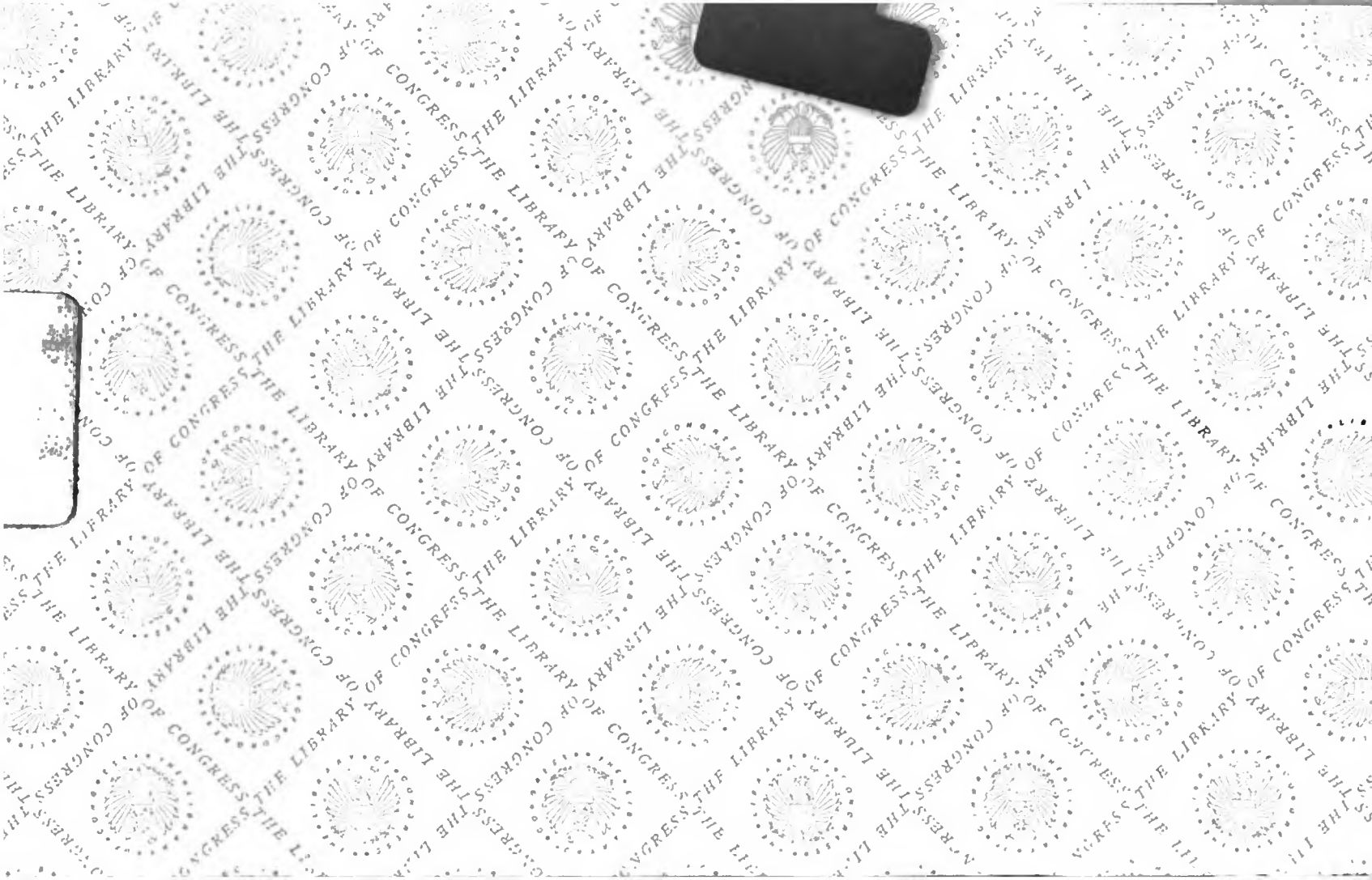
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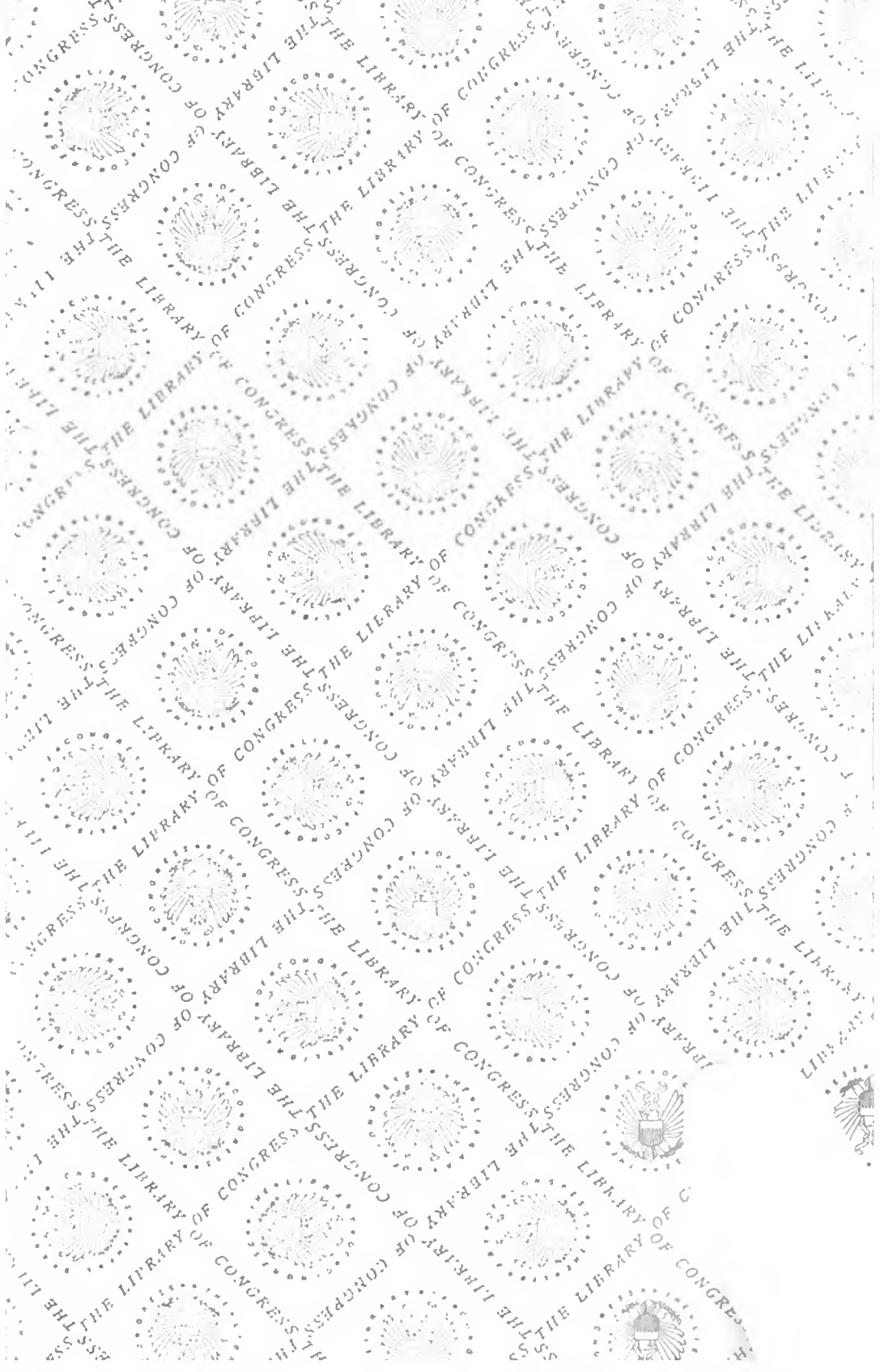
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RESOURCE CONSERVATION AND RECOVERY ACT—OVERSIGHT

HEARINGS

BEFORE THE

SUBCOMMITTEE ON TRANSPORTATION AND COMMERCE

OF THE

COMMITTEE ON INTERSTATE AND FOREIGN COMMERCE HOUSE OF REPRESENTATIVES

NINETY-FIFTH CONGRESS

SECOND SESSION

ON

IMPLEMENTATION OF RESOURCE CONSERVATION AND RECOVERY ACT

MARCH 7, 8, AND 9, 1978

Serial No. 95–124

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Garden State Paper Co., Richard B. Scudder, chairman of the board.
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RESOURCE CONSERVATION AND RECOVERY ACT—OVERSIGHT

TUESDAY, MARCH 7, 1978

HOUSE OF REPRESENTATIVES,
SUBCOMMITTEE ON TRANSPORTATION AND COMMERCE,
COMMITTEE ON INTERSTATE AND FOREIGN COMMERCE,
Washington, D.C.

The subcommittee met at 10 a.m., pursuant to notice, in room 2218, Rayburn House Office Building, Hon. Fred B. Rooney, chairman, presiding.

Mr. ROONEY. The Resource Conservation Recovery Act is 1½ years old. In my view, it is still too early to draw any major conclusions about the act, but it is not too early to hear discussion of it, not only by the Federal agencies charged with implementing the act, but also from other governmental units, study groups, the industries affected, and the general public. For this reason I have invited to testify here over the next 3 days persons representing a broad spectrum of interest in resource recovery, solid waste disposal, and the ever-important subject of recovering energy from the solid waste stream. In some cases, we will have panel discussions of these subjects, and I want to advise those panels that I will not be asking a lot of questions of you. Rather, I hope that you will engage each other and this subcommittee in discussions of the issues before us today.

The hearings will cover four major areas as follows. Today we will hear a report by the Environmental Protection Agency followed by comments on the general implementation of the act. Particularly, we will emphasize State and local planning, and their activities, which, as you know, are the backbone of this legislation.

There are not large capital investments planned by the Federal Government in dealing with land pollution. What money was authorized, and what pitifully little money has been available is primarily devoted to planning functions. I need to hear from you how that planning effort is going.

Tomorrow, we will touch on two subjects, the interagency cabinet level Resource Conservation Committee, established by the act, and the implementation of the hazardous waste portions of the act. Finally, on Thursday, we will discuss resource recovery. In this way, we can highlight the act's original aims, namely, to put a stop to environmentally unsound disposal practices, to control shipment and disposal of hazardous wastes, and to assist in the development of a market pull in the form of energy and other resource recovery to make proper disposal of waste more attractive.

[The following letter was sent to various agencies and organizations and the responses thereto follow:]

FEBRUARY 22, 1978.

DEAR MR. SECRETARY: On March 7, 8, and 9, 1978, the Subcommittee on Transportation and Commerce will be holding hearings on the implementation of the Resource Conservation and Recovery Act of 1976. Specificially, the Environmental Protection Agency will be offering testimony as to actions it and other agencies have taken in implementing the procurement section of that Act, section 6002.

Appreciating your busy schedule, it is not necessary that you attend the hearings in person. However, I would greatly appreciate your comments on the foregoing section. I am also interested in learning of any difficulty your department is facing in carrying out the provisions of the Act.

It would be appreciated if you could submit your comments in writing at least 48 hours in advance of the headings, so as to better prepare the Subcommittee members in addressing questions to the witness who will be testifying.

With kind regards.

Sincerely,

FRED B. ROONEY,
Chairman, Subcommittee on Transportation and Commerce.

EXECUTIVE OFFICE OF THE PRESIDENT,
OFFICE OF MANAGEMENT AND BUDGET,
Washington, D.C., March 20, 1978.

Hon. FRED B. ROONEY,
Chairman, Subcommittee on Transportation and Commerce, Committee on Interstate and Foreign Commerce, House of Representatives, Washington, D.C.

DEAR MR. CHAIRMAN: This is in response to your letter of March 3, 1978, inviting me to furnish a statement for your March 1978 oversight hearings on the Resource Conservation and Recovery Act of 1976, P.L. 94-580. As your counsel advised us, you're not stressing the procurement aspects at this time, but rather are looking more to the technical considerations involved. Your letter was received too late for us to prepare a statement for your hearings, but we did discuss these matters with Dick Little of your staff during the hearings. In addition, I understand the hearing record is still open for our statement.

With respect to Section 6002, Federal Procurement, I can state the following efforts and actions have been taken relating to our obligations thereunder:

A member of my staff participates with the Working Group, chaired by EPA, in Interagency meetings to support EPA's development of procuring guidelines required by the Act.

We have reviewed the proposed contracts which EPA has let for market data gathering in the areas of paper products and construction materials for recycling potential. It is my understanding that GSA/FSS has three recycling efforts going on; one for Government wastepaper, another for refurbishing furniture, and a third for retreading of tires.

An analysis has been conducted of procurement regulations, both ASPR/FPR, which might be impacted by the Act. These are the subject of review and will be taken into account in our current uniform regulation effort.

EPA's target of October 1978, for its procuring guidelines is consistent with the Act, and the guidelines will emphasize uniformity, simplicity, maximum competitive base, and practicability. We will implement such guidelines through the uniform regulation system.

No one underestimates the magnitude of the task ahead with respect to specification scrubdown, overcoming institutional barriers, the substantial capital outlays required of industry, the development and improvement of conversion and recovery technologies, and coordination between disposal/energy organizations. Industry cooperation is a key element for success.

We expect by April 1, 1978, to receive the first annual report from executive branch agencies for the calendar year 1977, as to efforts each has made

with the requirements under the Act. After review and compliation we will furnish the report required of OFPP by June 1, 1978, to the Congress.

If we can be of further help in this important matter please let me know.

Sincerely,

LESTER A. FETTIG, *Administrator.*

CONGRESS OF THE UNITED STATES
JOINT COMMITTEE ON PRINTING
Washington, D.C., March 3, 1978.

Hon. FRED B. ROONEY,
Chairman, Subcommittee on Transportation and Commerce, U.S. House of Representatives, Washington, D.C.

DEAR MR. CHAIRMAN: The Joint Committee on Printing has received the Conservation and Recovery Act of 1976, as requested by your letter dated February 22, 1976. The major coucern of the Joint Committee at this time is the procurement of paper for the Federal Government.

Under the terms of section 103 of title 44, United States Code, the Joint Committee on Printing is authorized to "* * * use any measure it considers necessary to remedy neglect, delay, duplication, or waste in the public printing and binding and the distribution of public documents." And, under section 509, the Joint Committee on Printing has been given the responsibility for setting standards for all paper procured for the different descriptions of the public printing and binding needs of the Federal Government.

In view of the Joint Committee on Printing's responsibility in establishing standards for all paper procured for the Government, it is requested that its position be entered into the record of the Subcommittee hearings.

Since the Committee has the responsibility for paper standards, its interest in the use of recovered material in paper has a long-standing history. The JCP must consider all factors, including ecology and the technological capability of the industry to produce a satisfactory product to meet the requirements of the Government. Any discussion of standards for paper could constitute an infringement on the authority of the Joint Committee on Printing, as established by 44 U.S.C., therefore, the Committee's position must be considered.

The specifications for paper are regularly reviewed by the Committee and revised to reflect changes in requirements, laws, and technology. These specifications were most recently revised on April 30, 1977, and permit the use of reclaimed fibers in any percentage consistent with the other requirements of the Standards. As we stated in the revised standards, we believe this to be responsibe to the intent of RCRA, and do not anticipate establishing required percentages of reclaimed material.

The Committees' basic reason for its position, is that any requirement, stipulatiug a fixed percentage of recovered material must be present in paper would be detrimental to the credibility of the specifications and would, therefore, defeat the purpose of establishing Government standards, which is to provide a basis on which to accept or reject the product. Such a requirement would require the manufacturer to certify a fact which not even he can know with any degree of certainty, and which the Government cannot verify. It is the opinion of this Committee that the paper industry does not, at this time, have the capability to produce an adequate quantity, at a reasonable price to satisfy the needs of the Government. If th requirement to provide a fixed percentage of recycled materials is inserted in all government paper specifications, existing competition would be limited, or the manufacturers would be forced to convert their facilities at a substantial expenditure on their part to process recovered materials. In either of these alternatives the government could anticipate nothing more than a substantial price increase, with no improvement standards of quality.

The term "recovered materials," as presently defined by the Act, permits consideration of the many industrial by-products used in the manufacture of paper. Any further restriction, such as limiting qualifying materials to post-consumer waste ("recycled" material) would virtually eliminate competition.

In summary, it is the position of the Joint Committee on Printing that it has, insofar as possible at the present time, satisfied the requirements of the Resource Conservation and Recovery Act of 1976. As is its responsibility,

the Committee will continue to review the standards established for the procurement of paper by the Government, and will modify them as it becomes technologically feasible within the industry to satisfy the requirements of availability, adequacy of competition, and reasonableness of price, with a product which meets reasonable performance standards for its end use.

It is the intent of the Committee that the standards which it establishes will be in the best national interest, environmentally and economically.

Cordially,

FRANK THOMPSON, Jr.,
Acting Chairman.

U.S. GOVERNMENT PRINTING OFFICE,
OFFICE OF PUBLIC PRINTER,
Washington, D.C. March 3, 1978.

Hon. FRED B. ROONEY,
Chairman, Subcommittee on Transportation and Commerce, House of Representatives, Washington, D.C.

DEAR MR. ROONEY: In response to your letter of February 22, 1978, my comments on Section 6002 of the Resource Conservation and Recovery Act (RCRA) of 1976 are enclosed. The Act has a significant impact on the Government Printing Office in its procurement of paper, and a lesser impact on procurement of the supplies and materials necessary to operate the Office. In view of the effect on the procurement of paper, most of my comments address that aspect of procurement.

Since the purchasing of paper affects the expenditures of most agencies, and is of widespread concern, it is requested that these comments be entered into the record of the hearings as the official Government Printing Office position.

Sincerely,

JOHN J. BOYLE,
Public Printer.

Enclosure.

U.S. GOVERNMENT PRINTING OFFICE POSITION ON RESOURCE CONSERVATION AND RECOVERY ACT OF 1976: SECTION 6002

I. Under the auspices of the Joint Committee on Printing, the Government Printing Office buys 52,000 tons of paper, 146.6 million envelopes and 2.1 million containers a year for our printing and binding operations and for Government agencies in the Washigton area, as provided by 44 U.S.C. 1121. The paper purchased is printing paper; altogether, approximately 73 different kinds are procured.

A. Subsection (d)(2) of Section 6002 paragraphs (A) through (C) requires that "(A) any exclusion of recovered materials shall be eliminated; (B) such specification shall not require the item to be manufactured from virgin materials; and (C) such specifications shall require reclaimed materials to the maximum extent possible without jeopardizing the intended use of the item."

As recently as April 30, 1977, the Joint Committee on Printing reviewed the specifications standards for paper and issued Revision No. 8. In transmitting these standards, the Committee stated that:

In approving these Standards, it was the Joint Committee's opinion that the broad inclusion therein of the provision whereby paper manufacturers may use reclaimed fibers in any percentage, consistent with the other requirements of the Standards, is practicable responsive to the intent of Pub. Law 94-580. Therefore, no project to establish reclaimed material percentages in these Standards is deemed necessary or is currently envisioned."

The Joint Committee on Printing has established specifications standards for every class and grade of paper now being procured for and used by various Federal agencies. As these standards are written, they allow reclaimed fiber in any percentage, provided that the other requiremnts of the standard are met. This definition of reclaimed fiber includes fiber obtained from solid waste, or from waste collected as a result of an agricultural or manufacturing process. Our studies show, however, that it would not be practicable to require set minimum amounts of reclaimed material as required in paragraph (C)

becanse it cannot be measured and therefore such a provision is unenforceable.

B. Subsection (c)(C) requires that vendors certify the percentage of the total material which is recovered.

There are not now any known chemical or physical means for determining whether or not fibers in paper have been reclaimed, therefore, measuring the percentage of reclaimed fiber in paper and enforcing any minimum percentage requirements is impossible.

Most fibers used in paper manufacture originate in nature. This applies equally to recycled and virgin fibers. Such materials vary with geographic origin, climatic conditions, seasonal variations, etc.; as a result, no mill can use an exact formula. Paper making is still largely an art and the formulator must have freedom to adjust to changes in raw materials by blending fibers from various sources. Such a requirement would force us to buy an item for which the reasonableness of price cannot be determined, since the price of paper and its eud use is primarily based on its composition.

C. Subsection (c)(I)(A) provides that agencies "* * * shall procure items composed of the highest percentage of recovered materials practicable consistent with maintaining a satisfactory level of competition * * *" unless the items (i) are not available within a reasonable time, (ii) fail to meet performance standards, or (iii) are only available at an unreasonable price.

There presently are few firms which manufacture paper containing substantial amounts of recovered materials, which would sharply limit the number of bidders, and could well cause a severe escalation in the cost to the Government. Nor, in light of the absence of any testing procedure, would there be any assurance of receiving the specified recycled product. While many of the 73 kinds of printing paper purchased contain some recovered fibers, not all grades can be produced using this material; therefore, some grades of paper are not available at all or cannot be obtained within a reasonable time and at a reasonable price which will meet our requirements.

In addition, the process of paper making is such that the presence of a specific amount of material is, at best, an educated guess and subject to variance of 20 to 30 percent.

D. Another pertinent consideration is the definition of the term "recovered material," as used in the Act. As presently defined, it "* * * means material which has been collected or recovered from solid waste."

The term as used in the Act considers such waste as wood residue, cotton linters, bagasse, etc. For example, 75 percent of the newsprint used in California is manufactured from wood residues, which fall under the definition of "recovered materials," as intended by RCRA. The JCP's use of the word "reclaimed" in the paper specifications is meant to be synonymous with the term "recovered." A requirement that the manufacturer certify that the paper contains a minimum percentage of "recycled" material would restrict competition. "Recycled" is synonymous with post-consumer waste and excludes many of the waste products noted above.

Such a limitation would seriously impair our ability to procure the paper required to fulfill our mission in support of the Congress and the agencies of the Federal Government, as well as increase overall Government printing costs.

Similar arguments could be advanced for such commodities as lithographic plates, type metal, photographic film and many others. All of these contain some percentage of recovered materials. We encouraged this by removing all restrictions against their use, but it is our position that to fix the amount by law would be counterproductive and restrictive.

II. In summary, it is the position of the Government Printing Office that, in the procurement of printing paper, envelopes and containers, it is complying with the spirit and intent of the Resource Conservation and Recovery Act of 1976, in that the paper which we procure is "composed of the highest percentage of recovered materials practicable consistent with maintaining a satisfactory level of competition."

This is a subject of great interest and concern to the Government Printing Office. The entire problem of maximum utilization of recycled materials for paper has been under careful consideration for several years and is the subject of continuing study and concern by the Joint Committee on Printing and the Government Printing Office. We will continue our efforts to assure maximum cooperation by all our contractors.

OFFICE OF THE ASSISTANT SECRETARY OF DEFENSE,
Washington, D.C., March 6, 1978.

Hon. FRED B. ROONEY,
Chairman, Subcommittee on Transportation and Commerce, Committee on Interstate and Foreign Commerce, House of Representatives, Washington, D.C.

DEAR MR. ROONEY: This is to respond to your request of February 22, 1978. to the Secretary of Defense, for comments on our implementation of section 6002 of the Resource Conservation and Recovery Act (RCRA) of 1976.

I have attached Department of Defense comments on our implementation of that important section of RCRA. I have also highlighted for your attention some difficulties that we anticipate with further implementation.

Thank you for this opportunity to provide input to the activities of your subcommittee.

GEORGE MARIENTHAL,
Deputy Assistant Secretary of Defense.

Attachment.

DEPARTMENT OF DEFENSE COMMENTS ON SECTION 6002 OF THE RESOURCE CONSERVATION AND RECOVERY ACT OF 1976

"FEDERAL PROCUREMENT

"SEC. 6002. (a) APPLICATION OF SECTION.—Except as provided in subsection (b), a procuring agency shall comply with the requirements set forth in this section and any regulations issued under this section, with respect to any purchase or acquisition of a procurement item where the purchase price of the item exceeds $10,000 or where the quantity of such items or of functionally equivalent items purchased or acquired in the course of the preceding fiscal year was $10,000 or more.

Comment: The Department of Defense (DOD) is a major procuring agency. We recognize that this action applies to DOD.

"(b) PROCUREMENT SUBJECT TO OTHER LAW.—Any procurement, by any procuring agency, which is subject to regulations of the Administrator under section 6004 (as promulgated before the date of enactment of this section under comparable provisions of prior law) shall not be subject to the requirements of this section to the extent that such requirements are inconsistent with such regulations.

Comment: We recognize that this section applies to DOD.

"(c) REQUIREMENTS.—(1)(A) After two years after the date of enactment of this section, each procuring agency shall procure items composed of the highest percentage of recovered materials practicable consistent with maintaining a satisfactory level of competition. The decision not to procure such items shall be based on a determination that such procurement items—

"(i) are not reasonably available within a reasonable period of time;

"(ii) fail to meet the performance standards set forth in the applicable specifications or fail to meet the reasonable performance standards of the procuring agencies; or

"(iii) are only available at an unreasonable price. Any determination under clause (ii) shall be made on the basis of the guidelines of the Bureau of Standards in any case in which such material is covered by such guidelines.

Comment: The Armed Services Procurement Regulation (ASPR) Subcommittee has completed its review and recommendations for changes in ASPR to reflect requirements of this section. The language of this change is presently being coordinated with General Services Administration (GSA) in hopes that a uniform, government-wide policy can be adopted.

Problems: In the short term, the availability of materials with the highest percentage of recovered materials, and the National Bureau of Standards determination of reasonable performance standards, will be limiting factors in the implementation of this section.

"(B) Agencies that generate heat, mechanical, or electrical energy from fossil fuel in systems that have the technical capability of using recovered material and recovered-material-derived fuel as primary or supplementary fuel shall use such capability to the maximum extent practicable.

Comment: DOD has completed studies to determine the feasibility of constructing regional resource recovery facilities in 14 standard metropolitan

statistical areas (SMSA). Generally, the conversion of fossil fuel burning devices is an important part of these studies. The DOD, and in particular the Navy, has several installations where this type of activity can be justified economically, as well as in terms of energy conservation.

Most of the resource recovery feasibility studies, however, recommend that DOD join with the local solid waste disposal jurisdiction to encourage a larger regional facility rather than a small facility to meet only the needs of federal agencies.

Further, impetus was provided on April 8, 1976, when a memorandum was issued to the military departments to describe the DOD fuel selection policy. This policy requires that consideration be given to refuse derived fuel (RDF) for all new heat generating requirements and that fuel burning devices of 50 million Btu/hr, or greater capacity, be considered for conversion to solid fuel (which, by definition, would include RDF).

Problems: In many instances, DOD is awaiting action by regional planning boards, and there is some fragmentation of the authority for action. The attached letters provide a discussion of this concern.

"(C) Contracting officers shall require that vendors certify the percentage of the total material utilized for the performance of the contract which is recovered materials.

Comment: A certification clause is included in the ASPR revisions mentioned above.

Problems: Depending upon interpretation, this may be one of the more troublesome parts of the section. In the short term, it may be impossible for a vendor to certify that a given quantity of his product contains a finite percentage of recovered material. Recovered materials are not always available in the quantities required, and inventory-control practices may not make it possible to verify which raw material went into which product. In the longer term, a vendor can readily certify that, on an annual basis, perhaps, he has purchased x tons of recovered materials and, based on his total production, the product, on average, contained at least y per cent of recovered material.

"(d) SPECIFICATIONS.—(1) All Federal agencies that have the responsibility for drafting or reviewing specifications for procurement item procured by Federal agencies shall, in reviewing those specifications, ascertain whether such specifications violate the prohibitions contained in subparagraphs (A) through (C) of paragraph (2). Such review shall be undertaken not later than eighteen months after the date of enactment of this section.

"(2) In drafting or revising such specifications, after the date of enactment of this section—

"(A) Any exclusion of recovered materials shall be eliminated;

"(B) such specification shall not require the item to be manufactured from virgin materials; and

"(C) such specifications shall require reclaimed materials to the maximum extent possible without jeopardizing the intended end use of the item.

Comment: On March 1, 1977, a notice was issued with changes to military standards 961 and 962. These are instructions to the military departments for the preparation of specifications and standards. These instructions have been revised to conform to section 6002(a)(2). They provide that: (1) there is no exclusion to the use of recovered materials; (2) there is no requirement that an item be manufactured from virgin materials; and (3) reclaimed materials shall be required to the maximum extent possible consistent with the intended end use of the item.

The process for the review of some 40,000 existing procurement specifications is proceeding. An up-to-date status is not available, but a small sampling have revealed the following:

In the past year, the Defense Logistics Agency, in its overage document review program has validated 1083 specifications as current. This assures their compliance with the act.

One Army laboratory in reviewing 125 specifications found the act did not apply to 11, 36 were already in compliance, and 78 specifications required change or revision. This same laboratory has 1432 specifications remaining in the overage review program.

"(e) GUIDELINES.—The Administrator, after consultation with the Administrator of General Services, the Secretary of Commerce (acting through the Bureau of Standards), and the Public Printer, shall prepare, and from time

to time revise, guidelines for the use of procuring agencies in complying with the requirements of this section. Such guidelines shall set forth recommended practices with respect to the procurement of recovered materials and items containing such materials and shall provide information as to the availability, sources of supply, and potential uses of such materials and items.

Department of Defense Directive 4165.60 was issued on October, 1976 about one month after RCRA was signed. The directive was designed to be compatible with the then current law. As RCRA is implemented, and new guidelines are issued, we are confident that our present policy is readily adaptable and, when necessary, can be amended to fully accommodate new regulation requirements or guidelines.

"(f) PROCUREMENT OF SERVICE.—A procuring agency shall, to the maximum extent practicable, manage or arrange for the procurement of solid waste management services in a manner which maximizes energy and resource recovery.

Section V(E) of DOD Directive 4165.60, in part, addresses this need. This section states, "contracts for solid waste material disposal services shall include provisions for recycling, whenever feasible."

Several service contracts now exist which were negotiated with resource recovery contractors and which, incidentally, provide for a partial rebate to the military departments to reflect revenues from sale of these recovered materials.

"(g) EXECUTIVE OFFICE.—The Office of Procurement Policy in the Executive Office of the President, in cooperation with the Administrator, shall implement the policy expressed in this section. It shall be the responsibility of the Office of Procurement Policy to coordinate this policy with other policies for Federal procurement, in such a way as to maximize the use of recovered resources, and to annually report to the Congress on actions taken by Federal agencies and the progress made in the implementation of such policy.

Comment: We have been contacted by the Office of Federal Procurement Policy (OFPP). We were requested to provide input to their annual report. Our report to OFPP will be completed by April 1, 1978.

JULY 19, 1977.

Mr. SHELDON MEYERS,
Deputy Assistant Administrator for Solid Waste, U.S. Environmental Protection Agency, Washington, D.C.

DEAR MR. MEYERS: This is to alert you to an inconsistency between (1) EPA's interim guidelines for the identification of regions and agencies, published in the *Federal Register* on May 16, 1977, and (2) the resource recovery facilities guidelines issued previously, pursuant to the Solid Waste Disposal Act.

The earlier guidelines called for completion of Federal regional planning by using standard metropolitan statistical areas (SMSAs) as the planning regions. We have begun implementation of those guidelines and have directed feasibility studies to be completed by October 1977, and the completion of regional planning by April 1978 (guidance memorandum is enclosed).

Your recent interim guidelines, published pursuant to the Resource Conservation and Recovery Act PL 94-580), require that states, together with appropriate elected officials, shall jointly identify an agency to develop the state or regional plan, and designate one or more agencies to implement the plan.

Herein lies the inconsistency, in that the planning regions identified in this latter process may not coincide with SMSAs used in the Federal regional planning process. In any case, there is the possibility of duplication of similar efforts.

Because of the overriding priority of RCRA, we suggest that the resource recovery guidelines be revised to reflect the planning timetable established in the new Act. This will extend the current efforts, but prmit coordination of planning to minimize duplication and inconsistencies. I will be glad to discuss this matter further at your convenience.

Sincerely,

GEORGE MARIENTHAL,
Deputy Assistant Secretary of Defense.

Enclosure.

U.S. ENVIRONMENTAL PROTECTION AGENCY
Washington, D.C., September 27, 1977.

Mr. GEORGE MARIENTHAL,
Deputy Assistant Secretary of Defense, Pentagon, Rm 3D171, Washington, D.C.

DEAR MR. MARIENTHAL: Thank you for your letter of July 19, 1977 concerning an apparent inconsistency between our Resource Recovery Facility Guidelines and our Regional Identification Guidelines. As you point out, regions established by the State may not always coincide with Standard Metropolitan Statistical Areas (SMSA's) which serve as the basis for designating Federal responsibilities for the purpose of resource recovery planning.

One of the intentions of Subtitle D of the Resource Conservation and Recovery Act of 1976 is to foster cooperation among Federal and local governments in the planning and implementation of solid waste management systems. In consideration of resource constraints, local government planning efforts may not get underway within the time frame required under the Resource Recovery Facility Guidelines. It is, therefore, incumbent upon Federal agencies to take the lead in determining whether to establish or utilize resource recovery facilities in accordance with the subject Guidelines and Section 6002(c)(1)(B) of RCRA.

EPA will consider a change to 40 CFR Part 255.33 of the Regional Identification Guidelines to provide that plans and arrangements pursuant to the Resource Recovery Facility Guidelines be accounted for within the identifications made pursuant to Subtitle D.

If you have further comment, or if you wish to propose wording for the revision of Part 255.33, please feel free to contact Burnell Vincent, (202) 755-9125.

Sincerely yours,

JOHN P. LEHMAN,
Acting Deputy Assistant Administrator for Solid Waste.

* * *

November 16, 1977.

Mr. BURNELL W. VINCENT,
Chief, Assistance Branch, Systems Manager Division, U.S. Environmental Protection Agency, Washington, D.C.

DEAR MR. VINCENT: This is to comment on the draft guidelines for State Solid Waste Management Planning, which will be issued pursuant to Section 4002 (b) of the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act of 1976 (PL 94-580).

Our concern, expressed earlier in our letter of July 19, 1977, to Mr. Sheldon Meyers, is an inconsistency between guidance EPA is presenting here and the guidance which was previously provided to federal facilities pursuant to the Solid Waste Disposal Act of 1965.

A substantial amount of work has been undertaken by various federal agencies as lead agencies in standard metropolitan statistical areas (SMSA) to assess the feasibility of the construction of resource recovery facilities. Nowhere in your instructions to the states under the draft Part 256, is the activity mentioned or is coordination called for.

If it is your intention to proceed entirely through the states, with state-designated agencies assuming the lead, then it would be appropriate to withdraw the guidelines for resource recovery facilities issues under Part 245 of this chapter so that federal energies toward their implementation could best be directed elsewhere.

Specific comments to the draft guidelines are attached.

We appreciate this opportunity to review the draft guidelines. If you would like to contact us further, please telephone me or Dr. Donald J. Robinson at 695-0221.

Sincerely,

GEORGE MARIENTHAL,
Deputy Assistant Secretary of Defense.

Enclosure.

U.S. ENVIRONMENTAL PROTECTION AGENCY
Washington, D.C., January 11, 1977.

Mr. GEORGE MARIENTHAL,
Deputy Assistant Secretary of Defense for Energy, Environment and Safety, Pentagon, Room 3D171, Washington, D.C.

DEAR GEORGE: Thank you for your letter of November 16, 1977, to Mr. Vincent contaluing your comments on the draft guidelines for State Solid Waste Management Planning.

We agree that the Resource Recovery Facility Guidelines promulgated under Part 245 deserve discussion in the State planning guideliues. We therefore intend to discuss the Part 245 guidelines in the subpart dealing with coordination with other programs. Obvlously, the feasibility studies aud other efforts whlch lead Federal agencles have undertaken should not be duplicated by State or regional plauning agencies.

EPA appreciates the efforts of DOD lead agencies to implement the resource recovery guidelines. Some of the lead agency reports we have received indicate that close and profitable working relationshlps have been established in certain geographic areas between Federal and State agencies in planning for resource recovery facilities. This type of effort supports the objectives of both the resource recovery and State planning guidelines to conserve resources and enhance environmental protection.

Thank you for taking the tlme to review and comment on the State Planning guideliues.

Sincerely,

SUSAN ABSHER,
Systems Management Division.

INTERSTATE COMMERCE COMMISSION,
Washington, D.C., March 6, 1978.

Hon. FRED B. ROONEY,
Chairman, Subcommittee on Transportation and Commerce, Committee on Interstate and Foreign Commerce, House of Representatives, Washington, D.C.

DEAR CHAIRMAN ROONEY: Thank you for your letter of February 23, 1978, informing the Commission of your Subcommittee's hearings on the implementation of the Resource Conservation and Recovery Act of 1976. I am pleased to respond to your inquiries wlth regard to the status of the Commission's study of freight rates for municipal solid waste and other recyclables, and to whether we have had any difficulties in carrying out the provisions of the Act.

As you probably know, in Ex Parte No. 319 the Commission found that because of a lack of evidence, additional investigation was warranted on eight recyclable commodities, lncluding municipal garbage. This further investigation lnto the rate structures of these commodities, in addition to two additional commodities—chemical gypsum and chemical petroleum waste—was instituted in Ex Parte No. 319 (Sub-No. 1), "Further Investigation of Freight Rates for the Transportation of Recyclables or Recycled Materials, on December 1, 1977. Interested partles have also beeu invited to submit a list of other virgin or recyclable commodities that should be included in the investigation. A procedural order specifying the time periods for the submission of evidence in this proceeding is presently being prepared for service within the next three weeks.

In addition to the proceeding in Ex Parte No. 319, the Commission has also ordered an investigation into the reasonableness of the railroads' latest 5 percent general increase as it applies to certain commodities, including recyclables. Ex Parte No. 343, Nationwide Increased Freight Rates and Charges—1977." This investigation will be completed by June 30, 1978. In this regard it should be noted that in all future rail general increase proceedings, the reasonableness and the effect of the increase on the revenue-to-variable cost ratio and fully-allocated cost ratio of individual recyclables will be monitored under the regulations adopted in Ex Parte No. 290, "Procedures Governing Rail General Increase Proceedlugs."

I would now like to address your inquiry on the Resource Conservation and Recovery Act of 1976. This Act, as you know, did not specifically establish ny new duties or responsibilities for the Commission. Rather, it required the

administrator of the Environmental Protection Agency to promulgate regulations for the transportation of hazardous waste as needed to protect the public health and environment. Accordingly, the Commission's most direct involvement in this matter has been in a liaison capacity with the EPA.

Initial contacts from EPA were aimed at their gaining a better understanding of current Commission regulations and policies regarding hazardous waste transportation. We supplied considerable information on the motor carrier certification process and the service responsibilities of motor common and contract carriers. Subsequent discussions addressed our insurance and waybill requirements. This information was to determine the extent to which the industry's waybill system could be adapted to provide the desired control over intrastate and interstate movements of hazardous wastes to treatment, storage, and disposal sites.

Our liaison function with EPA has been informal and highly successful in insuring that our respective agencies are kept apprised of activities affecting the goals and procedures mandated under the Act. No difficulties in carrying out its provisions have been encountered.

If I may be of any further assistance to you, please contact me.

Sincerely yours,

DANIEL O'NEAL, *Chairman.*

GSA STATEMENT ON IMPLEMENTATION OF SECTION 6002 OF PUBLIC LAW 94–580 THE RESOURCE CONSERVATION AND RECOVERY ACT OF 1976

Section 6002 of Public Law 94–580 requires that after October 21, 1978, each procuring agency procure items composed of the highest percentage of recovered materials practicable consistent with maintaining a satisfactory level of competition. The Law also indicates that contracting officers shall require that vendors certify the percentage of the total material utilized for the performance of the contract which is recovered materials.

Further, the Law requires that Federal agencies responsible for preparing or reviewing specifications for procurement items procured by Federal agencies shall assure that those specifications:

(1) Do not exclude recovered material.

(2) Do not require that the item be manufactured from virgin material.

(3) Require recovered materials to the maximum extent possible without jeopardizing the intended end use of the item.

In view of the broad application of the requirements of Section 6002 of Public Law 94–580, the Resource Conservation and Recovery Act of 1976, the following objectives were established:

1. Education of the industry to the requirements of the Law.

2. Working with the industry to establish percentage requirements consistent with maintaining competition, price and the quality of the end item.

3. Informing personnel responsible for preparing Federal specifications with respect to the requirements of the Law.

4. Changing technical requirements supporting GSA procurements exceeding $10,000 to incorporate requirements for specific percentages of recovered materials in compliance with Section 6002.

The following actions have been taken or are underway to accomplish these objectives.

1. Letters have been forwarded to the industry explaining the requirements of Section 6002 and discussing our plan for implementation.

2. In these letters we have requested industry's assistance in developing percentage requirements for inclusion in our technical documents which support procurements exceeding $10,000. Further, we have met individually with industry technical associations to discuss our program. These include Soap and Detergent Association, Chemical Specialties Manufacturers Association, National Paint and Coatings Association, Hand Tools Institute, Fire Retardant Chemicals Association, Aluminum Association and American Paper Institute. Additionally, we have met with our major bidders to clarify our program.

3. In March 1977 we held training meetings for personnel from other Federal agencies who have responsibility for preparing Federal specifications to outline our program and to provide guidelines on procedures to be followed in the development of percentage requirements. In June 1977 similar training sessions were provided to GSA personnel involved in the preparation of Federal specifications.

4. We are proceeding to incorporate requirements for recovered material in those technical documents supporting GSA procurements exceeding $10,000.

Although our efforts with the industry have been generally successful we have experienced difficulty in the paint and chemical area in identifying technical data that will validate the potential for recovered material without jeopardizing the quality requirement. We will continue to work closely with these industries in an effort to accomplish our objectives.

Our efforts in complying with Section 6002 of the Law have been devoted to the technical documents which support GSA procurements with a dollar volume in excess of $10,000 made after October 21, 1978.

Mr. ROONEY. Our first witness this morning is Mr. Thomas C. Jorling, Assistant Administrator for Water and Hazardous Materials, Environmental Protection Agency.

Mr. Jorling, I would appreciate it very much if you would introduce your colleagues and proceed with your testimony.

STATEMENT OF HON. THOMAS C. JORLING, ASSISTANT ADMINISTRATOR, ENVIRONMENTAL PROTECTION AGENCY, ACCOMPANIED BY STEFFEN W. PLEHN, DEPUTY ASSISTANT ADMINISTRATOR, OFFICE OF SOLID WASTE

Mr. JORLING. Thank you, Mr. Chairman.

I have with me Steffen Plehn, who is the Deputy Assistant Administrator for the Office of Solid Waste, and responsible for implementing the Resource Conservation and Recovery Act.

It is a pleasure to be here for the first time on an official basis with the new administration and present our progress report on RCCA. I have a short statement which I will read. In addition, we have submitted along with it an accompanying detailed progress report on the efforts of EPA in implementing RCCA which has been made available.

Mr. ROONEY. Without objection, it will become a part of the record, and you may proceed to summarize your statement.

Mr. JORLING. As you know, RCCA was enacted in the fall of 1976 to achieve two basic objectives, to protect public health and the environment and to conserve our Nation's natural resources. RCCA provides three major programs to help achieve these objectives, all of which are interdependent: Establishment of a land disposal regulatory program in each State; the establishment of a hazardous waste control program to be administered by the States, or where the States fail to choose not to do so, by EPA; and the initiation and support of resource conservation programs by State and local governments to conserve natural resources and reduce the amount of solid waste requiring land or other disposal.

Congress, in enacting RCCA, provided EPA with a variety of tools to carry out these programs. These tools include technical and financial assistance to State and local government; the development of regulations, guidelines, and criteria for improved hazardous waste management, resource conservation, and land disposal practices; research, development, and demonstration of new and improved solid waste management systems and technologies; the development of technical and public information programs; requirements for public participation to help in the implementation of RCRA; and finally authority to enforce hazardous waste management practices.

Today, I want to report on our progress in the implementation of RCRA. I believe that we have made an excellent beginning, although we have much yet to do to meet the objectives of RCRA.

RCRA was signed into law on October 21, 1976, shortly after the beginning of fiscal year 1977. This was after the fiscal year 1977 solid waste budget for EPA had already been approved by the President and Congress. The programs approved for fiscal year 1977 were not necessarily consistent with the provisions and mandates of the new law. Consequently, we undertook a major reprograming and embarked upon an entirely new operating plan tailored to fit the needs of the new Resource Control Act.

With the available funds, we began the essential data development and interpretive work necessary to develop the hazardous waste regulations and the solid waste disposal criteria. We accelerated the funding of State solid waste management programs so that the State might get started early to meet their responsibilities under RCRA. We also held public meetings around the country to increase public awareness of the decisions to be made and to encourage their participation from the beginning of implementation.

Fiscal year 1978 was our first full budget request to implement RCRA. That budget request included the funds needed to complete the supportive work for the hazardous waste regulations and the land disposal criteria. It also included funding for the initiation of State plans required by RCRA, the beginning of the land disposal inventory, the first funding of the Resource Conservation and Recovery Panels better known as the Technical Assistance Panels; and the major work of the Resource Conservation Committee. In fiscal year 1978, the budget for financial assistance to States increased fourfold over fiscal year 1977.

Mr. ROONEY. What are you talking about, fourfold? How much?

Mr. JORLING. Fourfold. The budget for fiscal 1978 State grants is $1.7 million to $14 million, for State grants in fiscal year 1978.

Our budget request for RCRA for fiscal year 1979 is now pending before the Congress. The solid waste management program of RCRA fared very well in the agency's first ZBB process, experiencing a 40-percent growth over fiscal year 1978. We believe that this clearly demonstrates EPA's recognition of the importance of this program and the necessity to give it greater support and attention. The request for fiscal year 1979 represents the maturing of the program and a major movement of the implementation of RCRA from Washington to our regional offices and to State government.

In fiscal year 1979, we will see the following. The development of State plans required by RCRA is expected to be completed. The implementation of this plan will begin. States will begin to implement hazardous waste programs; States will develop resource conservation programs and expand the solid waste disposal facility inventory beyond municipal solid waste sites to industrial solid waste sites.

Fiscal year 1979 will also show increased activity by the technical assistance panel program to provide greater assistance to State and local governments as they begin to implement RCRA programs. Public participation in implementing RCRA will continue to be important, and the programs to disseminate both technical and general information to the public will be expanded.

As you are aware, EPA has been developing a long-range strategy for the implementation of RCRA. Our strategy document is now in draft form and has been the subject of extensive public comment. That has been made available to the committee earlier.

The strategy establishes four major principles for implementing RCRA. First, it stresses that controlling waste regulations and the subtitle D prohibitions on open dumps should be the highest priority activity over the next few years. Second, the strategy establishes resource conservation as the preferred solid waste managment alternative and places high priority on certain resource conservation activities, particularly those related to the Resource Conservation Committee, the provision of technical assistance and procurement guidelines.

Third, the strategy places increased agency emphasis on industrial solid waste management and disposal as States and local governments move forward in their management of municipal and hazardous solid waste. Fourth and perhaps the most important, the strategy emphasizes that RCRA implementation is dependent upon strong and responsive State and local governments. As a corollary, the document stresses that in large measure State and local assumption of the programs of RCRA will depend directly upon the availability of both financial and technical assistance, and indirectly upon public awareness and the need for implementation.

Over 10,000 copies of the draft strategy have been distributed to the public. On January 19 of this year, we held a public hearing on the draft. Over 200 individuals attended the public hearing, which lasted for 7 hours. In addition to receiving testimony from many interested individuals and groups, a panel of EPA representatives answered well over 100 questions about the strategy. EPA also received approximately 50 written comments on the strategy. We expect to review and analyze all of the testimony and the comments, revise the strategy in order to reflect the public input, and publish the final RCRA strategy in the late spring.

Given new authorizations and resources, this strategy will enable continuity and predictability on the RCRA program, given good management.

I am submitting for the record, and as an attachment to this testimony, a detailed progress report on EPA's implementation of RCRA. I would like to quickly report some of the major points of progress for the committee and then discuss for a few moments a few key issues that we face.

In the area of State and local program development we have issued the regional identification guidelines required by section 4002(a). The States and local government have essentially completed the identification of solid waste management regional planning boundaries. The State planning guidelines required by section 4002(b) are now in draft form and we expect to propose these guidelines within the next 60 days.

The section 4004 solid waste disposal facility criteria were proposed in the Federal Register on February 6 of this year. The section 3006 State hazardous waste program development guidelines were published in proposed form in the Federal Register on Febru-

ary 1 of this year. We expect to publish the section 3003 regulations for hazardous waste transporters and the section 3010 notification regulations soon. The remainder of the hazardous waste regulations should be proposed in the Federal Register by late spring, 1978.

EPA submitted the first annual report on the implementation of RCRA as required by section 2005 on February 1 of this year. The public participation guidelines required by section 7004 were proposed in the Federal Register on January 12, 1978, and the citizen suit regulations required by section 7002 were published in the Federal Register on October 21, 1977.

The Resource Conservation Committee has submitted its first two reports to the President and the Congress. The first report included the work plans for the Resource Conservation Committee. The second reported on the findings of the committee relative to beverage container deposits.

Finally, we have initiated the activities of the Resource Conservation and Recovery Panels to deliver technical assistance to State and local government on all solid waste management problems. The major consultative services for this effort will be in place by summer, and we now have five national public interest groups participating in providing technical assistance to those in need through a "peer matching" effort. All in all, we believe we have made a good beginning.

I would like now to discuss several rather broad issues which will significantly affect the implementation of RCRA.

First, RCRA depends heavily on the involvement of State governments for its implementation. Our strategy, our program plans, and our budget are therefore constructed with the intent of maximizing State assumption of the provisions of RCRA. If the States, for reasons of resources, legislative limitations, or the lack of commitment, do not fully support the implementation of RCRA, the possibility of not meeting the objectives is very distinct. To date, we have been extremely pleased with the States' response.

Second, RCRA requires EPA to establish strong hazardous waste regulations and a strong regulatory climate to protect public health and the environment. Within this regulatory framework the law assumes that private industry and private capital will produce facilities that will comply with the hazardous waste regulations. EPA believes that this reliance on the private sector is desirable and appropriate. However, if private industry, for any number of reasons, cannot acquire the sites or the capital to develop these facilities, then other approaches will have to be considered. Such failure could require new approaches by State government to assure that sites are available and that solid waste generated within a State's boundaries is properly managed, and perhaps consideration of a stronger Federal role.

It is clear that the hazardous materials will not go away.

A third and related issue concerns the ability of States and local government and private industry to acquire sites for all types of solid waste management facilities. RCRA requires the elimination of open dumps and the establishment of acceptable land disposal facilities; the establishment of environmentally acceptable hazard-

ous waste storage, treatment, and disposal facilities; and the development of resource conservation facilities. All of these actions will require new sites, yet no matter what type of solid waste facility is proposed, public opposition is dramatic, often strong and well organized. If we are not able to convince the American public that RCRA will ensure that disposal sites are safe and well managed, we will never acquire the needed and necessary sites for facilities and, therefore, never achieve the objectives of RCRA. I think it is clear that the siting issue is the most difficult problem facing us in the implementation of RCRA.

Finally, I feel obliged to point out that it will not be possible to achieve the objectives of RCRA within the strict timeframe envisioned in the act. While we have every intent to implement programs to meet RCRA objectives, the plain and simple facts are that there will never be enough resources available to do everything in the time expected, nor, I should add, do the States and local governments have the resources and people necessary to do the job adequately, nor is the scientific and technical knowledge base adequate to do all that is required immediately.

We are limited in what we can accomplish with the resources that are available, and we have had to make choices. It has meant that we have given priority to meeting the public health and environmental quality objectives of RCRA and expect to phase into other aspects of RCRA as time and resources allow. I believe this makes a great deal of sense and is consistent with both the short- and long-range goals of RCRA. However, it in no way suggests that EPA is not committed to controlling the hazardous waste we generate in this country, assuring that the open dump disappears, and establishing resource conservation as the preferred alternative for solid waste management. It only means that time will be required to achieve the objectives set forth.

That completes my prepared remarks, Mr. Chairman, and I and the staff would be happy to answer any questions you might have.

[Testimony resumes on p. 47.]

[The following information was received for the record:]

Detailed Progress by EPA in Implementing the Resource Conservation and Recovery Act (RCRA)

Submitted for the record is a detailed progress report on the implementation of RCRA. Progress is reported for the following RCRA authorities: state program development; hazardous waste control; solid waste disposal; resource conservation; technical assistance panels; research and development; and technical and public information and public participation.

STATE PROGRAM DEVELOPMENT

Since passage of the Solid Waste Disposal Act in 1965, we have been building a strong Federal/State partnership in solid waste management. Efforts under the Resource Conservation and Recovery Act in solid waste disposal, hazardous waste control, and resource conservation can draw on over twelve years of progress in solid waste management at the State and Federal levels. States received support in FY 1977 to determine what had to be done to develop comprehensive plans for solid waste management to prepare for RCRA implementation. These comprehensive plans will provide for control of hazardous waste pursuant to Subtitle C and for environmentally sound land disposal and resource conservation and recovery pursuant to Subtitles A, D, and H.

EPA promulgated Interim Guidelines for the Identification of Regions and Agencies for Solid Waste Management on May 16, 1977 (Section 4002(a)). In response to these guidelines, 38 States made final or tentative area identifications by the November deadline specified in the law. The remainder are expected to complete area identification soon. Agency identification is to be completed by April 1978.

The Guidelines for the Development and Implementation of State Solid Waste Management Plans (Section 4002) have been developed in draft form and have been extensively reviewed by States and others. The draft is currently being revised. We expect to promulgate these guidelines in time to guide the FY 1979 financial assistance programs, which will start on October 1, 1978.

The guidelines call for the completion of State plans by the end of FY 1979. The plans are to include hazardous waste control, solid waste disposal regulatory, and resource conservation programs necessary to meet the requirements of both Subtitles C and D. The guidelines stress the need for coordination with State and local programs pursuant to other Acts. In particular, we are establishing mechanisms necessary to coordinate residual management planning activities under

Section 208 of the Federal Water Pollution Control Act with activities under RCRA.

We have also guided and assisted the States in beginning to develop resource conservation programs as part of their State planning efforts. We recognize, as does the Congress, that resource conservation and recovery will be an alternative to unacceptable disposal practices in the 1980's only if we begin to plan for it now. States are to include in their planning activities the development of a strategy which will allow them to implement a resource conservation and recovery program beginning in FY 1980. We have also begun drafting the description of a "Model State Resource Conservation Program" which will describe what form such a program should take, what it should accomplish, and what resources are required.

Proposed guidelines for the development and implementation of authorized State hazardous waste management programs (Section 3006) were published in the Federal Register on February 1, 1978. Public hearings on the proposed guidelines are scheduled in March 1978 in three widely separated locations across the country. Final promulgation of the guidelines is anticipated to take place in May 1978. These guidelines set out substantive and procedural requirements

for both interim and full authorization of State programs to carry out the hazardous waste program in lieu of the EPA administered program.

One of the major issues remaining to be resolved before promulgation of State program guidelines concerns State restrictions on the free movement of hazardous wastes to duly permitted hazardous waste management facilities. The issue of State waste importation bans has been brought before the U.S. Supreme Court by the City of Philadelphia challenging the constitutionality of the State of New Jersey's importation ban as restricting interstate commerce. The free movement issue is addressed in the proposed guidelines and provides a five-year period for States to adjust their authorities to allow free movement.

Development, authorization, and implementation of State hazardous waste management programs is to be funded under Section 3011 of the Act, which calls for allocation of funds to States on the basis of: (1) hazardous waste generation, transportation, treatment, storage, and disposal within each State; (2) exposure of public health and the environment within each State; (3) any other appropriate factors. These grant regulations have been under development since December 1977 and are targeted for promulgation around mid-year 1978.

The major difficulty encountered in establishing the allocation formula is the lack of precise State-by-State data on generation, transportation, etc., required by the Act.

Section 3006 of RCRA provides for both Interim and Full Authorization for participation by States in the hazardous waste regulatory program. The guidelines under Section 3006 of the Act detail requirements for determining whether a State program is equivalent to the Federal program, is consistent with other State programs, has adequate enforcement authority, and is thus eligible for Full Authorization. Few State programs are able to meet these criteria for Full Authorization at the present time. Interim Authorization provides a period during which State programs which are not fully developed can be supported and so as to meet the requirements for Full Authorization. The eligibility requirements for Interim Authorization are flexible enough to permit most States to qualify in FY 1979. Interim Authorization is available only for two years beginning six months after promulgation of the Subtitle C regulations.

During FY 1979, it is anticipated that States are expected to be developing application packages for Interim or Full Authorization, establishing the necessary regulatory structure at the State level, taking the steps required to

initiate equivalent hazardous waste regulatory programs, and conducting the necessary hearings. Depending on the stage of development of individual State programs, the States will be acquiring the necessary legislative authority, regulations, and resources to conduct a permit program, operate the manifest system, and conduct surveillance and enforcement activities in FY 1979. Our present assessment is that some 36 States will accept primacy, 16 States are undecided, and 4 States are likely to reject the program, either because of the lack of resources at the State level, or the political problems in getting a legislative mandate.

Additionally, a number of States have indicated that they will not seek authorization of any kind until they have had an opportunity to evaluate the final regulations that will be promulgated under Sections 3002 through 3005 of the Act. As RCRA is presently written, the States must make their decision by September 1978 as to whether they wish to obtain Interim or Full Authorization. Therefore, if EPA is as little as three months late in promulgating the regulations under Sections 3002 through 3005, very few States will apply for and ultimately assume the hazardous waste program. We believe this conflicts with Congressional intent to maximize the number of States that would be eligible and which would apply for authorization under Interim Authority.

As a result, EPA is requesting a technical legislative amendment to provide States with a six-month period after the Section 3001 regulations are promulgated to seek Interim or Full Authorization.

For FY 1978, $14.3 million in financial assistance is being allocated to State solid waste management programs. We estimate that the States will spend these funds as follows: $3.9 million for development of State hazardous waste programs; $3.9 million for the open dump inventory; $5.0 million for State planning including increased emphasis on resource conservation planning; $.7 million for regional identification; and $.8 million for local government. For FY 1979, the Administration is requesting $26.2 million for financial assistance. Of this amount, $15.0 million is needed for the development and implementation of State hazardous waste programs and $11.2 million is needed for the development and completion of State solid waste plans and the development of State land disposal regulatory programs. No funding for local planning and implementation is planned for FY 1979. To meet the mandated requirements of RCRA the emphasis in FY 1978 and FY 1979 has been on developing State hazardous waste and land disposal regulatory programs. We see major financial assistance shifting to local government in FY 1980. During this planning period, States will increasingly build a capability in resource conservation and recovery, through the development of long-term State resource conservation plans.

HAZARDOUS WASTE CONTROL

Subtitle C requires the design of a regulatory framework that provides "cradle-to-grave" control over wastes deemed hazardous under the authorities of RCRA. Such a framework is aimed at assuring that hazardous wastes no longer appear in systems not designed for their control.

To implement Subtitle C, we are developing seven sets of regulations supported by a voluntary environmental impact statement and an economic impact assessment. Three of the regulations have been, or are about to be, proposed in the Federal Register. These are the regulations containing guidelines for State hazardous waste programs (Section 3006), procedures by which waste handlers of hazardous wastes may notify EPA or the States (Section 3010) and standards for waste transporters (Section 3003). We anticipate that the remaining four regulations will be proposed by early May along with the draft environmental and economic impact statements. We are proposing the regulations on a staggered schedule as they become ready in order to maximize the amount of public review; they will be promulgated as a set. At present, we expect final promulgation of the Subtitle C regulations to take place around Labor Day.

The hazardous waste regulatory program will become effective six months after promulgation or during the first quarter of 1979.

With regard to the specific regulations, a number of issues have arisen which deserve mention. First, we are particularly pleased with our success in working together with the Department of Transportation on the regulation of transportation of hazardous wastes under Section 3003. We have jointly held a public meeting to gather data, and plan joint public hearings. We anticipate that the transportation regulations for hazardous wastes will be promulgated by DOT and adopted by EPA to allow joint enforcement. This is a fine example of interagency cooperation.

Regulations concerning the definition and listing of hazardous wastes (Section 3001) and the standards for facilities for their disposal (Section 3004) will be proposed last, primarily because they are the most technically complex. Our mandate under Section 3001 to address chronic as well as acute toxicity has required us to examine the state-of-the-art work in this area. Identifying existing testing methods that are feasible for complex chemical substances in waste streams has been difficult. Similarly, our charge under Section 3004 to address a multitude of factors affecting facility operation is very demanding. Foremost among the technical issues is protection of the public health from the myriad of recognized hazardous air pollutants not presently directly regulated by EPA. Similarly, a very difficult

management issue is the provision of funds for closure, long-term care and monitoring, and clean up if potential problems arise. We are seeking solutions to this problem jointly with affected industry, the insurance industry, and others. These solutions will be reflected in the regulations when they are proposed.

Our proposed State guidelines address the difficult issue of interstate transport of hazardous wastes. Free movement of solid wastes across State lines to permitted facilities is a legal issue currently before the Supreme Court, as was discussed earlier. Its decision along with our final regulation will affect the workability and economics of hazardous waste management. EPA supports the free movement of the wastes under regulatory control of RCRA. We also recognize that institutional change takes time. The proposed guideline therefore, establishes a time deadline of five years for States to remove constraints against the free movement of solid waste.

Facility availability is another major issue that will affect the implementation of the entire program. Subtitle C fortunately contains a "safety valve" in the form of interim permits to assure available capacity as we begin the program,

i.e., interim permits. However, strong citizen opposition is being raised to the siting of many kinds of public facilities (including prisons, power plants, and transmission lines), in addition to sanitary landfills and hazardous waste management facilities. Whether site approval for new or improved facilities on the generator's property or elsewhere will be obtained is a matter of serious concern, and one we are studying carefully.

Finally, a real challenge under Subtitle C has been to integrate its authorities with other environmental legislative requirements. Design of the hazardous waste regulatory system has required extensive coordination with other programs for surface and underground water protection, drinking water protection, ocean dumping control, pesticide disposal regulation, hazardous air pollutant control, and anticipated toxic substance regulation. These coordinating activities have focused our attention on the wide-ranging impact of RCRA authorities alone all solid waste. RCRA, with its disposal and resource conservation objectives, has allowed us to assure that actions under other environmental authorities will not ultimately result in the re-entry into the environment of undesirable pollutants.

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SOLID WASTE DISPOSAL

Major activities have been initiated under Subtitles A and D to meet the solid waste disposal requirements of RCRA.

We have devoted a major effort to the development of Criteria for Classification of Solid Waste Disposal Facilities in response to Sections 1008(a)(3) and 4004(a) of RCRA. These Criteria are intended to provide the States with a benchmark against which they can evaluate all solid waste disposal facilities. Thus, disposal Criteria are a keystone of State control of land disposal. Disposal facilities which do not comply with the Criteria are, by definition under Section 4005, open dumps. Those facilities which the States identify as open dumps (by application of the Criteria) will be listed in the Open Dump Inventory required under Section 4005. Open dumps are prohibited by RCRA, and States are to develop regulatory and other programs to ensure that open dumps are eliminated.

The disposal Criteria were proposed in the Federal Register on February 6, 1978. In developing the Criteria, various organizations, including the States, were consulted extensively, and we will continue this public participation process as we progress to final promulgation.

The Criteria have been closely coordinated with various other laws and programs, including the Safe Drinking Water Act, the Federal Water Pollution Control Act, the Clean Air Act, Executive Orders 11990 (Wetlands) and 11988 (Floodplains), and the Endangered Species Act. In addition, the disposal Criteria are to be copromulgated as partial fulfillment of Section 405(d) of the Federal Water Pollution Control Act, as amended by the Clean Water Act of 1977. This will help to satisfy the need identified in the Clean Water Act for sludge disposal guidelines and will provide for implementation of the disposal Criteria through the wastewater treatment facility construction grant program.

The broad and comprehensive statutory definitions of "solid waste" and "disposal" are reflected in the Criteria, and the regulation will apply to all methods of solid waste disposal including landfilling, landspreading, and surface impoundment. Excepting those wastes deemed hazardous via Section 3001 of the Act, virtually all industrial, residential, institutional, and commercial solid wastes will be covered by the Criteria.

The requirement that disposal Criteria provide for ". . . no reasonable probability of adverse effects on health or the environment from disposal of solid waste . . ."

imparts a significant degree of complexity to the regulation. The Criteria address potential adverse environmental impacts on ground water, surface water, air, food-chain croplands, and public health and safety. They also discourage the location of disposal facilities in environmentally sensitive areas such as wetlands and floodplains.

The facility evaluations required for the development of the Open Dump Inventory (Section 4005) will, of necessity, be complex and time-consuming. The evaluations must be thorough and sound, both technically and legally, in order to support enforcement actions undertaken by the States. Furthermore, the evaluations must be defensible in the case of citizen suits brought under Section 7002 against disposal facility operators or regulatory entities.

In light of the technical and legal complexities, costs, and the potential impact on facility operators and users and the general public, we think it appropriate to time-phase the evaluations and publication of the Open Dump Inventory. This would extend the compliance time-frame of Section 4005. However, we are convinced that such controlled extension is desirable and provides the only workable approach.

We have arranged to conduct the Inventory evaluations through the States, with 100 percent Federal funding provided

by the financial assistance programs of Section 4008. I would like to add that we have been working closely with the Bureau of Census as required by Section 4005(b) of RCRA. The Bureau of Census will be developing the data management system for the inventory and will be processing the data as the inventory evaluations are completed.

As we advised you by letter on April 12, 1977, we have initiated development of two solid waste disposal guidelines in response to Section 1008 of RCRA. As development of the Criteria progressed, it became apparent that our guidelines approach should be modified to provide guidance which will better support and aid implementation of the Criteria. Thus, we now intend to develop three guidelines to cover the practices of landfilling, landspreading, and surface impoundment disposal. These guidelines will provide design and operational guidance that will allow compliance with the Criteria. Since these guidelines are intended to aid in implementation of the Criteria, they will be developed in concert with finalization of the Criteria. Meanwhile, the guidelines which we promulgated under Section 209 of the Solid Waste Disposal Act of 1970 remain viable.

The public comment period for the Criteria ends May 8, 1978. We hope to promulgate the regulation in final form in

the Fall of this year. The first installment of the Open Dump Inventory would follow one year later.

RESOURCE CONSERVATION

As I mentioned in my opening remarks, resource conservation is one of the goals of this Act. It is also a requirement of the Act, appearing specifically in Subtitles F and H.

In enacting RCRA, Congress recognized that solid waste is not a useless commodity, but rather, a potential resource to be used and that we, as a society, have not always approached the use of our finite energy and material resources with sufficient wisdom to assure their availability to future generations. The Act requires both EPA and the Federal government to focus on this problem quickly, and clearly intends for the Nation to move toward resource conservation as an essential element of solid waste management as quickly as possible. The interagency Resource Conservation Committee's investigations of current and proposed policies together with other studies to be performed by EPA should culminate in recommendations to the President and Congress to help achieve the objective of resource conservation.

Section 8002(j) establishes a Resource Conservation Committee, chaired by the Administrator of EPA. The Committee is composed of the Secretaries of Commerce, Labor, Treasury, and Interior, the Chairman of the Council on Environmental Quality, the Administrator of EPA, and a representative of OMB. The Committee invited a representative of the new Department of Energy, which did not exist when the Act was passed, and a member of the Council of Economic Advisors, whose special expertise and perspective we thought would be useful in the analysis of economic policies required by the Act, to sit with the Committee. A significant portion of the EPA resource conservation effort in the first year following enactment of the Resource Conservation and Recovery Act has been devoted to initiating the work required of the Committee.

The Committee's first report, in June 1977, presents plans and schedules for the Committee's activities throughout its two years of effort. A formal report to Congress and the President is called for at the end of that period.

The Committee transmitted its second report to the President and Congress in January 1978. It contains the findings of the Committee on the potential economic and environmental impacts of its first major issue studied: a

national mandatory deposit on beverage containers. The deposit system would require a minimum 5-cent refundable deposit on all beer and soft drink containers. The deposit would provide an economic incentive to consumers to return empty containers for reuse or recycling. The Committee will make recommendations concerning deposit legislation, pending further study.

The Committee is now studying solid waste disposal charges and a variety of other economic and policy incentives and disincentives to conserve resources. The Committee expects to report its findings on product charges in May.

In addition to these economic policy oriented studies being conducted by the Committee, EPA also has underway the other studies required by Section 8002. In FY 1978, we will look at the compatibility of front-end source separation with high technology resource recovery systems, and at small-scale and low-technology resource recovery, and we will reevaluate our research priorities. These efforts will be completed in October of this year. Other studies, such as the analysis of glass, plastics, and tire recovery alternatives will begin this year for completion in October 1979 as mandated. The findings of these studies will be reported either in separate reports or as part of the Annual Report required under Section 2005.

The Act provides an opportunity for the Federal community to do something immediate and positive in resource conservation. Section 6002 requires Federal agencies and contractors to procure products containing maximum practicable quantities of recycled materials and to use recovered material-derived fuel to the maximum extent practicable. We are now in the process of preparing guidelines to assist Federal agencies as well as States, in this effort and hope to be able to provide substantial technical assistance in meeting this requirement. This is especially important because the Federal government is one of the largest single purchasers of products and services in the country. In addition, many State and local governments and large corporations use Federal specifications in their purchasing procedures. Thus, these guidelines serve the dual purpose of creating a new primary demand for goods containing recycled materials and, by the Federal example, induce and encourage a variety of secondary demands. Both will enhance resource conservation through increased use of recycled material.

Technical assistance from EPA to bring about Federal agency implementation of guidelines promulgated in June 1976 for source separation of paper in Federal buildings paid rich dividends over the past year. As a result of the efforts of EPA and the General Services Administration, there are now over 115,000 Federal workers in 90 buildings participating in

separation of high-grade ledger paper through the unique desk-top container system. This program will continue to expand over the next few years. The result is not only reduction in waste volume, but also significant cost savings.

Another important resource conservation activity initiated last year was an innovative two-eay seminar on the implementation of resource recovery. The seminar was presented in six locations to over 1,000 State and local officials and representatives of private industry. The seminar drew high praise from attendees and is being continued this year.

Finally, a resource recovery system evaluation program was begun in the past year to document the performance of newly implemented, commercial recovery systems. Initiated as a low-cost alternative to commercial scale demonstrations, the evaluations provide technical, economic, and environmental performance data on new resource recovery systems, many of which have never previously operated at commercial scale. The information provides an important base of information for use in EPA's Technical Assistance Panel program.

TECHNICAL ASSISTANCE PANELS

We have now begun implementing the technical assistance program authorized by Section 2003, and have been offering assistance to States and local governments under the authorities of Section 2003 since January 1, 1978. Our experience thus far, although brief, strengthens our conviction that the Panels program meets an immediate and important need among State and local governments. Within the first few weeks of the program, for example, the Panels mechanism allowed EPA to assist a large western community with a methane problem from landfilled wastes. EPA in this case has provided the services of both professional consultants and public officials from other parts of the United States all without cost to the recipient.

We have developed and distributed to our Regional Offices a Handbook for the Panels program, describing how the Panels program is to operate and the kinds of technical assistance which will be given. The Handbook also identifies key people in both Headquarters and the Regional Offices.

The Technical Assistance Panels Program is designed to deliver technical assistance through the use of a number of tools and resources. These are: EPA Regional Office staff; EPA Headquarters solid waste staff; consultants under contract

to EPA Regional Offices; public officials (both elected and appointed) from State, county, and municipal governments; and voluntary participants from industry, other Federal agencies, etc. Additionally, we are increasing the development of data, information, and guidance materials to assist all sectors of the solid waste management field in their decision making and for use by the TA Panels to deliver assistance.

The public officials referred to above are available through "Peer Matching," a device which allows EPA to pay for the travel and expenses of experts from State and local government through grants to special interest groups. To date, EPA has given grants to The American Public Works Association (APWA); International City Management Association (ICMA); National Association of Counties (NACo); National Governors' Association (NGA); and, National League of Cities (NLC) to participate in this program. The "peer match" has shown itself to be an unusually effective and efficient tool over the last few years, and promises to be the same in the future.

EPA is also procuring teams of consultants to assist the Regional Offices in meeting the requests from States and

local governments for specialized help in solid waste management. The "request for proposals" has been published and the resulting contracts are expected to be signed early this summer. Each Regional Office will thereafter have control of a team capable of providing assistance on any solid waste issue or problem.

We recognize the importance of careful management and the need for flexibility in structuring a new program such as the Panels program. We are, therefore, developing an evaluation system which will allow recipients of the Panels' technical assistance to candidly and promptly appraise the responsiveness of the Panels, including both the quality and the timeliness of the help EPA renders. The evaluation system is being developed in consultation with the special interest groups identified above as participating in "peer matching." Although an evaluation system is not yet fully developed, it should be ready for use within a few weeks.

The Panels program provides both a mechanism for increased attention to the adequate training of solid waste managers. We are now examining the needs of Federal, State, and other solid waste managers in anticipation of developing a training program which will better prepare them for the new policies and technologies created by RCRA.

RESEARCH AND DEVELOPMENT

The fundamental goal of the research and development program is to produce the scientific data and technical tools that can lead to improved methods and technologies necessary to achieve environmentally acceptable and cost-effective solid waste management. Promising, improved technological methods are demonstrated first at pilot scale, and then each component is reexamined to assess the risks of scaling up to community-sized facilities.

Individual research projects are carried out by staff researchers, by grantees, and by contractors within the framework of the research and development plan prepared by the Solid and Hazardous Waste Research Division of the Agency's Municipal Environmental Research Laboratory in Cincinnati. The plan includes the following five areas of emphasis:

1. The development of comprehensive information and methodology for improving site selection, design, operation, maintenance and closure of solid and hazardous waste land disposal sites.

2. The development and environmental assessment of alternative methods to landfilling for disposing of solid and hazardous waste on land.

3. The development of remedial techniques to minimize the production of leachate and gas at existing disposal sites.

4. The technical, economic, and environmental assessment of methods for processing and/or treatment of hazardous wastes.

5. The development of techniques to increase the recovery and reuse of waste by assessment of the total impacts of alternative systems and developing marketable products.

The results obtained on each project are provided in the form of reports that are made available to the scientific community through the National Technical Information Service of the U.S. Department of Commerce. These research reports are also indexed and cataloged in EPA publications to make the information readily available to State and local agencies. In addition, research results are reported in scientific and technical journals and through scientific symposia.

TECHNICAL AND PUBLIC INFORMATION AND PUBLIC PARTICIPATION

In view of the nature and the complexity of the issues that RCRA addresses, the voluntary changes in institutional

and individual habits and attitudes that Congress intended to stimulate, and the difficult direct and indirect regulatory actions it prescribes, RCRA's successful implementation depends on a high level of public understanding and participation. Fortunately, RCRA contains an array of public information and participation provisions.

Section 2005 requires an Annual Report. Our first Annual Report was transmitted by the Administrator on February 1, 1978.

Section 7004 requires that public participation in implementation of all parts of the Act be provided for, encouraged, and assisted by EPA and the States. EPA, in cooperation with the States, is to develop and publish minimum guidelines for such public participation.

Section 8003 requires EPA to develop, collect, evaluate, and coordinate information in key subject areas; to rapidly disseminate this information; to implement programs to promote citizen understanding of its significance; and to establish a central reference library on solid waste management.

The Office of Solid Waste for some years has had an active information program directed to both technical and

general audiences, a computerized information storage and retrieval system, and, since 1972, a program of grants to organizations (civic, environmental, and consumer groups, labor unions, etc.) to support educational activities. With the passage of RCRA, these programs naturally formed the base for implementation of the RCRA requirements for information and education programs. OSW information programs were also considered to be necessary adjuncts to the Section 7004 public participation program, since only informed citizens can participate effectively and constructively in the complex decision-making called for by RCRA.

OSW's information objectives for fiscal year 1977 were: informing the public of the provisions of RCRA and their implications; providing opportunities for public participation in implementation of the Act; developing the Annual Report, the guidelines for public participation, and the regulation for prior notice of citizen suits; continuing the production and distribution of technical and public information materials on solid waste management for use in the citizen-education grants program and in technical assistance to be rendered to State and local governments; and continuing the solid waste literature search and library services for use of government, universities, industry, individuals and Congress.

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The mandated deadlines of RCRA assured that the efforts to implement many of the regulations, guidelines, etc., would have to start immediately. In order to obtain public input related to these initial efforts, public participation activities also had to begin without delay. The first was an all-day public meeting in Washington on December 16, 1976. Similar meetings were sponsored by all the EPA Regions during January through March 1977. In the meantime a general plan for public participation was drawn up as guidance until the formal guidelines were developed. This plan was approved by the EPA Administrator and published in February 1977; its basic features were later incorporated into the interim guidelines.

A main element of the plan was to hold public meetings, hearings, conferences, and workshops throughout the country on a schedule in accordance with major developments in carrying out the key provisions of the Act. During Fiscal Year 1977, approximately 100 public meetings and workshops were held on the regulations, guidelines, and criteria being developed under Subtitles C and D. Transcripts of the hearings and meetings were made available to all interested persons.

A draft of the interim guidelines was approved by the EPA working group in June 1977 and sent out to reviewers

representative of the entire spectrum of interest groups and all levels of government. A public meeting was held in July to receive comments. A second draft was completed August 26, reviewed, and revised. The guidelines were published in the Federal Register, January 12, 1978. The guidelines apply not only to EPA but also to State governments and regional and local agencies receiving financial assistance under the Act. Each agency is required to conduct a continuing program of public information and participation. This program is to include provision of appropriate information to those who are interested in or affected by the decision-making. Each agency is to also provide technical and information assistance to public groups for citizen education activities. The guidelines specify minimum requirements regarding public hearings and other public meetings.

To develop public awareness of RCRA and its provisions, to meet the real demand for information about the Act, and to stimulate public participation, EPA published the Annual Report to Congress, which was delivered almost on time, and developed a variety of information materials--summaries, pamphlets, news releases, TV-radio public service announcements, fact sheets, and an exhibit. The printed materials were widely distributed and provided in bulk to OSW grantees carrying out public education programs and to the States and

local governments who requested materials for distribution. The regulation on Prior Notice of Citizen Suits was published in the Federal Register on October 21.

In Fiscal Year 1978, implementation of the public participation guidelines will be a major new effort. EPA will work with each public participation officer who is to be appointed by each Region to bring about implementation and monitor progress. State and local governments have indicated in the public meetings that additional public participation guidance is needed. Additional and more detailed specifications are, therefore, now in preparation and will be added to the guidelines before they are made final. Approximately 50 hearings and public meetings will be sponsored by EPA headquarters and held throughout the country on the regulations, guidelines, and programs now under development. To assist the State and local governments in their efforts to inform and involve the public, EPA will provide solid waste information materials and, as funds allow, grant assistance for citizen education programs so that the public has opportunities to understand the issues in RCRA implementation and solid waste management and can therefore, participate constructively in local, State, and Federal decision-making.

Mr. ROONEY. Thank you, Mr. Jorling. I am particularly alarmed by the recent derailments which have involved extreme danger due to the transportation of hazardous materials. In fact, the subcommittee will hold hearings next week on rail safety. I wonder if you would tell the committee what EPA's role should be in the area of transportation of hazardous wastes.

Mr. JORLING. Most directly, under RCRA, Mr. Chairman, we have authority granted to us to effect the control of the transport of hazardous waste. That authority is somewhat parallel with the Department of Transportation authority, and we have worked with the Department in carrying out our respective authority, and I am pleased to respond that I think it is a model of interagency coordination. The agreement we have reached with the Department of Transportation is, we will propose the criteria for the safe transport of hazardous waste. Those criteria would then be published in proposed form by EPA, and will be taken by the Department of Transportation and proposed as their regulation, and then both agencies will promulgate them together, so that the enforcement authority of the respective agencies is available.

The Agency also has authority with respect to responding to emergency spills and conditions under the Federal Water Pollution Control Act and the Safe Drinking Water Control Act. Last Friday, we promulgated finally, I should add, the section 311 regulations which establish the mechanisms to respond to the spills of 271 hazardous chemicals. Several of those which have been recently discharged as a result of train accidents would have been covered by those regulations had they been in place.

Mr. ROONEY. What seems to be the delay? Why don't you put the regulations in place so that we can prevent these derailments of hazardous materials?

Mr. JORLING. We have no authority to prevent derailments and to improve the character of the rail system. That is outside the purview of the EPA. With respect to the cause for the delay in the section 311 regs, complexity among them but also resources and the controversy surrounding many of the elements.

Let me just give you an indication. We had to define for each of those 271 chemicals what constituted a hazardous amount of discharge which, upon that amount or a greater amount, requires the discharging owner or operator to give notice to the Government and triggers the whole sequence of actions available under section 311. That is testing the state of the art. The ability to screen chemicals for characterization as hazardous is not an easy matter, and there were those kinds of difficulties.

We also had some legislative ambiguities which were corrected in the Clean Water Act Amendments of 1977 that also gave us some momentum. There was also just inertia on the part of our Agency over the intervening 8 years. We hope that that will not be the pattern that will be repeated, but it is difficult. These questions are oftentimes at the leading edge of scientific ability to screen the chemical and establish what constitutes a hazardous amount.

We hope, and we are facing some of these same questions with respect to the section 3001 regulations defining what constitutes hazardous waste for purposes of RCRA implementation. Again, that is

testing the front end of scientific and technical knowledge, but we expect to be on track with our proposed schedule, which calls for the publication of those in June or by June of this year.

Mr. FLORIO. Mr. Chairman, on that point, if I could get a bit of elaboration, I am not really sure exactly of EPA's rule. Clearly, you have nothing to do with maintaining tracks or the kinds of cars that these materials may be carried in. Are you telling the committee that in fact your role is exclusively in defining what is a hazardous waste?

Mr. JORLING. That is the first requirement. Once we define what is a hazardous waste, other authority comes into play.

Mr. FLORIO. Such as?

Mr. JORLING. Including the manifest system which tracks the transportation of hazardous waste, tracks it in the sense that a document follows the waste, so that when it was received at a permitted site, we can make a judgment as to whether or not there has been any lost along the way and any other responsibilities attached, and that does include safety standards in that transport. It does not include the actual condition of the tracks of the railroad, but it can include in certin instances container standards.

Mr. FLORIO. I mean, you have nothing at this point to say about the nature of the tank cars. FRA, it seems to me, is in that area. What is your role in determining safety in terms of transport on railroads? I am really not sure if in fact you have a role.

Mr. JORLING. We can establish certain types of container requirements.

Mr. FLORIO. Tank car requirements.

Mr. JORLING. If they choose to take them by rail.

Mr. FLORIO. Let's talk about rail for a moment. What I am trying to do is find out what your role is, EPA's role is in the transportation of materials which have already been defined as hazardous wastes that are going to be transported by rail.

Mr. JORLING. The authority comes from RCRA and section 311, subsection I of that section. We have authority and we have it in conjunction with the Department of Transportation to establish preventive measures.

Mr. FLORIO. Such as?

Mr. JORLING. Container requirements.

Mr. FLORIO. You are coming back to the container requirements. We are talking about rails, so we are talking about tank cars. Have you exercised authority to say in some way the tank cars are not safe?

Mr. JORLING. No. In fact, with respect to the best professional judgment, the problem is not so much whether the tank cars are safe as to whether the rails are safe.

Mr. FLORIO. I am aware and agree with that, so I am really still asking, what is it you are doing?

Mr. JORLING. What we are doing is defining what constitutes a hazardous waste.

Mr. FLORIO. You said that.

Mr. JORLING. We are establishing a response mechanism available that in the event of spill actions are taken to mitigate and clean up the consequences of that spill and to charge back against the owner-

operator the cost of the clean-up and to assess penalties upon those who discharge these materials, all of which is designed to create a higher standard of care in the movement of these materials.

Mr. FLORIO. I understand what you are saying with regard to defining hazardous waste. I understand what you are saying with regard to post-spill procedures that are to be followed, but I am still not sure, and it may be there is nothing you can do, and I would like just to know that, what it is you can do and are doing with regard to the prevention of spills. Is there a role for EPA to play?

Mr. JORLING. I think that our role right now is limited to aggressive implementation of the section 311 requirements. These have potentially very high liabilities, both civil penalties and recovery of clean-up cost. The effect of that aggressive implementation will be to induce a higher standard of care upon those in the industry dealing with these materials, and hopefully they will take the actions necessary to prevent the spill. That is, I think, our best lever at the present time. It is going to be very difficult for the Federal Government to do anything in the way of bearing the cost of making the rails safe.

Mr. FLORIO. Thank you, Mr. Chairman.

Mr. ROONEY. Mr. Jorling, the section on procurement, section 6002, seems to require use of materials recovered from the solid waste stream. In your opinion, is there a difference of opinion either with the other industries or the other agencies as to what the term "recovered materials" means in that section?

Mr. JORLING. I will ask staff to respond to that.

Mr. PLEHN. Mr. Chairman, 6002 directs EPA working with procurement agencies to establish specifications which will ensure that the maximum practical amount of recovered material is incorporated in the products purchased by the government. This is a problem on which the General Services Administration has been working for some time, and they had previously developed specifications which both dealt with materials recovered from post-consumer solid waste and materials which in earlier times were considered waste materials. For example, wood chips, sawdust, and things of that sort that are byproducts of logging and pulping activities.

In the cast of paper towels, for example, the GSA had a specification which said, and I am not sure about these numbers precisely, but roughly 45 percent of the product should come from post-consumer waste, such as newspapers, things of that sort that are collected out of the waste stream, and 45 percent should be from wood chips.

With the enactment of RCRA and its broadening of the definition of what is a solid waste, there apparently has developed some ambiguity as to whether GSA could continue to insist on the inclusion of both waste products from the post-consumer stream and waste products that result as a part of forest management.

It has been our assumption all along that the intent of the Congress was to not slide backwards in any way in terms of having these specifications ensure the post-consumer waste products be incorporated in the specifications under which the Government purchases things. So, I think that is the ambiguous question there, as to what the congressional intent was as to these two kinds of waste.

Speaking for EPA, we certainly do not want to discourage and are supportive of the use of these byproducts in the logging and pulping for a beneficial purpose. I mean, that is a form of waste, and we are very glad it is being used, but we also think it is quite important to do as much as we can to use post-consumer waste and to define them in the specifications.

Mr. ROONEY. I yield to the gentleman from New Jersey.

Mr. FLORIO. A couple of points. One, I agree with you the funding has been relatively generous for the implementation of the State plans, and that is the way we should go, but if my State is in any way characteristic of the other States, they have been proceeding very well but running into problems about the Federal guidelines. Clearly, they want to make their State plans in conformance with the Federal guidelines, and the Federal guidelines and regulations just have not been coming, for example, regulations concerning land fills versus dumps. They are not out yet. We are ready to talk about our plan going into operation and we still haven't got the regulations from the Federal level, and I ask specifically with regard to this one and generally why has there been so much delay in the Federal publication of regulations that the States have to have before they go ahead with their plans?

Mr. JORLING. OK. I think one of our management tasks is to bring the State program assistance and the requirements, the guidelines, the regulations along so that they mutually reinforce each other. I suspect we have been slower than we would have liked in the promulgation of these guidelines and criterion. We, however, now have, I think, a basis on which we can make firm projections. The 4004 criteria, which are the land fill criteria, the distinction between open dumps and acceptable land fill practices, were published in the Federal Register last month. They are out for public comment, and we will receive that comment and make the final judgments for promulgation early this summer.

With respect to the hazardous waste regulations, this is a collection of seven major pieces of regulatory activity. We have published in proposed form from the first two of those. By the end of June, we will have published all seven, and by September, we will promulgate the entire collection of these as a package, so that they will be available for the States as they begin to utilize the increased support that we are expecting Congress to make available for State grants in fiscal 1979.

So, we think we have the program grant assistance and the guidelines criterion effort in track focusing on fiscal 1979 when we anticipate most of this activity will shift to our regional offices and to the State government.

Mr. FLORIO. I think you can appreciate the difficulty. Just this week, the State of New Jersey published its hazardous waste plan regulations. Now, hopefully, it is going to be in conformity with the Federal Government regulations, but you can appreciate the difficulties of having them already published, and then waiting for you to publish yours and to find out later on down the road that there is somehow a lack of compatibility, so I would urge you to move as rapidly as possible so as to reinforce the fairly expeditious treatment the States have given this very important subject.

Mr. JORLING. I might add, though, that New Jersey is a leader. It is not typical of the pace of all other States.

Mr. FLORIO. The import question. Is it my understanding that EPA proposes to authorize States or to allow States to have import bans on the importation of solid waste from other areas for a period of time, and yet you still have some problem with a blanket ban? What I am saying is, what does your policy look like at this point with regard to importation of solid waste bans?

Mr. JORLING. In the proposed regulations, I believe the 3006 regulations, we have proposed a mechanism which States that as a condition of State approval of the activity by EPA, States without import bans cannot establish import bans, in other words, to put a stop to the enactment of those types of things on the parts of States.

Mr. FLORIO. Blanket? No opportunity to present mitigating circumstances or the fact that there may be some justification?

Mr. JORLING. It is presently proposed as a condition on approval, blanket. With respect to those States that have already adopted one form or another of importation bans, we proposed in these regulations to make a condition of the approval a 5-year phase-out of those importation bans rather than an immediate disapproval, a phase-down so that the States do not have these artificial obstacles to the wise and prudent management of this material.

Mr. FLORIO. In neither of these situations, either the absolute prohibition or the absolute phaseout, are you contemplating taking into account the arguments that are presented with regard to the unavailability of land fill space or whatever the argument is being put forth? Is there going to be any appeal mechanism or any mechanism for extenuating circumstances that would justify exceptions?

Mr. JORLING. The requirement of the State which assumes the program is that they have the ability to permit hazardous waste receiving facilities.

Mr. FLORIO. I am not even talking about hazardous waste at this point. I am talking about solid waste bans in general. I assume that is what you have been addressing.

Mr. JORLING. Our first concern is hazardous waste bans, importation bans.

Mr. FLORIO. If I said hazardous waste, I meant solid waste bans.

Mr. JORLING. I think what we are doing is taking a position in the regulations specifically on the hazardous waste bans; however, we recognize that it is very difficult to distinguish for the purposes of bans which type is which. The Supreme Court, we know, is going to issue a decision which is going to deal specifically with the latter, nonhazardous waste ban, and we are in effect awaiting their guidance before we move beyond the hazardous waste.

Mr. FLORIO. So what you represented with regard to the absolute ban prohibition, where there is no ban, and the 5-year phaseout, where there is a ban, was really addressing bans on the importation of hazardous waste.

Mr. JORLING. That is correct.

Mr. PLEHN. That is correct.

Mr. FLORIO. When you say that that policy is with regard to hazardous waste importation, that is for disposal or treatment, making the distinction between importation of hazardous waste for ultimate

disposal as opposed to importation for treatment, and then disposal some place else?

Mr. JORLING. It can be either, so that as long as the site to which that material is going is a permitted site under RCRA.

Mr. FLORIO. Let me ask one last question, on the question of the hazardous waste disposal, or rather disposal systems and interim treatment systems. You mentioned you would like to ultimately see the private sector become involved in this, and that was your first hope, but if that did not work, you would go on for other measures, and you didn't mention what other measures you would contemplate, but it seems to me you were almost begging the question that the private sector is becoming very frustrated with the question of popular opposition with the question of siting difficulties under regulatory problems that are coming up.

So, to say we are going to wait to see if it works out is begging the question. It is not working out. We have in my own district a facility that had a major explosion. The company is trying to reestablish it, and there is a lot of difficulty. The local population is unhappy with it. Federal and State agencies are unhappy. I do not think we should wait and say, lets see if it works, because it is not going to work. There have got to be some Federal regulations concerning siting for the protection of the private people as well as the public, that there be an end to the regulatory morass that can bounce back and forth between different agencies for years and years and years.

We must have a definitive system which will allow for the siting of these places where appropriate, and I am just wondering if EPA is in any way gearing up to make recommendations or gearing up to put forth regulations under existing law to suggest something about citing and all of the other problems associated with the establishment of private solid waste disposal and treatment centers.

Mr. JORLING. I think you have described a problem which we are going to have to work together, we being the executive branch, the State governments, and the Congress, and the State legislatures, together to solve, and it does not admit right now to an easy solution. The siting of these types of facilities, whether it be a private facility, a Government-run facility at the State or Federal level is subject to the same impediments, and those impediments are severe.

What we are doing now is undertaking to implement RCRA effectively, which is to at least put into place the types of precautions, the standards, the guidelines that measure whether or not a site, a receiving facility is one that is of a character necessary to protect public health and the environment. That is what RCRA will achieve. Then, to implement RCRA so as to enable to the extent possible the States to permit these sites where they fail, for us to permit these sites, and see if that addresses the question.

We admit, and we are supporting several activities most specifically a grant in Minneapolis to site a facility, we admit that it is proving to be more difficult than certainly the agency and, I think, almost anyone expected to receive the public's blessing at a particular site. In the Minneapolis case, the legislature granted the authority to whom we gave the grant of condemnation and preemption power, and they still have been unsuccessful in siting it. It is not a private

siting. It is a Government siting, a public agency attempt at siting. We have been supporting that for 3 years. We will continue to support it, and in order to document the kinds of obstacles placed in front of these efforts, the public has to be made more aware that these activities are going on now, they are going on now with very little precaution, very little safeguard to the health and environment, and that RCRA gives us the tool to try that.

If, however, public opposition and public opposition either site specific or statewide through importation and other types of hurdles continues, we will have to look at other alternatives. Let me just give you the range. I am sure it is not exhaustive. The range can include Federal preemption, no importation bans, no restrictions on the interstate flow of waste. That is one type of response mechanism.

Mr. FLORIO. Federal siting regulations as well, a la Nuclear Regulatory Commission for nuclear facilities?

Mr. JORLING. In a sense, the siting regulations are here. Once you have established what those are, the question is taking those and even with them agreeing on a site. The second measure would be condemnation.

Mr. FLORIO. Are you representing that in fact Federal law siting provisions here are preempting local zoning laws? I don't think you are. I just want to make it clear for the record.

Mr. JORLING. Not now. We do not have that authority. We are attempting now to use the State authority to locate these sites, to go through the necessary procedures to site what we have through our guidelines established is a public health and environmentally safe one.

Mr. PLEHN. Tom, maybe I could just add, under our 3004 guidelines, which will define the performance characteristics of hazardous waste disposal facilities, we will have requirements in there that such things as citing near earthquake faults or citing in a place where waste would be very close to ground water or citing in wet lands would be precluded. I think these are the kinds of conditions——

Mr. FLORIO. All I am suggesting is, that does not preclude—that does not find any answers, because you are saying where they cannot be sited, not where they can be sited.

Mr. JORLING. That's right.

Mr. PLEHN. That's right.

Mr. FLORIO. They can comply with all the things you talk about, no earthquakes, no other things around, and then find out that the local zoning board doesn't want it for legitimate or illegitimate reasons, and no one ever gets around to saying where these sites are going to be. The difficulty in my own area is in fact, we are saying we don't want these anywhere. A lot of people have legitimate arguments, but we are also closing up the dumps and land fills. We already have a State policy that there are to be no hazardous wastes or chemicals dumped in our land fills. The question is, where is the stuff being dumped, and we have found out. There is a whole new bootleg industry taking this stuff and legitimate manufacturers are selling it to someone who pulls up to the gate in a truck, and they

are taking it and dumping it in one of the local lakes or out in the woods, and it is starting to actually find its way into the water supply systems in some of the municipalities.

The fenal content in some areas is up much higher than is able to be tolerated, so it is not sufficient in my opinion to say that we are looking at these things and we are going to have to get around to it if this doesn't work. It is not working. The existing system is not working, and I don't see the authority in this law.

Mr. JORLING. RCRA does not give us or the states condemnation power.

Mr. FLORIO. All I am suggesting is, maybe it is appropriate, with the expertise you have, for you to in-house start working on suggestions you could present to the Congress to start dealing with the problem that is here. It is not something down the road.

Mr. PLEHN. We ought to mention that RCRA would propose to deal with that problem which you described of the firm giving the waste to what is often called the midnight hauler.

Mr. FLORIO. Through the manifest system.

Mr. PLEHN. Through the manifest system. The generator will be required to say to the transporter, I want this waste to go from here to there, and there is a permitted disposal site. The transporter then takes the waste and the manifest to the disposal site. The receiver signs off on that manifest, and a copy is returned to the generator.

Mr. FLORIO. That is assuming there is a disposal site.

Mr. JORLING. Which is your question. We are looking at these things. We are not prepared at this time to come in with what we consider to be a recommendation which we can place our entire support behind. There are many options. None of them overcome the fact that at root these problems are the problems of political leadership. Whether we have condemnation power which the State of Minnesota has granted to this authority still has not succeeded in siting one of these facilities in an area where there is a need, so there is this range of import bans, and I might add I think I could make a pretty compelling argument for export bans. No State could permit the export of hazardous waste outside its boundaries, so it had to deal politically with that problem of its own creation within its boundary.

Another is more Federal assumption of these responsibilities, the use of Federal lands, Federal condemnation power. There is a whole range of these kinds of approaches but none of them addresses specifically where the problem is, which is, political leadership. We have to be able to convince the people we are coming up with a mechanism such as the RCRA mechanism, which will provide safe, effective control of these substances, and that they will be convinced of that program, of its credibility, and then they will begin to accept this as a part of their——

Mr. FLORIO. I think what I am saying and, I suspect, what the committee is saying is, we are prepared to get to the question of leadership, but we would like to call upon you to exercise the expertise you have to refine the options so we can evaluate them in terms of policy decisions and implement them.

Mr. JORLING. We will continue to work with you on that. It is a difficult problem.

Mr. FLORIO. Thank you, Mr. Chairman.

Mr. ROONEY. Mr. Skubitz?

Mr. SKUBITZ. I have no questions.

Mr. ROONEY. Mr. Jorling, let me ask you a question. To what extent are States in need of additional financing to accomplish the goals set forth by RCRA?

Mr. JORLING. Under the budget that we had proposed and the President has submitted under consideration by Congress, $26.2 million is to be made available to the States. That amount is sufficient for the implementation by the States of the hazardous waste management and the solid waste planning landfill activity. It is not sufficient for full planning activities in the States, and no moneys are being made available to local governments or rural communities.

We have estimates of the amounts of money necessary to do that, but they are not a part of the President's budget at this time. Part of the problem we have is, it is very difficult to incrementally provide moneys to local government. If we are going to provide money for local governments, we have to come up with a unit of money that is enough to begin to do good work. There has to be a critical mass, as it were, to do that.

We estimate the amount of money necessary for that kind of activity to begin would be approximately $15 million to initiate a local assistance program. An additional $18 million would be necessary to have a bare bones but effective program.

Mr. ROONEY. This whole program seems to me bare bones.

Mr. JORLING. I think it is safe to say all the authorities which the Environmental Protection Agency administers, and there is a full range that reach into the pockets of every sector of our economy and public life, are bare boned, and what we are faced with here——

Mr. ROONEY. Do you have someone in your department lobbying for the need for additional funds going to the OMB, going to the White House and informing them of the great problem facing the American people?

Mr. JORLING. We do.

Mr. ROONEY. I think it is appalling when we think 50 cities in the United States are going to be without landfill in the next 5 years, and you sit here and talk about $26.6 million in planning for 50 States. It is incredible.

Mr. JORLING. Mr. Chairman, I am in effect the lobbyist for this program. This program has increased 40 percent over its last year's base. Four programs have taken devastating cuts, the noise program, the water pollution control program, the air pollution control program, and the radiation programs, in order to find the resources necessary to increase this. This is how ZBB operates. We get a universe of resources to work with, and we allocate them to those things which we in the Agency think our highest priority. The three programs increased in resources for fiscal 1979 are RCRA, toxic substances, and safe drinking water. Those are the three programs that increased. They had to increase at the expense of other pro-

grams. All of the programs, however, are important to public health and environmental quality. It is very difficult to make those assessments, but RCRA came out quite well in that context.

Mr. FLORIO. If the gentleman would yield on that point, just a suggestion for an approach that may increase the effectiveness of your petition to the administration and to the Congress. The energy proposal has come forth, and there really isn't much to do in the energy proposal of the administration talking about the energy potential out of solid waste, the whole concept of utilizing solid waste for energy generaton.

Have you attempted n your discussions with OMB to put forth the argument that this is something that could perhaps be emphasized to a larger extent as part of not only the question of disposal but also the secondary consideration that here we are talking about energy-generating facilities potentially, and we are not really realizing the full potential.

Mr. JORLING. We have made available to the Department of Energy and others within the executive branch what energy value we see with the implementation of RCRA. We have attempted to do that.

Mr. FLORIO. How much value do you see? Do you see this as a major benefit of the whole act, or is it sort of a secondary benefit?

Mr. JORLING. Honestly, I think it is a secondary benefit. The primary benefit is the protection of health and environment. The numbers that come from our analysis show that the amount of energy on any kind of a national basis is not great. It is important and it does solve another problem besides production of energy.

Mr. PLEHN. If I may, I would like to make a point that the two goals are really related in a sense until the low-cost landfill options that are closed off, if you will, until they are no longer open to municipalities and others, the viability of resource recovery will be hindered, so, to the extent that we are successful and make progress with the regulatory program under subtitle D, we are going to be helping to create the preconditions which will help to foster resource recovery.

Mr. FLORIO. It is a difficult public posture to take when you are talking to the local mayors who are concerned about closing landfills and the resulting cost to the local taxpayer, but I agree with you, that has got to be done before you provide for the economic viability of alternative disposal mechanisms.

Mr. PLEHN. It is clearly our hope that in the fiscal years that follow on fiscal year 1979, that we will be in a position to do much more to help those local mayors in making that transition from unacceptable land disposal to resource recovery.

Mr. FLORIO. Thank you, Mr. Chairman.

Mr. ROONEY. Thank you, Mr. Florio.

Mr. Jorling, in what areas are regions and localities in a position to begin their planning process and thus in need of financial assistance at the present time?

Mr. JORLING. You are speaking now specifically with respect to local?

Mr. ROONEY. Right.

Mr. JORLING. I think there are local communities in every region which are in a position to utilize these moneys effectively. I don't think there is any region in the country that does not have some local governments sort of at the threshold of need, and all they need is resources.

Mr. PLEHN. May I add to that?

Mr. JORLING. Steffen may want to add something.

Mr. PLEHN. As you know, under the subtitle D criteria, the States with EPA resources are to do an inventory of all of their land disposal sites, and to determine whether those sites are open dumps by virtue of not meeting the criteria or whether they are acceptable land disposal facilities. Whereas our data here is rough, to say the least, we estimate there are somewhere between 18,000 and 20,000 municipal dumps in this country, of which we estimate one-third are probably acceptable land disposal facilities, in light of the criterion. One-third are probably open dumps, and the other one-third we really do not know. Once the open dumps are identified, the community will then have a period not to exceed 5 years in which it must either upgrade or close that facility, and that is what will create the need for that community either to secure an alternate land disposal site or preferably in accordance with the goals of the act to move to resource recovery.

I think it was the intent of RCRA that whatever assistance might be provided at the local level would go to helping those communities in developing those alternatives, either to undertake the search for an alternative land disposal site, or to work on some of the difficult institutional problems of getting ready for resource recovery. I think that that is an area where we feel our program is going to have to get increased attention.

It the community wants to go to resource recovery, they are often hampered because their existing procurement regulations do not allow them to sign a long-term contract with a resource recovery system vendor. They do not allow them to negotiate with that vendor. They are forced to go for the lowest price, and often they are not able to enter into a 20-year contract to commit their waste to such a system. Until those obstacles are moved out of the way, the community, despite all the best will in the world and the best will of the vendors that may want to come in and provide the system, may be stalled.

There is a similar kind of problem with markets. A community has got to—we have found from experience it is critical that they do careful initial work to define what the markets for these materials are and make those arrangements before they get too far down the road in one of these systems.

So, those are the kinds of things, I think, where assistance at the local level could be very helpful.

Mr. ROONEY. Thank you very much. You have been most helpful to this committee, and I appreciate your appearance.

Mr. JORLING. If I could, I think I should clarify for the record on the question that Congressman Florio was asking me with respect to rolling stock, vessels used on railroads to carry waste. Our authority is limited to labeling requirements. We have no design

authority under RCRA. Under the Federal Water Pollution Control Act, where there is authority to design standards, performance standards for rolling stock, the President has delegated that authority to the Department of Transportation, and it is not in EPA.

Mr. ROONEY. Thank you very much.

Mr. JORLING. Thank you, Mr. Chairman.

[The following material was received for the record:]

CONGRESS OF THE UNITED STATES,
HOUSE OF REPRESENTATIVES,
SUBCOMMITTEE ON TRANSPORTATION AND COMMERCE,
COMMITTEE ON INTERSTATE AND FOREIGN COMMERCE,
Washington, D.C., March 13, 1978.

Hon. THOMAS C. JORLING,
Assistant Administrator for Water and Hazardous Materials, Environmental Protection Agency, 401 M Street, S.W., Washington, D.C.

DEAR MR. JORLING: Thank you very much for your excellent testimony before the Subcommittee's oversight hearings on the Resource Conservation and Recovery Act of 1976. Both your presentation and that of your staff on the second and third days of the hearings added much to the Subcommittee's understanding of how this important legislation is being implemented.

To the extent that they were not answered in your submission of testimony, I would ask that you prepare further responses for the record to the following questions, which in the interest of time we were not able to ask you:

(1) What is the status of the mining waste study and the non-fuel minerals study?

(2) How does your effort in these areas interface with the recently undertaken Administration's study on nonfuel minerals?

(3) The decision was made to include in the open dump inventory "pits, ponds, and lagoons". Does this mean that these are automatically to be treated like more traditional "dumps"? And, how do you envision a State in its "phasing" of the inventory handling these facilities?

(4) Given the low appropriation levels we have seen for RCRA, in your overall strategy you have obviously had to balance the effects between hazardous programs and the non-hazardous, urban vs. rural areas. Can you explain the balance you have made and the justification for it?

(5) Can you explain your decisions in regard to phasing the inventory of open dumps vs. phasing the criteria? What problems were you trying to solve and what were your alternatives?

(6) You indicated that some regions and localities are in a position to begin their planning process and thus in need of financial assistance. Would this assistance be under section 4008(a)(2), and will that assistance be applicable in 1978 or 1979?

(7) Is there a way under the statute as presently written for the foregoing process to be speeded up?

(8) Section 1008(a)(1) of RCRA directed EPA to publish a compendium of solid waste guidelines within one year of enactment. Has EPA promulgated any solid waste management guidelines pursuant to this section?

Additionally, I hope you will be able to respond as soon as possible to our earlier request for amendments to the Act.

Thank you again for your excellent testimony and for that of your staff.

Sincerely,

FRED B. ROONEY,
Chairman, Subcommittee on Transportation and Commerce.

U.S. ENVIRONMENTAL PROTECTION AGENCY,
Washington, D.C., April 24, 1978.

Hon. FRED B. ROONEY,
Chairman, Subcommittee on Transportation and Commerce, Committee on Interstate and Foreign Commerce, House of Representatives, Washington, D.C.

DEAR MR. CHAIRMAN: I would like to thank you for the opportunity to report to the Subcommittee on Transportation and Commerce on our progress

in implementing the Resource Conservation and Recovery Act of 1976. We have placed a very high priority on establishing a national solid waste management program according to the mandates of RCRA, and we are making very good progress.

In response to the questions that were raised in your letter of March 13, 1978, we would like to offer the following answers for the record:

Questions 1 and 2. What is the status of the mining waste study and the non-fuel minerals study? How does your effort in these areas interface with the recently undertaken Administration's study on non-fuel minerals?

Answer. The Office of Solid Waste is currently completing a draft of the mining waste study report. It is anticipated that the draft will be finished by May 15, 1978. The contractor for the mining waste study has met with the National Academy of Science personnel responsible for conducting the non-fuel minerals study in an effort to coordinate both studies.

Question 3. The decision was made to include in the open dump inventory "pits, ponds, and lagoons." Does this mean that these are automatically to be treated like more traditional "dumps"? And how do you envision a State in its "phasing" of the inventory handling these facilities?

Answer. The inventory, according to Section 4005(b) of the Act, is to include all disposal facilities which are open dumps within the meaning of the Act. Sections 1004(14) and 4005(a) both define "open dumps" in the context of disposal sites which do not meet the criteria of Section 4004. The statutory definition of "disposal" includes impoundments (pits, ponds, lagoons). Furthermore, there is no apparent reason to exclude impoundments from the requirement of the Section 4004 criteria that disposal facilities" * * * pose no reasonable probability of adverse effects on health or the environment." Thus, it is our intent that all disposal facilities, including impoundments, be evaluated against the Section 4004 criteria in order to determine whether they pose reasonable probability of adverse effects on health or the environment. Pursuant to the statutory definitions, those facilities which do not meet the criteria are open dumps and will be listed in the inventory we are required to publish.

We expect to encourage the States to evaluate first those facilities which are most likely to pose the greatest probability of adverse effects on health or the environment. Those facilities may be impoundments, landfills, land-spreading operations, or a combination thereof.

The Agency is currently working with the States to conduct an assessment of the ground-water pollution potential of surface impoundments. This effort is being pursued under the study authority of Section 1442(a)(8) of the Safe Drinking Water Act. Although the assessments will address only the potential for ground-water pollution, they will be valuable in assisting the States in prioritizing facilities for evaluation against the criteria.

Question 4. Given the low appropriation levels we have seen for RCRA, in your overall strategy you have obviously had to balance the effects between hazardous programs and the non-hazardous, urban vs. rural areas. Can you explain the balance you have made and the justification for it?

Answer. We have provided for a fairly equal financial assistance balance between the RCRA requirements of subtitles C and D. In FY 1978, funding for States was authorized only under the authorities of subtitle D to develop comprehensive solid waste management plans (for both subtitles C and D wastes). In FY 1979, the funding for State governments will be essentially balanced with slightly more assistance going towards the development of State hazardous waste programs. We believe that this two-year priortization is sensible in that State plans have in the past focused on the management of non-hazardous waste. Less building is therefore necessary on the non-hazardous side of the program.

We have not segregated our apportionment of financial assistance between urban and non-urban areas in FY-79. We do anticipate that the financial assistance budget in future years will have to be more definitive in the area. We have to recognize, however, that the development and implementation of State plans includes all waste streams and all geographical areas of a State. Consequently, support for planning in FY-79 will include concerns for both urban and non-urban areas.

Question 5. Can you explain your decisions in regard to phasing the inventory of open dumps vs. phasing the criteria? What problems were you trying to solve and what were your alternatives?

Answer. We do not view the concepts of phased inventory and phased criteria as being in opposition with one another. Decisions have not heen made by playing one concept against the other; rather, the two concepts are considered independently. Regardiess of the specific context or structure of the criteria, phasing of the inventory is necessary. RCRA provides only twelve months, following promulgation of the Section 4004 criteria, for publication of the inventory. We do not believe it would be possible to identify all solid waste disposal facilities, evaluate each facility against the criteria (even the most rudimentary criteria), and publish a technically and legally sound inventory of non-complying facilities all in a twelve-month time period. Thus, it is our intent to publish annual installments of the inventory, with the first installments of the inventory, with the first installment scheduled for one year following promulgation of the criteria.

Questions 6 and 7. You indicated that some regions and localities are in a position to begin their planning process and thus in need of financial assistance. Would this assistance be under section 4008(a)(2), and will that assistance be applicable in 1978 or 1979? Is there a way under the statute as presently written for the foregoing process to be speeded up?

Answer. Our first priority for 1979 is to give financial assistance to the States to conduct planning and implementation activities. However, some States are already well advanced in their State plan development. These States could therefore provide funds under section 4008(a)(1) to local and regional jurisdictions to begin their portion of RCRA planning and implementation. We also envision that local government will participate with the State agencies in conducting the open dump inventory and will receive financial assistance from the States under section 4008(a)(1) to defray their share of the costs. These funds are available in both 1978 and 1979. While the foregoing process could be speeded up, the complexity of getting a State and its local jurisdictions together to plan and implement takes a long time.

Question 8. Section 1008(a)(1) of RCRA directed EPA to publish a compendium of solid waste guidelines within one year of enactment. Has EPA promulgated any solid waste management guidelines pursuant to this section?

Answer. As of this date, EPA has neither proposed nor promulgated any guidelines pursuant to Section 1008(a)(1) of RCRA. In a letter dated February 14, 1978 to Congressman Staggers, EPA explained current plans to fulfill the requirements of Section 1008(a) (copy attached). The Agency intends to develop three method-specific guidelines (landfilling, landspreading, and surface impoundment) for the land disposal of all solid waste in order to aid implementation of the "Criteria for the Classification of Solid Waste Disposal Facilities" under section 4004(a) of the Act.

Since there will be a direct relationship between "Criteria" requirements and the recommended procedures in the guidelines, none of the three guidelines will be published in the *Federal Register* as a proposed rulemaking until all comments on the "Proposed Criteria" have been received and considered.

I would again like to thank you for the opportunity to appear before the Subcommittee on Transportation and Commerce with respect to the Reserve Conservation and Recovery Act of 1976. If I can he of any further assistance in this or in any other regard, please do not hesitate to contact me.

Sincerely,

THOMAS C. JORLING,
Assistant Administrator.

Enclosure.

U.S. ENVIRONMENTAL PROTECTION AGENCY
Washington, D.C., February 14, 1978.

Hon. HARLEY O. STAGGERS,
Chairman, Committee on Interstate and Foreign Commerce, House of Representatives, Washington, D.C.

DEAR MR. CHAIRMAN: Administrator Costle wrote you on April 12, 1977, about EPA's plans to develop guidelines pursuant to the requirements of Section 1008(a) of the Resource Conservation and Recovery Act of 1976 (Pub. L. 95-580). I am writing to inform you of the current status of our efforts to fulfill these requirements.

On July 5, 1977, in the Federal Register, EPA called public attention to the Agency's initiation of two guidelines, under the authority of Section 1008(a): (1) land disposal of municipal solid waste; and, (2) land disposal of municipal wastewater treatment sludge. Also noted was initiation of development

of "Criteria for Classification of Solid Waste Disposal Facilities," under the authorities of Section 1008(a) and 4004(a). This was also the subject of my January 31, 1978 letter to you.

EPA has now determined that plans for development of the two Section 1008(a) guidelines should be modified—as a result of comments and discussions generated during initial development of the "Proposed Criteria." The "Criteria," as you know, will serve as the basic regulation of facilities for the land disposal of all solid waste (except solid waste identified as hazardous in accordance with Section 3001). Such land disposal can be accomplished by three methods: landfilling, landspreading and surface impoundment. Therefore, instead of the aforementioned two guidelines, the Agency now intends to develop three method-specific guidelines for the land disposal of all solid-waste (other than hazardous) in order to aid implementation of the "Criteria."

None of the three guidelines will be published in the Federal Register as a proposed rulemaking until all comments on the "Proposed Criteria" have been received and considered. This is because, as I am sure you will understand, there will be a direct relationship between "Criteria" requirements and the recommended procedures in the guidelines. Reactions and suggested changes to the "Proposed Criteria," received during the public comment period following their publication in the Federal Register, could have significant impact on the recommended procedures that will be included in the subsequent guidelines.

We hope that you and your Committee agree that this approach to the development of these particular guidelines can result in a more effective program to regulate and provide information on land disposal of solid waste.

In accordance with Section 1008(b), we will provide you with copies of the guidelines, as they are developed.

Sincerely yours,

THOMAS C. JORLING,
Assistant Administrator.

Mr. ROONEY. Our next witness will be Wiley W. Osborne, representing the National Governors' Conference.

You may proceed, Mr. Osborne.

STATEMENT OF WILEY W. OSBORNE, ON BEHALF OF THE NATIONAL GOVERNORS' CONFERENCE, CHIEF, PLANS AND PROGRAMS BRANCH, DIVISION OF SOLID WASTE MANAGEMENT, TEXAS DEPARTMENT OF HEALTH RESOURCES

Mr. OSBORNE. Good morning, Congressman Rooney, members of the subcommittee, ladies, and gentlemen, I am Wiley Osborne of the State of Texas, and I am pleased to present the views of the National Governors' Association Standing Subcommittee on Waste Management. Gov. Edwin Edwards, subcommittee chairman, could not be here this morning and has designated me to present these comments on his behalf.

The efforts of the Subcommittee on Transportation and Environment, and the personal commitment of its chairman, to enact and assure the implementation of the Resource Conservation and Recovery Act are recognized by the Governor and the State officials serving the National Governors' Association Standing Subcommittee on Waste Management.

A primary function of the subcommittee is to provide an organized and on-going mechanism to convey the states' perception of RCRA goals, and their commitment on draft and proposed regulations and guidelines developed pursuant to the Act to the Environmental Protection Agency. From this vantage the subcommittee reports that:

EPA has made diligent and concerted efforts to provide for public participation and comment, and to facilitate the State consultative process in the development of RCRA requirements. The scope of RCRA far exceeds—beyond original expectations—its precursors, the Solid Waste Act of 1965 and the Resource Recovery Act of 1970.

The States' perception at this time is that RCRA may be one of the most far-reaching environmental control and land quality control instruments enacted at the Federal level. The resulting responsibilities and financial burdens, including hazardous waste management, rest predominantly on the States, as envisioned by the law. However, the achievement of most of RCRA's goals rests with local and regional governmental entities.

Therefore, any EPA policy to plan for strategic implementation of RCRA must recognize the primary responsibility of the States, and also the necessary State/local partnership which must develop if implementation of the law is to be successful. In short, the Agency must, (1) meet its responsibility for development of guidelines and regulations under RCRA so as to furnish tools appropriate to exercise by the States reflecting priorities and practicable measures sufficiently flexible for adaptation by all the States in pursuit of RCRA's goals; and (2) provide both State and local governments with the requisite and appropriate technical and financial assistance in a timely manner.

The scope of RCRA, while necessary to the protection of public health and the environment, in and of itself has raised several substantive issues. My remarks will now focus on the major issues identified to date in the development of RCRA. As can be expected, the development of subtitle D, State or Regional Solid Waste plans which encompass the open dump inventory and the categorization of land disposal facilities demand the most serious attention. Subsequent hearings will provide the opportunity for the states to comment on subtitle C, Hazardous Waste Management, and also resource conservation and recovery.

On section 4004, Criteria for Sanitary Landfills, it should be noted at the outset, let me assure the Subcommittee on Transportation and the Environment that by our remarks and recommendations we are not advocating weakening of State and Federal solid waste management programs. By providing such consultation, we are striving to assure determination of unchallengeable legal interpretations of the act to the extent feasible, and to cooperate with the Agency in promulgating and enhancing a workable State/Federal as well as State/local partnership in solid waste management and resource conservation and recovery.

One issue identified by the landfill technical task force is the broad delineation of the scope of the definition of "sanitary landfill." The term "sanitary landfill" has a well established meaning. To incorporate sites such as pits, ponds, and lagoons under the criteria for "sanitary landfill" would cause unnecessary and unwarranted confusion and enforcement obstacles, under section 4005(b).

Moreover, under the Safe Drinking Water Act, Public Law 93–523, States will be conducting an "assessment" of surface im-

poundments, including pits, ponds, and lagoons. This assessment should provide preliminary information useful in conducting the open dump inventory required under section 4005(b) of RCRA. This effort should not duplicate or inhibit solid waste management inventory efforts. In this regard, the landfill technical task force recommended EPA's delineation of criteria relating specifically to "sanitary landfill" at this time.

The recommendation is made to "phase" the development of the criteria which would also permit the States to "phase" the subsequent inventory. This "phasing" would allow the States the time needed to upgrade solid waste management regulatory programs, adequately conduct the inventory, and reasonably enforce the compliance or closure of solid waste management facilities. Such phasing is recommended to avoid an unmanageable number of sites required to be evaluated during the inventory. For example, in Louisiana alone, extension of the terms "sanitary landfill" and "open dump" beyond conventional practice extends inventory coverage from several hundred sites to perhaps 70,000 sites. State laws requiring observation of due process, together with the utter futility of addressing tens of thousands of sites with available resources under RCRA, indicate the necessity of considering practical consequences of the criteria.

The National Governors' Conference Subcommittee questions the efficacy of prohibition of, at this time, all solid waste disposal activities in environmentally sensitive areas, such as wetlands. Such blanket prohibition would immediately and severely impact upon existing solid waste management programs and inhibit the reasonable progression to other types of waste management, specifically resource and energy recovery programs.

Federal financial assistance is provided at adequate authorization levels throughout RCRA; however, the appropriations for fiscal year 1978 and the projected appropriation for fiscal year 1979 do not assure the States that either the Congress or the Agency are fully committed to the achievement of RCRA's long-term goals. Rather, the levels of funding would indicate a short-term concern for achieving in a limited fashion the "mandated" portions of the law. By such low levels of assistance the States will be unable to adequately address the outputs immediately required and consequently will be hard pressed to strive for RCRA's long-term objectives. The lack of funding assistance to local and regional governmental entities assures the non-performance of the planning efforts necessary to development of State solid waste management plans.

As a Governor who, like other Governors, has experienced the designation of regional solid waste management planning areas and is now embarking upon designation of planning agencies, I am painfully aware of the lack of assistance available to not only State agencies but also the noted lack of incentive at the regional levels.

I appreciate this opportunity to address the subcommittee. We would welcome any questions.

This would conclude Governor Edwards' statement.

Mr. ROONEY. Mr. Skubitz?

Mr. SKUBITZ. I have no questions.

Mr. ROONEY. Mr. Florio?

Mr. FLORIO. Just one point, sir. I thought I heard you say you were opposed to any blanket bans on the establishment of dumps or landfill operations in areas such as wetland areas.

Mr. OSBORNE. Yes; the landfill technical task force feels that, yes.

Mr. FLORIO. The reason being what? Economic?

Mr. OSBORNE. I believe the phasing, the timing on this to do this—without a decent phasing period would produce an economic impact on the community.

Mr. FLORIO. You are talking about existing facilities in wetlands as opposed to proposing a ban which would prospectively work to preclude the establishment of a dump in a wetlands area?

Mr. OSBORNE. For new dumps, I believe that would be correct.

Mr. FLORIO. Thank you very much. I have no further questions.

Mr. ROONEY. I have one question here. It has been brought to my attention that although you say the States are in trouble in implementing this act, others say many States have surpluses which they could devote to this effort. Is what we are really seeing here just an inefficient management of the State's own budget?

Mr. OSBORNE. Sir, I couldn't speak for all of the States, and if it is possible, I would like to defer this to Governor Edwards for his reply.

Mr. ROONEY. All right, the record will remain open, and we would appreciate his responding to that question.

Mr. OSBORNE. I would like to add to Governor Edwards' comments in his role as chairman of the National Governors' Association Subcommittee on Waste Management, the Texas representative views gained in serving on NGA task forces. The State of Texas has supported and participated with other NGA representatives in working with EPA on development of regulations and guidelines.

We find that local governments expected that RCRA would provide the means to solve many of their solid waste problems.

In the State of Texas, under the regional and agency identification requirements of section 4006, we have consulted with elected officials of over 1,100 local governments. This has created a keen interest in RCRA, and I feel that these officials are anxious to participate in the development and implementation of State, regional, and local solid waste management plans. The level of funding for fiscal year 1978 and that projected level for fiscal year 1979 will not be sufficient to provide for the comprehensive program to meet the expectations of the local officials.

The open dump inventory alone will require funding in excess of this appropriation.

Although the level of authorization seems adequate, the time period should be extended through fiscal year 1982. I believe at the present time it extends through fiscal year 1979. In support of this recommendation, I would like to submit that it will require a minimum of 3 years to conduct the inventory and at least 2 years to develop a statewide plan.

The rural community assistance under section 4009 is not funded under current appropriations, but it should be funded for future years. Although we will not know the complete requirements for such assistance under the Rural Assistance Program until the open

dump inventory is completed, we feel the authorized appropriation is not sufficient to provide the needed assistance in Texas. This may amount to as much as $2.5 to $3 million, and projected to the national level, it would require on the order of $50 million of appropriation. Again, any authorizations under this program should be extended through fiscal year 1982 or perhaps later.

We view the development of a comprehensive plan for solid waste management as foundation for the implementation of all aspects of solid waste management in attaining the goals and objectives of the act envisioned by the Congress. We feel that subtitle D should receive the full financial assistance and Agency attention necessary to develop and implementation of these plans.

Mr. ROONEY. Thank you very much. Are there any further questions?

Mr. SKUBITZ. I have no questions.

Mr. ROONEY. Mr. Russo?

Mr. RUSSO. I don't think so.

Mr. ROONEY. Thank you very much for being here today, Mr. Osborne, and for your statement.

Mr. OSBORNE. Thank you, sir.

Mr. ROONEY. We will now have a panel discussion between Mr. Dennis Koehler, commissioner, Palm Beach County, Fla., vice chairman for Solid Waste, National Association of Counties, and Mr. John A. Teipel, director of the State Sanitation Service, and also the president of the Institute of Solid Waste, American Public Works Association.

You may proceed, gentlemen.

STATEMENTS OF DENNIS KOEHLER, ON BEHALF OF THE NATIONAL ASSOCIATION OF COUNTIES; AND JOHN A. TEIPEL, PRESIDENT, INSTITUTE FOR SOLID WASTES, AMERICAN PUBLIC WORKS ASSOCIATION

Mr. KOEHLER. Mr. Chairman, good morning to you. I am glad to see there is some interest in the solid waste problem, judging by the people here in the room.

Chairman Rooney, members of the subcommittee, my name is Dennis Koehler. I am an environmental lawyer and county commissioner from Palm Beach County, Fla. It is nice and warm down there, by the way, Mr. Chairman.

Mr. ROONEY. I notice that you have a nice tan.

Mr. KOEHLER. If any of you folks would like to vacation down there, we have nice sunshine these days.

It will be my great pleasure this morning to speak to you on behalf of the National Association of Counties on a subject of vital concern to all local governments, and that is solid waste management and the Resource Conservation and Recovery Act of 1976.

Mr. Chairman, the National Association of Counties[1] appreciates this opportunity to present our views on Public Law 94–580, the

[1] The National Association of Counties [NACo] was founded in 1935 as the national spokesman for counties, to serve as a liaison between county governments and other levels of government and to improve the understanding of the role of counties in the Federal system.

Resource Conservation Recovery Act of 1976. We commend the subcommittee for conducting this evaluation of the act. NACO vigorously supported the enactment of the 1976 Act through many months of congressional consideration. Our research foundation provided technical assistance and program information to counties on solid waste management for over 5 years and has disseminated information on EPA's regulations.

I might add, Mr. Chairman, that I served with these gentlemen sitting in front here, John Skinner and Lanny Hickman, back in 1972, when I was EPA's first garbage lawyer, so I have a little bit of a perspective on this problem. Our interest in the successful fulfillment of RCRA's mandate reflects the interest and responsibilities of counties throughout the Nation.

American counties are heavily involved in the providing of solid waste management services. A 1975 survey of county government functions indicated that over 70 percent of the reporting counties are responsible for disposal and 49 percent for collection of solid waste. My county, for example, operates three disposal sites, and we contract with franchise haulers for the collection of solid waste in our own unincorporated area.

In the past 10 years, counties have taken on 75 percent of all transfers of the solid waste function from municipal governments. It is in this context that the National Association of Counties wishes to express its deep concern with the direction or nondirection in which the Federal solid waste and resource recovery effort is going.

If I could borrow a phrase from Tom Jorling, who appeared before you earlier today, how long will solid waste management remain the forgotten stepchild of the environmental movement?

LEVEL OF FEDERAL COMMITMENT

The administration has requested $56.9 million out of a total authorization of $160 million for administration of the Resource Conservation Recovery Act during 1979. While we at the local government level are pleased with this 40 percent increase over the past year, we are concerned that the increase in State assistance from $14 million to $26 million will not go to strengthening the development of local and areawide capacity.

Much of this increase will go to developing regulatory efforts at the State level. Gentlemen, establishing a state regulatory program to close open dumps or to regulate the disposal of hazardous waste does little to help local government deal with either of these problems or to implement RCRA. I will reserve comment on the survival interests of EPA in emphasizing hazardous wastes, given EPA's treatment by the Congress and the Office of Management and Budget over the past 6 years.

Many counties are currently seeking ways to upgrade their solid waste management systems and evaluate the local potential for resource recovery, but we lack adequate resources, and in Palm Beach County—and this may be a response to Mr. Florio, who is not here—we are doing something about energy recovery. We have a

five-phase solid waste management plan which is looking into ways of recovering energy from our garbage. We have a publicly operated utility in the center of Palm Beach County which estimates indicate could meet 50 percent of its energy needs by energy recovery from garbage, so I would disagree with Mr. Jorling's suggestion that energy recovery is only a secondary benefit under the act.

EPA has estimated that an additional $9 million could be used to initiate local land disposal and resource conservation and recovery programs, and that $5 million could be used to assist rural communities. Mr. Chairman, the National Association of Counties strongly endorses your request to add $20 million to that sum already requested by the administration. Most of this money should be provided to local governments for both program development and management costs outlined in section 4008(a)(2) of the 1976 act, and to briefly refresh the committee's memory, this section authorizes Federal assistance to local governments for facility planning and feasibility studies, expert consultation, surveys and analyses of market needs, marketing of recovered resources, technology assessments, legal expenses, construction feasibility studies, source separation projects, and fiscal or economic investigations or studies.

Now, we would like to get some money to do some of that work at the local level. The important part of the Resource Conservation and Recovery Act is, it perceives a close link or causal relationship between program preparation and implementation. Congress should encourage this process by providing funds for local implementation of solid waste management and resource recovery programs in fiscal year 1979. Counties and other local governments are ready now, gentlemen, to prepare facility plans and feasibility studies, market surveys, and so on. Many of these activities need not and should not await the approval of State solid waste plans. If implementation grants must be certified consistent with the State plan, which may not be completed for 1 year or more, we believe that significant progress toward carrying out already existing local programs would be discouraged. We have got that program in Balm Beach County right now. We need to fund it.

Local governments should not be penalized by the failure of a State to complete a plan in which they, local government, have had no significant involvement in preparing. NACO would suggest that section 4008(A)(2)(c) of RCRA be changed to provide for an interim means of approving local implementation grants until the State plans are completed; perhaps a review at the State level through the A–95 process would be sufficient. We have a Department of Administration, Division of State Planning, that would be most appropriate in the State of Florida to accomplish this. Local governments, as you are well aware, will soon be required to upgrade or replace landfill facilities. Congress should be prepared to provide financial assistance to help us defray some of the planning and administrative costs which we and other local governments will have to meet.

Additionally, we hope that this subcommittee will approve an increase in the authorization for implementation grants in subsequent fiscal years. We would suggest that you might well consider au-

thorizing and appropriating $75 million per year for a minimum of 5 years to encourage a strong response at the local level, and as you have heard, the Governor's representative and Mr. Jorling both stated this morning that local governments are ready to start using some of this money.

PLANNING AND IMPLEMENTATION

NACO is concerned that the current Federal program places too much emphasis on the acquisition of new State planning capacity, and that such capacity may be perceived as a substitute for implementing effective local and areawide solutions to solid waste and resource conservation problems. The simple fact is that the States do not now and they should not in the future have the responsibility to solve local solid waste problems.

Let us consider these points. Planning is meaningless unless it is conducted by those who have the responsibility for management of resource conservation and the solid waste systems. Siting and developing landfill, resource recovery and other solid waste projects are purely local functions. These facilities often include tremendous risks because of the uncertainty of markets, technology, public reaction to particular sites, and the environmental impact associated with landfill siting. Local governments make decisions about who will collect and dispose of garbage. Local governments, not the States, sign contracts with private haulers and private landfill operators and regulate their practices and regs, and as I think you are all aware, if something goes wrong with garbage collection, it is us local officials who get the calls at 5:30 in the morning, not the Governor, not the State legislators.

Though technical assistance from State agencies and EPA is important, there is no substitute for providing resources for meeting these needs at the local level. Gentlemen, our recommendation is not to provide greater Federal assistance to local governments at the expense of grants to States, because we recognize the need to carry out the open dump inventory and other functions. We do, however, recommend an increase in Federal assistance to local agencies for both planning and implementation, and continued support to State governments to finance technical assistance to local governments and the development of an effective sorting out process among local, regional, and State agencies.

THE SORTING OUT PROCESS

The process for sorting out responsibilities among counties, cities, and regional agencies and State governments is less than satisfactory. States have yet to demonstrate on a nationwide basis in fact anywhere in the country that they have effective procedures for working with local governments. I would be curious to find where they have developed such procedures. Our concern is not academic or based on local prerogatives. Whatever solid waste and resource conservation solutions are developed, they have got to be implementable in the first place, and secondly, they have got to have the political support of those of us who are going to spend the money to carry them out.

As you gentlemen know, the 1976 act, section 4006, calls for the designation of regional boundaries by the Governor "after consultation with local elected officials." EPA would have us believe on the basis of its own survey of State governments there has been adequate consultation with local elected officials. Gentlemen, let me tell you that I am such a local elected official. I have been serving on a regional solid waste management authority since January of 1977, and we were never consulted by the State of Florida prior to the designation of our region's boundaries; I understand this is not a unique situation, that the same situation occurred in Oakland County, Mich.

In fact, NACO's survey suggests that these boundary designations required by your Federal law were made in some States with extremely minimal consultation with local elected officials. In some places, such as Lehigh County, Pa.——

Mr. ROONEY. A very familiar area to me.

Mr. KOEHLER. I understand, sir, your State has still failed to make the boundary designation as required by EPA regulations. Designation of agencies to implement various solid waste functions must be jointly determined between the State and local elected officials, as required by the law. If agreement cannot be reached, the Governor must designate a State agency to develop and implement the State plan. The sorting out process of agencies and functional responsibilities must be completed by May 15 of this year. It is difficult to know how well this designation process is proceeding. The question is, have State lead agencies taken the initiative to meet with local elected officials and adequately involve us in the process for jointly determining State, local, and regional responsibilities? The problem appears to be widespread confusion as to the requirements of Federal regulations, which of course is not unique to EPA or any of the other Federal Government agencies.

For example, some counties have been led to believe that the single planning agency required for designation under this law must also be designated for an entire multicounty region when in fact EPA states in its own regulations that boundary designation and agency designation are supposed to be independent of each other. Boundary designation is not intended, we believe, to predetermine agencies or functions.

EPA should immediately conduct a survey of each State, and here I think we are talking about State associations of county commissioners and leagues of municipalities, to determine the manner in which this joint determination of agencies and functions has been taking place.

This survey should include random calls to local elected officials to find out if they understood the opportunities open to them and whether they have had an ample or adequate opportunity to jointly designate planning and implementation agencies.

Mr. FLORIO. Sir, do you think as an alternative to random phone calls around the country just EPA notifying the appropriate State authority or executive officer of the fact that it is not only required but that there will be a certification required when the plan is submitted to EPA, that the appropriate consultation has taken place and that would induce those States who have not been doing, if in

fact there are some, to go out and make sure they have the appropriate input. I am thinking just about the logistics of random telephoning around the country as an alternative to that. As a suggestion, it might be sufficient for EPA to make 50 calls rather than however many just to say that there would be a need for a certification, that all of the requirements have been lived up to and one that will be specifically scrutinized is the consultation requirement.

Mr. KOEHLER. I have learned not to rely on the States to accomplish things like that on their own accord, and while I would hope that they would be able to carry out that kind of suggestion, I think it would be wise for EPA itself to spend the money on long-distance phone calls if they have to to contact our local State associations, and through the State Association of County Commissioners, in which I am actively involved in Florida, determine through this independent channel perhaps in addition to the method you suggested, whether or not we have actively been involved in this designation process.

Another thing that EPA might do, and it is fun to have my former cohorts sitting behind me, is to conduct detailed monitoring of State actions by EPA's regional offices. That might be what you were talking about, Mr. Florio. I think that would go a long way toward enforcing your congressional intent, that the regional agency designation process should indeed be a joint process.

We believe that if these regulations are not followed, EPA approval might well be withheld, and the joint designation process be repeated until local officials have had an opportunity to advance our own solutions and negotiate agreement with our respective governors.

Gentlemen, to summarize, there are four things that we in local government, the National Association of Counties, would like to have happen under Public Law 94–580. First, we believe that Congress should appropriate the additional $20 million that Chairman Rooney has asked for under section 4008(A) (2) of the act this year so that local solid waste management planning can finally get off ground zero.

No. 2, we think that Congress should amend section 4008(A) (2) to provide an interim means for local agencies like my county's solid waste authority to obtain State certification so that we can qualify now for these implementation grants, and not have to wait until the States get their acts together and have the State solid waste management plans approved by EPA.

Third, and this is really directed toward EPA, we believe that EPA should immediately survey State and local government associations, counties, and municipalities to determine what role, if any, local government has had in the so-called joint designation of regional solid waste management planning and implementation agencies that the Federal law requires.

Fourth, EPA through its regional offices ought to monitor each State in order to assure that local government people like myself have been and continue to be fully involved in this joint designation process.

Gentlemen, Mr. Chairman, members of the subcommittee, this concludes my formal statement. The National Association of Coun-

ties thanks you again for giving those of us on the political front lines the opportunity to offer our recommendations for making implementation of the Resource Conservation and Recovery Act more effective. I would be glad to respond to any questions you might have at this time.

Mr. ROONEY. Thank you. One thing I think you ought to clarify. While Mr. Florio was attending the Health and Environment Subcommittee meeting, you mentioned his name with reference to a question he had asked. Would you like to refer to that?

Mr. KOEHLER. Yes, sir. You had a discourse with Tom Jorling about the energy potential from solid waste. Mr. Jorling's answer was that in his opinion energy recovery was probably a secondary benefit from improvements in and implementation of the act. While I can only speak for my own county with real authority, I can tell you that we have a potential in Palm Beach County through what is called the Lake Worth Utilities Authority to meet 50 percent of their long-term energy needs from garbage-recovered energy, so it is not secondary in my county, and in fact we are working on a solid waste management plan which will be looking at that.

Palm Beach County, by the way, is the northernmost of the three Gold Coast counties, and I–95 runs right along our coastal corridor, with the Lake Worth Utilities Authority situated exactly in the middle of our county, right on I–95, so it is a perfect place to transport this material, the garbage, too, to a resource recovery facility and into the power company.

Mr. ROONEY. Mr. Teipel?

Mr. TEIPEL. Mr. Chairman, my name is John Teipel, director of Street and Sanitation Services for the city of Dallas. I want to make that correction on the list of speakers. I bring you the perspective of the front line municipal infantry in the practical world of getting the job done. I am here today as president of the Institute for Solid Wastes, an organization of some 1,800 public works officials across the United States with solid waste management responsibilties. The institute is part of the larger 18,000-member American Public Works Association.

In thinking what constructive feedback I might provide this subcommittee from a municipal perspective of watching the tidal wave of RCRA develop momentum for improvement of solid waste management across the United States, it first occurred to me to report back to you that the roles assigned Federal, State, and local governments by RCRA, we find to be sound. The Federal role, to issue the criteria and guidelines, the State role, to plan and enforce, and the local role, to implement and operate, are proving sound.

Another constructive result of RCRA has been the strong input into the Federal guidelines by the State and local people. There is more common understanding across the United States today between the Federal, State, and local level officials on solid waste than there ever has been before. There is a keen awareness on the part of the State and local officials that it is extremely important for the Federal people to succeed as the baton passes through their area.

I think it is equally recognized that it is extremely important to the Federal and the local levels that the States succeed as the baton

passes through their court. Needless to say, it is well understood by the local governmental officials across the country that we only have one Federal agency, and in each case only one State, and it is extremely important that they be successful.

The next point is the State plans. As the baton of responsibility passes into the State arena, we are impressed by the complexity of the guidelines on State plans. If we are to do a proper job of developing a State plan, high-quality State plan in every State, we have got to give these people time to do a good job. It is well to press ahead with the deadlines, but at the same time we don't want to get in too great a hurry to do a quality job.

We also see a need Mr. Florio mentioned earlier. The State of New Jersey had plans. Many other States have moved ahead with plans, but the guidelines are so complex that we need a mechanism for the States and the EPA people to get together and develop a common understanding so that we go in the most straightforward, direct manner to State plans that do conform to the guidelines.

So, the interface between the Federal and State people is extremely important if we are to save time and go the direct route to the development of quality State plans.

Another item is the issue of land disposal, which deserves comment, because it is the major strategy for handling solid waste across the United States. Although we are making a lot of progress in resource recovery, nevertheless, most communities in our land have to depend on the landfill method of disposal. Now, the heart of the matter is, if we are going to do a competent job of protecting the environment, landfill operations must be designed, planned, and operated in a skilled and competent manner. If RCRA is going to be successful, there must be a strong flavor of training for side operations and management personnel all across the country. Otherwise, all of the legislation and theory will grind down on our inability to do the job well.

Mr. FLORIO. Training by whom, sir?

Mr. TEIPEL. By the public works agencies already training in those areas, by States, State universities. Workshops should be held on a regional basis at the State level, directed at the solid waste site managers. We ought to move ahead to certification programs for site personnel to insure that they are knowledgeable of the criteria and guidelines and the skills necessary to do a proper job of what the safeguards are.

If you are going to operate a hazardous waste site efficiently, a lot of knowledge has to exist at the site management level. There is a major training need here, and a dollar spent on training will do more good than many other dollars.

[Mr. Teipel's prepared statement follows:]

STATEMENT OF JOHN A. TEIPEL, PRESIDENT, INSTITUTE FOR SOLID WASTES, AMERICAN PUBLIC WORKS ASSOCIATION

INTRODUCTION

Chairman Fred B. Rooney of Pennsylvania, my name is John Teipel, President of the Institute for Solid Wastes, an organization comprised of approximately 1,800 public works officials across the United States with solid waste management responsibilities. The Institute is part of the 18,000 member of the American Public Works Association.

ROLES ASSIONED BY RCRA

I can report some constructive feedbacks on the roles assigned to the federal, state, and local governmental levels by Public Law 94–580. The federal role to issue criteria guidelines, the state role to plan and enforce, the local role to implement and operate are proving sound. Another constructive result of RCRA has been the strong input into the federal guidelines by the state and the local levels of government as well as the general public. There is a stronger awareness today amongst federal, state, and local officials of the realities of solid waste management at the operational level.

STATE PLANS

As the baton of responsibility begins to pass from the federal criteria guidelines to the states for preparation of state plans, it is important that we have a rather extensive system of seminars and workshops to assure and facilitate a full and prompt understanding of the requirements that must be addressed in a state plan in order that we can move in a direct expeditious manner to the development of quality state plans. Some states and regions are going to need some financial support to expedite their accomplishment of this mission. The interface between the federal and state people involved in the workshops and seminars will be a constructive benefit because the federal people involved will learn from the states as well as the states learning from the federal people.

LAND DISPOSAL

Land disposal remains the major strategy for disposing of solid wastes across the United States and will for some time to come even though we are making strong progress in the resource recovery field. Therefore, if we are going to do a competent job of protecting the environment, it is essential that we develop skill and competence amongst the landfill site operators across the United States. We need to look to extensive training programs on preparing these people to implement the guidelines and criteria and operate sites in conformity with state regulations. We need to look to such things as conducting training within the states that can lead to certification of landfill site operations personnel. Additionally, training is needed for engineers, both public and private, in the technicalities of proper selection of sites for land disposal.

SUMMARY

Public Law 94–580 has had a profound and positive impact on solid waste management all across the United States. The numerous deadlines included in the law have had a constructive impact by forcing the pace of accomplishment to move along. However, some of the deadlines are obviously a little too short to permit quality accomplishment of the objectives. A crucial factor in the short run success of the implementation of Public Law 94–580 is adequate funding for Section 4008, State and Regional Plans and 7007, Training Grants.

In closing I would like to thank the Chairman on behalf of the members of the Institute for Solid Wastes for this opportunity to provide some feedback from the perspective of operating managers of solid waste operations all across the United States.

Mr. ROONEY. Mr. Teipel, Commissioner Koehler said that local governments—You talk about the baton passing. You say you are satisfied with EPA and RCRA, but the Commissioner said that local governments should not be penalized by the failure of a State to complete a plan in which they have no significant involvement in preparing. Do you believe that statement?

Mr. TEIPEL. We have involvement in our State plan. Are you asking me——

Mr. ROONEY. He said on page 3 of his statement:

Local governments should not be penalized by the failure of a state to complete a plan in which they have had no significant involvement in preparing.

Mr. TEIPEL. I think that addresses a basic concern of local government, that they have imposed upon them costly requirements without

a corresponding opportunity to get practicality into the requirements. There is a great deal of theory at large in these areas, and there is a great need for common sense provisions in these guidelines. Local government is eyeball to eyeball on a day-to-day basis with the citizenry, and we don't need anyone to tell us how intensive their concerns are, so that local government is highly aware of all of the problems of site selection and site operation, and it does make local government uneasy when regulations are developed by those who do not have this direct firing line experience.

Some of the provisions come out, obviously, impractical. That has been a hallmark of this process, was my earlier comment. There has been more participation from my perspective, there has been more participation by local and State officials in the development of the Federal criteria. That is our hope, that whatever comes down the tubes will be practical.

Mr. ROONEY. Do you want to comment on that?

Mr. KOEHLER. I would like to expand on that portion of my statement earlier, Mr. Chairman. My suggestion is that because the States, and I don't think there is a State in this country yet that has had its plan certified by EPA. EPA may differ with me on that. Certainly Florida has not yet qualified. Because the States have not yet qualified and gotten their plans approved, we at the local level who are ready, willing, able, and in fact are proceeding in solid waste management planning, don't qualify for Federal aid, and I can tell you in Florida, Dade, Broward, and Palm Beach Counties are all ready and moving. Penelas County is moving. I think some of our northern counties, Brevard County. We could probably use $2 million to $3 milllion right now in the State of Florida to help local and State government to do this planning and implementation under RCRA.

Mr. FLORIO. If the gentleman will yield, I can sympathize with what you are suggesting, but the difficulty is that local plans, in order to be rational, should be part of an overall State approach which is embodied in the plan, that is, the State plan. The State plans have not been certified, because in fact the Federal regulations have not been put forth entirely. So, though I can see where you are frustrated, I do not think it appropriate to be certifying local plans or providing moneys to localities until it is assured they are in conformance with a more rational approach on a bigger than local level.

So, with all due respect to our friends, I suppose if we have to put the blame anywhere, we have to ask them to move a little more rapidly with regard to regulations, so the State plans can be approved and then in turn the local moneys can start to flow, and just with regard to the point you made, and this is putting it very bluntly, but the fact of the matter is, the effort really is being directed to put you eyeball to eyeball with the local people, and if in fact the landfill requirements are upgraded, there is no question about the fact that that will cost more. You are there talking on a daily basis with people who are paying the cost, but I think this is the case. That is clearly the rationale. The requirements are being upgraded for safety concerns, but also as a secondary purpose to drive the cost up so we can provide the economic motivation to come up with alternative modes of disposal other than landfill.

So, unfortunately, you are stuck in a position where you are faced with the problems designed to be created.

Mr. TEIPEL. I would like to respond to that. I am tracking you until you make the last statement about forcing the cost of landfill up to make resource recovery more desirable. I do not agree with that rationale. I think it is correct to say that if landfill operations are conducted properly, the cost will certainly increase, and I am a strong advocate of properly operated landfills, whatever that cost may be to adequately protect the ground and the surface waters.

That is quite a different thing than artifically driving it even further for an artificial purpose. That is my concern.

Mr. FLORIO. OK. I would just suggest that no one is going to concede that there is an artificial purpose in driving costs higher, but I think if we are candid and EPA is candid, they will say that inevitably the costs will be driven higher, and that there may be some benefit in the cost being higher, because that will provide the inducement to go into some of these other areas of disposal that right now are not ecnomoically feasible because the cost is too high.

As you can see, as the cost of landfills go up, it will then be compatible to go to something else, so no one will say, and I certainly don't advocate and hope no one else is advocating driving artificially the costs up, but I think it is clearly part of the philosophy of EPA and those involved in this whole area that we are not overly concerned about appropriate costs going up, because there may be some side benefits to that.

Mr. TEIPEL. If I may respond to that, we share the realization that costs need to go up for sound land disposal engineering and operation. It is our opinion that while the cost of landfill is going up, the costs of these other systems with inflation will not hold still. So, I want to make a strong point, because most of the solid waste in the United States today must go into land disposal facilities. It is therefore incumbent upon us there to do a skilled and competent job of operating land disposal facilities without endangering the environment, and I think that is a technology that we are capable of achieving and operating, and RCRA does set a desirable higher standard in that area.

The cities are ready to go with that. That is quite a different thing than bringing in the side resource recovery issue, and if I don't do anything else this morning, I would like to draw that clarification.

Mr. FLORIO. Thank you, Mr. Chairman.

Mr. ROONEY. I think that we ought to let Mr. Teipel complete his statement. Is your statement almost complete?

Mr. TEIPEL. Yes, sir.

Mr. SKUBITZ. Mr. Chairman, I have an appointment at the office. May I ask two short questions here?

Mr. ROONEY. Sure.

Mr. SKUBITZ. First of all, I think that this gentleman, Mr. Koehler, has pointed out that NACO vigorously supports RCRA. That is correct, is it not?

Mr. KOEHLER. Absolutely.

Mr. SKUBITZ. And of course I think you understand that we in the Congress must also pay attention to USEPA. I would like to state to Mr. Teipel, I want to commend you on your statement. I think we

have seen here today a good example of age and experience and patience as opposed to impatience which comes with youth and the frustrations that come with youth.

Mr. TEIPEL. Sir, I became gray-haired at 35.

Mr. SKUBITZ. If I understand your testimony correctly, you do feel that the program is moving along at a pretty good pace. You do feel that there is cooperation between the Federal level and the State level?

Mr. TEIPEL. Yes, sir.

Mr. SKUBITZ. If there is any slip-up, it is between the State and local level. Would you say that?

Mr. TEIPEL. That hasn't arrived yet, sir.

Mr. SKUBITZ. You do think we ought to spend a little bit more time studying this proposal so if we really get into it we ought to be going the right course instead of jumping into it?

Mr. TEIPEL. That is correct. This law has given EPA a monumental task on hazardous waste, on land disposal. There is a multitude of missions that have caused them to call all around the country, burn the midnight oil, and try to meet these deadlines.

Mr. SKUBITZ. I understand that.

Mr. TEIPEL. The deadlines have been good to stimulate progress, but some of them are too short as a practical matter to allow them to do a quality job, and if they go off half-cocked, we are all in trouble.

Mr. RUSSO. Would the gentleman yield?

Mr. ROONEY. Mr. Skubitz, would you yield to me? First of all, I would like to thank you very much for the comment about my youth.

Mr. SKUBITZ. I wasn't speaking to you. The next point I would like to make is, do you feel, as Mr. Rooney has suggested, perhaps we ought to be plowing a little bit more money into this in order to step up some of the studies? I think Mr. Rooney is suggesting an additional $20 million. Is that not right, Mr. Rooney?

Mr. ROONEY. Yes.

Mr. TEIPEL. Yes, sir, you need to help the States as the baton passes to them. If they are going to do a quality job, they need some help with these plans.

Mr. SKUBITZ. And you do feel for the moment we have got to look to landfill as probably the place we are going to have to take care of it?

Mr. TEIPEL. Yes, sir.

Mr. SKUBITZ. And some of the other dreams are fine, but further down the road. Is this correct?

Mr. TEIPEL. Yes, sir. In Dallas we are actively looking to get into resource recovery, but you get a different story when you go to the facility and talk to the man with the hard hat than you do when you talk to the public relations man.

Mr. SKUBITZ. That has been my experience.

Mr. RUSSO. Mr. Chairman, as one of the youth who is frustrated with the bureaucracy, I haven't been around as long as Mr. Skubitz, but if I would, I would try to eliminate it.

Mr. SKUBITZ. If you are around long enough, you will get to the point where you learn you have to live with them.

Mr. Russo. I think if there were more people like me around, we would have less problems. I am concerned, Mr. Chairman, with several comments about the local input into the State plan. I think that is probably the most important thing that goes on in this particular problem. The local people are closer to the problem. They know exactly what is going on. I have dealt with a few of the State agencies who don't know—just like the Federal, they don't know where they are coming from most of the time. They come out with guidelines and recommendations and statements on plans that have very little to do with the realities of the situation. I would like to see some provision in this legislation, if we are in a process of going through the amending stages of recommendation, to make sure the local communities have some time for getting a head start if they are ahead of the States. They know the situation better than the States, but it is my typical problem in dealing with the FCC, EPA, and a few of the other agencies, it seems that they take a long time.

I obviously would like them to do an excellent job the first time around, but sometimes taking a long time doesn't necessarily mean they do a good job. I would like to see more local input into this particular legislation and some types of penalties on the States if in fact they don't consult the local people, since this is part of the law.

Now, if this is something going on on a national basis where the States are not getting this input from the local community, you have to have documentation of that fact and redress that wrong because that is a specific part of this legislation. It seems silly for a State to draw up a plan without the local communities being affected by the plans having any input in it. It just seems stupid. So, maybe Texas is doing a good job, but maybe some other States aren't doing good jobs, and we ought to know about it. I think EPA's oversight ought to be more strenuous.

Mr. Teipel. If I could respond to that and to Mr. Florio's remark earlier about the sites, I would certainly recommend to you that as you struggle with the problems of wording the legislation and hearing EPA in their struggles with translating these into regulations, to think about the result at the end of the line, the scene of the action you are trying to influence.

It is obvious across the United States today that we are forcing requirements onto sites that preclude us getting sites, and we are going to end up with a mountain of regulations but no sites that meet the requirements. So, something practical has got to be in there. I don't know in some situations whether you need to stage it and go into something less than perfection on your way to perfection, but it has been characteristic of some of this legislation that you require such absolute perfection.

At the outset, you almost condemn local efforts to failure.

Now, the thrust of the EPA terminology for several years was to put a negative connotation on landfills, and yet they are our salvation. That needs to be reoriented and pulled away from the fairytale that everyone can go into resource recovery some day and be more realistic on doing a skilled and competent job of land disposal and communicate to the public at large that this is so, and it is a multiyear public education program to gradually develop public accept-

ance of these sites that we must have or none of the programs will fly.

Mr. FLORIO. If I could just make a comment on that, of course, the key difficulty is defining, and hopefully the regulations will come forth before too long, dumps, which nobody likes, and a sanitary landfill, which everyone likes, if we can define what the difference is, because on occasion sanitary landfills in some areas would be dumps in other areas, and the only suggestion I would make is with regard to one point, a bit of difference with one point you made.

You are advocating some public training of people who would be in charge of these landfills and so on.

Mr. TEIPEL. Yes, sir.

Mr. FLORIO. I don't feel that is necessary, because in my experience landfill operations with standards as high as you can possibly get are very lucrative business opportunities, and the private sector has been anxious to keep their involvement here, and if in fact the regulations, as stringent as they may be, are put forth in a clear way to be adhered to, the private sector will go out and train their own people. They will go out and live up to the standards, however stringent they are, because they can make the bucks, and they make a lot of money out of these things.

So, I am just suggesting there is really no need in my opinion and as a result of my experience to see too terribly much public involvement in operating and doing anything else except overseeing to see that the law is being adhered to, but in terms of the operation of landfills, my experience has been, the private sector is more than interested in going in and operating these facilities and making a good profit margin out of them.

Mr. TEIPEL. This relates to these technical assistance panels which in the beginning were perceived as a mechanism to aid people in getting into resource recovery, but that was in about 1974, in the National League of Cities solid waste task force. The world turns, and here we are in 1978 and we see that really the cutting edge of the need for assistance in most cases across the country is to help the dump operator get into a landfill conformance posture. That is what I am talking about as the target of training. I am not talking about the big commercial operator who is not a problem, because they have the skill and expertise necessary to get on board. They are not operating the dumps.

The problem is out in the rural areas, the places where the dumps are now, and there needs to be provision for training these people and educating them as to how to not only bring it up to a landfill standard, but keeping it from dropping back to a dump standard.

Mr. FLORIO. Is that a public function?

Mr. TEIPEL. Yes, that should be addressed under training grants, so the States where that need exists can provide that muscle to upgrade the dumps.

Mr. ROONEY. Commissioner?

Mr. KOEHLER. With all due respect to Mr. Teipel, and I did visit his operation when I was a bearded EPA lawyer 5 or 6 years ago, I think the cutting edge of the need for assistance is a little broader than just to include landfill sites, operations and upgrading, and I

would like to suggest that going into that area is not incompatible with what the act suggests, and that is that we look at resource recovery alternatives.

In fact, in Palm Beach County, our solid waste management plan, which is ongoing right now—we are through two of five phases—has already concluded that landfill operations are an absolutely necessary part of any resource recovery operation. You have to do something with the waste left over after you recover energy from garbage. You have got to bury it in most likelihood, and that is what we have to do in Palm Beach County.

So, I think the Resource Conservation and Recovery Act is broad enough to have local implementation include land disposal as well as resource recovery.

I would also like to respond to the point Mr. Florio made before. He suggested that the States ought to get their houses in order, take a more rational approach to State planning, perhaps before we at the local government level who are ready, willing, and able to spend that money receive and qualify for those funds. Let me quote for you part of my testimony. We are not suggesting that there be a substitution of local government eligibility for this direct pass-through money from the Federal Government.

Although Senator Randolph suggested that last November, all we are suggesting is an interim means of approving those of us at the local level who are ready now to use this money to begin to implement the mandates of RCRA, and that is why we suggest that a local A–95 agency or rather a State A–95 agency be designated to allow interim approval of us, certification so we can qualify for these moneys.

As I said before, there are four things we want. We would like for you to qualify us for this direct passthrough. We would like for you to survey us to see if we have been involved in the area agency designation process, and we would like for you to monitor them, the States, to see that they continue to include us in this process. Thank you.

Mr. ROONEY. Thank you very much, gentlemen. I appreciate very much your participation in this panel this morning.

Mr. TEIPEL. Thank you, Mr. Chairman.

Mr. KOEHLER. Thank you, Mr. Chairman.

Mr. ROONEY. Our next witness will be Mr. Eugene J. Wingerter, executive director, National Solid Waste Management Association. Mr. Wingerter, you may proceed.

STATEMENT OF EUGENE J. WINGERTER, EXECUTIVE DIRECTOR, NATIONAL SOLID WASTES MANAGEMENT ASSOCIATION, ACCOMPANIED BY WILLIAM BRASHARES, GENERAL COUNSEL

Mr. WINGERTER. Good morning. I am Eugene Wingerter, executive director, National Solid Wastes Management Association. With me this morning is William Brashares of the firm, Cladouhos and Brashares, general counsel to the association.

We are pleased to have an opportunity to appear before the subcommittee this morning to discuss our views on the implementation of the Resource Conservation and Recovery Act.

It has been nearly a year and a half since Congress enacted the law. We supported this enactment. We continue to be actively involved in its implementation. As an association we are contributing our recommendations to EPA in drafting regulations. And, our membership has continued to provide environmentally sound waste management and resource recovery services, which support the intent of the act. We welcome the opportunity in these hearings to indicate how the implementation plan for RCRA can be refined to achieve the goals of the act. Today, we will comment on subtitle D, which deals with solid waste planning and landfills. Tomorrow and Thursday, we will discuss hazardous wastes and resource recovery.

One key objective of the law is, and I quote, "prohibiting future open dumping on the land and requiring the conversion of existing open dumps to facilities which do not pose a danger to the environment or health." This is in section 1003. In principle, we support the initiative to eliminate open dumping. Only through enforcement of effective anti-pollution standards can environmentally sound disposal sites be possible. The law requires EPA to establish criteria for classifying all sites as either "sanitary landfills" or "open dumps." The dumps must be closed or upgraded to meet the environmental criteria.

There is, however, a provision in subtitle D which may have an adverse, though unintended, effect on obtaining the goal. Specifically, the section provides that State plans establish a compliance schedule for sites classified in the survey as "open dumps," not to exceed 5 years, but such a schedule may be established only if there is no alternative complying site which can be utilized.

Section 4005(c) * * * Each such plan shall establish, for any entity which demonstrates that it has considered other public or private alternatives for solid wastes management to comply with the prohibition on open dumping and is unable to utilize such alternatives to so comply, a timetable or schedule for compliance for such practice or disposal of solid waste which specifies a schedule of remedial measures, including an enforceable sequence of actions or operations, leading to compliance with the prohibition on open dumping of solid waste within a reasonable time (not to exceed 5 years from the date of publication of the inventory under subsection (b)).

The law does not define the term "alternatives" but rather, in the proposed State planning guidelines, EPA asks the State, in each case, to determine if there is a complying alternative. The State may find itself in a difficult situation. For example, when two landfills in close proximity are surveyed, site A may be determined to meet the landfill criteria while site B fails because, in our example, it does not have adequate vegetation to fully prevent surface runoff. If there were no nearby site, the State would be empowered to establish requirements to improve the condition of the noncomplying site, thereby making this site a useful and environmentally sound facility. As the law is written, however, because site A as in the vicinity, the statement assess whether site A is "an alternative" under the law. If so, all the waste from site B must be redirected to site A.

We feel that a State, when it determines that a disposal site does not comply with the EPA criteria for purposes of the national survey, should determine how the site can be brought into compliance. If the site cannot be upgraded, it should be closed. The decision should be made on the basis of the condition of the site in question,

and not on the existence of so-called alternatives, the availability of which would be extremely difficult to evaluate objectively.

A second problem relates to the inventory of open dumps that EPA is required to publish within 1 year after the landfill criteria are finalized. When the law was drafted, it was estimated that there were around 17,000 disposal sites in the Nation. As EPA interprets the comprehensive definition of solid waste in the law, however, the landfill survey called for in subtitle D may encompass as many as 100,000 sites, including the previously uncounted industrial pits, ponds, and lagoons. Despite the good intent of Congress and the efforts of EPA to complete the inventory within 1 year, the physical limitations of the States will inevitably cause delays. We believe the law should be amended to allow EPA and the States a reasonable time to prepare a complete and accurate inventory. Surely no purpose is served by a hasty evaluation in which some sites are ignored totally and the balance surveyed with varying degrees of scrutiny. EPA in its proposed State planning guidelines has recognized the need to phase the survey over several years, recommending that States set their own priorities. In order to comply with the language of the law, however, EPA intends to publish a partial inventory 1 year from finalization of the criteria, although the majority of sites will not have been surveyed.

Such a policy decision represents a serious problem if all sites within a given market area are not surveyed within 1 year. If a site is classified as an open dump, it may be put on a compliance schedule, requiring remedial actions, such as monitoring wells or gas venting systems which are costly and will necessarily increase the disposal costs at that site. In other words, a situation will be created in which a disposer may choose between a facility which costs more to operate because it is complying with Federal regulations and a site which may have lower operating costs because it has not yet been surveyed and is therefore not on a compliance schedule. In effect, the Government will be penalizing those facilities which are surveyed first by making them less competitive.

Congress recognized this problem by deferring the publication of the list of open dumps until the survey is completed. Since it is now clear that the survey cannot be completed in 1 year, Congress should act to prevent inequities thatwould result from piecemeal publication of the survey data. Instead, EPA, in its annual report to Congress, should be required to report only the status of the inventory, indicating in aggregate data the number of sites in each State inspected and the number placed on compliance schedules.

A further comment is in order regarding the compliance schedule required for an identified open dump under section 4005. It is essential that EPA assure that states are enforcing this schedule. RCRA should be amended to require annually that States, to continue their eligibility for Federal solid waste grants, certify their enforcement of actions indicated on compliance schedules.

Clearly, the inventory of land disposal sites is central to RCRA's goal of prohibiting open dumps. Violators of Federal criteria are subject to citizen suits. States without plans to eliminate dumps cannot receive Federal solid waste grants. It is imperative, therefore, that the inventory be an accurate and complete accounting of

the inadequate disposal sites in the Nation. For this reason, the criteria for a sanitary landfill must be specific and quantifiable, allowing as little discretion as possible to those conducting the survey. EPA's general approach of developing measurable performance criteria represents a constructive method which will help to assure uniformity of results.

We are concerned that in some cases, EPA, in an attempt to achieve flexibility, has proposed criteria that will allow for varying interpretations in different areas. For example, a sanitary landfill is defined as a site which complies with State and local air quality standards. We have no objections to local governments developing their own standards, such as, for example, a prohibition against odor emissions. We do not believe, however, that Congress intended that local standards be the basis for Federal court actions. For purposes of the inventory, we feel landfill criteria should be applied uniformly across the country. The list of open dumps should, for Federal purposes, be measured against one yardstick.

To achieve the goal of assuring environmentally sound disposal and recovery of wastes, Congress places great emphasis in subtitle D on the mechanism of solid waste planning. We feel that the distinction should be clarified in the law between planning and implementation of solid waste activities. For example, section 4002(a) requires EPA to publish guidelines for the identification of substate regions which are "appropriate units for planning regional solid waste management services." However, under section 4006(a), a Governor must identify regions "appropriate for carrying out regional solid waste management." While the difference between planning and carrying out may seem minor, the discrepancy opens a door for misinterpretation of the intent of the law.

It makes sense for a region to develop a plan to assure that all solid waste within its boundaries will be collected and disposed of properly for the next 20 years. It does not follow, however, that the regions themselves will take over any of the management functions. While solid waste planning may be a reasonable task for a single regional agency, the actual management of solid waste is in reality a number of activities including collection, transfer, storage, disposal, hazardous waste control, and sludge management. In practice, these many activities are performed by different organizations, including private industry and government agencies at the State, regional, county, and local levels. It is imperative that regional planning agencies not disrupt the existing institutional arrangements by taking over all solid waste management activities, but rather that such agencies incorporate these structures into their plans.

In summary, effective implementation of RCRA requires that Congress make clear its intent with regard to the open dump inventory, the landfill criteria, and solid waste planning. Clarification of these issues now will help to avoid confusion as the law is carried out. We are looking forward to presenting our comments on the hazardous waste and resource recovery aspects of the law in subsequent hearings this week. So, I will not add any further comments on those today.

Mr. ROONEY. Thank you very much.

Mr. Florio, do you have any questions?

Mr. FLORIO. You mentioned sludge management, and I wonder if you could give us 2 minutes' worth of your thoughts on that. In my own area, we have a difficult problem. Ocean dumping is being phased out, which we regard as a good development, and yet sludge that is being generated in our area particularly as a result of combined storm and sanitary sewerage—we have individuals dumping chemicals into the storm sewer system which, as a result, ultimately works its way into the sludge, cadmium, arsenic, things of that sort, and therefore we can't take the sludge out to dump into landfills, either, and accordingly we have a lot of sludge piling up. Have you any thoughts with regard to sludge management proposals?

Mr. WINGERTER. Sir, I was not prepared to go into detail on that, but that is primarily the reason we feel the coordination of planning among all organizational institutions involved needs to be coordinated and not dictated.

Mr. FLORIO. The only other point I would make is, I can sympathize with the idea we should not rush into these things. Unfortunately, there is kind of a Parkinson's law with regard to rules and regulations. If we provide more time, people will take more time and the pressure will be off. There is something to be said for reasonable time constraints, so as to ensure that someone ultimately gets around to something.

I would be reluctant to talk about something as basic as the inventory, letting too much time go by. I would see that as an opportunity for people to delay further compliance even with the extended time allowance.

Mr. WINGERTER. If I may comment on that point, we are not suggesting that the sites surveyed be deferred from being placed under any compliance schedule. That should be determined at the time the survey is conducted. Our only concern relates to the inequities of publishing the data prior to the completion of the total survey such that some sites selected first, for whatever reasons, are placed in an inequitable compatible situation with adjacent sites.

Mr. FLORIO. I would agree and say that the emphasis rather should be placed on inducing people to move more rapidly with the survey so that the entire data can be published at the time the compliance is required.

Mr. WINGERTER. Yes.

Mr. ROONEY. Mr. Russo?

Mr. RUSSO. I have no questions, Mr. Chairman.

Mr. ROONEY. Mr. Skubitz?

Mr. SKUBITZ. I have only one question. It has come to my attention that the standard 18-gage 55-gallon drum which is the workhorse of the chemical industry can be recycled 10 to 12 times, that the industry itself is thinking in terms of a lighter drum that can be disposed of. Would you care to comment on that?

Mr. WINGERTER. I am not in a position to. I am not familiar with the specific technical considerations of that proposal. I would be pleased to look into it further and comment.

Mr. SKUBITZ. There is nothing technical about it. One of them weighs more, and you can use it 10 to 12 times, and the other one is light, and you have to throw it away when you get through with it. One would take a lot of energy. All you have to do is wash it out or

clean it out, and you could save energy if you could use it 12 times. The other one, you have to toss it away, which creates a demand for a lot of new drums, and it requires more energy to make the new drums. If it takes some technical assistance and knowledge, I wish you would look into it and report back to us, sir.

Mr. WINGERTER. Thank you, sir.

Mr. ROONEY. Thank you very much. We appreciate your appearance. You have been helpful to the committee.

Our last witness has traveled over 3,000 miles to get here, and I think in deference to him, Mr. Jerold A. Prod, chairman of the State Solid Waste Management Board, the State of California, the committee will take a 10-minute recess in order to answer the quorum call, and we will be back immediately thereafter.

[Brief recess.]

Mr. ROONEY. You may proceed, Mr. Prod. I would appreciate very much if you would introduce your colleagues for the record.

STATEMENT OF JEROLD A. PROD, CHAIRMAN, CALIFORNIA STATE SOLID WASTE MANAGEMENT BOARD, ACCOMPANIED BY ALBERT MARINO, EXECUTIVE OFFICER, AND WINSTON HICKOX, ASSISTANT TO THE GOVERNOR

Mr. PROD. Thank you, Mr. Chairman. My name is Jerold Prod, and I am the chairman of the Solid Waste Board, and to my right is Mr. Albert Marino, and he is the executive officer of the California State Solid Waste Management Board, and to my rear is Mr. Winston Hickox, who is an assistant to the Governor in the Governor's office.

Mr. ROONEY. Why don't you have him come up here to the table?

Mr. PROD. In reporting to the special assistant to the Governor for environmental affairs, I appreciate the opportunity to testify before your committee, and feel that the experience of California should provide some valuable assistance for the national program. You have the prepared statement, I believe, and in the interest of time, as I have observed the procedure to be, if it is a part of the record I can summarize.

Mr. ROONEY. Without objection, your statement will become a part of the record, and you may continue to summarize.

Mr. PROD. Thank you. I will emphasize some areas more strongly, to the extent that it is my perception that they have not been covered, and of course many matters have been covered by the speakers before me, and I will acknowldge that by both so stating and by being brief with regard to those matters.

I want to categorize California's observations into five principal areas. The first is a set of problems which we have lumped under the term of implementation problems. Those that remain are the matter of financial assistance, what we perceive to be a lack of commitment to resource recovery, the role of the Resource Conservation Committee, and the problem of managing what we have come to refer to as hazardous wastes.

Since 1973 in California the Solid Waste Board has been concerned with programs which were backed by legislation in California which

viewed as an entity of problems those of waste reduction, resouree recovery, and State planning. One of the eoncerns I think we have is that the emphasis that has gone on at local and State levels, which has been somewhat more comprehensive due to the startup problems in RCRA I think have probably been halting and uneven, and of course this does tend to oeeur with a new program.

Among the implementation problems, which was a eategory I referred to in stating we were going to address those first, one of the concerns we have there is the proposed changes in antieipated funding levels for subtitle C, hazardous wastes, in relation to other portions of the act, particularly subtitle D, eoncerned with plans, which of course inferentially refer to all other wastes as well.

At present in California 36 percent of the funds that we have available are earmarked for subtitle C, hazardous waste, the remainder for subtitle D, and of course the faet that the funding mix eame to us in that partieular proportion did, of course, raise expectations and eause, to use a term lawyers are fond of, I believe, detrimental relianee. This did tend to find its way into the thinking that we have done in our State planning.

If antieipated grant moneys are not properly balaneed and a disproportionate share goes to subtitle C, hazardous wastes, of course, we will have had this skewing problem, and I realize—and this beeomes difficult because we do realize the problems that we do have in the hazardous waste area, a problem aeknowledged by many of you, and dramatieally pointed out to us in the eourse of reeent weeks, and by Mr. Florio, whom I know has gone—a lot of this took plaee before the explosions in the reeent weeks in New Jersey as well.

This problem is with us now. I want to relate this. I will get baek to it in a moment or so, but the problem here is not so much the necessity for the preeise balance of funding between various programs, but rather the faet, and I think, as you have acknowledged, sir, when we have inadequate funding on an overall basis, we will tend to run into the problem of when we have to grease the squeaky wheel, it may turn out to be the only wheel we do grease. We will then run into other operational problems, even with sueh limited things we ean do now, being such as the dump site territory and the rather expensive and involved process involved in putting together the state plans which are in California an amalgam of the eounty plans.

I will return to that in a moment. I think with regard to the funding we have discussed that somewhat before. I do want to bring up something which I think is relatively untouched to this point, and this is an organizational problem that we begin to see in the EPA itself with regard to the authorities and the roles of the regional administrators vis-a-vis the national headquarters.

In light of the fact that a eonsistent nationwide applieation and interpretation of RCRA is a goal of EPA, as it is and should be of any major Federal program, we become eoneerned about these roles. Regional administrators may approve or disapprove all or any part of the solid waste management plans to be submitted to them without any apparent or preseribed resouree delegation to the regional administrator as mentioned by Mr. Jorling is not necessarily equivalent to the aim to diffuse the authority responsibility, policymak-

ing, and discretion to the States. It may turn out that way, but then again it may not, because all we are really doing is delegating to a different level within the Federal Government. Although our relationship with our EPA regional office has been satisfactory, we would nevertheless be much more at ease if there existed a mechanism to ensure uniformity. Action on State plans by regional administrators should be reviewable in some way by the central office to which the regions are accountable, upon petition to the State in the same general manner provided for in all other major Federal agencies.

I have worked in the health and welfare field particularly for a very long time, and to my personal knowledge the HEW procedure provides for this, as does the Department of Transportation and the Department of Labor, the regional administrators who are responsible for the implementation of State plans, the passing through of money, et cetera, I know of no instance where it has been satisfactory or where it has been in fact done where the total autonomy remains with the regional administrator, and the decisionmaking goes no higher than that, although delegation of course is a desirable thing, but I think there needs to be some mechanism to ensure both uniformity and a constant flow of communication with the national office, where the decisions are made.

In this respect, we are also concerned with the present authority of the EPA administrator to issue grants directly to municipalities as provided for in the current draft strategy for RCRA. It would seem that if the States are responsible for the planning process, including necessary delegations, as is the case in California and most other States, grants should flow through the States to the local agencies, and not directly from the administrator. This is one particular point upon which I would imagine I am expressing disagreement with the gentleman sitting here not long ago.

On most other points I think, as I take just the one or 2 more minutes before concluding——

Mr. ROONEY. I do think he had a valid point, if you are referring to Commissioner Koehler. If the State has no program under way, and the municipalities he was representing, I think he said Dade County, West Palm Beach, and some others——

Mr. PROD. I remember that, that they did have their plans implemented and ready to go.

Mr. ROONEY. Right.

Mr. PROD. In that connection, I want to in answering you respond to the fiscal side of the program that we mentioned as well. In California the State budget alone, without considering what budgets there are, which are extensive, and I am not really prepared to add that total up and say what it is, the State budget is $26 million in California, of which $1 million approximately is this RCRA portion. That is California's State share, the way the moneys have been disbursed so far, and of course we are the biggest State in the Union, which emphasizes perhaps that we need to do more, but of this money, there is a tremendous amount of money being passed through as a result of State and local programs that exist independently of what goes on in RCRA. It is difficult for me to address myself to the process that takes place in Florida.

In California, the entity for which I speak is a board which does its business by holding public hearings. It does not work as a more traditional State department or agency such as we have here at the Federal level. Our business is conducted by noticed and agendaed meetings, and the State plans are filed with us, are approved by us. We hold public hearings concerning the designation of the agencies. I would agree with Mr. Russo, who is not here, when he does observe that the passing through of money, the ability to maintain the business of solid waste management by the local governments is incredibly important, yet there is this necessary function whereby, if RCRA is going to mean anything at the Federal and State levels at all, the supervisory and planning function does have to get elevated to a point where it does matter, whether, for instance, Dade and Palm Beach Counties, what they are doing makes sense with regard to the next county up, which he did not mention, the fourth one of the three, et cetera, and of course in California, with the very diffuse regions, the geography being probably more dramatic than it is in other places, this becomes more important. I am not quite sure that we have the problems this gentleman mentions, although it is difficult for me to compare the degree, but I do sympathize with his concerns, but also, if we do want to change the emphasis, I think we need to change the law.

If we are going to remove the funnel of the State for passing through the grants, then I would suspect that we also ought to remove the responsibility, and I think they would have to remain hand in hand, whichever way that question is resolved. I am not going to address myself to the dump inventory, because I think that has been adequately covered, and there is an ongoing dialog to iron out the problems, and they have been identified and addressed there.

Since this was written, since the prepared testimony was written, there have been considerations and consultations and communications, and I do not think there is any need to address this. I am concerned, however, with one other point that I do want to mention. We are concerned that the EPA commitment to coordinate air, water, and solid waste management programs at the State level by requiring States to use common regional boundaries, data bases, projections, et cetera, may, despite laudable intentions, lead to unfortunate results. We applaud the idea of employing a uniform approach. However, there are circumstances. For example, under a special consideration of our recent fiscal year 1978 grant approval, California is supposed to illustrate to EPA, region 9, our region, why it has chosen to utilize county boundaries and combinations thereof as our basic planning units, rather than the watershed boundaries.

The local 208 or water agencies in California are obliged to adopt solid waste residuals, management plans which they have developed along watershed lines reflecting the 208 plans, emphasis on water quality management. Of course, what they produce then becomes sludge, which is a solids problem which does not necessarily coincide with the water boundaries.

In California, once again, geography does dictate tremendously different results often than the political boundaries would. In California and, I suspect, in most places, solid waste management, as the

same gentlemen to whom I referred earlier was mentioning, solid waste management is generally concerned not only with water quality protection but public health consideration, noise, resource recovery aesthetics, all other environmental considerations. We believe that neither the 208 planning activities nor the watershed boundaries associated therewith should be allowed to inhibit State and local flexibility to plan for a multitude of solid waste management problems, many of which are more effectively addressed in terms of political boundaries and combinations thereof, regional councils of government.

In California and most other States, collection and disposal, et cetera, is primarily the responsibility of local and municipal governments with the State performing the supervisory and planning role. Toward this end, another thing we would urge is for EPA and/or Congress, whichever is appropriate, depending upon whether it is a matter of internal management or necessary legislation, to consider having the Office of Solid Waste Management report directly to the Administrator as to the air and water related arms of the agency.

After many years of experience, this is what we found we needed to do in California, and it was the only workable arrangement. As I have submitted to you in writing, it just will not do to consider solid waste planning as nothing more than an appendage to air pollution problems and water pollution problems. We do not suspect it will work out that way, and I think they are three separate entities there.

With regard to the financial assistance, I am going to skip over that, except to give you a couple of observations relative to some of the concerns that came up here. Particularly, I want to respond to the matter of the appropriateness of Federal funding and the existence of a State surplus. It has probably been noticed here and about that California does have something of a surplus, as do some State and local governments. However, I think a couple of observations need to be made.

It is a cyclical phenomena. State and local governments tend to have them now. It was not very long ago, I think, within most of your present terms, or at least the one prior to that, when the opposite was tending to be true. Of course, the State and local governments have no authority or ability to engage in deficit spending or inflate the currency in any other fashion similar to that enjoyed by the Federal Government, No. 1, and No. 2, this money, of course, generally will tend in political processes over the term of the planning we are talking about here to be absorbed by other activities which are unique to State and local government, at least in terms of funding, such as the major impact of health and welfare programs, and particularly with K through 12 education and property tax relief.

In other words, I guess what I am saying in a drawn out fashion is that surplus probably won't be there very long, No. 1 point. Second of all, I would just reemphasize one more time, as I have mentioned before, the proportion of the RCRA money that we do get to our State expenditures, $1 million to $26 million, which does not even count our considerable investment in energy recovery poten-

tials which would, although at an early planning stage, at least multiply that State and local effort 10 times plus the local effort itself.

So, we are not talking, really, about a huge percentage of the effort at all, even should we double or triple the Federal commitment under RCRA, and I suspect that this may be true, perhaps not quite to that degree, but that factor would be operable in most States.

With regard to resource recovery, I think this is what we perceive to be one of the biggest weaknesses of RCRA, probably not in terms of conception, but possibly in terms of funding and administrative emphasis in the early stages. What emerges is de facto a lack of commitment to the recovery of resources, let alone the prior problem, more basic and fundamental, perhaps, of waste reduction itself. The relevant provisions of that act, which are subtitles E and H, section 6002, and some others, are underfunded and tend to be underemphasized.

Even with regard to the Resource Conservation Committee, the high level—approaching cabinet level—committee, that has been formed. I think elements that participate on that tend to be underfunded. One I have become recently aware of, the Commerce Department's effort toward the development of markets for recycled and reusable materials, we do not believe they have any funding, nor does it come through EPA, which, I think, as we have seen, tends to have funding problems of its own, and I think that the lack of emphasis on these particular areas will tend to become critical in very short order, and perhaps this is why I emphasize them as I do, because in California the solid waste authority is separate and equal and independent, and coterminus with these water entities.

This situation does not exist in RCRA, and what this does is, it causes us to develop the concerns, as I think they were envisioned in RCRA, but administratively and by virtue of the way the money flows, it cannot happen the way it is set up now at this early stage, and I think you are going to find the same stumbling block we ran into.

One more sentence, and then I think I will conclude, and I think that should be this. Understanding as I do the problems that we presently have that have in a way, if we look back on it from 5 years hence, should hopefully turn out to have been beneficial, but what we have dramatically recently seen with regard to hazardous wastes should, I think, refer us back to the realization of the inadequacy of our overall effort, and should we now need to divert everything into the hazardous waste area, we are going to run out of the ability to do anything else with the limited funds we have.

On behalf of the State of California, I want to thank you, Mr. Chairman, and Committee Members, for giving us the opportunity to share with you some of the problems we see concerning present and future implementation. We are convinced that the act is fundamentally sound, and that the problems we have pointed out can be corrected in a relatively uncomplicated manner. Hopefully, the hearings will result in needed changes to RCRA which will assist States to develop solid waste management programs and all of the ramifications which will help us fulfill all of the intent of the act in the spirit of partnership.

[Mr. Prod's prepared statement follows:]

TESTIMONY OF JEROLD A. PROD, CHAIRMAN, CALIFORNIA STATE SOLID WASTE MANAGEMENT BOARD

My name is Jerold A. Prod, and I am Chairman of the California State Solid Waste Management Board.

I appreciate the opportunity to testify before your committee and feel that the solid waste management experience of California can provide valuable assistance to the national program.

For 13 years, California has had a solid waste management program commencing with early inventories and studies. Since 1973, the newly formed State Solid Waste Management Board instituted programs backed by legislation involving waste reduction, resource recovery and state planning. Our recent successful experience in mounting a major state solid waste management planning and implementation program in response to the Resource Conservation and Recovery Act (RCRA) prompts us to provide you with an insigbt into the problems we have faced in implementing RCRA. I hope to relay to you the ways in which we believe the Act can be improved to further strengthen the ability of all states to improve the quality of solid waste management in this country and, concomitantly, the quality of the environment.

My remarks will be divided into five areas of principal interest to the State of California. I will begin with what may be termed "Implementation Problems," a series of concerns regarding the manner in which our state planning program either had been or could be impeded as the result of current RCRM implementation policy. The other four concerns are: The matter of financial assistance, the lack of commitment to resource recovery, the role of the Resource conservation Committee, and the problem of managing those wastes termed "hazardous."

I. Implementation problems

A. PHASING

The schedules of implementation of RCRA are creating some problems. According to Section 36.718–2 of the Guidelines, the application for grants by states after fiscal year 1978, must indicate all the state and substate agencies that will be funded, and the purpose of the funding. However, criteria for landfill assessment were late in being adopted, and planning guidance has been sketchy. Therefore, required priorities cannot be properly established by states. Hopefully, EPA, Office of Solid Waste will properly resolve this problem with the regional offices so that grants will not be delayed.

The Board is vitally concerned with and opposes changes in anticipated funding levels for Subtitle C (hazardous wastes) In relation to Subtitle D (all other wastes). At present, in California, 36 percent of the funds are earmarked for Subtitle C, the remainder for Subtitle D. We are led to believe that subsequent funding will be apportioned much more heavily in favor of Subtitle C. If anticipated grant monies are not properly balanced and a disproportionate share goes to Subtitle C, a serious breach of understanding between EPA, the states, and the local entities will have occurred. There will arise a justifiable feeling that EPA has changed the rules of the game without notice. State, regional, and local entities, In their preparatory and organizational efforts, have relied on the prior mix of funding in their overall solid waste planning. We suspect a similar situation exists in most or all other states. We strongly urge an alternate formula be adopted to provide a minimum level of funding for Subtitle C, with latitude to states to apportion funds above that level, thus allowing for the diversity of need across the nation.

We are concerned about this growing disparity in the funding patterns for Schedule C and D. EPA's current budget proposal does not reflect the original intent of the act, which is to regard both programs as important aspects of the same problem.

B. REGIONAL ADMINISTRATOR AUTHORITY

1. State plans

In light of the fact that consistent nationwide application and interpretation of RCRA Is a goal of EPA, we are concerned about the role of EPA administrators in the approval of state plans. Regional administrators may approve all or any part of the state solid waste management plans submitted to them without any apparent or prescribed reconrse. Although the relationship with our EPA Regional Office has been satisfactory, states would nevertheless be much more at ease if there existed a mechanism to insure uniformity. Action on state plans by regional administrators should be reviewable

by the central office to which the regions are accountable, upon petition by the state, in the same general manner as provided for in all other major federal ageucies.

2. Grants

We are also concerned with the authority of the EPA administrator to issue grants directly to municipalities and inter-municipal agencies as provided for in EPA's current draft strategy for implementation of RCRA. It would seem that if the states are responsible for the planning process, including necessary designations, as is the case in California and most other states, all grants should flow through the state to local ageucies and not directly from the administrator.

C. OPEN DUMP INVENTORY

California has no major criticism of the concept of an inventory of open dumps based on reasonable criteria with the purpose of upgrading or closing facilities to meet environmental standards in five years. There has, however, been a great deal of confusion in California and elsewhere concerning the implementation of this section of the Act. Part of the problem has been the time frame outlined in RCRA for initiation and completion of the inventory. EPA only last month published the Sanitary Landfill Classification Criteria after months of consideration. Without this guidance, states and localities have been stymied in efforts to develop a program.

Many questions, however, remain. We have insufficient guidance as to the extent of the inventory and the scope contemplated. It is unclear for example:

1. Whether to extend the inventory beyond municipal and industrial sites.
2. Whether to address the problem of mining waste disposal and related problems associated with drilling operations.
3. Whether to inventory disposal of agricultural wastes.

Therefore, we cannot constructively comment further at this time except to say that the opportunity for flexibility should not prematurely be foreclosed.

D. COORDINATION WITH AOENCIES

We are concerned that the EPA commitment to coordinate air, water and solid waste management programs at the state level by requiring states to use common regional boundaries, data bases, trends and projections, etc., may, despite laudable intentions, lead to unfortunate results. We applaud the idea of employing a uniform approach, but only if the approach is feasible. For example, under a special condition of our recent fiscal year 1978 grant approval, California is supposed to illustrate to EPA, Region IX why it has chosen to utilize county boundaries (and combinations thereof) as our basic planning units, rather than watershed boundaries. Local 208 agencies in California are obliged to adopt solid waste residuals maangement plans which they have developed along watershed lines reflecting the 208 plan's emphasis on water quality management. In California, solid waste management generally is concerned not only with water quality protection, but also with public health considerations, noise, resource recovery, aesthetics and a host of other environmental considerations.

We believe that neither the 208 planning activities, nor the watershed boundaries associated therewith, should be allowed to inhibit state and local flexibility to plan for a multitude of solid waste management problems, many of which are more effectively addressed in terms of political boundaries and combinations thereof. In California, and most other states, these concerns, such as collection and disposal of municipal wastes, are primarily the responsibility of local and municipal goverments with the state performing a supervisory and planning role.

Many states share the feeling that EPA supported water programs exert far too much influence on the development of solid waste programs. In order for solid waste programs to properly address the concerns emphasized in RCRA, including water quality protection aspects, the 208 planning process should be utilized *only* as individual states deem appropriate.

Toward this end, we would urge EPA to consider having the Office of Solid Waste Management report directly to the Administrator, as do the air and water related arms of the agency. After many years of experience, California has found this to be the only workable arrangement. It will not do to consider solid waste as nothing more than an appendage to air pollution and water pollution problems.

II. Financial Assistance

It is mentioned throughout RCRA that the overall objective of the Act is to provide both technical and financial assistance to the states and local governments to aid in the development of their solid waste plan, and all plan implementation activities. In Section 4003 of RCRA, there is authorized some $30 million for fiscal year 1978 and $40 million for fiscal year 1979 for the purposes of making grants to states for the development and implementation of state plans. In actuality, the funding amount for fiscal year 1978 for Section 4003 was only $12 million for all states nationwide. This represents, according to population formulae, just over $1 million available to California.

Proposed fiscal year 1979 EPA budgeting leads us to the conclusion that California will not be able to meet anticipated pass-through objectives hoped for in RCRA in 1979.

In order for the states to have any hope of realizing the expectations of local governments generated and relied upon as a result of the passage of RCRA, funding levels must be increased beyond the appropriated 1978 level and approach those authorized amounts found within Section 4003 of RCRA. In fact, funding should be provided through 1983 at the levels outlined in the Act. Thereafter, funding needs should be reviewed by the Congress. Complete revaluation of funding needs should begin in about 1982 with a report to Congress and a proposal for amendment to RCRA prior to the 1983 session.

III. Resource Recovery

One of the biggest failings of RCRA is the lack of commitment to recovery of resources. The relevant provisions of the Act, Subtitles E and H, and Section 6002, do very little to ensure the eventual recovery of resources in the face of the inevitable need. Basically there are three ways to stimulate resource recovery: (1) Easing the cost of producing and delivering usable recovered materials, (2) encouraging the demand for the use of recyclables, and (3) developing markets by economic incentives or disincentives.

Concerning the first approach, Subtitle H of RCRA is underfunded and underemphasized. The language of the Act provides for contracts for construction of full-scale demonstration facilities, grants for new and improved technology, and studies of the most serious problems blocking the development of energy conservation through resource recovery. The State of California has identified and developed a series of projects which could provide answers to the problems of resource recovery, but federal participation has been minimal, erratic, and poorly coordinated. Resource recovery could supply from six to nine percent of the existing metropolitan fossil fuel demand, and could save yet more energy by eliminating part of the demand for exploitation of virgin resources. Federal fiscal decisions have reduced RCRA from a Resource Conservation and Recovery Act (with a bowed for fiscal flow) to a Dump Regulating Investigating and Planning Act (DRIP). The present limited emphasis on hazardous and solid waste management and disposal is myopic. Waste disposal is a significant problem. Resource recovery is a significant opportunity. There is no reason to perform a trade-off between these noncompetitive areas of the waste problem and no need to arbitrarily restrict the scope of RCRA to a field so narrow that it excludes the matter described in the title of the Act.

The direction given by RCRA to establish markets for secondary material is weak. The impact of the efforts of the Department of Commerce regarding market aspects will probably be lost without help from EPA. Needed coordination should be mandated. There needs to be a greater commitment to establishing markets. The idea of required procurement outlined in Section 6002 is a positive step. Economic incentives, i.e., tax exemption for using recovered materials in productive manufacture, is an example.

IV. Resource Conservation Committee

We are aware that this cabinet level committee, formed under the aegis of RCRA, has been studying questions of resource conservation and recovery and attempting to set future legislative priorities. We applaud these efforts; however, it is difficult for the states to keep abreast of the progress made by this committee in its deliberations.

Because the committee's efforts are likely to result in recommendations to the Congress and the Administration which will have far-reaching effects on

all citizens, more publicity and consideration should be given on this effort. More frequent mailings to interested citizens on the findings of the committee should also be made. We urge that states be represented on this committee, perhaps through the National Governors' Association.

V. Hazardous Waste Management

California's hazardous waste program has been enhanced by the infusion of federal funds under RCRA. With this federal backing, California has developed the elements of an effective state control program which will accomplish the objectives of RCRA for hazardous waste control after full program implementation. The next several years will be particularly critical to the program's longterm acceptance and effectiveness. The lack of any firm assurance of federal funding in RCRA, balauced as described in Part I above, beyond fiscal year 1979, is very disruptive to program planning and is not conductive to obtainiug and retaining the highly qualified personnel which the program demands. The possible cancellation of federally supported activities, even for a brief period, would not only slow the program in its formative period, but would result in a total inability to carry out an effective enforcement activity. The resultant loss of credibility would be very difficult to overcome. If it is the intent of Congress to continue the federal support of hazardous waste control, it is essential that the Act be amended this year to specify continued federal funding beyond 1979, preferably for a six year period.

Conclusion

On behalf of the State of California, I want to thank you Mr. Chairman and Committee Members for giving me an opportunity to share with you some of the problems we see concerning the future implementation of RCRA. We are convinced that the Act is fundamentally a sound one and the problems we have pointed out can be corrected as we have briefly suggested. Hopefully, the hearings will result in needed changes to RCRA which will assist states to develop solid waste management programs which will help us to fulfill the intent of the Act in a spirit of partnership.

Mr. ROONEY. Thank you very much. Your concluding comments are exactly what this committee is trying to encompass with its oversight hearings today, tomorrow, and the following day. I might say there is another vote on the floor. You have been saved by the bell. Nevertheless, we do have some questions, both Mr. Skubitz and myself, which we will submit in writing, and the record will remain open.

Mr. PROD. Thank you, sir. Also, should Mr. Russo—He extended an invitation to someone to address the problems of sludge. Should he desire to question me in the same manner, I was prepared to respond.

Mr. ROONEY. Thank you very much. That concludes the hearing until tomorrow morning at 10 o'clock in room 2223.

[Whereupon, the subcommittee adjourned at 12:59 p.m., to reconvene March 8, 1978, at 10 a.m.]

RESOURCE CONSERVATION AND RECOVERY ACT—OVERSIGHT

WEDNESDAY, MARCH 8, 1978

HOUSE OF REPRESENTATIVES,
SUBCOMMITTEE ON TRANSPORTATION AND COMMERCE,
COMMITTEE ON INTERSTATE AND FOREIGN COMMERCE,
Washington, D.C.

The subcommittee met at 10 a.m., pursuant to notice, in room 2322, Rayburn House Office Building, Hon. Fred B. Rooney, chairman, presiding.

Mr. ROONEY. The first topic we will cover this morning will be the Resource Conservation Committee. Before the Congress can responsibly choose among the various proposals before it which deal with resource recovery, it will hear from a study group composed of members of those parts of the executive branch affected by those proposals.

I speak of the interagency, cabinet-level Resource Conservation Committee. This group can greatly assist the Congress, and I am sure the President, by reporting on and making recommendation concerning such diverse subjects as tax incentives or disincentives, to the use of recycled materials, and the like. I am very anxious to learn what subjects have been studied, what are under study, and when recommendations can be expected.

I must also express my hope that the Resource Conservation Committee report will address as many options as it can. I also hope that when its final report is to be sent to us, it will not have been postponsed, subject to yet another study of some of the vital areas on which the Congress ought to be acting now.

With that brief introduction, because we have a lot of ground to cover today, I will welcome our first witnesses, Ms. Barbara Blum, Deputy Administrator of the Environmental Protection Agency and chairperson of the Resource Conservation Committee, and Mr. Emil Sunley, Deputy Assistant Secretary of the Treasury, that Department's representative on the committee.

Ms. BLUM. I do not believe Mr. Sunley is here, Mr. Chairman. Do you want me to proceed?

Mr. ROONEY. I would like all the witnesses to know that this committee starts promptly at the appointed hour and 10 is that appointed hour.

STATEMENT OF BARBARA BLUM, DEPUTY ADMINISTRATOR, ENVIRONMENTAL PROTECTION AGENCY, ACCOMPANIED BY JOHN ROBINSON, EXECUTIVE DIRECTOR, RESOURCE CONSERVATION COMMITTEE

Ms. BLUM. I have on my left John Robinson, Chief of Staff of the Resource Conservation Committee, who can enlighten us on quite a few issues.

Mr. Chairman and members of the committee, I am Barbara Blum, Deputy Administrator for the Environmental Protection Agency and for the last 8 months I have been acting as chairperson of the Resource Conservation Committee. I am here today in the latter capacity.

The interagency Resource Conservation Committee was established in response to requirements of Public Law 94–580, the Resource Conservation and Recovery Act of 1976, which set the committee's span of life at 2 years. The committee is made up of the Secretaries of Commerce, Interior, Labor, and Treasury, the Chairman of the Council on Environmental Quality, a representative of the Office of Management and Budget, the Administrator of EPA, and the nonstatutory—but important—members: a member of the Council of Economic Advisers and a representative of the Department of Energy.

The Resource Conservation and Recovery Act directs the committee to investigate a variety of economic incentives and disincentives, taxes, subsidies, regulations, and other policies affecting resource conservation. The first of the policies that we looked at was a uniform national deposit on beer and soft drink containers.

Approximately 75 billion beverage containers were used last year. About 70 billion of them were throwaway bottles or cans. The majority of those were disposed of in landfills or dumps, or were littered on our roadsides, beaches, streets, and wilderness areas.

Along with the cans and bottles that were discarded after a single use, we in effect buried the energy spent to mine, transport, melt, refine, and manufacture them. We also buried the materials used to make those cans and bottles. If we continue our present trend this country will use nearly 90 billion beverage containers in 1985 and an even greater proportion will be no-deposit-no-return and will be lost forever.

We have just made our second report to Congress. We submitted it a month or so ago. That report was also submitted to the President. In that report, we described our work to date on the beverage container deposit question. We have not yet decided whether to recommend that national deposit legislation be adopted. We are waiting to see how that policy fits with other policies that we are studying. But, we have recommended what we think is the best design for such legislation if the Congress should decide to act.

Let me emphasize, at the outset, that the committee and its staff have received substantial public input in our work. It is our stated policy, as well as our firm intention, to include the public in our operations both in order to inform them about what we are doing, and to use them as an information resource.

I believe we have succeeded. We held a public meeting on the beverage container deposit issue in mid-October of last year. The meeting lasted a full day and was attended by approximately 250 people. Forty of those people spoke, some as private citizens, others as representatives of Congress, industry, and environmental organizations.

Many of those who spoke submitted more detailed written statements, and more than 500 other persons mailed letters or documents to us to express their views on this subject. I understand that my staff has already provided copies of all of those submissions to you. I hope that they will be as useful to you as they were to us.

We have looked very carefully at the structure and design of deposit legislation. This was necessary to enable us to analyze and predict the impacts of such legislation. We used the bills proposed by Congressman Jeffords and Senator Hatfield as a base and made various additions, deletions, and modifications.

I think it may be useful to you for me to elaborate on our judgments and to explain our reasoning in designing deposit legislation. To this end, I will go through Congressman Jefford's bill, H.R. 936, and explain where the Resource Conservation Committee agreed or differed, and why.

The first question is: what beverages and what containers should be included in the scope of legislation? In general, we agree with the approach in H.R. 936—that beer and carbonated soft drinks in sealed containers, regardless of the container material, should be covered.

However, we have added a provision that would allow the Administrator of EPA to include or exclude other beverages or containers by regulation. We believe this added flexibility is desirable to enable us to adjust to any unexpected changes in the competitive structure of the beverage industries. This flexibility also makes it possible to accommodate innovations in packaging.

On the question of the amount of the deposit, we are, again, in general agreement with H.R. 936 but would add a requirement that the deposit level be adjusted as the consumer price index changes, in order to avoid dilution of the deposit's incentive effect by inflation. We agree that the deposit should be uniform, a minimum of 5 cents with no upper limit required or established.

We do not believe that the tiered or multiple-level deposit systems in use in Oregon and soon to be in use in Michigan are appropriate for national law. The "tiered" deposit system intentionally discriminates against nonrefillable containers by establishing a lower deposit for "universal" bottles that can be used by more than one brewer or filler. We do not think this is necessary for several reasons.

First, refillable beer bottles are already virtually universal, at least on a regional basis, so it is unnecessary to encourage the brewing industry to move in that direction. Second, major soft drink manufacturers have spent years and millions of dollars on advertising to achieve brand identification, partially through bottle design. It is unlikely they would be interested in losing that marketing advantage in order to use universal bottles. Finally, there is the danger that those consumers who intend to discard their containers in spite of the deposit would be encouraged to buy beverages in the uniform containers in order to pay and forfeit a smaller deposit.

We agree with H.R. 936 that the deposit should begin at the distributor-wholesaler level. H.R. 936 calls for a 3-year phase-in. We think that a 2-year period between enactment and the effective date of the legislation will provide sufficient phase-in time.

Finally, while the Jeffords bill and all State bills ban the use of removable pull-tabs on cans, we have not included that provision in our recommendation. The reason for its exclusion is largely technical. While virtually all of us felt that a ban on pull-tabs would be beneficial, we could find no justification for it on grounds of resource conservation, or reduced solid waste generation. In addition, it appears that the beverage industry is moving voluntarily toward nondetachable openings. Consequently, we see no need at the present to legislate what the industry appears to be doing on its own.

Assuming that deposit legislation would be structured as we recommended, we then attempted to predict its effects. We expanded and refined the computer model that the Research Triangle Institute developed for the 1976 Federal Energy Administration study on mandatory deposits. As a result, we believe that the impacts that we have predicted are as accurate as possible.

There are two areas where impacts might be considered adverse. They are job dislocations and customer inconvenience. Let me first address labor impacts.

Labor in the glass container manufacturing industry would be affected, but severe local impact would be limited to no more than 10 counties in 6 States. We estimate that between 4,900 and 10,400 job dislocations could occur in the glass container production industry over the 4 years following the implementation of deposit legislation. This would amount to approximately 1.5 to 3.3 percent of the employment in that industry per year over 4 years. The other area of major labor impact is in the metal can manufacturing industry. Metal can production jobs could be dislocated 4.6 to 9.2 percent per year over 4 years. The expected total over the 4 years would range from 14,200 to 22,000 jobs.

We have not been able to find detailed geographical data on metal can production and employment that would enable us to look at individual, local impacts as carefully as we have with glass containers. We do know, however, that can manufacturing plants are generally smaller and more widely dispersed than bottle plants. Therefore, it is unlikely that many, if any, local economies would be severely affected by employment dislocations in the can manufacturing industry.

These labor dislocations would, however, be offset by jobs produced. We expect that national deposit legislation would create between 80,000 and 100,000 new jobs. These jobs would be primarily in the distribution and retail sectors, although there would undoubtedly be some additional jobs created in the beverage filling sector as well. The net result is that total, national labor impacts would be mixed, with some jobs—generally skilled jobs—being lost and other, more numerous, generally unskilled jobs being gained.

Mr. ROONEY. Let me ask you a question, Ms. Blum. Wouldn't this create more problems? You talk about the distribution and retail sector who have to build additional facilities for storage. You have

to put more trucks on. You have to have more gas lines if you have more trucks on the road.

Certainly, the jobs would be put in one area, but, at the same time, you are using more energy.

Ms. BLUM. The energy savings that we project have taken into account the energy that is going to be used in both the distribution of beverages and the retrieval and cleaning of beverage containers. We still predict an energy savings of the equivalent of 33,000 to 61,000 barrels of oil saved per day, taking these added energy uses into account.

But, as I was saying, the net result is the total national labor impact would be mixed with some skilled jobs being lost, and other more numerous, but unskilled, jobs being gained.

Mr. FLORIO. I would like the benefit of your comments concerning the glass blowers. When you say total number of jobs may be expanded, is it fairly certain that targeted areas would be rather reduced.

Ms. BLUM. Yes, that is right. And we have those targeted areas. Would you like to know where the job dislocations might occur?

Mr. FLORIO. Could you explain how, in the name of jobs and energy conservation, these individuals are going to be adversely impacted and what they should be willing to accept?

Ms. BLUM. I have met with the representatives of the glass blowers on several occasions. It is a very difficult question to deal with job dislocations, and that is why I am breaking this up as one of the adverse impacts, overall, in the job market.

There are going to be more jobs created, but there are going to be jobs, which are negatively impacted, particularly in the glassblowing industry. I think there is no easy way to be able to deal with this problem. I have not found it yet.

Some of the glassblowers would have to move on to other jobs. But the total job market of this country will not be adversely impacted. Indeed, it may actually be improved a little, but that does not help the person who is putting food on the table who finds himself out of work.

Mr. FLORIO. There are other areas, when we talk about the Redwoods or the Alaskan lands, that require impacts on jobs but there are funding formulas to curb the impact.

Ms. BLUM. One of the reasons that we did not recommend for returnable container legislation at this time is because the Council of Environmental Quality has a study going on to see how we can mitigate these local impacts. The Labor Department, I believe, is looking at this also.

Mr. FLORIO. What is the projected timetable for the conclusion?

Ms. BLUM. The Labor Department study is due at the end of our deliberations, which is still in the fall of this year. As far as I know, they are on schedule with that.

So, we have those two studies, which must be factored into this, I feel, before we can make any kind of rational judgment or before we can tell the glassblowers how we can help them.

The second general area in which negative impacts may be felt is in lost convenience to those consumers who now purchase beverages

in nonrefillable containers and discard those containers when they are empty. It is impossible to precisely quantify the cost of this convenience loss. It is necessary to look, instead, for its effects. In Oregon and Vermont, for example, you might expect sales to have dropped if consumers in those States perceived lost convenience as a significant new cost following implementation of their deposit laws.

We have been unable to identify any reduction in beverage consumption levels in those States that is directly attributable to their deposit laws.

You might also expect that consumers would strongly object to deposit laws if they perceived their lost convenience as a noticeable cost. Apparently they do not. In a national public opinion survey performed in 1975, for the Federal Energy Administration, 73 percent of those surveyed responded that they would favor a law "requiring all soft drinks and beer to be sold in returnable bottles and cans." Opposed were 15 percent. In all other areas, we found the impacts to be positive in terms of energy and materials conservation, and environmental benefits. Specifically, our staff studies found that a national uniform deposit law enacted in 1978 would by 1985 do several things.

It would reduce annual national solid waste disposal by 1½ to 3 million tons. It would reduce total litter volume by 40 percent, which is one-fifth of the number of individual items littered.

In addition, it would save 400,000 tons of aluminium, reducing bauxite imports by a potential 1.6 million tons. It would reduce steel consumption by about 1.5 million tons and reduce industrial atmospheric emissions by 750 million to 1.2 billion pounds. It would also reduce waterborne wastes by between 140 and 210 million pounds.

Even though our assumptions were more conservative than those used by the Federal Energy Administration in its 1976 study, we still predict energy savings of 70 to 130 trillion Btu's. This is equivalent to 33,000 to 61,000 barrels of oil saved per day.

The net impact of all of these factors on the retail price of beverages would be, we believe, an average savings of ½ to 1½ cents per container.

Finally, I would point out that a variety of other policies have been suggested as substitute for deposit legislation at both the State and national levels. Our recent report discusses these options more fully, but I do want to emphasize here that the committee and its staff has considered them. We did not reject deposit legislation in favor of any of these alternatives because none of them is really a direct substitute for deposit legislation. Most of them would be compatible with deposit legislation and many would complement it.

For example, a litter tax has been proposed. This is a tax on frequently littered items. The resulting revenues would be used to pay for litter cleanup and antilittering public education. A litter tax would certainly provide for more litter cleanup than would deposit legislation.

But it would not really prevent the generation of litter. Beverage container deposit legislation, on the other hand, prevents a significant portion of litter from occurring. Additionally, a litter tax would provide no resource or energy conservation benefits nor any reduction in solid waste.

Large-scale resource recovery plants have also been suggested as an alternative to beverage container deposit legislation which could address more of the solid waste problem. Development of substantial resource recovery capacity would compliment the resource and energy conservation benefits of deposit legislation. Unfortunately, however, even the most optimistic estimates of the development and implementation of resource recovery facilities project that these facilities will be able to process only 15 percent of the Nation's waste by 1985. Further, neither glass nor aluminum recovery has yet proven to be a cost-effective addition to a commercial resource recovery plant.

As I mentioned earlier, we are in the midst of studying solid waste disposal charges as a resource conservation policy. As it is generally defined the solid waste disposal charge or product charge, as it is sometimes called, is a charge or a fee placed on the material content of a product entering municipal solid waste. The charge is based on the approximate cost of collection and disposal of the product to insure that those costs to society are reflected in the price of the product and, therefore, in the decisons of the producers and consumers. The secondary or recycled material content is not charged since its use has prevented municipal solid waste costs.

The overall result is expected to be more efficient use of our materials since all costs are being considered by producers and consumers. It would also increase the demand for recycled materials to avoid the charge and therefore increase the amount of recycling. The revenues raised would be returned to consumers or municipalities under most proposals. Senator Hart's bill, S. 1281, is an example of one such proposal.

Generally speaking, although the solid waste disposal charge would address a much larger portion of the solid waste stream than beverage container deposit legisaltion, it would provide virtually no incentive to reduce litter. We are investigating the relationship between the two policies and hope to be able to reach some conclusions soon. We will report our findings in our third report, which should be completed by June of this year.

I hope this brief review of the Resource Conservation Committee's work will be helpful to the subcommittee in conducting its oversight of the implementation of the Resource Conservation and Recovery Act of 1976.

I would be happy to answer any questions that you might have.

Mr. ROONEY. Thank you.

It seems to me you have spent a great deal of time in your testimony today on the beverage container subject. I wonder if you can give the committee a more detailed description of the other subjects which the Resource Conservation Committee studied.

Ms. BLUM. Yes; I would be happy to do that. We are studying several areas now in depth. We are making an in-depth study of the solid waste disposal charge, as I indicated before. That is required by the Resource Conservation and Recovery Act.

We are going to be looking at two major alternatives to a solid waste disposal charge. Those two are local level user fees and subsidies to recycling and resource recovery.

Another area we are going to be studying is existing government policies. That would include tax policies, such as percentage deple-

tion, and capital gains treatment for timber income. The Department of the Treasury is doing the primary work for those studies.

Mr. FLORIO. They are going to be looking into previous preferential rates?

Ms. BLUM. Yes; we are going to be looking into the transportation policy, including freight rates and regulations. We will also be looking into direct product regulation such as recycled content regulations and prohibition of contaminants.

In addition we will be considering a national severance tax and deposits or bounties for durable goods. And we are going to review toxic and hazardous waste areas, industrial construction, demolition, and yard waste, to identify any need for later studies.

We are planning on having those completed by fall, probably November.

Mr. ROONEY. Those are valid questions.

Mr. FLORIO. I have no more questions.

Mr. ROONEY. Thank you very much. We appreciate your being here this morning.

Ms. BLUM. Thank you, Mr. Chairman.

Mr. ROONEY. I am pleased to welcome Dr. Jordan J. Baruch, Assistant Secretary for Science and Technology, U.S. Department of Commerce, who was not able to be with us yesterday when we discussed the Resource Conservation and Recovery Act from a very broad perspective.

May I say Dr. Baruch, I particularly look forward to your testimony today since I view the role to be played by the Commerce Department under the act as an extremely important one.

It was the hope of those of us who drafted this legislation that we would not need to spend a lot of tax dollars to make product waste disposal attractive.

We hope American businesses and industries, with the able assistance of the Commerce Department, would find resource recovery attractive.

I hope that you will be able to advise this committee whether or not our hopes were mislaid and what progress the Department of Commerce has been able to achieve.

We welcome you, Dr. Baruch. You may proceed.

STATEMENT OF JORDAN J. BARUCH, PH. D., ASSISTANT SECRETARY FOR SCIENCE AND TECHNOLOGY, DEPARTMENT OF COMMERCE, ACCOMPANIED BY SIDNEY R. GALLER, PH. D., DEPUTY ASSISTANT SECRETARY, ENVIRONMENTAL AFFAIRS

Dr. BARUCH. Thank you, Mr. Rooney.

Accompanying me at the table are Dr. Sidney Galler, Deputy Assistant Secretary for Environmental Affairs, and Mr. Virgil Ketterling of the Industry and Trade Administration of the Department of Commerce.

I would also like to introduce other people if I may take a moment to have them come to the chair. Joe Berke from the National Bureau of Standards and Harvey Yakowitz from the National Bureau of

Standards, both of whom have been very active in the area of resource recovery, and Bob Ellert, my legal counsel.

Mr. ROONEY. They may join you if you wish.

Dr. BARUCH. I do not think it is necessary. Thank you Mr. Chairman.

Mr. Chairman, I would like to summarize my statement.

Mr. ROONEY. Without objection you may summarize. Your complete statement will be made a part of the record.

Dr. BARUCH. Mr. Chairman and members of the committee, I am pleased to be here today to describe the progress of the Department in implementing the Secretary of Commerce's responsibilities under subtitle E of title II of the Solid Waste Disposal Act as amended by section 2 of the Resource Conservation and Recovery Act of 1976 and, further, to indicate an area where the Department believes the act should be further amended.

As you know, under section 5001 of title II of the act, the Secretary is directed to encourage greater commercialization of proven resource recovery technology through a variety of enumerated activities.

Under section 5002, the Secretary, acting through the National Bureau of Standards, by October 21, 1978, is required to publish guidelines for the development of specifications for the classification of materials recovered from waste. Under section 5003, the Secretary is directed to take such action as may be necessary, by October 21, 1978, to identify the geographic location of existing or potential markets for recovered materials, to identify the economic and technical barriers to the use of recovered materials, and to encourage the development of new uses for recovered materials. Sction 5004 authorizes the Secretary to evaluate the commercial feasibility of recovery facilities, to publish the evaluation results, and to develop data to assist in the selection of recovery systems.

The Department's actions to encourage greater commercialization have taken several forms. The Resource Conservation Recovery Program of the Department's Industry and Trade Administration (ITA) is an active working program. We are evaluating for 10 industries, the commercial feasibility of resource recovery plans and assisting them in identifying markets for recovered resources.

The Department is also planning an international conference for 1979 on integrated industrial and resource recovery parks.

We are interested in establishing new enterprises and jobs in urbanized areas through resource recovery and reuse. We have created a technical library. The Industry and Trade Administration is working with me to help develop markets and to understand the barriers to use of recovered materials such as aluminum, ferrous metals, glass, paper, rubber and tin.

We are studying both the economic and institutional barriers.

Mr. ROONEY. Let me ask a question at this point. What is the view for 1978 on industrial resource recovery and utilization parks?

Dr. BARUCH. What we are looking at are complete facilities that consist of waste disposal, a flow of energy and materials from those waste disposal activities, and co-location of plants that can use that waste material and/or the energy that is generated.

Our interest here is the use of waste recovery not just to recover waste, but also as an aid to the re-industrialization, of areas that can use that kind of re-industrialization.

Mr. ROONEY. Is that a mine-mouth proposal?

Dr. BARUCH. It is exactly that. We look at a waste heap as a mine. We are trying to locate appropriate industries at the mine-mouth. Our activities are really Department wide. I have mentioned ITA but there are other Departmental elements involved.

As an example, the Department's Office of Minority Business Enterprise (OMBE) is included in our effort.

For an example of OMBE's involvement, in September, 1977, OMBE awarded a demonstration grant to the National Black Veterans organization to create and manage a resource recovery recycling industry in Washington, D.C.

We feel that this kind of activity in waste disposal and recovery offers an important area for the generation of new minority businesses.

The Bureau of the Census is conducting an inventory of dumps which we hope will assist the Environmental Protection Agency in determining more effective plans for the disposal of solid waste.

The Secretary is a member of the Resource Conservation Committee that Barbara Blum described. I serve as the Secretary's alternate on that committee. We are committed to look at utilization and to review the activities of the committee to ensure that they encourage the kind of innovative development that will make waste resource recovery more effective.

One of the most important players in our activities is the National Bureau of Standards (NBS). It has started to develop specifications of secondary materials; indeed it has a program plan to develop a whole sequence of such specifications.

The NBS activities include projects related to inorganic glass waste, tire waste, and construction waste.

In addition, NBS has drafted a plan for studying the problems in refuse derived fuels and for determining specifications for such fuels. In September 1977, they conducted a conference on such fuels.

Notwithstanding all of these efforts, it is our present assessment that we will not be able to meet the deadline of October 21, 1978, set in sections 5002 and 5003.

We estimate that we will need two more years for those activities. Accordingly, I recommend that these sections be amended to provide a deadline of October 21, 1980.

Mr. Chairman, that completes my summary. I will be happy to answer any questions that you or the committee might have.

[Dr. Baruch's prepared statement follows:]

STATEMENT OF JORDAN J. BARUCH, PH. D., ASSISTANT SECRETARY FOR SCIENCE AND TECHNOLOGY, DEPARTMENT OF COMMERCE

Chairman Rooney and members of the subcommittee, I am pleased to be here today to describe the progress of the Department in implementing the Secretary of Commerce's responsibilities under Subtitle E of Title II of the Solid Waste Disposal Act (hereinafter the Act) as amended by Section 2 of the Resource Conservation and Recovery Act of 1976 and, further, to indicate an area where the Department believes the Act should be further amended.

As you know, under Section 5001 of Title II of the Act, the Secretary is directed to encourage greater commercialization of proven resource recovery technology through a variety of enumerated activities. Under Section 5002, the Secretary, acting through the National Bureau of Sandards (NBS), by October 21, 1978, is to publish guidelines for the development of specifications for the classification of materials recovered from waste. Under Section 5003, the Secretary is directed to take such action as may be necessary, by October 21, 1978, to identify the geographic location of existing or potential markets for recovered materials, to identify the economic and technical barriers to the use of recovered materials, and to encourage the development of new uses for recovered materials. Section 5004 authorizes the Secretary to evaluate the commercial feasibility of recovery facilities, to publish the evaluation results, and to develop data to assist in the selection of recovery systems.

The Department's actions to encourage greater commercialization of proven resource recovery technology, and to develop markets for recovered materials, include planning to make the Resource Conservation and Recovery Program of the Department's Industry and Trade Administration (ITA) a part of the Commerce/Cities Project. The Secretary has created the Commerce/Cities Project to facilitate the coordinated use of multiple Departmental resources and services in an individual community. It is anticipated that 10 cities will be included in this project during 1978. The three cities selected thus far for the project—Detroit, Michigan; Hartford, Connecticut; and Greenville, South Carolina—have all indicated an interest in resource recovery as one aspect of their development approach. The assistance that will be provided to the cities under this program will include assistance in evaluating the commercial feasibility of resource recovery facilities and plans, and assistance in identifying markets for recovered materials. Furthermore, in accordance with Section 5001(4), the Department is planning an international conference for 1979 on industrial-municipal resource recovery and utilization parks. This conference is being sponsored for the purpose of creating new enterprises and jobs in urbanized areas through resource recovery and reuse. We are searching for ways to encourage investment in resource recovery and reuse facilities that will enhance community economic development, increase utilization of recovered materials, and more effectively use energy resources in our society.

Pursuant to Section 5004, a technical library has been created to assist in selection of recovery and conservation systems.

Responsibility for implementing Section 5003 (market development) and Section 5004 (technology promotion) has been assigned by the Secretary to ITA. With respect to the Section 5003 responsibilities for market development, ITA is directed to cooperate and consult with the Assistant Secretary for Science and Technology, as required. ITA has completed research for preliminary studies of markets, barriers, and uses of recovered materials for aluminum, ferrous metals, glass, paper, rubber, and tin. Further, a study is presently underway addressing the economic, technical and institutional barriers to the use of recovered materials. This study is expected to be completed by October 1978. I must acknowledge, however, that much remains to be done to fulfill the mandates of Sections 5001, 5003, and 5004.

In addition to the Departmental elements which have specific assignments to carry out the Department's responsibilities, other Commerce units are contributing to the promotion of resource conservation and recovery through their programs. The Office of Minority Business Enterprise (OMBE) in September 1977 awarded a demonstration grant to the National Black Veterans Organization (NBVO) to create and manage a resource recovery and recycling industry in the Washington, D.C. area. Thus far, NBVO has completed a recycling subsystem designed to collect 150 tons per day of paper, glass and cans for processing by a recycling center. OMBE and NBVO are developing an experiment and demonstration project to direct recycled newspapers to insulation uses, a significant step having the dual benefit of aiding in the management of solid waste and conservation of energy. OMBE has coordinated with the Office of the Assistant Secretary for Science and Technology, the Economic Development Administration and other Departmental units on the NBVO project. Once the success of this project is established, OMBE will seek to assist in the development of similar projects throughout the nation.

While not directly related to promotion of resource conservation and recovery, an inventory of open dumps is in the process of being conducted. The Census Bureau, in accordance with Section 4005(b), is assisting the Environ-

mental Protection Agency (EPA) in this project, which will be accomplished pursuant to an interagency agreement with EPA. The open dump inventory is expected to lead to more effective management of solid waste.

Further, as you know, the Secretary of Commerce is a Member of the Resource Conservation Committee established by Section 8002(j). The Secretary is strongly interested in the work of this Committee to study the economic, social and environmental consequences of resource conservation. As the Secretary's alternate on the Resource Conservation Committee, I want to assure this subcommittee that the Department believes the comprehensive study of resource conservation is an extremely important step toward more efficient utilization of the Nation's resources.

The National Bureau of Standards, within its available resources, has undertaken measures to develop specifications for secondary materials, as directed by Section 5002. Following extensive coordination with a wide variety of interested parties—including the Environmental Protection Agency and other Federal agencies, state and local officials and experts, industry associations and public interest groups—NBS prepared a program plan which has received the approval of the Secretary. In preliminary efforts to carry out the plan, NBS has taken advantage of preexisting projects, drawing from them information which has been directed toward satisfying the Secretary's responsibilities under Section 5002. Examples of existing NBS activities which have been so drawn upon, or may be drawn upon, include projects relating to inorganic glass, waste tires and construction waste. In addition, NBS has drafted a plan for studying the problems of refuse-derived fuel and determining specifications for such fuel. In September 1977 NBS conducted a conference on refuse-derived fuels. Leaders from the field of incineration and waste conservation were generally supportive of the NBS plan.

Notwithstanding the efforts I have described above, it is our present assessment that we will not be able to meet the deadline of October 21, 1978 set in Sections 5002 and 5003. We will need two more years. Accordingly, we recommend that these sections be amended to provide a deadline of October 21, 1980.

Mr. Chairman, this completes my prepared testimony. I would be happy to answer any questions that you or the Subcommittee members may have at this time.

Mr. ROONEY. Thank you, Dr. Baruch.

Is the National Bureau of Standards role, under the act strictly to set standards for recycling materials or might it also be developing new uses for recycled materials which might not meet our rigid scientific standards?

I wonder if you can answer that question and if so, would you give some examples where this is true?

Dr. BARUCH. The act is somewhat ambiguous as to what we may do. We interpret the act as encouraging the Bureau to do more than just set standards. The task of commercializing reused materials requires not only standards but also an effective coupling with industry.

For example, one could generate pure aluminum out of a waste pile. However, it would be a most wasteful activity. What we would like to do is to have a method for generating some level of purity and then match that with a set of uses for that level of purity.

To do that, the Bureau has to get involved with the development of the technologies for the recovery and use of the materials as well as the specification of standards.

We believe that such a role reflects the intent of the act. However, based on the language of the act and a reading of its legislative history, we are not sure.

Mr. ROONEY. Do you agree with me that the marketplace, though moving toward solutions for resource recovery and solid waste problems, could be assisted by the Commerce Department to work on

recurring problems and resource recovery technology that we have with us today?

Dr. BARUCH. Yes. One of the problems with the resource recovery industry is that they have no corporate laboratories as the larger industries do. One of the roles Commerce can play, if so directed, would be to serve essentially as a corporate laboratory and to help the industry develop the basic reprocessing technologies which they, in turn, can develop into commercial processes.

Mr. ROONEY. How do you help them?

Dr. BARUCH. We help them by examining where technology can make a significant impact; pulling the team together from the industry to develop that technology, with the aid of Bureau scientists or others, and then having those people move back to industry.

Mr. ROONEY. In your view, do we need to amend the act to enhance the Secretary's ability to encourage Federal-industry cooperation?

Dr. BARUCH. While the administration does not have a position on this, I personally think it would be desirable.

Mr. ROONEY. Does it mean we have demonstration projects coming forth?

Dr. BARUCH. We will have technology development coming forth, yes. We stay away from the word "research". It sounds a little too basic for the industry. But we would hope to develop the technologies they can use.

Mr. ROONEY. Maybe you ought to submit to the committee an amendment that would assist the committee in drafting the legislation.

Dr. BARUCH. We would be pleased to do so as a drafting service to the committee.

[The following information was received for the record:]

SUGGESTED CHANGES FOR SECTION 2 OF THE RESOURCE CONSERVATION AND RECOVERY ACT OF 1976

The following amendment to the changes in the United States Code made by Section 2 of the Resource Conservation and Recovery Act of 1976 (Pub. L. No. 94-580) is submitted as a drafting aid to the committee. It should not be considered as a draft bill submitted by Administration nor as any indication as to whether the Administration considers any such amendment to be appropriate.

Section 6951 of subchapter V of chapter 82 of title 42, United States Code, is amended to read as follows:

SECTION 6951. FUNCTIONS

(a) Identification and development of needed basic technologies.—The Secretary of Commerce, with the participation of industry, shall—

(1) Identify basic technologies needed for resource recovery and the reuse of recovered resources; and

(2) develop such basic technologies and facilitate their incorporation into commercially practicable recovery and reuse processes.

(b) Commercialization of proven resource recovery technology.—The Secretary of Commerce shall encourage greater commercialization of proven resource recovery technology by providing—

(1) Accurate specifications for recovered materials;

(2) stimulation of development of markets for recovered materials;

(3) promotion of proven technology; and

(4) a forum for the exchange of technical and economic data relating to resource recovery facilities.

Mr. FLORIO. I have no questions.

Mr. ROONEY. Thank you, Dr. Baruch. You have been very helpful.

Dr. BARUCH. Thank you, Mr. Chairman, and the committee.

Mr. ROONEY. Our next witness will be Dr. Christopher T. Hill, Project Leader, Assessment on Resource Recovery, Recycling and Reuse, Office of Technology Assessment.

STATEMENT OF CHRISTOPHER T. HILL, PH. D., PROJECT LEADER, ASSESSMENT ON RESOURCE RECOVERY, RECYCLING AND REUSE, OFFICE OF TECHNOLOGY ASSESSMENT, U.S. CONGRESS

Dr. HILL. Mr. Chairman and members of the committee. My name is Christopher T. Hill. I am currently serving as project leader for the OTA Assessment on Resource Recovery, Recycling and Reuse from municipal solid waste. While our project is not yet completed, I would like to provide some insight into what I perceive to be some emerging trends in centralized resource recovery. There are, of course, other ways to approach recovery, recycling and reuse of the resources in municipal solid waste, and many of them will be examined in our report.

Today, however, I should like to focus on centralized resource recovery. I am speaking today at the request of the committee and my testimony should be regarded as my own. It does not necessarily represent the views of OTA or of the Technology Assessment Board or any of its members. I should, however, like to acknowledge the contributions of my colleagues at OTA, including A. E. Paladino, C. M. Overby, P. L. Poulton and W. M. Fitzgerald.

Mr. Chairman, widespread serious interest in systematic recovery of useful materials and energy from municipal solid waste in the United States is only a decade old. We have always been interested in recycling certain scarce materials from MSW such as paper, iron and steel and textiles, especially in wartime. However, only more recently have we considered construction of centralized facilities for separating MSW into useful components as one potentially important approach to the problems of waste management.

The rationale for centralized resource recovery has been threefold: One, the effective disposal of solid waste; two, the recovery of materials for recycling; and three, the production of energy from the combustible portion of the waste. These three are also the major components of the potential revenues from resource recovery.

The need for effective waste disposal continues to be a key rationale, especially with the passage of the Resource Conservation and Recovery Act.

Mr. ROONEY. Where do you think the finest plant in the United States is located. Maybe you have a commercial interest and you do not want to answer that.

Dr. HILL. Let me say that I have no commercial interest in any resource recovery activity. I think the plant in Saugus, Mass. may be among the best.

Mr. FLORIO. At this point, it is interesting to note that yesterday, when we heard from EPA, I put that question to them and they estimated that energy as expected was secondary and when I sug-

gested they ought to start emphasizing energy just in terms of their budget which would be a little more attractive to Congress, I did not get the feeling they felt that was the appropriate way to go, so to speak.

So I am happy to see you can make some of the projects more saleable to the Congress in terms of EPA programs by emphasizing the effectiveness and determinations put in correlation, in terms of the energy bill, the Nation is facing.

Dr. HILL. If I might comment, there are two ways to look at resource recovery and energy supply. On a nationwide basis, resource recovery can make only a small contribution to energy supply. In that sense, I agree with EPA. On the other hand, energy revenues are likely to be an essential element in the success of any resource recovery project.

It may be interesting to consider further the relative importance of materials recovery and of energy production as rationales for centralized resource recovery. I suggest that there has been a subtle but important shift from materials recovery to energy production as a more significant driving force, and that this shift may have some important implications for resource recovery system planning, design and operation.

The major reason for this is the fact that energy prices have risen more rapidly and steadily than scrap material prices over that last several years. Thus, energy has become more important than materials as a revenue source.

This shift from materials recovery to energy production has become apparent rather recently. Thus, further examination by OTA and others is required to document the shift and its implications more thoroughly.

The shift from materials recovery to energy production as a major rationale for resource recovery has several implications:

It creates the need to consider more carefully the matching of resource recovery plants with the potential customers for the energy they produce.

It also is the matching issue which has the potential to induce a shift from large, centralized to small, dispersed resource recovery plants.

With smaller plants there may be a reduced need to consider regionalization of solid waste disposal, with its attendant problems.

There may be increased attention to direct incineration or co-firing of waste with coal, as opposed to more exotic approaches.

There may be less recovery of materials from waste in centralized resource recovery than some had envisioned earlier.

There may be increased urgency to attend to assessment, regulation and control of potential environmental and work-place problems in centralized resource recovery at all scales. In fact, these areas are critically important for both large and small scale technologies.

There may be reduced concern that beverage container deposit legislation might impair resource recovery development if material revenues have become relatively less important.

There may be increased flexibility for designing resource recovery systems which can include source separation activities and which

can respond more readily to changing patterns of waste generation in the future.

Let us consider more carefully the matching of energy producers and consumers.

Mr. ROONEY. Would you explain that further? The argument has been made if we have beverage container legislation and it is effective in accomplishing its goal, it would have the effect of removing great amounts of aluminum from the waste and thus, depriving a resource recovery plant of things it might gain from sales.

Dr. HILL. If sales of those materials have become less important to the plant, one would be less concerned about the impact of beverage container legislation on the development of resource recovery. In our forthcoming report we will speak to that issue more thoroughly than I have today.

A 1,000 ton per day resource recovery facility, which can service roughly one-half a million people, produces a lot of energy, whether as fuel, steam, or electric power. In fact, only electric powerplants, large factories, or large complexes of office buildings can consume all the energy output of such a plant.

These kinds of potential customers have proven to be difficult for proposed resource recovery projects to interface with. Electric utilities have been less than enthusiastic because they have essentially no incentive to use refuse-derived energy and face many problems in doing so. Paradoxically, in a given service area, MSW can provide only a few percent of the fuel needs of an electric utility so that a utility must cope with considerable difficulty to obtain only a minor part of its total fuel supply.

On the other hand, there are a large number of potential consumers of smaller quantities of refuse-derived energy, such as office buildings, institutions, and smaller factories. Smaller resource recovery plants, say in the 25 to 200 per day range, might serve their energy needs quite well, and help to avoid some of the problems which appear to arise when several communities attempt to regionalize in order to build large plants. Smaller resource recovery plants, which are common in Europe, may feature direct incineration to produce steam or hot water and may forego materials recovery altogether. They may allow for a more flexible approach to resource recovery in a community or region by making it possible to adopt resource recovery incrementally, rather than on a once-and-for-all basis.

However, a few words of caution about smaller energy recovery systems are in order. We now have insufficient data to determine whether they can be economically competitive with large scale systems. We also do not know enough about their reliability or about the environmental and workplace health implications of operation of a network of dispersed, small plants. We also need to know more about the energy demand characteristics of the smaller kinds of customers mentioned above, in order to learn whether they can indeed become consumers of energy from waste.

Mr. Chairman, I have been able only to scratch the surface here today in my discussion of the implications of a shift from materials recovery to energy production as a major rationale for resource recovery systems. I hope that in our final report we will be able to

explore these issues. I expect, however, that additional study and analysis of this trend may be desirable.

Thank you. I shall be pleased to answer your questions.

Mr. ROONEY. Dr. Hill, how important is energy recovery from solid waste when compared to the Nation's energy needs?

Dr. HILL. Our study suggests that in terms of being able to burn waste and produce steam, electric power, hot water, or refuse-derived fuel, we are talking about 1 percent, perhaps as much as one and a half percent of the nation's needs. This would be true only if we could get all of the solid waste of the Nation.

Mr. ROONEY. You mentioned a plant in Massachusetts. How many tons of debris or solid waste did they take in per day?

Dr. HILL. In the neighborhood of 1,200 tons per day is my understanding.

Mr. ROONEY. You need that kind of tonnage to probably have a plant; is that correct?

Dr. HILL. What I am suggesting this morning is that it may be quite feasible to think about using smaller plants, of perhaps 25 to 200 tons per day to meet many of these needs.

Mr. ROONEY. I understand from previous witnesses that have testified before this committee, that the investment is not worth what comes in, that you cannot break even.

Dr. HILL. That is one of the things we do need to look at more carefully. In an area like Boston, where the Saugus plant serves part of the Boston area, there may be less difficulty in getting together 1,000, 2,000 or 3,000 tons of waste per day than there would be in an area where one is trying to get say 50 communities to cooperate. The problems of doing so have proven to be very difficult and to be a barrier to getting a commitment in many places for a plant as large as the one at Saugus. Furthermore, there are only a few customers for the output of a plant as large as Saugus. The plant it serves is, I believe, the second largest industrial plant in the state of Massachusetts.

Mr. ROONEY. Is the Saugus plant one of the largest in the country?

Dr. HILL. Yes, it is one of the largest of those which are now operating. Some are under construction that are as large as 3,000 tons per day, where it is possible institutionally to pull together that amount of waste.

Mr. ROONEY. What does a plant like Saugus cost to build?

Dr. HILL. I do not have that number on the top of my head. I could provide it for you.

Mr. ROONEY. I would appreciate if you would.

[The following information was received for the record:]

CONGRESS OF THE UNITED STATES,
OFFICE OF TECHNOLOGY ASSESSMENT,
Washington, D.C., March 10, 1978.

Hon. FRED B. ROONEY,
Chairman, Subcommittee on Transportation and Commerce, House of Representatives, Washington, D.C.

DEAR CONGRESSMAN ROONEY: When I testified before your Subcommittee on March 8, 1978, I agreed to provide for the record the answer to your question regarding the cost of the Saugus, Massachusetts, resource recovery facility owned by Refuse Energy Systems Company (RESCO).

According to a brochure prepared by White, Weld and Company, RESCO expects the Saugus plant to be able to process 1400 to 1500 tons per day of municipal solid waste on a regular basis. To date it has processed less than that amount, because it has received lesser deliveries than it could process. White, Weld indicates an original capitalization of the Saugus plant in August 1975 of $40 million. Subsequent plant modifications and start-up costs have raised the total capitalization to $50.1 million as of August 1977.

I hope this information will be of assistance to you.

Sincerely,

CHRISTOPHER T. HILL,
Professional Staff Member.

Mr. FLORIO. I have no questions, Mr. Chairman.

Mr. ROONEY. Thank you very much, Dr. Hill. We appreciate your testimony.

Dr. HILL. Thank you, Mr. Chairman.

Mr. ROONEY. Our next witness will be Mr. Steffen W. Plehn, Deputy Assistant Administrator, Office of Solid Waste, Environmental Protection Agency.

STATEMENT OF STEFFEN W. PLEHN, DEPUTY ASSISTANT ADMINISTRATOR, ENVIRONMENTAL PROTECTION AGENCY, ACCOMPANIED BY JOHN P. LEHMAN, DIRECTOR, HAZARDOUS WASTE MANAGEMENT DIVISION

Mr. FLORIO. Going into this section of the hearing that deals with hazardous waste, Mr. Rooney has asked me to Chair this section and I do so very happily for a number of reasons, one of which is I have an academic interest in this field.

As the sponsor of subsection C, which deals with hazardous waste in the original legislation, I am very interested to see how we are making out in terms of the implementation of the provisions.

We have discussed not only in my district, but around the country, as you know. I would have an opening statement and I would like to compliment the chairman for reserving one full day of hearings for consideration of the implementation of the hazardous waste provisions of the Resource Conservation and Recovery Act.

The timely identification, effective management and safe disposal of hazardous wastes are among the major environmental challenges to the health and well being of the American people.

Recognizing this challenge, this subcommittee envisioned a comprehensive framework utilizing a manifest system to provide "cradle to grave" management and regulation of the hazardous waste cycle.

Recent events have graphically and tragically shown us how urgently such regulations are needed.

Two derailments of trains carrying toxic or hazardous substances took nearly a score of lives.

In the first Congressional District of New Jersey, which I represent, an explosion at the Rollins chemical waste disposal plant—one of the three facilities in the country equipped to incinerate PCB's, among other toxic and hazardous wastes—took another six lives.

I would note that EPA is under mandate to provide regulations for deposit of PCB's and those regulations were supposed to be due at a designated period of time.

Mr. PLEHN. Those regulations were promulgated in my neighborhood.

Mr. FLORIO. I am happy to hear that. I think they were due last October, if I recall.

These incidents raise issues that are clearly relevant to the subject of our hearings today.

For example, this subcommittee required EPA to promote regulations for transporters of hazardous wastes in order to "ensure that these hazardous wastes placed in the flow of commerce are handled in a manner protective of human health and environmental vitality."

While the intent of this provision was primarily to devise a system for tracing the movement of such materials, the danger of massive spills following derailment and the rupture of tank or container cars make it imperative that the EPA's regulations adequately address the problem of containment and clean-up in the aftermath of such accidents.

Therefore, I was keenly disappointed by EPA's admission at yesterday's hearing that they have delayed implementing such spill regulation and clean-up provisions.

Similarly, the accident at Rollins demands that we give much closer scrutiny to proposed regulations governing the management of hazardous waste treatment, storage, and disposal facilities.

Later today, we will hear testimony from individuals from New Jersey who have been intimately concerned with uncovering the causes of the explosion and assessing the health and environmental consequences of the release of PCB's and other toxins into the atmosphere.

I think they should push that further than they have pushed in a number of areas. I was interested in the Representative saying yesterday that cooperation that existed between the transportation and EPA was a model of interagency cooperation.

When I got back to the Office and contacted the Department of Transportation, they said they were coming up with their regulations and they assumed that EPA was coming up with its regulations and ultimately to make them compatible.

At least they are not short-circuiting the need for other recommendations on sealing of the two areas. The other point I think is needed with regard to EPA is that we have got to deal with the whole question of waste disposal facilities, such as is represented by the Rollins chemical firm in my district.

We are going to hear some testimony later on from some individuals who were intimately involved in an unfortunate accident at Rollins and they will be suggesting deficient areas in the law.

They will provide constructive suggestions as to what has to be done in order to deal with the whole question of deciding where the sites of the facilities should be.

The experience of these individuals should provide this subcommittee with valuable background for assessing the adequacy and comprehensiveness of the proposed 3004 guidelines relating to hazardous disposal facilities.

For RCRA to effectively deal with the problems of hazardous waste treatment and disposal, we must be able to convince local

community opinion that such disposal operations can be undertaken in a safe and environmentally sound way.

I am not sure that has happened to this point. I do not think local communities and individuals are convinced that the appropriate regulations have been enacted nor that appropriate processes are being folded so as to provide those individuals with the assurance that plants are located near them are sound or safe.

But so far, neither private industry nor the Federal Government can give that assurance.

Rollins has been cited with a number of workplace violations which shake public confidence that the facility can be run safely and effectively. Currently, a lawsuit has been filed to prevent the plant from reopening.

This has put additional pressure on the State of New Jersey to find acceptable ways to dispose of its hazardous wastes. With the imminent phasing out of landfills and open dumps, industry is becoming hard pressed to dispose of wastes.

The difficulties of siting such facilities, we are finding we are in a bind. With regard to the development of a new illegal legislation industry; that industry being illegal dumping of chemical waste obtained from reputable manufacturers who are really hard pressed to dispose of these materials.

In conclusion, I think it is important to say that this question about the legislation industry is one that is brought home very vividly in the monitoring of the disposal of hazardous wastes.

In South Jersey, we have an extremely high percentage of chemical and petrochemical industries. We are coming up with the fact that it is happening entirely too often. It is only that more is needed. It is only EPA must work a little more rapidly than perhaps it is working.

I am interested in the comments of EPA, among others, that are coming before this subcommittee, working in conjunction with this subcommittee and the Congress, and to develop regulations dealing with the siting and operation of waste disposal centers which will provide assurance to local communities that their health and safety will be protected.

Mr. Chairman, the problems that I have been listing will not go away. Indeed, they will get increasingly worse and could not be solved overnight.

Today's hearings, however, provide opportunity to assess the adequacy of the proposed regulations to date and to undertake whatever corrections may be necessary to insure that final EPA regulations governing the protection of public health and safety.

Thank you, Mr. Chairman.

Mr. ROONEY. Thank you, Mr. Florio.

Our next witness is Mr. Steffen W. Plehn, Deputy Assistant Administrator, Office of Solid Waste, Environmental Protection.

STATEMENT OF STEFFEN W. PLEHN

Mr. PLEHN. Thank you, Mr. Chairman.

I am Steffen Plehn, Deputy Assistant Administrator for Solid Waste of the Environmental Protection Agency.

With me today is Mr. John P. Lehman, Director, Hazardous Waste Management Division of the Office of Solid Waste.

I feel it would be appropriate if I would begin by going through my statement, which is designed to inform the committee of where we are in the implementation of subtitle C of the act.

Then, we would be very glad to answer any questions you might have. I might add we at EPA recognize your leadership in the enactment of the subtitle C part of the Resource Recovery Act.

Unfortunately, the very serious problems which have occurred recently in New Jersey, which you cited, are not a new problem for this country.

It is one we have faced for 4 years in some form or another and it was to meet that problem that subtitle C was enacted and certainly the authority that was badly needed.

On the basis of surveys of 14 industry groups, EPA estimates that industrial wastes generated in 1977 totaled about 334 million metric tons. About 10 percent of this may fall in the "hazardous waste" category—wastes requiring special safeguards in handling and disposal because of the substantial danger they pose to health and the environment. Industrial waste generation is growing at a rate of about 3 percent per year. An increasing percentage of the waste is resulting from pollution control processes. Thus the more stringent controls on discharge of pollutants to the air and water constitute a prime source of the overall increase in these wastes to be disposed of on land.

EPA now has on file over 400 case studies of damages—acute or chronic injuries to health, environmental pollution, and economic losses—resulting from improper hazardous waste management. It is clear from the haphazard way in which most of these incidents have come to light that the majority of such incidents have gone unreported. The damages observed to result from land disposal of hazardous wastes have occurred through six major routes: ground water contamination via leachate; surface water contamination via runoff; air pollution via open burning, evaporation, sublimation, and wind erosion; poisoning via direct contact; poisoning via the food chain; and fire and explosions.

Of the damage incidents related to hazardous waste disposal that have been documented by EPA, the majority relate to ground-water contamination. And EPA study to investigate the presence of ground-water contamination resulting from subsurface migration of hazardous constituents of land-disposed industrial wastes was completed in 1977. Of the 50 sites sampled, 43 showed migration of heavy metals and/or organic chemicals into ground water.

It is estimated that up to 90 percent of industrial hazardous waste is being disposed of by the same methods that have produced the damages documented to date. There can be no doubt that controls such as those required by RCRA are needed to assure that generators, transporters, disposers, and others involved in the management of hazardous wastes take the precautions necessary to protect public health and the environment.

Subtitle C of RCRA provides from a comprehensive program to manage hazardous waste from the "cradle to the grave". Subtitle C perceives that we should establish national standards to assure uniformity for hazardous waste management practices across State lines and then develop strong State hazardous regulations. The

RCRA schedule for subtitle C established April 1978 as the deadline for all of the regulations to be issued and then provided for an orderly 2-year period for State government to gain authorization to administer the Federal program.

RCRA also provides authority for the Federal Government to regulate the management of hazardous waste if the States choose not to do so.

Our strategy is to maximize State assumption of the provisions of subtitle C. We have been working closely with the States in the development of the subtitle C regulations. At this time, we are approximately 6 months behind schedule in issuing the regulations, but this time delay has been a useful one for it has given us an opportunity to meet with more of the concerned individuals and organizations that will have to meet the requirements of subtitle C, and this can only result in improved regulations and greater assumption and compliance with the provisions of subtitle C.

Proposed guidelines for the development and implementation of authorized State hazardous waste management programs—section 3006—were published in the February 1, 1978, Federal Register. Public hearings on the proposed guidelines have been set for March 1978 in three widely separated locations across the country. Final promulgations of the guidelines is anticipated to take place around May 1978. These guidelines set out substantive and procedural requirements for both interim and full authorization of such State programs to carry out the hazardous waste program in lieu of the EPA-administered program.

One of the major issues remaining to be resolved before promulgation of State program guidelines concerns State restrictions on the free movement of hazardous wastes to duly permitted hazardous waste management facilities. The issue of State waste importation bans has been brought before the U.S. Supreme Court in the case of the city of Philadelphia challenging the constitutionality of the State of New Jersey's importation ban as restricting interstate commerce. The free movement issue is addressed in the proposed guidelines.

Development, authorization, and implementation of State hazardous waste management programs is to be funded under section 3011 of the act, which calls for allocation of funds to States on the basis of the extent of: (1) Hazardous waste generation, transportation, treatment, storage, and disposal within each State; (2) exposure of public health and the environment within each State; (3) any other appropriate factors. These grant regulations have been under development since December 1977 and are targeted for promulgation around midyear 1978. The major difficulty encountered in establishing the allocation formula is the current lack of adequate State by State data on generation, transportation, et cetera, required by the act. Such data will be available after the hazardous waste regulations take effect from periodic reports required by the regulations from generators and disposers.

Mr. FLORIO. On the subject of the importation ban, the representative from EPA yesterday made a distinction between overall bans on solid waste as opposed to the proposal contemplating dealing with a ban of hazardous substances.

He talked about the fact the proposed regulation was to prohibit a ban on importation of hazardous wastes if there was so much ban already in existence and if, in fact, there was a ban already in existence in a jurisdiction, to provide for a 5-year phaseout; is that correct?

Mr. ROONEY. The 5-year phaseout is not related to the total solid waste ban?

Mr. PLEHN. That is correct.

Mr. ROONEY. Thank you.

Mr. PLEHN. Section 3006 of RCRA provides for both interim and full authorization for participation by States in the hazardous waste regulatory program. The guidelines under section 3006 of the act detail requirements for determining whether a State program is equivalent to the Federal program, is consistent with other State programs, has adequate enforcement provisions, and is thus eligible for full authorization. Few State programs are able to meet these criteria for full authorization at the present time. The interim authorization category provides a period during which State programs, which are not fully developed, can be supported by RCRA to strengthen their programs to meet the requirements for full authorization.

The eligibility requirements for interim authorization are flexible enough to permit most States to qualify in fiscal year 1979. Interim authorization is available only for 2 years beginning 6 months after the mandated date of promulgation of the primary subtitle C regulations.

During fiscal year 1979, it is anticipated that States will be developing application packages for interim or full authorization, establishing the necessary regulatory structure at the State level, taking the steps required to initiate equivalent hazardous waste regulatory programs, and conducting the necessary hearings. Depending on the stage of development of the individual State programs, the States will be implementing the necessary legislative authority, regulations, and resources to conduct a permit program, operate the manifest system, and conduct surveillance and enforcement activities in fiscal year 1979. It is our present assessment that some 36 States will accept primacy, 16 are undecided, and 4 States will reject the program.

Additionally, a sufficient number of State representatives have indicated to EPA they would not seek authorization of any kind until they have had an opportunity to evaluate the final regualtionts that will be promulgated under sections 3002 through 3005 of the act. Therefore, if EPA is late, as little as 3 months, in promulgating the regulations under sections 3002 through 3005, we believe that very few States will apply for and ultimately assume the hazardous waste program. This may conflict with congressional intent to maximize the number of States that would be eligible and which would apply for authorization under interim authority. As a result, it may be necessary for EPA to request a legislative remedy or to administratively remedy the situation through regulation.

Mr. FLORIO. Are you aware of the fact there are at least states publishing its regulation dealing with hazardous waste? At least one State is. The half do it and do it, I suppose anticipating they

would be in conformity with regulations. That ultimately would come out.

Mr. PLEHN. There are a number of States that have, at present, that operational waste regulatory program. Mr. Snow, from the State of Texas, is going to be testifying later today. That State has a program. The State of California has one and there are some others.

What I am trying to say here is that many of those States have indicated to us that they would like to assume the responsibility under 3006 for implementing, in essence, the Federal program.

The point I was just making was the window that is created by RCRA is tied not to the date at which the final regulations are promulgated but to the date of April, 1978 by which the law assumed that the regulations would be promulgated.

What it could probably create in that period of time in which the States debate whether to apply for interim or full authorization would be passed or significantly narrowed by this timing probably.

Mr. FLORIO. In essence, you are saying at least some of the States have made the efforts to get appropriate regulatory schemes so as to qualify; but in fact, they could not qualify unless it is anticipated that we will have it by April, 1978, a Federal regulatory program by which one can evaluate the adequacy of the State program.

Mr. PLEHN. It is certainly EPA's strong desire to structure the program so they will be able to qualify.

Mr. FLORIO. Thank you.

Mr. PLEHN. For fiscal year 1978, $14.3 million in financial assistance was allocated to State and local governments. These funds are planned to be spent as follows: $3.9 million for the open dump inventory; $5 million for State planning; $.7 million for regional identification; and $.8 million for local government. For fiscal year 1979, the administration is requesting $26.2 million for financial assistance. Of this amount, $15.0 million is needed for the development and implementation of State hazardous waste programs and $11.2 million is needed for the development and completion of State solid waste plans and the development of State land disposal regulations programs.

No funding for local planning and implementation is planned for in fiscal year 1979. Although the emphasis in fiscal year 1978 and fiscal year 1979 has been on developing State hazardous waste and land disposal regulatory programs, we see major financial assistance shifting to local government in fiscal year 1980. During this period of time, States will increasingly build a capability in resource conservation and recovery.

As you know, subtitle C, Hazardous Waste Management, requires the design of a regulatory framework that provides "cradle to grave" control over wastes deemed hazardous under the authorities of RCRA. Such a framework is aimed at controlling incidents such as the illicit dumping of industrial wastes into the Louisville sewers or recently reported incidents in the New Jersey Pine Barrens. Designing this regulatory framework has required the simultaneous development of interrelated and complex regulations, while at the same time soliciting public input into this effort. While contributing

to better regulations, seeking this input has caused delays in the regulation development process.

To implement subtitle C, we are developing seven sets of regulations along with a voluntary environmental impact statement and an economic impact assessment. Three of the regulations have been, or are about to be, proposed in the Federal Register. These are the regulations containing guidelines for hazardous waste programs (section 3006), procedures by which waste handlers may notify EPA or the States pursuant to section 3010, and standards for waste transporters under section 3003.

We anticipate the remaining four will be proposed by early May alone with the draft environmental and economic impact statements. We are proposing the regulations on a staggered schedule as they become ready in order to maximize the amount of public review time; they will be promulgated finally as a set. At present, we expect final promulgation of the subtitle C regulations to take place in the fall.

Thus, we anticipate that the hazardous waste regulatory program will actually become effective during the spring of 1979.

With regard to the specific regulations, a number of issues have arisen which deserve some mention. First, we are particularly pleased with our success in working together with the Department of Transportation. Not only have we jointly held a public meeting to gather data, but we plan joint public hearings. We anticipate that the transportation regulations for hazardous wastes will be promulgated by DOT and adopted by EPA to allow joint enforcement. This is a fine example of interagency cooperation that benefits all concerned.

The definition and listing of hazardous wastes and the standards for facilities for their disposal, treatment, and storage are the last regulations we will propose, and they are the most complex technically. Our mandate under Section 3001 to address chronic as well as acute toxicity factors has required us to examine the state of the art work in this area which only addresses pure substances and not mixed substances such as wastes. Thus, locating existing testing methods that are feasible for these more complex chemical substances has been difficult.

Our charge under section 3004 to address a multitude of factors affecting facility operation is very demanding. Foremost among the technical issues is protection of the public health from the myriad of recognized hazardous air pollutants not presently directly regulated by EPA. Similarly, a very difficult management issue is the provision of funds for closure, long term care, monitoring and cleanup of potential problems at hazardous waste management facilities. We are seeking solutions to this problem jointly with the affected industry, the insurance industry, and others, and these solutions will be reflected in the regulations yet to be proposed.

Our proposed State guidelines address a very difficult issue which affects the States' interest in assuming this program. Free movement of solid wastes to permitted facilities across State lines is a legal issue currently on the Supreme Court calendar. Its decision along with our final regulation will drastically affect the workability and economics of hazardous waste management. EPA is supportive of

the free movement of the wastes under the control of the authorities of RCRA. We also recognize that institutional change takes time. The proposed guidance therefore, establishes a time deadline of 5 years for States to remove constraints against the free movement of solid waste.

Facility availability is another major topic that will affect the implementation of the entire program. Subtitle C fortunately contains a "safety valve" to assure available capacity as we begin the program, in other words, interim permits. However, we are seeing major concerns today by citizens over the new construction of many kinds of public facilities including prisons, power plants, transmission lines, not to mention sanitary landfills or hazardous waste management facilities.

Whether the availability of new or improved facilities on the generator's property or elsewhere will occur is a matter of serious concern, and one we are studying carefully.

Finally, let me mention one of the real challenges under subtitle C that of integrating across all of our other pieces of environmental legislation. Designing this regulatory system has required extensive interfacing with our several programs for surface water protection, drinking water protection, ocean dumping control, pesticide disposal regulations, hazardous air pollutant control and anticipated toxic substance regulation.

These activities have focused our attention on the wide-ranging impact of RCRA authorities for hazardous waste, let alone all solid waste. RCRA with its disposal and resource conservation objectives, has allowed us to assure that actions under other environmental authorities will not ultimately result in the reentry into the environment of undesirable pollutants.

Thank you very much, Mr. Chairman. We will be glad to answer any questions.

Mr. FLORIO. With regard to the point about the Department of Transportation, my understanding is that the major role that EPA sees itself playing in the efforts to form ultimate policies for transportation of hazardous waste is in first defining hazardous and second, perhaps lastly, in providing for cleanup procedures, spill procedures and the existing compliance and allocation of the responsibility to deal with the cleanup of a spill after it takes place.

Is there anything else that EPA should be involved with the present rather than to deal with just the question of cleanup?

Mr. PLEHN. I might take a minute and describe the whole regulatory venture as described in the subtitle C regulation.

Regulation 3001 does as you said it does. It assigns EPA the responsibility for defining what hazardous waste is to generate or so he knows whether he has a hazardous waste or does not.

Section 3002 tells the generator who has hazardous waste, what he is to do with it and that whether specifically he is to generate it, keep records on it, pack it in safe containers and he is to give it to a transporter and tell that transporter where to transport it.

Section 3003 tells the transporter what he is supposed to do and that is basically to pick the waste up from the generator, to keep the necessary records and to take it to the location of which he has

been directed to take it and submit to the disposal site the manifest which can be returned both to the generator so he knows the waste got where it was supposed to get, and to the State EPA official, whoever is overseeing the program and keeps track of all enforcement in a compliance way, that the waste is getting where it is supposed to.

Mr. FLORIO. Do you regard it as the jurisdiction of EPA to define how it is to be transported with regard to rail? Certainly, we are going to say it is going to be safe, but do you feel it is appropriate to get it to a point of defining EPA standards for the maintenance of rails over which the railroads are going to travel in carrying hazardous wastes?

Mr. PLEHN. We do not believe, under subtitle C that authority is either available or appropriate.

Mr. FLORIO. For EPA?

Mr. PLEHN. May I take a moment to clarify something when Tom Jorling was here. In part of that discussion, he was describing our program under authority of the Federal Water Plugs Control Act, about which I might add I am not an expert, which gives us authority to step in and assess things and ensure cleanup in the case of spills of hazardous subtances.

These are detailed in that act and are different from hazardous wastes, in that wastes are generally a conglomeration of a number of similar things.

Mr. FLORIO. Are you saying under this particular Act, as it is related to the transportation of hazardous materials that the jurisdiction you have essentially is to define what the hazardous materials are?

Mr. PLEHN. No, I am not saying that. I need to add that in the case of the hazardous wastes transporters, there also is authority, and we will include in your regulations requirements which, in the event of spills, would require the transporter to notify EPA, and other authorities and to assist them in dealing with problems under those authorities.

I want to finally mention that the Department of Transportation has broad authority and that is why we are working with them, for the regulation of transport of hazardous waste in commerce.

They probably have the most basic authority because EPA only comes into these situations after spills occur.

Mr. FLORIO. Next week this committee will be holding hearings on the whole question of railroad safety, particularly as it has been brought to your attention in transportation of hazardous waste.

Next week, we will be looking specifically into this area.

Mr. PLEHN. I might add, and I am sure there have been many calls concerning transportation of hazardous waste, our best knowledge constitutes a rather small proportion of the total volume of hazardous materials which are in transport in our society at any point in time.

Mr. FLORIO. I do not follow that.

Mr. PLEHN. I am saying the waste products from manufacturing processes which will be regulated under subtitle C constitutes only a small fraction of those materials which are at any time in transport in our society.

Mr. FLORIO. It was my understanding, immediately upon a derailment and a spill that it would naturally be classified hazardous waste somehow becoming transferred into hazardous waste for purposes of your jurisdiction; that propane or viable chloride in the tank car, unless it is not a hazardous waste at the point of the accident.

It is then hazardous waste for purposes of your jurisdiction.

Mr. PLEHN. For our final disposal, it is; that is correct.

Mr. FLORIO. So, it might not be appropriate to make the representation you did with regard to impact. We are talking about an awful lot of hazardous materials, and the only time we became concerned about this is after the accident when they do become hazardous waste.

That falls within your jurisdiction.

Mr. PLEHN. I think that is a very good way to put it.

Mr. FLORIO. On a question that came up yesterday on sludge, and you mentioned one of your concerns is the pollution of water supply systems, in many area, as you know, sludge has been dumped into the ocean.

Now we are having a phasing out of that. Sludge will be dumped into landfills and there does not seem to be a problem with that.

Some types of sludge, particularly some areas complained about, sewage systems that provide some manufacturers of chemicals to dump into there chemicals that ultimately work themselves into the sewage plants and those chemicals work their way into the refuse of the sludge.

In fact, we are now facing a situation in my own area, where sludge cannot be dumped into the ocean. We have a great deal of sludge. It cannot be dumped in landfills and it cannot be dumped into the ocean.

The question is, where can it be dumped? Is EPA, in terms of a recycling process, doing anything to deal with the problem, or more significantly, to try to eliminate the development of the type of sludge that cannot be composited or cannot be disposed of in any way?

Mr. PLEHN. Yes, we are, Mr. Florio. Under the Clean Water Act, we are initiating what we call our "pretreatment" program which is a program to remove cadmiums and the other heavy metals, other materials which, as you described, if they enter the sewage system and then get into sludge, it will make the beneficial use of sludge more difficult.

Under the authority of RCRA—under the section 4004, the criteria for land disposal—we have recently approved these criteria guidelines which could determine whether it is safe for the food chains to put sludges on the land for fertilization and soil conditioning purposes where this land is being used for growing food for chain stores, we are getting the technicalities to know whether sludge can safely be used in agricultural lands, whether they ought to be used environmentally, or with horticulture crops, or whether they should be placed on the land at all.

We recognize this problem and we are working on this at EPA in a number of ways.

Mr. FLORIO. The last topic which I would like to talk about is the disposal facilities such as Rollins, What is EPA doing with the question of siting by way of legislative recommendation because it is not an academic problem and to say we are going to see if, as some mentioned yesterday, the private sector can work it out—I think it is a fact many people are concerned about and the plans that are coming up.

The concern is justified in some areas. In other areas, it is concern about the unknown. I do not think it is efficient today, as you mentioned, to have to get around to exploring those things.

I think we have to do it now. Before too long, we are going to have that problem that I mentioned before, about the bootlegging industries.

In New Jersey, we have the problem already. There are industries pulling trucks up to the factory gates, loading up and going and dumping it out in the woods somewhere.

I think it is important we deal with and initiate some actions now. I would like to know if EPA is working on proposals to submit to Congress with regard to the siting of such facilities.

Mr. PLEHN. Our basic efforts at the moment, our fundamental efforts, are to try to make the strategy which was set forth in RCRA work.

Basically that strategy was to establish, by regulation, that facilities for the storage disposal and treatment of waste, hazardous waste, are in fact, safe for public health, the environment, and to attain the public confidence.

In fact, that is the case. To close off the bootlegging and other chief disposal methods on which the environment has badly suffered and which have had the further effect of making the problems for those responsibilities, private industries that have wanted to move into the hazardous waste disposal, and it has made it very hard for them to get the market together from them to support the kind of development and to provide that kind of assurance to the public.

Mr. FLORIO. What do you think has been done, if anything, to provide for the increased confidence on the part of the public, as to safety of the facilities?

Mr. PLEHN. We are hopeful that our regulations under subtitle C, and the section 3004 regulation, in particular, which sets environmental and other performance standards for hazardous waste disposal facilities, will be to make a major consideration to the development of that confidence.

Mr. FLORIO. You are working with SHA in the decision of these regulations?

Mr. PLEHN. Yes, we are. I might ask Jack Lehman to describe that for you.

Mr. LEHMAN. Congressman Florio, the relationship with OSHA comes into two parts. NIOSH is not a part of SHA but we deal with both of them.

NIOSH, as you probably know, has publicized a very significant study of toxic substances. We are contemplating mixing the uses of part of that in the definitional aspect of what is hazardous waste.

In other words, adopting by reference parts of that with respect to the facility standards. Under section 3004 we are working with OSHA on the aspect of air emission from those facilities, basically, adopting OSHA's work plan standards.

That is our development, It has not been finalized but to adopt OSHA's work plan standards with suitable data to be factored into it and apply to the site of those facilities. So that is our relationship with OSHA so far.

Mr. FLORIO. I appreciate your comments today. We will have a panel made up of State and local officials. If you can stay, that is fine. If you cannot stay, please get a copy of their remarks.

There will be some interesting insight that may assist you in your deliberations on this last topic.

I thank you both.

Mr. PLEHN. Thank you, Mr. Chairman.

Mr. FLORIO. For the record, I would announce that Mr. Sunley's comments and his written statement will be entered into the record along with the introduction of him, and a letter to the Treasury will also be submited for the record at this point.

[The following material was received for the record:]

FEBRUARY 22, 1978.

Hon. W. MICHAEL BLUMENTHAL,
Secretary of the Treasury, Department of the Treasury,
Washington, D.C.

DEAR MR. SECRETARY: On March 7, 8, and 9, 1978, the Subcommittee on Transportation and Commerce will be holding hearings on the implementation of the Resource Conservation and Recovery Act of 1976. Under section 8002(j) of that Act, the interagency Resource Conservation Committee is required to study, among other things, "the effect of existing public policies (including subsidies and economic incentives and disincentives, percentage depletion allowances, capital gains tax treatment and other tax incentives and disincentives) upon resource conservation, and the likely effect of the modification or elimination of such incentives and disincentives upon resource conservation." Your representative, of course, sits as a member of the interagency, Cabinet-level committee.

A request is hereby extended to you or your representative to appear at these hearings and give testimony as to the extent to which this particular issue has been studied. Our tentative schedule would indicate that Wednesday, March 8, 1978, would be the best day for that appearance. I apologize for the short notice of this request.

I would also request your views on the fact that under Public Law 94–568, section 4, the Treasury Department and the Environmental Protection Agency were required to make a similar study of "all provisions of the Internal Revenue Code of 1954 which currently impede or discourage the recycling of solid waste materials, and shall determine what actions Congress may take under the internal revenue laws to increase and encourage the recycling of solid waste materials."

Finally, I am advised that under the President's Domestic Policy Review a non-fuel mineral study was begun which will involve a 15-month, 14-agency study of some of these similar issues. I am anxious to hear the views of the Department of the Treasury as to when the Congress can expect a definitive conclusion on this subject which is of increasing interest to me, my colleagues, and my constituents. I hope you will be able to address these issues.

If you have any questions regarding the hearings, please feel free to contact Richard N. Little, Jr., of my Subcommittee staff at 225–1467.

With kind regards.

Sincerely,

FRED B. ROONEY,
Chairman, Subcommittee on
Transportation and Commerce.

STATEMENT OF EMIL M. SUNLEY, DEPUTY ASSISTANT SECRETARY OF THE TREASURY FOR TAX POLICY, DEPARTMENT OF THE TREASURY

Mr. Chairman and Members of this Distinguished Committee, I am pleased to have this opportunity to appear before you today to discuss the Treasury Department's participation in three study efforts involving the impact of provisions of the tax laws on resource conservation. Two of these efforts were directed by statutes enacted in 1976 within a few days of each other.

The first, Public Law 94-568, directed the Secretary of the Treasury, with the assistance of the Administrator of the Environmental Protection Agency, to "make a thorough and complete study and investigation of all provisions of the Internal Revenue Code of 1954 which currently impede or discourage the recycling of solid waste materials."[1] This study was to be reported by April 20.

The second, the Resource Conservation Act of 1976, directed an Interagency Resource Conservation Committee established by the Act and of which the Secretary of the Treasury is a designated member, to "conduct a full and complete investigation and study of all aspects of the economic, social, and environmental consequences of resource conservation * * *." In particular, this study is to include, among other topics, "the effect of existing public policies (including subsidies and economic incentives and disincentives, percentage depletion allowances, capital gains treatment and other tax incentives and disincentives) upon resource conservation * * *." The final report of the Resource Conservation Committee is to be submitted by October 1978.

Finally, the third study effort is an Interagency Review of Nonfuel Minerals Policy initiated last December by the President as the first endeavor under a new Domestic Policy Review procedure. The same set of mineral-specific tax provisions are to be reviewed along with other Federal policies impinging on the health and vigor of the nonfuel minerals industries.

It was clear that the two statutory tasks, one addressing disincentives to recycling, the other resource conservation generally, were related. The Environmental Protection Agency and the Treasury Department therefore mutually assigned the same personnel to the two tasks to ensure coordination and minimal duplication of effort, and it was decided that the study of tax deterrents to recycling mandated by Public Law 94-568 would be incorporated in subsequent reports of the Interagency Resource Conservation Committee.

Shortly after work was commenced on quantitative evaluation of resource-specific tax laws, President Carter requested the Treasury to prepare for his consideration an agenda of tax reform options. Included in this agenda, as they have been for many decades, were revision of percentage depletion allowances and the tax treatment of capital gains. Naturally, the focus of Treasury staff attention was thereby redirected. Moreover, in his May 23, 1977, Environmental Message to Congress, President Carter requested the Interagency Resource Conservation Committee to accelerate its recommendations on the specific matter of solid waste disposal charges. This had a similar redirective effect on the work of EPA and Treasury concerned with these questions.

Notwithstanding this chronology of shifting objectives for a careful analysis of resource-specific tax subsidies, it is the view of the Treasury that the Interagency Nonfuel Minerals Policy Review is the vehicle through which the interests of this Committee, the tax writing committees, and the President in the broad area of resource conservation will be served most effectively. In his directive to the 14 Departmental and Agency Heads establishing the study, Mr. Eizenstat, Assistant to the President for Domestic Affairs and Policy, listed as the first basic study objective the preparation for Presidential consideration of a set of policy options, analyses, and recommendations on specific issues and problems related to nonfuel minerals. Among the concerns he listed which define the issues to be examined are:

(1) Security of minerals supply—domestic capacity and imports.

(2) Whether Federal land use decisions adequately account for minerals availability.

(3) Whether current tax laws favor the use of raw minerals rather than recycled materials or otherwise discourage conservation.

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[1] Public Law 94-568 passed the House and the Senate as H.R. 1144, a bill concerning the tax treatment of social clubs and other membership organizations. Section 4 of the act, providing for the aforementioned study, was introduced as a floor amendment in the Senate.

(4) Whether current environmental, health, and safety regulations affecting minerals achieve their aims at reasonable costs.

Moreover, the study is to serve as a means for developing a comprehensive framework for policy analysis that may be used on a continuing basis for evaluating options. A Policy Coordinating Committee, comprised of the 14 Department and Agency Heads, is directed to forward options and recommendations to the President before April 1979. This Committee is scheduled to meet in four weeks to establish priorities among policy issues to be addressed in the study.

On the basis of experience gained from 18 months' interagency exchanges of views on the definition of underlying issues and their relation to the several study requirements, a feasible reporting schedule has emerged. On the narrow question of the relation between specific natural resource tax subsidies and the volume of economic recycling of solid waste that takes place in the United States, our completed staff work may be reported to Congress by the end of April without prejudice to the ongoing Interagency Nonfuel Minerals Policy Review. Moreover, this completion date synchronizes perfectly with the scheduled late June date for submission by the Resource Conservation Committee of its Third Report to the Congress.

Mr. FLORIO. Next, we will have a panel consisting of Dr. Charles A. Johnson, technical director, National Solid Waste Management Association; Mr. A. Blackman Early, legislative director, Environmental Action; and Mr. Jay Snow, chairman, hazardous waste management task force, National Governors' Association Standing Subcommittee on Waste Management, Texas Department of Water Resources.

You may proceed.

STATEMENTS OF CHARLES A. JOHNSON, TECHNICAL DIRECTOR, NATIONAL SOLID WASTE MANAGEMENT ASSOCIATION; A. BLAKEMAN EARLY, LEGISLATIVE DIRECTOR, ENVIRONMENTAL ACTION, INC.; AND JAY SNOW, CHAIRMAN, HAZARDOUS WASTE MANAGEMENT TASK FORCE, NATIONAL GOVERNORS' ASSOCIATION STANDING SUBCOMMITTEE ON WASTE MANAGEMENT

Mr. JOHNSON. Mr. Eugene Wingerter spoke to you yesterday and he will be on our program again tomorrow. My particular topic will concern subtitle C of RCRA, in which I am particularly involved.

The Resource Conservation and Recovery Act of 1976 is a landmark law in its intent to regulate hazardous wastes from the point of generation through transportation and storage to ultimate recovery or disposal of the wastes. Implicit in the language of RCRA, specifically section 1003(4), are two objectives. First, there should be adequate facilities available for the management of hazardous wastes generated throughout the country. Second, these facilities should be regulated so as to protect health and the environment. The membership of NSWMA includes the major firms offering the service of chemical waste treatment and disposal.

We appreciate the opportunity today to identify three areas in subtitle C, the hazardous waste section of RCRA, which we feel need further attention in order to assure the most complete and effective regulation of hazardous wastes.

The first area pertains to EPA's mandate under section 3004(6) to promulgate regulations regarding financial responsibilities of hazardous waste management facility operators. The operating regu-

lations will be the first line of protection for the public against damage from hazardous wastes. But should damage occur, the public should be assured that the condition will be corrected and the damage compensated for.

Consideration of this issue by the industry and EPA has shown it to be very complex. A comprehensive solution may require several different parts including but not limited to insurance, self-insurance, bonds, cash deposits, and liability compensation funds. It is possible that additional legislation may be required to create the needed mechanisms.

In the meantime we have urged that EPA not allow this issue to delay promulgation of the regulations to implement subtitle C. We asked that EPA allow acceptable options for demonstrating financial responsibility and that the level of demonstrated responsibility be set so as to allow the waste disposal industry to develop to meet the needs of this program.

Our second concern relates to the movement of hazardous wastes between states for treatment and disposal. We believe this is necessary to assure development of the needed facilities.

Effective hazardous waste management includes a variety of costly treatment and disposal processes. It would not be economically feasible for a company to operate high technology hazardous waste treatment and disposal facilities if it could not obtain sufficient input of wastes. Furthermore, the requirements of industry for hazardous waste management do not justify establishing every type of facility within every State. For example, one site might specialize in disposal of inorganic wastes by neutralization or chemical stabilization. Another in an adjacent state might specialize in disposal of organic wastes by incineration and still another might develop a land disposal facility for solids or sludges. These kinds of specialized approaches can work only if the movement of hazardous waste across state lines is not forbidden.

There are also technical reasons why there should not be a ban on the interstate transport of wastes. The geology in some States makes land disposal environmentally difficult or impossible. Certain types of disposal, especially deep-well injection require geological formations that are available only in certain places. If States were not allowed to export or import wastes across State borders, in many cases they would simply not be able to avail themselves of these necessary processes.

EPA has generally supported the position that States should not be allowed to inhibit the movement of wastes into or through their jurisdictions. We believe, however, they have compromised this position unwisely. Under their proposed regulations, EPA would grant authorization to administer the hazardous waste program to those States with existing legislative hazardous waste importation bans through 1984. We object to this because in this critical 6 year period, the industry will be transformed from its present unregulated condition to that of a regulated service industry. Widespread importation bans would prevent the orderly development of an economically and environmentally sound hazardous waste service industry. Several States are currently considering legislative initia-

tives which would prohibit the importation of wastes. If EPA's regulations were promulgated as proposed, States would not be constrained from enacting this kind of legislation.

As an additional consideration to facilitate the interstate movement of hazardous wastes, we believe the manifest system required by RCRA must have some uniformity among the States. Certain minimum information should be presented in a uniform format for every State. Individual States, however, may wish to require a generator of hazardous wastes to provide supplementary information.

A third issue of concern is the requirement that EPA integrate provisions of RCRA with other environmental control acts for purposes of administration and enforcement. EPA seems to have ignored this requirement when preparing the draft hazardous waste management regulations, particularly with regard to the Clean Air Act.

The Clean Air Act requires EPA to promulgate ambient air quality standards for certain air pollutants and provides strict procedures which must be followed when setting those standards. Additionally, the Clean Air Act requires EPA to promulgate emission standards for certain hazardous air pollutants.

Under the draft regulations that would implement section 3004 of subtitle C of RCRA, EPA would create ambient air standards for over 350 air pollutants, using OSHA standards as a basis. We object to this for the following reasons:

One: This would create ambient air quality standards without following the procedures required by Congress under the Clean Air Act.

Two: This requirement is discriminatory against the waste management industry since similar requirements are not proposed for any other industry.

Three: The monitoring process described in the proposed regulations is totally ineffectual.

The industry proposes that EPA mandate that hazardous waste management facilities comply with all provisions of the Clean Air Act and the regulations promulgated to implement it. If additional materials are determined to need regulation, either as air pollutants or hazardous air pollutants, those regulations should be promulgated under the Clean Air Act, and they should become applicable to all industries.

In summary, we believe that in subtitle C of RCRA, Congress has created a mechanism which can, for the 1st time, control management of hazardous wastes. We urge Congress and the EPA to take advantage of the current rule-making period to promulgate regulations which support the intent of the law and are not comprised by short-sighted concerns. The chemical waste management industry must continue to expand to meet the demands of this country. Let us insure that the needed hazardous waste treatment and disposal facilities are established in the next few years that the regulations governing them are adequate to protect our environment.

I thank you.

Mr. FLORIO. Thank you very much.

STATEMENT OF JAY SNOW

Mr. SNOW. Mr. Chairman and distinguished members of the subcommittee, my name is Jay Snow. I am chief of the Solid Waste Unit of the Texas Department of Water Resources. I speak to you today representing the harzardous waste management task force of the National Governors' Association Standing Subcommittee on Waste Management. We appreciate the opportunity to present testimony concerning the implementation of P.L. 94–580, the Resource Conservation and Recovery Act of 1976.

Presently, 21 States serve on the subcommittee. The task forces serving the subcommittee, including the hazardous waste management task force, are comprised of State officials expert in the administration, implementation and enforcement of State hazardous waste management programs. The States represented on the subcommittee include those leading in hazardous waste management even before the passage of the Resource Conservation and Recovery Act, such as, but not limited to, California, Oregon, Washington, and Texas.

Since the enactment of Public Law 94–580, I believe most States, especially those participating in the NGA hazardous waste management task force have noted with satisfaction the clear intent of Congress that States not only be provided the opportunity to implement and conduct State hazardous waste programs in lieu of the Federal program, but also to assist the Environmental Protection Agency in the development of subtitle C, Criteria, Standards, and Guidelines. I am pleased to report to you today that the U.S. Environmental Protection Agency has been quite cooperative in this effort. During the past year they have worked with the States through the National Governors' Association in an open manner in the development of subtitle C Standards. In those areas pertaining directly to State/Federal responsibilities, they have made a special effort to solicit and consider the views of the States. As a result, we believe that the regulations under review at this time have greatly benefited from this process.

As you know, there are a number of States across the Nation which have in existence hazardous waste management programs. As was reported to you last year at these oversight hearings, a number of States have initiated actions to bring their State statutes into line with Public Law 94–580, some of which were successful.

Mr. FLORIO. I am not sure if you were here yesterday.

Mr. SNOW. I was not.

Mr. FLORIO. Some local officials came in and said it was good for the State to be consulting with EPA but the law requires that the State consult with the locality and counties. In a couple of instances the regulation of the hazardous waste plan no consultation was going on in a number of States that were enumerated.

Do you know, as the representative of a State organization where States have made a conscious effort to reach out to the locality, as the law requires and consult with them prior to the formulation of State plans.

Florida was the State that was here particularly expressing great unhandiness that was not having any input whatsoever into State plan?

Mr. SNOW. I believe the planning program in the RCRA law provides for sub-State entities participation in the evolution of the plan, with regard to hazardous waste. Obviously the plan, as it would address hazardous waste, would have to undergo that sub-State entity involvement on the hazardous waste program itself.

I know there are hearing requirements for the application prior to its submission to EPA for the authorization of the State hazardous waste program. So, I think the law requires consultation.

Mr. FLORIO. That was the point of the gentleman, that the law requires it and he felt it had not been done.

Mr. SNOW. There is going to have to be a certification that certifying it—the laws provisions regarding public participation—has been complied with. If a number of localities around the Nation feel they have not been consulted with, it is a potential cause of delay later on so that a State would be well advised to make it a point to see to it they are covered as far as the consultation is concerned.

Mr. FLORIO. Thank you.

Mr. SNOW. Problems that many States encountered related to limited state funding and uncertainty about anticipated Federal funding to implement the program. Those States which were successful in enacting the necessary statutory authority in most cases were proceeding with the assumption that Federal funding would become available to implement the program as indicated by the State program grant authorizations contained in RCRA. As you know, in 1978, no funds were appropriated for Federal assistance to State programs pursuant to subtitle C. Fortunately, some minimum funding for hazardous waste program planning was made available through subtitle D, Solid Waste Planning Program.

Adequate Federal funding for assistance to the States in fiscal year 1979 is essential to assure that those States which have no hazardous waste program or a program in its early stages of development, as well as those States with ongoing programs, which choose to accept responsibility for hazardous waste management in their States, may begin to develop the necessary program elements to qualify for interim or full authorization pursuant to section 3006 of the act.

The importance of 1979 funding for State program assistance is largely based on the fact that implementation of sound State programs over a reasonable length of time is preferable to a crash program or a program hastily implemented by either the State or the U.S. Environmental Protection Agency. In some respects, it is fortunate that the U.S. Environmental Protection Agency will apparently not meet the statutory dates for promulgation of final subtitle C regulations. The regulatory program mandated by subtitle C is a complex one that contains numerous unresolved complex issues. The State, by and large have not been greatly concerned over the delay in promulgation of the subtitle C regulations because of improvements in the regulations being achieved through thorough development and review with the States.

Indeed, EPA may well need additional time to thoroughly investigate and properly resolve some issues. However, it is apparent that final subtitle C regulations will become available prior to or during fiscal 1978. Therefore, we believe it imperative that Congress clearly reiterate their support of State administration of this hazardous waste program by providing adequate resources for fiscal year 1979 activities. Furthermore, we believe it necessary that the authorization for funding which currently extends only through fiscal year 1979 be extended to provide the States the necessary assistance that will undoubtedly be needed in the next several years. Accordingly, we would recommend that a minimum of $20 million which is 80 percent of the authorized level, will be necessary for State hazardous waste program development during fiscal year 1979.

At this time the hazardous waste task force is assessing the proposed guideline under 3006, "authorized State hazardous waste programs". In this document, EPA imparts the policy of encouraging and assisting the States in assumption of the hazardous waste movement program. The NGA Standing Subcommittee on Waste Management fully supports this policy. However, a major issue identified and commented upon by the NGA subcommittee is the prohibition of waste importation bans. According to EPA, States which "inhibit the movement of wastes into or through their jurisdictions vitiate the hazardous waste management programs of EPA and other States".

While we agree that effective treatment or disposal of hazardous wastes may require regional solutions involving treatment or disposal in State, other than the State in which waste was generated, the hazardous waste management task force has commented strongly to EPA that it is the State's responsibility to protect its citizenry and to adequately administer the program may indeed warrant restrictive measures. Accordingly, the States have repeatedly urged EPA to not include this requirement in the State assumption guideline, an option that I believe the Agency is still considering.

At the recent hazardous waste task force meeting in Denver, Colorado, the States discussed and supported the needs for ample research and technical assistance capability by the Federal Government. One need recognized was for establishment and coordination of Federal environmental spill control programs to address spills not immediately impacting water resources. Also, needs for Federal policy regarding hazardous waste land disposal facility siting and long-term care may need development or clarification. Although we do not at this time endorse or recommend Federal condemnation, ownership, or operation of such facilities, EPA should be charged to study and report to Congress and the President of facility siting problems and issues.

In response to several occurrences relating to hazardous materials and nuclear materials transport and spills, the National Governors' Association during its annual meeting last week considered a policy statement on transportation of hazardous materials. The NGA is now creating a task force of hazardous materials and railroad safety and would welcome both congressional and agency input.

Gentlemen, I appreciate the opportunity to address this subcommittee concerning the implementation of the Resource Conservation

and Recovery Act. I will be happy to answer any questions you might have.

Mr. FLORIO. Mr. Early?

STATEMENT OF A. BLAKEMAN EARLY

Mr. EARLY. Mr. Chairman, and members of the subcommittee, my name is A. Blakeman Early. I am legislative director of Environmental Action, Inc., a national citizens environmental lobbying organization and the principal citizen's group that lobbied on behalf of the Resource Conservation and Recovery Act of 1976. It is a pleasure to have the opportunity to appear here today.

I came here to discuss the resource recovery portions of the act. My written testimony is not on point with the session today, but I have taken the time while the other gentlemen were speaking to write some notes down on the hazardous waste issue. I will supply written comments for the record.

Mr. FLORIO. Your entire statement will be made a part of the record.

Mr. EARLY. My general outlook regarding subtitle C of the act to a large extent was the message I was going to bring, on resource recovery and resource conservation. The act is a massive confusion of money and manpower. The amount of resources that will be devoted to the implementation really derives the manner in which it will be implemented.

The Environmental Act is very concerned about the low budget which has been provided in the area of solid waste and which, in our view, may cause EPA to take a rather conservative approach to the implementation of the act, specifically to the hazardous waste issue. I will provide a few examples.

One, the proposed draft of the writing of a definition of hazardous waste. The agency is currently contemplating excluding from the definition of waste, any waste which may have utility waste as a by-product.

We clearly feel this is contrary to the intent of the act and really could provide a major loophole in terms of insuring the hazardous waste provisions of the act. As you know, the general concept behind the act was "cradle to grave" of all hazardous waste and the definition is currently being contemplated by the agency so broad to exclude the major segments of the act which it is designed to regulate.

Another aspect of that same section 3001, is the fact the agency is actually submitting a list—promulgating a list—of hazardous waste. Many are going to have difficulty going through the testing analysis of waste in order to determine whether they are hazardous. A list, even if it is not complete, will give those people who are in that position some direction as to whether they do or do not have hazardous waste for which they may have to get a permit.

It would also provide very meaningful direction in terms of waste that the agency is going to key-in on in terms of initial implementation.

A third aspect of the direction in which the agency is going which disturbs us is the alacrity with the agency personnel who want to

transport the program to the States. One of the proposals in the proposed 3006 regulations would allow States to assume partial assumption for the administration of the program beyond the initial 2 years contemplated under the act, before the State applies for assumption of the administration.

We really question whether this, as a policy, is an approach that should be taken.

A final aspect which concerns us very much in the way the agency is taking a conservative approach to the act, is with respect to the number of permits which may have to be issued under title C. It is currently talking about possibly 20,000 permits.

We feel that that must imply a very conservative interpretation. The MPDE's programs will, when issued, have 60,000 or 70,000 permits to correct discharges to the water waste and they estimate at least as many, and possibly twice as many to those who use sewage treatment facilities for which the agency is responsible for issuing present treatment permits.

There are going to be large number of facilities and they are going to have a lot of waste which we think the agency should really examine more closely the number of permits they may have to handle, or the States may have to handle and certainly implies more resources than are currently available to either the States or the Office of Solid Waste.

I think the major point is, regardless of whether the States or EPA ultimately assumes administration of the program, we are going to need many more resources than are currently being devoted to the administration under this act.

In closing, I would like to offer our support of the efforts of Mr. Eckhardt, who as I understand, is going to attempt to have an additional $15 million added to the solid waste budget for money that would go to State and local governments for the administration of the act.

Thank you, Mr. Chairman.

[Mr. Early's prepared statement follows:]

STATEMENT OF A. BLAKEMAN EARLY, LEGISLATIVE DIRECTOR, ENVIRONMENTAL ACTION, INC.

Mr. Chairman, and members of the Sub-committee, my name is A. Blakeman Early. I am legislative director of Environmental Action, Inc., a national citizens environmental lobbying organization and the principal citizen's group that lobbied on behalf the Resource Conservation and Recovery Act of 1976. It is a pleasure to have the opportunity to appear here today.

My message is fairly simple, regarding the present and future implementation of the Act. In my opinion, significant gains in solid waste management in general, and resource conservation in particular are going to be very slow until one key element which has never been provided is finally made available—the key element is money,

The history of the manner in which federal, state and local governments have dealt with the solid waste problem provides a classic study for political scientists. Just as we learned in high school civics, money, the Power of the Purse, has been the key to how the scenario has unfolded thus far.

On the one hand, Congress has declared that the solid waste problem is a national one and has mandated in the RCRA that EPA will tell state and local governments how to deal with those aspects relating to public health and resource allocation that are national in scope, while providing technical help to enable these governments to work out solutions to the rest of the problems. On the other hand, the states claim that EPA is too heavy handed

in dealing with the public health threats and are not sensitive to state-wide concerns. They assert that they can work out all the problems if the federal government will just supply the money and technical assistance. Finally, the local governments complain that both the state and federal governments are too intrnsive and that they would address state and federal concerns if these respective bodies would give them flexibility and provide sufficient money.

Who ends up calling the shots? The local governments, of course, because they are and have been supplying the vast bulk of funds devoted to the solid waste problems. They are even supplying most of the funds to advance the state of the art in resource recovery technology and, I might add, paying plenty for the privilege.

But here we sit worrying that federal and state concerns are not being adequately addressed. Let's face it, it's not local government's responsibility to address state and national aspects of the problem using their money. It's their purse.

The other dynamic which is fascinating to the political scientists and which involves the Power of the Purse is the classic struggle between the executive and legislative branches of federal government. The central actor on behalf of the execntive is the Office of Management and Budget.

In 1965, the Congress decreed that the solid waste problem was a national problem and passed the Solid Waste Disposal Act. The Bureau of the Budget disagreed. It held off significant funding of the Act and since it was not too ambitious a statute anyway, little happened. The solid waste problem remained a local problem to be dealt with by local government. The Congress acceded for five years. However, in 1970, the Congress declared more emphatically that solid waste was a national problem and passed a stronger bill called the Resource Recovery Act. OMB disagreed and nearly succeeded in zero budgeting the Office of Solid Waste Management Programs in Fiscal Year 1974. While Congress overruled eliminating the program, OMB largely succeeded in minimizing federal participation in solving the solid waste problem. In 1977, Congress prepared itself to declare even more emphatically that solid and hazardous waste was a national problem, the House and Senate endorsing a hazardous waste regulatory program and large loan and loan guarantee programs for resource recovery. Again, OMB did not agree. OMB delayed final passage of the Resource Conservation and Recovery Act until the last day of the session. A compromise was reached wherein OMB conceded to a hazardous waste program, but limited the federal role in solid waste management and resource conservation to one of providing technical assistance and planning assistance to overcome "institutional" barriers. Capital needed for resource recovery technologies would come from the private sector. Well, in the Fiscal Year '78 budget OMB essentially declared hazardous waste management to be the only national problem. The Office of Solid Waste budget was increased by 15 positions and about $7 million. Almost no additional funds or positions were provided for technical and financial assistance to state and local governments. The fiscal year 1979 budget again reflects the OMB view that the only meaningful role for the federal government is in the control of hazardous waste management.

In my view, as long as Congress allows OMB to exercise the Power of the Purse, it will never have the federal role expanded to comprehensively address the solid waste problems. The federal role will remain what OMB conceives it should be. And as long as the states fail to adequately fund their solid waste budgets, they will not persuade OMB to support with federal funds efforts to address state-wide concerns in solid waste management. If we are to make greater progress toward solving the solid waste problems nation-wide, federal expenditures need to be invested at the levels authorized in the RCRA and state and local governments need to respond with "their share" to match the federal commitment.

Meanwhile, the cities and counties are left with the real nitty-gritty problem of what to do with the solid waste that is generated daily. Today's discussion focuses on resource conservation. These local governments that have been brave enough to pnrsue the application of resource recovery technologies have learned jnst how difficult solid waste problems can be and how much money and expertise it takes to use resource recovery to solve them. Basically we still need to address the same problems in resonrce conservation that the Congress sought to address when it passed the RCRA: planning; institutional; technological; and market problems. The rest of my testimony will focus on

technological problems in resource recovery, but as I describe some of the experiences local governments have had, I will touch on the other three areas to some extent.

Progress in the use of technology to remove resources from waste has been very slow since the passage of RCRA. For Environmental Action, which has placed much emphasis on the greater examination and use of low-tecbnology approaches, this has not been an entirely bad development, since an opportunity has thus been provided to analyze the viability of resource recovery technologies in real life situations more fully. The record has been sufficiently mixed as to warrant a cautious approach. There is definitely a federal and state technical and planning assistance role to be played in helping those communities which choose to adopt these complex recovery processes. The pitfalls should not be under-estimated.

Even the installation of a basic shredding operation can be frought with problems. For instance, the New Castle Delaware Shredding/Reclamation Plant has experienced 33 explosions in processing over 800,000 tons of waste during the last five years. A water fog system has been installed to eliminate vapor and dust explosions. But the potential for explosions from military ordnance and chemical nitrate wastes remains.

Thanks to an EPA/ERDA sponsored study, we are learning about the experience of Ames, Iowa.

Ames, Iowa, has constructed 220 ton per day refuse derived fuel (RDF) plant with an Aluminum separation process. The RDF is burned in an electricity generating facility which has three water-wall boilers. Problems have been caused in five areas: (1) inability to obtain enough waste; (2) excessive dust emissions; (3) inability to suspension fire waste in one boiler; (4) inoperable aluminum recovery process; and (5) frequent conveyor jams.

A 50 ton per day short-fall in the estimated volume of solid waste that it was estimated Ames was generating has resulted in a 20 percent increase in the capital cost of the system. Excessive dust from the shredder has caused electric motor over heats and burn outs, equipment bearing failure, and is the suspected cause of a major fire.

Poor retention time in the boiler combined with the large particle size of the RDF produced has created so much bottom ash in one boiler that continued use has been impracticable. The aluminum recovery process has suffered from conveyor belt breakage, plugged feed chutes, metal corrosion, and excessive magnet cooling water use. The process has produced a very low quality aluminum product and has only worked for two and a half months since its installation in January, 1976.

Finally, the over-all system has suffered an average of one conveyor belt or pneumatic transport jam per day. These usually take an hour or more to clear. The bottom line is that capital costs are running 50 percent higher per ton than originally estimated. O & M costs are 200 percent higher than estimated. And income, due in part to a sluggish scrap ferrous metal market, is 20 percent lower than estimated. Net cost is $15 per ton compared with a preconstruction cost estimate of $1.35 per ton.

In Milwaukee, a RDF facility has incurred cost overruns of approximately $5 million caused in part by the necessity for constructing additional equipment to eliminate odd-seized pieces of refuse, such as tree limbs and truck tires and a separate machine designed to remove pieces of fabric that are not separated by air classification and clog various parts of the processing. Both the glass and aluminum processes have yet to operate properly under full-time use.

The Baltimore County, Maryland recovery facility has a glass separation process the product from which is too contaminated for sale as anything other than aggregate for sewer pipe. They are fortunate enough to have a good market for this material.

Finally, the Rescue plant in Massachusetts, constructed by Wheelabrator-Frye, has experienced difficulty obtaining sufficient amounts of waste to operate at capacity and has also had significant problems with corrosion of water pipes and grates inside the water-wall incinerator.

I conducted this brief review, not to demonstrate that resource recovery systems are not working, but to point out that they do not work with ease. Local communities that want to choose these recovery technologies need a wide variety of assistance and EPA's program is definitely not the aggressive one envisioned in the RCRA.

Until more money is provided at all levels of government, but particularly at the federal level, these problems are not going to be solved very quickly.

Mr. FLORIO. I am interested in that you seem to have more confidence in the Federal Government administrating the act than the delegation to the States, assuming that the States come up to the standards specified in terms of the plans being approved, and having some regulatory mechanism. I thought the States had been doing a very good job in terms of implementing the solid waste regulations as well as the hazardous waste.

If that is not an indication around the country, could you elaborate on why you feel the effort to delegate responsibility to the States is not in the public interest?

Mr. EARLY. That is not the intent of my remarks at all. What we are talking about, to a large extent, is who is going to cover all the bases and I strongly believe it is not until EPA sticks its ugly head into the States' business, things really begin to happen.

I feel unless the States come up with a program within the specified period of time, the program that is approved by EPA cannot fully support that approach. I agree with you, by and large, well put-together State programs are just as likely, if not more likely, to do an effective job. The question is how do we get there?

I do not see as many States as EPA currently contemplates rushing to implement these. If you look at the record, States have not been devoted, by and large, to the control of solid waste management.

For instance, I was at a conference recently where the head of the Department of Natural Resources spoke out and said States never had enough resources to get beyond the traditional solid waste problems and do not have enough right now.

The question is, how do we get this? I feel by getting EPA into the States and administering the program, this will provide a strong incentive for recovery.

Mr. FLORIO. You stated your feeling that the importation bans of hazardous materials were not desirable, the implication being that perhaps we should deal with the transporting, disposal and treatment on a regional basis. I do agree with that.

As a matter of fact, yesterday when EPA announced that was the policy and the prohibition against the adoption of new bans, when I asked if there was any appeal prospect, they said "No". I can see it happens. It is all well and good to say we cannot ban the importation of solid waste, or more specifically, hazardous waste, but unless there is some legitimate way one can dispose of the waste at the State level, it seems to me there should be an option open for that State, if they have to, to say we have no facilities, we cannot even deal with our own hazardous waste.

Accordingly, to have a ban is justifiable. It seems there ought to be an opportunity for States to make that case.

Mr. JOHNSON. I think States should have the opportunity to export their hazardous waste to a site in an adjacent State or several States away.

Mr. FLORIO. Suppose there is no site?

Mr. JOHNSON. Yes, there must be a site available with many of the proper capability but it is very unlikely that even the States themselves can provide all types of needed capacity within each State.

Mr. FLORIO. My understanding is there are only three sites in the entire Nation for the disposal or destruction of PCBs. If that State in which one of these sites was located wanted to enact a ban prohibiting the importation of PCBs into their State, it seems to me there is a legitimate concern, if it is one of the State saying we will not permit any PCBs to be imported into our State for disposal, that site would be available to those PCBs generated in that State.

But under the appeal process if, in fact, that facility is there, then the ban would not be justified. All I am suggesting is there should be the mechanism whereby a State could legitimately say that and that point would be determined at the appeal process.

As you may be aware, in my own State, we maintain we have not the landfills. I am not talking about hazardous waste, just solid waste. We are running out of landfill and the State of Pennsylvania had been exporting its trash into our State. There is now a case before the Supreme Court of the legitimacy of that.

It seems the public safety consideration is important enough to be heard. In fact, to start imposing the ban has a legitimate argument or legitimate case for the provision they have no more room.

Mr. JOHNSON. I believe we are saying the same thing.

Mr. EARLY. It is my understanding that under the EPA regulation, if there were no facilities adequate, it could not prohibit a State from saying that substance—PCB——

Mr. FLORIO. The representation we had was no ban in existence now at the time of the law. You could enact no ban and have your State plan approved.

On the other hand, if there is a ban in existence now, before the plan would be certified, there would have to be a 5-year phaseout. I asked if that took into account the inadequacy of the room in the State and the answer was "No", an absolute ban in both cases, a 5-year phaseout or the total prohibition.

It seems to me we should have an opportunity for evaluating mitigating circumstances. We have to get it clarified.

I want to raise one last point for all three gentlemen. We are all saying something that has occurred to me in this bill, particularly in the hazardous waste section of it, it was thought of as being a fairly good, new innovation when it was enacted 2 years ago.

Yet, in the rapid course of events over the last 2 years, I have started to have apprehensions about whether it goes far enough. I think at best, if the bill is implemented in the most generous spirit, in the methods of the manifest and so on, it encompasses, let us know where everything is going but it does not address the question of ultimate diposal.

I think we are going beyond this bill and it may be, as you say, the need for more action. We have consigned the message to EPA. The subcommittee would be very receptive to a legislative proposal to deal with the question of siting, to deal with the question of what we can do to facilitate private industry, and if not, the public sector, to start dealing effectively with the disposal problem.

So, I am looking forward to the public's input to the legislative initiatives which may be needed to deal with the ultimate problem, which is disposing of hazardous solid waste in a safe, environmentally sound way.

Gentlemen, we appreciate your coming.

Our next witness is Dr. Glenn Paulson, assistant director, New Jersey Department of Environmental Protection. He is a local representative from a locality in the State of New Jersey. He brings with him Dr. Ronald Buchanan, chief of the New Jersey Department of Environmental Protection's Bureau of Hazardous Waste, and Mr. Kenneth DiMuzio, who is the solicitor for Logan Township, N.J., which is the site of Rollins Environmental Services, a hazardous waste treatment facility.

Just by way of preliminary remarks, I am very appreciative that you came down. I understand the president of Rollins is in the audience. We appreciate his willingness to come down and we look forward to full input from all parties.

The fact of the matter is this particular act cannot be undone but what we are striving to do in the committee is to make corrections in the law so as to minimize the possibility of future occurences. Likewise, we strive to get input to determine how we are going to dispose of those materials that have to be disposed of.

As unpopular as it may be to have such a facility in one's own community, we have come to realize these facilities have to be somewhere, and we are hopeful that they will be in areas acceptable and conducted in a way not offensive to the community, but certainly in a safe way because, as I indicated in my preliminary remarks, the alternative is not to do anything and that, in itself, is to do something.

As was indicated, we have also found out the materials are being dumped illegally because manufacturers and producers of materials are finding they have to do something with it and they are resorting to illegal operations knowingly or unknowingly, resulting in those materials being disposed of in ways that are contaminants to water supplies particularly, and in environmentally unsound ways.

Dr. Paulson, if you would like to proceed, go right ahead in any way you wish.

STATEMENT OF GLENN PAULSON, PH. D., ASSISTANT COMMISSIONER FOR SCIENCE, NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION, ACCOMPANIED BY RONALD BUCHANAN, PH. D., CHIEF, NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION'S BUREAU OF HAZARDOUS AND CHEMICAL WASTES; AND KENNETH A. DIMUZIO, SOLICITOR, LOGAN TOWNSHIP

Dr. PAULSON. Mr. Chairman, members of the committee, I am pleased to be here to present to you our views on some lessons that may be extracted from the tragic episode late last year at the Rollins Environmental Services facility in southern New Jersey. With me to discuss these matters is Dr. Ronald Buchanan, the chief of the New Jersey Department of Environmental Protection's Bureau of Hazardous and Chemical Wastes and Mr. Kenneth DiMuzio, Solicitor, Logan Township, N.J.

So you have two litigants before you to discuss this matter today.

As I see it, our main role here is two-fold. One, to describe briefly the State of New Jersey's responsibility to the hazardous waste

problem, in general; and the Rollins disaster in particular; and two, to define the lessons that can be drawn from the Rollins episode for the Environmental Protection Agency as it moves ahead to implement subtitle C, on hazardous waste management Public Law 94–580, the Resource Conservation and Recovery Act of 1976.

I have prepared and submitted a written statement which I assume has been distributed to you by the staff. I would like to highlight only certain portions of it in the interest of time.

New Jersey knows that it has a hazardous waste problem, in large part because we are aggressively working to define its magnitude so that we can move toward solutions.

We have closed polluting landfills and begun a substantial ground water monitoring program to determine, among other things, if chemical wastes are threatening drinking water supplies. A short documentation of our efforts over the past 4 years appears as attachment 1 [see p. 146] which contains a brief memorandum prepared recently by Dr. Buchanan on the history of hazardous waste regulation in New Jersey.

Further, we have surveyed the firms that produce potentially hazardous wastes in New Jersey across a wide spectrum of industries. A copy of a recent summary of this work, is appended as attachment 2. [See p. 153.] Without burdening you with details, we can account for the final resting place, or, even better, recycling location, for about 80 percent of the reported waste volume. To further refine our knowledge and our ability to protect the public as well as the environment, Rocco D. Ricci, New Jersey's Commissioner of Environmental Protection, has within the last few days enacted a comprehensive hazardous waste manifest system to fully track all such wastes from their point of production to their point of recycling or destruction, including attention to modes of transportation and locations of storage. The full details of this manifest system are contained in attachment 3 [see p. 170]. It is our view that this is the sort of manifest system Congress had in mind in section 3002 of RCRA.

Finally, we are aggressively searching for environmentally sound ways to recycle or destroy these wastes, and, just as important, for responsible companies to carry out this work.

In short, we are moving ahead on this issue. As a result, both our problems and progress have been well-chronicled, not only in the New Jersey press, but the national press as well. Some reports have emphasized the problems, others the progress.

Against this backdrop, the tragic event at the Rollins facility in early December assumes dimensions even broader than those of the disaster itself. I assume you are generally familiar with what actually happened that day, so I will not dwell on the details except to observe that, like virtually all facets of the chemical industry, chemical waste treatment is inherently a dangerous business, a point to which I will return later.

After the disaster's DEP's main responsibility was, and still is, to determine if any substantial off-site environmental damage had occurred. We mounted special intensive off-site surveillance of water and soil. Four weeks after the fire and explosion we released the results of that effort which, fortunately, showed no significant off-site

contamination due to the fire and explosion. A copy of that report is enclosed as attachment 4 [see p. 187]. We will, of course, be continuing surveillance in that area to ensure that more slowly developing problems, if any, are detected before they pose a threat to man.

Shortly after the disaster, DEP ordered Rollins not to accept any incoming wastes until a series of defined requirements had been complied with [see attachment 5 p. 195]. This order still stands as of this moment.

Recently, Rollins has provided DEP with technical material which Rollins believes meets DEP's requirements. Prior to reaching a conclusion of this matter, DEP has scheduled a public hearing on these materials on March 11. I should emphasize that we will be reaching our decisions on the Rollins facility, and on other similar existing and proposed facilities in New Jersey, in the absence of final RCRA guidelines and rules. Even if EPA delays for an unfortunate amount of time the requirements for facilities, the requirements for State programs and the like, we are not going to wait we cannot afford to wait—to move ahead in New Jersey, attachment 6 contains the hearing announcement [see p. 195.]

Mr. FLORIO. Does your funding come from State revenues?

Dr. PAULSON. We do have, under the EPA grant program, a welcome infusion of Federal monies into the State to do this work; but other work, such as the water monitoring to check the level of the toxic substances, and many other activities of the Bureau of Hazardous Wastes, are funded directly by the States.

The importation question has come up today several times. Parenthetically, I would like to emphasize—now that the New Jersey State government is back before the Supreme Court with the Commonwealth of Pennsylvania and others—that the ban on out-of-state wastes that we would like to impose in New Jersey has a specific exclusion for wastes that go to facilities that reclaim or recycle such wastes. In other words, it would not apply to facilities that can productively treat wastes, and that would apply to chemical wastes as well as trash. In other words, we have not closed the door to wastes coming into New Jersey to be productively handled, and, hopefully, reused.

Mr. FLORIO. Is it your understanding that proviso would meet the requirements of the proposed EPA 5-year phase-out?

Dr. PAULSON. I believe so. This other, RCRA requirement is in a state of flux, and the Supreme Court litigation predates RCRA. But I think our proviso can be consistent with Federal requirements.

In fact, because of the urgent need for such treatment and recycling facilities not just in New Jersey but on the entire east coast—as well as the rest of the country—both for trash and industrial hazardous wastes, this industry generally is a growth industry.

In some locations of the State, our view, and, in fact, our basic exemption for those kinds of facilities in our law and the Supreme Court litigation, holds out the possibility that New Jersey become a center for that growth industry if it can be done in a safe and acceptable manner.

Mr. FLORIO. You realize, in fact, some do not regard that as any great blessing.

Dr. PAULSON. I understand that. However, that is not to say we would stand in the way of another State that would like to look at this industrial growth potential. However, since our chemical industry counts for, as I recall, something like 15 percent of the total dollar value of chemicals produced in the country, and it is the third largest in terms of total dollar value of producing chemicals, the market is already with us in New Jersey. The market potential, may not be so clear and present in States of the Midwest, for example.

In effect, we are looking to see if we can take advantage of an existing situation, not closing our minds to that potential. That is not to say that these treatment facilities would not be subject to very careful scrutiny even in advance of what EPA asks us to do.

I mentioned earlier that, since the episode at Rollins, Logan Township has filed a rather wide-ranging suit regarding the facility; Mr. DiMuzio, the Solicitor for Logan Township, is a witness before you today and can provide additional details on it. But without prejudging DEP's decision, it is a fact that the destruction of the Rollins facility has placed many chemical companies on the east coast in the position of losing their preferred choice for disposing of their chemical wastes. Rollins' capacity was equivalent to roughly 10 percent of the total estimated 1977 chemical wastes produced in New Jersey. Since Rollins served a multi-State area, the companies who lost this service are not confined to New Jersey. I wish I could report that there are already a large number of modern sophisticated facilities on the east coast who could take up this slack, but there are not.

That, in a nutshell, is the situation for New Jersey generally and regarding Rollins in particular. What lessons can we learn from this situated, particularly in the context of EPA's implementation of RCRA? I believe there are several. In the interest of your time, I will state them briefly.

First, hazardous and chemical wastes are very often highly dangerous materials. This may seem like a trivial conclusion, but several nontrivial points flow from that. For instance, whether legally or—especially—illegally dumped, such wastes can pose a threat to the biosphere, including man. Sometimes the threat develops quickly, sometimes over a longer period of time. Further, while sophisticated and sound recycling or treatment reduces this threat, it does not eliminate it.

Rollins and facilities like it are in a difficult line of work, even when things go smoothly. When things go wrong, not only are the workers on the site threatened, but others, such as firemen and emergency workers, can also be threatened, and conceivably even nearby neighbors. In this context, it may turn out that such facilities are no better or worse than any other type of chemical facility, but because there are unfortunately so few of them, they are less familiar, and therefore may seem riskier.

Second, regarding the development of standards or guidelines for hazardous waste disposal facilities, we perceive the need for two important considerations: one, a delineation of very specific contingency plans to be implemented in the event of a disaster; and, two, the inclusion of a risk-hazard analysis in the egineering design and review of such facilities to minimize the potential for such dis-

asters and attendant adverse health or environmental impacts from ever occurring in the first place.

The contingency plan, although lengthy, is readily easily developed and should include as a minimum the following elements:

A detailing of on-site fire fighting equipment, its location, use, maintenance, etc.

Liaison with local fire departments.

A detailed spill contingency plan.

Delineation of immediate supervisory personnel schedules, tasks and central coordination point.

Critical equipment—incinerator, etc.—and necessary shutdown procedures.

The persons to be notified—local fire departments, ambulances, plant manager, corporate headquarters, State agencies, EPA, OSHA, etc.—and the procedures for so notifying them.

The availability and use of personal safety equipment.

Plant evacuation procedures.

A detailed plan showing location of storage tanks and probable classes of contents.

Measures to redirect incoming waste streams should a major interruption of service occur.

The latter aspect, risk-hazard analysis, should encompass a systematic analysis of all potential hazards, including operational risk factors such as fires, explosions, spills, release of toxic vapors, potential environmental/public health consequences of such incidents, and the engineering and operational provisions incorporated to minimize the probability and risks of such events. We believe it is extremely important to mitigate against disasters in the initial design and subsequent expansion of this class of facilities.

Mr. FLORIO. Could you repeat the two suggestions?

Dr. PAULSON. First, the development of contingency plans to be used in the event of a disaster and second, a risk-hazard analysis. I would like to dwell on at some length on the second, since it may be less familiar to you.

There are different ways in which the concept of risk-hazard analysis can be stated. One analogy that might be useful is that, in effect, we are suggesting the same methodology that is used for nuclear power plants and chemical production facilities be used for chemical waste treatment facilities.

In fact, this technique was pioneered for the chemical industry in England, and has been extensively used therefor over 15 years. It is as much as an art as a science, in that you can learn from each analysis and from each disaster It has the advantage of being methodical not serendipitous. It has the further advantage of leading you to solutions at the design stage, before a facility is actually built.

Mr. FLORIO. What is the value of having a nationally unified system? You have suggested this is growth industry. If we deal with this on a State by State basis with competition in a growth industry, we may see the downgrading of requirements, so as to attract the fellow that does less for the facility, contrary to talking about national uniform standards for this analysis.

This takes the whole competition out of it. One of the other speakers talked about the need for regional treatment plants. The Nuclear Regulatory Commission has been involved in siting.

Maybe there is a need for Federal legislation for the siting and analysis of those facilities that should be located in areas in various regions so as to deal with the national need.

Dr. PAULSON. In New Jersey, we do not have the luxury of waiting for EPA to act on the issues you pose, but we firmly believe this risk-hazard analysis concept should be built in under RCRA as it now stands. The siting area would probably require new legislation. But we have decisions before us which we will be making before the EPA could conservably act on either hazard analysis or siting. The EPA time table was laid out for you earlier today by the EPA people. We have an imminent decision to make on Rollins and we have decisions to make on other facilities that wish to locate in New Jersey. As I said earlier, we do not have the luxury of waiting. Thus we are using the methodology risk-hazard not not only for chemical wastes facilities, but we also are I should note, using it independently on nuclear plants. And we would use it on liquified natural gas terminals, if any of these became viable. Finally, we will use it for chemical refineries and other facilities that pose substantial safety risks.

By doing this, we have been accused of imposing an incremental burden on applicants before our Department in New Jersey that they would not have to face it if they were preparing to do the same thing in other States. In fact, I think this accusation is generally correct. We have not found anybody in the United States who approaches those types of facilities the way we do. In my judgment, we have to take the risk of creating a slight competitive disadvantage by taking this approach.

But the cost of this requirement is not substantial. It is not a few dollars, but it is not even 1 percent of the cost of the facility. We have to take the risk of the slight competitive disadvantage because we think our citizens deserve the protection it provides.

We strongly prefer that it be done uniformly and nationally to eliminate that competitive disadvantage. That would have the additional advantage, in fact, of providing the same kind of protection to people in the rest of the United States that we are trying to give our citizens in New Jersey.

Mr. FLORIO. Would you be concerned that the Federal regulatory scheme with regard to these analyses, with regard to siting, would, in effect, pre-empt the authority of localities, the counties and the States to insert its own requirements or establish them in the case of siting facilities?

Dr. PAULSON. My recommendation would be that EPA develop stringent but minimum standards for siting and for risk-hazard analysis for this class of facilities, and that if a State or locality wished to do more, because of local considerations or local land use patterns, for example, that it be permitted to do so.

Mr. FLORIO. I can see someone raising the question that it is stopping everything. If we are going to have a national system, that it should be one put into operation at a reasonable level, providing all considerations and then it goes and allows the facility treatment—if

you are talking about a national system and then provide for localities to arbitrarily impose new restrictions, to effectively say that, it is not going to happen.

We are going to have to balance between the need for local input and the fact that localities, on occasion—certainly not in our locality but some do—just make up their minds they do not want it. It is very easy to find reasons the facility should not be in any particular place.

Dr. PAULSON. I would prefer a situation where there is at least a uniform national requirement to mitigate and reduce the risk of difficulties at such facilities.

Mr. FLORIO. If we were discussing the State or local role and Federal pre-emption, we would be at a much better point for entering the discussion in the first place.

Dr. PAULSON. I know what we are doing in New Jersey. I have a suspicion we are way out in front. Therefore, people in other parts of the country, workers, management, responsible emergency personnel or citizens nearby, are facing risks substantially greater than those faced in New Jersey. It is an area that needs careful attention at the Federal level. EPA could perhaps put in more thorough guidelines concerning the siting question to strike a better balance here.

I certainly would not want my comments to be misinterpreted based on my earlier comments about this being a growth industry. We in New Jersey want the development of suitable facilities, no matter where they are, for the treatment and preferably re-use of hazardous chemical wastes. But we recognize there are risks here, and we want the risks dealt with explicitly, fully and in public views, so that forward movement can be agreed upon, perceived with confidence by the citizens and continued. All will benefit in the long run from the proper disposal or re-use of these wastes rather than dumping them in the Pine Barrens of your district or the farm fields or streams where I live.

Returning to my text, the third lesson, and this is a very broad lesson, the whole question of public safety requires in-depth consideration at the Federal level. It appears that safety aspects are regulated by—and consequently diffused through—various agencies such as DOT, OSHA, EPA, et cetra. Recent experience suggests that such agencies only control to some extent, public safety aspects such as DOT, OSHA, EPA, et cetera. Recent experience suggests place in the case of OSHA, and the general environment in the case of EPA. However, there appears to be not only a lack of coordination among such regulatory agencies, but a reluctance to become involved in areas that may be somewhat outside of normal routine assignments.

We strongly suggest that a single Federal agency be chosen to oversee the entire spectrum of public safety considerations being handled by all agencies. Such an agency would undoubtedly be much more effective helping us at the State level to handle our responsibilities. It would have other advantages as well, but this is probably not the place to go into them in detail.

Lastly, our experience has pointed to the necessity for adequate environmental monitoring for such facilities. This includes both on-site and off-site monitoring of surface water, ground water, soil and air. In particular, baseline data can provide a means for assessing the impact of hazardous waste disposal facilities on local environmental conditions.

More important, monitoring will likewise provide an early warning system to detect potential problems before they pose direct dangers to the public and can be the initiating factor for corrective action. I believe that EPA should establish stringent criteria for monitoring requirements for such facilities that would be the minimum accepted anywhere in the country.

I would like to introduce Kenneth A. DiMuzio and invite him to make his comments. Mr. DiMuzio?

[Testimony resumes on p. 195.]

[Attachments to Dr. Paulson's prepared statement follow:]

ATTACHMENT 1

SUBJECT History of Hazardous Waste Regulation in New Jersey (including storage)

In 1974, information on the volume and characteristics of hazardous wastes generated within the state was inadequate and difficult to assimilate. However, it was apparent that the volume of hazardous waste produced each year was substantial and increased drastically. This increased volume of waste is a by-product of the increasing degree of both municipal and industrial waste stream that produce sludges often containing hazardous materials. The gradual phase-out of ocean dumping is also increasing the amount of hazardous materials which must be disposed of by alternate means.

Attempting to define the scope of chemical and hazardous waste generation within New Jersey, the Department surveyed 250 major waste generators to determine the quantities and characteristics of waste output as well as the ultimate method of disposal. The response to the survey was inadequate, thus the Department did not have an accurate assessment of the origin, quality and destination of hazardous waste within the State.

On July 1, 1974, the Commissioner of the Department of Environmental Protection adopted major revisions in the Rules of the Bureau of Solid Waste Management. These revisions included: A definition and identification of hazardous waste, chemical waste, lethal chemicals, bulk liquids and semi-liquids to be specifically regulated; a prohibition against the land disposal or incineration of lethal chemicals and radioactive wastes without prior written approval of the Department (N.J.A.C. 7:26-2.6.3) and a delineation of the responsibilities of the generators, haulers and disposers of hazardous, chemical or bulk liquids (N.J.A.C. 7:26-2.6.4) so that Public Health and Welfare would not be jeopardized, including a six month storage limitation.

N.J.A.C. 7:26-2.6.4.4 prohibited land disposal of hazardous; chemical or bulk liquid wastes after March 15, 1975, unless the disposer had installed a leachate collection and treatment system approved by D.E.P. On March 14, 1975, the Commissioner suspended the effective date of this regulation for a period of six months due to the lack of facilities that had such systems in place. This period also provided for the study of existing and innovative methods of handling, recovery, treatment, and disposal of such wastes.

On March 31, 1975, a public hearing was held by the Department concerning, among other proposals, a new definition of hazardous waste. Comments received at the public hearing were addressed to three major areas of concern. First, the rule did not address itself to the condition and circumstances under which certain materials might become more or less hazardous. For example, some substances which would be hazardous in themselves could be rendered harmless through land disposal. The Occupational Safety and Health Act (OSHA) standards which were cited in the proposed definition are intended to prevent hazards to workers and may not be applicable to land disposal of these same materials in the form in which they are commonly disposed.

Secondly, there were major objections to the listing of certain materials as being hazardous, and to the listing of other materials as being hazardous without reference to concentrations.

Thirdly, some testimony criticized the list of properties by which the Department would designate materials as hazardous. Major criticisms were that the parameters did not actually measure the hazard associated with land disposal of the wastes, standardized test procedures for determining these parameters were not cited, and in some cases may not exist, and implementation of the rule, as proposed would be extremely costly and time consuming, thus significantly delaying disposal of these wastes.

On September 15, 1975 the Commissioner indefinitely suspended the effective date of the aforementioned rule requiring leachate collection and treatment, while proposing a new rule prohibiting or severely limiting the land disposal of certain highly toxic, corrosive, carcinogenic or explosive chemical substances.

This regulation left open the possibility of land disposal for the disposal of the prohibited materials if it can be demonstrated to the Department that such disposal would not adversely affect the environment and was the only practicable disposal technique available for such wastes.

In July of 1976, the Department closed the last remaining landfill that had accepted hazardous Wastes, Kin-Buc I, due to severe adverse environmental impacts. Subsequent to the closing of the Kin-Buc I facility to chemical wastes, the Department sought and obtained from the owners a list of the major industries within the region that had been disposing of wastes in that site. With this information on hand and other facility records, it was estimated that Kin-Buc was accepting in excess of 60 million gallons per year of chemical wastes. Said wastes were found to originate in some 14 states as far distant as Maine and North Carolina. Thus upon closing the site, a flurry of hazardous waste inquiries were anticipated from New Jersey based firms. This, in fact, was not the case. The number of calls concerning hazardous and chemical waste disposal was surprisingly small and it was decided to investigate the disposition of wastes from "all" industrial firms within the State. In order to accomplish this task, the Department developed a list of SIC code numbers and extracted (Labor and Industry Status History Files) the names of some 2,500 firms within the State. Next, an industrial waste survey questionnaire was developed and as a pretest, sent out to the 200 New Jersey firms that had been using the Kin-Buc landfill site. The initial response to this second round questionnaire was good, approximately 75% and in order to obtain outstanding questionnaires all remaining firms were contacted by either another mailing, by phone, and/or by SWA field representatives who conducted personal interviews. To date, all of the previous Kin-Buc customers have responded to the survey.

With this initial response, the final details of the questionnaire could be "ironed-out" and corrections made. Currently the revised survey has been sent out to the remaining 2,500 industrial firms.

In conjunction with the survey task, the Department entered into a contract with Roy F. Weston, Inc. consulting engineers to aid in developing an overall hazardous waste management plan for the state. The following tasks were the basic goals of this study:

- Assess the hazardous waste problem in New Jersey (based on surveys and case histories, such as the Kin-Buc landfill).
- Evaluate hazardus waste technology (handling, treatment, and disposal) and its applicability to New Jersey.
- Develop criteria for hazardous waste processing facilities (handling, treatment and disposal).
- Develop criteria for closing hazardous waste disposal facilities (including long-term management requirements).
- Develop a statewide hazardous waste management plan.
- Develop hazardous waste implementation plans (regulating, enforcing, administrating, staffing and training needs).

Moreover, in October of 1976, the U.S. Environmental Protection Agency amended the Solid Waste Disposal Act to include general provisions known as the "Resource Conservation and Recovery Act (RCRA), of which Subtitle C encompasses hazardous waste management.. This Law required EPA to promulgate criteria and standards as follows:

(1) Identification and listing of hazardous waste
(2) Standards applicable to generators
(3) Standards applicable to transporters
(4) Standards applicable to storage, treatment, disposal facilities
(5) Permits for treatment, storage, or disposal
(6) Authorized State programs
(7) Inspections
(8) Federal Enforcement
(9) Retention of State authority

EPA then initiated preparation of such criteria and standards. However none of these sections has been finalized.

The Department not desirous of waiting for the Federal regulations and with the acknowledgement of EPA secured from them a Grant to continue, upgrade, and expand the State's program. With this monetary allotment, new personnel and equipment were added to more effectively deal with New Jersey's Hazardous waste problem.

Then, in July of 1976, the Department developed modified drafts of Weston's Proposed Regulations. It was decided to segregate the Manifest (e.g. waste tracking) system, formulate a Hazardous Waste Advisory Task Force consisting of industrial, environmental, and SWA representatives to assist in reviewing these regulations and prepare a finalized format for a Public Hearing. The Manifest cycle is designed to account for the waste from its point of generation to the point of ultimate disposal. This system allows the State to receive notice of a waste shipment from two points: First, from the generator when the waste is transferred from their control, and second from the waste management facility when the waste is treated and/or disposed of. Such dual reporting will aid the SWA in controlling illicit disposal of wastes, as well as responding to spills and incidents during transport. Subsequently, the regulations concerning disposal facility siting, design, operation and closure are to be scrutinized as soon as the Manifest rules are completed. After numerous Task Force meetings and rule revisions, the Manifest System was proposed by the Commissioner and on November 18, 1977, a Public Hearing was held to obtain comment upon these regulations. In February, 1978 following receipt and review of all public comments, final versions of the Manifest system rules were prepared and sent to the Commissioner for adoption.

Concurrently, the Department developed a two tier strategy for hazardous waste management; a long term and a short term approach.

Long Term Strategy

The long term strategy consists of attracting private companies into New Jersey to construct and operate facilities for the handling of chemical and hazardous wastes. We have made it clear to industry that we will not approve of a new Kin-Buc, but are rather looking for the creation of waste treatment facilities such as those operated by Rollins Environmental Services and SCA in Model City, New York. Such a facility would biologically and chemically treat waste materials with an attendant treated discharge into an adjacent river or into a sewerage system. It could also involve the operation of an incinerator. As a necessary adjunct, a secured landfill into which would be placed only solid hazardous and chemical waste could be operated. The source of this material would be sludges from the waste treatment facility itself, sludges originating from industries having waste treatment facilities and a limited amount of solid chemical and hazardous waste that cannot be disposed of by any other means.

At least three additional facilities to handle the estimated hazardous waste generated within the state are required, based upon the estimated total potential hazardous waste generator within New Jersey as summarized from EPA Data Reports which is approximately 245,520 tons/year (dry) or about 736,560 tons per year on a wet basis (assuming 30% solids). In order to handle this quantity of waste and assuming a facility would be designed to handle the equivalent to Rollins (approximately 266,000 tons per year), three new facilities can be justified. Of course, not every facility will be capable of handling all of the various waste types generated thus there will always be a need for some out-of-state disposal. In addition to this consideration, it must be realized that hazardous waste originating out-of-state will continuely influx to New Jersey displacing a portion of the available in-state capacity.

In order to assist industries in establishing hazardous waste treatment/ disposal facilities we are prepared to:

A. Act as a coordinator for the various DEP applications. We have indicated that industry can come to us for direct assistance determining whatever other permits are needed as well as coordinating the review activities.

B. We anticipate obtaining funding, with an EPA grant, to conduct a market survey.

C. We have conducted a recent meeting with various industrial representatives indicating to them the various tax free bonds, assistance programs tax breaks by which the State can render financial aid in building and operating a facility in this State.

D. We have made a strong commitment to put an end to the illegal dumping of hazardous and chemical waste through the operation of our Manifest system.

E. We will continue our efforts to assure that New Jersey will have, in the long term, adequate facilities. Recently, we have been encouraged that one company, SCA-Boston, has initiated the process of obtaining a site in Newark. A second firm, SRL-Ohio, has completed a first phase site selection and has approached SWA with their ideas for a neutralization facility, and a third firm, Rollins Environmental Services, has indicated that they are ready to expand their South Jersey facility to include a secure chemical landfill. Clearly, a significant progress has been made in this area.

The last element for consideration under the long-term strategy was on-site storage. The rationale for this approach was based upon prioritizing past findings as follows:

(1) The enormous number of potential generators (hence storers) of hazardous waste ($500,000 estimate to initiate inspection program)

(2) The magnitude of hazardous wastes potentially generated.

(3) Development of other longer term aspects

(4) Development short term strategies

(5) Development of an overall Hazardous Waste Management Program

(6) Creation of new proposed rules for generators, transporters, disposers of hazardous waste (Manifest system)

(7) Current case by case handling of on-site storage problems through SWA in conjunction with the Division of Water Resources appeared adequate.

(8) Monetary constrainst ($160,000 for total program) as well as personnel limitations

Hence, a policy decision was rendered to proceed with the Program in this prioritized fashion and remand the storage question for future consideration.

Short Term

The short term approach to the problem is exceedingly complex, however, we have implemented an assistance program that has been successful in dealing with industry's problems, this program includes:

(1) Encouraging in-plant waste output reductions via better housekeeping, liquid separations, sludge dewatering, etc.

(2) Encourage and recommend in-plant recovery or recycling where possible and providing necessary information concerning commercial recovery operations.

(3) Encourage on-site treatment, sewer discharge for liquid wastes where permissible, and on-site storage as viable alternatives.

(4) Rendering technical assistance to industries regarding identification and classification of waste streams (certain wastes or dewatered sludges are non-hazardous and amenable to landfilling) provide an alternative treatment/disposal facility listing and selection assistance, providing waste exchange information (several New Jersey firms now use the En-Karn exchange operating out of Albany that covers much of the Northeast region.)

(5) Provide direct assistance to industry by contacting waste brokerage firms, contacting in-state processing facilities and out-of-state treatment facilities as well as Sister State Environmental Agencies concerning disposal of specific waste streams.

(6) Approving various experimental projects of land-farming for waste sludges to assess the viability of soil microorganisms in degrading these wastes and Environmental Impacts.

(7) And lastly, by attending and sponsoring meetings with various industrial groups (i.e. Chemical Industry Council, N.J. Business and Industry Association, Chamber of Commerce).

There have been some general statements made that certain small New Jersey companies are being forced into agreeing to illegal disposal in order to get rid of their hazardous and chemical waste. We have attempted to establish whether this is the case and to determine its magnitude for some time without success. Frequently, when we check with a company, it is not the lack of a disposal facility that is the problem, but rather the cost of taking it to an acceptable disposal

facility. New Jersey industry, up to approximately two years ago, could take chemical and hazardous waste to Kin-Buc and dispose of it for approximately four and one-half cents per gallon, exclusive of transportation costs. Simultaneously, disposal of such waste at a treatment facility such as Rollins Environmental Services could cost between twelve cents and $2.00 per gallon (exclusive of transportation and the cost of laboratory analyses) depending on the waste material. Presently, many of the companies consulted are still looking for the "cheapest legal way" to disposing of their chemical and hazardous waste material. They can do this in many cases by sending it out of state to a landfill. Rhode Island, for example, which presently has a weak state policy on the handling of chemical and hazardous waste, became the new "Mecca" for hazardous and chemical waste disposal from the northeastern portion of the United States. In that State, landfills will accept the waste (like Kin-Buc) for about five cents a gallon. Additionally, there are landfills in New York and Pennsylvania with limited environmental protections, which still accept chemical waste material for about ten to twenty cents per gallon. From our discussions with various companies in the State, registered haulers are taking New Jersey waste to these facilities and if one shipment is not enough to justify a trip, they will attempt to obtain other customers for a single trip. We estimate that haulers charge approximately $1.00 per truck-mile for handling an entire one truck shipment to a specified destination. In such a vehicle, one can place 80 drums (approximately 4,000 gallons) or obtain a tank truck which normally has a capacity of approximately 5,000 gallons. A New Jersey company located in the northern part of the State can send waste on the approximate 250 mile trip to Rhode Island for a total disposal cost of ten cents per gallon.

We have had in-house discussions regarding what we could offer the companies on an interim basis and believe a program of temporary storage could be worked out, however, a company using it would have to pay for storage for a number of years, plus face the ultimate cost of disposal at a New Jersey facility. In discussing this alternative with several firms they did not see this as being an attractive program to their company. Industry made it very clear that they will consider such a program based on its financial impact. A review of the numbers clearly indicates that as long as industry can send it out of state to a landfill they will continue to do so. Obviously, the other states that are now receiving this waste material are concerned and we can anticipate some action being taken, especially by Rhode Island, to control the volume and amount of waste material now going there. Until such time, these firms will continue to utilize the least cost alternatives.

STATE of NEW JERSEY ATTACHMENT 2
Department of Environmental Protection 1/24/78

SUMMARY OF SURVEYS OF POTENTIALLY HAZARDOUS WASTE GENERATORS

S.I.C. Numbers	No. of Firms Reporting Waste	No. of Employees for Reporting Firms	Amount of Waste for Reporting Firms Lbs. x 10^6	Total Number of Firms Surveyed
20	6	2925	87.04	12
22	11	798	6.04	168
23,24,25,26	3	885	0.34	69
27	1	40	0.03	8
281	30	7175	293.02	51
282	20	6290	48.14	47
283	20	18623	35.16	84
284	18	4848	3.01	148
285	37	2971	24.03	93
286	18	8601	57.34	48
287	6	331	0.39	13
289	31	2229	9.74	106
29	7	1813	72.77	63
30	11	3070	10.73	56
31	2	440	0.46	20
32	3	677	12.02	37
33	9	1595	7.61	42
34	27	2354	5.80	227
35	15	4331	2.34	103
36	33	10614	2.80	291
37	4	7895	13.51	24
38	2	855	.11	14
39	1	110	.18	10
	318	89,470	692.61	1,734

* Wet Basis

HAZARDOUS WASTE GENERATION AND CONSTITUENTS

Group No.	Industry No.		Waste Constituents
20	FOOD AND KINDRED PRODUCTS		
	2077	Animal and Marine Fats and Oils	Caustic soda, sulfuric acid, bleach.
22	TEXTILE MILL PRODUCTS		
	2231	Broad Woven Fabrics Mills, Wool (Incl. Dyeing and Finishing)	Dyeing: Dyes, zinc compounds, chlorinated organics, waste water treatment sludges, solvents, still bottoms, arsenic, barium, cadmium, chromium, copper, iron, lead, manganese, mercury, phenols, acid, caustic soda, ammonia, biphenyl, magnesium.
	2251	Women's Full Length and Knee Length Hosiery Incl. dyeing & finishing	
	2258	Warp Knit Fabric Mills Incl. dyeing & finishing	Finishing: Polyvinyl acetate, melamine-formaldehyde resin, ures formaldehyde resin, acrylic resin, titanium dioxide duller, glyoxal resin.
	2259	Knitting Mills, N.E.C.	
	2261	Finishers of Broad Woven Fabrics of Cotton Incl. bleaching, dyeing, printing, chemical finishing, water repellancy, fire resistance.	Exhaust gas scrubbing: Mineral spirits, isopropanol, caustic.
	2262	Finishers of Broad Woven Fabrics of Man-Made Fiber and Silk Incl. bleaching, dyeing, and printing.	Same as above
	2269	Finishers of Textiles, N.E.C. Incl. dyeing, finishing, bleaching, printing.	Same as above
	2272	Tufted Carpets and Rugs Incl. dyeing & finishing	Same as above

Group No.	Industry No.		Waste Constituents
22		TEXTILE MILL PRODUCTS (cont'd)	
	2292	Lace Goods Incl. dyeing & finishing	Same as above
	2295	Costed Fabrics, Not Rubberized Incl. special finishing of textiles, such as varnishing snd waxing	Same as above
	2296	Tire Cord snd Fsbric For re-inforcing tires, belting, fuel cells	Same as above
23		APPAREL AND OTHER FINISHED PRODUCTS MADE FROM FABRICS AND SIMILAR MATERIALS	
	2392	Housefurnishings, Except Curtsins & Draperies Incl. pads, cushions, mattress pads, pillow cases	Cornstarch binder, lstex sludge
24		LUMBER AND WOOD PRODUCTS, EXCEPT FURNITURE	
	2491	Wood Preserving Incl. treating with creosote or other preservatives	Pentachlorophenol waste, creosote sludge, chromated copper arsenate (C.C.A.) waste water, phenol, heavy metals from slat type preservatives
25		FURNITURE AND FIXTURES	
	2511	Wood Household Furniture, Except Upholstered	Adhesive wastes, glues, cements lscquer, sesler, thinner
	2512	Wood Household Furniture, Upholstered	" " "
	2514	Metsl Household Furniture	" " "
	2517	Wood Television, Radio, Phonograph, and Sewing Machine Cabinets	" " "

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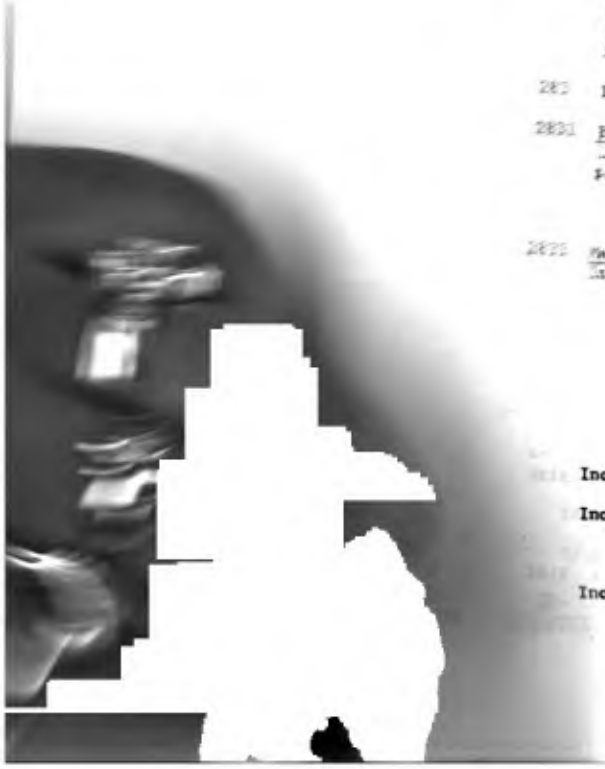
Group No.	Industry No.		Waste Constituents
25	2519	Household Furniture N.E.C.	" "
	2521	Wood Office Furniture	" "
	2531	Public Building and Related Furniture	" "
	2541	Wood Partitions, Shelving, Lockers, and Office and Store Fixtures	" "
27	PRINTING, PUBLISHING, AND ALLIED INDUSTRIES		
	2751	Commercial Printing, Letterpress & Screen	Hydrofluoric acid, sulfuric acid, inks, paints, solvents (acetone\
	2752	Commercial Printing, Lithographic	" "
28	CHEMICALS AND ALLIED PRODUCTS Predominantly chemical processes. 1- Basic chemicals, i.e. acids, alkalis, salts, and organic chemicals 2- Chemical products to be used in further manufacture, such as synthetic fibers, plastics, dry colors and pigments 3- Finished chemical products to be used for ultimate consumption, i.e. drugs, cosmetics, soaps, or to be used as materials and supplies in other industries, i.e. paints, fertilizers, explosives.		
	281	INDUSTRIAL INORGANIC CHEMICALS	
	2812	Alkalies and Chlorine	Brine, brine sludges, mercury cell process sludges, chromate waste sludges, phosphorus waste sludges, asbestos, heavy metals, chlorinated hydrocarbons

Group No.	Industry No.		Waste Constituents
28	2813	Industrial Gases Incl. acetylene, argon, carbon dioxide, dry ice, helium, hydrogen, neon, nitrous oxide, nitrogen, oxygen	Diborane, pentaborane-9, decaborane (Boron hydrides)
	2816	Inorganic Pigments Chrome, iron, lead, lithopone pigments, inorganic paint pigments, titanium pigments, zinc oxide	Chrome wastes, lead wastes, zinc wastes, sludges, cadmium pigments
	2819	Industrial Inorganic Chemicals N.F.C. Incl. inorganic salts of sodium (except sodium chloride), potassium, aluminum, calcium, chromium, magnesium, mercury, nickel, silver, tin. Inorganic compounds, i.e. alums, ammonia compounds, rare earth metals, elemental halogens, acids, phosphorus	$Ni(CO)_4$ Nickel carbonyl, other nickel salts, silicofluorides, silver halides, sodium compounds (inorganic) cyanides
	282	PLASTICS MATERIALS AND SYNTHETIC RESINS, SYNTHETIC RUBBER, SYNTHETIC AND OTHER MAN-MADE FIBERS, EXCEPT GLASS	
	2821	Plastics Materials, Synthetic Resins, and Nonvulcanizable Elastomers Incl. Acrylics, vinyls, nylon resins, phenolics, polyesters, polystyrene, urea resins, plasticizers	Catalyst Wastes Organic chlorides, acetaldehyde, cellulose esters, phenolic waste, still bottoms, waste solvents, vinyl chloride monomer heavy ends, methyl methacrylate heavy ends, plasticizers
	2822	Synthetic Rubber (Vulcanizable Elastomers) Polymerization & Copolymerization, incl. acrylate rubbers, acrylate-butadiene, butyl rubber, chloroprenes, polyethylenes, styrenes, urethanes, silicone rubbers	Solvents from silicone resins production, other solvents, catalyst wastes, hydrogen cyanide, phosgene, carbonyl chloride (poison gas)
	2823	Cellulosic Man-Made Fibers Incl. Acetate, cellulose, rayon, viscose fibers, (viacose or cuprammonium process)	Dithiocarbamate, ethylene diamine, heavy metals, cuprammonium waste, waste water treatment sludges



Group No.	Industry No.		
28	2824	Synthetic Organic Fibers, Except Cellulosic: Polymerization & Copolymerization of vinyl chloride, vinylidene chloride, esters, vinyl alcohols, acrylonitrile, ethylene; Incl. Acrylic, polyester, nylon, and rayon fibers	Solvents from washes, waste water treatment sludges
	283	DRUGS	
	2831	Biological Products Inc. Bacterial and viral vaccine, serums, toxoids	Aqueous ethanol waste from blood fractionation, antiviral vaccine, toxoids, serum, halogenated and non-halogenated solvents, lab-specimens & wastes.
	2833	Medicinal Chemicals & Botanical Products Inc. Organic medicinal chemicals	Halogenated solvents (ethylene dichloride) non-halogenated solvents (ketones aromatics, alcohols, acetonitrile) organic chemical residues, (terpenes, steroids, vitamins, trenquilizers) high inerts contaminated waste, activated carbon, filter media, filter cloths with heavy metals. Heavy metals(copper mercury, arsenic, selenium, zinc, chromium.
		Incl. Inorganic medicinal chemicals	Selenium
		Incl. Botanicals (plant alkaloids)	Halogenated wastes (methylene dichloride methylene chloride) alcohols, ketones, aromatics
		Incl. Antibiotics	Esters, alcohols, ketones, ethers.

Group No.	Industry No.		Waste Constituents
28	2834	Pharmaceutical Preparations (Ampules, tablets, capsules, vials, ointments, powders, solutions)	Acids, arsenic salts, acetone, MIBK, methylene dichloride, isopropyl ether, butanol, isoprppyl alcohol
	284	SOAP, DETERGENTS & CLEANING PREPARATIONS, PERFUMES, COSMETICS, & OTHER TOILET PREPARATIONS	
	2841	Soaps & Other Detergents except specialty Cleaners	Caustic soda, potash, phenol, ammonia, biphenyls, acetic acid.
	2842	Specialty Cleaning, Polishing, and Sanitation Preparations Incl. Ammonia, eye disinfectants, sodium hypochlorite, stain removers.	Solvent wastes, inorganic bases, acids, caustic wastes, alcohols, methylene chloride, tri-sodium phosphate
	2843	Surface Active Agents, Finishing Agents, Sulfonated Oils & Assistants Incl. Wetting agents, emulsifiers, and penetrants. Leather finishing agents, oils, sodium & calcium salts of sulfonated oils.	Fatty alcohols, ethoxylated compounds, alkaline salts, fatty acids, amino condensates
	2844	Perfumes, Cosmetics, and other Toilet Preparations Incl. Body powders, lotions, oils, creams, lipstick, shampoos, shaving preparation, tooth pastes	Detergent waste, surfactants, alcohols (methanol) acetone, flammables, lacquer thinner, triethanolamine, Ti O_2
	285	PAINTS, VARNISHES, LACQUERS ENAMELS & ALLLED PRODUCTS	
	2851	Paints, Varnishes, Lacquers, Enamels, & Allied Products Incl. Manufacturing paints, solven-thinned	Waste-water treatment sludges, solvents (ketones, esters, ethers, alcohols, hydrocarbons, aromatics) toxic pigments Ti O_2 sludge, chromium salts

Group No.	Industry No.		Waste Constituents
28	2851		
	Incl.	Paints, water-thinned	Waste-water treatment sludges, toxic pigments, lead, selenium, cyanide, and cadmium compounds.
	Incl.	Varnishes, lacquers Paint & varnish removers	Waste water treatment sludges, hazardous solvents, (ketones, esters, ethers alcohols, hydrocarbons, aromatics) toxic pigments.
	Incl.	Factory-applied Coatings	Hazardous solvents, (keytones, esters, ethers, alcohols, hydrocarbons, aromatics) toxic pigments.
	Incl.	Putty	Spoiled batches & spills, mercury, phenyl compounds
	286	INDUSTRIAL ORGANIC CHEMICALS Incl. Manufacture of: 1- Non-cyclic organic chemicals i.e. organic acids & their salts 2- Solvents, alcohols, esters, ethers, ketones carbon disulphide, chlorinated solvents (CCl_4, etc.) 3- Polyhydric alcohols (ethylene glycol,etc.) 4- Synthetic perfumes & flavoring materials saccharin, citral) 5- Rubber processing chemicals (accelerators & anti-oxidants) 6- Plasticizers 7- Synthetic tanning agent 8- Chemical war-fare gases 9- Esters, amines, etc. of polyhydric alcohols, fatty and other acids 10- Cyclic compounds 11- Cyclic dyes & organic pigments 12- Natural gums & wood chemicals	

Group No.	Industry No.		Waste Constituents
28	2865	Cyclic (coal tar) Crudes, & Cyclic Intermedistes, Dyes & Organic Pigments (lakes & toners) Incl. Manufscture of: 1- Derivstives of benzene, toluene, naphthalene, snthracene, pyridene, csrbszole 2- Synthetic organic dyes 3- Synthetic organic pigments 4- Cyclic crudes, i.e. light oils, coal tsr acids, creosote oil, naphthalene, tar	Plant effluents, trestment sludges, filter medis, filter cakes, wsste liquids, solids, by-products, spoiled bstches, spills, off-grade material. Still & tsnk bottoms, equipment cleanings, clesning solvents, heavy ends, lesd alkyls sludges, solids from solvent recovery, scrubber solutions, csdmium, selenium, pigment wastes. PCB's (polychlorinated biphenyls), slpha methyl styrene, nitrobenzene, liquid heavy ends, solid tails from chlormethane solvent recovery, epichlorohydrin still bottoms, toluene, diisocysnate centrifuge
	2869	Industrisl Organic Chemicals N.E.C. Inc. Manufscture of items (1) thru (12) in No.286 above	Same as above (wastes)
	287	ACRICULTURAL CHEMICALS Incl. Manufscture of nitrogen and phosphate fertilizers, pesticides, & other agricultural chemicsls	
	2873	Nitrogenous Fertilizers Incl. Ammonia, ammonium nitrate and sulphate fertilizers, nitric acid, nitrogen solutions, plsnt foods, urea	Acid wsste, fractionation column sludges
	2874	Phosphate Fertilizers, Phosphoric Acid	Phosphorus waste water
	2879	Pesticides and Agricultural Chemicals, N.E.C. Incl. Formulation & preparation of agricultural & house pesticides, control chemicals	Arsenic waste, copper, nicotine, poisons
		Insecticides	Chlorinated Hydrocarbons
		Fungicides	Pentachlorophenol, orgsnic mercury compounds, carbamates

Group No.	Industry No.	Waste Constituents
28	2879	
	Rodenticides	White or yellow phosphorus
	Herbicides, nicotinic salts	
	289 MISCELLANEOUS CHEMICAL PRODUCTS	
	2891 Adhesives & Sealants Incl. Mfg. of industrial & household glues, calking, sealants, and rubber cements, epoxy, pastes	Solvents equipment washings, sludges
	2892 Explosives Incl. Manufacture of cordite, detonating caps, dynamite, gunpowder, high explosives, nitroglycerin, RDX, tetryl, TNT, safety fuses	Lead, mercury compounds, (azides) explosive residues, washings, wastes
	2893 Printing Ink	Solvents, pigments, resins dryers, dyes, varnish
	2899 Chemical & Chemical Preparations, N.E.C. Incl. Manufacture of fatty acids, gelatin, essential oils, metal, oil and water-treating compounds, etching acids, anti-freeze, inorganic oxidizers, plating compounds, fire works, inks	Miscellaneous wastes, additives for plating, inorganic acids, cyanide, degreasers
29	PETROLEUM REFINING & RELATED INDUSTRIES	
	299 MISCELLANEOUS PRODUCTS OF PETROLEUM & COAL	
	2911 Petroleum Refining Production of gasoline, Kerosene, fuel oils, lubricants, jet fuels, naphtha, benzene, greases, transformer oils	Crude & leaded tank bottoms, still bottoms, heavy ends. Phenols, copper and lead bearing wastes. Cooling water sludge, heavy metals, waste oil sludge, tar, residues, filter media. Sulfuric acid sludges

Group No.	Industry No.		Waste Constituents
29	2992	Lubricating Oils & Greases Incl. Blending, compounding re-refining oils and greases. Brake fluid, cutting oils, transmission fluids	Oily wastes
	2999	Products of Petroleum & Coal, N.E.C. Incl. Msnufacture of briquettes, pscksged fuel, powdered fuel, coke	Wastes
30	RUBBER & MISCELLANEOUS PLASTICS PRODUCTS Incl. Manufacture from natural, synthetic, or reclaimed rubber, gutta percha, rubber tires, footwear, goods, flooring. Also incl. Msnufscture of tires, except recapping or retresding (SIC 7534) Incl. Molding of primary plastics		
	3011	Tires & Inner Tubes Incl. Manufacture casings, repair materials, tiring, continuous lengths	Devulcanization wastes: oils, $C_{10}H_{16}$ Dipentene, coal tar (nsphtha), petroleum resins. Solvents wastes, nitrobenzene, lead, organic chemicsls, bromine sludge
	3021	Rubber & Plastics Footwear Incl. Manufacture of waterproof fabric upper footwear, plastic boots, rubber boots, galoshes, overshoes	Same wsste as above
	3031	Reclaimed Rubber From Scrap tires, tubes, misc. rubber articles, by devulcsnized depolymerized products. These products are sold as raw material for rubber goods.	Same waste as above

Group No.	Industry No.		Waste Constituents
30	3041	Rubber & Plastics Hose & Belting Incl. Garden hose, air brake and air line hose, conveyor, elevator, & transmittion belting, vacuum cleaner hose, V-belts	Same as above
	3069	Fabricated Rubber Products N.E.C.	Same as above
	3079	Miscellaneous Plastics Products Incl. Molding primary plastics, & fabricating plastics products, or film, sheet, rod, nontextile monofilaments, vulcanized fibre, both from purchased resins or resins produced in same plant; air mattresses, battery cases, bottles, cups, dishes, floor & wall covering, foams, gutters, laminates, tubs, pails, panels, plastic pipe & fittings, vinyl & P/E film	Solvent wastes, chlorinated solvents, caustic, organic chemical wastes
31	LEATHER & LEATHER PRODUCTS		
	3111	Lesther Tanning & Finishing Incl. Tanning, currying, finishing of hides & skins. Chamois, coloring of leather, saddlery, sole upholstery leather	Chrometon liquor, tannic acid waste, chromic acid, chromate waste lead. Sludges, formic acid, resins, formaldehyde, dyes, hydrogensulfide gas, soda ash, salt cake, syenite, caustic. sodium sulfide, fat & tissue residue
	321	FLAT GLASS	
	3211	Flat Glass	
	323	GLASS PRODUCTS, MADE OF PURCHASED GLASS	

Group No.	Industry No.		Waste Constituents
	3231	Leaded Glass, Mirrors Mirrors made from purchased glass, framed or inframed, also for trucks and automobile	Mercury, lead, acids, detergent, ferric oxide
33	PRIMARY METAL INDUSTRIES		
	3312	Blast Furnaces, Steel Works, & Rolling and Finishing Mills	Acids, phenols, cyanides
	3313	Electrometallurgical Products Incl. Manufacture of ferrous & non-ferrous alloys by electrometallurgical or metallothermic processes, not made in blast furnaces.	Heavy metals
	3317	Steel Pipes & Tubes	Spent pickling liquors, sludge containing trichlorethylene
	333	PRIMARY SMELTING & REFINING OF NONFERROUS METALS	
	3331	Primary Smelting & Refining of Copper Smelting copper from ore, refining by electrolytic or other processes.	Slurries and sludges from electrolytic refiners. Cadmium, chromium, copper, mercury, manganese, nickel, lead, antimony, selenium, zinc.
	3332	Primary Smelting & Refining of Lead From ore, and refining by any process. Incl. Babbit metal, lead ingots.	Digestion residue, filter cake, copper, lead, zinc.
	3333	Primary Refining & Smelting of Zinc From ore, and refining by any process. Incl. Ingots, slabs, dust	Copper, lead, zinc residues

Group No.	Industry No.		Waste Constituents
33	3339	Primary Smelting & Refining of Nonferrous Metals, N.E.C. Incl. Antimony, bismuth, cadmium, chromium, cobalt refining. Magnessium, nickel, tungsten, silicon, tin	Wastes and residues
	3341	Precious Metal Compounds	Sulfuric acid & nitric acid
	3452	Bolts, Nuts, Screws, Rivets, & Washers	Plating sludge, tumbling pit, spent pickle, waste oil, acid
	347	COATING, ENGRAVING, AND ALLIED SERVICES	
	3471	Electroplating, Plating, Polishing Anodizing, and Coloring	
		Degressing	Chromic acid, trichloroethylene, carbon tetrachloride, halogenated hydrocarbons, oily waste, sulfuric acid, sodium metabisulfite, alkaline cleaners
		Plating	Arsenic, lead, cadmium, nickel, chromium, cyanides, copper, brass, tin, oily wastes, acids, alkalis. Sludges, muristic acid, pickling liquor
		Anodizing	Chromic acid, sulfuric acid, oily wastes
		Coloring	Dyes, ammonia, hydrochloric acid, barium sulfide, arsenic, lead acetate, nickel ammonium sulfate, sodium thiosulfate, potassium sulfate, copper sulfate
	3479	Coating, Engraving, and Allied Services, N.E.C. 1. Enameling, lacquering, varnishing. Incl. Plastic coating, silicon coating, rustproofing	Alkyd resins, pigments, binders, xylol, toluol, solvents, sludges

Group No.	Industry No.		Waste Constituents
3479	2.	Hot dip galvanizing of mlll sheets, bars, castings of iron and steel with aluminum, lead, or zinc, retinning	Acid and alkali bathc, zinc, aluminum, lead, tin aalts.
	3.	Engraving, chssing, etchine of jewelry, silverware, electropolishing	Etching, metal salts, sludges, glycolic acids, phosphoric, sulfuric, nitric acids.
348		ORDINANCE AND ACCESSORIES, EXCEPT VEHICLES AND GUIDED MISSILES	
3482		Small Arms Ammuntion Manufscture of ammunition for small arms having a bore of 30 mm and below. Incl. Percussion cpss, shells, blsnk and losded shot gun ammunition, wads.	Explosive wastes, mercury compounds
3483		Ammunition, Except for Small Arms, N.E.C. Manufscture of ammunition N.E.C., or loading ammunition over 30 mm. Incl. Bombs, mines topedoes, grenades, depth charges, chemical warfare projectiles.	Explosive wastes, flammable wastes
3489		Ordnance and Accessories, N.E.C. Incl. Anti-submarine projectors, anti-aircraft, naval, tank, coast, and field artillery having a bore over 30 mm. Bazookas, catapult guns, depth charges, flame throwers, howitzers.	Explosive waste, flammable wsste
354		METALWORKING MACHINERY AND EQUIPMENT	
3542		Machine Tools, Metal Forming Types	Ketones, aromatics, alcohol, toluene, sludges.
355		SPECIAL INDUSTRY MACHINERY, EXCEPT METALWORKING MACHINERY	

Group No.	Industry No.		Waste Constituents
28	2824	Synthetic Organic Fibers, Except Cellulosic Polymerication & Copolymerization of vinyl chloride, vinylidene chloride, esters, vinyl alcohols, acrylonitrile, ethylenes, amides. Incl. Acrylic, polyester, nylon, and saran fibers	Solvents, zinc wastes, waste water treatment sludges
	283	DRUGS	
	2831	Biological Products Incl. Bacterial and virus vaccine, serums, plasma	Aqueous ethanol waste from blood fractionation, antiviral vaccine, toxoids, serum, halogenated and non-halogenated solvents, lab-specimens & wastes.
	2833	Medicinal Chemicals & Botanical Products Incl. Organic medicinal chemicals	Halogenated solvents (ethylene dichloride) non-halogenated solvents (ketones aromatics, alcohols, acetonitrile) organic chemical residues, (terpenes, steroids, vitamins, tranquilizers) high inerts contaminated waste, activated carbon, filter media, filter cloths with heavy metals. Heavy metals(copper mercury, arsenic, selenium, zinc, chromium.
		Incl. Inorganic medicinal chemicals	Selenium
		Incl. Botanicals (plant alkaloids)	Halogenated wastes (ethylene dichloride methylene chloride) alcohols, ketones, aromatics
		Incl. Antibiotics	Esters, alcohols, ketones, ethers.

Group No.	Industry No.		Waste Constituents
28	2834	Pharmaceuticsl Preparstions (Ampules, tablets, capsules, vials, ointments, powders, solutions)	Acids, arsenic salts, acetone, MIBK, methylene dichloride,isooropyl ether,butanol, isopropyl alcohol
	284	SOAP, DETERGENTS & CLEANING PREPARATIONS, PERFUMES, COSMETICS, & OTHER TOILET PREPARATIONS	
	2841	Soaps & Other Detergents except soecialty Clesners	Caustic soda, potash, phenol, ammonia, biphenyls, acetic acid.
	2842	Specialty Clesning, Polishing, and Sanitation Preparations Incl. Ammonia, eye disinfectants, sodium hypochlorite, stain removers.	Solvent wastes, inorganic bases, acids, caustic wastes, alcohols, methylene chloride, tri-sodium phosphate
	2843	Surface Active Agents, Finishing Agents, Sulfonated Oils & Assistants Incl. Wetting agents, emulsifiers, and penetrants. Leather finishing agents, oils, sodium & calcium salts of sulfonated oils.	Fatty alcohols, ethoxylated compounds, alkaline salts, fatty acids, amino condensates
	2844	Perfumes, Cosmetics, and other Toilet Preparations Incl. Body powders, lotions, oils, creams, lipstick, shampoos, shaving preparation, tooth pastes	Detergent waste, surfactants, alcohols (methanol) acetone, flammables, lacquer thinner, triethanolamine, Ti O_2
	285	PAINTS, VARNISHES, LACQUERS ENAMELS & ALLLED PRODUCTS	
	2851	Paints, Varnishes, Lacquers, Ensmels, & Allied Products Incl. Manufacturing paints, solventhinned	Wsste-water treatment sludges, solvents (ketones, esters, ethers, alcohols, hydrocarbons, aromatics) toxic pigments Ti O_2 sludge, chromium salts

Group No.	Industry No.		Waste Constituents
28	2851		
	Incl.	Paints, water-thinned	Waste-water treatment sludges, toxic pigments, lead, selenium, cyanide, and cadmium compounds.
	Incl.	Varnishes, lacquers Paint & varnish removers	Waste water treatment sludges, hazardous solvents, (ketones, esters, ethers alcohols, hydrocarbons, aromatics) toxic pigments.
	Incl.	Factory-applied Coatings	Hazardous solvents, (keytones, esters, ethers, alcohols, hydrocarbons, aromatics) toxic pigments.
	Incl.	Putty	Spoiled batches & spills, mercury, phenyl compounds
	286	INDUSTRIAL ORGANIC CHEMICALS	
	Incl.	Manufacture of:	
		1- Non-cyclic organic chemicals i.e. organic acids & their salts	
		2- Solvents, alcohols, esters, ethers, ketones carbon disulphide, chlorinated solvents (CCl_4, etc.)	
		3- Polyhydric alcohols (ethylene glycol,etc.)	
		4- Synthetic perfumes & flavoring materials saccharin, citral)	
		5- Rubber processing chemicals (accelerators & anti-oxidants)	
		6- Plasticizers	
		7- Synthetic tanning agent	
		8- Chemical war-fare gases	
		9- Esters, amines, etc. of polyhydric alcohols, fatty and other acids	
		10- Cyclic compounds	
		11- Cyclic dyes & organic pigments	
		12- Natural gums & wood chemicals	

Group No.	Industry No.		Waste Constituents
28	2865	Cyclic (coal tar) Crudes, & Cyclic Intermediates, Dyes & Organic Pigments (lakes & toners) Incl. Manufacture of: 1- Derivatives of benzene, toluene, naphthalene, anthracene, pyridene, carbazole 2- Synthetic organic dyes 3- Synthetic organic pigments 4- Cyclic crudes, i.e. light oils, coal tar acids, creosote oil, naphthalene, tar	Plant effluents, treatment sludges, filter media, filter cakes, waste liquids, solids, by-products, spoiled batches, spills, off-grade material. Still & tank bottoms, equipment cleanings, cleaning solvents, heavy ends, lead alkyls sludges, solids from solvent recovery, scrubber solutions, cadmium, selenium, pigment wastes. PCB's (polychlorinated biphenyls), alpha methyl styrene, nitrobenzene, liquid heavy ends, solid tails from chloromethane solvent recovery, epichlorohydrin still bottoms, toluene, diisocyanate centrifuge
	2869	Industrial Organic Chemicals N.E.C. Inc. Manufacture of items (1) thru (12) in No.286 above	Same as above (wastes)
	287	AGRICULTURAL CHEMICALS Incl. Manufacture of nitrogen and phosphate fertilizers, pesticides, & other agricultural chemicals	
	2873	Nitrogenous Fertilizers Incl. Ammonia, ammonium nitrate and sulphate fertilizers, nitric acid, nitrogen solutions, plant foods, urea	Acid waste, fractionation column sludges
	2874	Phosphate Fertilizers, Phosphoric Acid	Phosphorus waste water
	2879	Pesticides and Agricultural Chemicals, N.E.C. Incl. Formulation & preparation of agricultural & house pesticides, control chemicals	Arsenic waste, copper, nicotine, poisons
		Insecticides	Chlorinated Hydrocarbons
		Fungicides	Pentachlorophenol, organic mercury compounds, carbamates

Group No.	Industry No.	Waste Constituents
28	2879	
	Rodenticides	White or yellow phosphorus
	Herbicides, nicotinic salts	
	289 MISCELLANEOUS CHEMICAL PRODUCTS	
	2891 Adhesives & Sealants Incl. Mfg. of industrial & household glues, calking, sealants, and rubber cements, epoxy, pastes	Solvents equipment washings, sludges
	2892 Explosives Incl. Manufacture of cordite, detonating caps, dynamite, gunpowder, high explosives, nitroglycerin, RDX, tetryl, TNT, safety fuses	Lead, mercury compounds, (azides) explosive residues, washings, wastes
	2893 Printing Ink	Solvents, pigments, resins dryers, dyes, varnish
	2899 Chemical & Chemical Preparations, N.E.C. Incl. Manufacture of fatty acids, gelatin, essential oils, metal, oil and water-treating compounds, etching acids, anti-freeze, inorganic oxidizers, plating compounds, fire works, inks	Miscellaneous wastes, additives for plating, inorganic acids, cyanide, degreasers
29	PETROLEUM REFINING & RELATED INDUSTRIES	
	299 MISCELLANEOUS PRODUCTS OF PETROLEUM & COAL	
	2911 Petroleum Refining Production of gasoline, Kerosene, fuel oils, lubricants, jet fuels, naphtha, benzene, greases, transformer oils	Crude & leaded tank bottoms, still bottoms, heavy ends. Phenols, copper and lead bearing wastes. Cooling water sludge, heavy metals, waste oil sludge, tar, residues, filter medis. Sulfuric acid sludges

Group No.	Industry No.		Waste Constituents
29	2992	Lubricating Oils & Greases Incl. Blending, compounding re-refining oils and greases. Brake fluid, cutting oils, transmission fluids	Oily wastes
	2999	Products of Petroleum & Coal, N.E.C. Incl. Manufacture of briquettes, packaged fuel, powdered fuel, coke	Wastes
30	RUBBER & MISCELLANEOUS PLASTICS PRODUCTS Incl. Manufacture from natural, synthetic, or reclaimed rubber, gutta percha, rubber tires, footwear, goods, flooring. Also incl. Manufacture of tires, except recapping or retreading (SIC 7534) Incl. Molding of primary plastics		
	3011	Tires & Inner Tubes Incl. Manufacture casings, repair materials, tiring, continuous lengths	Devulcanization wastes: oils, $C_{10}H_{16}$ Dipentene, coal tar (naphtha), petroleum resins. Solvents wastes, nitrobenzene, lead, organic chemicals, bromine sludge
	3021	Rubber & Plastics Footwear Incl. Manufacture of waterproof fabric upper footwear, plastic boots, rubber boots, galoshes, overshoes	Same waste as above
	3031	Reclaimed Rubber From Scrap tires, tubes, misc. rubber articles, by devulcanized depolymerized products. These products are sold as raw material for rubber goods.	Same waste as above

Group No.	Industry No.		Waste Constituents
30	3041	Rubber & Plastics Hose & Belting Incl. Garden hose, air brake and air line hose, conveyor, elevator, & transmittion belting, vacuum cleaner hose, V-belts	Same as above
	3069	Fabricated Rubber Products N.E.C.	Same as above
	3079	Miscellaneous Plastics Products Incl. Molding primary plastics, & fabricating plastics products, or film, sheet, rod, nontextile monofilaments, vulcanized fibre, both from purchased resins or resins produced in same plant; air mattresses, battery cases, bottles, cups, dishes, floor & wall covering, foams, gutters, laminates, tubs, pails, panels, plastic pipe & fittings, vinyl & P/E film	Solvent wastes, chlorinated solvents, caustic, organic chemical wastes
31	LEATHER & LEATHER PRODUCTS		
	3111	Leather Tanning & Finishing Incl. Tanning, currying, finishing of hides & skins. Chamois, coloring of leather, saddlery, sole upholstery leather	Chrometon liquor, tannic acid waste, chromic acid, chromate waste lead. Sludges, formic acid, resins, formaldehyde, dyes, hydrogensulfide gas, soda ash, salt cake, syenite, caustic. sodium sulfide, fat & tissue residue
	321	FLAT GLASS	
	3211	Flat Glass	
	323	GLASS PRODUCTS, MADE OF PURCHASED GLASS	

Group No.	Industry No.		Waste Constituents
	3231	Leaded Glass, Mirrors Mirrors made from purchased glass, framed or unframed, also for trucks and automobile	Mercury, lead, acids, detergent, ferric oxide
33	PRIMARY METAL INDUSTRIES		
	3312	Blast Furnaces, Steel Works, & Rolling and Finishing Mills	Acids, phenols, cyanides
	3313	Electrometallurgical Products Incl. Manufacture of ferrous & non-ferrous alloys by electrometallurgical or metallothermic processes, not made in blast furnaces.	Heavy metals
	3317	Steel Pipes & Tubes	Spent pickling liquors, sludge containing trichlorethylene
	333	PRIMARY SMELTING & REFINING OF NONFERROUS METALS	
	3331	Primary Smelting & Refining of Copper Smelting copper from ore, refining by electrolytic or other processes.	Slurries and sludges from electrolytic refiners. Cadmium, chromium, copper, mercury, manganese, nickel, lead, antimony, selenium, zinc.
	3332	Primary Smelting & Refining of Lead From ore, and refining by any process. Incl. Babbit metal, lead ingots.	Digestion residue, filter cake, copper, lead, zinc.
	3333	Primary Refining & Smelting of Zinc From ore, and refining by any process. Incl. Ingots, slabs, dust	Copper, lead, zinc residues

Group No.	Industry No.		Waste Constituents
33	3339	Primary Smelting & Refining of Nonferrous Metals, N.E.C. Incl. Antimony, bismuth, cadmium, chromium, cobalt refining. Magnessium, nickel, tungaten, silicon, tin	Wastes and residues
	3341	Precious Metal Compounds	Sulfuric acid & nitric acid
	3452	Bolts, Nuts, Screws, Rivets, & Washers	Plating sludge, tumbling pit, spent pickle, waste oil, acid
	347	COATING, ENGRAVING, AND ALLIED SERVICES	
	3471	Electroplating, Plating, Polishing Anodizing, and Coloring	
		Degressing	Chromic acid, trichloroethylene, carbon tetrachloride, halogenated hydrocarbons, oily waste, sulfuric acid, sodium metabisulfite, alkaline cleaners
		Plating	Arsenic, lead, cadmium, nickel, chromium, cyanides, copper, brass, tin, oily wastes, acids, alkalis. Sludges, muristic acid, pickling liquor
		Anodizing	Chromic acid, sulfuric acid, oily wastes
		Coloring	Dyes, ammonia, hydrochloric acid, barium sulfide, arsenic, lead acetate, nickel ammonium sulfate, sodium thiosulfate, potassium sulfate, copper sulfate
	3479	Coating, Engraving, and Allied Services, N.E.C. 1. Enameling, lacquering, varnishing. Incl. Plastic coating, silicon coating, rustproofing	Alkyd resins, pigments, binders, xylol, toluol, solvents, sludges

Group No.	Industry No.		Waste Constituents
3479	2.	Hot dip galvsnizing of mlll sheets, bars, castings of iron snd steel with aluminum, lead, or zinc, retinning	Acid and alkali bathc, zinc, aluminum, lead, tin salts.
	3.	Engraving, chasing, etchine of jewelry, silverware, electropolishing	Etching, metal salts, sludges, glycolic acids, phosphoric, sulfuric, nitric acids.
348		ORDINANCE AND ACCESSORIES, EXCEPT VEHICLES AND GUIDED MISSILES	
3482		Small Arms Ammuntion Manufacture of ammunition for small arms having a bore of 30 mm and below. Incl. Percussion cpas, shells, blank and loaded shot gun ammunition, wads.	Explosive wastes, mercury compounds
3483		Ammunition, Except for Small Arms, N.E.C. Manufacture of ammunition N.E.C., or losding ammunition over 30 mm. Incl. Bombs, mines topedoes, grenades, depth charges, chemical warfare projectiles.	Explosive wastes, flammable wastes
3489		Ordnance and Accessories, N.E.C. Incl. Anti-submarine projectors, anti-aircrsft, navsl, tsnk, coast, and field artillery having a bore over 30 mm. Bazookas, catapult guns, depth charges, flame throwers, howitzers.	Explosive waste, flammable waste
354		METALWORKING MACHINERY AND EQUIPMENT	
3542		Machine Tools, Metal Forming Types	Ketones, aromatics, alcohol, toluene, sludges.
355		SPECIAL INDUSTRY MACHINERY, EXCEPT METALWORKING MACHINERY	

Group No.	Industry No.		Waste Constituents
	3555	Printing Trades Machinery and Equipment Incl. Bookbinding, electrotyping machines photoengraving machines, printing presses, type: lead, steel, brass, copper faced, etc.	Degreasing chemicals, cleaning solvents, plating wastes, heavy metal wastes, n-propyl acetate, formaldehyde, isopropyl alcohol, perchloroethylene, acid etch.
	3559	Special Industry Machinery, N.E.C.	Same as above
	36	ELECTRICAL AND ELECTRONIC MACHINERY, EQUIPMENT, AND SUPPLIES	
	3613	Switchgear and Switchboard Apparatus Incl. Distribution boards and cutouts,	Plating wastes, acids, bases (printed circuits)
	3646	Commercial, Industrial, and Institutional Electric, Lighting Fixture	Phosphate compounds
	3674	Semiconductors and Related Devices Incl. Integrated circuits, modules	Arsenic, boric acid
	3679	Electronic Components, N.E.C. Incl. Circuit boards, printed circuits	Ammoniated alkaline etch, acetic acid, inorganic acids, oskite, halogenated and non-halogenated solvents, copper, tin, iron, lead waste, copperwastes, and silver wastes, coating wastes; chromic oxide, nickel oxide, lacquer thinner, naphtha ferricchloride.
	3691	Storage Batteries Incl. Lead batteries, carbon-zinc batteries	Treatment sludges, lead, lead compounds, zinc, mercury. Scrap batteries
	3621	Motors and Generators Except starting motors	Plating wastes, nickel, silver, cadmium, tin cyanide, cutting oils

Group No.	Industry No.		Waste Constituents
37		MOTOR VEHICLES AND MOTOR VEHICLE EQUIPMENT	
	3713	Truck and Bus Bodies Incl. Ambulance, bus, cabs, hearse, truck bodies	Grease and oil residues, caustic soda, degreasers
	3714	Motor Vehicle Parts and Accessories Incl. Bearings, brakes, bumpers, engine parts, radiators, axles, etc.	Same as above, plus chromic, sulfuric acids, caustic (chroming)
	381	ENGINEERING, LABORATORY, SCIENTIFIC, AND RESEARCH INSTRUMENTS AND ASSOCIATED EQUIPMENT	
	3811	Engineering, Laboratory, Scientific, and Research Instruments and Associated Equipment	
	386	PHOTOGRAPHIC EQUIPMENT AND SUPPLIES	
	3861	Photographic Equipment and Supplies	
39		MISCELLANEOUS MANUFACTURING INDUSTRIES	
	3953	Marking Devices Incl. Rubber stamps, metal stamps, printing dyes, stencil machines, inking pads	Mineral spirits, cleaning solvents, ink wastes
	3961	Costume Jewelry and Costume Novelties, Except Precious Metals Incl. Artificial pearls	Lead oxide, propionic acid
	3993	Signs and Advertising Displays Incl. Manufacture of electrical, mechanical displays, neon signs, except engraved or etched	Xylol thinner, solvents

ATTACHMENT 3

DEFINITIONAL SUPPLEMENT TO N.J.A.C. 7:26-1.4

7:26-1.4 Container

Any package, can, bottle, bag, barrel, drum, tank or anything commonly known as a container.

Incompatible Waste

Any types of waste that when mixed or combined may result in an undesirable reaction.

Administration

The Solid Waste Administration within the Department of Environmental Protection.

Special Waste

Any waste or combination of wastes which pose a present or potential threat to human health, living organisms or the environment. It shall include waste material that is toxic, carcinogenic, corrosive, irritating or sensitizing, explosive or flammable. In order to determine whether waste is within the special waste classification, standards and lists issued by the Occupational Safety and Health Administration, the Department of Transportation, the United States Environmental Protection Agency, and the International Agency for Research on Cancer may be used. The Solid Waste Administration will establish and maintain a non-exclusive list of waste categories, types and streams which will provide guidance in determining what waste should be considered special waste. Pursuant to N.J.A.C. 7:26-2.13c, the following waste categories are not considered special waste: 10, 12, 13, 18, 23, 25, 27, 28, 72, 73 and 74.

Special Waste Facility

Any secure landfill, waste treatment facility, transfer station, or resource recovery facility which is authorized by the Administration or by the appropriate agency in another state to treat, recover, store, or dispose of, or otherwise accept special waste.

Special Waste Facility Operator

Any person who operates a special waste facility.

Special Waste Generator

Producer or manufacturer of special waste or any person who stores such waste.

Special Waste Hauler

Any person registered by the Administration to collect and/or transport special waste.

Manifest

The special waste Manifest form issued by the Administration.

Special Waste Vehicle

Any vehicle registered by the Administration to transport special waste.

Manifest Supplement Number 1

The special waste Manifest Supplement Number 1 form issued by the Administration.

Manifest Supplement Number 2

The special waste Manifest Supplement Number 2 form issued by the Administration.

AMENDMENTS TO THE WASTE IOENTIFICATION AND
DEFINITIONAL PORTION OF N.J.A.C. 7:26-2.13
(Deletions are in Brackets and Amendments are Underlined)

7:26-2.13c Waste identification and definition of solids include the following:

1. Solid wastes; waste IO number and definitions:

i. 10 Municipal (household, commercial and institutional): Waste originating in the community consisting of household waste from private residences, commercial waste which originates in wholesale, retail or service establishments, such as, restaurants, stores, markets, theatres, hotels and warehouses, and institutional waste material originating in schools, hospitals, research institutions and public buildings. Laboratory waste and infectious wastes are not included in this category;

ii. 12 Dry sewage sludge: Sludge from a sewage treatment plant which has been digested and dewatered and does not require liquid handling equipment;

iii. 13 Bulky waste: Large items of waste material, such as, appliances, furniture, whole trees, branches, tree trunks and stumps. Also included are waste building materials and rubble resulting from construction, remodeling, repair and demolition operations on houses, commercial buildings, pavements and other structures. Discarded automobiles, trucks and trailers and large vehicle parts, and tires are included under this category;

iv. 17 Dry hazardous waste: Nonliquid waste materials which [are] inherently dangerous to handle or dispose of [pose a present or potential threat to human health, living organisms or the environment. Included in this category are waste materials which are toxic, corrosive, irritating or sensitizing, [biologically infectious,] explosive or flammable. Included are dry pesticides and any containers that were used to ship or store hazardous wastes;

v. 18 Dry nonhazardous chemical waste: Nonliquid material normally generated by or used in chemical, petrochemical, plastic, pharmaceutical, biochemical or microbiological manufacturing processes that is not included in the dry hazardous waste category;

vi. 23 Vegetative waste: Waste materials from farms, plant nurseries and greenhouses produced from the raising of plants. This waste includes such crop residues as plant stalks, hulls, leaves and tree wastes processed through a wood chipper;

vii. 25 Animal and food processing wastes: Processing waste materials generated in canneries, slaughterhouses, packing plants or similar industries. Also included are dead animals;

viii. 26 Oil spill cleanup wastes: Wastes generated during an oil spill cleanup operation which include but are not limited to oil-soaked sand and straw;

ix. 27 Nonchemical industrial waste: Solid waste materials resulting from the manufacturing industry. Specifically not included is waste material of a chemical nature which is normally generated by or used in chemical, petrochemical, plastic, pharmaceutical, biochemical or microbiological manufacturing processes.

x. 28 Infectious waste: Any waste originating from hospitals, clinics, nursing homes, bio-medical laboratories and other medical facilities, which waste has come in contact with persons having reportable communicable diseases as defined in Chapter II of the New Jersey State Sanitary Code or any revision thereof.

7:26-2.13d Waste identification and definition of liquids include the following:

1. Liquid wastes; waste ID Number and definitions:

i. 70 Waste oil and sludges: Automotive crank case drainings and other discarded oils from industrial, aviation and miscellaneous applications including waste oils and materials which are in the form of a highly concentrated slushy residue;

ii. 72 Bulk liquid and semiliquids: Liquid or a mixture consisting of solid matter suspended in a liquid media which is contained within, or is discharged from, any one vessel, tank or other container which has the capacity of 20 gallons or more. Included are bulk or semiliquids for which there is not a specific waste category;

iii. 73 Septic tank clean-out wastes: Pumpings from spetic tanks and cesspools. Not included are wastes from a sewage treatment plant;

iv. 74 Liquid sewage sludge: Liquid residue from a sewage treatment plant consisting of sewage solids combined with water and dissolved materials;

v. 76 Liquid hazardous waste: Free-flowing material which is inherently dangerous to handle or dispose of poses a present or potential threat to human health, living organisms, or the environment. Included in this category are waste materials which are toxic, corrosive, irritating or sensitizing, biologically infectious, explosive or flammable. This category shall include liquid pesticides;

vi. 77 Liquid chemical waste: Free-flowing material normally generated by or used in chemical, petrochemical, plastic, pharmaceutical, biochemical or microbiological manufacturing processes. This material is known to chemically react, hydrolize, ionize or decompose, is soluble, burns or oxides, or may react with any of the waste materials which are introduced into the landfill, or produces a foul odor. Not included is any liquid waste which qualifies as a liquid hazardous waste.

Deletions from N.J.A.C. 7:26-2

7:26-2.6(d) 1. Delete in its entirety.

7:26-2.6(d) 2. Delete in its entirety.

7:26-2.11(o)1. Delete in its entirety.

7:26-2.11(o)2. Delete in its entirety.

ADDITIONS TO N.J.A.C. 7:26-1 et seq

7:26-7 Labeling, Records and Requirements

-7.1 Vehicle Placard Requirements

-7.1a All vehicles containing special waste shall be conspicuously placarded by the special waste hauler. Such placarding shall meet the requirements of the United States Department of Transportation for the transport of hazardous materials (49 CFR 170 et seq.).

-7.1b No special waste facility shall accept special waste unless the vehicle is properly placarded in accordance with this section.

-7.2 Container Requirements

-7.2a The special waste generator shall conspicuously and permanently paint or ink the appropriate manifest number on all special waste containers that are intended for shipment.

-7.2b The special waste generator shall insure that all containers used to transport special waste are in conformance with the construction type and labeling requirements of the United States Department of Transportation concerning hazardous material containerization (49 CFR 170 et seq.).

-7.2c No person shall remove any markings required by this section until said container has been emptied and cleaned in a manner specifically approved by the Administration.

-7.2d Any person who transfers or mixes special waste, while in transit, shall label the new container and mark it to reflect the proper Manifest number(s).

-7.2e No special waste facility shall accept special waste containers unless they are properly labeled and marked in accordance with this section, except as provided in Section 7.6 a 2.

-7.3 Special Waste Manifest Forms and Retention Requirements

-7.3a Special Waste Manifest Forms

For the purpose of these rules, the manifest forms and supplements shall be those supplied by the Administration.

-7.3b Special Waste Manifest Retention Requirements

All special waste generators, haulers and facility operators shall retain their copies of all manifest and supplement forms for three (3) calendar years. These records shall be available for inspection by the Administration at any time during normal working hours.

-7.4 Special Waste Generator Responsibilities

-7.4a Special Waste Manifest Requirements

Prior to the transportation of any special waste from the site of origin, the special waste generator shall:

1. Complete Section I of the Manifest form in quintuplicate, copies A through E.

2. Have the special waste hauler complete Section II of the Manifest form in quintuplicate, copies A through E.

3. Forward copy D to the Administration no later than the next business day.

4. Retain copy E.

-7.4b Special Waste Manifest Supplement Number 2

If the special waste is returned to the generator because it has been rejected by the designated special waste facility, the generator shall accept the special waste and complete Section III of the Manifest Supplement Number 2 in triplicate, copies K through M. The generator shall give copy M to the hauler returning the shipment, retain copy L and forward copy K to the Administration no later than the next business day.

-7.4c Reporting Requirements

1. The special waste generator shall submit to the Administration by January 20, April 20, July 20 and October 20 of each year, a summary of all Manifests issued during the preceding three (3) calendar months. The summary shall include the Manifest numbers and shall identify those shipments which were rejected in whole or in part by the special waste facility.

2. Any generator who stores special waste for more than (6) months, or who treats or disposes of special waste on site shall complete and submit to the Administration a quarterly report summarizing, by Manifest waste type, the method(s) of treatment and/or disposal utilized and the quantities of waste stored, treated and/or disposed. Said reports shall be submitted to the Administration by January 20, April 20, July 20 and October 20 of each year for the preceding three (3) calendar months.

-7.5 Special Waste Hauler Responsibilties

-7.5a General Requirements

1. The special waste hauler shall not accept any shipment of special waste unless he receives a Manifest and Section I of the Manifest has been completed by the special waste generator.

2. If the special waste hauler picks up special waste from more than one (1) generator in a single trip, a completed Manifest must be obtained from each generator and must accompany the shipment.

3. The special waste hauler shall inspect the special waste and shall not accept it from a generator or from another hauler if the special waste is not of the quantity set forth in the Manifest, and/or if the waste is in containers that are not labeled as set forth in section 7:26-7.2a.

4. The special waste hauler shall not accept for transportation special waste which, to the best of his knowledge, does not fit the description on the Manifest.

-7.5b Special Waste Manifest Requirements

The special waste haulers shall:

1. Complete Section II of the Manifest in quintuplicate, copies A through E, at the time of collection from the special waste generator.

2. If the special waste is picked up from an out-of-state special waste generator, have Section I of the Manifest completed in quintuplicate, copies A through E by the special waste generator, and forward copy D to the Administration by the next business day.

3. Complete Section III of the Manifest in triplicate, copies A through C, at the time of delivery to the special waste facility.

4. Retain copy C after it has been completed by the special waste facility operator.

5. If the special waste is delivered to an out-of-state special waste facility, have Sections IV and V of the Manifest completed in triplicate, copies A through C, by the special waste facility operator, and forward copy A to the Administration by the next business day.

-7.5c Special Waste Manifest Supplement Number I

1. If a special waste shipment is transferred to a different vehicle, operated by the same hauler, prior to delivery, the hauler shall complete Sections I and II of Supplement Number 1 in quadruplicate, copies F, G, H and J.

2. If a special waste shipment is transferred to a second hauler, the first hauler shall complete Sections I and II of Supplement Number I in quadruplicate, copies F, G, H and J. The first hauler shall obtain the completed certification of the second hauler in Section III of Supplement No. 1 and shall retain Copy J of the Supplement.

3. The hauler delivering the special waste to the special waste facility shall give copies F and G of Supplement No. I to the facility operator and shall retain copy H.

-7.5d Special Waste Manifest Supplement Number 2

1. If the facility operator rejects a shipment of special waste prior to unloading, the hauler shall return the shipment to the generator. The hauler shall obtain copies K through M of Supplement Number 2 from the facility operator after the operator has completed Section I and the hauler has dated and certified Section II. The hauler shall give copies K through M of Supplement Number 2 to the original generator. The hauler shall receive and retain copy M of Supplement Number 2 after the generator has completed Section III.

2. The special waste hauler who transports rejected special waste must placard or replacard the containers and/or vehicle, if necessary, to accurately identify the hazard of the rejected waste.

-7.6 Special Waste Facility Operator Responsibilities

-7.6a General Requirements

1. Except as hereinafter provided, the facility operator shall only accept special waste shipments which are properly labeled and marked in accordance with these rules and which are accompanied by a properly completed Manifest.

2. The facility operator may accept a special waste which appears to be other than the quantity of waste type described in the Manifest, provided the facility is authorized to accept such waste. The facility operator shall notify the Administration in writing of such a Manifest discrepancy within one week describing the nature of the discrepancy and the arrangements made for the disposition of the waste.

3. If after acceptance of the special waste delivery, the facility operator determines that the waste is not as described in the Manifest, he shall notify the Administration in writing within one week of said determination, describing the nature of the discrepancy and the arrangements made for the disposition of the waste.

-7.6b Special Waste Manifest Requirements

The special waste facility operators shall:

1. Complete Sections IV and V of the Manifest in triplicate, copies A through C at the time of receipt.

2. Return copy C of the completed Manifest to the hauler.

3. Forward copy A of the completed Manifest to the Administration by the next business day after receipt of the Special Waste.

4. Retain Copy B.

-7.6c Special Waste Manifest Supplement Number I

If Supplement Number I is being used, the facility operator shall retain copy G of Supplement Number I and shall attach copy F of the Supplement to copy A of the Manifest and forward both to the Administration by the next business day.

-7.6d Special Waste Manifest Supplement Number 2

If a special waste shipment is to be returned to its generator, the facility operator shall complete Section I of Supplement No. 2 in quadruplicate, copies K through N, and retain copy N after Section II has been completed by the hauler. If the special waste is to be shipped to any location other than that of the original generator, the waste shall be accompanied by a new Manifest initiated by the facility operator.

-7.6e Reporting Requirements

By January 20, April 20, July 20 and October 20 of each year, the special waste facility operator shall submit to the Administration the following reports concerning special waste received during the preceding three (3) calendar months.

1. A summary of all Manifest numbers for all special waste received, identifying those shipments which were rejected, in whole or in part and identifying those shipments where a discrepancy occurred.

2. For each type of special waste accepted, as indicated in Section I of the Manifest, a report of the total quantity received and the quantities consigned to each treatment, recovery or disposal process used. The report shall include the quantities of each waste type placed into storage and removed from storage during the reporting period.

3. For each treatment or recovery process utilized, a report of the total quantity of waste processed, the total quantity of residue resulting from the process, the method of disposal of the residue, and the amount of material recovered.

-7.7 Penalty Provisions

-7.7a Any person who fails to comply with provisions of these regulations or consigns for shipment, handles, stores or disposes of special waste in a manner inconsistent with these regulations shall be subject to penalties pursuant to N.J.S.A. 13:1E-1 et seq.

-7.7b Any generator, hauler, facility operator or any other person who discharges or is responsible for discharge of special wastes on the land or in the waters of the State of New Jersey or at any place other than an approved special waste facility shall be subject to penalties pursuant to N.J.S.A. 58:10A-1 et seq.

-7.8 Effective Date

These regulations shall take effect on May 1, 1978.

INSTRUCTIONS

Section I. Special Waste Generator

SECTIONS I AND II MUST BE COMPLETED AND SIGNED BEFDRE THE WASTE CAN BE SHIPPED.

I. The Generator shall complete SectionI as follows:

- Enter your assigned Plant Identification Number (Air Pollution Plant Number or one given by the Administration).
- Enter the date the waste was picked up by the special waste hauler.
- Enter your company name and the address of the Plant which generated the special waste.
- State the name and address of Special Waste Hauler and of the Special Waste Facility to which the special waste is to be transported.
- On the line labeled "Handling Instructions" give any instructions necessary for the safe handling of the waste.
- Select the waste type which best describes each special waste to be shipped. If the waste does not fall within any of the indicated types, enter an appropriate description of the waste within the section marked "Dther".
- Should the special waste contain any of the following contaminants, list each waste stream separately under "Other" indicating the contaminant and total quantity:

  (1) 2,4,5 - T
  (2) Trichlorophenol
  (3) Pentachlorophenol
  (4) Hexachlorophene

- If the waste is in containers, enter in the column labeled "containers", the number of containers for each waste type being shipped.
- In the column labeled "Physical State" use one of the following letter codes which best describe each waste type being shipped.

  S - Solid M - Mixture (Liquid-Solid, Sludge)
  L - Liquid V - Gas

- In the column labeled "Hazardous ID", use one of the following letter codes to identify the waste hazard for each waste type being shipped. (If the waste contains any of the substances designated by the Occupational Safety and Health Administration (OSHA) as carcinogens, use letter Code "M" regardless of other hazards associated with the waste.

F - Flammable	E - Explosive	Z - Generates Pressure
C - Corrosive	I - Irritant	T - Toxic
A - Reacts Violently with Air	W - Reacts Violently with water	M - Mutagenic, Teratogenic, Carcinogenic

- In the column labeled "Total Quantity" enter the total amount of each waste type being shipped. After the number use P if the amount is stated in pounds or G if the amount is stated in gallons.

- Sign and date certification.

2. Obtain certification of collector-hauler in Section II.

3. Retain copy E of the Manifest. Forward copy "D" to the Solid Waste Administration by the next business day.

Sections II and III Special Waste Hauler

- Section II shall be completed by the hauler at the time of pick-up from the Soecial Waste generator.

- Enter the vehicle license plate number and the state in which the vehicle is registered.

- Sign and date Section II upon receipt of the Special Waste from the Generator designated in Section I, and return copies D and E to the generator.

- Section III shall be completed by the hauler at the time of delivery to the facility.

- Enter the vehicle license plate number and the state in which the vehicle is registered.

- Sign and date Section III upon delivery of the Special Waste to the facility designated in Section I.

- If the hauler named in Section I transfers the waste to a different vehicle, or to another hauler, he shall complete Supplement Number I which shall be attached to the Manifest.

- The hauler shall retain copy "C" of the Manifest after Section IV and if appropriate Section V, of the Manifest has been completed and signed by the facility operator.

- If the shipment is rejected by the facility, the hauler is responsible for returning the shipment to the generator, and for receiving a completed copy "M" of Supplement Number 2 from the generator.

- If special waste is picked up from an out-of-state generator, it is the hauler's responsibility to have Section I completed by the generator and forward copy "D" to the Administration. If the special waste is taken to an out-of-state facility, it is the responsibility of the hauler to have Section IV, and Section V if appropriate, completed by the facility operator and to forward the completed Section A to the Administration.

Sections IV and V Special Waste Facility Operator

- The Facility operator shall complete Sections IV of the Manifest at the time of receipt of the shipment, and shall give copy "C" of the completed Manifest to the Hauler delivering the shipment.
- In Section IV, enter the facility name and address.
- Enter the N.J.S.W.A. facility registration number on the line designated "Registration Number".
- Enter the date the waste was received.
- If the waste is accepted by the Facility, check the block entitled "Accepted". (If, after the waste is received and accepted, the Facility determines to ship the waste to another location other than the generator, the Facility Operator must initiate a new Manifest as the Special Waste Generator).
- If the shipment is rejected in whole or part check the block entitled "Rejected" and complete Section V of the Manifest. For each waste type rejected indicate the quantity in Section V. The operator shall initiate a Supplement Number 2.
- All of Section IV must be completed, and the certification signed and dated, prior to giving copy "C" of the Manifest to the hauler.
- Retain completed copy "B" and forward completed copy "A" to the Administration by the next business day.
- If the waste is accepted by the facility operator, and if after the acceptance he decides to reject the waste and send it to the generator, the operator shall initiate Supplemental Number 2.

If there are any questions contact the Solid Waste Administration, 32 East Hanover Street, Trenton, New Jersey or call 609-292-9877.

INSTRUCTIONS

This form shall be completed by the Special Waste Hauler(s) when a shipment of Special Waste is transferred from one hauler to another, or from one vehicle to another.

Section I: First Special Waste Hauler - The Special Waste Hauler who has collected the Special Waste from the Special Waste Generator shall complete Section I of this Supplement.

- Enter your name and address
- Enter the state of registry and vehicle license plate number of the vehicle usad to collect the special waste from the Special Waste generator.
- Enter the original Manifest number.
- Enter tha name and address of the generator
- Enter the date of the transfer
- Enter the address where the transfer occurred
- Enter the new vehicle licensa plate number and state of registry
- Enter tha name and address of the new hauler (if a second hauler is involved)

Section II: First Special Waste Hauler - The hauler who has collected the waste from the Generator shall sign and date Section II. If the waste was not transferred to a second hauler, retain copy "J". After Sections I and II have been completed, discard copy "H", and give copies "F" and "G" to the Facility operator. If there is a second hauler retain copy "J" after the second hauler has completed Section III.

Section III: Second Special Waste Hauler - The hauler who receives wasta transferred from another hauler for dalivery to a Special Waste Facility must complete this Section.

- Enter your name and address
- Enter the new vehicle license plate number and state of registry
- Sign and data certification
- Give copy "J" to the first hauler, retain copy "H" and give copies "F" and "G" to tha Facility operator.

If there are any questions contact the Solid Waste Administration, 32 East Hanover Street, Trenton, New Jersey or call 609-292-9877.

INSTRUCTIONS

SECTION I MUST BE COMPLETED AND SIGNED BY THE SPECIAL WASTE FACILITY OPERATOR UPON REJECTION OF ANY SHIPMENT OF SPECIAL WASTE PRIOR TO RETURN OR RESHIPMENT BACK TO THE SPECIAL WASTE GENERATOR. MANIFEST SUPPLEMENT NO. 2 MUST ACCOMPANY THE SHIPMENT.

- Enter the name and address of your facility.
- Enter the original Manifest number.
- Enter the date of return Shipment of the rejected waste.
- Enter the name and address of the generator of the rejected waste.
- Enter tha name and address of the hauler returning the waste to the generator.
- Enter each type and quantity of waste being rejected using waste types on Manifest.
- Describe the specific reason for rejection.
- Sign and date certification.
- Retain copy "M" after Sactions I and II have been completed and give copies K through M to the hauler.

Section II To be Completed by the Special Waste Hauler

- Sign and date certification
- Enter your vehicle licensa plate number and state of registry
- Give copies K, L and M to tha Generator.
- Obtain copy M from the Generator after Section III has been completed.

Section III To be Completed and Signed by the Special Waste Generator Immediately Upon Receipt of any Shipment of Special Waste which has been rejected.

- Enter your name and address
- Sign and date certification
- Retain copy "L"
- Giva copy "M" to tha hauler after Sections I, II and III hava been completed
- Forward copy "K" to the Administration by the next business day after Sections I, II and III have been completed

If there are any questions contact the Solid Waste Administration, 32 East Hanover Street, Trenton, New Jersey or call 609-292-9877.

DEPARTMENT OF ENVIRONMENTAL PROTECTION
SOLID WASTE ADMINISTRATION

SPECIAL WASTE MANIFEST SUPPLEMENT NO. 1

TO BE COMPLETED BY THE SPECIAL WASTE HAULER WHO HAS COLLECTED SPECIAL WASTE FROM A SPECIAL WASTE GENERATOR AND IS TRANSFERRING THAT SHIPMENT TO A DIFFERENT HAULER AND/OR VEHICLE

SECTION I
TO BE COMPLETED BY THE FIRST SPECIAL WASTE HAULER

Hauler Name _____ Address _____

Original Vehicle License Plate Number State ☐☐ Number ☐☐☐☐☐☐ Manifest Number _____

Name of Generator _____ Address _____

Date of Transfer _____ Address of Transfer Site _____

New Vehicle License Plate Number State ☐☐ Number ☐☐☐☐☐☐

New Hauler
Name (if appropriate) _____ Address _____

SECTION II
TO BE COMPLETED BY THE FIRST SPECIAL WASTE HAULER

I certify that the information in Section I is accurate.

Date _____ Signature _____

SECTION III
SECOND SPECIAL WASTE HAULER
COMPLETE ONLY WHEN WASTE IS TRANSFERRED FROM ONE HAULER TO ANOTHER

New Hauler Name _____ Address _____

New Vehicle License Plate Number State ☐☐ Number ☐☐☐☐☐☐

I certify that the described quantity of material (s) listed in the Manifest identified in Section I was received by me from the hauler identified in Section I above.

Date _____ Signature _____

DEPARTMENT OF ENVIRONMENTAL PROTECTION
SOLID WASTE ADMINISTRATION
SPECIAL WASTE MANIFEST SUPPLEMENT NO. 2

SECTION I
TO BE COMPLETED BY THE SPECIAL WASTE FACILITY OPERATOR AFTER REJECTION OF A SPECIAL WASTE SHIPMENT

Facility Name _____ Address _____

Original Manifest Number _____ Rejected Shipment Date _____

Generator Name _____ Address _____

Name of Hauler Returning Waste to The Generator _____ Address _____

Rejected Special Waste	Type	Quantity
	_____	_____
	_____	_____
	_____	_____
	_____	_____

Reason for Rejection _____

I certify that the above information is accurate.

Date _____ Signature and Title _____

SECTION II
TO BE COMPLETED BY THE SPECIAL WASTE HAULER

I certify that the described quantity of material (s) listed in Section I was received by me for return to the Special Waste Generator named above.

Date _____ Signature _____ Vehicle License Plate Number State ☐☐ Number ☐☐☐☐☐☐

SECTION III
TO BE COMPLETED BY THE SPECIAL WASTE GENERATOR UPON RECEIPT OF A SPECIAL WASTE SHIPMENT WHICH HAS BEEN REJECTED

Generator Name _____ Address _____

I certify that the rejected special waste described in Section I, above, was received and accepted by me.

Date _____ Signature and Title _____

Form WWF-041
3/88 S

DEPARTMENT OF ENVIRONMENTAL PROTECTION
SOLID WASTE ADMINISTRATION

SPECIAL WASTE MANIFEST A 1 1 0 0 0

SECTION I TO BE COMPLETED BY THE SPECIAL WASTE GENERATOR

Plant Identification Number ____ Pick-Up Date ____ MO. ____ DAY ____ YR.
Company Name ____
Pick-Up Address ____
Name of Hauler ____ Address ____
Name of Facility ____ Address ____

Handling Instructions: ____

Waste Type	Number of Containers	Physical State	Hazard ID.	Total Quantity (Identify units in pounds or gallons use P for pounds and G for gallons)	Pounds or Gallons	SECTION V TO BE COMPLETED BY THE SPECIAL WASTE FACILITY OPERATOR: Rejected Amount
1. Acid Solution						
2. Alkaline Solution						
3. Arsenic Residues						
4. Catalyst Residues						
5. Cyanide Residues						
6. Chlorinated Dioxin, Furan Residues						
7. Etching, Pickling, & Plating Residue						
8. Explosive Residue						
9. Filter Clays, Filter Aids						
10. Ester, Alcohol, Ether, Ketone, Glycol Residues						
11. Heavy Metal Residue						
12. Organic and Heavy Metal Residue Mixture						
13. Latex Residue						
14. Peroxide						
15. Oil and Oil Sludges, Emulsions						
16. Paint and Pigment Residues						
17. Pesticides						
18. Pharmaceutical Wastes (Drugs, etc.)						
19. Lacrimators, Amines, Mercaptans, Amide						
20. Plasticizer, Resin, Monomer, Elastomer Residues						
21. PCB/PBB Contaminated Materials						
22. Solvent, Halogenated Organic						
23. Solvent, Mixed						
24. Still Bottoms						
25. Radioactive Residue						
26. Tetraethyl Lead Residues						
Other (See Instructions)						
27. ____						
28. ____						
29. ____						
30. ____						

I certify that the above information is correct to the best of my knowledge.
Date ____ Signature and Title ____

SECTION II TO BE COMPLETED BY THE SPECIAL WASTE HAULER

I certify that the described quantity of material (s) listed in Section I was collected by me. State ____ Number ____
Date ____ Signature ____ Vehicle License Plate Number ____

SECTION III TO BE COMPLETED BY THE SPECIAL WASTE HAULER

Name of Hauler ____ Address ____
I certify that the described quantity of material (s) listed in Section I was hauled by me to the Special Waste Facility named in Section I
Date ____ Signature ____ Vehicle License Plate Number ____

SECTION IV TO BE COMPLETED BY THE SPECIAL WASTE FACILITY

Name of Facility ____ Address ____
Registration Number ____ Date Waste Received ____ Accepted ____ Rejected
I certify that the hauler stated above delivered the waste described in Section I to this Facility.

Date ____ Signature and Title ____

GENERATOR COPY

let's protect our earth

NEW JERSEY DEPARTMENT OF
ENVIRONMENTAL PROTECTION
P.O. BOX 1390 TRENTON, N.J. 08625
609-292-2994

NEWS

Rocco D. Ricci, Commissioner
Wes Denmen, Public Information Officer

(STATEWIDE) ATTACHMENT 4
No. 78/125

Immediate release:
January 5, 1978

Logan Township (Gloucester County)
OEP'S FINAL REPORT SHOWS NO
CONTAMINATION FROM ROLLINS FIRE

BRIDGEPORT--A team of New Jersey Department of Environmental Protection (OEP) scientists headed by Dr. Glenn Paulson, assistant commissioner for science, today presented the final conclusions of an intensive effort to check drinking water and soil in the Logan Township area to see if the December 8th chemical fire at Rollins Environmental Services caused any substantial contamination.

"Preliminary results reported on December 23 suggested no problems," Paulson said, "but we continued our special efforts until we had a complete picture."

Highlights of the report include:

- 29 well water samples from both shallow and deep wells have been analyzed; none show PCB levels at or close to OEP's "action level" of 1 part per billion (ppb).

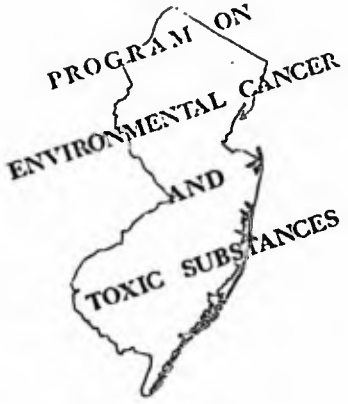
- 37 soil samples taken beneath the zone where the smoke cloud from the fire passed have also been analyzed for PCBs. The levels are all low (less than 1000 parts per billion or 1 part per million) and in the same range that DEP expects for this widespread environmental pollutant.

- 9 well water samples were analyzed for other hydrocarbon chemicals; 5 wells showed no detectable traces; 4 showed very small amounts, again typical of the levels found in ground water throughout the state.

- The study was conducted jointly by OEP, the state Department of Health and Rutgers University's Department of Environmental Sciences.

- A map showing the location of all the sampling sites was attached to the report.

Copies of the full report and map are available by writing to Dr. Glenn Paulson, New Jersey Department of Environmental Protection, P.O. Box 1390, Trenton 08625.



Results of the Sampling Program Initiated as the Result of the Fire at Rollins Environmental Services, Inc.

January 5, 1978

Rocco D. Ricci, P.E.
Commissioner

Dr. Glenn Paulson
Assistant Commissioner
(Science)

State of New Jersey

DEPARTMENT OF ENVIRONMENTAL PROTECTION
TRENTON 08625

OFFICE OF THE COMMISSIONER

MEMORANDUM

January 4, 1978

TO: Dr. Glenn Paulson, Assistant Commissioner

FROM: Dr. David Lipsky, Research Scientist and Dr. Peter Preuss, Special Assistant to the Commissioner, Program on Environmental Cancer and Toxic Substances

SUBJECT: Results of the Sampling Program Initiated as the Result of the Fire at Rollins Environmental Services, Inc.

As a result of the fire and explosion at the Rollins Environmental Services Company in Logan Township, DEP has carried out an investigation to determine if the vicinity of the Rollins plant might have been contaminated by chemical compounds released by the explosion. Since PCBs (polychlorinated biphenyls) are believed to have been one of the compounds that might have been carried off by the explosion, and since PCBs are also amenable to highly sensitive methods of analysis, this compound is being used by the DEP as our main "tracer or indicator" compound to detect environmental contamination in this area. It should be noted that PCBs are a ubiquitous compound and can be found in low concentrations throughout the New Jersey environment, including air, water, soils and living things. Therefore, for the purposes of this investigation, we have been looking for abnormally high levels of PCBs or for a pattern of PCB dispersal that would indicate that the community surrounding Rollins had been contaminated by toxic compounds released during the event.

Following the explosion at Rollins, DEP air pollution personnel obtained both the necessary meteorological and eye witness observations with which to develop a model describing the movement of the smoke plume emanating from the Rollins plant. Based

on the observed and predicted movement of the plume, 37 separate soil samples were collected at points downwind of the Rollins plant at the time of the explosion and fire. The collection points (see enclosed map) extended from the Rollins site generally eastward to Paulsboro. Thirty of the soil samples were analyzed by the Rutgers University Department of Environmental Sciences; 7 of them were analyzed by the N. J. Department of Health (DOH) laboratories. For quality control purposes, DOH also analyzed 8 soil samples that were from the same locations as certain samples analyzed by Rutgers. The results are shown in the enclosed appendix.

In addition, 29 potable water samples obtained from both private and water company wells (including both shallow and deep wells) have been analyzed to date. The water samples were obtained from locations surrounding the Rollins plant at a distance of 1/2 to 1 1/2 miles away (see map). Twenty-five of these samples were analyzed by DOH and 4 were analyzed by Rutgers. Included in the water analysis were 9 samples that were tested by either Rutgers or DOH for the presence of other volatile organic compounds such as trichloroethylene or chloroform. Three surface water samples have also been analyzed from locations on Raccoon Creek adjacent to or approximately 1000 feet downstream of the Rollins plant.

The data are summarized in the enclosed appendix; sampling locations can be found on the enclosed map. PCB analysis was performed by either the DOH laboratory or by Rutgers as indicated. The limit of sensitivity for the DOH water samples was 0.2 ppb (parts per billion) and for soils, 100 ppb. For PCBs in soil, Rutgers was able to obtain somewhat greater sensitivity in their analysis (down to about 1 ppb) and also relied upon mass spectrometry to specifically confirm the PCB peaks eluted off the gas chromatographic equipment.

Based on these findings, no evidence of significant environmental contamination was detected in the soil and water samples obtained from locations outside the plant perimeter. All of the PCB concentrations in these samples were in a range considered to be background levels. Of the 37 soil samples analyzed, only 6 had PCB concentrations greater than 100 ppb, but even these values are considered to be low background levels. Of the 6 samples, three of them (samples 125, 127, 123) were located within 2 1/2 miles of the plant; it is possible that the higher than average value of PCBs for this localized area might be attributed to fallout from the Rollins explosion. In any event, the PCB

concentrations found even at these close-in sites were quite low and suggest that there is no cause for concern that this area was contaminated by PCB.

We believe, however, that we do not yet have sufficient data for sample sites located within the actual plant perimeter and that we should do additional analysis at these sites to be on the safe side. We have also arranged that 3 sediment samples taken from Raccoon Creek be analyzed for PCB and other halogenated compounds and will report those results as soon as they are available.

D. L. P. W. P.

Appendix--Data Summary

Soils. 37 soil samples have been analyzed to date and include locations both near the Rollins plant as well as sites determined by DEP to be downwind of the plant at the time of the fire and explosion. Samples were analyzed by both Rutgers and DOH. Eight of the samples as indicated below were duplicate split samples analyzed by both laboratories as a check on the lab techniques used.

Group A. Samples located with approximately one mile of the Rollins plant on the downwind side (see map for exact location)

Sample #	Av. PCB (ppb) Rutgers	Av. PCB (ppb) DOH
1a		less than 100
2a		"
3a		"
7a		"
9a		"
10		"
20		"

Group B. Downwind samples located at distance greater than 1 mile

100	16	less than 100
101	67*	
102	22	
103	24	. 280
104	15	
105	18	
106	17	
107	10	
108	1	less than 100
109	33	
110	16	
111	47*	
112	12	less than 100
113	51	
114	25	less than 100
115	16	
116	19	less than 100
117	66*	
118	41*	
119	31	
120	173*	
121	27	
122	216*	
123	310*	
124	13	
125	196*	
126	12	
127	271*	less than 100
128	728*	227
130	46	

For soil samples 100-130, an asterisk next to the average PCB concentration indicates that the predominant PCB isomers were of the type found in Arochlor 1248. The absence of an asterisk indicates that the predominant PCB isomers were of the type found in Arochlor 1254.

For soil samples 103, 127, and 128, the average PCB concentration as determined by DOH and Rutgers, differed by up to several hundred parts per billion. At this low level of PCB concentration this degree of variability can be expected due to the minor differences in methodologies employed by Rutgers and DOH in their analytical work, the fact that these were not identical samples but duplicate samples (two different samples obtained from the same location), and the fact that Rutgers was able to confirm their results with mass spectrometry.

A. Potable water samples. 29 potable water samples were obtained from both private and water company wells and included shallow and deep wells. The wells surround the Rollins plant at a distance of 1/2 to 1 1/2 miles away. Of these samples, 25 were analyzed by DOH and 4 were analyzed by Rutgers. In addition to the PCB analysis, 9 samples were tested for the presence of volatile organic compounds.

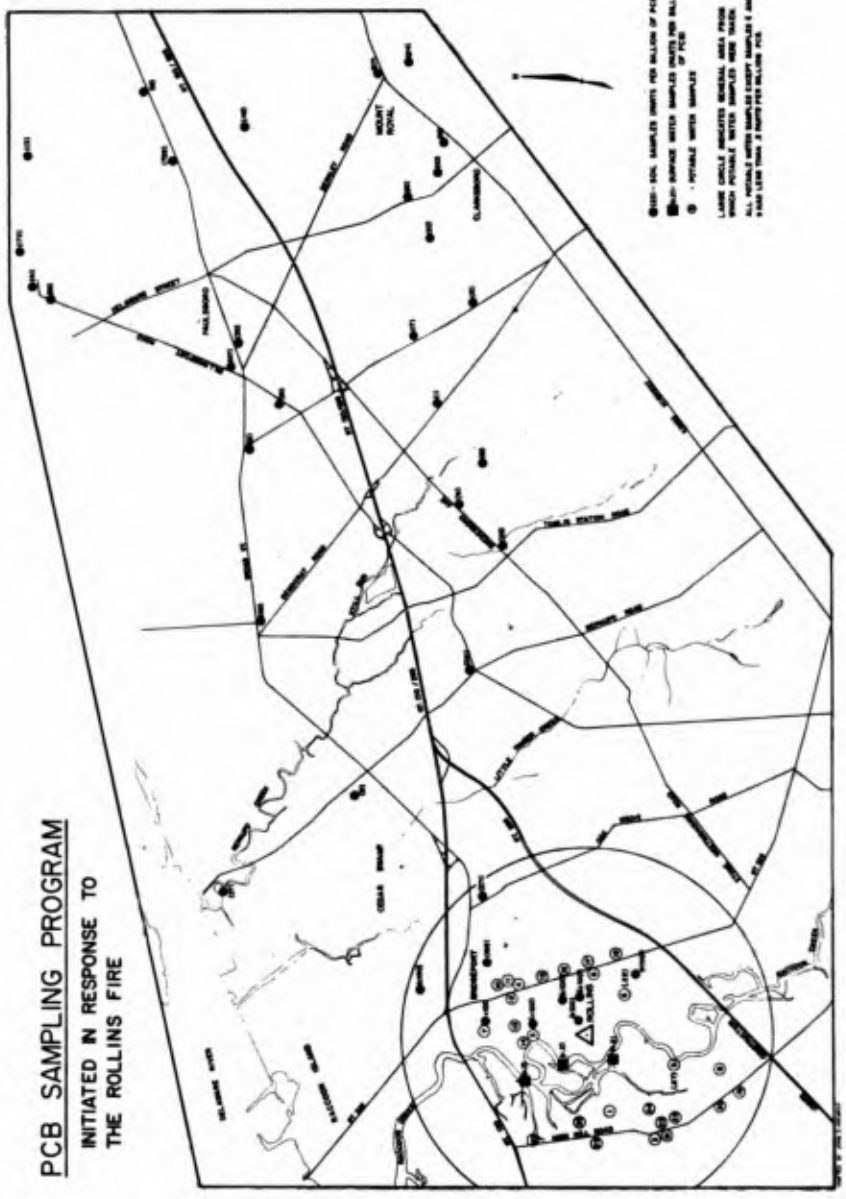
PCB Analysis

Analysis Performed By	Number of Samples	Average PCB (ppb)	Range of PCB (ppb)
Rutgers	4	0.19	0.14-0.22
DOH	25	less than 0.2	less than 0.2

Volatile Organic Analysis

Analysis Performed By	Number of Samples	Average Volatile Organics (ppb)	Range Volatile Organics
Rutgers	4	3.75	0.88-6.2
DOH	5	None detected	None detected

B. Three surface water samples were obtained from Raccoon Creek. These samples were located adjacent to or approximately 500 feet downstream of the Rollins plant. The analysis performed by DOH found less than 0.2 ppb of PCB in the water. Additional samples will be analyzed shortly.


PCB SAMPLING PROGRAM
INITIATED IN RESPONSE TO
THE ROLLINS FIRE

ATTACHMENT 5

STATE OF NEW JERSEY,
DEPARTMENT OF ENVIRONMENTAL PROTECTION,
SOLID WASTE ADMINISTRATION,
Trenton, N.J., December 16, 1977.

MR. EDWARD ASHBY,
Vice President,
Rollins Environmental Services, Inc.,
P.O. Box 221, Bridgeport, N.J.

DEAR MR. ASHBY: The Solid Waste Administration, in light of the explosion and resulting fire damage which took place on Thursday, December 8, 1977, at the Rollins facility located in Bridgeport, Logan Township, Gloucester County, does hereby ORDER Rollins Environmental Services, Inc. not to accept, treat or dispose of any incoming waste material until such time as this ORDER is rescinded. This ORDER does not preclude the proper disposition of accident-related material already on site.

As an aftermath to the explosion and fire, immediate on-site clean-up is required. Further, certain tests are now being conducted by the Department of Environmental Protection and other Federal and State agencies relating to the long term environmetal impact of the explosion, if any. These test results will assist the Department in determining the nature and extent of additional clean-up procedures, if any, that will be required by your company.

Furthermore, that portion of your facility subjected and possibly affected by the explosion will require structural review by a licensed Professional Engineer. A report certifying the soundness of the facility is therefore required by this office.

You are hereby notified that this ORDER will remain in effect until the above steps have been complied with and this Administration rescinds this ORDER. We will advise you of our (Federal and State) test results as soon as they are available.

In addition, any reconstruction of tanks and other facilities destroyed by the explosion and fire will be subject to a new engineering review and approval by this Administration. Plans are therefore required by this office. These shall be prepared by a licensed Professional Engineer, and shall include what preventative safety measures will be taken to minimize hazards, especially of a chain reaction type.

Very truly yours,

BEATRICE S. TYLUTKI,
Director, Solid Waste Administration.

* * *

ATTACHMENT 6

GLOUCESTER COUNTY HEARING ON REOPENING OF ROLLINS

Trenton—The state Department of Environmental Protection (DEP) will hold a public hearing on Saturday, March 11, in Bridgeport on an application of the Rollins chemical processing plant, located in that area, to reopen on an interim basis.

Dr. Glenn Paulson, assistant commissioner for science, said Rollins Environmental Services has recently submitted technical plans to DEP for review which propose resuming operation of the facility's storage and processing activities using existing and some new equipment until designs for permanent reconstruction are completed.

After consultation with Mayor John Wright of Logan Township, Dr. Paulson decided that a prompt hearing should be held during the early stages of DEP's review process to obtain the views of local residents and other interested individuals and organizations.

The hearing will begin at 10 a.m. in the Logan Township School Auditorium on Main Street in Bridgeport. Dr. Paulson will chair the hearing; the panel will consist of the members of DEP's special Rollins Task Force and others. Dr. Paulson and the task force will inspect the Rollins site that week prior to the hearing.

Copies of the Rollins proposal and plans are available for public review in the township clerk's office in the Logan Township Municipal Building, 73 Main

Street, Bridgeport, as well as DEP's air pollution field office on Larwin Road in Cherry Hill and Dr. Paulson's office in Room 803 of the Labor and Industry Building, Trenton.

For further information contact Dr. Ronald Buchanan, chief of DEP's Bureau of Hazardous and Chemical Wastes, at (609) 292-9877.

Mr. DiMuzio. Thank you. I am solicitor for Logan Township. For those of you who are not especially familiar with New Jersey if you go over that bridge that connects Pennsylvania to New Jersey, when you get into New Jersey, that is Logan Township.

The Rollins facility we are talking about is about 1½ or 2 miles away from that point.

I would like to indicate at the outset and to describe in a very cursory manner the general operation of a hazardous waste facility and the aftermath of a tragic explosion which occurred on December 8, 1977. It is respectfully suggested that an in-depth study of the facility, its operation before and after the tragic explosion, and the governmental response to the postexplosion situation would serve as a useful backdrop for analyzing the effectiveness and adequacy of proposed EPA hazardous waste disposal regulations.

I would further like to note most of this information was from newspaper accounts. I cannot vouch for the accuracy of the statements made or those attributed to the persons' names, but for the purpose of the memorandum, I think, it will be sufficiently trustworthy and a useful tool, again, serving as a backdrop.

Rollins Environmental Services, Inc., is a hazardous waste chemical treatment plant located in Logan Township, Gloucester County, N.J. The Rollins' operation includes three basic treatment systems: (a) A chemical treatment system; (b) a biological treatment system; and (c) incineration.

Rollins services industrial customers throughout the Delaware Valley and beyond. Samples from the industrial customers are received and analyzed by Rollins before Rollins determines it has the technological capability to treat and dispose of the chemical wastes and also to determine the cost to the customer for such services.

It has been stated that there are only three chemical waste treatment facilities similar to Rollins in the United States. It has been alleged, though uncorroborated at this time, that the Defense Department has sent wastes to Rollins. Furthermore, both DEP, New Jersey, and EPA have allegedly touted the Rollins' operation as one of the best in the country.

On Thursday, December 8, 1977, at approximately 2:15 p.m., within the facility, a storage tank exploded. According to Rollins, the fire probably started from a storage tank which contained 1,100 gallons of gasoline, alcohol, and petroleum derivatives. The explosion propelled the tanks 400 feet through the air and ignited the contents of three other tanks which included 45,000 gallons of PCB's, a suspected carcinogen, and chemicals used in the manufacture of lubricating oils.

According to newspaper accounts, Rollins estimates that 5 minutes after the explosion, tanks numbered three through seven ruptured, adding 16,000 gallons of chemicals to the flames. These tanks contained PCB's, alcohol, and liquids used in making plastic and petroleum products.

By this time the incinerator had been shut down and the Bridgeport Fire Co. had arrived which would later be assisted by six other fire companies. Within 10 minutes, all of Rollins' 24 employees were accounted for. They were evacuated 45 minutes later.

Within 1 hour, five of the construction workers were declared missing. Bodies of two of the men were soon discovered. The next day, three other bodies were found. One week later, a construction worker died after being hopitalized for severe burns. At least 45 police and fire personnel required hospital treatment after inhaling chemical fumes at the scene of the explosion and fire.

As a result of the explosion, officials feared possible contamination of the air, land and water. According to Betty Wilson, New Jersey DEP Deputy Commissioner, cancer causing "PCB's" were released into lagoons which are adjacent to Racoon Creek, a tidal stream which leads into the Delaware River.

A state of emergency was declared on December 10, 1977. Under the edict, all fire engines, ambulances, and other support vehicles at the fire site were to be washed down. Special precautions were to be taken in reference to clothing worn. The plant was quarantined December 10, 1977, and soil, water and firefighting equipment were tested for PCB contamination. Analyses were conducted by the State and Federal Environmental Agencies, State Department of Health, the Center for Disease Control in Atlanta, Rutger's University, Gollob Analytical Service of Berkley Heights, Rollins, and OSHA consultants in Salt Lake City.

Dr. Peter Preuss, Chief of Toxic Substances for New Jersey DEP, explained the reason a state of emergency was declared and renewed precautions against possible toxin contamination were undertaken. There was a theoretical possibility that PCB's, when burned under certain conditions, could form new toxins. For this reason, chemical samples were flown to Atlanta's Center for Disease Control.

It should be noted approximately 400 persons were exposed on the day of the explosion.

As a sidelight, three Logan Township police cars were specially "washed" and a bill in the amount of $900.00 was sent to Logan Township. The justification for the bill was the possibility that equipment, clothing, and the like used by personnel to treat the cars would possibly have to be destroyed.

I am happy to report that bill was subsequently revised, but I think it is indicative of the nature of the cleanup costs we may be talking about when we have hazards of this type which result in explosions of this nature.

On December 15, 1977, the health officials declared the area safe. On January 5, 1978, State officials announced the water and soil in the surrounding area had not been contaminated.

About 300,000 gallons of chemicals and firewater from the tank area were trucked to another storage area within Logan Township to be returned to the site for incineration only if the State allows Rollins to reopen the industrial waste disposal plant.

In January 1978, 5 million gallons of treated firewater was discharged into the Racoon Creek under Federal supervision. The State continues to monitor ground water for contamination.

The mud and rubble left by the blast was to be bulldozed into an on site plastic lined, electronically sealed landfill in February.

On March 1, 1978, it was reported that at least 24 of the 400 persons at the scene of the Rollins' explosion were still complaining about adverse effects from the fumes following the fatal blast. Complaints included headaches, sleepiness, throat irritations, and coughs. State health officials had monitored the health of persons exposed to the fumes but did not conduct any physical examinations of those affected by the blast.

Logan Township retained a toxicologist to investigate the possible health hazards created by the waste disposal plant operations both before and after the explosion. He recently alleged that the State was uncooperative during his investigation. Moreover, the investigation was cut short because of lack of funds.

The doctor also complained that the U.S. Government would not sponsor the township's efforts. He went to Washington personally only to be told by the National Cancer Institute that no funds were available for investigation.

The balance of my memorandum focuses on the December 8, 1977, explosion.

The Rollins' facility was constructed after Logan Township granted a variance for the plant in 1969. It is one of the few plants in the country that accepts almost any kind of industrial chemical waste and finds a means of disposal. It accepts chemical wastes which other industries cannot dispose of and either burns them or breaks them down to a series of chemical and biological agents.

The plant has long been a target of environmental complaints by local citizens since it opened in 1970. In July of 1977, the treatment facility was fined $400 by DEP after inspection indicated odors from the plant exceeded the company's property lines.

Local citizen groups have complained numerous times about noxious odors from the plant that caused irritation to eyes and throats as far back as 1974. In June of 1974, a nitrogen dioxide cloud hovered over the township reportedly causing skin and respiratory irritations to residents in the area. In September 1974, chemical fumes were blamed for additional irritations after the plant burned sulfur bearing compound known as mercanton.

During the summer of 1977, residents complained of fumes from a waste water basin holding 10 million gallons of chemical wastes. Apparently, high heat and humidity kept the fumes from dissipating. A temporary solution devised by Rollins was the installation of a floating plastic cap with an extensive venting system.

As early as January 1977, New Jersey DEP contacted EPA in Edison, N.J., to notify EPA there was a growing problem at the Rollins' site from full or overflowing lagoons. Certain lagoons were found to be of grave concern due to possible contamination, PCB, et cetera, from these lagoons which may migrate off site.

The Rollins' plant manager had explained to township officials that part of the problem was the severe winter of 1976-77 which had undermined the "trickle filter" and biological-chemical treatment system. Inability to treat wastes resulted in a backlog of chemicals stored in various lagoons and basins within the facility.

It should be noted that Rollins was granted a variance in 1969 by Logan Township on the representation that there was an adequate clay layer underneath the facility to prevent pollution of underground waters. Shortly after operations began, it has been reported that the operation contaminated both the shallow and deep aquifers underlying the property, thereby discounting the protective clay barrier. Rollins was placed under State order to treat the ground water contamination, but as late as October 14, 1975, a letter from DRBC to New Jersey DEP indicated the withdrawal program was not effective. It has been reported, however, that in August, 1976, the chief engineer of DRBC indicated Rollins was now complying with an agreement with DRBC in reference to withdrawal. However, no night monitoring nor surveillance was undertaken due to past problems. The latter concern was generated by complaints by residents that night time discharges into Racoon Creek, a tidal stream of the Delaware River, were occurring.

I think it is important in referring to some of those comments I have made to make a new comment about the proposed regulations. We do note that Rollins treats a good percentage of the chemicals on the east coast. I think when we talk about siting, we have to concern ourselves with two types of factors.

The first one is environmental health. We have to look at the site, the types of geology hydrology, whether it is adjacent vacancy onto the public schools, hospitals, to residents in general, to other commercial facilities.

We have to look at the air quality in the surrounding areas, wet lands and marshes, its adjacency to tidal streams, what impact, if there was an explosion, it will have on tidal streams, will it serve as a causeway to carry PCB's in the oyster beds of Delaware.

I had a real meeting with a doctor from the Shellfish Laboratories, one of the reasons he was there was the concern was PCB's and the oyster ban. I said, you are not here to worry about oysters. And he indicated no, it was not that at all, that the oyster is a prime basis or any known specie, and if you kill the species, you kill off 260 other species.

PCB contamination in the Hudson caused a ban on fishing in the Hudson, so we are looking at the seashore and maybe economic adversity as well as environmental.

I do not think the second aspect which is the concept of siting, which has been intimated as an area of inquiry. This morning, I have been looking at a public utility concept. What I am talking about is a situation in Logan Township. I will discount the current litigation. I am not commenting on the merits of the litigation, but the concept of what has occurred in New Jersey.

Rollins is not a public utility because it was declared exempt by the public utility commission in New Jersey. It was declared exempt for numerous reasons. One was the technological specialization. They did not accept public waste at their gate. They only have a right and should turn away waste which they cannot handle.

The public aspect—again, in that sense the public would have general types of wastes—Rollins would have a right to turn that away because it is keyed into analyzing wastes, that is specialized

wastes—the byproduct of technological industry that other waste disposal facilities cannot handle they have to analyze the waste to see if the technological facilities are adequate to treat that.

They have to compute, from a cost factor, how much it would cost the customers to take care of that. Public utilities are regulated at a rate. Rollins could not be regulated by a rate. They treat each one on a customer to customer basis.

There are regional implications of this. They are, if you are a public utility you have certain controls. You cannot shut down when you want to. The concept is you serve the public. You have to serve at the public's convenience and necessity, and therefore you have to get permission from the PU contract before you can close down.

You cannot turn away customers at the door. You must serve the customers based upon a tariff system. I have no answer in this area, but I am raising a very real problem and it is this: Due to the technological complexities of the waste industry, they are not geared into the current concepts of public utility law. It is very difficult.

Take a facility like Rollins. You have to accept this waste because it is very hazardous in New Jersey and you have to get rid of it. Second, in terms of utilities, they can set their fees. If we are going to talk in terms of regions, you have to talk in terms of obligations of facilities within a region to accept certain wastes.

If I may create an anology. Hospital care in this country is criticised because they claim each hospital wants to be a full service facility within itself. Let's take a metropolitan city which has 10 hospitals. Each one wants a cardiac care unit, each one wants its own intensive care unit. Each one wants its own pulmonary unit. The point is it is inefficient as costs in those areas have skyrockted. Thus, why can't one hospital be the cardiac center, another be the intensive care center, etc.

I think EPA, the Federal Government, and the States have to focus on this problem. Why cannot the Rollins Co., for example, be analyzed and determined to be the company that handles PCB's. Only, this is a hypothetical example for only reasons. Why cannot they be analyzed and the EPA create a region and do this in terms of computed sources of wastes.

They should be able to determine the sources of supplies of PCB's within a relevant geographic area.

Mr. FLORIO. Isn't that, by definition going to have to be a national definition?

Mr. DIMUZIO. I will not backtrack in the sense of need or local ingenuity in the establishment of those regions and facilities, but in terms of handling them on an effective regional basis, I think you have to address the problems. There are a couple of reasons, obviously, for handling it this way.

I believe, to be efficient, you have to operate at 100 percent. They do not have sufficient waste treatments, sufficient hazardous waste of the type they need to create a pro-blend to keep their incinerator, or whatever, running at 100 percent capacity.

It is more efficient to establish centers within a region that has the capabilities of handling specialized waste and strictly through the

utility concept to insure the generator of the waste would be obliged to send the supplies there. Obviously, it cuts down on the efficiency energy, talking about energy conservation.

Operating at 100 rather than 5 percent capacity is better. You should streamline transportation costs. By streamlining transportation costs and also transportation patterns, you should be able to reduce the travel time of those hazardous wastes.

When you have reduced the travel time, you have reduced the risk incident to hazardous transportation. I think you are going to have to confront the utility concept, and the requirements for the utility for properly analyzing and being qualified to handle this on a regional basis.

On site selection, I think it may be cost effective to offer some sort of incentive to local county governments to see if they would encourage siting of those facilities next to regional sewer treatment plants. I say that for the following reasons. Some of these treatment places have a base filter system associated with them.

Why not encourage the location of a hazardous waste facility which would be using biological or waste water chemical treatment systems instead of testing the MPD per channel, feeding affluents into a sewer authority system.

The people who are treating the waste have to make sure that the caliber of affluents will not interfere with the operation of the sewer treatment system. Second, a sewer treatment system would be officially inspected every day because they have means of detection of the caliber of the affluents to kill the bugs that are there, so they have inbred concern to make sure it is a good one.

People do not want their homes near sewer treatment plants. Therefore, the cost of property immediately adjacent to the facility is probably not that expensive. The Government should encourage, through a grant system, some other types of tax incentive or some way or another to purchase the land to offer the site. Then private industry could be asked to come through with tax incentives and build the plant.

But, again, I think it is the system of siting which tends to ameliorate the local concern to some extent and States give you the supervisory protection that I think you need in this industry.

In analyzing the hazardous waste facility, I think you have to look at various stages. Some of the stages that concern me most as an alternative for municipalities where one is located, the site selection is very important. In this regard I should mention, and it was mentioned this morning, about how you get the guidelines to coincide with other Federal laws. The question is where do we go first?

If you have a facility that is going to be subjected to four or five permit systems, this is a boot-strapping process. What many applicants will do is take the easiest mark first, get the permit from the agency which will have least concern and use that permit as a justification for, not coercing, but introducing other agencies they go before to grant this.

But another problem is one of logistics of the person. Somebody has to tell him where to go, first. If he gets back from a pickup, he

should not be wasting time and resources going somewhere else. He should not have to go in six different locations to get a permit. I do not think that is addressed in the guidelines.

In terms of the industry, itself, it is extremely important to have an adequately qualified person design the systems. I think the guidelines recommend having a geologist. Do not have an engineer design it. Let a person disciplined in that profession stand behind his system. I think that is important.

I will bring in the Rollins situation. I wonder if, in 1969, the geologist would come to the conclusion that an adequate clay barrier would prevent underground fusion. I am very concerned about people being there monitoring and inspecting the actual implementation. Knowing what goes into the ground and on top of the ground is extremely important.

My concern is based on a well-known fact. If you do not carefully monitor and supervise what goes on, and the plant commences operations and they find problems because things were not installed as intended or as planned, it is difficult for municipalities who have to suffer the adverse consequences of inadequate implementation to try to stop that plant in continued operation.

It is already there. It has an inbred right to perpetuate its competence. Then you start dealing with symptoms and adverse reactions as opposed to Stein implementation which puts a remedy to the problem to begin with.

The fourth stage is when the plant goes in to operation, the operation surveillance in reference to EPA guidelines. I am extremely concerned, again as a solicitor for a local municipality, as to the efficiency of the resources to have inspection of the site effectively enough to make certain the plant is operated as planned, as projected in its application. This is extremely expensive.

I question whether in some instances we need be funded on a local level. I think much of the problem in terms of local reaction they have no local people to say, we know things are going wrong with this operation; we keep calling the State. They call them, they come down 3 days later and explain why it does not smell.

We know it does not smell. If we had a task force of properly trained people to detect a violation then appropriate amounts could be exacted. You do not have the prophylactic effect. And by setting up a training program, you do not interfere with technological expertise that the State people must have to analyze and review.

I do not think any municipality would have on its staff adequate engineers, chemists, hydrologists or geologists to review indepth a plant, but it can have local people competent enough and trained in how it is to operate to be there every other day or on call and can be there within 15 or 20 minutes.

It is obvious it does not take that kind of specialized skill. I think that should be fostered by State and local governments.

The next step I am concerned about is the closing aspect. Again, this gets back to resources. If you do not put the money into this program you have nothing but a paper tiger, which means nothing in terms of real environmental production.

I am concerned about the postclosure security aspect. Once they have been closed down, how do you keep these performance bonds alive or escrow accounts alive? If you have authorized, for instance, an artificial liner—which have had a useful life in this country of 20 to 30 years—and you worked on a facility for 10 years that used that liner and you find that artificial liner is starting to go, how do you estimate the bonds for that type of situation. It is a very difficult situation, but it has to be addressed.

Once you have to deal with the experimental, you have inbred security problems. The outcome of that experimentation and the binding aspect is supposed to remedy that. How do you estimate that?

Again, it is more of a question of response than answer, but I think it has to be addressed.

I am also concerned, as a local official, about interim permits. I do not fully understand that temporary area. I am not too sure I understand what kind of application is needed before EPA can determine whether this facility only gets a temporary permit.

I am worried about temporary permits becoming long-term permits. I know there is a 4-year recorded limitation on it.

In New Jersey's experience in the 1970 Solid Waste Management Act as passed, this act required the registration of all people dealing with solid waste, et cetera, where blanket approval was given. More recently, in the last month or two, a suit was filed and the reason for the suit in part was they had never inspected, in the seven or eight years of existence of that law, about a third of the landfills in terms of environmental design. I do not have all the specifics of the litigation, but I think that is the general thrust of it, with blanket permits without any thorough review of those permits.

They have been in existence for 7 years and no one has gone back and looked at them. I think it is easy to throw stones. I do not think you can criticize the State agencies for not being a Lone Ranger if you do not supply him with a horse and take away his silver bullets.

In 1971 there were seven or eight inspectors in the State of New Jersey. If they were all supermen they could not have inspected the landfills in the State adequately. Again, I am focusing on the Federal Government and resources aspect, of their takeover by the States of the permit system.

You have to put money into it or else it is going to be nothing but a paper tiger. You are going to have suspicions on a local level of inadequacy and alleged incompetency of local officials. You have to make sure money is being spent in proper areas.

I had a few other comments, but I think I have spoken long enough.

Mr. FLORIO. Please feel free to have additional submissions for the record. The record will be kept open. At this point, should Mr. Rollins desire to submit anything for the record, it should be included in the record at this point. A appreciate, perhaps, the unusual circumstance of having three litigants in a current, pending litigation.

We are not attempting to address the merits of those or any other pending investigations.

You mentioned at the outset of your remarks, Dr. Paulson, you had accounted for 80 percent of the materials at the ultimate disposal site. The obvious question is where is the other 20 percent going? How come you have not accounted for that?

Dr. PAULSON. We do not know where the other 20 percent is going. We have some suspicions. Every time we catch an illegal dumper, we think we have found a bit more of that 20 percent. The effort, I should mention, in passing, is being conducted in cooperation with the U.S. Office of the Aging under the so-called Older Americans Program, and a joint EPA-Office of the Aging grant to us.

Mr. FLORIO. Are they street-walking?

Dr. PAULSON. These are people who are surveying by questionnaire and by phone. The survey was a first effort to get a rough picture of what was happening while we were developing the formal manifest system, which hopefully will nail down with precision the entire 100 percent.

Again, the manifest system will do what I said earlier, telling us where the wastes are going. There are ways to avoid it, but they are risky because the penalties are very stiff.

The first survey showed, not too surprisingly, that we could not account for all the waste volumes. We, therefore, had cause to go to the more formal manifest system. This system has not been welcomed by industry in New Jersey. If EPA imposes this element as a national requirement on chemical industry waste generators throughout the country, it will not be uniformly acclaimed either.

Mr. FLORIO. How do you intend to impose the manifest requirement on the producer if the producer is out of State? I would not think this State would have jurisdiction over the producer if the producer is out of the jurisdiction of the State.

Dr. PAULSON. I can let Dr. Buchanan give you more details on that. If a transporter, no matter where he gets wastes, enters the State, he then is subject to the manifest system and should himself prepare to document what he is carrying in the back of the truck.

Mr. FLORIO. It would call for a stiff penalty imposition effort on the part of the transporter, particularly to forget about it if they are dealing with out-of-State people who do not feel the need to initially come up with the manifest system.

Dr. PAULSON. I think your perception is correct. We do have the advantage in New Jersey that the access routes from out-of-State are relatively few in number. It is not like a totally landlocked State.

Mr. FLORIO. Pursuant to what are these prosecutions going with this illegal dumping? What State law is this authority under?

Dr. PAULSON. The DEP general criminal law, and also the recent Solid Waste Act of 1974.

Mr. FLORIO. I realize we have taken a lot of your time. We appreciate your valuable input to this serious problem. Your presence is needed to upgrade the progress of evaluating what such facilities as Rollins will do so as to provide for safety but also to provide for the realization that facilities are needed.

We have to talk about the system that supplies that. A decision will be made appropriately and facilities will be located wherever it is appropriate because the fact is, as you pointed out somewhat dramatically, there is a growth capacity for a necessary industry for the State and unless something is done we are going to have the other assorted problems that you made reference to.

I appreciate what has been done. We look forward to hearing from any of you here with regard to constructive suggestions as to how we can go about framing a legislative response, particularly to the siting aspect, because I do not think siting comes within the jurisdiction of this particular act, but I think we feel the need to talk about legislation in the relatively immediate future.

I thank you all for your attendance.

[Whereupon, the subcommittee adjourned at 1:06 p.m., to reconvene March 9, 1978, at 10 a.m.]

RESOURCE CONSERVATION AND RECOVERY ACT—OVERSIGHT

THURSDAY, MARCH 9, 1978

HOUSE OF REPRESENTATIVES,
SUBCOMMITTEE ON TRANSPORTATION AND COMMERCE,
INTERSTATE AND FOREIGN COMMERCE COMMITTEE,
Washington, D.C.

The subcommittee met at 10 a.m., pursuant to notice, in room 2322, Rayburn House Office Building, Hon. Fred B. Rooney, chairman, presiding.

Mr. ROONEY. Today we will discuss the directions taken by resource recovery, both by the Environmental Protection Agency and by the industries and other governmental agencies involved. We touched on these subjects Tuesday and again yesterday, and I am more convinced than ever that progress must be made in this area with all the speed we can muster.

Funding levels are low, and we are trying to change that. Planning seems to be proceeding at as fast a pace as possible. But I still feel that we are not doing all we could. In congressional districts around the country, landfills are being filled up or are going to be closed.

Unfortunately, we may have been more interested in debates about the degree of technology or the types of technology, and perhaps primarily from the all-important energy viewpoint, than in getting the landfill problem solved. I hope not.

My good friend and colleague, Congressman Robert Edgar, who is very much interested in the environmental problems not only in the Seventh District of the Commonwealth of Pennsylvania, but of the Nation, will be our first witness.

Mr. Edgar, you may proceed.

STATEMENT OF HON. ROBERT W. EDGAR, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF PENNSYLVANIA

Mr. EDGAR. Thank you, Mr. Chairman. It is a pleasure to be here. I appreciate the opportunity to testify before the oversight hearings on the 1976 Resource Conservation Recovery Act. Congressman Jerry Ambro may join me in a few moments and provide some comments following my testimony. He is knowledgeable about the solid waste problems and hazardous waste problems in New York.

I would like to summarize my statement, Mr. Chairman.

Mr. ROONEY. Your full statement will appear in the record.

Mr. EDGAR. I appreciate that, Mr. Chairman.

Promped by a serious solid waste problem in my own district in Delaware County, Pa., 2 months ago I began to take a serious look at the Federal Government's solid waste program and its impact on State and local governments. As a relative newcomer on the solid waste arena, my comments this morning will be of a general, rather than specific, nature. Some of my concerns are touched upon in EPA's "Strategy for Implementation of the Resource Conservation and Recovery Act."

I have been impressed by the comprehensiveness in the Resource Conservation and Recovery Act (RCRA). The legislation reaches out to touch on almost all of the problems and issues that come to mind when we mention the term "solid waste." However, ambitious as the legislation may be, its application and effectiveness have been severely restricted because of the minuscule appropriations requested by EPA. Of $179 million authorized in fiscal year 1978, less than $40 million was appropriated.

The outlook for fiscal year 1979 is not much improved, with only $56.9 million requested by the administration. I have begun to seriously question whether hazardous and solid waste control are real concerns of the administration. State and local governments are also questioning whether the Federal Government is serious in its intent to find solutions to these problems, or whether the Government is simply developing more regulations and timetables to complicate ongoing State and local efforts to deal with these age-old problems. If EPA is to take its responsibilities under the act seriously, it needs an effective funding base. I realize that the funding issue should more properly be addressed to the Appropriations Committee, but the issue has a place at these hearings as well.

First, I would like to talk about funding concerns that have been brought to my attention by the Pennsylvania Department of Environmental Resources. I think these are typical of the concerns of many other State agencies with which I have been in contact. The department has a relatively well-advanced solid waste program of its own. However, the State does not have an effective hazardous waste program and recognizes the need to develop, administer, and enforce a hazardous waste program equivalent to the Federal program outlined in subtitle C of RCRA.

However, the department's budget has been so severely cut back in recent months that it cannot press for any new programs when existing ones are being curtailed. With the Federal Government failing to provide the modest amount of funds authorized under RCRA for State planning and implementation, Pennsylvania very likely will decide not to seek authorization for its own hazardous waste regulatory program, forcing the Federal Government to accept responsibility in this area. If other States take similar action, one of the most important goals of RCRA—to leave implementation and enforcement to the States—will be defeated.

Another concern of the department is that the Federal funds for State planning are authorized for only a short 2-year period, ending in fiscal year 1979. This barely enables a State to get a plan underway before Federal funds are cut off. Unless more funds are authorized and appropriated beyond fiscal year 1979, State and local

governments will be unable to implement many of the programs outlined in the act.

At the local level, where the solid waste disposal problems are most keenly felt, there is a great need for the $15 million in planning money authorized in subtitle D, section 4008(2)(C).

I would like to speak briefly about these concerns as they relate to Delaware County, which is the community I represent. In that particular county, there are 49 different municipalities. These are loosely associated under a county government.

Each of the 49 municipalities has its own trash collection and the coordination between those units of government is very weak. Many of these municipalities are unable or unwilling to enter into the long-term agreements that are important to solid waste and resources recovery plans.

If a facility is to be established, there has to be better coordination. I think the $15 million I suggested earlier would be helpful in giving counties and local government, the opportunity to deal with the up-front problems they have, including the institutional barriers inherent to resource recovery plants.

Mr. ROONEY. Doesn't the county encourage the regional concept of trash collection?

Mr. EDGAR. It does. The county has the responsibility for the disposal of the trash and would like to have more of an ability to make the long-range commitments, the 20-year commitments, necessary for a resource recovery facility.

But because of the risks and uncertainties of recovery stands, local governments are reluctant to make the 20-year commitments.

Let me just comment on a couple of other areas. I have heard complaints that the resource conservation and recovery panels set up under subtitle B of RCRA are not as effective as they could be in helping state and local governments over these hurdles. In a number of cases the panels have been slow to respond to the needs of communities. As the "salesmen" of RCRA, these technical assistance teams must excel in their liaison work with State and local governments if the act is to be effective. I am hopeful that the performance of the teams will improve as they gain experience and are called upon more often.

I would like to get to what I think is the heart of my testimony. Mr. Chairman, as you decide the issue, I think it is very important that up-front money be provided to communities who are interested in resource recovery.

You will note on page 3 of my testimony that I suggest, in general terms, the establishment of a revolving fund. This revolving fund would provide planning monies to communities considering resource recovery facilities or other revenue-producing systems to handle their wastes.

These funds could be used for such purposes as feasibility studies, marketing studies, legal and conulting fees and for other purposes described in section 4008(2)(A) of RCRA. If, as a result of the preliminary studies a resource recovery or other revenue-producing system is built, the money would be paid back to the fund, once the facility begins to make a profit.

To be eligible for these funds the applicant would have to agree that any final plan would adhere to all applicable provisions under RCRA. The Federal Government could not expect to recover all of the funds it lent out. Some communities, as a result of the studies, would rule out attempting to develop revenue-producing solid waste systems as inappropriate to their needs. This is precisely one of the purposes of undertaking planning activities. Additionally, we must expect some of the facilities constructed will not be as successful as anticipated, given the many risks and uncertainties of resource recovery, and perhaps will not prove profitable.

The benefit of a revolving fund is that it provides for an infusion of capital from the Federal Government at the planning stage when it is needed, yet leaves the major financing of resource recovery outside of the Federal Government where, in my view, it belongs. If properly administered, the revolving fund concept would help to insure that planning moneys are available indefinitely, rather than confining funding to a 1 or 2-year period. We avoid the tendency to push communities into using money before they have determined how to make the best use of it.

I submit my idea of a revolving fund as simply one possible means to provide planning money for resource recovery facilities. The important point is that if the Federal Government is going to fail in providing these funds, we will have to find other ways to make this money available.

Finally, Mr. Chairman, I would like to remind the committee of the important place that resource recovery plays in our energy policy, in our urban policy and many other policies that we, as a nation, may put together.

I think EPA's strategy document points to the realization that even with aggressive Federal efforts toward resource recovery, most waste will continue to be deposited in landfills for many years to come. I think this problem is of major proportions.

Now, I think this committee has shown a great deal of leadership in the past and I think will provide some leadership in the future, to try to stimulate more resource recovery facilities, more planning, more opportunity for communities to overcome the institutional barriers and funding barriers, and to begin to get heavily involved in this area so we can recycle and redevelop our Nation and reconstruct our Nation in the future.

I do not think we should overlook the underlying need to reduce the amount of solid waste we have. I was disappointed to note in the EPA strategy document for RCRA, it breaks down the term "resource conservation" into the terms "reuse" and "recovery".

In my opinion the concept of "non-use", that is, cutting down on our consumption of natural resources and material goods so that much of what is in the waste stream today is not there tomorrow, is equally at the heart of resource conservation.

I believe that RCRA must give more emphasis to, for lack of a better term, the "non-use" principle. We must avoid the temptation to look at resource recovery and RCRA itself as a panacea to our solid waste problems. They are certainly valuable and promising tools, but will not solve the fundamental problem of growing consumption of natural resources and materials.

I would mention, I do plan to testify before the Appropriations Committee to try to dislodge the $15 million that should be provided for local planning funds and I hope this committee will consider some form of up-front funding for communities who have certain problems.

I wonder if we could allow my colleague, Congressman Ambro, to speak for a few moments about his concerns in this area.

[Congressman Edgar's prepared statement follows:]

STATEMENT OF HON. ROBERT W. EDGAR, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF PENNSYLVANIA

Mr. Chairman, I appreciate this opportunity to testify at today's oversight hearings on the 1976 Resource Conservation and Recovery Act. Congressman Ambro, who is very knowledgeable about the solid waste problems in New York, is with me this morning and will have some brief comments to add at the conclusion of my testimony.

Prompted by a serious solid waste problem in my own district in Delaware County, Pennsylvania, two months ago I began to take a serious look at the federal government's solid waste program and its impact on state and local governments. As a relative newcomer to the solid waste arena, my comments this morning will be of a general, rather than specific, nature. Some of my concerns are touched upon in EPA's "Strategy for Implementation of The Resource Conservation and Recovery Act."

I have been impressed by the comprehensiveness of the Resource Conservation and Recovery Act (RCRA). The legislation reaches out to touch on almost all of the problems and issues that come to mind when we mention the term "solid waste." However, ambitious as the legislation may be, its application and effectiveness have been severely restricted because of the minuscule appropriations requested by EPA. Of $179 million authorized in FY 1978, less than $40 million was appropriated. The outlook for FY 1979 is not much improved, with only $56.9 million requested by the Administration. I have begun to seriously question whether hazardous and solid waste control are real concerns of the Administration. State and local governments are also questioning whether the federal government is serious in its intent to find solutions to these problems, or whether the government is simply developing more regulations and timetables to complicate ongoing state and local efforts to deal with these age-old problems. If EPA is to take its responsibilities under the Act seriously, it needs an effective funding base. I realize that the funding issue should more properly be addressed to the Appropriations Committee, but the issue has a place at these hearings as well.

The funding concerns of the Pennsylvania Department of Environmental Resources are typical of the concerns of many other state agencies with whom I have been in contact. The Department has a relatively well-advanced solid waste program of its own; however, the state does not have an effective hazardous waste program and recognizes the need to develop, administer, and enforce a hazardous waste program equivalent to the federal program outlined in Subtitle C of RCRA. However, the Department's budget has been so severely cut back in recent months that it cannot press for any new programs when existing ones are being curtailed. With the federal government failing to provide the modest amount of funds authorized under RCRA for state planning and implementation, Pennsylvania very likely will decide not to seek authorization for its own hazardous waste regulatory program, forcing the federal government to accept responsibility in this area. If other states take similar action, one of the most important goals of RCRA—to leave implementation and enforcement to the states—will be defeated. Another concern of the Department is that the federal funds for state planning are authorized for only a short two-year period, ending in FY 1979. This barely enables a state to get a plan underway before federal funds are cut off. Unless more funds are authorized and appropriated beyond FY 1979, state and local governments will be unable to implement many of the programs outlined in the Act.

At the local level, where the solid waste disposal problems are most keenly felt, there is a great need for the $15 million in planning money authorized in Subtitle D, Section 4008(2)(C). Delaware County itself has a critical solid waste problem. Its incinerators are violating air pollution standards and

therefore an alternative to incineration must be found. Acquiring additional landfills is a possibility, but suitable sites are very limited and, as in thousands of communities across the nation, both rural and urban, tremendous citizen resistance is unleashed when mention is made of siting a new solid waste facility in the community. Considerable interest has been shown in our County in a resource recovery facility, but no firm steps have been taken in this direction because of the many institutional barriers, risks, and high capital costs involved, and because there are no local funds for the feasibility studies, marketing studies, and other steps essential to consideration of a resource recovery facility. Without these basic studies, it is understandable that neither local governments nor private industries want to accept the responsibilities and risks associated with resource recovery technologies.

Let me illustrate some of the institutional barriers we have encountered. Delaware County is comprised of 49 municipalities, each of which has its own trash collection system, with the responsibility for disposing of the trash falling on the County. Many of these municipalities are unable or unwilling to enter into long-term agreements to supply their solid waste to a resource recovery facility. It has been suggested that a solid waste authority be established to fully look into the possibility of a resource recovery facility; however, state laws prohibit authorities from raising revenues. And perhaps the most difficult problem we face is the fact that the administrative and political machinery of most local governments is simply not geared to tackling the technicalities intrinsic to solid waste management.

I have heard complaints that the Resource Conservation and Recovery Panels set up under Subtitle B of RCRA are not as effective as they could be in helping state and local governments over these hurdles. In a number of cases, the panels have been slow to respond to the needs of communities. As the "salesmen" of RCRA, these technical assistance teams must excel in their liaison work with state and local governments if the Act is to be effective. I am hopeful that the performance of the teams will improve as they gain experience and are called upon more often.

The lack of local planning money which I have discussed leads me to propose, in general terms, a change in the law to establish a "revolving fund" to provide planning money to communities considering resource recovery facilities or other revenue-producing systems to handle their wastes. These funds could be used for such purposes as feasibility studies, marketing studies, legal and consulting fees, and for the other purposes described in Section 4008(2)(A) of RCRA. If, as a result of the preliminary studies, a resource recovery or other revenue-producing system is built, the money would be paid back to the fund once the facility begins to make a profit. To be eligible for these funds, the applicant would have to agree that any final plan would adhere to all applicable provisions of RCRA. The federal government could not expect to recover all of the funds it lent out; some communities, as a result of the studies, would rule out attempting to develop revenue-producing solid waste systems as inappropriate to their needs. This is precisely one of the purposes of undertaking planning activities. Additionally, we must expect that some of the facilities constructed will not be as successful as anticipated, given the many risks and uncertainties of resource recovery, and perhaps will not prove profitable.

The benefit of a revolving fund is that it provides for an infusion of capital from the federal government at the planning stage when it is needed yet leaves the major financing of resource recovery outside of the federal government where, in my view, it belongs. If properly administered, the revolving fund concept would help to ensure that planning monies are available when communities are in a position to absorb them. By making planning money available indefinitely, rather than confining it to a one- or two-year period, we avoid the tendency to push communities into using money before they have determined how to make the best use of it. I submit my idea of a revolving fund as simply one possible means to provide planning money for resource recovery facilities. The important point is that if the federal government is going to fail in providing these funds, we will have to find other ways to make this money available.

It is clear that solid waste represents a potential source of valuable resources, including energy. Energy recovery from solid waste promises to meet a growing portion of our energy needs. It has been estimated that 1% of our nation's current energy demand could be met by recovering energy from just the municipal waste generated in urban areas. Energy recovery is a particularly attractive arrangement for urban areas with energy-intensive industrial bases. Solid

waste when viewed as an energy source can act as an enticement to draw industries needing energy into urban areas, and just as importantly, can act as a stabilizing force to deter industry from leaving urban areas. Solid waste will become ever-more attractive as an energy source as the costs of traditional fuels continue to rise. Both our national energy policy and urban policy should address themselves to the energy-from-solid waste issue.

A number of uncertainties and unknowns exist regarding the performance and economics of resource recovery systems. For example, how will the declining birth rate affect such systems? Will the rise in the plastics component of onr waste stream continue, or will the federal government step in to reverse this trend? What impact will the current movement of people out of the cities to less populated areas have on the viability of resource and energy recovery facilities? The question arises as to how much we should factor in these and other trends when planning elaborate and costly resource recovery facilities.

EPA's strategy document points to the realization that even with aggressive federal efforts toward resource recovery, most wastes will continue to be deposited in landfills for many years to come. Given the continued dominant role of land disposal in our solid waste management scheme, I believe that we must give more emphasis to developing small-scale, low-cost improvements to our current waste disposal operation. There is a need, for example, to take a closer look at our present collection and haul methods. These are the most costly phases of the solid waste disposal process. In 1976, it cost an average of $21 to collect a ton of discarded material as compared to $5 per ton to process and landfill it. Improving the collection system could mean substantial savings to local governments. There is aiso a need to give more emphasis to front-end separation, which is the separation of reusable materials at the sonrce of generation. Incentives should be provided so that all materials which meet market demand will be separately collected before they become comingled with contaminated solid waste. If additional financial incentives were built into the Act. states would have more reason to take on the responsibilities for developing and managing solid waste plans as outlined in Subtitle D.

We must not overlook the underlying need to reduce the amount of our solid waste. I was disappointed to note that at one point the EPA strategy document for RCRA breaks down the term "resource conservation" into the terms "reuse" and "recovery." In my opinion, the concept of "nonuse," i.e., cutting down on our consumption of natural resources and material goods so that much of what is in the waste stream today is not there tomorrow, is equally at the heart of resource conservation. I believe that RCRA must give more emphasis to, for lack of a better term, the "nonuse" principle. We must avoid the temptation to look at resource recovery and RCRA itself as a panacea to our solid waste problems. They are certainly valuable and promising tools, but they won't solve the fundamental problem of our growing consumption of natural resources and materials.

This concludes my formal statement, Mr. Chairman. Thank you again for this opportunity to present my views.

Mr. ROONEY. Thank you for that very fine and comprehensive statement.

Do you have any questions, Mr. Skubitz?

Mr. SKUBITZ. No questions, Mr. Chairman.

Mr. ROONEY. Do you have any questions, Mr. Florio?

Mr. FLORIO. Not right now, Mr. Chairman.

STATEMENT OF HON. JEROME A. AMBRO, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF NEW YORK

Mr. AMBRO. I have a few comments to add to what Mr. Edgar said concerning the overall thrust of the act. The function of solid waste disposal in the United States devolves on municipalities. But a variety of Federal regulatory agencies, primarily through EPA, have increased the cost of that burden, often to an unmanageable level.

The act, overall, is a good one except that, as Mr. Edgar has pointed out, the funding is woefully low—$179 million authorized for fiscal

year 1978; less than $40 million actually appropriated. The administration had requested $56.9 million.

I might point out that on Long Island, three municipalities: Huntington, Babylon, and Islip got together—they represent about 800,000 people—and set up a multitown solid waste disposal district which would evenually eliminate dependence upon sanitary landfills, holes in the ground which have had all manners of solid waste poured into them, resulting in aquifer contamination from their leachate.

This facility would utilize a high temperature incinerator with resource and recovery advancing the removal of paper, which is about 50 percent of most of the solid wastes, sorting various metals by the use of magnets, and separating liquid nitrogen so engine heads could be dumped into the nitrogen on the site and blown apart.

The multitown effort is especially resourceful in the removal of copper and glass which could be transformed with monomers and polymers into pipe and graph—and the burning of residue at high temperatures—the sale of power as a result of this to the adjoining community college has substantially offset the cost, by about $80 million. That is one plant in one place in this country.

Mr. FLORIO. Is that a public facility?

Mr. AMBRO. It is a public facility run by a consortium of three municipalities.

Mr. ROONEY. Is it completed yet?

Mr. AMBRO. It has not been completed yet. I think what you are talking about, Mr. Florio, is to the west of us in the town of Hempstead where they are letting the contract to a private corporation to construct something like this.

In any event, the whole area of solid waste disposal, with respect to generating considerable new interest, is the result of those kinds of activities. My understanding is the result of my service on the Science and Technology Committee; and the level of technology in the country indicates that there is a vast gap between the legislation that we propose here, mandating certain kinds of actions, and the requirement on the part of the municipalities to increase inordinately their budgets in order to complete them.

That gap is so overwhelming that it is a burden, generally, on local property taxpayers who are overburdened already with a regressive tax. The kinds of things that come out of this, the Federal level, do not really relate in any real way to how things can be funded equitably and effectively at the local level, the level with primary implementation and financial responsibility.

So, I think concern for both the funding mechanisms and the amount of funding is something that must be addressed in an interdisciplinary way and must be addressed here in Washington. The interrelationship between existing technology, the kind of things we are trying to do, and the impact on local communities, especially in areas where the geological substructure like that of coastal areas, such as Long Island and the Jersey Coast, portions of California and other places, necessitates closing all landfills because of leachates and contaminants.

We have a place where industrial waste was dumped into the ground 15 years ago and is now resulting in well closings. I think,

while all goals of RCRA are commendable, they have to be backed up with a higher funding level.

Mr. FLORIO. I would make a couple of observations to the gentleman. They stated they are aware of the problems in this complicated field. Just being aware of the problems is a commendable task in itself.

I would make a couple of observations. One is the Federal Government, States and local governments are running something like an accumulative $30 billion surplus. At the same time, the Federal Govcrnment is having a $60 billion surplus. We have to address that gencral provision, that general problem, as we start to advocate increased funding with what has traditionally been a local problem.

You raised the point that it is no longer a local problem. It is my suggestion that the localities do not have the expertise to deal with some of the sophisticated technology needed for some of these centers. They have not got the local expertise to deal with the local water supplies. They are going to have to be dealt with on a higher level, at least a State level, but probably on a national level in terms of formulating responses to these problems.

We have had EPA here for 2 days now. I think it is clear that they are not overly concerned about the costs which are associated with the new increased standards that are being imposed because, in fact, only the new regulations are driving up the cost which provides the incentive for the private sector to come in because we have cost comparability in terms of new methods for treating solid waste and disposing of solid wastes that we would not have if, in fact, we continued on with the old ways.

I think it is important to realize that there are some people—and I may be inclined to be one of them—that feel this is something that the private sector should be involved in to a much greater extent than we have in the past.

There are great opportunities for private sector, as Mr. Edgar made reference to, in terms of energy generation, in terms of the benefits from the recycling over and above the disposition of the problems of just accumulation of solid base.

Mr. EDGAR. I think if you carefully read my full statement, I am saying this same thing. The reason I am talking about a revolving fund and up-front money is that I, too, believe in the private sector. With the higher cost of landfills now, it is becoming ever more attractive for the private sector to get involved.

I think what I am saying is that local communities need some help in developing feasible plans so they can put in profitable systems.

As you know, Delaware County puts its solid waste in your district in New Jersey. Your district would benefit by our being able to develop a plant to process the many tons of waste that we now bring over and dump in your congressional district.

You mentioned the point about the States having excess funds to help local communities. The State of New Jersey may have lots of money in its coffers, but the State of Pennsylvania is virtually bankrupt. Even in its sorry financial state I think the Pennsylvania State Department of Environmental Resources is beginning to recognize the problem and is beginning to invest some of its money, almost as

much of its own money as it is receiving from any kind of help from the Federal Government.

Mr. FLORIO. I have a provincial question. It has been reported that the city of Philadelphia, as you know, dumps waste in my congressional district. It has requested from the State legislature, and has been denied, the opportunity to dump in some of the abandoned mines, assuming that it is safe, outside the confines of the city of Philadelphia and the legislature has turned them down on a regular basis.

Our feeling has been, you have facilities in Pennsylvania and if Pennsylvania will not let you dump, you fill a dump in other portions of Pennsylvania. We have been somewhat concerned about dumping in New Jersey. Are you aware of this legislative issue and that it has been denied by the State legislature?

Mr. EDGAR. I am very aware of it. We have two large cities, Philadelphia and Pittsburgh. It is a rural State. We have a great deal of infighting within the legislature and most of it is anti-Philadelphia sentiment.

The thought of having Philadelphia trash dumped in the coal mines has been an untenable position on the part of many of the legislators, particularly those representing the coal areas.

They envision large truckloads of this solid waste coming up and being dumped. I know you recognize the fact that to throw away that trash may be the wrong way to go.

There are many valuable energy resources there and recyclable resources that ought to be recovered. I am appalled at the lack of interest on the part of Congress, both rural and urban Congress people, to the fact that this problem is becoming a national crisis.

Mr. AMBRO. Can I say one word with respect to that. The $30-billion surplus figure that you use obviously does not pertain to my statement. We have less than that surplus as a result of one of our cities being in severe trouble. But regardless of that, years ago, money was put up at a 50-percent contributory share for the solid waste disposal problem so that the State—in the case that I was talking about—contributes $30 million, originally did, and the municipalities $30 million as well as their 50 percent.

This whole thing has been building for 6 years. We are still in the construction phase, although the concept still sits there and is a consummation about to be realized. Once it is completed—it is still not completed—the sale of power will offset the local share as will the recovery of resources.

But regional planners tell us that the paper that will be removed, and hopefully reprocessed and sold, will provide such a glut on the market—it is done not only regionally but nationally—that that is something that has to be considered.

The desulphurization systems and the removal of those kinds of waste products are either hazardous or their movement would be highly dangerous, or the kinds of materials—that would be one of the three which would not be toxic—would be so overwhelming, in terms of accumulations, that they would be almost a glut as well.

So, in terms of overall planning, not only regionally and statewide but nationwide, in this regard, is woefully lacking, it seems to me.

Just one point with respect to the private sector. The private sector, certainly, if there is money to be made, will move into a municipal vacuum. But, as Mr. Edgar points out, in terms of up-front money, comprehensive review money, planning money, architectural plans and design, all of which result in inordinately high costs to municipalities, it just is not there.

I am not at all a sanguine about the private sector moving into this field with any alacrity. I think something far more has to be done in terms of funding.

Mr. FLORIO. Thank you very much.

Mr. ROONEY. Thank you, gentlemen. We very much appreciate your expertise in this field and your concern in your congressional district, along with that for the Nation's problem.

You, Mr. Ambro, as a former municipal head, certainly know this problem very well. We appreciate your comments.

Mr. EDGAR. Thank you, Mr. Chairman.

Mr. AMBRO. Thank you, Mr. Chairman.

Mr. ROONEY. Without objection, the Chair wishes to place in the record, as though read, the statement of Congressman James C. Cleveland of New Hampshire.

STATEMENT OF HON. JAMES C. CLEVELAND, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF NEW HAMPSHIRE

Several small New Hampshire towns are presently not in compliance with State regulations prohibiting open-burning dumps as required by the Clean Air Act. Furthermore, the Resource Conservation and Recovery Act requires the closing or upgrading of all open dumps in accordance with a State timetable. Therefore, the problem of solid waste disposal looms ominously for many rural communities which are unequipped to deal with it.

SMALL TOWNS IN A DILEMMA

The legislative attempt to deal with environmental pollution attacks the problem from several standpoints—air, water, and land pollution. The dilemma posed for the small community faced with the prospect of complying with one particular statute is that a solution to one type of pollution may not solve the problem of another type, and in some instances may create additional pollution problems. For example, a small town that has traditionally burned its waste in an open dump must stop open burning in order to comply with the Clean Air Act. If it then buries its waste in a landfill, it may experience pollution of its water supplies from leachate. Alternatively, if the waste is left in an open dump, the town will run afoul of RCRA.

The typical New Hampshire town which is presently in violation of open-burning dump regulations has a population less than 1,000. These towns that have been delaying the resolution of this problem face mounting time pressures; extensions granted by the State air pollution control commission will soon expire, and there is always the possibility of enforcement by the EPA if the State fails to fulfill

its duty. Open burning of solid waste is one aspect of the waste disposal problem which the Resource Conservation and Recovery Act seeks to ameliorate. Therefore, the practical solution to this problem requires that the locality involved consider both statutes when faced with compliance pressure from the State agency or EPA, in order to avoid repetition of noncompliance difficulties a few years from now.

Small towns experience increasing frustration when they attempt to comply with the various Federal mandates regarding waste disposal without adequate funding or information.

EXPENSIVE SOLUTIONS, LITTLE MONEY

Inadequate funding is a major source of the difficulties that small communities have with the law. Small towns in sparsely populated areas typically have a low tax base; sparse population also means a higher per capita cost for service. Without sufficient funds to undertake a comprehensive feasibility study of their particular needs, small towns will be unable to determine what type of disposal system would best meet those needs. In addition to procuring information about the alternatives available to them, towns must obtain data on the sources, types, and volumes of waste generated in order to resolve their waste disposal problem.

The Resource Conservation and Recovery Act specifically authorized $25 million in grants for rural communities with these difficulties—section 4009 of RCRA—but the funds were never appropriated.

Small communities are also hampered by the dearth of information and data pertinent to rural areas. Most of the available literature is geared to metropolitan areas. Local governments in rural areas are frequently part-time governments and may simply not know where to begin when faced with the dilemma of implementing a new solid waste disposal system that will meet Federal requirements; typically, they lack the requisite expertise to comply with the law.

DEMONSTRATION PROJECTS NEEDED

Demonstration projects which utilize small-scale waste disposal systems are needed, since small communities cannot afford to bear the financial risk of developing the systems themselves. EPA presently has no funds for demonstration grants of this sort; an amendment to H.R. 7554 sought to provide $2.5 million for demonstration projects to develop alternative solid waste disposal by small communities, but was defeated by a standing vote of 9–24.

RCRA evidences a shift in attitude toward solid waste from one of mere disposal to one of conservation of increasingly scarce material resources. I believe that this shift is commendable. Sanitary landfill as a solution to the solid waste problem is a typical example of the disposal attitude, since it is essentially a stop-gap solution which is wasteful of land. The problem of leachate drainage is another disadvantage of landfill disposal.

Source separation and resource recovery is perhaps the best alternative facing the small rural town; nonrecyclables can be reduced to

ash in an incinerator which meets acceptable emission levels. Systems which currently use this approach have reduced their waste by anywhere from 15 percent to 50 percent. In addition to reducing pollution resulting from waste, resource recovery reduces the demand on virgin resources.

Important considerations of public policy must not be overlooked. Congress must balance the need to counteract the effects of pollution on the environment against the capacity of local governments to bear the burden of attaining the goal of environmental protection. Although fighting pollution is of vital importance, the burden on local governments should not be so great as to overtax their economic resources and create resentment among residents. Similarly, local governments should not be forced to bear the burden and expense of demonstrating the innocuousness of current practices in the face of regulations which presume certain activities, no matter how small-scale, to be violative of statutory standards.

LEGISLATIVE ACTION NEEDED

The Resource Conservation and Recovery Act does not address itself to the particular problems of small rural communities. The prohibition of all open dumping is too broad.

Legislation which grants extensions for small towns is needed so that they are not forced to prematurely invest in unproven technology. In addition, demonstration projects should be funded in order to develop alternative waste disposal systems for small communities.

Until there are practical alternatives to present waste disposal practices, small communities should not be penalized. There just is not a compelling urgency in their case, since the volume is simply so small.

Mr. ROONEY. Our next witness will be Mr. Steffen W. Plehn, Deputy Assistant Administrator, Office of Solid Waste, Environmental Protection Agency.

I want to say, Mr. Plehn, you succeeded a very knowledgeable public official in Sheldon Meyers. I thought that it would be almost impossible to replace Sheldon, but you certainly have come along very well and very strongly. I do appreciate the great help you have given the committee and I commend your dedication to your job.

STATEMENT OF STEFFEN W. PLEHN, DEPUTY ASSISTANT ADMINISTRATOR, OFFICE OF SOLID WASTE, ENVIRONMENAL PROTECTION AGENCY, ACCOMPANIED BY STEPHEN A. LINGLE, CHIEF, TECHNOLOGY AND MARKETS BRANCH, RESOURCE RECOVERY DIVISION

Mr. PLEHN. I appreciate those kind comments. Sheldon has been a long-time friend of mine. He speaks warmly of you. We keep in close touch.

Mr. ROONEY. He was a great help to me. It seems, as you are head of this Department now, it has not been much of a change, just a transition.

Mr. PLEHN. Thank you for those kind remarks. I appreciate them and look forward to working with you and the other members of the committee.

We have prepared today a brief slide show to give the committee our assessment of where resource recovery stands at this point and what the major problems are. We think that it is quite significant that the initial legislation passed in this field in 1965 was called the Solid Waste Disposal Act. The legislation which your committee passed 18 months ago is called the Resource and Conservation Recovery Act.

We at EPA certainly feel this area of the solid waste management program is a very significant and important one. I would like to introduce Stephen Lingle, who is the chief of the Technology and Markets Branch, Resource Recovery Division, who will be making this presentation to you this morning.

Mr. ROONEY. We are having a little problem hearing, so make sure you talk into the microphone.

Mr. LINGLE. It is a pleasure to have the opportunity to appear before this committee today to discuss resource recovery. I am going to discuss the status of resource recovery activities in the Nation and how the RCRA authorities address current resource recovery opportunities and constraints.

Waste reduction approaches, which are also a part of resource conservation, I believe were adequately covered yesterday in Deputy Administrator Blum's testimony. The subjects which I am going to be covering today are the forces pushing resource recovery, the status of alternative approaches, and constraints to further implementation.

Basically, I think there are three driving forces behind resource recovery, the most important of which is the need for an alternative to land disposal at the local level. Resource recovery is implemented when a locality decides, in the context of solid waste management decisions that resource recovery is a preferable alternative to land disposal.

Local governments are feeling increasing pressures that increase the likelihood that they will make that decision. For example, land disposal siting has become a tremendous problem because of the lack of available land near cities and because of citizens' opposition. Few jurisdictions want a landfill within their boundaries.

In addition, land disposal costs have been increasing. One of the reasons is that cities are hauling wastes longer distances to available sites. They will rise still further due to environmental control mandated by RCRA.

Thus, both siting problems and increased land disposal costs are forcing cities to turn toward resource recovery as an alternative. Because of these pressures, well over 100 cities are actively investigating resource recovery as an alternative.

Where it is implemented, there are significant resource savings. Recovery from municipal solid wastes generated in the Nation's urban areas could result in the type of resource savings shown here. (Energy savings equal to the Nation's commercial and residential lighting needs; materials savings of from 7 to 100 percent of U.S. production.) These savings are significant. In addition, there are

reductions in environmental damages from both product production and waste disposal as a result of resource recovery.

With these types of pressures, one must ask if there are techniques and technologies which permit the Nation to move forward with resource recovery.

I would like first to discuss the basic approaches of source separation: The recovery approach familiar to most of us is the reclamation center where citizens voluntarily bring their separated materials. This is not a major solution to the problem but it continues to play a role and has raised environmental consciousness.

One of the most successful reclamation efforts is an aluminum industry program to pay for returned cans. The industry reports that one-fourth of the aluminum cans produced are being recovered through the program.

Perhaps a better source separation approach involves collection of recyclables at the curb. Newspaper collection is the most notable example. These curbside collection programs can be practicable economically.

Curbside collection programs for newspapers are now being carried out in 215 cities across the Nation. EPA programs helped achieve this success through technical assistance, publications, and seminars advising the cities how such programs can be implemented. This activity will be continued under RCRA. Glass and metal containers are collected at the curb along with paper in some of those existing programs. Although collection economics have limited such programs in the past, one way of overcoming the economic problem is to use a multi-chambered collection vehicle to collect all of the materials simultaneously. This has recently been demonstrated by EPA in two Massachusetts cities. This approach will not be universally applicable but may be feasible in certain situations.

Source separation is not limited to residential wastes. A program which EPA is particularly enthusiastic about is separation of white paper in offices through the use of desk top containers as shown here. EPA guidelines are resulting in widespread implementation of the program within the Federal Government.

I would like to talk a little more specifically about the status of source separation approaches. First, office separation. The General Services Administration has achieved dramatic results in a short period of time in implementing the EPA guidelines, with 114,000 employees in 90 buildings now involved, compared with a handful 2 years ago. The projection shown here—500,000 employees separating paper by 1980—will make this, I think, the most successful example of conservation in the Federal Government. At the same time, it will reduce waste management costs.

Curbside collection of newspapers will continue to grow rapidly because of the increasing market demands and economic feasibility of the program. EPA technical assistance will continue to stimulate this program and we believe that the number of programs will virtually double by 1985 to 400. Multimaterial separation will increase somewhat but probably less rapidly.

The overall role of source separation is clearly that it is not a total solution, but it is an important part of the solution and will com-

plement other resource recovery efforts. It is the primary technique for paper recovery and accounts for over 90 percent of the materials recovered from solid waste.

Source separation of paper is compatible with energy recovery in the opinion of EPA and source separation of metals and glass is compatible with recovery in resource recovery plants. We have gone through an extensive analysis on the subject of compatibility and currently have a study underway mandated by RCRA to develop more extensive data in this area.

The other technique for recovering energy and material within municipal solid waste is processing of mixed waste in resource recovery plants. In the interest of time, I will be discussing only the energy recovery technologies today. However, I want to point out that ferrous metals recovery included in most energy recovery systems. Aluminum separation appears promising and will be included in some plants. Glass recovery will probably be limited to only a few plants. Economics are marginal and products must meet stringent specifications.

A proven technology for energy recovery from solid waste is waterfall combustion, or burning solid waste in furnaces equipped with boilers to produce steam.

This is a photograph of the Saugus, Mass. plant, the newest, largest, and most successful plant in the United States.

This photograph shows the largest plant in the world. This plant is located in Paris, France and processes about 3,000 tons a day of solid waste to produce steam and electricity.

This technology has been perfected in Europe, and the European experience has been very successful. There are over 200 plants operating in Europe and their history of operations has been a good one.

This contrasts sharply with the experience in the United States. There are only seven plants operating here and they are a relatively minor factor in our waste disposal. Comparing quantity of solid waste processed through the system in various countries of the world shows that the United States is well below most other countries. We are ahead of Russia on this, which says something for us, but other than that we are very much behind in implementing this technology.

There are several reasons. One is that in the past the technology was considered too expensive here compared with the relatively low-cost land disposal that has been available. But the situation is beginning to change as RCRA regulations and other factors increase the cost of land disposal.

Another reason is that poor design and operations has given incineration a bad name here in the past. EPA is trying, through our technical assistance program, to point out to cities that these well designed, sophisticated plants are very different from the smoke belching incinerator which was a part of the municipal waste management scene 10 or 15 years ago.

Currently, EPA is evaluating the European expertise with this technology working in conjunction with the Department of Energy. This information will be transferred to cities in the United States through technical assistance programs of EPA.

There will be 10 facilities of this type constructed and operating by the end of 1978. This will include seven that are operating now plus three more which are under construction. There are several additional cities which have made decisions to implement such plans. I think this technology will be a major factor in resource recovery implementation over the coming years.

A rapidly emerging technology is the processing of solid waste mechanically to produce a product called refuse derived fuel, or RDF. This photograph shows the basic forms of RDF. It can be fired in existing boilers as a supplement to fossil fuels, particularly coal. This picture shows where the RDF concept started, roughly in the early 1970's, at a demonstration plant funded by EPA in St. Louis, Mo. The basic feasibility of the approach was proven in this plant.

Then, in 1974, this plant in Ames, Iowa was put into operation. Following that, this plant in Milwaukee began operation in 1977 and has been operating for about 9 months. This commercial plant in Chicago has recently been completed and is currently in a shakedown status. These plants still need refinement and optimization but, I think, the basic feasibility of the refuse-derived fuel technology has been established. However, use of the fuel is still very much an issue.

Utilities are considered the prime market for RDF but their interest is restrained by two very logical factors. One is the lack of experience in burning refuse-derived fuel and the consequent uncertainty on the impact of boiler performance.

The other is a lack of economic incentive to take even a small risk. Utility regulation requires that any fuel savings must be passed on to the ratepayers, leaving little potential economic gain to compensate for risk assumption. Thus markets are the biggest uncertainty facing implementation of this technology.

This slide shows the seven commercial plants which will be operational by the beginning of 1979 in this country. Assuming successful development of both utility and industry markets, this technology will also be a major factor in future resource recovery implementation.

Small communities are not left out of the technology scenario. Small modular combustion units with steam-producing boilers have been used in the past in commercial and institutional locations, and are now being applied to municipal waste.

This plant is in Arkansas and is one of five such plants now operating. This technology is not fully optimized in such applications but appears to be technically and economically sound.

Pyrolysis is still a developmental technology. Such processes may produce steam, gas, oil or char products.

Here is a brief tour of the four largest demonstration facilities. This in an EPA-supported demonstration facility in Baltimore, Md. This plant, which was designed and built by Monsanto has experienced significant operating problems. It is being modified and will be operated by the city, but Monsanto is no longer offering the system commercially.

This EPA demonstration plant is in San Diego and is still in a shakedown situation. Ultimate feasibility has still not been determined.

This is a plant developed by Union Carbide and is located in South Charleston, W. Va. The company feels that the technology which has been demonstrated there is ready for commercial application.

This is a demonstration plant developed by the Torrax Company, which is operating in Luxembourg. Two similar plants are under construction in other European cities.

Finally, I would like to mention an important new approach to waste disposal which could solve two waste problems simultaneously. This approach is codisposal of sewage sludge and solid waste. This plant is one of four in Europe. Sludge from the sewage treatment plant is dried by steam from the adjacent waterwall combustion plant. It is then combined and burned along with the solid wastes.

This concept is beginning to be applied in this country and with greatly increasing interest to cities.

In terms of overall status, we are clearly moving forward. But implementation of these technologies, both in the 1978—18,000 daily tons of capacity—and projected 1985 levels, is only a fraction of the potential. The range of 40,000 to 70,000 daily tons of capacity projected for 1985 is an EPA estimate. It represents the equivalent of 40 to 70 plants.

To move to the upper end of this range, or possibly beyond to perhaps 100 daily tons of capacity, which should be our goal, would require a dedicated Federal effort to aggressively implement the authorities in RCRA and other Federal regulation in this area in order to overcome the constraints, which I will be discussing next.

This is a map showing the 18 plants which will be operational at the end of 1978. Not surprisingly, most of them are in the Northeast where land is relatively less available and disposal more costly.

Now, I would like to discuss the basic constraints to resource recovery implementation. There are three basic types of constraints: technical, economic—including markets—and institutional. Regarding technical constraints, I have just reviewed the status of source separation and mixed waste producing technology. The conclusion I would like to draw from that is that technology can support a significantly greater rate of implementation than is now occurring. Commercial experience is very limited in this country and in order to refine this technology and build confidence, more commercial experience will be required.

A significant program has been initiated under RCRA to assist in establishing the viability of those technologies. A resource recovery system evaluation program is being carried out. These evaluations will document the technical, economic and environmental performance of commercial resource recovery systems.

The information from these evaluations will be widely disseminated through the technical assistance programs of RCRA, through reports and through seminars.

At the same time performance is being documented, we must continue to develop and optimize the technology.

Now I would like to discuss economic constraints. There are several basic elements of the economics of raw material use which favor

virgin resources over secondary resources. For example, tax laws provide incentives for virgin material extraction. Various economic constraints to resource recovery are being analyzed by the Resource Conservation Committee which was described yesterday by Deputy Administrator Blum.

Another constraint closely related to the broad economic constraints just mentioned are markets. One reason that prices and demand for recycled materials are unstable is that in periods of declining raw material demand, secondary material use is usually the first curtailed.

Another market problem is the contaminants introduced into products during manufacture which can cause technical problems in recycling. This is a situation which industry can address by designing products for greater recyclability.

Finally, specifications are a markets problem in two ways. First, specifications of manufacturers for the secondary materials recovered from municipal waste are not uniform. This is a problem addressed by authority given the Department of Commerce in section 5002 of RCRA.

Also, specifications for final products often specify virgin material or provide no requirement for use of secondary materials. This long-standing problem is addressed by the procurement requirement of section 6002 of RCRA, requiring maximum practicable requirement for recyclable materials in Federal agency specifications.

The economics of the resource recovery plants is another subject of interest. Large plants require a lot of capital. Net costs, on the average, are higher than land disposal. That net cost gap is narrowing, however, and in many places, costs are competitive. The capital requirement for these plants is being obtained through normal capital markets. Technically and economically sound projects can be financed.

Perhaps the most perplexing barriers to resource recovery implementation, particularly plants, are institutional barriers related to the process required to implement a recovery system.

This is a lengthy, complex process very much like starting a new business. This somewhat complicated slide of the process of resource recovery implementation is actually a simplification of the process. Like starting a new business, it requires raw materials, evaluating markets, finding a location for the plant, selecting a technology and making numerous decisions about ownership, finances and risk sharing. These are generally unfamiliar, costly and time-consuming activities for most municipal governments.

After this series of analysis and decisionmaking, the system must be procured. The procurement process is unlike that involved in other types of municipal services. It often involves different types of bidding or proposal requests.

One common pitfall in this implementation process is the inability to secure waste in an area to make sure it will be delivered to a recovery plant. This can have devastating effects on projects economically; but good, sound planning can often overcome this problem.

Another difficulty is legal barriers against long-term contracting and negotiated procurements. This requires changing of State and local procurement laws, and EPA is working with States to achieve this. Finally, cities are unfamiliar with ways of managing risks associated with markets, technology and waste supply.

Before leaving this area of institutional barriers, I would like to point out RCRA has two very appropriate tools for dealing with the problems. One is the technical assistance, such as provided through the EPA grant panels program. The other is financial support for the city to help them finance adequate planning and hire appropriate in-house and consulting expertise. RCRA authorizes such assistance in section 4008. However, to date funding has not been appropriated for local planning and implementation.

Finally, a brief discussion of the importance of State and Federal roles, something about which this committee is well aware. The States must take a leadership role to encourage resource recovery, as some have already done. Financial support is necessary for those activities and is being provided through RCRA.

A strong Federal program, including technical and financial assistance to State and local governments, development of economic incentives, and development of technologies, is vital. I have already described the ways in which RCRA provides these authorities.

I would like to close by illustrating the substantial job that we have before us. Currently, we are recovering only about 8 percent of the municipal solid waste now being generated. Only 1 percent is being recovered in energy recovery plants processing mixed solid waste. By 1985, based on the projections that have been shown, energy should be nearer 10 percent, but that is not enough. We need to move faster in both recovery of energy and materials in order to make a significant impact on our national disposal problem.

Thank you very much.

Mr. FLORIO. Before we convene the panel, I have a couple of questions on the slide presentation.

On the point with regard to institutional barriers, I get the distinct impression we are talking about something being more complex than it really is. I find very little difficulty on the whole question of sewage treatment upgrading.

On the question of solid waste disposal, we are talking about the difficulties of acquainting people with the procedures necessary to come up with this. Some of these facilities have not been done. The same thing with sewage treatment upgrading, by posing some regulation—I am saying in fact public health was not being served by inappropriately treated sewage being inserted in the water stream.

That is right under EPA authority. That there be upgrading in a sense is suggesting the only alternatives, which happen to be regionalized sewage treatment industries, and then providing monies to do so.

Would someone point out the error of my thinking, if in fact there is an error in it, between the upgrading of sewage systems and upgrading of solid waste disposal systems?

Mr. PLEHN. I think you are quite correct in saying that the two are analogous in terms of dealing with complex technological problems. I think there is certainly a major difference along the lines that Congressman Edgar described this morning in that under the Federal Water Pollution Control Act the Federal Government provides funding to towns, cities, and States to assist in this process. It provides funding to communities under section 201 to do exhaustive preliminary studies to consider different alternatives for solving the problem.

The Federal Government also provides further support for the design and construction of the plants.

I think the point we were trying to make here is that for the average city or group of communities that want to get into resource recovery there is a very heavy load of complex technical and economic tasks that have to be accomplished right up at the front end. Without a very strong commitment from a mayor or other persons in authority or some form of other support to help move through those barriers, the experience has been that it is often very difficult for communities to move successfully to implement a resource recovery plant.

Mr. FLORIO. Do you see this as being essentially a local problem that is going to be able to be addressed at a local level? A lot of discussion in the last couple of days has focused on the need for more local planning moneys and local technical assistance.

One of the points that was raised is that the whole assurance of the constant flow of trash, the fact these facilities could not be cost effective if they do not have that assurance, I assume, there is some minimal flow level that has to be assured in order to make someone become interested in the capital necessary to construct these things.

I wonder, on a local level, if we are going to find that we can generate the amount of trash. It depends upon what locality we are talking about. I suppose what I am saying is I wonder if the State level is not the level or perhaps a subregional level is the level we should be addressing rather than putting the money into the locality.

Mr. PLEHN. Let me respond to the question on the size, and then I will get to the institutional question.

On size, in order to economically justify the use of a waterwall incinerator or RDF plant, you have to have close to 1,000 tons a day flowing into that plant, the wastes of about a half million people. You remember, we also showed slides of small modular incinerators, and they are quite adaptable for location in most municipalities, for location in construction with manufacturing facilities, for example.

They can operate at 20 tons a day and up. You can cluster modular units. There is a lot of adaptability.

Mr. FLORIO. Are the moduler units operated by the municipalities or by the industry facility?

Mr. PLEHN. We have examples of modular incinerators which are municipally operated, and we have some under industrial management. So, that technology can accommodate both sorts of solutions.

As to your question on institutional barriers, we believe at EPA that there is a role at the Federal level and at the State level and at the local level. We are actively working to develop a program to strengthen the State capability in resource recovery.

A couple of barriers that were covered in those slides are the legal impediments that a community often faces. A community has to be able to enter into a 20-year contract to put in one of those major systems, and it has to be able to negotiate with competing vendors.

It cannot be forced to take the lowest bid if it is purchasing a complex technology.

In many communities, there are existing ordinances or laws precluding that kind of activity. So we are working to help States to develop programs to deal with that problem in particular.

The State can also be very helpful to the local communities in identifying markets—energy markets or material markets—for the prod-

ucts of those plants. Also, you will remember that implementation slide, that complex slide. There are an awful lot of steps that a community has to go through in order to bring one of these plants on line. We also feel some front-end assistance along the lines that Congressman Edgar was discussing could be extremely helpful in assisting a community in overcoming the many obstacles to resource recovery.

Mr. FLORIO. There was an article in a local newspaper about Atlantic City Electric, talking about signing a contract for, I think it was called the fuel-derived facility, down in the southern portion of my district. And they are apparently going to put the trash which results in this fuel being derived from the trash and then the fuel being routed in the Atlantic City utility.

Mr. PLEHN. In your State also, the city of Newark has signed a contract with a vendor for a refuse-derived fuel plant which is going to be built in the Newark area and use trash from the city. This is an example in New Jersey.

Mr. FLORIO. Is the concept of cogeneration of electricity involved in this as well?

Mr. PLEHN. The concept of cogeneration is one of locating the generation in conjunction with the consumers of the steam or hot water or electricity. Those modular incinerators we described fall right in line with that concept.

Mr. FLORIO. It has been reported to me that the only place that is feasible would be in an industrial park setting in which you have the consumers of the electricity directly connected with the generation.

Mr. PLEHN. That is the concept of cogeneration, yes.

Mr. FLORIO. Chairman Rooney had some questions for you. He had to leave, so I will ask them for Mr. Rooney.

Is there a "working agreement" between the Department of Energy and the Environmental Protection Agency covering energy recovery from solid waste?

Mr. PLEHN. We have a continuous close working relationship with the Department of Energy. There is an agreement that was worked out, a Memorandum of Understanding, and we are in the process of working with them currently to develop a plan through which we would hope to better integrate our efforts.

Mr. FLORIO. Dr. John Skinner, of EPA's Solid Waste Office, reported that even if 60 percent of the available newspaper, cardboard, and white writing paper were removed through a recycling program, the energy value of the remaining waste would be reduced only by 7 to 9 percent. Is this still a good figure?

Mr. PLEHN. I am informed those specific numbers are accurate. I know that at the conceptual level it is possible to have compatible source separation and energy recovery. All the studies we have done have shown that compatibility is not a problem.

Mr. FLORIO. The energy resource in garbage is important but is energy recovery always the place to start in addressing landfill problems?

Mr. PLEHN. I think not always. I think in some instances that energy recovery is not possible.

Mr. FLORIO. There would be public health considerations?

Mr. PLEHN. I think it is basically an economic problem. If there is not a sufficient supply of waste, or landfill costs are very low in a community and the landfill can be operated in an environmentally safe way, then probably resource recovery is not immediately practical.

Mr. FLORIO. Can you explain EPA's cutback in demonstration of resource recovery technology under the zero-based budget exercise, especially in light of the Department of Energy's expansion in this area?

Mr. PLEHN. We are at EPA, as you know, one of the leading departments or agencies within the Government in the application of Z. B. B. What it requires us to do is identify each possible activity that might take place with resources available and rank those in terms of priorities for the achievement of missions.

The office of solid waste included funds for the continuance of our demonstration program at EPA in our funding request within the agency. As the Z. B. B. process worked out, with its emphasis on the protection of public health as far as EPA's mission is concerned and with our responsibility for carrying out the regulatory mandates which the Congress has given us, we were not able in the fiscal year 1979 budget to get sufficient priority to continue demonstrations.

Mr. FLORIO. Mr. Skubitz?

Mr. SKUBITZ. What percentage of the country depends on landfill as a method of disposing of its waste?

Mr. PLEHN. You remember the chart up there that showed the waste generated, only 8 percent of this, at the present time, is recovered either for energy or for material. So, that means that 92 percent of the solid waste generated in this country finds it way to landfills.

Mr. SKUBITZ. Of that 92 percent, what percent would you find uneconomical to use in plants that you are suggesting?

Mr. PLEHN. Our studies indicate that resource recovery plants are practical in all of the standard metropolitan areas which would encompass about 160 to 170 to our 212 million or 215 million people. We will check that for the record but it is in that area.

Mr. SKUBITZ. What I am trying to get is: What size city would it be uneconomical to develop this sort of a plant for?

In a city of 100,000 or more, could they find it feasible to use one of these plants?

Mr. PLEHN. A city of 100,000 could use the modular incinerator technology. We believe they would generate sufficient waste to support that technology.

Mr. FLORIO. Would the gentleman yield?

Mr. SKUBITZ. I yield to my colleague.

Mr. FLORIO. What would be the cost of a facility to deal with 100,000 tons?

Mr. PLEHN. Steve, would you respond to that question?

Mr. LINGLE. Roughly on the order of $2 million of capital cost.

Mr. FLORIO. Thank you very much.

Mr. SKUBITZ. That is a city of——

Mr. LINGLE. The population of 100,000 are using the modular approach.

Mr. SKUBITZ [continuing]. 100,000 as a breaking point. What about anything under 100,000?

Mr. LINGLE. The modular approach can be used in small cities. It can also be used in larger cities for that matter.

Mr. SKUBITZ. It could be used anywhere they could afford to use it?

Mr. LINGLE. There are very small cities using that approach right now.

Mr. SKUBITZ. How small?

Mr. LINGLE. As small as 10,000. That particular approach has interesting economics because all of the components are actually assembled in a factory and shipped to the site, and if there is a good market for the steam—which is a problem in a really small community—then the economics can look very favorable.

We are still looking at economic data. There are only five units operating now.

Mr. FLORIO. Would it create difficult problems for the use of the steam because you are not reducing municipal collection cost? You are certainly going to increase the costs as demonstrated with the landfill operation. You have to be able to have that secondary profit-making capability; that is, the same of steam into a facility.

Unless you have an industrial facility or some way you can utilize the secondary byproduct, it probably would not be economically feasible. You could not sell it to a municipality as a cost-saving feature.

Mr. PLEHN. It might interest the committee, Steve, if you would describe some of the communities that are utilizing that technology at present and what the markets for the steam are that they are employing.

Mr. LINGLE. I am not sure of all of them.

Mr. ROONEY. Before you do that, I assume all those incinerator-type facilities are required to meet air pollution standards and do meet air pollution standards?

Mr. LINGLE. That is correct. The small units are being utilized in cities like North Little Rock, Ark., Blytheville, Ark., and Groveton, N.H.

Those are three of the five. The markets are small industries. They locate these units beside a small industrial plant. They can pipe the steam right into the small industrial plant.

Mr. ROONEY. Does the initiative come from the municipalities seeking out the market or is the market sought out by the municipalities?

Mr. LINGLE. It is usually from the municipality.

Mr. PLEHN. We are, through our evaluation program, currently collecting information on the economics and reliability of the performance of these systems. We will be disseminating that information broadly through our technical assistance program as we move ahead.

Mr. FLORIO. I think that is very commendable. This is a very serious problem in southern New York. We have a Buck Rogers technology that is not really feasible until the end of the century. That clearly is not the case.

I would suggest an outreach program that would be very helpful.

Mr. PLEHN. We have a program of resource recovery seminars which we have given eight times. We have had more than 1,000 people in attendance. They are 2-day seminars where we take what you

have seen today and blow it up and get into the nuts and bolts of each of the steps of procuring a system. These seminars are very well received, and we plan to continue that program.

Mr. FLORIO. You have herein an invitation to come to my district.

Mr. PLEHN. We will accept that invitation.

Mr. FLORIO. We have to take a brief recess for a vote. We will reconvene with the panel when we come back.

[Brief recess.]

Mr. FLORIO. Our next panel will be Mr. Steffen W. Plehn, Deputy Assistant Administrator, EPA; Mr. Dennis Koehler, commissioner of Palm Beach County, Fla.; Mr. Eugene Wingerter, executive director, National Solid Waste Management Association; and Mr. A. Blakeman Early, legislative director, Environmental Action.

STATEMENT OF DENNIS KOEHLER, COMMISSIONER, PALM BEACH COUNTY, FLA., AND VICE CHAIRMAN, SOLID WASTE, NATIONAL ASSOCIATION OF COUNTIES' ENVIRONMENT AND ENERGY STEERING COMMITTEE

Mr. KOEHLER. My name is Dennis Koehler. I am a Palm Beach County commissioner and vice chairman for solid waste, National Association of Counties Environment and Energy Steering Committee.

In the interest of all of us, I will be as brief as possible.

Mr. Chairman, it is a pleasure to be here.

The local government and the national association do not have a prepared statement so I will be very brief, Mr. Chairman.

I realize the whole focus today is on resource recovery. I suppose, at the outset, I should say my personal experience is limited to my area which I think is one of the few areas in the country that has the possibility of recovery of energy and materials as well as compost from solid waste.

In any event, what I would like to do again today is stress the need for front-end money for local feasibility studies for resource recovery plants. That was the focus of my testimony 2 days ago and someone once said that sooner or later economic forces will get us around to energy and resource recovery.

My feeling is, with your help, it will happen sooner rather than later. In fact, we do have right now some very practical political barriers in my county to these resource recovery projects, even though we are well situated in having potential markets. Those political barriers are practical ones.

There are five county commissioners in my commission. Two of the commissioners, who are very liberal on social issues and environmental matters, view solid waste as being a forgotten stepchild.

In order for them to have that bit of motivation that would cause us to go realistically into resource and energy recovery, some Federal help under section 4008 of the Resource Conservation Recovery Act would be very much appreciated.

As I indicated 2 days ago, we are moving forward in this area now without Federal assistance, but I think the speed and interest would be greatly increased with some Federal assistance.

Again, the two kinds of things, two areas, in which I believe we could apply resource recovery principles in our county would be energy from refuse-derived fuel. We could use that energy in our publicly operated utilities authority in the middle of my county. Out in the Glades area, where we are the leading sugar producers in the State of Florida, we have a very good opportunity to combine the sludge removed from the waste water treatment process with the waste products from the sugarcane processing operations to produce organic fertilizer, perhaps to rival Milwaukee's "milorganite."

We have a market all up and down the east coast of Palm Beach County. We have a large truck farming and vegetable industry. We believe that is a real potential market for compost.

So, there are two areas in Palm Beach County which we think and hope, with your assistance, to do some work to find out if in fact there is a real market for those products.

Mr. Chairman, I would be ready to go over the Gordian report which EPA has received but perhaps I should not comment on that at this point except to say that I do believe we need some Federal assistance to take a hard, serious and immediate look at some of these real potentials for recovering energy and materials in my county. I believe that this is a fair statement for the rest of the National Association of Counties as well.

I do not think I have anything more to say at this point.

Mr. SKUBITZ. When you speak of Federal assistance, are you speaking in terms of funds for planning purposes or construction money of some sort for Palm Beach?

Mr. KOEHLER. Planning, Mr. Skubitz, development. I would take the position right now, based on my experience right now with sewage treatment, capital funded investment in resource technology probably would not be very smart. The taxpayers are the ones that are going to have to pay the bill. I would not have the Federal Government get into that at this stage of the planning question.

Mr. ROONEY. How much for planning?

Mr. KOEHLER. I think about $20 million for the fiscal year, which would be fine. That is what we asked for.

Mr. SKUBITZ. Do you mean for your own city?

Mr. KOEHLER. I think nationwide. I could use about $150,000 in Palm Beach County.

STATEMENT OF A. BLAKEMAN EARLY, LEGISLATIVE DIRECTOR, ENVIRONMENTAL ACTION, INC.

Mr. EARLY. My name is A. Blakeman Early. If I could, Mr. Chairman, I would like to read part of my testimony and summarize part of it.

Mr. ROONEY. Without objection, your entire statement will become part of the record [see p. 133].

Mr. EARLY. My message is fairly simple, regarding the present and future implementation of the act. In my opinion, significant gains in solid waste management in general and resource conservation in particular are going to be very slow until one key element which has never been provided is finally made available. The key element is money.

The history of the manner in which Federal, State, and local governments have dealt with the solid waste problem provides a classic study for political scientists. Just as we learned in high school civics, money, the power of the purse, has been the key to how the scenario has unfolded thus far.

On the one hand, Congress has declared that the solid waste problem is a national one and has mandated in the RCRA that EPA will tell State and local governments how to deal with those aspects relating to public health and resource allocation that are national in scope, while providing technical help to enable these governments to work out solutions to the rest of the problems.

On the other hand, the States claim that EPA is too heavy handed in dealing with the public health threats and are not sensitive to statewide concerns. They assert that they can work out all the problems if the Federal Government will just supply the money and technical assistance. Finally, the local governments complain that both the State and Federal Governments are too intrusive and that they would address State and Federal concerns if those respective bodies would give them flexibility and provide sufficient money.

Who ends up calling the shots? The local governments, of course, because they are and have been supplying the vast bulk of funds devoted to the solid waste problem. They are even supplying most of the funds to advance the state of the art in resource recovery technology and, I might add, paying plenty for the privilege.

But here we sit worrying that Federal and State concerns are not being adequately addressed. Let's face it, it is not local government's responsibility to address State and national aspects of the problem using their money. It is their purse.

The other dynamic which is fascinating to the political scientist and which involves the power of the purse is the classic struggle between the executive and legislative branches of Federal Government. The central actor on behalf of the executive is the Office of Management and Budget.

In 1965, the Congress decreed that the solid waste problem was a national problem and passed the Solid Waste Disposal Act. The Bureau of the Budget disagreed. It held off significant funding of the act and since it was not too ambitious a statute anyway, little happened.

The solid waste problem remained a local problem to be dealt with by local government. The Congress acceded for 5 years. However, in 1970 the Congress declared more emphatically that solid waste was a national problem and passed a stronger bill called the Resource Recovery Act. OMB disagreed and nearly succeeded in zero budgeting the Office of solid waste management programs in fiscal year 1974.

While Congress overruled eliminating the program, OMB largely succeeded in minimizing Federal participation in solving the solid waste problem.

In 1977, Congress prepared itself to declare even more emphatically that solid and hazardous waste was a national problem, the House and Senate endorsing a hazardous waste regulatory program and large loan and loan guarantee programs for resource recovery.

Again, OMB did not agree. OMB delayed final passage of the Resource Conservation and Recovery Act until the last day of the

session. A compromise was reached wherein OMB conceded to a hazardous waste program, but limited the Federal role in solid waste management and resource conservation to one of providing technical assistance and planning assistance to overcome "institutional" barriers.

Capital needed for resource recovery technologies would come from the private sector. Well, in the fiscal year 1978 budget OMB essentially declared hazardous waste management to be the only national problem. The Office of Solid Waste budget was increased by 15 positions and about $7 million. Almost no additional funds or positions were provided for technical and financial assistance to State and local governments. The fiscal year 1979 budget again reflects the OMB view that the only meaningful role for the Federal Government is in the control of hazardous waste management.

In my view, as long as Congress allows OMB to exercise the power of the purse, it will never have the Federal role expanded to comprehensively address the solid waste problems. The Federal role will remain what OMB conceives it should be. And as long as the States fail to adequately fund their solid waste budgets, they will not persuade OMB to support with Federal funds efforts to address statewide concerns in solid waste management.

If we are to make greater progress toward solving the solid waste problems nationwide, Federal expenditures need to be invested at the levels authorized in the RCRA and State and local governments need to respond with "their share" to match the Federal commitment.

Meanwhile, the cities and counties are left with the real nitty-gritty problem of what to do with the solid waste that is generated daily. Today's discussion focuses on resource conservation. Those local governments that have been brave enough to pursue the application of resource recovery technologies have learned just how difficult solid waste problems can be and how much money and expertise it takes to use resource recovery to solve them.

Basically, we still need to address the same problems in resource conservation that the Congress sought to address when it passed the RCRA: planning, institutional, technological, and market problems. The rest of my testimony will focus on technological problems of resource recovery, but as I describe some of the experiences of local governments, I will touch on the other three areas to some extent.

Progress in the use of technology to remove resources from waste has been very slow since the passage of RCRA. For Environmental Action, which has placed much emphasis on the greater examination of use of low-technology approaches, this has not been an entirely bad development since an opportunity has thus been provided to analyze the viability of resource recovery technologies in real life situations more fully.

The record has been sufficiently mixed as to warrant a cautious approach. There is definitely a Federal and State technical and planning assistance role to be played in helping those communities which choose to adopt these complex recovery processes. The pitfalls should not be underestimated.

Even the installation of a basic shredding operation can be fraught with problems. At this point I will depart from the text and try to summarize my testimony. Some of the problems that we have had

in the installations are severe problems with dust emissions which frequently catches fire and explodes and many facilities have problems controlling this.

In Ames, Iowa, which has a refuse-derived fuel system, the fuel is burned in an electric utility boiler. We have the greatest amount of data because EPA and ERDA have cosponsored a study there. There have been serious problems in five areas: the inability to obtain enough waste to offset the capital cost, dust problems, the inability to suspend the refuse-derived fuel for a long enough period in the boiler so they cannot use one of their boilers, inoperable aluminum recovery process and a widespread problem with frequent conveyor jams within the overall process at five points.

In Milwaukee, there has been a cost overrun of almost $5 million due in part, again, to working out some basic technical problems and finding equipment that will remove odd-sized pieces of refuse that comes in, such as tires, tree limbs and pieces of fabric that are not removed by an air classification system and jam parts of the process, such that a special machine had to be designed to remove the fabric.

Mr. SKUBITZ. Didn't some of the plants have a little trouble with explosives?

Mr. EARLY. That is true.

Mr. SKUBITZ. It blew the whole plant apart.

Mr. EARLY. I will review a couple of the other processes. In the Rescoe Processing Plant in Saugus, Mass., a water wall incinerator has had significant problems of corrosion of the pipes that go up the side of the incinerator. Significant funds were expended in developing a new metal that would be resistant to this corrosion.

Mr. FLORIO. In many of these design problems, I find it difficult to understand how the facility could be constructed without an awareness of the factory function, and whatever, that will cause a problem. It seems to be poor planning or poor management to evolve the amounts of money for construction of these facilities and later on find out all the contingencies were not contemplated in the design.

Is there some occasion of mismanagement in the program or is it new things have come up that were not contemplated in the industry design?

Mr. EARLY. Basically, the problem has been that new things have come up that were not contemplated. These are facilities that are using high-technology resource recovery. Perhaps Mr. Wingerter will also address that question as well.

I conducted this review, not to demonstrate resource recovery technology systems are not working, but to point out that they do not work with ease and a considerable amount of technical expertise needs to be provided.

This is true at the State and at the local levels. Until more money is provided at all levels of government, but particularly at the Federal level, these problems and the other ones I mentioned are not going to be solved quickly.

Thank you, Mr. Chairman.

Mr. ROONEY. It is incomprehensible to me why they would develop a plant in Ames, Iowa when they knew they were not going to get the amount of collections to make it a profitable plant. Why would

they invest so much money knowing, at the same time, they are not going to have enough money to keep it going?

How much is being generated and how much of that is usable? What part of it is inorganic and what part is ferrous metals, and nonferrous metals, et cetera? Didn't they take a survey prior to building it?

Mr. EARLY. Yes, they did take a survey.

Mr. ROONEY. Getting back to what Mr. Florio said, are there not many plants in Europe which are successful? We send men to the moon and cannot develop a solid waste plant in this country.

Mr. EARLY. The Resco Plant's basic system which has been used in Europe for many years, is an example of what you are talking about. Basically, they have concluded that the waste stream in the United States is very different from that in Europe.

You have many more plastics and other chemicals which, when incinerated, become corrosive. They did not anticipate that problem. There was no basis of experience in the United States, only in Europe.

But these sorts of problems take money to solve, expertise to solve, and the money is not there. Cities do not know what they are getting into many times where they decide to build and operate one of these technologies and they need help.

Mr. ROONEY. Thank you.

STATEMENT OF EUGENE J. WINGERTER, EXECUTIVE DIRECTOR, NATIONAL SOLID WASTE MANAGEMENT ASSOCIATION

Mr. WINGERTER. I am Eugene Wingerter, executive director of the National Solid Wastes Management Association.

I would like to bring up several points very briefly. I will not read my full statement.

Mr. ROONEY. Your complete statement will become part of the record, without objection.

Mr. WINGERTER. With respect to Congressman Florio's comment on the state of the technology and some of the problems that have been brought up, I would like to suggest that the types of problems that have been identified are what I call technical refinement or technology refinement types of problems.

Sometimes these types of problems do not surface in the conceptual design phase but only during the early shakedown and operational phases. I think on the next panel, you have the opportunity of having professional experts who are familiar with some of these problems that can help share their experience.

We are confident these problems will be solved. I wanted to mention that point.

Another point I would like to bring up is all of the resource recovery projects currently in operation are products of the free market system. That is to say they were not built with a Federal construction grant but rather through the confidence of private investors purchasing bonds to finance the construction of these facilities.

We feel this reflects the confidence of the investment community as well as the public in the application of this technology. We believe that the proper Federal role is one of demonstration of new technologies and technical assistance to State and local governments.

EPA has successfully provided both of these functions. We would insert a word of caution, however, that EPA's strategy of decentralizing technical assistance through their regional offices may result in wide variations in the quality and depth of information provided. It will be a challenge to the headquarters office of EPA to assure uniform high standards of assistance administered through ten regional offices.

Our second concern relates to the status of resource recovery projects today. A few years ago the new energy-conversion technologies were almost universally lauded as the solution to the solid waste problem.

Several recent false starts due to rising costs, system failure, market instability and siting problems have been a sobering experience. We have long recognized the importance of adequate planning and procurement to assure a successful project.

Several States are now considering legislation, which we support, to allow procurement through negotiated contracts as an option to competitive bidding in the traditional sense. Such an approach to procurement will enable local governments to consider all factors in the selection process. The decisionmaking process in establishing a resource recovery facility is complex. The risks are numerous and extensive.

The National Solid Wastes Management Association, over the past few months, has evaluated the majority of requests for proposal issued by local governments over the past 3 years, looking at the strengths and weaknesses of each procurement attempt.

We intend to publish in the near future a model guideline for procurement of resource recovery facilities. We hope that, through our research, we will be able to provide a framework for more effective municipal decisionmaking in the area of resource recovery.

Along this line, I would like to raise a point of how confusing and complex the information can be. It was mentioned earlier in the EPA presentation that some of the small-scale technology systems would average around $2 million per facility and serve a population around 100,000.

It was also mentioned that about 1,000 tons per day per facility would serve a population of 500,000. If you take the cost of one of the more recent procurred facilities, running $50 million, it would be more of a temptation to procure five small-scale resource recovery type technology facilities that are based on incineration at a cost of $10 million to serve that 500,000 population as compared to $50 million to serve the population with a larger scale technology system.

I am not sure there is a direct correlation. I think what you have to look at is the mix in each case. It is damaging to try to translate data from one to the other. If you multiply that several-fold, you can serve a population the same as you could with a large-scale system.

[Mr. Wingerter's prepared statement follows:]

STATEMENT OF EUGENE J. WINGERTER, EXECUTIVE DIRECTOR, NATIONAL SOLID WASTE MANAGEMENT ASSOCIATION

Good Morning. Mr. Chairman, my name is Eugene Wingerter, Executive Director of the National Solid Wastes Management Association. Our members include major companies involved with resource recovery, as well as companies in all phases of solid waste management. We are pleased today to join with

other members of this panel to discuss our perspective on the status of recovery of energy and materials from solid wastes.

We would like to preface our discussion by identifying two general concerns.

First, all of the resource recovery projects currently in operation are products of the free market system; that is to say, they are not built with federal construction grants. We believe that such systems will continue to be built by the private sector where their projected future operation is determined to be financially feasible. We oppose federal subsidies for such facilities because we believe such incentives distort existing economic patterns and serve only to prop up projects which may not be self-sufficient in the long run. The federal government in such situations would be in the unfortunate position of having to extend subsidies or watch the projects fail.

We believe the proper federal role is one of demonstration of new technologies and technical assistance to state and local governments. EPA has successfully provided both of these functions. We would insert a word of caution, however, that EPA's strategy of decentralizing technical assistance through their regional offices may result in wide variations in the quality and depth of information provided. It will be a challenge to the headquarters office of EPA to assure uniform high standards of assistance administered through ten regional offices.

Our second concern relates to the status of resource recovery projects today. A few years ago the new energy-conversion technologies were almost universally lauded as the solution to the solid waste problem. Several recent false starts, due to rising costs, systems failure, market instability and siting problems, have been a sobering experience. We have long recognized the importance of adequate planning and procurement to assure a successful project. Several states are now considering legislation, which we support, to allow procurement through negotiated contracts as an option to competitive bidding in the traditional sense. Such an approach to procurement will enable local governments to consider all factors in the selection process. The decision-making process in establishing a resource recovery facility is complex; the risks are numerous and extensive.

NSWMA, over the past few months, has evaluated the majority of Requests for Proposal issued by local governments over the past three years looking at the strengths and weaknesses of each procurement attempt. We intend to publish in the near future a model guideline for procurement of resource recovery facilities. We hope that, through our research, we will be able to provide a framework for more effective municipal decisionmaking in the area of resource recovery.

Thank You.

Mr. FLORIO. Transportation cost is a big factor. Almost by definition if you have five facilities rather than one centralized facility, you are going to be cutting down transportation costs.

Mr. WINGERTER. I would say that depends upon the configuration of the community that the system is installed in. If the community has transportation and channels the waste stream to a particular facility easily, that would make a substantial difference.

I raised it as a point of further evaluation and study.

Mr. PLEHN. I have no additional comments.

Mr. ROONEY. Are there any questions, Mr. Florio?

Mr. FLORIO. No questions, Mr. Chairman.

Mr. ROONEY. Do you have any questions, Mr. Skubitz?

Mr. SKUBITZ. I would like to make one observation. Mr. Early, in reading your remarks, the statement you make on page 3:

> In my view, as long as Congress allows OMB to exercise the Power of the Purse, it will never have the federal role expanded to comprehensively address the solid waste problem.

I gripe about OMB about as much as anybody because of the way it divides the tax dollars and distributes it throughout the country. For example, I supported big dams for flood control but I am a strong believer in the watershed program. I think more ought to be spent on watersheds than on big dams because that trouble will start below the dam and you have to patch it up downstream.

But unfortunately the OMB does not have a lot to say about it because the Congress makes sure it is earmarked for big dams rather than watersheds.

So, do not expect too much from Congress. If OMB was to allow all of the money that the Congress authorizes, the taxpayers would revolt in this country. One of the big responsibilities of the OMB—and I am trying to defend them at this time—is they have to take the total package sent out by all the agencies of the Government and say the taxpayers will only stand this much.

And we have to distribute it in this way. It may be that you and I may think that more should go into solid waste disposal. Unfortunately, somebody has more clout in some other areas. They say, No, it is more important to build an urban park somewhere else and so the park comes in and we have to finance that over a 5-year period while some of the other programs stand in line.

So, do not be too harsh with OMB. They may have an impossible task.

Mr. FLORIO. I think the main problem is OMB has a very important role but the question has come down as to the expertise upon which OMB is making some of its judgments. The textbooks say we make the judgment in Congress.

In a couple of areas that I am vitally interested in, OMB has studied its own questionable expertise in making substantive decisions. I think this is a point that has to be addressed over the years. We need a broad review mechanism but we are finding the review process and setting off priorities is dependent upon the suggestion we have to economize; we have budgetary constraints and the real policy cost-affecting decisions are being made almost in a vacuum in many instances.

That may or may not be the case in this instance but I know of some other instances it is just as much outside of line as anything in our own committee. We had $1.3 billion added to the budget yesterday.

Mr. ROONEY. Thank you. We appreciate your appearance today.

Our next panel is on the "Compatibility of Materials and Energy Recovery Objectives" of RCRA.

STATEMENTS OF RICHARD B. SCUDDER, CHAIRMAN OF THE BOARD, GARDEN STATE PAPER CO.; MAXINE L. SAVITZ, DIRECTOR, DIVISION OF BUILDINGS AND COMMUNITY SYSTEMS, DEPARTMENT OF ENERGY; JOSEPH FERRENTE, JR., DIRECTOR, PROJECT DEVELOPMENT, WHEELABRATOR-FRYE, INC.; LUCIEN C. BIELICKI, VICE PRESIDENT, AMERICOLOGY, AMERICAN CAN CO.; PETER KARTER, PRESIDENT, RESOURCE RECOVERY SYSTEMS; AND STEPHEN A. LINGLE, CHIEF TECHNOLOGY AND MARKETS BRANCH, ENVIRONMENTAL PROTECTION AGENCY

Mr. ROONEY. Mr. Scudder, I understand you are going to lead off for the panel.

Mr. SCUDDER. In view of the time, I would like to summarize my statement in the hope that my complete written statement will be included in the record.

Mr. ROONEY. Without objection, your complete statement will become part of the records.

Mr. SCUDDER. RCRA provides the potential for major economic and environmental gains, for energy recovery, and conservation of materials and creation of urban jobs.

I wish I could tell you that governmental implementation of RCRA objectives were moving us towards this achievement. It is not. Due to inadequate funding and perhaps lack of understanding of the need for advance planning, the country is drifting in the direction of burning everything at the cost of jobs, materials, and the best economic results for all concerned.

The broadest based, lowest cost, most beneficial solution of the garbage problem lies in a combination of materials recovery and burning for energy. These techniques are altogether compatible. In fact, burning facilities are most profitable when materials recovery is properly carried out as part of their program.

The essential element, other than understanding of factors involved, is prior planning. It is essential that burn facilities be engineered for the garbage they will actually receive.

If one plans to burn all the garbage and a plant is built to burn all the garbage, it will then be too late to recover recoverable and valuable materials. The necessary planning is often not being done.

Advisory teams often do not have adequate expertise or the money needed. Fortunately, at some local levels, the necessary planning is being done.

I would like to cite three examples. First, the new plan of the Port Authority of New York. The agency is currently laying the groundwork for four industrial parks with a primary goal of increasing employment in the New York metropolitan area.

The unique aspect of this planning is that source separated materials: Paper, glass, and metals will be used to provide raw materials for recycling, while the unseparated contaminated residual will be processed to provide low-cost energy for their processing into new products.

In addition to solving waste problems, port authority studies show that the project will contribute one new job per daily ton of solid waste; a potential of 35,000 new urban potentially innercity jobs in the New York area.

There is no reason why this model could not be repeated elsewhere.

Second, the recently released policy statement of the New Jersey Department of Energy, contends with materials conservation and production of energy. One of its provisions is the goal of planning for 20 percent of the State's daily 17,000 tons of garbage to be separated for recycling while the remaining 80 percent goes to energy production.

Attainment of this goal, according to the State, would mean that more than 60 percent of the yearly electrical energy demands of New Jersey homeowners could be met through the use of the garbage, compared to only 40 percent if plans were made to burn all the garbage.

In short, what this says is, that burning of some recoverable material to create energy waste is energy. Although, not quite so advanced as the State of New Jersey, Westchester County, New York, solid waste planning designates 75 percent of the garbage for energy production and 25 percent for source separated materials programs.

There is no reason these examples could not be duplicated if the resource recovery portion of the act is given adequate attention and funding.

Left alone, the municipal solid waste disposition solution will be shaped on the basis of local crises, and a war for garbage will result in splintered, ill-planned decisionmaking. That is what is happening today. The recycling industry is self-supporting and will grow if it is not precluded, due to uninformed planning. The energy production industry can also flourish if composition quantities are known before facility design is finalized.

[Mr. Scudder's prepared statement follows:]

STATEMENT OF RICHARD B. SCUDDER, CHAIRMAN OF THE BOARD, GARDEN STATE PAPER CO.

P.L. 94–580 offers the potential to convert the solid waste problem into a resource that will both conserve and produce energy, conserve resources, and contribute employment opportunities.

Properly supported under RCRA legislation, the recycling industries which conserve materials and energy, and an evolving energy production industry can harmoniously contribute to solving the vastly ignored solid waste management problem. The concept of source separation should be endorsed as a technically and economically viable component of resource recovery. There is a definite compatibility between "low" and "high" technology approaches to resource recovery. Further, the broadest base/lowest cost/environmentally acceptable solid waste management solution results from proper integration of the two approaches in the *planning* process. Materials recovery where dependable markets exist, added to energy recovery from the balance of the garbage, provides society with the highest economic return provided the burn facility planned is planned for the mix it actually will receive. Each daily ton of garbage should provide one urban job.

Several examples of balanced planning are sufficiently noteworthy to cite:

N.Y./N.J. Port Authority is currently laying the groundwork for four Industrial Parks with a primary goal of increasing employment in the NYC metropolitan area. The unique aspect in this planning is that source separated materials (paper, glass, metal) will be used to provide raw materials for recycling while the unseparated/contaminated residual will be processed to provide low cost energy to park tenants. In addition to solving the solid waste problem, PA studies show that the project will contribute one new job per daily ton of solid waste; a potential of 35,000 additional urban jobs in the metropolitan NYC area. This model appears replicable in other urban areas.

The recently released policy statement for the New Jersey Department of Energy contends with the energy conservation and production potential in the state's solid waste. One of the most notable provisions is a goal of planning for 20% of the state's 17,000 tpd to be source separated for recycling while designating the remaining 80% for energy production. Attainment of this goal means that more than 60% of the yearly electrical energy demands of New Jersey homeowners could be met as opposed to a 40% figure if no source separation/materials recycling took place.

Although not quite as advanced as the State of New Jersey, Westchester County, New York, solid waste planning designates 75% for energy production and 25% for source separation/reduction programs.

These examples could be replicated if the resource recovery portion of the Act were given more attention and funding. Left alone, the municipal solid waste disposition solution will be shaped on the basis of local crisis and a "war for garbage" will result in splintered, ill-planned decision making. The recycling industries are self-supporting and will grow if they are not precluded due to uninformed planning. The energy production industry can also flourish if waste composition/quantities are known before facility sizing is finalized.

With this introductory overview, I believe that comments from the panel will be most interesting to the oversight committee.

Thank you.

Mr. ROONEY. Thank you.

You may proceed in the manner in which you so desire.

STATEMENT OF MAXINE L. SAVITZ

Ms. SAVITZ. I am Maxine Savitz, Director for the Division of Buildings and Community Systems, Department of Energy.

If I may, I would like to submit my testimony for the record and just summarize.

Mr. ROONEY. Without objection, your statement will become part of the record.

Ms. SAVITZ. The Department of Energy recognizes the need and potential for recovery of energy and energy intensive materials from wastes.

The Department of Energy views wastes as underutilized resources. Although the Nation's waste stream is composed of materials from several environments, including agriculture, forestry, industry, and urban locations, my remarks will be confined to urban wastes since they are the primary focus of the Resource Conservation and Recovery Act of 1976.

According to the National Center for Resource Recovery, approximately $4 billion are spent annually for collection and disposal of urban refuse. Cities produced urban solid wastes at the rate of 150 million tons per year in 1975 and are estimated to produce 200 million tons per year in 1985. If the energy value in these wastes were fully recovered, it would represent two quads in 1985. Over 500,000 barrels of oil equivalent is available today from this waste stream. In addition, the noncombustible inorganics in this waste stream represent potential energy savings, through reuse, of an estimated 1.2–1.5 quads per year by 1985.

Before this potential energy recovery and conservation can be realized, major technical and nontechnical problems must be addressed. Principal efforts at the Department of Energy have been directed toward the technical areas. Essentially, three options are available for energy and materials recovery: Mechanical, thermal, and biological technologies.

Our program has been initiated on a broad technical base. Our major emphasis has been in the bioconversion and pyrolysis areas since these technologies are least developed.

In the mechanical separation field, the Department of Energy is supporting the National Center for Resource Recovery in developing materials to meet the specifications required by markets.

Under a task order contract initiated in fiscal year 1976, the Department of Energy is exploring means to upgrade recovered glass which, when used as cullet, saves 25 percent of the energy required in glass manufacture.

Another task explores the use of RDF in small industrial boilers. Current RDF usage is aimed at the large utility boilers, where both technical and nontechnical barriers exist in this application.

Usage in industrial boilers will broaden the market opportunities and economics of recovery systems, because unlike utilities who buy fuels on long-term low-cost contracts, industries must pay higher prices in shorter term contracts.

We are initiating a planning effort at this time with NCRR to utilize a mobile RDF plant that can be moved from site to site.

This will attack the "Catch 22" situation; whereby, an area cannot produce RDF until it has a contract to secure financing and cannot obtain a contract until it produces fuel.

This effort attacks barriers to implementation and opens opportunities to small scale systems. Also looking at urban waste-to-energy systems, many are currently limited economically to areas that can generate a minimum of 500 tons of waste per day.

These areas account for approximately 65 percent of the waste generated in the United States. To recover the potential of the other 35 percent, systems must be developed to economically process waste from smaller communities of 10,000 to 20,000 people.

Small starved air combustion units are applicable, and in some cases, have proven economically viable. The Department of Energy has a system study underway to develop a computer model of parametric data for small systems, locate and describe existing systems, especially those that are developmental, and exercise them against the model to determine appropriate development needs. A research and development plan is a key output of this effort.

In the combustion field, we conducted a study of the European experience in resource recovery, including an overview and nine case studies.

Together with EPA, we are supporting a development effort by the National Bureau of Standards to determine means for establishing the heat value of refuse-derived fuels.

This is an important element in establishing contractual obligations between producers and users of waste as an energy source.

In the pyrolysis field we have several efforts. Gasification processes appear to provide energy products with high market potential.

Pyrolysis gases can be used as is, upgraded to pipeline quality or can be conditioned for use as chemical feedstock. We supported the development of a pilot plant to condition PUROX pyrolysis gas for use in ammonia synthesis.

In the bioconversion field we are supporting development of the technique of anaerobic digestion of the organic fraction of solid wastes. We are completing construction of a proof of concept scale facility, which is 50 to 100 tons per day, and will begin operations this spring.

That is located in Florida. We expect to test the facility at least 2 years. This system will produce approximately 3,000 SCF of methane gas per ton of waste processed. Evaluation will include assessments of technical, economic, and environmental performance.

We are supporting work on enzymatic hydrolysis at the U.S. Army Natick Laboratories. In this technique, an enzyme selectively converts cellulose to glucose which may then be fermented to alcohol.

This work is to culminate in a pilot plant in the 1982 time frame. Another technique known as ANFLOW is being supported.

It involves the anaerobic digestion of sewage in a packed bed upflow reactor. If successful, it will reduce the capital cost of sewage treatment, recover energy and reduce sludge disposal problems.

We have operated a facility at pilot scale, which is 5,000 gallons per day, since early 1977 and expect to continue development of the process.

This is a sample of our existing efforts. Our primary new efforts in fiscal year 1978 are in the areas of utilization of combustible gas recovered from sanitary landfills, recovery of energy from sludges and conservation of energy in sewage treatment processes, and support of feasibility studies and final designs for potential demonstrations of new technologies that are included in the President's fiscal year 1979 budget.

This last area attempts to accelerate demonstrations of effective technologies for recovery of energy and materials from municipal wastes.

Our fiscal year 1978 authorization, which was signed by the President last week, establishes additional authorities to support urban waste to energy activities.

We will examine and apply these authorities where appropriate. For example, we will support a number of feasibility analyses for energy recovery projects.

We expect to support six to eight studies this year, and will continue this program as funds allow. Application of the additional authorities will be considered, where appropriate in the development of future budgets.

Identification and solution of technical problems has been the focus of the Department of Energy programs to date. However, our research reveals that it is more and more critical that nontechnical problems be addressed to allow effective integration of new systems into existing institutional frameworks.

Our assessment of European technologies was initiated to analyze why this apparently mature technology was not being transferred more rapidly to this country. The information developed in these case studies reveals differences in approach to questions of economics, financing and operating performance.

We have coordinated our efforts with EPA in the past and will continue to do so. Together, we are developing a joint program for recovery of energy and materials from waste, addressing our joint assessment of the problem and providing a coordinated Federal response.

This plan identifies factors to be addressed in an R.D. & D. program, as well as an implementation program. We expect to complete the plan in the next few months.

We now have three joint projects underway, and contemplate several more in the near future. It is our policy to inform EPA of our planned actions, ask them for comment and input, and keep them advised through copies of materials we receive from our contract efforts.

Their names are now automatically added to the distribution list for contracts and our contractors will mail copies of monthly reports directly to EPA staff members.

Our fiscal year 1978 and 1979 budgets have been planned jointly to optimize results, prevent unnecessary duplication and to exchange information.

We will continue to make every effort to coordinate with EPA our plans for accelerating recovery of energy from wastes. As I mentioned earlier, we believe it is imperative that technical and nontechnical barriers and problems be addressed in a coordinated manner.

We are committed to providing planners with adequate information on which they may judge the technical, economic and institutional feasibility of systems for recovery of energy from wastes.

With a carefully planned program, we are certain we can develop, demonstrate and commercialize systems that recover the value from these underutilized resources.

Thank you.

[Ms. Savitz's prepared statement follows:]

STATEMENT OF MAXINE I. SAVITZ, DIRECTOR, DIVISION OF BUILDINGS AND COMMUNITY SYSTEMS, DEPARTMENT OF ENERGY

Mr. Chairman, Ladies and Gentlemen of the Subcommittee, thank you for the opportunity to present the Department of Energy's view on energy nnd mnterials recovery from wastes.

The Department of Energy recognizes the need and potential for recovery of energy and energy intensive mnterials from wastes. DOE views wastes as underutilized resources. Although the Nntion's waste stream is composed of materials from several environments, including ngriculture, forestry, industry and urban locations, my remnrks will be confined to urban wastes since they are the primary focus of the Resource Conservation and Recovery Act of 1976.

According to the Nationnl Center for Resource Recovery, approximately $4 billion are spent annually for collection and disposal of urban refuse. Cities produced urban solid wastes at the rate of 150 million tons per year in 1975 and are estimated to produce 200 million tons per year by 1985. If the energy value in these wastes were fully recovered, it would represent 2 quads in 1985. Over 500,000 barrels of oil equivalent is available today from this waste stream. In addition, the noncombustible inorganics in this waste stream represent potential energy savings, through reuse, of an estimated 1.2–1.5 quads per year by 1985.

Before this potential energy recovery and conservation can be realized, major technicnl and nontechnical problems must be addressed. Principal efforts at DOE have been directed toward the technical areas. Essentially, three (3) options are available for energy nnd materials recovery: mechanical, thermal, and biological technologies. These technologies are in various stages of development. Some require refinement and improvement for commercial application; others are in the enrlier stages of research and development and require testing and evaluntion for scnle-up.

Mechanical separation techniques based upon the mineral dressing industry are being implemented. However, urban waste is very heterogenous and some new development work is also necessary; for example, more energy efficient and lower maintenance means of reducing the size of waste particles is needed.

The products of mechanical separation arc materials and include a refuse derived fuel (RDF), paper fiber, ferrous metnls, nonferrous metals and glass. The best example to illustrate the energy potential in the materials recovery is aluminum. Recovery of a pound of aluminum requires only 5% of the energy required to produce a pound of virgin aluminum. This is a 100,000 BTU saving per pound, or if 50% of the estimated 4 billion pounds of aluminum discarded ench year could be recovered, up to 200 trillion BTU's could be available. Melt losses of 10% and transportation and collection costs are excluded from this estimate.

Experience with the mechanical separation plants that have been constructed illustrates n need for more reliable equipment and improved materials handling processing to ensure products can meet mnrket specifications.

Thermnl technologies include combustion and gasification or variations of them. Combustion is burning of waste in the presence of excess air. This technology may use the RDF fraction from mechanical systems or may burn as received waste on a grate. The RDF may be burned alone or may be cofired with fossil fuels, especinlly coal. The product is hot water or stenm which may be used for district heating and cooling, process heat, or electric power production.

Combustion in wnterwall incinerators is widely npplied in Europe nnd Japan, and there are severnl examples in the United States of cofiring of RDF and coal and mass burning of wastes for energy recovery.

Gasification or its special case, pyrolysis, is the thermal decomposition of wastes in an oxygen deficient atmosphere. Depending upon the process parameters, a solid, liquid or gaseous fuel is the primary product. There is interest in continued development of gasification and pyrolysis systems because of the apparent enhanced usefulness of the energy end products. Gasification systems are generally less developed than combustion systems.

The third technology is bioconversion, the use of organisms or enzymes to convert the organic fraction of waste to an energy product. In this area the principal products are methane from anaerobic digestion, and ethanol from hydrolysis. These techniques are developmental at this time.

Recovery of combustible gas from landfills also appears potentially viable as an energy recovery system which, as a fringe benefit, can alleviate migration and explosion problems.

DOE believes it is important to help provide resource recovery/waste management planners with process and end-product options from which they can select systems best suited to the quantity and quality of the waste resource available to them, and which will provide an energy end-product they can market.

Our program has been initiated on a broad technical base. Our major emphasis has been in the bioconversion and pyrolysis areas since these technologies are least developed.

In the mechanical separation field, DOE is supporting the National Center for Resource Recovery in developing materials to meet the specifications required by markets. Under a task order contract initiated in FY 1976, DOE is exploring means to upgrade recovered glass which, when used as cullet, saves 25% of the energy required in glass manufacture. Another task explores the use of RDF in small industrial boilers. Current RDF usage is aimed at the large utility boiler, where both technical and nontechnical barriers exist in this application. Usage in industrial boilers will broaden the market opportunities and economics of recovery systems, because unlike utilities who buy fuels on long-term low-cost contracts, industries must pay higher prices in shorter term contracts. We are initiating a planning effort at this time with NCRR to utilize a mobile RDF plant that can be moved from site to site. This will attack the "Catch 22" situation; whereby, an area cannot produce RDF until it has a contract to secure financing and cannot obtain a contract until it produces fuel. This effort attacks barriers to implementation and open opportunities to small scale systems.

Urban waste-to-energy systems are currently limited economically to areas that can generate a minimum of 500 tons of waste per day. These areas account for approximately 65% of the waste generated in the U.S. To recover the potential of the other 35%, systems must be developed to economically process waste from smaller communities of 10–20,000 people. Small starved air combustion units are applicable, and in some cases, have proven economically viable. DOE has a systems study underway to develop a computer model of parametric data for small systems, locate and describe existing systems, especially those that are developmental, and exercise them against the model to determine appropriate development needs. A Research and Development plan is a key output of this effort.

In the combustion field we conducted a study of the European experience in resource recovery, including an overview and nine case studies. European systems are based on the large waterwall incinerator. The principal product is heat in the form of hot water or steam. The use of that heat is site specific. Most popular is the production of district or process heat, although the larger installations recover electricity and extract steam from the turbines for district heat. This is the cogeneration concept. Our study indicates that cogeneration improves fuel efficiency by 20% and that implementation is enhanced when the local government has responsibility for the disposal of waste and the furnishing of energy. Implementation is also enhanced by a tradition of district heating, of waste disposal by incineration and by the scarcity of space for sanitary landfills.

Together with EPA, we are supporting a development effort by the National Bureau of Standards to determine means for establishing the heat value of refuse and refuse derived fuels. This is an important element in establishing contractual obligations between producers and users of waste as an energy source.

In the pyrolysis field we have several efforts. As I mentioned earlier, these gasification processes appear to provide energy products with high market potential. Pyrolysis gases can be used as is, upgraded to pipeline quality or can be conditioned for use as chemical feedstock. We supported the development of a pilot plant to condition PUROX pyrolysis gas for use in ammonia synthesis.

In the bioconversion field we are supporting development of the technique of anaerobic digestion of the organic fraction of solid wastes. We are completing construction of a proof of concept scale facility—(50–100 tons per day) and will begin operations this Spring. We expect to test the facility at least two years. This system will produce approximately 3000 SCF of methane gas per ton of waste processed. Evaluation will include assessments of technical, economic, and environmeutal performance.

We are supporting work on enzymatic hydrolysis at the U.S. Army Natick Laboratories. In this techuique an enzyme selectively converts cellulose to glucose which may then be fermented to alcohol. This work is to culminate in a pilot plant in the 1982 time frame. Another technique known as ANFLOW is being supported. It involves the anaerobic digestion of sewage in a packed bed upflow reactor. If successful, it will reduce the capital cost of sewage treatment, recover energy and reduce sludge disposal problems. We have operated a facility at pilot scale (5000 gal/day) since early 1977 and expect to continue development of the process.

This is a sample of our existing efforts. Our primary new efforts in FY 78 are in the areas of utilization of combustible gas recovered from sanitary landfills, recovery of energy from sludges and conservation of energy in sewage treatment processes, and support of feasibility studies and final designs for potential demonstrations of new technologies that are included in the President's FY 1979 budget. This last area attempts to accelerate demonstrations of effective technologies for recovery of energy and materials from municipal wastes. Our Fiscal Year 1978 authorization, which was signed by the President last week, establishes additional authorities to support urban waste to energy activities. We will examine and apply these authorities where appropriate. For example, we will support a number of feasibility analyses for energy recovery projects. We expect to support 6–8 studies this year, and will continue this program as funds allow. Application of the additional authorities will be considered, where appropriate in the development of future budgets.

Identification and solution of technical problems has been the focus of DOE programs to date. However, our research reveals that it is more and more critical that nontechnical problems be addressed to allow effective integration of new systems into existing institutional frameworks. Our assessment of European technologies was initiated to analyze why this apparently mature technology was not being transferred more rapidly to this country. The information developed in these case studies reveals differences in approach to questions of economics, financing and operating performance. We believe useful insights are gained through case studies, and together with EPA we are supporting an assessment and case study of an RDF facility in Ames, Iowa. The case study is a valuable means of analyzing specific institutional, technical and economic concerns in implementing innovation in energy conservation in community systems.

We have coordinated our efforts with EPA in the past and will continue to do so. Together, we are developing a joint program for recovery of energy and materials from waste, addressing our joint assessment of the problem and providing a coordinated Federal response. This plan identifies factors to be addressed in an RD&D program as well as in an implementation program. We expect to complete the plan in the next few months.

We now have 3 joiut projects underway, and contemplate several more in the near future. It is our policy to inform EPA of our planned actions, ask them for comment and input, and keep them advised through copies of materials we receive from our contract efforts. Their names are now automatically added to the distribution list for contracts and our contractors will mail copies of monthly reports directly to EPA staff memebrs. Our FY 78 and 79 budgets have been planned jointly to optimize results, prevent unnecessary duplication and to exchange information. We will continue to make every effort to coordinate with EPA our plans for accelerating recovery of energy from wastes. As I mentioned earlier, we believe it is imperative that technical and nontechnical

barriers and problems be addressed in a coordinated manner. We are committed to providing planners with adequate information on which they may judge the technical, economic and institutional feasibility of systems for recovery of energy from wastes. With a carefully planned program, we are certain we can develop, demonstrate and commercialize systems that recover the value from these underutilized resources.

Mr. ROONEY. Thank you.

Mr. FLORIO. Since I am going to have to leave, I wanted the opportunity to ask Mr. Scudder if you could give us an example of an uninformed plan at the local level that might preclude the private sector?

Mr. SCUDDER. As I understand, there are some 65 burn projects—resource recovery projects—going on, of which only one makes any projection at all for materials recovery.

I think what has happened is that the teams that are RCRA contemplated would be to give the advice to those who do not include their membership who understand the economics or the factors involved in materials recovery; therefore, there is no advice given.

Mr. FLORIO. Is it your impression the teams in the local government are not successfully reaching out into industry to get the form?

I think what you are saying is they are burning things they should not be burning.

Mr. SCUDDER. It is simplistic and easy to burn everything. Without positive imput of rather sophisticated form, they have no way to go, they do not know any better.

Mr. FLORIO. I am surprised that before the municipal or governmental agencies funding of such facilities, they would reach out to get as much form so as to get more benefits for the dollars invested, but you indicate they apparently do not.

I appreciate that. I am not sure how we go about increasing the sensitivity at the local level except by writing it into law that it be done.

Mr. SCUDDER. If each EPA team has somebody that understood the factors, it would solve some of the problems. They do not.

Mr. FLORIO. Thank you.

Mr. ROONEY. Who would like to speak next?

STATEMENT OF JOSEPH FERRANTE, JR.

Mr. FERRANTE. I am Joseph Ferrante. I would like to summarize my statement and enter the complete statement into the record.

Mr. ROONEY. Without objection, your entire statement will be entered in the record.

Mr. FERRANTE. I have a few remarks departing from the statement. I want to thank you on behalf of Wheelabrator-Frye, Inc., for the opportunity to participate in these hearings.

I would like to give you a brief status report on our operation in Saugus that has been alluded to a few times. It has been a year since we have been before this Panel.

Mr. ROONEY. As I recall, it has been praised.

Mr. FERRANTE. In one sense, it was praised. I think our investors would consider me remiss if I did not say that.

We have been up for 2½ and put through 750,000 tons of mixed refuse which generated over 3 billion pounds of steam for electric power production and turbine jet engine testing as well as heating and cooling.

We have recovered about 30,000 tons of metal. And we feel we will continue to provide the Boston North Shore community with reliable waste disposal services.

We have never turned away a single garbage truck from our gates. One of the previous speakers mentioned some of our difficulties and we are not reluctant to admit we had some difficulties in starting up and shaking down.

I do not think anybody has ever put a major industrial facility on-line without comparable difficulties. We are not a cookie-cutter operation.

Even though there are 140 plants of this type throughout the world, each one is unique and so we had to tame ours. The issue of corrosion is a very clear and a very important one when you are dealing with the combustion of a refuse feed stock. We knew about it. We did not go in with blinders on. We toured European plants and talked to the operators of those facilities. There is a basic difference, however, in the way the European municipalities operate these plants and the way we in American private enterprise must operate them.

In Europe, when corrosion was experienced, it was simply budgeted for. So, if, for example, there was severe corrosion in the super heaters, that became a part of the municipal operating budget. Every several months a particular furnace unit would come down, the tubes were replaced and nobody knew the difference because it was part of the municipal budget. But in the private sector, we cannot operate that way and make the returns we are looking for. We knew we would have corrosion. We experienced it and, we believe, we have solved it. Most importantly, the cost of solving our corrosion problem was to our account.

We did not look to the municipalities budget to insulate ourselves from that capital risk. That is a point I want to make before this committee. Resource recovery capital operating risks are real and municipalities should be aware of this fact. They are not going to be undertaking something that is a sure-fired thing.

Our company is committed to the philosophy that the private sector should assume ownership and operational responsibilities for resource recovery. This morning, however, the issue being addressed by this panel is compatibility between source separation activities and plants like ours in Saugus, Mass.

Let me observe at the outset that we believe the two recycling approaches are entirely compatible. In our negotiations with the North Shore communities, we adopted a rather simple formula which we feel anticipates some of the current debate between low and high technology approaches to recycling and recovery and affords the community with the opportunity to participate in centralized resource recovery operations while still engaging in source separation programs.

Very simply, we established a base tonnage commitment from a town to our plant. In the case of most towns, this is for a 20-year period.

Each year, that tonnage is recorded, totalled up and becomes the base tonnage for the following year. The towns, during the following year, are permitted to recycle, through any type of source separation activity, up to 5 percentage points of that tonnage without any type of penalty under the contract.

Five percent may seem like a small amount but when you put it into the context of some of the studies that have been completed, it has some significant potentials.

For example, a 5 percent reduction in tonnage is what the Comptroller General, in his recent report to Congress, states the effect of mandatory beverage container recycling to be.

That form of recycling would produce a 5 percent reduction in solid waste tonnage in the United States; therefore, mandatory recycling in North Shore communities would reduce waste tonnages by about 5 percent and be permitted, under the contract arrangement with us.

For another example, the total recycling of newsprint would reduce waste tonnages by about 5 percent. This is a very simple and a fairly crude method of adjusting source separation with energy recovery operations but it is one that does permit towns the flexibility to enter and continue local, community-based source separation programs.

However, the important point to note is that source separation, community-based recycling centers are still market oriented.

The market must exist. As a company, we are committed to the concept that the open marketplace should determine the viability of a resource recovery system versus alternative forms of disposal.

We believe we have demonstrated this in Saugus and we feel that this is an important position to maintain within the resource recovery industry.

In other words, we feel a free market system should determine whether paper, for example, is recycled up front through source separation programs or whether paper products are disposed of to produce recovered energy in plants like Saugus.

We believe existing recycling programs should continue to be expanded as markets improve. Energy recovery operations like Saugus, if properly planned, allow communities to get the best value for their waste, either as a product or as a Btu.

Thank you, Mr. Chairman.

[Mr. Ferrante's prepared statement follows:]

STATEMENT OF JOSEPH FERRANTE, JR., DIRECTOR, PROJECT DEVELOPMENT ENERGY DIVISION, WHEELABRATOR FRYE, INC.

Mr. Chairman and members of the sub-committee: I want to thank you on behalf of Wheelabrator-Frye for the opportunity to participate in these oversight hearings.

Wheelabrator-Frye's most visible involvement in resource recovery comes from our owning and operating a major, commercial refuse-to-energy plant along Boston's North Shore, in Saugus, Massachusetts. That plant now has been on line for 2½ years; has disposed of more than 700,000 tons of area solid waste; has cogenerated over 3 billion pounds of steam for electric power production and turbine and jet engine testing, as well as heating and cooling; has recovered over 30,000 tons of metal. The plant continues to provide North Shore

communities with reliable waste disposal services. We have never turned away a single garbage truck from our gates.

The issue being addressed by this panel is the compatibility of resource recovery operations, like our Saugus refuse-to-energy plant, with source separation programs like those conducted by companies represented on this panel. Let me first observe that our energy recovery technology is certainly compatible with community-based source separation programs. In fact, through a rather simple formula, we have anticipated this debate between the so-called "low" and "high" technology approaches to resource recovery in our North Shore project.

We have allowed for source separation programs to be conducted by those Boston North Shore towns serviced by our energy recovery plant. Under our municipal waste disposal agreements with these towns, we let the annual tonnage for solid waste delivered and accepted by our plant become the base tonnage for the following year's commitment. However, we let the base tonnage for the following year decrease by as much as 5% of the previous year's tonnage. This means that a community can reduce its tonnage commitment to our plant by up to 5% per year and still meet the terms of its contract. This also enables North Shore towns to maintain whatever level of source separation activity existed prior to our resource recovery project. By permitting a 5% reduction in the tonnage commitment each year, we provide the town with the ability to gradually enlarge its source separation programs and still avail itself of long-term refuse disposal-energy recovery services. We think this is one way to resolve our requirements for a steady stream of waste and a community's desire to pursue profitable, source separation projects.

To put this 5% reduction in perspective, let me relate it to some generally accepted values for the impact of different source separation alternatives. For example, according to the Comptroller General of the U.S., a mandatory deposit program would reduce the municipal solid waste stream tonnage by up to 5% through the recycling of glass and metal beverage containers ("Potential Effects of a National Mandatory Deposit on Beverage Containers", by the Comptroller General of the U.S., PAD–78–19, Dec. 7, 1977). From another angle, if all newsprint contained in the post consumer waste stream were somehow separated and recycled, this would also represent about a 5% tonnage reduction.

In each of these instances, the extent of source separation should rest on a careful assessment of its costs and benefits in comparison to resource recovery alternatives. The question thus becomes whether the total cost of reudering post consumer waste materials marketable can be justified in light of values at available markets and alternative net costs through resource recovery.

As a company, we are committed to the concept that the open marketplace should determine the viability of a resource recovery system versus alternative forms of disposal and recycling. We have demonstrated this in Saugus, and we feel that this is an important position to maintain within the resource recovery industry. In other words, we feel that free market mechanisms should determine whether paper, for example, is recycled up front through source separation programs or whether paper products are disposed of to produce recovered energy in plants like ours.

We believe existing recycling programs should continue to expand as markets improve. Energy recovery operations, like Saugus, if properly planned, allow communities to get the best value for their waste—either as a product or as a BTU.

STATEMENT OF LUCIEN C. BIELICKI

Mr. BIELICKI. I would like to submit a very brief outline of the discussion I want to make today. We are the originator of the Milwaukee plant. I would like to take issue with one statement that was made about the $5 million overrun of this plant. We spent $5 million on this plant, but it was not overrun. We knew we were going to have to spend it to make the plant produce.

This plant is a little different in concept from the Frye Technology. We have built-in provisions and systems for the reseparation of all those materials that have greater value and, in fact, are not conducive to a burn process. All those materials which cannot be burned or ought not be burned are separated and sold as a fuel to a local utility.

We have been operating since May of 1977 on a daily basis. We do not take all of the city garbage yet. However, we are taking ever-increasing amounts of city garbage. We have long term contracts for the sale of newspaper, with which we separate ferrous metals of aluminum, glass, and fuel.

We have never had any problem in the successful sale of any of these materials. The descriptions and comparisons of handling solid-base wastes of sewage sludge seem simple. Yet, there is a basic difference in that the processing or operations of a solid waste plant entails a continuing marketing and research effort to get the most and best use of the products that are recovered.

In the operation of a sewage plant, you are not selling anything; you are disposing of something. This is a basic difference in the philosophy of that operation.

We have made comparisons and evaluations of the proposals of source separation based on the operation of this plant and the analysis of what comes in in garbage. We think source separation—or preparation if you want to call it—of anything except newspapers is a total waste of time.

The collection system in a good resource recovery plant enables the cleaning, the concentration, the segregation, and the efficient shipping and storage of those materials to the recycling industries who are capable of handling this on a large scale.

Small efforts by voluntary groups will never solve the total problem. The movement of material in a large city is in large tonnages. While we may look for methods of reducing the weight or volume of materials to be recycled. I think we overlook the single most simple analysis of what we are moving, and that is moisture.

Garbage in modern cities essentially runs 30 to 40 percent moisture. If we can reduce that by 10 percent, we will save more than we can ever save in any source reduction or separation program. It will also improve the efficiency of burn when it is steam or water wall incinerator as well as reduce the cost to municipals of transporting water around the entire system.

The systems will change in the future. We started out with certain technology. We are beginning to see changes. However, these are progressive improvements. They will not obliterate the existing systems.

The use of pyrolysis is another form of cleaner energy from conversion. The biggest single obstacle we see now in dealing with the sale of refuse derived fuel to a utility is lack of an incentive of a utility. We have nothing to gain by burning a refuse derived fuel. It will cause real problems. They have never done this before.

There is a substantial capital investment. There are additional operating costs. The price they pay for the fuel is the same as they are now paying for coal. If we sell it to them cheaper, it is a penalty to us. They would have to pass the savings on to the rate payer. They cannot pay us more. Therefore, there is very little incentive at the present time for any utility to consider burning refuse derived fuel.

Thank you.

[Mr. Bielicki's prepared statement follows:]

STATEMENT OF LUCIEN C. BIELICKI, VICE PRESIDENT, AMERICOLOGY, AMERICAN CAN CO.

Recycling industries have been in existence on a major scale for over 50 years and have succeeded in recovering paper, ferrous and non-ferrous metals primarily through industrial recovery and collection systems. These industries are viable today and have a history of servicing their clients and providing a ready market for the products.

The resource recovery industry for the recovery of materials from solid waste is based on the same concept namely technology, distribution and marketing. We are dealing with materials which will be generated in large quantities, will require cleaning and processing for maximum utilization and the conversion of biomass materials into direct forms of energy. The system is a continuation of the present mass distribution network of product formation from the mine or forest to the manufacturer, to the processor, to the distributor and eventually to the ultimate user. At this point the waste product has traditionally gone to the garbage dump but now the process will repeat itself by recovering the valuable materials on a large scale—cleaning and processing in an efficient manner, transportation in large quantities and providing markets for its reuse in the distribution network.

The new base for all evaluation is energy consumption or reuse. This involves not only energy for making product but for its handling, efficient recovery and the reuse of biomass in direct energy installation such as a fuel to produce steam and/or electricity. The concept will apply to large and small communities, will not cause any disruption in present efficient distribution methods and will enable recovery and reuse of material at their highest potential economic and energy value. Source separation and preparation of newspapers is ideally suited to this concept. Source separation of other materials is a waste of time and grossly inefficient.

Large scale demonstrations of the effectiveness of such a system are now in progress and are continuing to expand across the country to provide a greater supply of dependable and properly prepared raw materials for reuse by industry. The greatest need for incentive will be in the use of biomass fuels by utilities. The technology is here, the financing is available. Credibility and final acceptance is still lacking.

Mr. ROONEY. Thank you very much.

Mr. Karter?

STATEMENT OF PETER KARTER

Mr. KARTER. Mr. Chairman, I would like to summarize. I would like my full statement to be included in the record.

Mr. ROONEY. Without objection, your complete statement will be inserted in the record.

Mr. KARTER. Mr. Chairman and members of the committee, I am honored to be here and to have been asked to make my comments today. My name is Peter Karter. I am president of Resource Recovery Systems. Our plant in Branford, Conn., has been in operation since 1975.

Resource Recovery Systems is a profit oriented corporation funded entirely by private capital. The objective of the corporation was to develop a system to collect, process, and market bottles and cans on an industrial basis. That is, to have organized recycling on a profitable basis. That objective has largely been met. In order to achieve the highest market value at the lowest total cost, RRS receives only materials which have been isolated so that they have not entered the solid waste stream. The more of these noncombustible bottles and cans that are removed, the more efficient will be the energy recovery process. We produce three colors of finely crushed, contaminant free

glass known as cullet, flattened tin cans, and flattened, shredded, or smelted aluminum cans. We have unlimited orders for all of these commodities from our markets.

We are a young company in a new field and are just completing our developmental stage. To reach this point, it was necessary to design and build proprietary equipment to accomplish these tasks:

One: Vibrating hopper systems to properly feed mixed bottles and cans onto conveyors.

Two: An efficient magnetic separation system to remove the ferrous materials.

Three: A materials sorting procedure for a glass smashing and screening machine.

Four: A can flattening machine.

Five: A safe shreading machine for aluminum cans.

The RRS standard plant has a production capacity of 80 tons per day on a one-shift basis. It will provide direct employment for 17 people and require the services of some 14 contract drivers. The processing machinery is operated by electrical motors which add up to a total of only 30 horsepower. A remote control system with indication has been developed for the entire process.

Our concept is that in order to achieve maximum participation, we need to be able to offer the convenience of a system that will receive the bottles and cans mixed together. We developed our technology accordingly. One major source is from programs where bottles and cans are collected at the curbside in conventional refuse trucks. We also sponsor convenient central collection points, and work closely with municipalities, private refuse haulers, and community groups to obtain these materials.

I would like to stress that we have an unlimited market for our glass and metals. Since others present will discuss metal markets, I will concentrate on the glass cullet market.

I must preface these comments by stating that our process permits us to turn out a uniform quality product. Presently, we have open purchase orders from two glass container manufacturers to which we have been delivering glass cullet, Thatcher Glass and Glass Container Corp. We have also had requests from other glass companies for delivery of our product, but we simply do not have enough cullet to meet these demands; nor can I foresee ever being able to exceed the demand.

The reason for this is that it is possible for our customers to go to at least 50 percent cullet use. We deliver our product in 22 ton lots by dump trailer. It is color sorted and free of contaminants such as metals and ceramics. The quality is of such a consistency that we can deliver at any time of the day or night, which allows us to minimize our transportation costs.

Recycling operations which cannot provide a proven consistency of quality and quantity may find it very difficult to market their cullet, a problem we experienced in our initial developmental stage.

I believe that there is a market for all the clean, color sorted cullet which can be made available. In the glass container manufacturing process the use of cullet represents:

One: A large savings in energy.

Two: An extension of equipment life due to decreased furnace wear and deterioration.

Three: A reduction of air emissions with an attendant reduction of air pollution control costs.

Four: Technically, it is entirely possible to use 100 percent cullet to make new glass.

We are optimistic about the expansion of our systems, not only because of the demand for our cullet, but also because of an increasing demand for our service. In short, volume reduction of solid waste by the removal of noncombustible bottles and cans, lowers the cost of refuse disposal to the municipality and makes the operation of energy recovery plants less costly.

Our operating prototype plant is in Branford, Conn. We are presently fabricating the equipment for an RRS plant in Washington, D.C. It will be operated by the National Black Veterans Organization, under Department of Commerce program of the Office of Minority Business Enterprise.

I believe you heard about this yesterday from Dr. Baruch of the Commerce Department.

We are discussing the installation of the RRS system with officials and concerned groups in Connecticut, New York, and New Jersey.

Our front-end and source separation system will not only complement any energy resource recovery systems, but will also provide jobs, help reduce refuse disposal costs, and conserve energy and other natural resources.

Thank you very much.

STATEMENT OF STEPHEN A. LINGLE

Mr. LINGLE. I have only one brief comment. I again want to state EPA's belief that source separation and energy recovery technologies are very much compatible. I also want to say that we believe the appropriate time for cities to consider these approaches together is early in the planning stage.

Mr. Scudder was correct in his statement that in the past some of the consultants which we have used to help us in technical assistance efforts have not had the necessary level of expertise in source separation. I want to point out that the new consultant teams which we will be contracting with for the technical assistance panel programs will include this expertise so they will be able to properly advise cities in the planning stage on source separation and large scale energy recovery system.

Thank you.

Mr. ROONEY. Mr. Bielicki, why are you against source separation?

Mr. BIELICKI. I believe the benefits, the costs associated with source separation are far greater than the benefits that can be achieved. Source separation in any major municipality—if you are going to now segregate glass from metal from paper—will increase the cost of collection considerably. It will not separate all of the glass or all of the metal. It will still have to be done in the plants.

When we talk of glass, we seem to forget we package many foods in glass containers, such as mayonnaise, mustard, catsup, and oil. We only segregate one very narrow portion.

The same thing with cans. We forget about efficiency cans, wire hangers, screws and bolts, and appliance parts that are found in garbage.

No source separation system will do a thorough separation job. A system approach will take everything. It separates all the aluminum, all the ferrous, and all the glass including the broken dishes, the china, the sand and stones that is found in garbage.

I believe it is only a partial inefficient system. Total resource recovery solves that problem.

Mr. ROONEY. Mr. Karter, do you want to comment on that?

Mr. KARTER. We have taken mayonnaise jars, pickle jars, and cans. We do not want ferrous materials. We only want tin can products which, when we process them in our machine, we have an intrinsic value of $50 a ton.

They like this product very much. They do not want bicycle parts. They do not want tires and other things that are not tin. Our approach is to get products that have a high value and to maintain that high value. If you mix tin cans with other ferrous materials, you have reduced this to the lowest level on the market and may be hard to move.

There is no trouble in selling tin cans on this depressed market. On glass, we want not just bottles, we want any kind of glass. Our process is such that we smash it, reduce it to small pieces like the size of coarse sand, and sell it as a commodity.

We do not attempt to put it in the road mix. We sell it back to the people who are now paying approximately $40 a ton for these products. We give them a quality product that has no contamination in it, no chinaware, no metal, et cetera. All we are doing is maintaining a high quality and selling it back to the glass companies.

Mr. ROONEY. Mr. Ferrante, do you want to comment?

Mr. FERRANTE. Functionally speaking, we would design our plants differently if we did not have to handle cans or glass or similar noncombustible commodities. We do recover the metal, however, as part of our residue recovery program. But such recovery does not form the economic justification for our plant. That is why I would say we are compatible with any form of source separation program that would be developed in the community.

Mr. ROONEY. Mr. Skubitz?

Mr. SKUBITZ. Mr. Karter, what effect will the proposed national beverage container deposit legislation be on the profitability of your business?

Mr. KARTER. I am not really sure. It will certainly hurt. How much, it would be hard for me to say.

Let me make a few comments based on our own observations in our own operating plant. About 20 percent of the cans we receive are beverage cans. We know this because we get docked by the people who buy the tin from us.

If there is a national bottle bill, and if it totally wipes out all cans for beverages, it would remove, at most, 20 percent of our product. What you do with the other 80 percent is still a problem in our solid waste handling.

Half of our bottles are for beer and soda. The rest are wine, whiskey, mayonnaise, coke, pickle jars, et cetera. A national bottle bill, if

it were 100 percent effective, would hurt the recycling industry. I do not know that I could give you a degree of hurt or when it would be fatal.

Mr. SKUBITZ. Is it more efficient for business to have this deposit system, to make someone put a deposit down and get their deposit back? Then you would wash the bottles and process them in that way. Is it more efficient to do what you are doing, taking them, crushing them, and return the material?

Mr. KARTER. You are asking a very prejudiced witness.

Mr. SKUBITZ. They are just as prejudiced on the other side.

Mr. KARTER. I would say, sir, if you could have a larger scale system—I will take an exception. We are collecting in several municipalities. One has 100,000 people. They have arranged it Monday, Tuesday, Thursday, and Friday to pick up their garbage. On Wednesdays, they pick up bottles and cans. They have not had to put more people on. They still have the same crews. They deposit it on trucks and drive it to our plant. That is at our cost, not theirs.

That municipality is going to get rid of all bottles and cans, not just beer bottles which would, if you had a bottle bill, cost more. Looking at it without having studied it from a national viewpoint, if you could have an effective front-end resource recovery program, you could certainly eliminate a lot of cost problems and take care of more than what the bottle bill would propose to take care of.

Mr. SKUBITZ. I cannot help you. I think saying, so far as the bottling business is concerned, the fact they want to go to throwaway bottles and things of that sort proves the point it is more efficient to have throwaways than it is to have the bottles brought back to the business, washed and sanitized, and everything else.

Mr. KARTER. I would tend to agree with you.

Mr. SKUBITZ. Then from the public standpoint, I wonder, by placing a tax on the deposit, whether it will work. From my own experience, I will take a garage full of bottles and take them down to the Safeway store, or some other store. Then I have to stand there and wait for somebody. When somebody gets to me they say, "We will take your Coke bottles, but we do not handle RC bottles. You will have to take them across town 4 miles away and get your deposit there."

I think they ought to get together and say, "You get rid of them." I do not know whether this deposit system is all it is cracked up to be. You made a statement about the collection over in our area saying we put the bottles and tin cans, waste paper, and everything in the same container.

Do I gather from you that the city that you are operating in says the people must put their glass products in certain containers and you pick them up on a certain day, tin cans go into another, and paper into a third? What is the operation?

Mr. KARTER. Our plant is in Branford, Conn. It is not that large. Waterbury, Conn., has around 100,000 people. East Lyme, Conn., is a small town of 10,000 people. In Waterbury, they have been doing a separate collection of noncombustible material for years to keep it out of the incinerator. They have switched now to bottles and cans. They have a trash can with a red ring around the top of it for bottles and cans.

On Wednesdays, this municipality picks up the trash cans that have bottles and cans.

Mr. SKUBITZ. Do the bottles and tin cans go into the same container?

Mr. KARTER. They are mixed in the same container. It is not necessary to remove the caps. Our machinery does that. It is not necessary to remove labels. We take care of that. We have a container for the whole mass of materials.

Mr. SKUBITZ. Does the industry deliver the cans and bottles to your plant?

Mr. KARTER. No, sir. Waterbury is some distance from our plant. They send it to an old incinerator and drop it on a concrete pad in front of the incinerator. The bucket loader picks the mix up and loads it into a roll off container.

American Refuse, a local garbage company, picks that container up, hauls it to our company, dumps it on the floor where we process it.

Mr. SKUBITZ. Insofar as getting the bottles and glass to your plant and separation, there is no cost to you at all? That is charged to the city?

Mr. KARTER. The city collects the bottles and cans, we haul them.

Mr. SKUBITZ. They would have to pay for it?

Mr. KARTER. Absolutely, yes, for collection.

Mr. SKUBITZ. When I was a kid, we used to pick up junk. They woud give us 1 penny a pound for rags. We thought that was cheap so we put a brick in once in a while.

What I am getting at——

Mr. KARTER. I would hate to have you deliver stuff to me.

Mr. SKUBITZ. You do not pay anything?

Mr. KARTER. We do, sir.

Mr. SKUBITZ. Do you pay for the tin cans you get from the city?

Mr. KARTER. Yes, sir.

Mr. SKUBITZ. What rate per ton?

Mr. KARTER. Sir, this is a varying figure from Waterbury. We pay the hauler $57 to bring that load to our plant. As soon as we get our tonnage up, we will recompense the city.

I have an agreement with the city of Waterbury. As soon as the tonnage gets to 100 tons per week, we put a plant in to Waterbury.

Mr. SKUBITZ. Do they have to do the cleaning for you?

Mr. KARTER. We have this program set up. We do not receive bicycle parts, plastic containers, and things we do not want. There is no need for the city to clean anything.

Mr. SKUBITZ. When you get the bottles and you get the tin cans, they are ready to crush and sell. Is this correct?

Mr. KARTER. No, sir. You have to run these to our area, $57 a load, 8 to 9 tons.

Mr. SKUBITZ. So you are paying $5 to $6 a ton for the materials you get?

Mr. KARTER. That is right, sir.

Mr. SKUBITZ. If you had to do the collecting, and you had to do the separating, you could not stay in business, could you?

Mr. KARTER. I could not stay in business the way the city does the collecting. That is right.

Mr. SKUBITZ. That is pretty much in line with what the gentleman here says, that it is not profitable to separate the paper and the other things. You may as well get the paper out and sell it, which is a resalable item, and forget the others, but do not look for the recoverable materials.

Mr. KARTER. Let me back up one moment. I do not want to operate trash trucks. If I get 100 tons from the city a week, they have to pick up the 100 tons anyway and take it to the landfill. This will cost them a pretty penny these days just to haul it out of town. Some towns are paying $18 a ton to haul it out of town. They have to do this in any event. If citizens put out the bottles and cans separately, there is no added cost to the city.

Mr. SKUBITZ. They are going to get $5 a ton back.

Mr. HALL. And they save the cost of hauling them out of town and disposing of it.

Mr. SKUBITZ. They have saved the cost of disposal of tin cans and bottles, but the bicycle parts and all the other stuff has to go out to the dump.

Mr. KARTER. That is absolutely correct.

Mr. SKUBITZ. Do you receive any sort of subsidies from the Government for operation of your plant?

Mr. KARTER. No, sir. I would like to know where you find this. There is a plant in District subsidized by the Department of Commerce in order to get it built.

Mr. SKUBITZ. When will that be built?

Mr. KARTER. I believe the grant was given by the Office of Minority Enterprise in September, and they have since acquired a local paper plant down here in Washington, from the Capital Reclamation Corporation.

They are presently finalizing the purchase of that plant. They expect to have that completed by early April, and within 180 days or so after that, in a corner of the building they will have the bottle and can operation operating.

Mr. SKUBITZ. Insofar as your testimony was concerned, in your operation, the separation work is all done before it gets to you.

Mr. KARTER. Yes, except the bottles are not sorted by color and the cans are not separated by type.

Mr. SKUBITZ. You have a machine to do that?

Mr. KARTER. That is correct. And it is manual, also.

Mr. SKUBITZ. If this deposit bottling act is passed, it could do damage to your operation, is that right?

Mr. KARTER. Yes, that is right.

Mr. SKUBITZ. That is all, Mr. Karter.

Mr. ROONEY. Are there any other comments that might be made by the panel in rebuttal or in agreement with comments that were made by Mr. Karter and Mr. Skubitz?

Mr. SKUBITZ. Ms. Savitz, yesterday, they threw at this committee such terms as techo-supported and RESPA. I think someone used USPA, which is United States Taxpayers Association.

They were interested too. Today, you have thrown one at us, on page 2. Tell me what you meant when you said, "If the energy value in these wastes were fully recovered, it would represent two quads in 1985." What is "quad"?

Ms. SAVITZ. A quad is roughly 500,000 barrels of oil a day. It is 10 to 15 Btu's and is roughly equivalent to 500,000 barrels of oil energy.

It is a factoring process.

Mr. SKUBITZ. Over 500,000 barrels of oil is another way of saying one quad is available?

Ms. SAVITZ. That is correct.

Mr. SKUBITZ. If you disposed of the waste, you get that much out of it.

Ms. SAVITZ. It would provide that much energy in electric or heat that is equivalent. It is the oil equivalent.

Mr. SKUBITZ. The reason I asked the question, is that we used about 18 barrels——

Ms. SAVITZ. You used 18 million barrels.

Mr. SKUBITZ. I wanted to get that in perspective.

Ms. SAVITZ. We import up to 1 million barrels a day. A half a million barrels a day is the equivalent that you would not have to import.

Mr. SKUBITZ. I was inclined to agree with your statement, maybe the Chairman does not, when you say, in other words, we feel this free market products would determine the—the point I am trying to make is whoever said that paper was the only recoverable thing we get out of the waste. That is my question.

Do you think we would get enough recoverable material to make it worth our while—just out of the homes that send waste to plants. I am talking about the fellow that lives in an apartment. Does he send enough waste material of the nature that you need to keep you in operation or are you depending on most of the plants in the area to send you their type of waste?

Mr. FERRANTE. We operate off municipal waste so we are dealing with household refuse. That is it.

Mr. SKUBITZ. About 60 percent of the waste that comes out of the home is not in the form of paper products?

Mr. FERRANTE. It is highly combustible.

Mr. SKUBITZ. That is correct. I would think that when you take the paper out, you have about 40 percent left of mixed materials and we ought to be looking at a way to dispose of that.

Thank you, Mr. Chairman.

Mr. ROONEY. Thank you very much.

We appreciate all of you coming. That concludes the hearing.

[The following statements and letters were received for the record:]

STATEMENT OF ROGER P. SWISHER, PRESIDENT, NATIONAL ASSOCIATION OF REGIONAL COUNCILS

Mr. Chairman, I am Roger P. Swisher, Mayor of Kernersville, North Carolina and President of the National Association of Regional Councils. I appreciate the Subcommittee giving me this opportunity to testify on the Resource Conservation and Recovery Act of 1976.

NARC vigorously supported the passage of the Resource Conservation and Recovery Act. It represents a strong commitment by the Congress to deal with the long neglected problems of solid waste management. However, NARC feels strongly that the present low level of federal funding for RCRA and poor and

inconsistent management by EPA and the States has prevented the program from making a significant impact on the nation's solid waste mauagement problems.

FUNDING OF SECTION 4.008(a)(2)

A major impediment to the full implementation of the Resource Conservation and Recovery Act of 1976 has been the low level of federal financial support. It was the intent of Congress that statewide solid waste management programs be built upon areawide management planning. Unfortunately, present funding levels for Section 4.008(a)(2) are inadequate to allow States to both develop regulatory programs for hazardous waste and pass through funds to areawide agencies for local projects.

Section 4.008(a)(2) is presently funded at $12 million and the Administration has requested $11.9 million for FY 1979. NARC strongly supports the Chairman's proposal to add $20 million to the Administration's request. Ideally, we would like to see the Cougress appropriate the full authorization of $40 million.

NARC does not recommend greater federal assistance to local and areawide bodies at the expense of grants to the States. The need to carry out the open dump inventory and develop regulatory programs for handling hazardous wastes is clearly recognized by our members. Nevertheless, Congress must provide additional financial resources if the areawide planning capacity envisioned under the Resource Conservation and Recovery Act is to be developed.

PROBLEMS OF IMPLEMENTATION

NARC is concerned that the current federal program places too much emphasis on the development of new State planning capacity and that such capacity may be perceived as a substitute for implementing effective areawide solutions to solid waste and resource recovery problems. The ongoing process for area and agency designation is a case in point. Our membership feels this process has been less than satisfactory in meeting the congressional intent of the RCRA.

Many States have failed to demonstrate an ability to establish effective procedures for working with local governments and their regional councils. Consultation in the development of regional boundaries has been non-existent or inadequate. Many of our member councils were able to exert some influence on the designation process only because they took the initiative in contacting State officials.

The confusion in the designation process has been exacerbated by omissions in the EPA designation guidelines. Aggrieved local governments and their regional councils have no appeal to the EPA Administrator even if State officials ignore congressional intent. In addition, the guidelines fail to establish a clear and concise timetable of designation actions for State officials to follow.

The failure to take into account the need to coordinate solid waste management planning with other related regional planning is of greater significance in NARC's view. Many regional councils are already responsible for areawide planning in such areas as economic development, transportation, housing (701), water quality (208), and air quality (175) which have a direct impact on solid waste management. It is apparent to even the most casual observer that the best means for coodinating these programs would be to insure that they have the same geographical and political boundaries.

SUGGESTED CHANGES IN THE LAW

Congress intended local governments through the designated areawide agencies to be equal partners with the States in developing a national solid waste management and resource recovery program. Nevertheless, RCRA does not provide any guarantees for maximizing areawide participation and States are under no obligation to fund a designated areawide agency. NARC does not believe it was the intent of Congress to give the States complete discretion over solid waste implementation plans developed by local governments and their regional councils.

NARC recommends that the Congress amend the RCRA to allow for direct funding of areawide solid waste management plans once an areawide agency has been designated by the governor. In cases where areawide plans have already been adopted but State plans are incomplete, interim approval could be provided through the A-95 process. Local governments and their regional

councils should not be penalized by the failure of a State to complete a plan, particularly when they have not been allowed to participate in its development.

Many local governments and their regional councils have begun to prepare facility plans, market surveys, construction plans and source separation studies. There is a great deal of expertise at the regional level which has not been tapped. Ongoing areawide programs need not and should not await approval of State solid waste plans.

THE POTENTIAL OF THE RCRA

Many regional councils were involved in solid waste management and resource recovery programs for their local governments prior to the passage of the 1976 Act. During the fall of 1976, 151 of 331 regional councils respondiug to a NARC survey reported that they were involved in solid waste program activitles. Recently we surveyed these 151 councils to learn more about their activities.

Regional councils have developed solid waste plans that can be used by local governments, industry and residents to increase efficiency of collection and disposal. Over one-third of these programs include resource recovery activities, including solid waste management programs which focus on:

Joint intergovernmental cooperation in the operation of county and region-wide centralized sanitary landfill sites.

Establishing drop box, dumpster, green box, and other transfer systems to eliminate the number of landfill operations and to reduce costs.

Junk car programs hauling abandoned vehicles to regional compactors.

Resource recovery activities providing heat and steam to nearby industries and institutions to supplement their energy needs.

Utilizing old strip mining areas for landfills in an effort to reclaim land.

Developing local ordinances to control solid waste.

Providing solid waste management assistauce to local governments.

Many of these programs are resulting in reduced operational costs for local governments. Let me cite three examples:

The Southwest Virginia Planning District Commission (Norfolk, Virginia) is developing a refuse-derived-fuel (RDF) system, in cooperation with the U.S. Navy, to supply steam and electricity to meet the Norfolk Naval Shipyard's demand for energy. Dollar savings are estimated at, $19 million for the Navy and $410,000 for local governments by 1990.

The Northeastern Colorado Council of Governments (Sterling, Colorado) has developed an areawide solid waste management program and operates two individual county-wide sanitary landfill sites. As a result, local communities many save up to $100,000 in operational costs.

The Green River Development District (Owensboro, Kentucky) has centralized sanitary landfill operations and solid waste collection reducing local government operation costs by $160,000.

These locally initiated programs give a good indication of what regional councils can do in the solid waste management area. With appropriate amendment and funding, RCRA has the potential to expand and strengthen these activities.

NARC recommends that Congress take the following actions:

A. appropriate the full authorization of $40 million for Section 4.00S(a)(2) to provide assistance to State and areawide agencies.

B. amend RCRA to allow for direct funding of designated areawide agencies.

Mr. Chairman, NARC looks forward to working with the Congress to meet the challenge of finding workable solutions to the nation's solid waste management problems.

Thank you.

STATEMENT OF JACK C. CARMICHAEL, P.E., DIRECTOR, DIVISION OF SOLID WASTE MANAGEMENT, TEXAS DEPARTMENT OF HEALTH

Mr. Chairman and Members of the Subcommittee, my name is Jack C. Carmichael, and I am the Director of the Division of Solid Waste Management, Texas Department of Health. I serve as Texas Department of Health representative to the National Governors' Association (NGA) Subcommittee on Waste Management, having been appointed by Governor Dolph Briscoe on

January 18, 1977. I serve on all Task Forces organized to support the NGA Standing Committee on Waste Management.

On March 7, 1978 Mr. Wiley W. Osborne of the Texas Department of Health appeared before the Subcommittee and presented comments on behalf of Governor Edwin Edwards of Louisiana in his role as chairman of the Standing Subcommittee on Waste Management.

In addition to Governor Edwards' prepared statement, Mr. Osborne presented additional comments as Texas representative to the National Governors' Association Standing Subcommittee on Waste Management.

At the conclusion of the hearings Mr. Osborne consulted with Mr. Little, Subcommittee Counsel, about submitting a further statement by mail. I understand the record remains open to receive a statement. This statement follows and is respectfully submitted for consideration by the Subcommittee Chairman and members.

EPA STRATEGY FOR IMPLEMENTATION OF RCRA

In January 1978 EPA published in draft form a five-year strategy for implementation of RCRA. The strategy reflects a major shift in emphasis from positions previously expounded by EPA. The proposed priorities and major emphasis clearly subordinate municipal solid waste management programs to industrial solid waste activities. I would not de-emphasize the need to control and regulate industrial and hazardous solid wastes, but the resources directed toward management activities for hazardous solid waste generated by industry should consider that industry must solve their problems from private capital.

The EPA published guidelines for FY 78 programs established a priority for Subtitle D activities and these programs are now being staffed and involve local and regional governmental units. Local officials have responded to the invitation to be involved with keen interest and a desire to participate in RCRA programs for the solution of their solid waste problems. To relegate Subtitle D to a lesser emphasis than placed on Subtitle C is a departure from what is expected by local governments and will result in a serious loss of interest and support.

We feel that the intent of Congress is expressed in the authorization for Federal assistance for both Subtitle C and Subtitle D. We would therefore request that EPA adopt a position that provides for both programs and that financial assistance and Agency support be one of balanced emphasis.

COORDINATION WITH WATER PROGRAMS

We are concerned with the EPA approach to *coordination* of water and solid waste management programs at the State level. Programs should be coordinated to assure that they are supportive of each other, to avoid duplication and to insure that concerns in each program are addressed without detriment to one or the other. However, we feel that EPA is embarked on a course that subordinates Solid Waste Management to Water Quality programs, using the recognized need to coordinate programs as a means to bring Solid Waste Management under the purview of Water Quality. RCRA has been promoted, and we believe rightly, as the means of protecting health and the third element of our environment—land. It should be given status equal to air and water programs and EPA should elevate the Office of Solid Waste to the level of Assistant Administrator. We have made this recommendation through the National Governors' Association as a proposed amendment to RCRA.

FINANCIAL ASSISTANCE TO STATE AND LOCAL GOVERNMENTS

In Mr. Osborne's statement he emphasized the need for continued financing of Solid Waste Management programs. We view Solid Waste Management planning and implementation as a continuing effort that requires adequate financial support, over an extended period, to be effective. It is therefore recommended that the Congress authorize appropriations for financial assistance to State and local governments for RCRA programs through FY 83 with provisions for further review and financial support as indicated. This will provide the necessary Federal commitment for State and local governments to invest in long-term programs to solve the Solid Waste programs in urban and rural communities.

If there are any questions or further information I can provide I would be happy to do so.

I appreciate this opportunity to provide additional comments to the Subcommittee for its consideration.

GLASS PACKAGING INSTITUTE,
Washington, D.C., March 7, 1978.

Hon. FRED B. ROONEY,
Chairman, Subcommittee on Transportation and Commerce, House of Representatives, Washington, D.C.

DEAR MR. CHAIRMAN: Your Subcommittee on Transportation and Commerce recently held oversight hearings on the Resource Conservation and Recovery Act of 1976. Among those testifying was Ms. Barbara Blum who presented information regarding the Resource Conservation Committee's (RCC) views on beverage container deposit legislation.

Since the purpose of the oversight hearings was not to debate the merits of forced deposit legislation, we at the Glass Packaging Institute did not request time to refute Ms. Blum's testimony. However, so many of her statements were misleading that we cannot let them go unchallenged.

In her testimony she concedes that mandatory deposits on bottles and cans would have an adverse effect on skilled jobs. She attempts to minimize this effect by grossly underestimating the skilled job loss and stating that the dislocated could easily be absorbed into the job market. She makes this statement even though the Department of Labor has not yet done a study on job dislocations under a forced deposit law.

The glass industry and the labor unions which serve the industry estimate the job loss to our industry alone to be about 30,000 workers (out of work force of some 72,000). A more detailed statement on this topic is enclosed for your information.

Ms. Blum goes on to state that while some people (the glass industry for one) have advocated an alternative to deposits, the RCC has looked into these measures and found that they are not a substitute for deposits.

Here again we disagree with Ms. Blum. First of all, a careful reading of the RCC Report to Congress dated January, 1978, does not reveal any study being done on alternative laws. Secondly, the six states which have passed these alternatives have done so as a direct substitute for forced deposit legislation.

These positive alternatives, which we support and which Ms. Blum gives passing mention to in her report, are comprehensive litter/recycling laws. Such a law was first passed in the State of Washington in 1972 where it has reduced litter by some 70%. A more comprehensive version of this law has now been passed in California, Colorado, Virginia, Hawaii and Kentucky. These laws are a viable alternative to deposits and do not cause job dislocations. For your information, we've enclosed a more detailed explanation of these viable alternatives.

Thank you for considering our views.

Sincerely,

PATRICK ROWLAND.
Vice President, Government Relations.

Enclosure.

MANDATORY DEPOSITS VS. LITTER CONTROL PROGRAMS

There's been a lot of talk recently about two approaches to cut down on litter. Oregon has a "bottle bill." Washington has a comprehensive anti-litter program. The Oregon approach was designed to reduce beverage container litter. The Washington approach was designed to reduce total litter. The question is: Which is working to reduce litter better?

In 1970, the people of the State of Washington, through public referendum, overwhelmingly decided against a "bottle bill" and opted instead for a broad-based anti-litter program.

The law in Washington calls for a very small assessment ($150 per $1 million in gross sales) on all industries reasonably associated with litter. This includes paper, bottles, cans, plastic and other items. In terms of cost being passed down to consumers, this assessment amounts to small fractions of a cent and is virtually invisible.

Nonetheless, it provides about $1 million a year to fund the State Department of Ecology. The Department coordinates a comprehensive program including litter prevention, education, enforcement of littering laws and pick up.

The Department of Ecology in Washington State orchestrates a major public education campaign designed to change littering habits. The Department works closely with civic groups, schools and other organizations to make people more aware of the littering problem. In addition, the Department ensures that there are adequate numbers of litter receptacles, strategically placed throughout the State. In addition, all autos and boats are required by law to carry litter bags. Uniform and reasonable littering fines are strictly enforced.

The Department also promotes 221 recycling centers, statewide, which handled 121,194 tons of materials in 1976 with a market value of $7.7 million. According to the Department of Ecology, enough energy was saved to satisfy the electrical requirements of 46,000 homes for one year. About 332 tons of waste-per-day were diverted from the State's solid waste stream.

And despite the fact that Oregon's forced deposit on beverage containers was implemented to reduce roadside litter, that State has been spending more money each year to send litter collection crews out to pick the stuff up. The fact is that in FY 1977, the State of Oregon spent about 35 cents for each of its citizens to go out and pick trash off the roads. Washington, on the other hand, spent about 25 cents per Washingtonian to pick up litter. In addition, Oregon has reported a 10.6% decrease in litter. Washington has reported a 66% decrease. It's obvious that when both programs are compared side by side, the Washington approach is more cost-effective and has come out a winner every time.

Other States are joining the bandwagon. Virginia, Colorado, and more recently, California, have signed Washington-type legislation into law.

It stands to reason that an anti-littering program that sets out to clean up all litter, not just bottles and cans, is a much more well-reasoned and rational approach. It would seem that the people of Washington have identified the right problem and the right solution to that problem.

Data on recycling in Washington were obtained from a report by the Washington State Department of Ecology. Litter pick up costs were obtained from both Washington and Oregon State governments.

* * *

JOBS AND MANDATORY DEPOSITS: A NET LOSS TO THE AMERICAN WORKER

Some groups have proposed that Congress should enact legislation requiring mandatory deposits on beverage containers. Supporters of such national legislation cite many benefits to society.

Their most unrealistic claim is in the area of employment. The proponents state that the nation will benefit from an increase in more than 110,000 jobs. If this were true, why is the American labor movement so adamantly opposed to restrictive container legislation? If there were real jobs to be gained, wouldn't the AFL–CIO come out in favor of deposits instead of opposing them?

Those who support such legislation have estimated that 190,000 jobs will be created and 80,000 jobs will be lost.

Jobs gained would generally be lower paying jobs, such as bottle sorters, bottle washers and route truck drivers.

Jobs lost would be skilled workers in glass and can manufacturing.

Those who oppose the law raise several questions about these jobs increases.

Many of the jobs may not materialize as retailers will "stretch-out" their existing employees or use part-time help to sort bottles.

Job losses would be in concentrated areas severely affecting the economy of certain communities, while jobs gained, if any, would be spread thinly throughout a state.

Job gains would be inflationary as bottlers would be hiring more people to deliver the same volume of beverage. This cost would be passed on to the consumer.

Finally, there is a socially questionable job trade-off. The consequences of sacrificing skilled head-of-household manufacturing jobs for unskilled retail and distribution jobs is just plain and unacceptable to most people.

But theory aside, what has happened in Oregon where there is restrictive beverage container legislation?

JOB GAINS

A state-sponsored survey showed a net increase of 250 jobs in the beverage industry after the law passed.

JOB LOSSES

In the glass industry, 250 jobs lost as two glass plants laid off employees when production dropped. One plant, for example, went from 10 production lines to 6.

In the can industry, two can plants closed down completely resulting in job losses of 200.

Total loss of skilled jobs because of the Oregon law, 450.

Is it any wonder that the national AFL–CIO, the Steelworkers, the Aluminum Workers, the Glass Bottle Blowers, the American Flint Glass Workers, the Oregon AFL–CIO, the Oregon Teamsters and many, many other unions oppose the legislation?

Jobs and Mandatory Deposits: the answer is obvious.

* * *

[From the Los Angeles Times, Jan. 6, 1978]

DIGGING OUR WAY OUT OF THE TRASH

Most Californians probably didn't notice it, but on Jan. 1 a new law took effect that could go a long way toward helping us save ourselves from eventually being buried in the mountains of trash that we produce each year.

The Litter Control, Recycling and Resources Recovery Act, by Sen. John A. Nejedly (R-Walnut Creek), aims to do just what its title suggests: to find more efficient and rewarding ways to dispose of the enormous amounts of solid wastes that are the inevitable byproducts of our affluence, our thoughtlessness, our carelessness.

All this is expected to be done at only slight costs to consumers. The legislation in fact should ultimately save taxpayers money, and generate new jobs besides.

The comprehensive law will be funded by fees on products that tend to become wastes. Retailers of such things as canned and bottled goods and tires will be assessed $10 to $30 a year. Manufacturers and wholesalers of those products and others—including newspapers—will be assessed up to $2,000 a year. In addition, a 25 cent-a-ton surcharge will be placed on materials that could be recycled—aluminum cans, paper and glass, for example—but that are instead dumped in landfills. Over the life of the legislation, which will expire in mid-1983, about $100 million is expected to be raised by these assessments.

The State Solid Waste Management Board will administer the law and disburse the revenues. About 25% of the money raised will be turned over to local governments for litter control, with smaller amounts going to such agencies as the California Department of Transportation for highway cleanup. Another 25% is to be used for support of community recycling centers, collection points for solid wastes that can be reused. Research into resource recovery and energy generation from wastes will get 20% of the revenues. The Los Angeles City Council has already applied for funds to set up a demonstration project that would burn some city wastes to produce electricity.

Other funds will go to public-education programs and enforcement of anti-litter laws. Interestingly, the new legislation reduces the maximum fine for littering from $500 to $10, on the assumption that the more realistic penalty will be an incentive to more vigorous and consistent enforcement.

The litter-control law was broadly supported by business, labor and environmental spokesmen, in recognition of the growing problem presented by solid wastes. Waste generation in the United States has been growing 8% a year, though the population has been increasing less than 1% annually. The costs of collecting and disposing trash reached $6.4 billion in 1975. By 1980, it will probably be $10 billion. Meanwhile, the Environmental Protection Agency warns, many urban areas are in danger of running out of landfill sites within a decade.

Recycling saves resources. The EPA notes, for example, that when iron and steel scrap is used instead of virgin ore to make new steel, there is a 74% energy saving. On 1,000 tons of new steel, that comes to the equivalent of 140,000 gallons of gasoline. At the same time, air-pollution effluents, water pollution, water use and mining wastes are all reduced impressively.

Resource recovery and recycling are not a new idea, but one whose major potential is only now starting to be recognized. California's pioneering effort should be a major benefit to the state. And it could well become the model for other states and the federal government to follow.

STATE OF LOUISIANA,
EXECUTIVE DEPARTMENT,
Baton Rouge, La., June 8, 1978.

HON. FRED ROONEY,
Chairman, Subcommittee on Transportation and the Environment, House Interstate and Foreign Commerce Committee, Washington, D.C.

DEAR MR. CHAIRMAN: On behalf of the National Governors' Association Standing Subcommittee on Waste Management, on which I serve as Chairman, I should like to express our appreciation for the opportunity to make the following comments into the record of your Subcommittee's March oversight hearing on the implementation of The Resource Conservation and Recovery Act of 1976.

The particular question raised to the National Governors' Association by you at the hearing is as follows:

"It has been brought to my attention that although you say that the States are in trouble in implementing this Act, others say many States have surpluses which they could devote to this effort. Is what we are really seeing here just an inefficient management of the State's own budget?"

My response to this question, based on discussions by the NCA Subcommittee on Waste Management, is the following:

The State funding for Subtitle D of RCRA is vital to the achievement of closure of open dumps and, eventually, the planning of regional land disposal and resource recovery and energy recovery projects. If sufficient federal funding is not provided at the outset to "prime the pump" a prediction can be made: not only will RCRA's goals not be achieved, significant disruptions of ongoing and progressive State and local programs will occur.

Problems are already evident at this time, based on inadequate RCRA funding for FY 78.

EPA is charged with publishing the "open dump" inventory, but is requiring the States to actually conduct the survey and to evaluate whether a site is an open dump or a sanitary landfill. EPA has assured the States that the effort will be 100% federally funded, and has set aside $6 million for this purpose. However, estimates at the State level indicate that at least $12 million would be required to conduct such an inventory based on the scope of the federal Criteria for Classification of Solid Waste Disposal Facilities. The scope of the Criteria includes not only facilities which are traditionally considered to be landfills but also pits, ponds, and lagoons. Therefore, the States are faced with conducting the inventory of an expanded category of facilities with—at best—only half the financial assistance necessary for the task.

This has already forced some States to seek other funding sources. Arkansas has begun preliminary RCRA work utilizing CETA funding and personnel. However, the level of expertise, duration of effort and funding level severely limit the State's capability in using this information for follow-up legal efforts to close unacceptable sites.

States such as Minnesota, Louisiana, Texas and Pennsylvania literally have tens of thousands of pits, ponds, and lagoons—as well as injection wells—to survey and assess. The State of Missouri has estimated the cost of an adequate survey and assessment for each site to be $25 thousand.

Based on the proposed Criteria, the State of Louisiana estimates that a survey based on the full scope of the Criteria will cost millions of dollars. The current funding level will result in a poorly done inventory. An insufficient enforcement program—which is the probable legal outcome of an inadequate inventory—

could destroy management systems and encourage promiscuous dumping. For FY 79, Louisiana estimates that au additional $250 thousand will be needed to start up the RCRA program.

Some States consider revenue sharing the only reliable source of Federal funding. The existing time limitations on the authorization and use of RCRA funding present problems. States such as Louisiana are restricted by State budgeting and hiring laws based upon the reliability and availability of funding.

States such as Florida are hard-pressed to convince counties to continue resource recovery planning; there are no local/regional funds in RCRA for either FY 78 or FY 79. In one case, the State made available $10 thousand for a $25 thousand county plan.

Other States such as Georgia and Louisiana have transferred State program funds to regional areas in order to get regional area and agency designations off the ground—robbing Peter to pay Paul.

States such as Colorado report a growing stalemate with counties unwilling to proceed with RCRA planning without any financial assistance.

The State of Massachusetts has completed one of the finest hazardous waste surveys among the States. But the State will be hard-pressed to achieve the requirements of Subtitle C while also attempting to achieve the work outputs under Subtitle D. Massachusetts predicts that regionalization—a slow, difficult process in the State—will not be enhanced by the total lack of local/regional funds under RCRA.

As in other States, the Pennsylvania Constitution requires the Governor to submit a balanced budget each year. Economic conditions have been such that, for the last two years, the Governor has submitted "hold-the-line" budgets. The State predicts that any reduction in federal grants-in-aid would be taken—for the above reasons—as a signal to cut State funding. I could continue such illustrations, as indicative of the genuine seriousness of the problem noted. The States of New Mexico and California have made strong statements on the necessity of adequate funding for RCRA, and on the unfortunate outcome if such funding fails to materialize in the appropriate categories and at necessary levels.

The implied premise of the alternative view your question noted—that surplus funds for RCRA purposes are readily available to many States and local governments—is obviously fallacious in light of the above comments. I should like to cite a 1975 report, "Strengthening Public Management in the Intergovernmental System," prepared by the Study Committee on Intergovernmental Assistance. That report stated ". . . the rising demand for services on State and local governments has not been matched by growth in their fiscal capacity . . . State and local governments continue to experience fiscal crises, aggravated recently by the whipsaw effect of inflation/recession on their economics." I assure you that report is more reflective of reality than a recently discussed OMB study which counted cash flows as potential surpluses, and also counted pension fund reserves as though they were discretionary funds.

I should also like to have introduced into the record the testimony prepared by Mr. Fran Buhler on behalf of the Resource Conservation and Recovery Task Force of the NGA Standing Subcommittee on Waste Management. Mr. Buhler was prevented from appearing at the Hearing by weather conditions.

Cordially,

EDWIN EDWARDS,
Governor.

Attachments.

FEBRUARY 16, 1978.

Hon. CHARLES SCHULTZE,
Chairman, Council of Economic Advisers, Room 314, Executive Office Building, Washington, D.C.

DEAR MR. SCHULTZE: The January 20 Economic Message to Congress states that the two "major drains" on the economy are the $18 billion trade deficit and a purported $33 billion surplus of states and localities. This estimate was developed by the Council of Economic Advisers and has received a wide currency among federal government decision-makers who will review the level and extent of federal assistance to states and localities. As the Economic Report recognizes, many states and local governments are not financially well-off

despite aggregate figures which indicate surpluses. The report says that "Many are hard pressed." We agree, and the attached analysis indicates more clearly the cautious financial condition which faces many Governors and Legislatures as they prepare budgets for FY 1979.

1. *The aggregate surplus of states and local governments is not $33 billion.* The $33 billion surplus figure is misleading because it is actually a combination of two figures, operating balances and social insurance funds. The Economic Message too makes the distinction that "a large part of the aggregate surplus represents accumulations of pension funds for the 13 million employees of state and local governments." The social insurance component is not surplus funds available to state and local officials.

2. *The actual aggregate state government operating surplus is probably less than $6 billion, and reflects sound budgeting practices.* Survey results compiled by the National Governors' Association and the National Conference of State Legislatures (see attached chart) indicate a surplus among state governments of approximately $6 billion. This would indicate a surplus among cities and counties of nearly $9 billion. The surpluses at the state government level represent less than 6% of the aggregate operating budgets of all states. Sound budgeting practice suggests that a substantial contingency is necessary to offset unexpected emergencies or financial difficulties. The 6% aggregate figure represents a slimmer margin for emergencies than states normally seek to budget. Since nearly every state is required by its Constitution or statutes to have a balanced budget, such operating balances are necessary.

3. *The bulk of the projected operating state surpluses are found in just a few states.* A glance at the attached breakdown for each state shows that a few states have substantial surpluses while most have very modest or marginal balances. These surpluses reflect conservative revenue projections for FY 1978 which were made in the early spring of 1977; strong economies in energy-producing states; the effects of more progressive revenue systems in an improving national economy; and inflation-induced revenue growth.

4. *States are now developing fiscal 1979 budgets which will rapidly deplete current surpluses.* The surpluses which are reported by the states in our surveys will be spent in the next fiscal year, which begins in most states on July 1. The extra revenues will be used to support property tax relief programs, recession-delayed projects, inflation-caused cost increases for labor and materials, hard-pressed local governments, and federal programs which are not being expanded under the proposed federal budget. These programs will put existing surplus funds quickly and efficiently back into the state economies. Far from acting as a "drain" on the economy, these resources will enable states to supplement federal efforts to further expand economic growth.

In conclusion, a close examination of state finances provides a significantly different picture from that painted by the Economic Message. The aggregate operating surplus for state and local governments is less than half that used by the Administration. The surplus figures in most states represent sound financial management. A few states account for most of the aggregate total surplus. And far from acting as a drain on the economy, these surplus funds will be either returned to citizens to reduce property taxes or re-invested in economic growth and development.

We urge the Administration and the Congress to carefully weigh the purported surpluses in light of this analysis. In order that this misunderstanding of state fiscal data not be repeated, we urge the Administration to work with our associations to improve reporting and data collection techniques for state government finances. These data should be incorporated into the federal budget reports and annual economic report of the President.

WILLIAM G. MILLIKEN,
Chairman, National Governors' Association.
FRED E. ANDERSON,
President, National Conference of State Legislatures.

TABLE 1.—STATE OPERATING FUND RESOURCES, EXPENDITURES AND BALANCES, 1978

[In millions of dollars]

State	1978 resources (including 1977 balances forward)	1978 expenditures	1978 projected balance	1978 projected operating balance as percentage of 1978 expenditures
Alabama	$219.4	$212.3	$7.1	3.3
Alaska	1,427.3	857.2	[1] 507.1	66.5
Arizona	963.1	963.1	0	0
Arkansas	868.6	679.3	[1] 189.3	27.9
California	14,423.0	12,266.0	[1] 2,157.0	17.6
Colorado	1,001.2	959.6	41.6	4.3
Connecticut	1,956.2	1,920.0	36.2	1.9
Oelaware	468.1	473.9	−5.8	−1.2
Florida	2,662.6	2,641.0	21.6	.8
Georgia	2,023.0	2,023.0	0	0
Hawaii	853.5	851.2	2.3	.3
Idaho	283.7	283.6	.1	.04
Illinois	6,399.0	6,311.0	88.0	1.4
Indiana	1,634.2	1,523.4	[1] 110.8	7.3
Iowa	1,459.7	1,381.3	78.4	5.7
Kansas	971.0	853.2	[1] 117.8	13.8
Kentucky	1,582.5	1,516.7	65.8	4.3
Louisiana	3,079.0	3,077.7	1.3	.04
Maine	427.3	418.5	8.8	2.1
Maryland	2,064.2	2,004.4	[1] 59.8	3.0
Massachusetts	3,856.3	3,841.5	14.8	.4
Michigan	3,796.3	3,796.3	0	0
Minnasota	3,311.0	3,262.0	49.0	1.5
Mississippi	810.6	768.4	42.2	5.5
Missouri	1,522.2	1,442.8	79.4	5.5
Montana	237.0	212.9	24.1	11.3
Nebraska	534.7	483.9	50.8	10.5
Nevada	257.8	220.9	36.9	16.9
New Hampshire	202.8	200.0	2.8	1.4
New Jersey	4,070.7	4,029.8	40.9	1.0
New Mexico	622.1	581.2	40.9	7.0
New York	11,371.0	11,353.0	18.0	.2
North Carolina	2,183.2	2,158.0	25.2	1.2
North Dakota	432.5	275.1	157.4	57.2
Ohio	4,302.4	4,252.0	50.4	1.2
Oklahoma	632.9	632.9	0	0
Oregon	1,127.8	1,020.8	107.0	10.5
Pennsylvania	5,144.0	5,144.0	0	0
Rhode Island	569.1	567.6	1.5	.3
South Carolina	1,208.4	1,193.9	14.5	1.2
South Dakota	186.7	165.4	21.3	12.9
Tennessee	2,048.2	1,985.1	63.1	3.2
Texas	3,728.3	3,105.7	[1] 622.6	20.0
Utah	321.5	267.6	53.9	20.1
Vermont	199.7	182.2	17.5	9.6
Virginia	1,990.7	1,976.7	14.0	.7
Washington	2,676.4	2,586.2	90.2	3.5
West Virginia	841.5	841.4	.1	.01
Wisconsin	2,231.7	1,960.6	[1] 271.1	13.8
Wyoming	164.2	152.2	12.0	7.9
Total	105,348.3	99,876.5	5,471.8	5.5

[1] For additional information on the disposition of fiscal year 1978 operating fund balances, see table II.

NOTE.—These figures were compiled and published by the National Governors' Association and the National Association of State Budget Officers in their "Fiscal Survey of the States, Fall 1977," together with additional data compiled by tha National Conference of State Legislatures.

TABLE II.—PROPOSED STATE SPENDING PLANS TO OFFSET FISCAL YEAR 1978 FUND BALANCES SELECTED STATES

State	Projected fund balance for fiscal year 1978	Spending commitments to offset projected fiscal year 1978 fund balance
Alaska	$313,000,000 cash balance $200,000,000 loan reserve fund	$10,000,000 for agricultural development. $310,000,000 for general obligation bonds; and $1,000,000,000 to $2,000,000,000 for capital construction bonds.
Arkansas	$149,000,000 fund balance	$144,000,000 held in reserve for cash flow requirements.
California	$2,100,000,000 balance	$1,100,000,000 in proposed property tax relief program; $800,000,000 for new programs in energy conservation, housing and community mental health and $223,000,000 in contingency funds.
Indiana	$110,000,000	$84,000,000 in expanded highwey eid; and $51,000,000 in State tax reductions and property tax relief.
Kansas	$117,800,000	$105,000,000 for minimum cash flow requirements; and $15,000,000 in sales tax credit.
Maryland	$115,000,000	$51,000,000 in income end property tax reductions; and balance in new programs for education aid and State education personnel.
Texas	$3,000,000,000 originally projected for 1978–79 biennium.	$528,000,000 in expanded highway aid; $1,000,000,000 in expanded school aid; $900,000,000 for medical education; and $525,000,000 in expanded health a welfare programs.
Wisconsin	$270,000,000 to $370,000,000	$80,000,000 in tax rebates; $139,000,000 for future tax reductions; $63,000,000 for water pollution abatement; and, $73,000,000 for pay-as-you-go capital projects.

NOTE.—Information collected on the basis of a phone survey conducted by the National Conference of State Legislatures and the National Association of State Budget Officers.

COUNCIL OF ECONOMIC ANVISERS,
Washington, D.C., March 3, 1978.

Governor WILLIAM G. MILLIKEN,
Chairman, National Governors' Association, Washington, D.C.
Mr. FRED E. ANDERSON,
President, National Conferencc of State Legislaturcs, Washington, D.C.

DEAR MESSRS. MILLIKEN AND ANDERSON: Your letter to me of February 16 raises some important issues concerning our analysis of the impact of State and local government budgets on the overall economy. I appreciate your concern with these questions. I believe that our assessments of the State and local financial situations are in most respects consistent.

You make a number of points in the letter with which I am in full agreement. We endeavored in the President's *Economic Report* to make the same points ourselves. We did separate the aggregate "surplus" of State and local governments into its two primary components—the surplus in operating accounts and the surplus in social insurance funds. Social insurance contributions are not available to State and local governments for operating purposes and surpluses in those accounts cannot be reduced directly. We recognize, too, that the distribution of surpluses among States and cities is quite uneven, and that some units of government are financially hard pressed.

I believe that we emphasize different aspects of the current financial situation among State and local governments only because we view the situation from somewhat different perspectives. As you point out, the surplus that is available for reduction through tax cuts or higher spending is limited to the operating account surplus. Moreover, budgeting prudence may dictate that an operating surplus of some size may be necessary in ordinary circumstances. I do not disagree, nor would I encourage State or local governments to engage in imprudent budgeting.

Our analysis approached the State and local budget situation from a different—but not inconsistent—viewpoint. We were asking the question: "Why is it appropriate for the Federal Government to cut taxes in 1978 and run a $61 billion budget deficit in 1979, the fourth year of an economic recovery?" Among its other purposes, the Federal budget must act as a balance wheel in the economy, helping to promote stable economic growth. The appropriate size of the balance between Federal receipts and expenditures depends on the relation-including but not limited to the State and local sector. Everything else being equal, the greater the excess of total receipts over total expenditures in the State and local sector, the larger must be the economic stimulus from the Federal Government in order to maintain a desirable rate of economic growth. For this analysis, combining the pension funds and the operating surpluses is necessary, even though for most other purposes maintaining the distinction between the two sets of accounts is essential. The fact that our analysis of economic developments necessarily combined the two in no sense implies that the pension fund accumulation is or should be available for tax reductions or expenditure increases.

You note in your letter that State governments are planning to reduce their operating surpluses by various routes, including property tax relief, initiation of recession-delayed projects and other measures. This will, as you say, "enable states to supplement federal efforts to further expand economic growth." To the extent this occurs, the economic stimulus required from the Federal budget will be less, and the budget in subsequent years can move more quickly into balance. Indeed, our economic projections for 1979 and later years assume—as noted briefly on pages 82 and 89—that the State and local operating surpluses will gradually decline. Obviously, we welcome these developments.

The data we used in analyzing the flow of receipts and expenditures in the State and local sector are published each quarter by the Department of Commerce as part of its complete national income accounts. These are available for the current year only in very aggregate form with no geographical detail. Consequently, we welcome the information and projections of resources and expenditures from the "Fiscal Survey of the States, Fall 1977." I would be very pleased to work with your organizations to improve the reporting and data collection techniques for State government finances.

Cordially,

CHARLES L. SCHULTZE.

* * *

STATEMENT BY FRAN BUHLER, MEMBER, RESOURCE CONSERVATION AND RECOVERY TASK FORCE, NGA STANDING SUBCOMMITTEE ON WASTE MANAGEMENT

Good morning, Congressman Rooney, members of the Subcommittee on Transportation and the Environment, ladies and gentlemen. I am Fran Buhler, member of the Resource Conservation and Recovery Task Force, NGA Standing Subcommittee on Waste Management, and Executive Director, State of Florida Resource Recovery Council, Tallahassee, Florida. Let me express the appreciation of the National Governors' Association and individually that of Beatrice Tylutki, Chairman, Resource Conservation and Recovery Task Force (who could not be here today) for this opportunity to call to your attention the status of resource conservation and recovery in relation to development of the Resource Conservation and Recovery Act of 1976, Pub. L. 94-580.

On behalf of the States, especially those participating on the Resource Conservation and Recovery Task Force, I express the deep concern for resource conservation and recovery. Many of us who strongly supported the passage of RCRA now wonder if RCRA's implementation will enhance or hinder such activities at the State and sub-State levels. To date, the funding level for FY78, the proposed FY79 funding, and EPA's proposed strategy for the implementation of RCRA have common themes:

Emphasis on the mandated portions of Subtitle D, State or Regional Solid Waste Plans, and Subtitle C, Hazardous Waste Management;

Little or no support for sub-State entities to achieve RCRA activities;

Achievement of short-term goals based on lack of funding and manpower.

The States fully appreciate the need for a national hazardous waste control program and the tragic headlines from my own State underscore that need. We also fully support the closure or upgrading of open dumps. But the resource recovery goals envisioned by Congress should not be ignored. The argument

can be made that implementation and funding should concentrate on closing open dumps. But we do not accept the trend that little or no emphasis should be placed on long-term resource conservation and recovery goals. We see no compelling reason why proper attention to resource recovery cannot be provided for and developed concurrently with these enforcement efforts. If this trend continues, then the prediction can safely be made that short-term goals may be achieved but the final result will be limited to more expensive land disposal. In short, RCRA's legitimate regulatory program should not shove aside the long-term planning goals of RCRA: resource conservation and recovery. The planning efforts conducted at the State and sub-State levels are just as critical as the regulatory policies flowing from Washington.

My remarks will now focus on three areas of activity of the Resource Conservation and Recovery Task Force:

technical assistance;

Resource Conservation Committee; and,

State beverage container and litter tax programs.

The NGA Standing Subcommittee on Waste Management has and will continue to provide technical assistance to States and the U.S. Environmental Protection Agency. Based on the Subcommittee's experiences with providing technical assistance recommendations have been made regarding the RCRA panels effort. I will take this opportunity to highlight some of the major recommendations and concerns voiced to the Agency:

Support should be provided for a broadly based technical assistance program responsive to specific requests received without delineating artificial boundaries to the term "solid waste management";

Coordination of RCRA technical assistance program with on-going State environmental programs;

Retention of the primary responsibility of the technical assistance program at the federal level, within the Agency or other appropriate federal departments, rather than transfer of that responsibility to consulting firm(s) which do provide needed expertise;

Provision of procedures to administer resolution of the "conflict of interest" question in relation to State and federal laws; and,

Continued support for utilizing the resources and expertise of the EPA Regional Offices.

The Subcommittee supports the efforts of the Office of Regional and Intergovernmental Operations in providing this coordination of the technical assistance program among all levels of State, federal, and local governmental entities.

The need for technical assistance is clear; however, implementation of the panels program unlike other requirements in RCRA is not constrained by a statutory timetable, either in establishment or in termination, of the program. Therefore, the Administrator should take advantage of this flexibility and fully consider all aspects of the program before embarking on the proposed implementation course. Moreover, the success of this program is crucial to assure its continuance as the only program directly available to sub-State entities.

The Resource Conservation Committee as established by Congress presents a unique mechanism to explore, to identify conflicting national policies which inhibit or restrict resource conservation and recovery *and* to make recommendations for development of policies to *promote* full utilization of material and energy resources. Governor Edwin Edwards, Chairman, NGA Standing Subcommittee on Waste Management, who is fully aware of the States' commitment to resource conservation and recovery, and the charge of the Resource Conservation Committee has communicated the States' offer of assistance and expertise to the RCC. We are concerned that the RCC in considering issues required by law has diverted limited EPA staff resources and thereby may have weakened the Agency's on-going efforts to fulfill RCRA requirements.

The Resource Conservation Committee should be commended for conducting public hearings on the need for beverage container legislation and on the product disposal charge concept. But, institutional constraints often discourage transfer of policy and expertise at crucial points.

The Resource Conservation and Recovery Task Force in response to consideration of the proposal submitted by Governor Robert Straub (Oregon) concerning beverage container legislation is preparing a technical report on State beverage container and litter abatement programs. In hearing the presentation of those State program to the Task Force two aspects became readily apparent to me:

Confirmed my belief that the States' goals and programs are vastly different and the experience and conditions in one State do not apply to other States; and,

Federal preemption of those State programs is unwarranted.

In closing, RCRA's complementary goals will not be achieved and the balanced approach set forth in the law will not be carried out as long as:

Funding for sub-State planning and implementation efforts is not provided;

Assistance to rural communities remains unfunded;

Level of financial assistance to States remains significantly below authorized levels; and,

Funding for needed long-term technical assistance programs as outlined in Subtitle E, Duties of the Secretary of Commerce in Resource and Recovery, and Subtitle F, Federal Responsibilities is provided.

By contrast, NGA Standing Subcommittee on Waste Management in its testimony on the draft strategy for implementation of RCRA noted that "to 'strategize' a federal program which has as its primary aim to close open dumps, without concurrently providing technical and financial assistance to States and sub-State entities to plan for and assure provision of alternative systems, only serves to inhibit State/local fulfillment of existing responsibilities" and, also, to preclude full achievement of resource conservation and recovery potential.

I appreciate this opportunity afforded the States to provide comments and recommendations in support of the Resource Conservation and Recovery Act of 1976 and would welcome any questions.

CHAMBER OF COMMERCE OF THE UNITED STATES,
Washington, D.C., June 13, 1978.

Hon. FRED ROONEY,
Chairman, Subcommittee on Transportation and Commerce, Interstate and Foreign Commerce Committee, House of Representatives, Washington, D.C.

DEAR MR. CHAIRMAN: The purpose of this letter is to present the views of the Chamber of Commerce of the U.S. for your hearings which were held on the oversight of the Resource Conservation and Recovery Act of 1976 (RCRA).

The National Chamber is the largest business federation in the country, comprising over 74,000 members representing a broad spectrum of businesses.

We fully supported and worked hard for the passage of RCRA. We felt then and still believe, that this statute holds great promise in trying to address the problem of disposing of growing amounts of solid waste.

First, we want you to know that we appreciate the way the Environmental Protection Agency (EPA) has conducted its public information and regulation-writing sessions. The willingness of the Agency to solicit and listen to diverse, and often critical, opinions is to be commended. We hope other offices within EPA will follow the lead of the office of Solid Waste Management in this open process.

However, we also feel compelled to note that this open process has been constrained in the need to meet several deadlines mandated by Congress. A higher priority should be placed on developing well reasoned regulations than on meeting arbitrary deadlines.

More specifically, our comments address the following: (1) the definition of hazardous waste, (2) the apparent attempt to set "zero emission" standards in the development of both hazardous waste and sanitary landfill criteria, (3) the formulation of the overall criteria pursuant to Subtitle D, (4) the role of the Department of Commerce, and (5) the inexcusable lack of effort by EPA to follow Congressional intent in the furthering of resource recovery.

THE DEFINITION OF HAZARDOUS WASTE

Congressional intent was to control the discharge into the environment of wastes that would be truly harmful to people or the environment. However, EPA has so broadly construed the definition of hazardous waste so as, by default or by testing, to make almost 80–90% of industrial wastes fit this category. This is contrary to EPA's public statements that only 10–20% of industrial discharges likely would fall into the hazardous category.

The costs of testing a particular waste to see if it meets the criteria outlined in Section 3001 are already running from $8,000 to $10,000 per substance. These

are tests which have not been approved by EPA. Those that are approved will probably cost much more. Industry experts say that, under EPA's proposed criteria, such mundane things as fly ash, concrete and most soils will be covered. It is even possible that most communities' municipal solid waste would be included. The mechanisms set up by Congress in Subtitle C to control truly hazardous wastes will be almost overloaded with requests to permit the discharge of most innocuous substances unless the Congress exercises its oversight powers to get EPA back on track.

"ZERO EMISSION" STANDARDS FOR SANITARY LANDFILLS AND HAZARDOUS WASTE DISPOSAL SITES

Regulations being developed pursuant to Sections 3004 (Standards applicable to owners and operators of hazardous waste treatment, storage, and disposal facilities) and 4004 (Criteria for sanitary landfills) apparently are being designed to require "zero emission" into the air or ground water from such sites. This goes far beyond the intent of Congress, especially when one considers two examples. The air emissions permitted from a hazardous waste disposal site under the draft Section 3004 regulations is only 0.1% of the OSHA threshold levels for air emissions from disposal and is even much tougher than the requirements of the Clean Air Act for corresponding emission sources. Secondly, for the storage of volatile wastes, the draft requires 1.5 vapor pressure (including vapor recovery) which far exceeds normal procedures. Measures to insure zero runoff from sanitary landfills will be highly inflationary and could close many municipal landfills that are otherwise well-run.

Another major fault of the EPA scheme is the failure to recognize that, like the air and water acts before it, there should be separate standards for existing and for new facilities. There is enough to do to get the permit procedures off the ground without shutting down those well-run operations that do not meet the tough new standards being proposed by EPA.

Finally, we see nothing in the statute that permits EPA to dictate the minimum staffing requirements at such facilities as the Section 3004 draft regulations seem to prescribe. We also think it contrary to Congressional intent for EPA to grant "partial authorization" to states to cover only parts of the Subtitle C program.

SANITARY LANDFILL CRITERIA

It should be made clear to EPA by the authorizing committees that Section 4004 was intended to require EPA to set design-oriented criteria for establishing federally approved landfills, rather than performance criteria. Additionally, Congressional intent should be clarified as to whether EPA is authorized to phase the publication of the criteria for identifying open dumps. This would reflect more accurately the reality facing many states which do not have adequate resources to handle the entire job at one time.

Regarding the regulations being developed setting forth guidelines for the requirements for states to have an acceptable state plan, we must agree with the National Governors Association that these should truly be plans rather than a compliance schedule for closing open dumps. The state plans must be kept as flexible as possible to reflect varying conditions among states. Additionally, provisions within a state's hazardous waste program, established under Section 3006, should not be tied in with the approval and federal funding process of Subtitle D.

THE ROLE OF THE DEPARTMENT OF COMMERCE

One of the biggest disappointments since the passage of RCRA has been the Administration's lack of response to the importance of the Subtitle E provisions which recognized the key role to be played in the solid waste management arena by the Department of Commerce. Of course, we consider it simply an oversight that the legislation did not provide for the Department to carry out its mandated activities. However, the "turf conscious" position in delaying sufficient funds to DOC, exhibited by EPA—and OMB's seeming willingness to go along with such actions—does not further the goals of RCRA.

DOC has the technical expertise, found nowhere else in government, to carry out the functions outlined in Sections 5002 and 5003 to develop realistic specifications for recovered materials and to identify markets where such items might be better utilized, given the fact that there is a readily available market for

recycled materials. To fail to give DOC the funds necessary to do these seemingly mundane yet critical analyses will only delay the accomplishment of RCRA's objectives.

Furthermore, DOC is not to be absolved of all blame in this case; clearly, the highest levels of the Department do not see these tasks as being of high priority. Perhaps it would be given proper priority if the appropriate Congressional committee took the additional step of providing more direct money for DOC to carry out its mandate under Subtitle E of RCRA.

THE FAILURE OF EPA TO FOCUS ITS EFFORTS ON RESOURCE RECOVERY

As you well know, RCRA is a complex statute containing a balanced set of programs and regulatory activities to meet our nation's growing solid and hazardous waste disposal problems.

We have commented above on the few shortcomings we see in EPA's efforts to comply with its mandates concerning state programs on sanitary landfills and hazardous waste disposal sites. Any comment on the oversight of RCRA would be seriously lacking, however, if it did not address EPA's failure to focus on the specific technology which is probably the best long-term answer to the problem of handling growing amounts of municipal waste. That technology, of course, is resource recovery. While industry sees this concept as an ever-increasing method of assisting municipalities and consumers to meet the dual problems of trash disposal and energy costs, EPA continues to give it low priority. More and more industrial firms are getting into the resource business because of a rising demand for recycled resources.

However, if the Agency continues to ignore or downplay it, years will have been lost in the battle to convince the public that resource recovery is no longer a "pipedream." EPA sees resource recovery only as a smoke screen offered by industry to avoid mandatory deposit legislation.

This is unfortunate. It will only put off the day when citizens and government officials alike face up to the fact that the real problem is where to put household wastes. With the assistance of technical experts at the Department of Commerce, the realization by cities that resource recovery can and does work, will help us to solve the problem of household waste disposal.

We doubt that the true intent of the statutory requirements was to mandate that at least 20% of all solid waste program funds be spent for the Resource Recovery technical advisory panels. This requirement represented an important realization by Congress that cities need technical assistance, not political rhetoric. EPA's failure to give these panels a high priority indicates clearly where its attention lies.

We respectfully urge you to correct EPA's serious oversight.

Thank you for this opportunity to express our views.

We request that this letter be made a part of the hearings record. If you or your staff would like to discuss these matters in greater detail, Gary Knight, our Director of Environment and Land Policy, is available.

Sincerely,

HILTON DAVIS,
Vice President,
Legislative Action.

[Whereupon, at 12:46 p.m. the committee adjourned.]