1634 HJ SB 29

Compiler's Notes. As enacted the section heading of this section read, "Consideration of ...ying conditions; and providing for coordinated procedures and integrated administration."

82-4207. Transportation of hazardous waste. — Following notice and ...blic hearing, the Arkansas Transportation Commission, in consultation ...th the Department, shall issue rules and regulations for the ...nsportation of hazardous waste. Such rules and regulations shall be ...nsistent with applicable rules and regulations issued by the United States ...partment of Transportation and with any rules, regulations, and ...andards issued by the Department pursuant to this Act [§§ 82-4201 — ...4216]. The Arkansas Transportation Commission shall comply with this ...ction within one [1] year after the effective date of this Act [March 14, ...79]. The provisions of this Section shall apply equally to those persons ...ansporting hazardous wastes generated by others and to those ...ansporting hazardous wastes they have generated themselves, or ...mbinations thereof. [Acts 1979, No. 406, § 7, p. —.]

82-4208. Imminent hazard. — Notwithstanding any other provisions of ...is Act [§§ 82-4201 — 82-4216], the Director of the Department, upon ...ding that the storage, transportation, treatment, or disposal of any waste ...ay present an imminent and substantial hazard to the health of persons ... to the environment and that an emergency exists requiring immediate ...tion to protect the public health and welfare, he may, without notice or ...aring, issue an order reciting the existence of such an imminent hazard ...d emergency and requiring that such action be taken as he determines to ... necessary to protect the health of such persons and/or the environment ...d to meet the emergency. The order of the Director may include, but is ...t limited to, directing the operator of the treatment or disposal facility or ...e, or the custodian of the waste, which constitutes such hazard, to take ...ch steps as are necessary to prevent the act or eliminate the practice ...hich constitutes such hazard and, with respect to a facility or site, may ...der cessation of operation. Any person to whom such order is directed shall ...mply therewith immediately, but, on written application to the Director ...thin ten [10] days of the issuance of such order, shall be afforded a hearing ...fore the Commission within ten (10) days after receipt of said written ...quest. On the basis of such hearing, the Commission shall continue such ...der in effect, or revoke or modify it. [Acts 1979, No. 406, § 8, p. —.]

82-4209. Procedure. — The procedure of the Department and ...mmission for issuance of rules and regulations, conduct of hearings, ...tice, power of subpoena, review of action on permits, right of appeal, ...sumptions, finality of actions, and related matters shall be as provided ... Part I of the Arkansas Water and Air Pollution Control Act, as amended, ...cluding but not limited to Sections 82-1904 (11) and 82-1906, Ark. Stats. ...nn. provided such is not in conflict with the provisions set forth in this Act ...§ 82-4201 — 82-4216]. [Acts 1979, No. 406, § 9, p. —.]

82-4210. Department designated state agency for participation in ... hereby designated as the official agency for the State for all purposes of the Federal Resource Conservation and Recovery Act of 1976 (Public Law 94-580 approved October 21, 1976) [42 U.S.C. §§ 6901 — 6987], as it now exists or may hereafter be amended, and for the purpose of such other State or Federal legislation as has or may be hereafter enacted to assist in the management of hazardous wastes.

(b) The legislature of this State encourages cooperative activities by the Department with other states for the improved management of hazardous wastes, and so far as is practicable, uniform State laws relating to the management of hazardous wastes, and compacts between this and other states for the improved management of hazardous wastes. The Department may enter into agreements with the responsible authorities of the United States and/or of other states, subject to approval by the Governor, relative to policies, methods, means, and procedures to be employed in the management of hazardous wastes not inconsistent with the provisions of this Act [§§ 82-4201 — 82-4216] and may carry out such agreements. [Acts 1979, No. 406, § 10, p. —.]

Compiler's Notes. As enacted the section heading of this section read, "Department designated state agency for participation in federal program; and interstate cooperation." The words in parentheses in subsection (a) so appeared in the law as enacted.

82-4211. Maintaining records, furnishing information, and permitting examinations and surveys. — (a) The owner or operator of any permitted facility or site shall establish and maintain such records, make such reports, install, use, and maintain such monitoring equipment or methods, take such samples, and perform such tests, and provide such other information to the Department as the Director may reasonably require.

(b) The Department, or any authorized employee or agent thereof, may examine and copy any book, papers, records, or memoranda pertaining to the operation of the facility or site.

(c) The Department, or any authorized employee or agent thereof, may enter upon any property, public or private, for the purpose of obtaining information or conduction [conducting] surveys or investigations necessary or appropriate for the purposes of this Act [§§ 82-4201 — 82-4216].

(d) Any records, reports, or information obtained under this Act and any permits, permit applications, and related documentation shall be available to the public for inspection and copying; provided that upon a showing satisfactory to the Director that such records, reports, permits, documentation, or information, or any part thereof would, if made public, divulge methods or processes entitled to protection as trade secrets, the Director shall consider, treat, and protect such records, reports, or information as confidential. As necessary to carry out the provisions of this Act, information afforded confidential treatment may be transmitted under a continuing restriction of confidentiality to other officers, employees, or authorized representatives of the State or of the United States, provided that ... facility to which such information pertains is

informed at least two [2] weeks prior to such transmittal and provided further that such information has been acquired by the Department under the provision of this Act. The provisions of this Section shall not be construed to limit the Department's authority to release confidential information during emergency situations. Any violation of this subsection shall be unlawful and constitute a misdemeanor. [Acts 1979, No. 406, § 11, p. —.]

Compiler's Notes. The bracketed word "conducting" in subsection (c) was inserted by the compiler.

82-4212. Unlawful acts. — It shall be unlawful for any person:

(a) to violate any provisions of this Act [§§ 82-4201 — 82-4216] or of any rule, regulation, permit, or order adopted or issued under this Act;

(b) knowingly to make any false statement, representation, or certification in any application, record, report, plan or other document filed or required to be maintained under this Act, or to falsify, tamper with, or knowingly render inaccurate any monitoring device or method required to be maintained under this Act or any rules or regulations adopted pursuant thereto;

(c) to dispose of hazardous wastes at any disposal site or facility other than one for which a permit has been issued by the Department pursuant to this Act;

(d) to store, collect, transport, treat, or dispose of any hazardous waste contrary to the rules, regulations, permits, or orders issued under this Act or in such a manner or place as to create or as is likely to be created a public nuisance or a public health hazard or to cause or is likely to cause water or air pollution within the meaning of the Arkansas Water and Air Pollution Control Act, as amended (Section 82-1902 et seq., Ark. Stats. Ann.). [Acts 1979, No. 406, § 12, p. —.]

82-4213. Penalties. — (a) Any person who commits any unlawful act shall be guilty of a misdemeanor and upon conviction thereof, shall be subject to imprisonment for not more than one (1) year, or a fine of not more than ten thousand dollars ($10,000.00), or by both such fine and imprisonment. Each day or part of a day during which such violation is continued or repeated shall constitute a separate offense.

(b) Any person who violates any provision of this Act [§§ 82-4201 — 82-4216] or commits any unlawful act thereunder shall be subject to a civil penalty in such amount as the court shall find appropriate, not to exceed twenty-five thousand dollars ($25,000.00) per day of such violation, to the payment of any expenses reasonably incurred by the State in removing, correcting, or terminating any adverse effects resulting therefrom, including the cost of the investigation, inspection, or survey establishing such violation or unlawful act, and the payment to the State of reasonable compensation of any actual damage resulting therefrom. [Acts 1979, No.

82-4214. Variances. — Where the application of, or compliance with, any rule or regulation(s) issued under this Act [§§ 82-4201 — 82-4216] would, in the judgment of the Commission, cause undue or unreasonable hardship to any person and not cause substantially adverse environmental effects, the Commission may issue a variance from such rule or regulation. In no case shall the duration of any such variance exceed one [1] year; renewals or extensions may be given only after opportunity for public comment on each such renewal or extension. [Acts 1979, No. 406, § 14, p. —.]

Compiler's Notes. The letter "s" in the word "regulations" was enclosed in parentheses by the compiler as surplusage.

82-4215. Existing rules, regulations, orders, permits, legal proceedings. — (a) All existing rules and regulations of the Department not inconsistent with the provisions of this Act [§§ 82-4201 — 82-4216] relating to subjects embraced within this Act shall remain in full force and effect until expressly repealed, amended, or superceded by the Commission provided, however, insofar as said rules and regulations do not conflict with the provisions of this Act.

(b) All orders entered, permits granted, and pending legal proceedings instituted by the Department relating to subjects embraced within this Act shall remain unimpaired and in full force and effect until superceded by actions taken by the Department or Commission under this Act.

(c) No existing civil or criminal remedies, public or private, for any wrongful action shall be excluded or impaired by this Act.

(d) The provisions of this Act, and the rules and regulations promulgated pursuant to this act, shall govern if the same conflict with the provisions of the Arkansas Water and Air Pollution Control Act, as amended (Section 82-1902 et seq., Ark. Stats. Ann.), or the Arkansas Solid Waste Management Act (Section 82-2701 et seq., Ark. Stats. Ann.), or any action taken by the Department or Commission under said Acts.

(e) Any person adversely affected by a violation of this Act or of any rules, regulations, or orders issued pursuant thereto, shall have a private right of action for relief against such violation. [Acts 1979, No. 406, § 15, p. —.]

82-4216. Venue for legal proceedings. — All legal proceedings affecting hazardous waste treatment and/or hazardous waste disposal facilities in this State shall be brought in the county in which the facility is located. [Acts 1979, No. 406. § 16, p. —.]

Repealing Clause. Section 18 of Acts 1979, No. 406, read: "All laws and parts of laws in conflict herewith are hereby repealed to the extent of such conflict. Nothing contained in this Act shall be deemed to repeal or affect the provisions of the Arkansas Solid Waste Management Act except as to hazardous wastes as defined herein and the Arkansas Solid Waste Management Act and rules and in full force and effect in respect to all wastes other than hazardous wastes."

Separability. Section 17 of Acts 1979, No. 406, read: "The provisions of this Act are hereby declared to be separable and if any provision shall be determined to be invalid, it shall not affect the validity of the remaining provisions of this Act."

Emergency. Section 19 of Acts 1979, No.

AtlanticRichfieldCompany Public Affairs
Alaska State and Local Government Relations
Mailing Address: Box 360
Anchorage, Alaska 99510
Telephone 907 277 5637

Dave Harbour
Regional Director

April 1, 1981

The Honorable Fred Brown
House of Representatives
Judiciary Chairman
Pouch V
Juneau, Alaska 99811

Dear Representative Brown:

We at Atlantic Richfield Company wish to submit these prepared comments on Hazardous Waste legislation and hope that they will be useful to you and the committee.

Sincerely,

Beverly Ward

Beverly Ward
Associate Director

Atlantic Richfield Company Position

Alaska House CS for CS for Senate Bill 29

Atlantic Richfield Company recognizes the desire of the State of Alaska to protect its citizens and its environment from the risks that can accompany nuclear facilities, transportation of nuclear materials and disposal of nuclear wastes. We also realize the State is concerned about the possible adverse effects of the transportation and disposal of hazardous wastes. With respect to the latter, it appears to be the intent of Senate Bill 29 to meet federal requirements for the handling and dispoal of hazardous wastes as mandated by the Resource Conservation and Recovery Act (RCRA) and the federal regulations that have been promulgated under that act. Atlantic Richfield Company supports efforts by Alaska to adopt a State hazardous waste program which can be authorized by the Environmental Protection Agency (EPA) under RCRA to be administered in Alaska in lieu of federal administration.

We would, however, like to comment on some provisions of the bill as proposed.

In the first place, we believe it is not appropriate to lump together nuclear issues with provisions dealing with the transportation and disposal of hazardous wastes. Nuclear installations, transportation of nuclear materials and disposal of nuclear wastes raise issues different in kind and in degree from hazardous waste management. This has long been recognized in federal law, notably in RCRA and in the recently-enacted Comprehensive Environmental Response

Compensation and Liabilty Act of 1980. Thus, while nuclear activites may be construed by the State of Alaska to necessitate highly restricted legislation, these activites should be addressed independently of hazardous waste transporation and disposal.

Secondly, we believe every effort should be made to see that State hazardous waste regulations are equivalent to and consistent with federal requirements. We are particularly concerned with the treatment of drilling fluids, produced waters and other wastes associated with the exploration, development or production of crude oil, natural gas and geothermal energy, as well as with those wastes associated with mineral extraction. RCRA specifically excludes such wastes from definition as hazardous, pending adequate scientific review by EPA as to any possible adverse health and environmental effects of such wastes. We urge the Alaska Legislature to exclude by Statute such wastes from definition as hazardous, in accordance with RCRA.

Furthermore, since EPA has developed an extensive classification system for hazardous wastes under RCRA and the Clean Water Act, we urge the State of Alaska to mandate a classification system consistent with generally accepted scientific criteria developed by EPA.

Atlantic Richfield Company enjoys experience with respect to the safe handling and disposal of both hazardous and non-hazardous wastes. We welcome any opportunity to work cooperatively with the Legislature and the Department of Environmental Conservation in Alaska to develop adequate and appropriate legislation and regulation concerning the transportation and disposal of hazardous wastes in the State.

STATE OF ALASKA
DEPT. OF HEALTH AND SOCIAL SERVICES
OFFICE OF THE COMMISSIONER

JAY S. HAMMOND, GOVERNOR

POUCH H 01 – JUNEAU 99811

April 1, 1981

Document# 83-81

Representative Fred E. Brown
Chairman
House Judiciary Committee
Pouch V
Juneau Alaska 99811

Dear Representative Brown:

Enclosed are our recommendations for changes in HCS-CSSB 29 (Res.). Our recommendations are written on a copy of the Bill itself.

Mr. Sidney Heidersdorf, our Radiological Physicist, phone 465-3019, will be representing the Department of Health and Social Services during hearings on the Bill. If you have any questions please address them to him.

Thank you for your consideration of these changes.

Sincerely,

for Helen D. Beirne
Commissioner

Enclosure

Original sponsor: Kerttula

Offered: 3/18/81
Referred: Judiciary

IN THE SENATE BY THE RESOURCES COMMITTEE

HOUSE CS FOR CS FOR SENATE BILL NO. 29 (Resources)

IN THE LEGISLATURE OF THE STATE OF ALASKA

TWELFTH LEGISLATURE - FIRST SESSION

A BILL

For an Act entitled: "An Act relating to ~~nuclear~~ RADIOACTIVE materials and extremely hazardous and hazardous wastes; and providing for an effective date."

BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF ALASKA:

* Section 1. AS 18.45 is amended by adding a new section to read:

Sec. 18.45.100. NUCLEAR FACILITIES PROHIBITED. A person may not construct a nuclear fuel production facility, a nuclear utilization facility, a nuclear reprocessing facility, or a nuclear enhancement facility in the state.

* Sec. 2. AS 18.45 is amended by adding new sections to read:

Sec. 18.45.110. HIGH LEVEL RADIOACTIVE NUCLEAR WASTE DISPOSAL FACILITY SITING PERMIT REQUIRED. (a) A person may not construct a high level RADIOACTIVE nuclear waste disposal facility in the state unless he has first obtained a permit from the department to construct the facility on land designated by the legislature under (b) of this section.

(b) The legislature shall designate by law the land in the state on which a high level RADIOACTIVE nuclear waste disposal facility may be located.

(c) The department shall adopt regulations governing the issuance of permits required by (a) of this section. However, a permit may not be issued by the department unless

(1) the governor has approved the permit;

(2) local approval has been obtained; local approval is obtained

(A) if the municipality with jurisdiction over the

COMMENT: IT IS RECOMMENDED THE WORD "RADIOACTIVE" REPLACE THE WORD "NUCLEAR" WHEREVER THE TERM MAKES REFERENCE TO WASTE. THIS IS A MORE PRECISE DESCRIPTION OF THE KIND OF WASTE UNDER CONSIDERATION.

proposed facility site has approved the permit; and

(B) if the facility is to be located in the unorganized borough, a majority of the registered voters who live within 100 miles of the proposed facility votes to approve the issuance of the permit for the facility at a general or special election of the state called for the purpose; and

(3) issuance of the permit is approved by a majority of the registered voters at a general or special statewide election.

Sec. 18.45.120. PROOF OF FINANCIAL RESPONSIBILITY REQUIRED FOR FACILITY OPERATION. (a) A person may not operate a high level ~~nuclear~~ RADIOACTIVE waste disposal facility unless he has furnished proof to the commissioner of financial ability to care in perpetuity for the ~~nuclear~~ RADIOACTIVE material which will be used in the facility. Financial responsibility may be demonstrated by self-insurance, insurance, surety, or guarantee, under terms the department may prescribe.

(b) Acceptance of proof of financial responsibility under this section expires

(1) one year from its issuance for self-insurance;

(2) on the effective date of a change in the surety bond, guarantee, or insurance agreement; or

(3) on the expiration or cancellation of the surety bond, guarantee, or insurance agreement.

(c) The person whose proof of financial responsibility is accepted by the department under this section shall notify the department at least 30 days before the effective date of a change, expiration or cancellation in the surety bond, guarantee, or insurance agreement. Application for renewal of acceptance of proof of financial responsibility under this section must be filed at least 30 days before the date of expiration.

(d) The department, after notice and hearing, may revoke acceptance of proof of financial responsibility if it determines that

(1) acceptance was procured by fraud or misrepresentation; or

(2) a change of circumstance has occurred, other than a change specified in (b)(1) - (3) of this section, which would have warranted denial of the application.

* Sec. 3. AS 18.45.110(a) is amended to read:

Sec. 18.45.110. FACILITIES [HIGH LEVEL NUCLEAR WASTE DISPOSAL FACILITY] SITING PERMIT REQUIRED. (a) A person may not construct a nuclear fuel production facility, nuclear utilization facility, nuclear reprocessing facility, nuclear enhancement facility, or high level RADIOACTIVE nuclear waste disposal facility in the state unless he has first obtained a permit from the department to construct the facility on land designated by the legislature under (b) of this section.

* Sec. 4. AS 18.45.110(b) is amended to read:

(b) The legislature shall designate by law the land in the state on which a nuclear fuel production, utilization, reprocessing, enhancement, or high level RADIOACTIVE nuclear waste disposal facility may be located.

* Sec. 5. AS 18.45.120(a) is amended to read:

(a) A person may not operate a nuclear fuel production facility, a nuclear utilization facility, a nuclear reprocessing facility, a nuclear enhancement facility, or a high level RADIOACTIVE nuclear waste disposal facility unless he has furnished proof to the commissioner of financial ability to care in perpetuity for the RADIOACTIVE nuclear material which will be used in the facility. Financial responsibility may be demonstrated by self-insurance, insurance, surety, or guarantee, under terms the department may prescribe.

* Sec. 6. AS 18.45 is amended by adding new sections to read:

Sec. 18.45.130. TRANSPORTATION OF ~~NUCLEAR~~ RADIOACTIVE WASTE MATERIAL. (a) The transportation of high level ~~nuclear~~ RADIOACTIVE waste material, except for purposes of disposal outside the state, is prohibited.

(b) A person may not transport low level ~~nuclear~~ RADIOACTIVE waste material in the state unless he has first obtained a permit from the department. The department shall adopt regulations governing the issuance of permits required by this subsection, and shall establish and implement a system to record by manifest the movement of low level ~~nuclear~~ RADIOACTIVE waste materials which are transported.

(c) The provisions of (a) and (b) of this section do not apply to the transportation of ~~nuclear~~ RADIOACTIVE waste material by the federal government. When the federal government proposes to transport ~~nuclear~~ RADIOACTIVE waste material in the state, the agency of the federal government shall notify the commissioner and the Department of Public Safety of its plans. When notification is received from the federal agency, the commissioner and the commissioner of public safety may take any action they regard as necessary to protect the health and safety of persons in the vicinity of the route used to transport the ~~nuclear~~ RADIOACTIVE waste material. The notification provisions of this subsection do not apply if advance notice to the commissioner would represent a threat to national security.

DELETE - ACCOMPLISHED BY SEC 46.03.250

Sec. 18.45.140. STORAGE AND DISPOSAL OF ~~NUCLEAR~~ RADIOACTIVE WASTE MATERIAL. (a) The storage and disposal in the state of nuclear waste material which would constitute a threat to the health or safety of the public is prohibited.

(b) The provisions of (a) of this section do not apply to

(1) material of a kind or quantity which, when stored or disposed, would not constitute a threat to the health or safety of the public as determined by the department under AS 46.03.250 by regulation;

DELETE

(2) radioactive materials used in medicine; and

(3) radioactive materials, not exceeding an amount determined by the department by regulation under AS 46.03.250, used in education, x-ray or photographic process testing, security screening, or scientific research which are stored or disposed of in conformity with procedures established by the department by regulation.

Sec. 18.45.150. PROOF OF RESPONSIBILITY FOR DISPOSAL OF HIGH RADIOACTIVE LEVEL ~~NUCLEAR~~ WASTES REQUIRED. (a) A person may not dispose of high RADIOACTIVE level ~~nuclear~~ wastes in the state unless he has furnished proof to the commissioner of financial ability to care for the disposed RADIOACTIVE ~~nuclear~~ waste material. Financial responsibility may be demonstrated by self-insurance, insurance, surety, or guarantee, under terms the department may prescribe.

(b) Acceptance of proof of financial responsibility under this section expires

(1) one year from its issuance for self-insurance;

(2) on the effective date of a change in the surety bond, guarantee, or insurance agreement; or

(3) on the expiration or cancellation of the surety bond, guarantee, or insurance agreement.

(c) The person whose proof of financial responsibility is accepted by the department under this section shall notify the department at least 30 days before the effective date of a change, expiration or cancellation in the surety bond, guarantee, or insurance agreement. Application for renewal of acceptance of proof of financial responsibility under this section must be filed at least 30 days before the date of expiration.

(d) The department, after notice and hearing, may revoke acceptance of proof of financial responsibility if it determines that

(1) acceptance was procured by fraud or misrepresentation; or

(2) a change of circumstance has occurred, other than a change specified in (b)(1) - (3) of this section, which would have warranted denial of the application.

Sec. 18.45.160. PENALTIES. (a) A person who violates a provision of AS 18.45.130 - 18.45.140 is guilty of a class C felony.

(b) In addition to the penalty prescribed for a class C felony under AS 12.55.035(b)(2) and (c), a corporation which violates a provision of AS 18.45.130 - 18.45.140 is subject to

(1) a penalty of $50,000 for each offense; each day that the violation continues constitutes a separate offense;

(2) the payment to the state of expenses incurred by the state in removing, correcting, or abating the adverse effects of the violation; and

(3) actual damages resulting from the violation.

Sec. 18.45.170. DEFINITIONS. In AS 18.45.100 - 18.45.170,

(1) "commissioner" means the commissioner of environmental conservation;

(2) "department" means the Department of Environmental Conservation;

(3) "high level ~~nuclear~~ RADIOACTIVE waste" means

(A) used nuclear reactor fuel;

(B) waste produced during the reprocessing of used nuclear reactor fuel; and

(C) elements having an atomic number greater than 92 CONTAINING and ~~emitting~~ 10 or more nanocuries per gram;

(4) "low level ~~nuclear~~ RADIOACTIVE waste" means a radioactive waste other than a high level ~~nuclear~~ RADIOACTIVE waste; and

DELETE - THESE ARE TRANSURANIC WASTES

SUGGEST USE OF DEFINITION GIVEN IN SEC 11. AS 46.03.900(30).

(5) "manifest" means a shipping or storage document containing a list of the contents, value, origin, carrier, and destination of the nuclear waste materials to be transported, required to be carried by the person providing transportation of the wastes.

(6) "RADIOACTIVE WASTE" MEANS HIGH LEVEL AND/OR LOW LEVEL RADIOACTIVE WASTE.

* Sec. 7. AS 46.03.250 is amended to read:

Sec. 46.03.250. AUTHORITY. The department shall adopt regulations

(1) establishing standards governing the discharge of low level ~~radiation~~ RADIOACTIVE WASTE [RADIONUCLIDES] to the air, water, land, and subsurface land of the state;

(2) defining LIMITS OF RADIATION EXPOSURE FROM RADIOACTIVE A nuclear waste material which does not constitute a threat to public health or safety and which may be stored or disposed in the state; and

(3) establishing procedures for the storage and disposal of radioactive WASTES materials used in medicine, education, INDUSTRY ~~x-ray or photographic process testing, security screening~~, or scientific research.

* Sec. 8. AS 46.03.260 is amended to read:

Sec. 46.03.260. USE OF ~~NUCLEAR [ATOMIC] RADIATION~~ RADIOACTIVE MATERIALS. A person who conducts an operation which results in the discharge of low level ~~radiation~~ RADIOACTIVE WASTE [RADIONUCLIDES] to the air, water, land or subsurface land of the state must obtain a permit from the department before commencing the discharge.

* Sec. 9. AS 46.03.790(a) is amended to read:

(a) A person who violates or who causes or permits a violation of a provision of this chapter or AS 46.04, or of a regulation, lawful order of the department, or permit, approval, or acceptance, or term or condition of a permit, approval, or acceptance issued under this chapter or AS 46.04 is guilty of a class B misdemeanor [VIOLATION].

* Sec. 10. AS 46.03.790(b) is amended to read:

(b) A person who wilfully violates a provision of this chapter, or of a regulation, lawful order of the department, or permit, approval, or acceptance, or term or condition of a permit, approval, or acceptance issued under this chapter or AS 46.04 is guilty of a class A misdemeanor.

* Sec. 11. AS 46.03.900 is amended by adding a new paragraph to read:

(30) "low level ~~nuclear~~ RADIOACTIVE waste" means a radioactive waste other than

(A) used nuclear reactor fuel;

(B) waste produced during the reprocessing of used nuclear reactor fuel; ~~and~~

(C) URANIUM MINE OR MILL TAILINGS; AND

~~(C)~~ (D) elements having an atomic number greater than 92 and ~~emitting~~ CONTAINING 10 or more nanocuries per gram.

* Sec. 12. AS 46.03.020(10)(H) is amended to read:

(H) any other purpose which [SUCH OTHER PURPOSES AS] may be required to implement [FOR THE IMPLEMENTATION OF] the policy declared in AS 46.03.010;

* Sec. 13. AS 46.03.020(10) is amended by adding a new subparagraph to read:

(I) procedures required to handle, transport, treat, store, and dispose of extremely hazardous wastes and hazardous wastes;

* Sec. 14. AS 46 is amended by adding a new chapter to read:

CHAPTER 32. WASTES.

Sec. 46.32.010. DISPOSAL OF EXTREMELY HAZARDOUS WASTES. (a) It is unlawful to dispose of extremely hazardous wastes in the state without a permit issued by the department.

(b) A permit may be issued by the department only for the disposal of extremely hazardous wastes which, when disposed of, will ensure the

protection of human health, livestock, wildlife, property, and the environment.

Sec. 46.32.020. DISPOSAL OF HAZARDOUS WASTES. (a) It is unlawful to dispose of hazardous wastes in the state unless

(1) the waste has been processed to remove its harmful properties to the maximum extent feasible; or

(2) it is disposed of in a manner which will ensure the protection of human health, livestock, wildlife, property, and the environment.

(b) The department shall adopt regulations in accordance with the Administrative Procedure Act (AS 44.62) for the disposal of hazardous wastes to ensure the protection of human health, livestock, wildlife, property, and the environment.

Sec. 46.32.030. TRANSPORTATION OF EXTREMELY HAZARDOUS WASTES. (a) The transportation of extremely hazardous wastes, except for purposes of disposal in accordance with AS 46.32.010(b), is prohibited.

(b) A person may not transport extremely hazardous wastes in the state unless he first obtains a permit from the department. The department shall adopt regulations governing the issuance of permits required by this subsection, and shall establish and implement a system to record by manifest the movement of extremely hazardous wastes which are transported.

(c) The provisions of (a) and (b) of this section do not apply to the transportation of extremely hazardous wastes by the federal government. When the federal government proposes to transport extremely hazardous wastes in the state, the agency of the federal government shall notify the commissioner and the Department of Public Safety of its plans. When notification is received from the federal agency, the commissioner and the commissioner of public safety may take any action

they regard as necessary to protect the health and safety of persons in the vicinity of the route used to transport the extremely hazardous wastes. The notification provisions of this subsection do not apply if advance notice to the commissioner would represent a threat to national security.

Sec. 46.32.040. TRANSPORTATION OF HAZARDOUS WASTES. (a) The department shall establish and implement a system to record by manifest the movement of hazardous wastes in excess of 1,000 kilograms per month which are transported.

(b) A person may not transport hazardous wastes in excess of 1,000 kilograms per month in the state unless he transports the hazardous wastes in accordance with (a) of this section.

(c) The provisions of (a) and (b) of this section do not apply to the transportation of hazardous wastes by the federal government. When the federal government proposes to transport hazardous wastes in the state, the agency of the federal government shall notify the commissioner and the Department of Public Safety of its plans. When notification is received from the federal agency, the commissioner and the commissioner of public safety may take any action they regard as necessary to protect the health and safety of persons in the vicinity of the route used to transport the hazardous wastes. The notification provisions of this subsection do not apply if advance notice to the commissioner would represent a threat to national security.

Sec. 46.32.050. DEPARTMENT TO DEFINE EXTREMELY HAZARDOUS WASTES AND HAZARDOUS WASTES BY REGULATION. The department shall, by regulations adopted in accordance with the Administrative Procedure Act (AS 44.62), classify substances as extremely hazardous wastes and hazardous wastes.

Sec. 46.32.060. PENALTY. (a) A person who violates this chapter

or a regulation adopted under this chapter is guilty of a class A misdemeanor.

(b) In addition to the penalty prescribed for a class A misdemeanor under AS 12.55.035(b)(3) and (c), a corporation which violates this chapter or a regulation adopted under this chapter is subject to

(1) a penalty of $50,000 for each offense; each day that the violation continues constitutes a separate offense;

(2) the payment to the state of expenses incurred by the state in removing, correcting, or abating the adverse effects of the violation; and

(3) actual damages resulting from the violation.

Sec. 46.32.070. DEFINITIONS. In this chapter

(1) "department" means the Department of Environmental Conservation;

(2) "extremely hazardous waste" means a hazardous waste or combination of hazardous wastes which will likely cause the death of, or result in disabling personal injury or serious illness to, a person who has been exposed to it;

(3) "hazardous waste" means a waste, or combination of wastes, which because of its quantity, concentration, or physical, chemical or infectious characteristics may

(A) cause, or significantly contribute to, an increase in mortality or an increase in serious irreversible, or incapacitating reversible illness; or

(B) pose a substantial present or potential hazard to human health, livestock, wildlife, property, or the environment when improperly disposed of;

(4) "manifest" means a shipping or storage document containing a list of the contents, value, origin, carrier, and destination of

the extremely hazardous and hazardous wastes to be transported, required to be carried by the person providing transportation of the wastes.

(5) "waste" means material for which no use or reuse is intended and which is to be disposed of; the term does not include ~~nuclear~~ RADIOACTIVE waste subject to AS 18.45.

* Sec. 15. AS 18.45.010 - 18.45.080 are repealed.

* Sec. 16. Sections 1, 2, 6 - 11, and 15 of this Act take effect immediately in accordance with AS 01.10.070(c).

* Sec. 17. Sections 3 - 5 of this Act take effect on he date of a final court order ruling AS 18.45.100 as enacted by sec. 1 of this Act invalid or unconstitutional.

* Sec. 18. Sections 12 - 14 of this Act take effect July 1, 1981.

Alaska Department of Environmental Conservation

TESTIMONY ON HCS CSSB-29 RELATING TO
CONTROL OF RADIOACTIVE AND HAZARDOUS WASTES

April 1981
Before the House Judiciary Committee

The Department of Environmental Conservation welcomes the opportunity to review and comment on HCS CSSB-29 relating to the transportation, storage and disposal of nuclear and other hazardous wastes material in Alaska. The Department strongly supports legislation on these two important environmental concerns.

This bill passed the Senate in its earlier form as CSSB-29, which at that point was only related to radioactive waste transportation and disposal. We have actively supported the bill throughout the Senate committee hearings, and more recently worked closely with the House Resources Committee on the bill which is before you today. A substantial number of new provisions were added in the bill in radioactive and hazardous waste control. Their efforts are to be commended in attempting to consolidate into one comprehensive bill the desirable features of CSSB-29 on radioactive waste control, the earlier HB-72 relating to radioactive and hazardous waste control, and the provisions of SB 239 which was recently introduced on hazardous waste control.

In reviewing the bill, there are some modifications which if made would make it a strong and more effective bill for controlling radioactive and hazardous waste in Alaska. We would like to present these modifications all of which could be readily made, for your consideration. Five changes are recommended to clarify the intent and/or to make the bill more effective in accomplishing the purposes for which it was originally intended. The reasons for the changes are described below, and we have attached suggested language which would accomplish them:

1. AUTHORITY TO REGULATE THE STORAGE OF HAZARDOUS WASTE

Section 13 (page 8, line 14) provides authority to "handle, transport, treat, store and dispose" of hazardous wastes. However, the following sections 46.32.020-040 only cover the disposal and transportation aspects. To make these sections compatible and to clarify the intent of the legislation, the Department recommends that section 46.32.010 on 46.32.020 include the words "storage, treatment and" which would be added just before "disposal of hazardous wastes" in the section title and in subparagraph (b).

Another slight modification recommended in this section is in subparagraph (a), which places two conditions under which hazardous wastes may be disposed of in the State. If both conditions were to be met before disposal was allowed, it would minimize the amount of wastes to be disposed of in the state as well as protect the environment. We recommend that the word "or" at the end subparagraph (a)(b) (1) be replaced with "and". Suggested wording for Section 46.32.020 is attached for your consideration.

2. AUTHORITY FOR PERMITTING DISPOSAL OF HAZARDOUS WASTES

Section 46.32.010 requires the issuance of permits for the disposal of extremely hazardous wastes, but the following Section 46.32.020 on disposal of "hazardous" wastes does not mention permits. However, the disposal of large quantities of hazardous wastes could easily pose a threat to public health as well as the environment if done inappropriately. In addition, the U.S. Environmental Protection Agency will issue permits for any facility disposing of hazardous wastes in excess of 1000 kg, which they will issue if the state does not have its own permit system.

In order to adequately protect the public health and the environment, as well as to keep the U.S. EPA from being involved in Alaskan hazardous wastes control, the department recommends that the section be revised to provide permit authority for issuing permits for those facilities which dispose of over 500 kgs.

This limit is approximately equal to 2-1/2 barrels of hazardous wastes, and is expected to be the limit at which the federal requirements will be set at shortly. Suggested language is attached which will accomplish this.

3. AUTHORITY TO REGULATE THE SAFE HANDLING AND STORAGE OF HAZARDOUS MATERIAL

The bill currently includes provisions for radioactive and hazardous waste. However, there is one additional area presenting considerable hazards and threat to human health and which is not currently regulated or controlled by any agency. That area is in the long-term storage of hazardous materials.

Much concern was expressed during the recent house resources committee hearing, that the transportation and handling of hazardous materials is already being extensively regulated by the federal Department of Transportation and the Federal Aviation Administration. As a consequence there was no need for the department to duplicate what is already being effectively regulated. The Department concurs that handling and transportation of hazardous materials are very effectively and well covered, and there is no reason to become involved except on a coordinative role. However, there is no agency which is regulating or actively assuring the safe handling and storage of hazardous materials within industrial work places, governmental agencies, commercial establishments and educational facilities. Inappropriate storage can present a substantial hazard to persons working in close proximity, and to those persons who may have to respond to fires and other emergencies in areas where these materials may be.

The Department recommends that authority for establishing criteria and guidance for the safe storage of hazardous materials be added to Section 13 of the bill, as proposed in the attached draft language. If this authority is incorporated into the bill the department would work closely with those persons storing hazardous material, to assure that adequate safeguards are taken. We do not

envision this to be a major regulatory effort. Rather, it would allow the department to provide effective and helpful aid to Alaskans working with these types of materials.

4. AUTHORITY TO MANIFEST THE MOVEMENT OF HAZARDOUS WASTES OF LESS THAN 1000 KILOGRAMS PER MONTH

Section 46.32.040 only provides the authority to manifest hazardous wastes in excess of 1000 kilograms per month this limit was placed in the bill by House Resources, because of their concern that unnecessarily small quantities of some wastes might come under regulation. The Department shares this concern, but the 1000 kilogram per month limitation is an extremely large amount of waste. Much smaller amounts could pose a significant hazard to the public health as well as environment if they are improperly disposed of.

The Department recommends that this limit be replaced by the authority for manifesting waste quantities which may "cause detrimental effects to human health, livestock, wildlife property and the environment." The manifest system is a readily established legal means of tracking wastes from the generator to the ultimate site of disposal, and will do much to reduce the amount indiscriminate dumping which might otherwise occur. We intend to limit its use to only those wastes and quantities which warrant this level of regulation. While our proposed change does not provide a specific quantity below which we would not require a manifest, it would more clearly reflect the concern that hazards to the environment be adequately controlled by the Department. It would also remove an artifical limitation on the department's ability to provide these needed safeguards.

5. DELETION OF EXEMPTIONS FOR FEDERAL GOVERNMENT

The bill currently provides a waiver to the federal government from substantive requirements of the bill in both radioactive and hazardous waste control. This is evidenced in Section 18.45.130(c), Section 45.32.020(c), and Section 46.32.040(c). However, the federal Resource Conservation and Recovery Act of 1976 specifically requires all federal facilities to comply with state and local solid waste and hazardous waste control requirements, to the same extent as any other person or entity is subject to such requirements.

Section 6001 of this Act clearly states that exemptions may only be granted by the President. Consequently we recommend that these three sections be deleted from the bill. This deletion is particularily important in Alaska: There are a large number of Alaskan federal facilities which handle the vast majority of radioactive materials in the state. They are also some of the major generators in Alaska of hazardous wastes.

The department appreciates the opportunity to provide testimony and comment on this highly important bill. With the modifications we have recommended it should become a very effective and important means to safeguard the public health and environment from hazardous materials and wastes. We would be glad to respond to any questions, or provide any additional information which might be requested.

Attachment to

Department of Environmental Conservation

TESTIMONY ON HCS CSSB-29

Suggested changes to HCS CSSB-29

RELATING TO RADIOACTIVE AND HAZARDOUS WASTE

April 1981

1. MODIFICATION OF SECTION 46.32.010 AS FOLLOWS:

Section 46.32.010. STORAGE, TREATMENT AND DISPOSAL OF EXTREMELY HAZARDOUS WASTES. (a) It is unlawful to store, treat or dispose of extremely hazardous wastes in the state without a permit issued by the department.

(b) A permit may be issued by the department only for the storage, treatment and disposal of extremely hazardous wastes which, when disposed of, will ensure the protection of human health, livestock, wildlife, property, and the environment.

2. MODIFICATION OF SECTION 46.32.020 AS FOLLOWS:

Section 46.32.020 STORAGE, TREATMENT AND DISPOSAL OF HAZARDOUS WASTES. (a) It is unlawful to dispose of hazardous wastes in the state unless

(1) the waste has been processed to remove its harmful properties to the maximum extent feasible; and

(2) it is disposed of in a manner which will assure the protection of human health, livestock, wildlife, property and the environment.

(b) The department shall adopt regulations in accordance with the Administrative Procedure Act (AS44.62) for the storage, treatment and disposal of hazardous wastes, including permits for the disposal in excess of 500 kg, to ensure the protection of human health, livestock, wildlife, property, and the environment.

3. MODIFICATION OF SECTION 13 AS FOLLOWS:

AS 46.03.020 (10) is amended by adding a new subparagraph to read:

(I) Handling, transportation, treatment, storage and disposal of extremely hazardous and hazardous wastes, and safe storage of hazardous materials

4. MODIFICATION OF SECTION 46.32.040 AS FOLLOWS:

Section 46.32.040. TRANSPORTATION OF HAZARDOUS WASTES. (a) The department shall establish and implement a system to record by manifest the movement of hazardous waste which may cause detrimental effects to human health, livestock, wildlife, property and the environment.

5. DELETION OF FEDERAL EXEMPTIONS AS FOLLOWS:

The following subsections are deleted:

Subsection 18.45.130 (c)

Subsection 46.32.030(c)

Subsection 46.32.040(c)

THE LEGISLATURE OF THE STATE OF ALASKA
TWELFTH LEGISLATURE

FISCAL NOTE

I. REQUEST
Bill/Resolution No. HCS CSSB-29
Title Act relating to the disposal of radioactive and hazardous wastes
Requested by Kertulla Date

II. FISCAL DETAIL
Agency Affected Department of Environmental Conservation
Program Category Affected Environmental Conservation
BRU, Program, or Subprogram(s) Affected Env. Quality Management, Env. Quality Operations
(Note: If more than one budget component is affected, separate line-item amounts and funding for each component in the analysis section.)

EXPENDITURES (Thousands of Dollars)

	FY 81	FY 82	FY 83	FY 84	FY 85	FY 86
100 PERSONAL SERVICES		388.8	429.4	472.4	519.6	571.6
200 TRAVEL		63.4	55.0	60.5	66.5	73.2
300 CONTRACTUAL		304.4	168.1	184.9	203.4	223.7
400 COMMODITIES		24.7	27.2	29.9	32.9	36.2
500 EQUIPMENT		28.5	31.4	34.5	37.9	41.7
600 LAND & STRUCTURES						
700 GRANTS, CLAIMS, ETC.						
TOTAL		809.8	711.1	782.2	860.3	946.4

FUNDING (Thousands of Dollars)

GENERAL FUND		809.8	711.1	782.2	860.3	946.4
FEDERAL FUNDS		(218.8)				
OTHER (Specify Fund Source)						

POSITIONS

FULL TIME		6	6	6	6	6
PART TIME		4	4	4	4	4
TEMPORARY						

III. ANALYSIS (See Fiscal Note Preparation Instructions, Section III)

I. BACKGROUND:

HCS-CSSB-29 will require the establishment of regulations plus controls, to assure proper disposal and handling of hazardous and radioactive wastes throughout the state. Up to now there has been no systematic state effort in controlling either type of waste.

There is very little radioactive waste in the state. Substantially larger quantities of hazardous wastes are present, with the majority of Alaskan generators being small firms and private individuals. However, there is

IV. DATE 3/17/81 PREPARED BY Thomas R. Hanna Thomas R Hanna
AGENCY Department of Environmental Conservation
PHONE 465-2666

Original: Legislative Finance
cc: Budget and Management
Prime Sponsor (First Legislator Named)

33-001 (Rev. 12/80

little widespread understanding or recognition of hazardous waste and its problems by either the general public or industry. The national Resource Conservation and Recovery Act places requirements on only the large generators, transporters, and disposers of hazardous waste, of which there are not many in the state now. Future industrial development will substantially increase the quantity of hazardous wastes.

HCS CSSB-29 requires that all hazardous waste be "processed to remove its harmful properties to the maximum extent feasible." Approximately 80-85% of all hazardous wastes can be rendered harmless through incineration and recycling. The remaining wastes would have to be disposited in a "secure landfill, which does not exist in the state now. Costs for determining acceptable locations are included in this fiscal note.

II. ASSUMPTIONS:

(1) Assume full bill to be enacted.

(2) Technical assistance, training, and public awareness will be emphasized so that general public and industry will be encouraged to use safe methods and procedures.

(3) A control effort to handle small hazardous waste users should also regulate industry covered under federal legislation, thus eliminating federal involvement at little additional cost.

(4) Program is to be 100% supported by state funds, to minimize influence of federal government.

(5) There are hazardous waste disposal site locations within the state which are accessible, capable of being developed and maintined in an environmentally safe manner for an indefinite time period, and acceptable to the public.

(6) 10% inflation assumed in all years after FY-82.

III. PERSONAL SERVICES:

A.	For the Southeast Regional Office: one environmental field officer to provide technical assistance, public awareness, training and conduct inspections (R17 for 10 months)	32.9
B.	For the Southcentral Regional Office (Including Anchorage-Wasilla-Valdez-Kenai): two environmental field officers to provide technical assistance, public awareness, training conduct inspections (One R19 and R17 for 10 months)	70.5
C.	For the Northern Regional Office (including Fairbanks and Prudhoe Bay) two environmental field officers to provide technical assistance, public awareness, training and conduct inspections (One R19 and one R17 for 10 months).	80.6
D.	For the Central Office, an environmental engineer to develop hazardous waste control guidelines, criteria, regulations, training and technical assistance to regional personnel on the proper ways to handle and dispose of hazardous wastes (R19 for 11 months).	44.8
E.	Half-time clerk-typist to support development and maintenance of regulations, plans, training and technical assistance in the	

	Central Office (R8 for twelve months, half-time)	12.3
F.	Clerk Typist support for Regional Offices	32.8
	1. Southeast Regional Office (R8 for 10 months, 1/4-time) 6.3	
	2. Southcentral Regional Office (R8 for 10 months, 1/2-time) 12.3	
	3. Northern Regional Office (R8 for 10 months, 1/2-time) 14.2	
G.	Needed: One person-year from the Dept. of Law, to support inspections and investigations as needed by regional personnel (see fiscal note from Dept. of Law)	
	SUBTOTAL, PERSONAL SERVICES:	273.9

IV. TRAVEL: In support of each field officer position and central office engineer, a total of $6,000 will be needed to provide travel, to carry out technical assistance, inspection/investigations and adequately provide for safe handling of hazardous wastes.

$36.0

V. CONTRACTUAL:

A.	Southeast Regional Office (1 position)	
	Rent	2.7
	Telephone	2.0
	Advertising	.5
	Repair & maintenance of machines	.5
	Equipment Rental (1/4 Lexitron rental)	1.2
	Subtotal	6.9
B.	Southcentral Regional Office (two positions located in the Cook Inlet area)	
	Contractual costs per position will be identical to those shown for the Southeast Regional Office above.	
	Subtotal	13.8
C.	Northern Regional Office (two positions located in the Fairbanks area)	
	Cost per position will be 1.15 times that shown for the Southeast Regional Office above.	
	Subtotal	15.6
D.	Professional Services - to provide for to investigation of specific disposal conditions and/or to provide for cleanup of environmental hazards due to improperly disposed-of wastes,or from emergency spill conditions.	
	Subtotal	$30.0
E.	Engineer and half-time Clerk/Typist in Central Office	
	Rent	4.1
	Telephone	3.0
	Advertising	1.0
	Repair & maintenance of machine	1.5
	Equipment Rental (1/2 Lexitron at $400 per month)	2.4
	Subtotal	12.0

F. Laboratory Support:

Equipment repair, maintenance service	4.0
Sample analysis	2.0
Subtotal:	6.0
SUBTOTAL CONTRACTUAL	84.3

VI. COMMODITIES:

A. In support of positions ($.5 times 6.5 positions)	3.3
B. Laboratory and sampling supplies-Regional Offices ($2.0 times 5 professional regional positions, plus $5.0 for Laboratory analysis supplies)	15.0
SUBTOTAL COMMODITIES	18.3

VII. EQUIPMENT:

A. $2.0 per professional position, to provide for sampling supplies (masks, sampling equipment, and protective devices)	12.0
B. $16.5, for equipment to identify and quantify specific hazardous substances	16.5
SUBTOTAL EQUIPMENT	28.5

VIII. SUMMARY OF NEW FISCAL NEEDS:

Personal services	273.9
Travel	36.0
Contractual	84.3
Commodities	18.3
Equipment	28.5
TOTAL, NEW COSTS NOT INCLUDED IN FY-82 BUDGET	441.0

IX. ADDITIONAL STATE FUNDS TO REPLACE FEDERAL FUNDS IN FY-82 BUDGET

In an effort to avoid unnecessary interference and harassment from the U. S. Environmental Protection Agency, this Fiscal Note replaces all federal funds associated with the hazardous waste control effort. In this way, the state will not be placed under any obligation to carry out unreasonable federal demands for fear of losing grant funds. A tabulation of the hazardous waste federal funds in the FY-82 budget is as follows:

1. Personal Services:

A. 25% of Chief, Air and Solid Waste Management Section	15.6

B.	25% of Clerk/Typist III (Air and SWM Section)	5.6
C.	100% of Hazardous Waste Engineer (Air and SWM Section)	42.6
D.	42% of Planner, Air and Solid Waste Management Section	15.5
E.	20% of Solid Waste-Landfill Engineer (Air and SWM Sec.)	9.8
F.	75% of Hazardous Waste Ecologist/Engineer position (new position)	25.8
	Subtotal, Personal Services	114.9
2.	Travel:	27.4
3.	Contractual:	70.1
4.	Commodities:	6.4
5.	Equipment:	—
	TOTAL:	218.8

X. PROJECTED EXPENSE FOR PROPERLY TREATING HAZARDOUS WASTE

Section 18.31.010 requires that hazardous wastes be rendered harmless before being disposed of in this state, "to the greatest extent feasible". The only effective ways to accomplish this objective is to recycle and/or incinerate these wastes. Through these means about 80-85% of the total hazardous wastes could be rendered harmless, thereby greatly reducing the amount of hazardous wastes to be handled and disposed. No such devices occur in the state, however, and if the state were to establish and operate such a facility it would have costs as below:

FY-82: Review of incinerator designs, location, and completion of feasibility studies. No additional expense, to be handled within program personnel projected above.

FY-83: Purchase of incinerator ($500,000), completion of site location and design, and initiation of operation ($500,000). This cost is not included in fiscal note, because of the possibility that private enterprise might fund and operate this facility.

FY-84: Annual operating expenses of approximately $150,000 per year. This expense would be covered by fees collected from industrial/commercial users.

XI. SECURE LANDFILL FEASIBILITY STUDY

HCS CSSB-29 allows for in-state disposal of those wastes which could not be recycled or rendered harmless. The only way to safely dispose of those wastes which cannot be recycled is in a "secure landfill", which is a carefully located, designed and operated facility which will assure that the deposited wastes will have no adverse effects on the public health or environment. Oregon currently operates a secure landfill in which Alaskan hazardous wastes are disposed.

However, other states are becoming increasingly reluctant to accept out-of-state hazardous wastes, and this reluctance will be more pronounced in years to come, particularly as the quantities of waste increase as will happen in Alaska. As Alaskan industry develops, there will be a critical need to provide for in-state disposal of hazardous wastes.

During FY-82 a feasibility study to identify suitable sites for a secure landfill is needed. This study would be conducted by consultant under contract from the department, to have several alternative sites selected by January, 1982. The feasibility study will cost $100,000, plus $50,000 for sampling of groundwater and soil characteristics at the final candidate site locations (prior to announcing the results of the study).

The costs for development and operation of a secure landfill are not projected in the Fiscal Note because of the possibility that private enterprise and/or industry may operate and fund this facility. The costs are presented for informational purposes only, to provide a full perspective of hazardous waste disposal costs. However, if state funds are needed, a detailed plan of developing the site, including the types of wastes expected to be handled, the means of transportation of the wastes and the associated costs, will be presented to the legislature in the next legislative session.

XII. TOTAL FY-82 COSTS FOR STATE HAZARDOUS WASTE CONTROL PROGRAM

	New Funds	Feasibility Study	State funds to replace federal funds	Total
A. Personal Services	273.9	---	114.9	388.8
B. Travel	36.0	---	27.4	63.4
C. Contractual	84.3	150.0	70.1	304.4
D. Commodities	18.3		6.4	24.7
E. Equipment	28.5			28.5
Total	441.0	150.0	218.8	809.8

League of Women Voters of Alaska

8926 Birch Lane
Juneau, AK 99801
April 1, 1981

The Honorable Fred Brown, Chairman
House Judiciary Committee
Alaska Legislature
Juneau, Alaska 99811

Re: Nuclear and Hazardous Chemical Wastes,
HCS CS SB 29 (Resources)

Dear Representative Brown and Committee Members:

The League of Women Voters of Alaska hartily endorses the present version of SB 29, as passed by the Senate and further amended by the House Resources Committee. We ask that the Judiciary Committee recommend enactment of the bill in its present form, without further amendment.

We do suggest, however, that the siting criteria given in Exhibit A (attached) be considered whenever disposal sites are being approved or permitted. A letter from your Committee, made part of the legislature history, would be an adequate indication of such intent.

Sincerely,

Margaret E. Holland

Margaret E. Holland
Action Chair
League of Women Voters of Alaska

MEH:DEC:rm

Enclosures:
(1) Criteria for Evaluating Suitability of Storage on Disposal Sites for Hazardous and Nuclear (Including Law-Level Radioactive) Wastes
(2) "Nuclear Waste Primer, "League of Women Voters Education Fund, 1980.

Criteria for Evaluating Suitability of Storage or Disposal Sites for Hazardous and Nuclear (including Low-Level Radioactive) Waste

These criteria, developed in April 1980, are an arrangement of national Environmental Quality and Land Use positions to help Leagues judge both the proce is employed in site determination and the suitability of a proposed site.

To ensure safe disposal:

☐ No disposal or storage sites shall be located in natural hazard areas such as floodplains, areas with high seismic or volcanic activity, areas of unstable geologic, ice or snow formations, or areas subject to extensive damage from hurricanes.

☐ There should be an examination of alternative sites, methods of storage and methods of treatment.

☐ Both on and off site monitoring for contamination of ground and surface waters and soils are of the utmost importance.

☐ Containers should be designed to prevent leakage of the material stored or disposed of.

☐ When containers are stored there should be regular inspections for possible leakage.

Siting of waste disposal or storage facilities should not take place in areas of critical concern, which include:

☐ Drinking water supply sources such as reservoirs and other storage facilities and sole source aquifers and watersheds.

☐ Fragile land areas such as shorelines of rivers, lakes and streams; estuaries and bays or wetlands.

☐ Where there are rare or valuable ecosystems or geologic formations, significant wildlife habitat or unique scenic or historic areas.

☐ Areas with significant renewable resource value, such as prime agricultural lands, aquifer or aquifer recharge areas, significant grazing and forest lands.

The waste siting decision-making process should provide for:

☐ Ample and effective public participation, including adequate funding for such participation.

☐ Economic, social and environmental impacts statements so that both decision makers and the public have information on which to base a decision. Secondary land use demands, in addition to the actual site, should be considered — roads, sewers, water, etc.

☐ Site selection in conformance with any adopted comprehensive plan — an example would be an adopted Coastal Zone Management Plan.

☐ Participation and review by all governmental levels to assure conformance with comprehensive plans at each level of government.

☐ Procedures for mediation of intergovernmental conflicts.

Exhibit A

improve the accommodations for the traveling public. (§ 40-10-5 ACLA 1949)

Sec. 18.40.070. Damages for destruction of or injury to shelter cabins. A person who violates § 50 of this chapter is liable in damages for injury sustained by another as a result of the wilful destruction of or injury to a shelter cabin or its contents. (§ 40-10-6 ACLA 1949)

Chapter 45. Atomic Energy.

Article
1. Atomic Energy Development (§§ 18.45.010—18.45.080)

Article 1. Atomic Energy Development.

Sec. 18.45.010. Declaration of intent. (a) The state endorses the action of the Congress of the United States in enacting the Atomic Energy Act of 1954 to institute a program to encourage the widespread participation in the development and utilization of atomic energy for peaceful purposes to the maximum extent consistent with the common defense and security and with the health and safety of the public, and declares that the policy of the state is

(1) to cooperate actively in the program instituted; and

(2) to the extent that the regulation of special nuclear, by-product, and radioactive materials, of production facilities and utilization facilities and of other forms of radiation, and of persons operating these facilities is within the jurisdiction of the state, to provide for the exercise of the state's regulatory authority to conform, as nearly as may be, to the Atomic Energy Act of 1954 and regulations issued under it, so that there may, in effect, be a single harmonious system of regulation in the state.

(b) The state recognizes that the production or utilization of atomic energy and other forms of radiation may result in new conditions calling for changes in the laws of the state and in regulations issued under them with respect to health and safety; working conditions; workmen's compensation; transportation; public utilities; life, health, accident, fire, and casualty insurance; the conservation of natural resources, including wildlife, and the protection of streams, rivers, and airspace from pollution; and declares that the policy of the state is

(1) to adapt its laws and regulations to meet the new conditions in ways that will encourage the healthy development of industries producing or utilizing atomic energy while at the same time protecting the public interest;

(2) to initiate continuing studies of the need for changes in the relevant laws and regulations of the state by the respective departments and agencies of the state responsible for their administration; and

(3) to assure the coordination of the studies undertaken, particularly with other atomic industrial development activities of the state and with the development and regulatory activities of other states and of the government of the United States. (§ 1 ch 119 SLA 1959)

Am. Jur. reference. — 25 Am. Jur., Health, §§ 24 to 27.

Sec. 18.45.020. United States licenses or permits required. No person may manufacture, construct, produce, transfer, acquire or possess a special nuclear material, by-product material, production facility, or utilization facility, or act as an operator of a production or utilization facility wholly within the state unless he has first obtained a license or permit for the activity in which he proposes to engage from the United States Atomic Energy Commission if the commission requires a license or permit to be obtained by persons proposing to engage in the activities. (§ 3 ch 119 SLA 1959)

Sec. 18.45.030. Conduct of studies concerning changes in laws and regulations with a view to atomic industrial development. The following departments and agencies of the state are directed to initiate and to pursue continuing studies as to the need for changes in the laws and regulations administered by it that would arise from the presence within the state of special nuclear, by-product, and radioactive materials, from the operation of production or utilization facilities, and from the generation of radiation, and, on the basis of these studies, to make the recommendations for the enactment of laws or amendments to law administered by it, and the proposals for amendments to the regulations issued by it which it considers necessary:

(1) the Department of Health and Social Services particularly as to hazards to the public health and safety;

(2) the Department of Labor particularly as to hazardous working conditions;

(3) the Department of Labor particularly as to the time and character of proof of claims of injuries and the extent of the compensation allowable;

(4) the Department of Public Works particularly as to the transportation of special nuclear, by-product, and radioactive materials on highways of the state;

(5) the Department of Public Works particularly as to the transportation of special nuclear, by-product, and radioactive materials by common carriers not in interstate commerce and as to the participation by public utilities subject to its jurisdiction in projects for

commercial use;

(6) the Department of Commerce particularly as to the insurance of persons and property from hazards to life and property resulting from atomic development;

(7) the Department of Fish and Game particularly as to the hazards to the natural resources of the state, including wildlife, and as to the protection of rivers, streams, and airspace from pollution;

(8) the Department of Natural Resources particularly as to the hazards involved in the mining of radioactive minerals;

(9) departments and agencies the governor directs and for the purposes specified by him, and other departments and agencies provided by law. (§ 4 ch 119 SLA 1959; am § 6 ch 104 SLA 1971)

Effect of amendment. — The 1971 amendment substituted "Department of Health and Social Services" for "Department of Health and Welfare" in paragraph (1).

As the rest of the section was not affected by the amendment, it is not set out.

Sec. 18.45.040. Appointment of coordinator of atomic development activities. The governor shall appoint a person from the executive branch to serve ex officio as his advisor for atomic industrial development in the state and as coordinator of the development and regulatory activities of the state relating to atomic energy and other forms of radiation, including cooperation with other states and with the government of the United States. The person appointed shall have the title of coordinator of atomic development activities. (§ 5(1) ch 119 SLA 1959)

Sec. 18.45.050. Coordination of studies and development activities. (a) The coordinator of atomic development activities shall coordinate the studies, recommendations, and proposals of the departments and agencies of the state and its political subdivisions required by § 30 of this chapter. So far as may be practicable he shall coordinate the studies conducted, and the recommendations and proposals made, in this state with like activities in other states and with the policies and regulations of the United States Atomic Energy Commission.

(b) The several departments and agencies of the state and its political subdivisions directed by § 30 of this chapter to initiate and pursue continuing studies shall keep the coordinator of atomic development activities fully and currently informed as to their activities relating atomic energy and other forms of radiation.

(c) The coordinator of atomic development activities shall keep the governor and the several interested departments and agencies informed as to private and public activities affecting atomic industrial development and shall enlist their cooperation in taking action to further development consistent with the health, safety and general welfare of the state. (§ 5(2) — (4) ch 119 SLA 1959)

the governor, a person is violating or is about to violate § 20 of this chapter, he may direct the attorney general to apply to the appropriate court for an order enjoining the person from engaging or continuing to engage in the activity and upon a showing that the person has engaged, or is about to engage in the activity, the court may grant a permanent or temporary injunction, restraining order, or other order. (§ 6 ch 119 SLA 1959)

Sec. 18.45.070. Cooperation. The heads of the appropriate agencies may cooperate with the federal government in the administration of this chapter or any matter pertaining to it. (§ 7 ch 119 SLA 1959)

Sec. 18.45.080. Definitions. In this chapter

(1) "atomic energy" means all forms of energy released in the course of nuclear fission or nuclear transformation;

(2) "byproduct material" means radioactive material (except special nuclear material) yielded in or made radioactive by exposure to the radiation incident to the process of producing or utilizing special nuclear material;

(3) "production facility" means equipment or a device capable of the production of special nuclear material in quantity of significance to the common defense and security, or to affect the health and safety of the public; or any important component part especially designed for the equipment or device;

(4) "special nuclear material" means plutonium, uranium 233, and uranium enriched in the isotope 233 or in the isotope 235, and any other material which the governor declares by order to be special nuclear material after the United States Atomic Energy Commissioner has determined the material to be special nuclear material; or material artificially enriched by any of the foregoing material;

(5) "utilization facility" means equipment or a device, except an atomic weapon, capable of making use of special nuclear material in a quantity significant to the common defense and security, or in a manner affecting the health and safety of the public, or peculiarly adapted for making use of atomic energy in a quantity significant to the common defense and security, or in a manner affecting the health and safety of the public; or an important component part especially designed for the equipment or device;

(6) "radiation" means gamma rays and X-rays, alpha and beta particles, high-speed electrons, neutrons, protons, and other nuclear particles; but not sound or radio waves, or visible, infrared, or ultra-violet light. (§ 2 ch 119 SLA 1959)

Sec. 18.45.010. Declaration of intent.
Repealed by § 12 ch 172 SLA 1978.

Editor's note. — The repealed section derived from § 1, ch. 119, SLA 1959.
Section 10, ch. 172, SLA 1978, provides: "Regulations adopted under authority of statutes repealed or amended by this Act shall remain in effect until repealed by the Department of Environmental Conservation in consultation within the Department of Health and Social Services."

Sec. 18.45.025. Facilities siting permit required. No person may construct a nuclear fuel production facility, utilization facility, reprocessing facility, or nuclear waste disposal facility in the state unless he has first obtained a permit from the Department of Environmental Conservation. The Department of Environmental Conservation shall adopt regulations governing the issuance of these permits; however, no permit may be issued until

(1) the legislature has approved the regulations by a concurrent resolution concurred in by a majority of the members of each house;

(2) the local government with jurisdiction over the proposed facility site has approved the permit;

(3) the legislature has approved the permit by a concurrent resolution concurred in by a majority of the members of each house; and

(4) the governor has approved the permit. (§ 8 ch 172 SLA 1978)

Cross reference. — As to radiation protection, see AS 18.60.475.

Sec. 18.45.030. Conduct of studies concerning changes in laws and regulations with a view to atomic industrial development. The following departments and agencies of the state are directed to initiate and to pursue continuing studies as to the need for changes in the laws and regulations administered by it that would arise from the presence within the state of special nuclear, by-product, and radioactive materials, from the operation of production or utilization facilities, and from the generation of radiation, and, on the basis of these studies, to make the recommendations for the enactment of laws or amendments to law administered by it, and the proposals for amendments to the regulations issued by it which it considers necessary:

(6) the Department of Commerce and Economic Development particularly as to the insurance of persons and property from hazards to life and property resulting from atomic development;
(am § 77 ch 218 SLA 1976)

Effect of amendment.
The 1976 amendment substituted "Department of Commerce and Economic Development" for "Department of Commerce" in paragraph (6).

As the rest of the section was not affected by the amendment, it is not set out.

Secs. 18.45.040 — 18.45.050.
Repealed by § 12 ch 172 SLA 1978.

Editor's note. — The repealed sections derived from § 5(1)—( ), ch. 119, SLA 1959.
Section 10, ch. 172, SLA 1978, provides: "Regulations adopted under authority of statutes repealed or amended by this Act shall remain in effect until repealed by the Department of Environmental Conservation in consultation with the Department of Health and Social Services."

Sec. 18.45.060. Injunction proceedings. When, in the opinion of the governor, a person is violating or is about to violate AS 18.45.020 or 18.45.025, he shall direct the attorney general to apply to the appropriate court for an order enjoining the person from engaging or continuing to engage in the activity and upon a showing that the person has engaged, or is about to engage in the activity, the court may grant a permanent or temporary injunction, restraining order, or other order. (§ 6 ch 119 SLA 1959; am § 9 ch 172 SLA 1978)

Effect of amendment. — The 1978 amendment substituted "AS 18.45.020 or 18.45.025, he shall" for "AS 18.45.020, he may."
Editor's note. — Section 10, ch. 172, SLA 1978, provides: "Regulations adopted under authority of statutes repealed or amended by this Act shall remain in effect until repealed by the Department of Environmental Conservation in consultation with the Department of Health and Social Services."

Chapter 50. Vital Statistics Act.

Article 3. Registration Requirements, Procedures and Certificates.

Section
280. Court reports of divorce, dissolution and annulment

Sec. 18.50.280. Court reports of divorce, dissolution and annulment. (a) For each dissolution, divorce and annulment of marriage granted by a court in the state the clerk of the court shall prepare and file a certificate of dissolution, divorce or annulment with the bureau, on forms prescribed and furnished by the bureau. The petitioner or plaintiff shall furnish the court with the information necessary to complete the certificate, and the furnishing of this information is prerequisite to the issuance of a decree.

(b) Before the 11th day of each month the clerk of the court shall forward to the bureau the certificate of each dissolution, divorce and

FEBRUARY 1981

HAZARDOUS WASTES

Information From Notifiers

	Code	Chemical	Number of Facilities				Amount of Waste Generated/ Month
			North	Central	South	Total	
1.	D000	Non-listed Toxic Wastes	12	15	1	28	28,000 kg
	D001	Non-listed Ignitable Wastes	10	18	1	29	29,000 kg
	D002	Non-listed Corrosive Wastes	8	11	1	20	20,000 kg
	D003	Non-listed Reactive Wastes	6	3		9	9,000 kg
			36	47	3	86	86,000 kg
		Hazardous Wastes from Non Specific Sources					
2.	F001	Spent halo chlorides + sludge fm gray foundri	9	8	1	18	18,000 kg
	F002	Halo solv + solv Rec still bottoms	3	5		8	8,000 kg
	F003	Non-Halgenatd solv & solv rec still bottoms		5		5	5,000 kg
	F005	Non-Halgenated solv & solv rec still bottoms		4		4	4,000 kg
	F017	Paint residues generated from industrial painting	2	1		3	3,000 kg
	F018	Wastewater treatment sludge fm industrial painting	2	2		4	4,000 kg
			16	25	1	42	42,000 kg
		Petroleum Refining					
3.	K048	DAF fm oily water sewer petro refin		2		2	2,000 kg
	K049	Slop oil fm oily water sewer petro refin		6		6	6,000 kg
	K050	Petro refin exc. bundle cleanup solv		3		3	3,000 kg
	K051	API sludge fm oily sewer petro refin.		5		5	5,000 kg
	K052	Bottoms (leaded) fm petro refin Industry		4		4	4,000 kg
				20		20	20,000 kg

Information From Notifiers (continued)

	Code	Chemical	Number of Facilities				Amount of Waste Generated/ Month	
			North	Central	South	Total		
		Acute Hazardous Wastes (small quantity exclusion)						
4.	P001	3-(alpha-acetonybenxyl) 4- hydroxycoumarn	1			1	1	kg
	P008	4-aminophyridine or avitrol, Phillips 1861		1		1	1	kg
	P022	Carbon Disulfide		1		1	1	kg
	P030	Cyanides		1		1	1	kg
	P035	2,4 Dichlorophenoxyacetic	2	1		3	3	kg
	P037	Dieldrin*		1		1	1	kg
	P098	Potasium Cyanide	2			2	2	kg
	P105	Sodium Azide or Smite		2		2	2	kg
			5	7		12	12	kg
		Toxic Waste						
5.	U002	Acetone (I) Amitrole or 3-aminos 5-IH-1	6	4		10	10,000	kg
	U011	Amitrol or 3-amino 5-IH-1,2,4-Triazole, Hydrate		1		1	1,000	kg
	U012	Aniline (1)		1		1	1,000	kg
	U013	Asbestos		4		4	4,000	kg
	U022	Carbon Disulfide		2		2	2,000	kg
	U031	N-Butyl Alcohol		2		2	2,000	kg
	U036	Chlordane		2		2	2,000	kg
	U038	Chlorobenzilate		1		1	1,000	kg

(Continued)

Code	Chemical	Number of Facilities				Amount of Waste Generated/ Month
		North	Central	South	Total	
U043	Chloroethene or vinyl Chloride ether		1		1	1,000 kg
U044	Chloroform (I,T)		3		3	3,000 kg
U061	DDT		1		1	1,000 kg
U066	1,2 Dibromo-3-Chloropropane		1		1	1,000 kg
U069	Di-N-Butyl-Phthalate		1		1	1,000 kg
U072	1,4-Dichlorobenzene		1		1	1,000 kg
U080	Dichloromethane		2		2	2,000 kg
U081	2,4-Dichlorophenol		1		1	1,000 kg
U092	Dimethylamine		1		1	1,000 kg
U102	Dimethyl Phthalate		1		1	1,000 kg
U112	Ethyl Acetate		1		1	1,000 kg
U117	Ethyl ether (I,T)		1		1	1,000 kg
U122	Formaldehyde	1	6		7	7,000 kg
U123	Formic Acid (C.T)		1		1	1,000 kg
U127	Hexachlorobenzene		1		1	1,000 kg
U132	Hexachlorophene		1		1	1,000 kg
U133	Hydrazine		1		1	1,000 kg
U134	Hydrofluoric Acid (C,T)		3		3	3,000 kg
U140	Isobutyl Alcohol		1		1	1,000 kg
U144	Lead Acetate		2		2	2,000 kg
U148	Haleic Hydrazide		1		1	1,000 kg
U151	Mercury	1	3		4	4,000 kg

(continued)

Code	Chemical	Number of Facilities				Amount of Waste Generated/ Month
		North	Central	South	Total	
U154	Methanol or Methyl Alcohol		3		3	3,000 kg
U158	4,4'-Methylene-BIS-1 (2-chloroaniline)		1		1	1,000 kg
U159	Methyul Isobutol Ketone	1	2		3	3,000 kg
U161	Methyl Ethy Ketone		1		1	1,000 kg
U162	Methyl Methacrylate	1			1	1,000 kg
U165	Naphthalene		2		2	2,000 kg
U169	Nitrobenzene (I,T) or Nitrobenzene (1)		1		1	1,000 kg
U170	4-Nitrophenol		1		1	1,000 kg
U188	Phenol or carbolic acid, hydroxybenze		3		3	3,000 kg
U196	Pyridine		1		1	1,000 kg
U201	Resorcinol		1		1	1,000 kg
U210	Tetrachloroethane		1		1	1,000 kg
U211	Tetrachloromethane or carbon tetrachloride		1		1	1,000 kg
U218	Trioacetamide		1		1	1,000 kg
U220	Toluene	1	6		7	7,000 kg
U222	D-Toliudine Hydrochloride		1		1	1,000 kg
U223	Toluene Diisocyanide		1		1	1,000 kg
U225	Tribromomethane		1		1	1,000 kg
U226	1,1,1-Dichloromethane	6	4		10	10,000 kg
U227	1,1,2-Trichloroethene		2		2	2,000 kg
U228	Trichloroethene		3		3	3,000 kg

U233	2,4,5-Trichlorophenoxyprionic acid alpha, alpha, alpha-trichlorotoluene (see U023)Triclene see U228	2			2	2,000 kg
U239	Xylene	1	2		3	3,000 kg
	Total Toxic Waste	20	91	0	111	111,000 kg
	Total Wastes	77	190	4	271	259,012 kg/month
		(28%)	(70%)	(2%)	(100%)	or
						569,826 lbs/month
						or
						285 tons/month
						or
						3,419 tons/year

"high level radioactive waste" means used reactor fuel or the radioactive wastes produced during the reprocessing of used reactor fuel, including transuranic elements of 10 of more nanocuries per gram.

"low level radioactive wastes" means wastes other than uranium mine or mill tailings, spent fuel, or high level wastes. Low level wastes contain radionuclides emitting primarily alpha, beta and gamma radiation, and less than 10 nanocuries per gram of transuranic elements.

"transuranic element" means any element having an atomic number greater than that of uranium (92).

League of Women Voters of Alaska

8926 Birch Lane
Juneau, AK 99801
February 12, 1981

The Honorable Terry Gardiner and
Fred Zharoff, Co-Chairmen
House Resources Committee
Alaska Legislature
Juneau, AK 99811

Re: House Bill 72 (Hazardous and Nuclear Wastes)

Dear Representatives Gardiner and Zharoff & Committee Members:

The League of Women Voters of Alaska supports enactment of House Bill 72, especially proposed new AS 46.03.844 (prohibiting in-state storage of high level nuclear waste material).

We do ask, however, that the Committee consider incorporating into the legislative history, as guidance to the Department of Environmental Conservation when drafting its facility siting permit regulations pursuant to AS 18.45.025, the League's "criteria for evaluating suitability of storage or disposal sites for hazards and nuclear (including low-level radioactive) waste." A copy of these criteria is attached as Exhibit A. As the title implies, these criteria are applicable not only to to nuclear waste storage and disposal sites, but also to hazardous chemical waste storage and disposal sites. Presumably the only nuclear waste storage facilities which could be permitted (under the legislation written) would be for storage of <u>low level</u> radioactive waste and the League's "criteria" apply to those facilities as well.

With respect to hazardous chemical waste storage and disposal facilities, the League has not attempted, in preparing these comments, to analyze House Bill 72 for consistency with the federal Resource Conservation and Recovery Act (RCRA) and pertinent regulations thereunder (e.g., 40 CFR Part 123, State Programs), so that the resulting Alaska statutes would enable the State to take over the

implementation of RCRA in Alaska if that is desired. Such an analysis is recommended, and the Department of Environmental Conservation (based on studies it has under way) may be able to provide valuable comments in that regard. We would not wish to see the nuclear waste provisions of the bill delayed, however, awaiting lengthy analysis of the chemical waste portions.

The Committee's attention is invited to a possible problem posed by proposed AS 46.03.842, which prohibits transportation of all nuclear waste material in this state except for purposes of disposal outside the state. We question whether it was not the intent to prohibit in-state transportation of high level nuclear waste material in the state. The present wording will prohibit all in-state transport of even those low level radioactive materials used in medicine, education or scientific research, which presumably should be taken away from the Alaskan institutions or hospitals where they have been used and stored in a suitably permitted Alaskan disposal facility limited to low level radioactive materials storage. Do Alaskans prefer to continue storing our low-level radioactive wastes in the State of Washington indefinitely, or should we be taking responsibility ourselves for storage of the low-level radioactive wastes we generate?

Finally, the Committee should be aware that since the A.L.I.V.E. decision, statutory provisions for the Legislature to approve regulations by the mechanism of a concurrent resolution no longer have any legal effect. State v. A.L.I.V.E. Voluntary, 606 P.2d 769 (Alaska 1980). We are referring specifically to AS 18.45.025(b)(1). It may be that Subsection (b)(3), concerning legislative approval of a facility permit by concurrent resolution, has also been affected by the A.L.I.V.E. decision. Probably Assistant Attorney General Jon Tillinghast could answer this question.

We are pleased that the present statute as amended will afford opportunities for meaningful citizen participation; first, when the regulations to be issued by the Department have been drafted and are out for public comment; and second, when municipalities hold their public hearings to develop the municipality's decision on a permit for a specific proposed facility (site).

Under these regulations, the Department will decide whether these facility permits are Class 1 or Class 2 permits. As the procedural regulations are presently drafted, Class 1 permits can be issued without any public notice nor notice to local government. Furthermore, some of the facility sites may be located in the unorganized borough, where there is no municipality involved under AS 18.45.025(b)(2). For the sake of obtaining adequate interagency and public participation in the individual siting permit decision, we believe that permits for hazardous chemical waste storage facilities and for radioactive (even low level) waste storage facilities should be Class 2 permits.

Thank you for considering our comments.

Sincerely yours,

Elizabeth Cavadra
for Margaret E. Holland, Action Chair
League of Women Voters of Alaska

MEH:DEC:rm

Enclosure ("Nuclear Waste Primer," League of Women Voters Education Fund, 1980, 2 copies)

Criteria for Evaluating Suitability of Storage or Disposal Sites for Hazardous and Nuclear (including Low-Level Radioactive) Waste

These criteria, developed in April 1980, are an arrangement of national Environmental Quality and Land Use positions to help Leagues judge both the process employed in site determination and the suitability of a proposed site.

To ensure safe disposal:

☐ No disposal or storage sites shall be located in natural hazard areas such as floodplains, areas with high seismic or volcanic activity, areas of unstable geologic, ice or snow formations, or areas subject to extensive damage from hurricanes.

☐ There should be an examination of alternative sites, methods of storage and methods of treatment.

☐ Both on and off site monitoring for contamination of ground and surface waters and soils are of the utmost importance.

☐ Containers should be designed to prevent leakage of the material stored or disposed of.

☐ When containers are stored there should be regular inspections for possible leakage.

Siting of waste disposal or storage facilities should not take place in areas of critical concern, which include:

☐ Drinking water supply sources such as reservoirs and other storage facilities and sole source aquifers and watersheds.

☐ Fragile land areas such as shorelines of rivers, lakes and streams; estuaries and bays or wetlands.

☐ Where there are rare or valuable ecosystems or geologic formations, significant wildlife habitat or unique scenic or historic areas.

☐ Areas with significant renewable resource value, such as prime agricultural lands, aquifer or aquifer recharge areas, significant grazing and forest lands.

The waste siting decision-making process should provide for:

☐ Ample and effective public participation, including adequate funding for such participation.

☐ Economic, social and environmental impacts statements so that both decision makers and the public have information on which to base a decision. Secondary land use demands, in addition to the actual site, should be considered — roads, sewers, water, etc.

☐ Site selection in conformance with any adopted comprehensive plan — an example would be an adopted Coastal Zone Management Plan.

☐ Participation and review by all governmental levels to assure conformance with comprehensive plans at each level of government.

☐ Procedures for mediation of intergovernmental conflicts.

Exhibit A

TO: House Resources Committee

FROM: League of Women Voters of Alaska

RE: H.B. 72: Erratum for LWVAK Letter of February 12

DATE: February 12, 1981

In the final text of our letter of February 12, we unintentionally omitted some lines on page 2, last paragraph. The first sentence of that paragraph should read:

"We are pleased that the present statute as amended will afford opportunities for meaningful citizen participation; first, when the regulations to be issued by the Department have been drafted and are out for public comment; and second, when municipalities hold their public hearings to develop the municipality's position regarding a permit for a specific proposed facility site."

The underscored portion is the part we unintentionally omitted.

DEPARTMENT OF ENVIRONMENTAL CONSERVATION

TESTIMONY ON HB-72

RELATING TO THE DISPOSAL OF RADIOACTIVE AND HAZARDOUS WASTES

FEBRUARY 13, 1981

The Department of Environmental Conservation welcomes the opportunity to review and comment on HB-72, relating to the transportation, storage, and disposal of nuclear and other hazardous waste material in Alaska. The Department strongly supports legislation on these two important environmental concerns.

Before getting into our detailed testimony, we would like to indicate that there is other legislation relating to hazardous and radioactive wastes. SB-29, which is now in the Senate Judiciary Committee, covers the transportation and disposal of nuclear waste - our comments today on nuclear wastes will be similar to our earlier testimony on SB-29 which we also support. In addition, the Administration is about to submit a hazardous waste bill within the next one to two weeks. We hope that all of these bills will be made compatible with each other, and possibly consolidated into one comprehensive bill which is suggested by HB-72. We would like to now present our testimony on the bill (HB-72), first discussing the portions dealing with ardioactive wastes, and then discussing that portion dealing with hazardous wastes.

Radioactive wastes:

The portion of the bill relating to radioactive wastes (Section 18.45.025 and 45.03.842-844) is similar to SB-29, which has undergone several hearings

already in this legislative session. These sections require that any new facility producing, using, or disposing of high level nuclear waste material must first obtain a permit from the department. It also requires that the department adopt regulations governing issuance of these permits and that these regulations and any permits cannot be issued unless the legislature, local government, and governor have given approval. As written, this portion of the bill will clearly state the legislature's intent that these highly toxic wastes should not be disposed of in Alaska. The Department supports this policy, and would like to recommend several relatively minor changes in wording, to avoid potential problems which are otherwise likely to result:

(1) As written, Section 18.45.025 may be in conflict with the recent State Supreme Court decision concerning legislative review and approval of regulation and permits, in particular subsections (1) and (3). We have attached SB-29 which eliminated these two conditions, along with a copy of our testimony on that bill. We understand that the Senate Judiciary Committee is now considering language which would be compatible with the court case and yet still provide for legislative oversight on this important environmental issue. This Committee might want to consider changes to this portion of the Act to make it compatible with the court decision.

(2) Section 46.03.842 covers transportation of "nuclear wastes". As it is now written, it will also prohibit nuclear materials used for medicine, industry, and research, much of which is low-level material which could adequately transported and safely deposited in properly constructed landfills without posing a threat to health or the environment. Especially considering the likely increase in growth in the state and the need for

these activities, we recommend that this section refer only to high-level nuclear wastes, by including "high-level" in front of "nuclear wastes" in the section. This wording is included on the attachment to this testimony.

(3) The Committee should be aware that there are other existing statutes relating to the disposal of radioactive wastes: AS 46.03.250 and AS 46.03.260 also cover the adoption, regulation, and issuance of permits for disposal of radioactive wastes. In an effort to clarify the jurisdiction of these statutes with those proposed in HB-72, the department recommends that a slight housekeeping amendment be added to the bill to make these statutes to apply only to low-level radioactive wastes. The suggested changes to these statutes are also included on the attachment, which would then allow the department to regulate the disposal of low-level radioactive wastes through regulation and permit, whereas high-level nuclear wastes would come under the considerably more stringent requirements of other sections in this bill.

Hazardous Wastes:

The portion of the bill dealing with all hazardous wastes would provide the department explicit authority to adopt regulations for the safe disposal of hazardous wastes in the state. At this time there are no detailed standards or criteria established in Alaska covering hazardous materials, yet these substances can easily cause a threat to public health and environment if improperly handled, transported, or disposed of.

Hazardous wastes are generated by virtually every part of the Alaskan economy. Not only does major industry generate these materials, but they also are generated by small businesses and commercial establishments, government operations, and virtually every individual in the state. These wastes can include anything which is ignitable, reactive, toxic or corrosive, and would include such common substances as paint thinners, wood preservatives, acids, and a wide variety of chemicals and petroleum substances which can be hazardous if not properly handled and disposed of. However, there is very little widespread knowledge of how these materials should be handled. Worse yet, there are few adequate disposal facilities (none in Alaska) which can handle these substances without eventually causing a hazard to the environment.

The department very strongly supports the need for regulations and safeguards in this environmental effort, and to have specific legislative intent defined in the Alaska statutes. This currently does not exist except for general environmental protection authorities as stated in AS 46.03.020(10).

One concern on HB-72 is that Section 18.31.010 would make it unlawful to dispose of hazardous waste in the state unless "the waste has been processed to remove its harmful properties". The department strongly supports the need to reduce these hazardous to the maximum extent possible, and this can be done through recycling and/or incineration. Through these means about 80-85% of the total volume of hazardous wastes can be eliminated or rendered harmless, provided that proper facilities are available. However, the remaining 15-20% of the wastes will still need some means

ATTACHMENT TO

DEPARTMENT OF ENVIRONMENTAL CONSERVATION'S

TESTIMONY ON HB-72

SUGGESTED CHANGES TO HB-72

RELATING TO RADIOACTIVE AND HAZARDOUS WASTES

ADDITION OF "HIGH-LEVEL" TO SEC. 46.03.842 AS FOLLOWS:

Section 46.03.842. TRANSPORTATION OF NUCLEAR WASTE MATERIAL. The transportation of high level nuclear waste material in the state, except for purposes of disposal outside the state, is prohibited.

MODIFICATION OF SEC. 18.31.010 AS FOLLOWS:

Section 18.31.010. DISPOSAL OF HAZARDOUS WASTE PROHIBITED. It is unlawful to dispose of hazardous waste in the state, unless it has been subjected to best available disposal techniques and cannot be rendered harmless, its harmful properties cannot be removed or the wastes recycled. Disposal shall be in accordance with regulations adopted by the department, and done in such a manner as to protect the public health, property, livestock, wildlife and the environment.

ADDITION OF THE FOLLOWING NEW SECTIONS:

Sec. 46.03.250. AUTHORITY. The department shall adopt regulations establishing standards governing the discharge of low level radiation (RADIONUCLIDES) to the air, water, land and subsurface of the state.

Sec. 46.03.260. USE OF Nuclear ATOMIC RADIATION. A person who conducts an operation which results in the discharge of low level nuclear radiation (RADIONUCLIDES) to the air, water, land or subsurface land of the state must obtain a permit from the department before commencing the discharge.

DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Testimony on SB-29

Relating to the Disposal of Radioactive Wastes

February 4, 1981

The Department of Environmental Conservation welcomes the opportunity to review and comment on SB-29, relating to the disposal of radioactive wastes in Alaska. We support this bill, and feel that it will provide much-needed clarification to existing Alaska Statutes relating to the handling and disposal of nuclear wastes.

As written, SB-29 will accomplish four things. First, it will eliminate certain aspects of the currently existing Alaska Statute 18.45.025 which would be found to be unconstitutional under the terms of a recent state supreme court decision. These changes would take the legislature out of the formal process of reviewing and approving regulations and permits relating to the disposal of nuclear wastes. However, the Department would still have to obtain local government and governor approval to either activity. These conditions are retained from the present AS 18.45.025, and are supported by the Department as desirable preconditions for issuing permits for high level nuclear activities.

The second thing accomplished by the bill will be to prohibit the disposal of high level wastes. This portion of the bill will clearly indicate the legislature's intent that these highly toxic wastes should not be disposed of in Alaska.

The third part of the bill, which was added in the Senate Resources Committee, will amend AS 46.03.250 and AS 46.03.260 to apply to low level radiation only. This change will eliminate overlapping jurisdictions which currently exist between these statutes and AS 18.45.025, which is included in the first part of this bill. The Department supports this change, which will clarify the legislature's intent on regulating low level radioactive waste disposal.

The last effect of this bill will be to prohibit the transportation of nuclear wastes in the state, except for the purpose of disposal outside of the state. The Department supports this portion of the bill, with the understanding that its intent is to apply to high level wastes only. Low level radiation is used in numerous applications in Alaska, primarily in research, medicine and instrumentation, and transportation of these materials can be done in a safe manner as long as adequate handling procedures are followed. These low level materials were specifically excluded from the definition of "high level nuclear waste material" found in the bill. To clarify this portion of the bill, the Department recommends that the words "high level" be added to the proposed AS 18.45.027 as follows:

"Section 18.45.027. TRANSPORTATION OF NUCLEAR WASTE MATERIAL. The transportation of high level nuclear waste material in the state, except for purposes of disposal outside of the state, is prohibited."

The Department thanks the Committee for consideration of our comments, and we would be glad to respond to any questions or provide additional information.

of disposal. While it would be nice if other states would take these wastes, the trend across the country is that fewer and fewer waste disposal sites (as well as states) are willing to take on the burden of waste disposal from other states.

This trend is likely to continue, and it may be possible out-of-state disposal sites would not be available to Alaskan wastes within the next five years. Consequently, the department recommends that modifications be made to Section 18.31.010 to allow for the disposal of hazardous wastes within the state but only under very carefully prescribed conditions, and at the same time require the best available disposal practices be used so that the amount and risk of these wastes will be minimized. Suggested language is attached to our testimony which should accomplish these two objectives.

This bill will require a fiscal note, to cover the expense of field and technical personnel to help the Alakan public and industry in properly disposing of these materials. This note will be provided to the Committee no later than February 18, along with an explanation of what is covered in the fiscal note and how the Department will establish an effective hazardous waste control program under this legislation.

The department thanks the committee for consideration of our comments and for the opportunity to present oral testimony on this bill. We would be glad to respond to any questions or provide any additional information which might be requested.

A M E N D M E N T

In the SENATE BY RODEY

To: SB 29

Page 1, line 13:

After "Conservation" insert "to construct the facility on land designated by the legislature under (b) of this section".

Page 1, after line 13:

Insert

"(b) The legislature shall designate by law the land in the state on which a nuclear fuel production, utilization, reprocessing or disposal facility may be located."

Page 1, line 14:

Change "(b)" to "(c)"

The politics of nuclear waste management

As the AEC's experience in Kansas and the more recent history of WIPP plainly demonstrate, there is more to nuclear waste management than solving technical problems. The process by which decisions are arrived at and the degree of trust and mutual regard between levels of government and between citizens and their governments count just as much in determining the outcome of struggles over nuclear waste and, indeed, the future of nuclear power.

There is a natural human tendency for people to want the benefits of nuclear power without suffering the worries or discomforts or risks of coping with the nuclear leftovers. And there is an equally natural tendency on the part of federal officials to want to make decisions without hordes of citizens, or even another set of officials, looking over their shoulders and second-guessing them. But citizens and state and local governments are rightful participants in these decisions. And the principal goal of any political arrangement must be to make it possible for them to play their parts well. It is equally imperative that the net effect of these negotiations and the decisions arising from them be a public perception that risks have been assessed with care and candor and that burdens are being borne equitably.

The state-federal stand-off

While many states are still receptive to the construction of nuclear power plants, few, if any, are interested in furnishing a site for a permanent HLW (and spent fuel) repository. In fact, more than a dozen states, responding to pressure from citizens, have enacted laws that either flatly prohibit or make difficult the establishment within their borders of disposal facilities for either HLW or LLW radioactive waste. And at least 15 more states, according to NRC, are thinking of following suit.

Why do so many state and local governments want to restrict or prohibit nuclear waste disposal (and even temporary storage)? One major reason is that they believe that the federal government has not made enough progress toward solving the management problems. If these localities are going to have radioactive wastes stored or permanently deposited within their borders, they want assurances that the facilities will be properly managed *now* and *in the future* and will pose no significant risks to citizens.

Adverse experiences with other government projects involving hazardous substances have made states extremely wary of saying yes to nuclear waste facilities. Residents of western states, which have the most favorable conditions for nuclear waste disposal—suitable geology, dry climate and sparse population—are in an especially mutinous mood. These states have been the sites for many hazardous federally sponsored activities—above-ground atomic bomb tests . . . uranium mining . . . milling and tailings disposal . . . nerve gas production, testing and storage. As one Westerner put it, "The government has used the wide open spaces as a dumping ground for almost four decades and has inflicted a lot of wounds on us. Well, we've just had enough."

And the impacts of these activities on local populations are just beginning to show up. For instance, recent investigations into the effect of atomic bomb tests conducted in the 1950s revealed that radioactive fallout may have caused an increase in thyroid cancers in southern Utah, Nevada and Arizona during the 1960s. Although these studies are inconclusive, the widespread publicity they received has made people in western states still more uneasy about the prospect of becoming disposal sites for nuclear wastes.

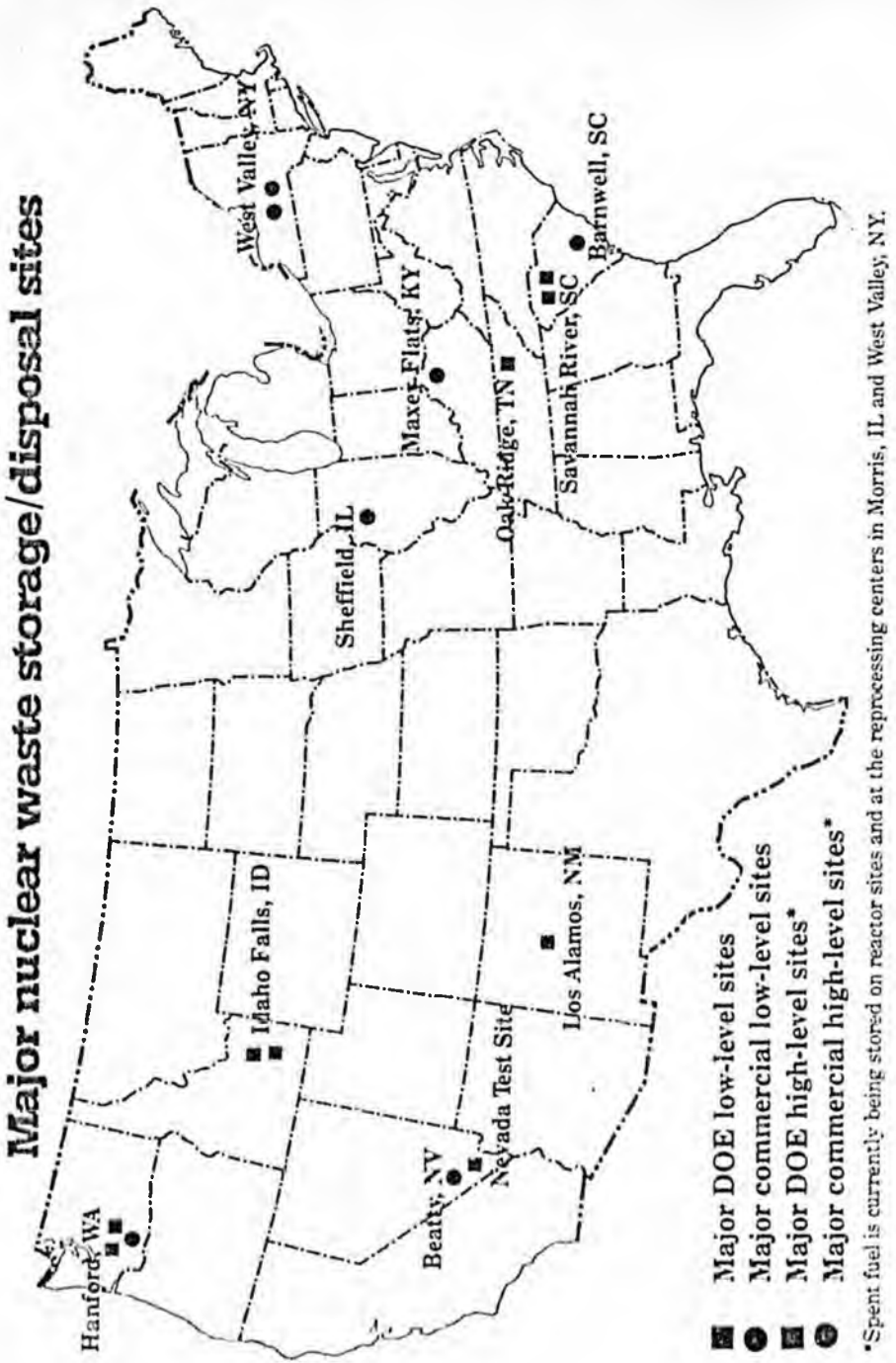
Where, then, can the U.S. government locate a repository? The General Accounting Office (GAO) reported in 1979 that the federal government could obtain land for a repository within any state without [illegible] that state's consent, a finding that calls into question the legality of state laws on the books. A bill has since been introduced in Congress to give states explicit "veto" power over waste facilities. It would require DOE to:

—notify a state of its intent to explore for a radioactive waste disposal site;

—enable state officials and citizens to review technical, environmental and safety questions during the planning process; and

—grant the state the right to refuse the repository after review, through a public referendum or vote of the state legislature.

Proponents of the legislation believe that it will force a thorough and complete examination of all technical and social issues and will be



more likely to lead to a federal decision based on these considerations rather than on what is most expedient.

Some members of Congress believe that states don't need this express veto power because they already have a "de facto" veto, since there are many different ways a state can block or delay federal activities. They want, instead, to give states incentives, such as money or tax breaks, for accepting repositories. Western states generally oppose "special incentives," while the central and eastern states like the idea. All states, however, want the federal government to pay "compensation for the direct and indirect costs of repository siting."[13]

A national policy

Recognizing the urgent need to resolve nuclear waste issues, President Carter in 1978 set up the Interagency Review Group (IRG) as a first step toward strengthening and accelerating the federal nuclear waste management program. Its job was to formulate policy recommendations for long-term management of nuclear wastes.

The final IRG report and recommendations, issued in March 1979, formed the basis of the nation's first comprehensive radioactive waste management program, announced by President Carter on February 12, 1980. Key elements, described below, reflect an attempt to give states a voice, but not an overriding voice, in federal siting decisions, to coordinate and speed federal agency actions and to give citizens, as well as lower levels of government, access points for influencing federal decisions.

■ **State Planning Council** The President created, by executive order, a State Planning Council to advise the executive branch and work with Congress in making and implementing decisions on interim waste management and permanent disposal. The council has 18 members including eight governors, five other state and local government officials, a representative from an Indian tribe, and the heads of EPA and the Departments of Energy, Interior and Transportation. Governor Richard Riley of South Carolina was appointed as its first chair. This council is expected to play a key role in helping to work out the political accommodations between "the feds" and state and local officials so that the radioactive waste management program can go forward.

■ **Consultation and concurrence** Under the framework of consultation and concurrence, a host state will have a continuing voice in the siting, design and construction of a permanent HLW repository.

■ **Interim planning strategy** Pending reviews required by the

National Environmental Policy Act (NEPA), the Administration is adopting an interim planning strategy for the disposal of HLW and TRU waste that relies on geologic repositories. Immediate attention will focus on identifying four to five potential sites for permanent repositories in a variety of different geologic environments with diverse rock types. This effort will be supported by a comprehensive research and development program. At least one site will be selected by about 1985 for development as a licensed full-scale repository. It should be operational by the mid-1990s. This program will be technically conservative—that is, experience and information gained at each stage will be reviewed and evaluated to determine if there is enough knowledge to proceed with the next stage of development. Site selection will also be governed by NEPA, which means there will be full public discussion of site conditions and alternatives.

■ **Away-from-reactor (AFR) facilities** The safe interim storage of commercial spent fuel from nuclear power reactors will continue to be the responsibility of the utilities operating these plants until a permanent geologic repository exists. However, the Administration will press for legislation to build or acquire one or more AFR facilities for those utilities unable to expand their storage capabilities and for limited amounts of foreign spent fuel. The President stressed that interim spent fuel storage is not an alternative to permanent storage.

■ **LLW disposal system** DOE will work with the states in their efforts to establish a regional network of LLW disposal sites. The State Planning Council will give LLW management early and high-priority attention.

■ **Expanded NRC licensing authority** The Administration will submit legislation to extend NRC's licensing authority to include storage of spent fuel; disposal of *all* TRU waste; and disposal of nondefense LLW in any new government owned and managed facilities that might be built. (Under existing law, NRC licenses DOE facilities for disposal of HLW and commercial facilities for disposal of HLW and LLW.)

■ **Expedite EPA, DOT and NRC regulatory actions** The President has directed EPA, DOT and NRC to speed up their development of standards and regulations applicable to nuclear waste management activities and to improve their working relationships with other federal agencies and state and local governments. The President has urged the NRC (which is an independent agency not subject to the President's control) to conduct its proceedings in a thorough and timely manner.

■ **Full citizen participation** The President is directing departments and agencies to develop and improve mechanisms to insure the fullest possible participation by the public and the technical community in all aspects of the nuclear waste management program. This includes providing technical and financial assistance to permit informed public input to programs and decisions and to support nongovernmental efforts to increase social and technical understanding and agreement on nuclear waste issues.

■ **National Plan for Nuclear Waste Management** DOE will complete a comprehensive National Plan for Nuclear Waste Management by 1981 and then update it annually. A draft of the plan is to be circulated for public and congressional review in 1980.

■ **International cooperation** Because nuclear waste management is a problem shared by many other countries and because the choice a country makes among waste management alternatives has implications for nuclear proliferation, the President will continue to encourage and support international efforts aimed at advancing our understanding of spent fuel and waste management options.

To implement this program, the President is asking for big money. The fiscal 1981 budgets for military and commercial radioactive waste management total nearly $700 million; that is almost $100 million more than is budgeted for all other civilian programs associated with nuclear fission. It is about $150 million over the 1980 waste management budget and is vastly greater than budgets of several years ago.

Initial reactions from both environmental groups and industry to the new program have been positive. Industry representatives would have preferred to see repository development on a faster track but can live with the President's schedule. Environmentalists believe that, overall, the program places priority on the protection of public health and safety.

How the President's program will be received by Congress is unclear. Some key members have put forward proposals that are compatible or reconcilable with the President's. But there are some major variances. A striking case in point is a congressional proposal that would divert spent fuel from present deep-pool storage—which has always been assumed to be short-term—to storage in vaults, under constant human monitoring and surveillance, for an indefinite length of time. Such a strategy would run counter to the President's view that radioactive waste disposal "should not be deferred to future generations and should not depend on the long-term stability of social institutions." Many congressional hearings will be held and compromises made before a final national nuclear waste management policy emerges.

The National Conference of State Legislatures is the official representative of the nation's 7,500 state legislators and their staffs. NCSL is funded by the states and governed by a 43-member Executive Committee. The NCSL headquarters are in Denver, Colorado, with an Office of State-Federal Relations located in Washington, D.C.

Executive Director: Earl S. Mackey

The National Conference of State Legislatures has three basic objectives:

- To improve the quality and effectiveness of state legislatures;
- To assure states a strong, cohesive voice in the federal decision-making process; and
- To foster interstate communication and cooperation.

A Legislator's Guide to Hazardous Waste Management

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Table of Contents

Preface

This publication was made possible through Training Grant No. T900960-01-0 of the United States Environmental Protection Agency. Any opinions, findings or conclusions expressed in the report are those of the author and do not necessarily reflect the views or policies of the U.S. Environmental Protection Agency. This guide is intended to provide state legislators with a better understanding of the hazardous waste management problem and present federal and state initiatives that respond to the problem.

Several NCSL staff members have helped prepare this report including Janet Beardsley, Dan Bucks, Gerard Bulanowski, June Eisenman, Greg Lazarus, Jennifer Olson, Barbara Simcoe and Donna Wise. Additionally, the author wishes to thank Ernie Pappajohn, EPA Project Officer, Alan Magan of the National Governors' Association and Tom Todd of the Minnesota House Research Office for their thoughtful review of this document. Finally, the author would like to thank Sal Ruibal for editing this guide.

Chapter I
Executive Summary

One product of our industrial society is waste—some of it dangerous. Every year, sources such as the chemical industry, metals production, electroplating, textiles, petroleum refining and other industries pour out over 300 million metric tons of industrial waste, of which 10 to 15 percent can be classified as hazardous.

The issue is not whether we can eliminate hazardous wastes—they belong inevitably to our industrial way of life—but how well we manage them. According to the U.S. Environmental Protection Agency (EPA), we manage most of it poorly. The EPA estimates only about 10 percent of America's hazardous wastes are managed in an acceptable manner.

The consequences of improper hazardous waste management can be disastrous to the environment and public health. Damage to the environment may take many forms, including: groundwater and water supply contamination, wildlife habitat destruction, soil contamination, fish kills, loss of livestock, air pollution, fire, explosion, and crop damage. Hazards to human health, in addition to those resulting from the above list, can be devastating.

Whether through inhalation, skin contact or ingestion, the impacts on the function of the human body can be serious. Unfortunately, direct association between physical and mental disorders and exposure to toxic chemical wastes is not adequately documented. Most of these environmental and health problems are due to incidents that arise as the result of indiscriminate disposal by "midnight dumpers," improper management at treatment, storage or disposal facilities, or spills in transport.

There are technologies available for proper management of hazardous waste. Proper management means more than careful disposal. It includes consideration of the full range of options for each type of waste including:

- reducing the amount of waste generated;
- transferring the waste to an industry that may use the waste as raw materials;
- recovering material or energy from the waste stream for use somewhere else in the production process; and
- treating the waste so it is no longer hazardous.

Federal and state governments have addressed the problems associated with improper hazardous waste management. The Resource Conservation and Recovery Act (RCRA) of 1976 represents a national effort to deal with the nation's past in-

adequate management practices. RCRA requires the EPA to establish a federal regulatory program for the management of hazardous waste from its generation to its ultimate disposal. The goals of this legislation and the regulatory program established under it are to control waste management practices that endanger the public health, and to promote resource conservation and recovery.

In passing RCRA, Congress envisioned that the states would administer federally approved state waste management programs. Under RCRA and its regulatory program, each state is to develop a hazardous waste program that must be authorized by the EPA. In states that choose not to implement their own programs or fail to qualify for approval, the EPA will assume regulatory responsibilities.

The federal regulations set forth the minimum requirements for a state program. This minimum program includes requirements for identifying hazardous waste, standards for generators, transporters and treatment, storage or disposal facilities, and a permit and enforcement program.

The EPA recognizes that federal regulations are only the first step in responding to the hazardous waste problem. The states may establish a more stringent program than the federal regulations require. The states may also want to consider additional elements not required by the federal regulations. These additional elements include establishing an effective planning process, setting up a procedure for siting hazardous waste facilities, organizing an abandoned sites program and determining the public and private sectors' roles in owning and operating hazardous waste facilities.

In some states, legislative authority and a comprehensive hazardous waste regulatory program already exist. In others, new legislation may need to be enacted or existing legislation amended to effectively control hazardous waste. This legislator's guide examines pertinent federal activity, state legislation addressing the federal program, additional components of a comprehensive state program and state legislative action concerning these additional components.

The examples of state legislative action presented in this guide do not represent "model legislation," nor will they necessarily meet EPA state program requirements. They are only intended to serve as examples of state legislation in specific program areas. Although this guide separates legislation according to the components of a hazardous waste program, many

states have legislation that attempts to respond comprehensively to the most critical problems associated with hazardous waste management.[1] Among these are:

- Michigan
- Florida
- Delaware
- Arkansas
- Massachusetts

This list, which is not intended to serve as a survey of state hazardous waste laws, provides examples of comprehensive legislation. A complete survey of hazardous waste laws is available from NCSL's Washington, D.C. office.

Federal activity in the area of hazardous waste management is quite extensive. As is explained later, the EPA is interpreting RCRA to be preemptory of less stringent state hazardous waste programs. Despite this federal activity, there is room for flexibility in state implementation of the federal requirements and innovation in subjects the federal government has not acted on.

Chapter II

The Hazardous Waste Problem

Hazardous wastes are by-products of the goods and services produced in a technologically advanced society. The EPA estimates that 10 to 15 percent of the annual production of about 344 million metric tons of industrial waste is hazardous. This quantity of hazardous waste is expected to increase by 3 percent annually. These wastes include toxic chemicals, acids, caustics, explosives, and other potentially harmful materials. Major hazardous waste-generating industries include chemicals, metals production, electroplating, textiles, petroleum refining, and rubber/plastics.

Only about 10 percent of hazardous waste now is managed acceptably by controlled incineration, neutralization, secure landfills, recovery for useful purposes or other environmentally sound methods. About 80 percent is disposed of in lagoons, landfills and dumps without proper security against leaks. Ten percent is incinerated without proper controls.

Inadequate hazardous waste management is one of the most pressing environmental issues now facing the United States. James Moorman, Assistant U.S. Attorney General for Land and Natural Resources, testified before a congressional committee that hazardous waste poses "probably the first or second most serious environmental problem in the country."

EPA files contain hundreds of documented cases of damage to public health and the environment resulting from the indiscriminate or improper management of hazardous waste. The vast majority of cases involve pollution of groundwater—the source of drinking water for about half of the U.S. population—from improperly sited or operated landfills and surface impoundments.

Damage occurs in other ways, including injury resulting from direct contact with the wastes, fires and explosions, contamination of surface waters, air pollution, and poisoning via the food chain.

A recent EPA publication, *Everybody's Problem: Hazardous Waste*, provides the details of several case histories of health and environmental damage resulting from improper hazardous waste disposal practices.

- Groundwater in a 30-square-mile area near Denver was contaminated from disposal of pesticide waste in unlined disposal ponds. The waste, from manufacturing activities of the U.S. Army and a chemical company, dates back to the 1943-to-1957 period. Decontamination, if possible, could take several years and cost as much as $80 million.
- A truck driver was killed in 1978 as he discharged waste from his truck into one of four open pits at a disposal site in Iberville Parish, Louisiana. He was asphyxiated by hydrogen sulfide produced when liquid wastes mixed in the open pit.
- A bulldozer operator was killed in a 1975 explosion at a landfill in Edison Township, New Jersey, as he was burying and compacting drums of unidentified chemical waste. Of the 200 truckloads of waste the landfill received daily, about 50 were industrial waste.
- At least 1,500 drums containing waste, primarily from metal-finishing operations, were buried near Byron, Illinois, for an unknown number of years until about 1972. Surface waters (and soil and groundwater as well) were contaminated with cyanides, heavy metals, phenols and miscellaneous other materials. Wildlife, stream life and local vegetation were destroyed. The disposal site suffered long-range damage from the toxic pollutants that drained into the soil.

Although expensive, the technology for safe management of hazardous waste is available. Safe technology, discussed in greater detail in the next chapter, includes secure chemical landfills, incineration, landspreading, chemical fixation, and physical, chemical and biological treatment.

Until now, this technology has not been widely used because it has not been legally required. Unfortunately, unsafe methods are perceived as less expensive over the short run. According to EPA studies, the 17 major generating industries now spend $155 million annually for hazardous waste management. The EPA estimates that this figure will increase to $750 million when adequate hazardous waste management programs are in effect.

RCRA and state hazardous waste programs are designed to encourage the use of these technologies and minimize the danger from hazardous wastes to the public health and the environment.

Chapter III

Hazardous Waste Management Technologies

Environmental and health problems can be reduced by effective hazardous waste management. In the past, environmentally sound management practices were not used due to their relatively high cost and because there were no legal requirements for their use. The problems associated with past hazardous waste disposal practices have caused state and federal governments to require industry to manage its waste in a more environmentally acceptable manner.

Proper management means more than careful disposal. It means consideration of the full range of options for each type of waste. Ideally, the following management options, given in order of preference, will be utilized to their maximum potential by the private sector:

- waste reduction (e.g., industrial process changes);
- waste exchange;
- energy/material recovery;
- waste incineration/treatment; and
- secure ultimate disposal.

Not all methods are available for each type of waste. Some wastes are amenable only to particular management methods.

Waste Reduction

Rising material costs, uncertain supplies (petroleum, minerals, water) and increasingly stringent regulations will encourage industrial waste generators to review their production processes to determine where substitutions for unnecessary or toxic materials can be made, and where changes in manufacturing processes can reduce both resource and disposal costs.

Waste Exchange

Waste exchanges operate to transfer the wastes of one firm to other firms that may use such wastes as raw materials. As stated in a 1976 study by Arthur D. Little, the function of the transfer agent is to "identify and help bring together the generator, who views the waste as trash without further value, and the user, who views it as scrap with reuse value. In this process, the transfer agent identifies scrap materials of interest to both generators and users." Although only a small percentage of hazardous waste is suitable for transfer, waste exchanges can reduce the amount of waste requiring treatment or disposal.

Energy/Material Recovery

Increasingly stringent regulations governing disposal of hazardous waste will cause industry to review its production processes to determine where waste materials can be reused in a segment of the process line or where materials or energy can be recovered from a waste stream for use elsewhere in the production process. Based on limited data as to the extent of hazardous waste resource recovery in the nation, the EPA estimates that probably less than 3 to 5 percent of the waste stream now is subject to resource recovery.

One of the EPA's primary goals is to encourage hazardous waste recycling. The EPA hopes that such encouragement will reduce the total hazardous waste stream by as much as 20 percent. A recent report completed for the New York State Environmental Facilities Corporation by Rensselaer Polytechnical Institute identifies the greatest potential for recovery in the following areas:

- recovery of energy from concentrated organic liquid waste (e.g., incineration of waste organic oils and liquids);
- recovery of materials from concentrated organic liquid wastes (e.g., distillation and recovery of waste solvents); and
- recovery of metals from industrial sludges and metal plating wastes (e.g., recovery of chromium, copper and nickel from spent plating baths).

Waste Treatment

Heat can destroy certain hazardous wastes, concentrate them or render them less hazardous, although the process may produce a hazardous ash or solid residual, which must be disposed of.

Thermal devices include rotary kiln incinerators, fluidized bed incinerators, multiple hearth incinerators, liquid injection incinerators, and microwave plasma detoxification. Investment costs associated with incineration are fairly high and air pollution control equipment is often needed.

Treatment techniques are used to separate hazardous components from the waste stream's non-hazardous components, as well as render wastes less hazardous, reduce the volume of waste requiring ultimate disposal, and recover or reclaim energy or materials from the waste. Several of these treatment methods may be used before ultimate disposal. Treatment can be divided into:

- physical processes, which include sedimentation and flotation (gravity separation), filtration, flocculation (use of chemicals to aggregate smaller particles into larger ones removable by gravity separation or filtration), distillation, and adsorption;
- chemical processes, which include neutralization, oxidation, reduction, precipitation, ion exchange, and solidification (use of materials that will render the mixture solid to reduce or prevent leaching); and
- biological processes, which include activated sludge, aerated lagoons, and composting.

Land Disposal

Land disposal may be in general purpose landfills, sanitary landfills, and secure landfills.

General purpose landfills are constructed, according to the EPA, without regard to their possible effects on water resources. These landfills are covered intermittently, or daily, but do not have provisions for monitoring, leachate treatment, or special containment of wastes. General purpose landfills, according to studies, are the disposal method for the vast majority of industrial wastes disposed of in landfills.

Sanitary landfills are designed and built to reduce environmental hazards by the spreading and compacting of wastes and by covering the waste with other materials. These landfills do not usually monitor or treat leachate or separate incompatible wastes.

Secure landfills are designed to prevent connection with ground and surface waters and to prevent different wastes from coming into contact with each other. This is usually accomplished with liner and capping materials (e.g., clay and synthetic liners), separate cells for specific waste types, continuous monitoring, and leachate collection systems. Only a very small portion of hazardous wastes is currently placed in secure landfills.

It should be noted that many groups are working on developing new and less expensive technologies for managing hazardous waste. A staff report from the President's Office of Science and Technology Policy/Intergovernmental Science, Engineering and Technology Advisory Panel recommended several strategies for developing treatment technologies. These recommendations include:

- work to develop or adopt new manufacturing or industrial processes to reduce the amount of wastes generated by industries that produce particularly dangerous wastes and those that are not likely to be able to conduct research and development on waste reduction processes;
- develop techniques to increase the recovery of heavy metals and start a nationwide waste exchange program; and
- conduct further research and development activities on treatment, destruction and long-term storage.

State Options

State legislatures can encourage alternatives to landfilling. Incentives include expediting license review for facilities other than landfills, encouraging waste exchanges and requiring that generators treat or neutralize their waste as opposed to disposing of it in landfills.

Minnesota's Waste Management Act contains a number of provisions which expedite the licensing of hazardous waste storage and treatment facilities compared to licensing commercial landfills.[2] Kentucky recently passed legislation that requires land disposal facilities to receive local approval prior to licensing. This local approval requirement does not apply to treatment facilities.[3]

In a report to the Missouri Senate Committee on Energy and Environment, the staff recommended a statewide waste exchange service to be established to facilitate recycling.[4]

California requires that no extremely hazardous waste be disposed of without prior processing to remove its harmful properties.[5] The Missouri report mentioned above also recommends that the Department of Natural Resources be authorized to require the use of alternatives to landfills where these alternatives are economically and technically feasible.[6] Additionally, the report suggests tax credits be given for investments in waste management equipment or processes.[7]

Encouragement of waste reduction and recycling is in a very early stage in most states, but is an area where significant state initiative can occur.

Chapter IV

The Resource Conservation and Recovery Act of 1976 (RCRA)

In the past, industry has sought to dispose of its wastes at the lowest possible cost, consistent with the requirements imposed by laws and regulations. Until recently, in most parts of the United States such laws and regulations were non-existent or incomplete. Consequently, hazardous waste is causing much pollution.

Most of the pollution results from indiscriminate disposal by "midnight dumpers," improper management at treatment, storage or disposal facilities, or spills in transport. In the 1970's, state and federal governments began to impose stronger controls.

California enacted legislation establishing a state hazardous waste program in 1972. Its success was a guiding force in the creation of RCRA. RCRA represents a national effort to improve management practices, to require industry to ensure safe hazardous waste management, and to provide incentives to industry to reduce the amount of waste and develop safer technologies for managing wastes.

The RCRA Hazardous Waste Program

Subtitle C of RCRA addresses the problems of hazardous waste. This subtitle requires that the EPA establish a national program to regulate hazardous waste from "cradle to grave." The EPA and state governments share responsibility for implementing and monitoring the hazardous waste program. Each state is to develop a hazardous waste program that must be approved and authorized by the EPA. In states that choose not to implement their own programs or fail to qualify for approval, the EPA will assume regulatory responsibilities.

Section 3001 of RCRA requires that the EPA establish regulations that set forth criteria for the identification and listing of hazardous waste. The act requires that these regulations take into account toxicity, persistence and degradability in nature, potential for accumulation in tissue, and other related factors, such as flammability, corrosiveness, and other hazardous characteristics.

Sections 3002 and 3003 of RCRA require the EPA to issue regulations that establish standards for generators and transporters of hazardous waste. The act requires that these regulations include standards for recordkeeping, labeling, packaging, transportation and use of a waste tracking system. Section 3003 (b) specifically requires that these regulations be developed in coordination with U.S. Department of Transportation regulations.

Section 3004 of the act mandates the EPA to set forth requirements for owners and operators of treatment, storage and disposal facilities. This section mandates requirements for recordkeeping, compliance with the waste tracking system, conformance with location, design and operating standards, as well as preparation of emergency response contingency plans and any additional qualifications as to ownership, continuity of operation, training of personnel and financial responsibility.

Section 3005 of the act requires the EPA to establish permit procedures for treatment, storage or disposal facilities. This procedure must include requirements for new facilities and for those now in existence. Congress decided that existing facilities should be regulated until a final decision is made on their application for a permit.

Section 3010 requires all entities engaged in generating, transporting, treating, storing or disposing of hazardous waste to notify the EPA of their activities. The EPA assigns an identification number to the notifier who is then subject to the regulatory program.

Opportunity for State Action

Congress believes that control of hazardous wastes is primarily a state responsibility. For the most part, implementation of the federal program is intended to occur through EPA-authorized state hazardous waste management programs. Where states do not establish such programs or the programs do not meet federal standards, the EPA must assume regulatory control.

Section 3006 of the act says that states may receive either final or interim authorization of their hazardous waste programs. To receive final authorization, the state program must be "equivalent" to the federal program, consistent with federal or state programs applicable in other states, and provide adequate enforcement of compliance with the requirements of RCRA. The reason for these requirements is that Congress intended that states receiving final authorization become part of an integrated national program.

Interim authorization allows the state to administer an EPA approved program for a two-year period. To qualify for interim authorization, the state must have a hazardous waste program in existence within 90 days of issuance of the final regula-

tions. The act requires that this program only be "substantially equivalent" to the federal program. During this interim period, a state may alter its program to qualify for final authorization. It was intended that interim authorization be granted in a relatively liberal manner so as not to disrupt state activities and to encourage state efforts in reaching final authorization.

Section 3009 of RCRA preempts any state or local requirements concerning hazardous waste management that are less stringent than those contained in effective federal regulations. Thus, as of November 19, 1980 (the effective date of the federal program), states without interim authorization may not enforce requirements less stringent than those established by the federal government.

One of the most frequently discussed issues in development of state RCRA programs concerns the timing and requirements for EPA authorization. On May 19, 1980, the EPA issued the final federal regulatory program.[8] A portion of these regulations outlines the requirements state programs must meet to qualify for EPA authorization.

To receive interim authorization for a state program, the state must meet certain procedural requirements. These requirements are outlined in RCRA and its regulations. The EPA has interpreted the word "program" as used in Section 3006 of RCRA to mean only enabling legislation. Although only enabling legislation is required to meet the 90-day cutoff, the EPA will require that an entire substantially equivalent program (legislation and regulations) be in place prior to authorization.

The EPA has defined "substantial equivalence" as "to a large degree or, in the main, equal to in effect." Thus, states that wish to apply for interim authorization must have legislation that enables the state agency to establish a substantially equivalent program by August 19, 1980.

To receive final authorization, which may be applied for at any time following the promulgation of the entire federal program, the state program must be equivalent and consistent with the federal program. The EPA has defined "equivalent" to mean "equal to in effect." In terms of consistency, the EPA attempted to achieve a goal of an integrated national program which requires that final state programs do not conflict with each other. An example of inconsistency is establishment of interstate waste importation bans.

State hazardous waste programs will be expensive, although the costs will vary greatly depending on the specific circumstances. Recognizing that these programs would be expensive, Congress authorized expenditures for grants to the states. The amount available for grants in FY 1981 is approximately $35 million. Because federal grants will not finance the entire program, state legislatures should consider alternatives funding state programs.

Due to the inherently high cost of implementing a program, a question that often arises is "Why should the state pass legislation to develop a state program? Because it is a federal program, let the EPA pay for it." The disadvantage to operating a program is clear—a very high cost. However, there are a number of advantages to operating a state program. These advantages include:

- a state may design its regulatory program to suit the specific needs of the state as opposed to having a uniform federal program;
- a state may desire to regulate its own activities;
- due to the lack of necessary resources, federal control may not provide adequate protection of public health and the environment.
- industry can avoid dual regulation by both the state and the EPA;
- the regulated community may desire to work with the state agency as opposed to the EPA; and
- local governments may desire to work with the state agency as opposed to the EPA.

The next two chapters of this guide describe the components of a state hazardous waste program and provide examples of selected state legislative activity for each program component.

Chapter V

State Hazardous Waste Programs

The EPA has established detailed minimum requirements for approvable state hazardous waste programs. This chapter will discuss those program elements that are required by federal law and state legislative options to respond to federal requirements. These minimum requirements include:

- a procedure for identifying hazardous waste;
- standards for generators and transporters of hazardous waste;
- standards for hazardous waste treatment, storage and disposal facilities; and
- establishment of an enforcement program.

It must be emphasized that the federal program only establishes minimum standards and does not prevent the states from creating more stringent requirements. The federal requirements discussed in this chapter do not necessarily address all potential problems associated with hazardous waste management. Chapter VI of this guide will discuss the role of state legislatures in responding to problems that are not addressed by the federal law.

Identification of Hazardous Waste

FEDERAL STANDARDS

The initial step in establishing an effective management program is to identify which wastes are hazardous and should be subject to control. Section 3001 of RCRA, in conjunction with the EPA's final regulations, established the core of the hazardous waste management system by defining hazardous wastes.[9] The EPA regulations, guided by the general definition of hazardous waste in RCRA, specify that a solid waste will be considered hazardous if it meets any of the following three conditions:

- The waste exhibits any of the *characteristics* of a hazardous waste, i.e., ignitibility, corrosivity, reactivity, or Extraction Procedure (EP) toxicity. EP toxicity involves a test procedure that estimates the potential for hazardous constituents in a waste to cause groundwater contamination in a landfill disposal situation. The other characteristics are also identified by waste generators through separate testing procedures.
- The waste is *listed* by the EPA as a hazardous waste, or is a mixture of a solid waste and a listed hazardous waste. The EPA rules put the burden of proof on the waste generator to show that a listed waste is not hazardous. If the generator proves this to the EPA's satisfaction, the waste may still be a hazardous waste if it meets any of the characteristics mentioned above.
- The waste is a sludge, spill residue, ash, emission control dust or leachate generated from the treatment, storage or disposal of a hazardous waste.

The list of hazardous wastes published by the EPA on May 19, 1980 can be divided into four parts:

a. Sixteen hazardous wastes from non-specific sources (e.g., wastewater treatment sludges from electroplating operations);
b. Sixty-nine hazardous wastes from specific sources (e.g., emission control dust/sludge from secondary lead smelting);
c. Twenty-two commercial chemical products that are acutely hazardous wastes if: discarded in their pure form; their off-specification products are discarded; containers used to hold the products are discarded; or any spill residue or debris contains the chemical product or off-specification material; and
d. An additional 239 commercial chemical products are designated as toxic wastes if: discarded in their pure form; their off-specification products are discarded; or any spill residue or debris contains the chemical product or off-specification material.

On July 16, the EPA added 18 wastes to the lists of hazardous wastes from specific and non-specific industrial sources (e.g., solvent cleaning wastes from equipment, and tank cleaning wastes from paint manufacturing) and proposed a rule to add seven more wastes as hazardous.

Certain solid wastes are not covered in the EPA hazardous waste regulations because of RCRA statutory provisions (e.g., electric utility-generated wastes).

In addition, the EPA will initially exclude certain small quantity generators from the hazardous waste management requirements, i.e., those who produce or accumulate less than 1000 kilograms (kg) of hazardous waste per calendar month. Those generators must only ensure that their wastes are delivered to a hazardous waste facility or to a facility licensed to manage municipal or industrial solid waste. However, generators of less than 1000 kg of acutely hazardous waste must meet full EPA hazardous waste management requirements. The EPA plans to phase in a lower small generator exclusion of 100 kg/month for other wastes over the next few years in order to more fully regulate hazardous waste management practices.

The EPA expects to add to the list of hazardous wastes during the remainder of 1980 and as further information on other possibly hazardous wastes is collected.

STATE ACTION

Most states have adopted the list and criteria approach described above. For example, Utah defines hazardous wastes by certain characteristics and then, in the section setting out the duties of the regulating agency, charges the agency with specifically incorporating the EPA's regulatory definition into the state's universe of controlled wastes. Thus, the Utah Hazardous Waste Act of 1979 states:

> "'Hazardous waste' means a solid waste or combination of solid wastes which, because of its quantity, concentration, or physical, chemical or infectious characteristics may cause or significantly contribute to an increase in mortality or an increase in serious irreversible, or incapacitating reversible, illness or may pose a substantial present or potential hazard to human health or the environment when improperly treated, stored, transported, or disposed of, or otherwise managed."[10]

The act mandates the agency adopt rules:

> "... identifying those wastes which are determined to be hazardous, including hazardous wastes designated under Section 3001 of the Resource Conservation and Recovery Act of 1976, 42 U.S.C. 6921, *et seq.*"[11]

An alternative has been suggested to the EPA that the regulations define hazardous waste on the basis of its degree of hazard. Under this approach, the management strategy is based on the hazard the waste poses. Those extremely hazardous wastes will be managed more strictly than other less hazardous wastes. This approach has been suggested by the Chemical Manufacturers Association, the U.S. House of Representatives Committee on Interstate and Foreign Commerce, and several states.

California and Washington are the most notable examples of states that have adopted this approach. California law describes two degrees of waste: hazardous and extremely hazardous. California defines "hazardous waste" as:

> "a waste, or combination of wastes, which because of its quantity, concentration, or physical, chemical, or infectious characteristics may either:
> 1. Cause, or significantly contribute to an increase in mortality or an increase in serious irreversible, or incapacitating reversible, illness.
> 2. Pose a substantial present or potential hazard to human health or environment when improperly treated, stored, transported, or disposed of, or otherwise managed."[12]

The statute defines "extremely hazardous waste" as:

> "any hazardous waste or mixture of hazardous wastes which, if human exposure should occur, may likely result in death, disabling personal injury or serious illness caused by the hazardous waste or mixture of hazardous wastes because of its quantity, concentration, or chemical characteristics."[13]

The legislation requires the agency to adopt lists of hazardous and extremely hazardous wastes and criteria for identifying hazardous and extremely hazardous wastes.

The Washington statute defines "dangerous waste" as well as "extremely hazardous waste"—considered a subset of dangerous waste. The term "dangerous wastes" refers to nonradioactive wastes "which are disposed of in such quantity or concentration as to pose a substantial present or potential hazard to human health, wildlife or the environment because such wastes . . .

1. have short-lived toxic properties that may cause death, injury, or illness, or have mutagenic, teratogenic or carcinogenic properties; or
2. are corrosive, explosive, flammable, or may generate pressure through decomposition or other means.

Extremely hazardous wastes are dangerous wastes which:

1. will persist in a hazardous form for several years or more at a disposal site and which in its persistent form:
   a. presents a significant environmental hazard and may be concentrated by living organisms through a food chain or may affect the genetic makeup of man or wildlife; and

b. is highly toxic to man or wildlife.
2. if disposed of at a disposal site in such quantities as would present an extreme hazard to man or the environment."[14]

Washington, in making its hazardous waste classifications, relies upon agency rules for specificity. Both California and Washington incorporate the degree of hazard approach into their management system, by specifying different standards of control for different types of waste.

Generator and Transporter Standards

FEDERAL STANDARDS

In order to comply with the notification requirements in RCRA, the generator must determine if its waste is hazardous. This determination is based on the lists and characteristics described earlier. Once the generator determines that it produces a hazardous waste, it must comply with the rules described below.

According to the federal regulations, the generator of the waste must ensure that the hazardous waste reaches a permitted facility. This is done through a tracking system which uses a set of shipping papers, or manifest, that follows the waste from its generation to disposal. The manifest, signed by the generator, must accompany all off-site shipments of the waste until its ultimate disposal. At that time, the owner/operator of the treatment, storage or disposal facility must return a copy of the manifest to the generator. If the generator does not receive the manifest within 35 days of shipment, he must contact the transporter and the owner/operator of the disposal facility to determine the status of the waste. If after 45 days from shipment the generator does not receive the manifest, the generator must file a report with the regional EPA office in order to alert the EPA to possible problems.

The EPA decided to require only certain information on the manifest as opposed to requiring a specific form. This allows flexibility for the generator and allows the manifest to be used to fulfill the Department of Transportation (DOT) shipping papers requirement. The manifest must contain:

- the name, address, telephone number and EPA identification number of the generator, transporter and one designated treatment, storage or disposal facility;
- a description of the wastes as required by DOT rules;

- a statement of the total quantity of each type of waste; and
- a certification of compliance with DOT and EPA rules.

The generator is required to package, label, mark and placard the waste according to DOT regulations before transporting the hazardous waste.

The regulations also require the generator to maintain extensive records on shipments; the records must be kept for three years and summarized in an annual report.

Transporters must also maintain all records for three years. Transporters must comply with the tracking system by acknowledging receipt of the waste and ensuring that the manifest accompanies the waste. Once the transporter takes delivery of the hazardous waste, he is responsible for its handling (including cleaning up discharges that occur during transportation) until the waste is delivered to another transporter or the designated disposal facility. The EPA believes this responsibility will help ensure proper handling of the wastes.

RCRA requires the EPA to consult with the DOT to ensure that the regulations are consistent with DOT regulations. Because there is regulatory overlap between the DOT and the EPA, the two agencies determined that DOT standards should apply in the area of transportation safety while EPA standards are applicable to waste management. DOT regulations apply to packaging, labeling, marking, placarding and identification of the wastes during shipment, and the EPA oversees waste management and ensures compliance with the manifest system. To implement this coordination, the EPA and the DOT have issued a Joint Memorandum of Understanding that delineates the agencies' responsibilities.

STATE ACTION

Texas was one of the first states to establish a manifest tracking system. The Solid Waste Disposal Act gives the Department of Water Resources the authority to regulate all aspects of the management and control of industrial waste.[15] Based on this broad grant of authority, the Texas Department of Water Resources established a tracking system whereby the generator must furnish the transporter of the waste a shipping ticket that, among other things, describes the waste and designates an authorized receiver to accept them. Transporters cannot transport waste unless it is accompanied by a shipping ticket. Both the carrier and the authorized receiver must fill out and sign the ticket, which must then be returned to the generator. All of the

parties must retain copies of the ticket for their records. This system ensures that the wastes reach a permitted facility.

Arkansas statutes provide another example of an authorized manifest system. The Arkansas Hazardous Waste Management Act specifically requires the regulatory agency to issue rules and regulations for "establishing a manifest system for the transport of hazardous wastes and prohibiting the receipt of hazardous wastes at storage, processing, recovery, disposal, or transport facilities or sites without a properly completed manifest."[16] Arkansas also specifically requires that rules pertaining to containerization and labeling of hazardous wastes and all other transportation rules be consistent with DOT rules.

Treatment, Storage and Disposal Facility Standards

FEDERAL STANDARDS

The next step in controlling hazardous waste management practices is to ensure that wastes identified as hazardous are managed in an environmentally acceptable manner at authorized treatment, storage and disposal facilities. As required by Section 3004 of RCRA, the EPA published standards for these facilities.

Because of the complexity of the technical and administrative requirements which the EPA must impose on the hazardous waste management industry, the agency decided to phase in facility requirements in a three-stage process. Phase I of the regulations will provide standards for existing facilities. These standards will be effective while the facility's permit is being processed. The EPA estimates that this processing will take several years. Phase II of the regulations sets out additional technical performance standards. These standards will be incorporated into the final permitting process. Phase III will incorporate more detailed technical standards. These three phases are explained in more detail below.

Phase I—These regulations use the concept of interim status contained in Section 3005 of RCRA to phase in hazardous waste facility standards. By November 19, 1980, owners/operators of existing facilities who have applied to the EPA for a facility permit must comply with the interim status standards.[17] These standards are a nearly complete set of requirements for facilities operating in interim status, and contain a limited framework of technical performance standards and most of the administrative and non-technical operating standards.

If an owner/operator of an existing facility notifies EPA under Section 3010 of RCRA and properly applies for a facility permit by indicating compliance with interim status requirements, the owner/operator is to "be treated as having been issued such permit." The interim status requirements will apply for the period between when a permit is applied for and when it is issued or denied by the EPA.

The interim status standards are designed so that hazardous waste facility owners/operators can comply within six months from publication and without significant capital expenditures. The administrative and non-technical operating standards include:

- chemical and physical analysis of wastes;
- spill preparedness and prevention arrangements;
- a contingency plan for waste releases and emergencies;
- compliance with manifest, recordkeeping and reporting requirements;
- closure and post-closure plan requirements;
- facility security requirements;
- training for facility personnel;
- separation of ignitible and reactive wastes from ignition or reaction sources;
- groundwater monitoring; and
- financial responsibility requirements.

One requirement mentioned above is that owners/operators of facilities provide assurances of financial responsibility for damages that may be incurred during the life of the facility, and assurances of financial responsibility for closure and post-closure care and maintenance of the facilities. These financial requirements are still in the proposal stage. Presented below is a short discussion of these requirements.

- Site Life Liability. Under the proposed regulations, an owner/operator of a facility seeking interim status must show evidence of at least $1 million of liability insurance per occurrence per firm (not per site) with a $2 million annual aggregate for sudden and accidental occurrences (exclusive of legal defense costs).
- Closure and Post-Closure Care. Post-closure care must be provided for 30 years following closure. The proposed regulations require the owner/operator to choose from a number of financial mechanisms to ensure there will be money available for closure and post-closure care. Separate mechanisms may be

used for closure and post-closure or one mechanism may be used for both if it meets the requirements of both. The regulations allow the following mechanisms for assuring closure and/or post-closure: trust funds, surety bonds, standby letters of credit, meeting a financial test that shows the economic conditions of the owner/operator to be stable enough to guarantee closure and post-closure, and a revenue test for municipally owned facilities.

The technical-related interim status standards include various requirements for the use of: containers; tanks; surface impoundments; waste piles; land treatment; chemical, physical and biological treatment, and underground injection.

Initially the use, reuse, reclamation or recycling of hazardous waste will be subject only to EPA requirements for storage and transportation. The EPA has deferred full regulation of wastes which are either being beneficially used or legitimately recycled, or being stored or treated prior to beneficial use or legitimate recycling. During Phase II and III of the program, the EPA will attempt to regulate resource recovery facilities while encouraging hazardous waste resource recovery in order to fulfill two separate intentions of RCRA.

Phase II—In late 1980, the EPA will publish the second phase of the hazardous waste facility standards. These will be more specific technical requirements which will be used to issue final facility permits. These permits will be issued on the basis of technical requirements and on the basis of the permit writer's "best engineering judgement."

Phase III—This will be the final phase for issuing more detailed technical requirements under Part 264. When this phase is completed, the standards issued will supplant the Phase II requirements and interim status requirements, make the permit writing process more straightforward, and may include standards for certain industries and wastes requiring special management standards.

The phased process will require the hazardous waste management industry to meet increasingly stringent standards over a period of time. By not requiring immediate adherence to complex technical standards, the closing of some existing facilities will be prevented.

The standards described above will be implemented by issuance of permits for treatment, storage or disposal facilities. The regulations issued under RCRA set forth the minimum federal requirements for a state permit program.

For existing facilities, RCRA and the regulations recognize that it may take a number of years to carry out the permit process. In order to allow existing facilities to continue operations without risking danger to the public health, the EPA set out the minimum standards, described above, for existing facilities to receive interim status. To receive interim status, the existing facility must notify the EPA and receive an identification number; submit a permit application, which defines the processes used, design capability and the hazardous waste to be handled; and comply with the interim status standards. An existing facility will maintain interim status until the final permit application is acted upon.

For proposed facilities, a complete permit application must be submitted at least 180 days before physical construction is scheduled to begin. Once a permit is submitted, the regulatory authority must decide whether to issue or deny a permit. EPA regulations require that these permits, at a minimum, are reviewed and re-issued every 10 years.

STATE ACTION

The facility standards described above cover many subjects. Included in these are technical standards, administrative standards, and financial responsibility. Generally, states have adopted an approach where, to receive a permit, the applicants must identify themselves, provide reports and be subject to inspection and controls over new construction. These states leave the details of the program to the regulatory agency.

A good example of this approach is in Illinois. Legislation which was passed during the 1979 legislative session requires that the agency adopt:

- standards for the location, design, construction, sanitation, operation, maintenance and discontinuance of the operation of hazardous waste sites;
- standards for the certification of personnel to operate waste sites;
- standards for the handling, storing, processing, transporting and disposal of any hazardous waste;
- recordkeeping requirements;
- water monitoring and equipment standards and procedures;
- standards relative to alerting and abating land pollution emergencies constituting a serious danger to health or to the environment; and

- standards for adequate and proper care and maintenance of, closure of, and post-closure monitoring, maintenance and use of hazardous waste disposal sites.[18]

The legislation requires that these standards are met by owners and operators of treatment, storage or disposal facilities.

The bill does limit the location of hazardous waste disposal facilities. Under the act, these facilities could not be located above an active or inactive shaft or tunneled mine or within two miles of an active fault in the earth's crust. In counties of a population less than 225,000, a hazardous waste disposal facility cannot be located within one-and-one-half miles of the corporate limits of any municipality without the approval of the governing body of the municipality, or within 1000 feet of an existing private well or the existing source of a public water supply.

The Arkansas Hazardous Waste Management Act of 1979 provides an approach to permitting and ensuring compliance with the act's provisions. The act sets forth the requirements for permits. It states a permit is needed for construction, substantial alteration or operation of a hazardous waste treatment or disposal facility.[19] Permits are also needed for storage, transportation, treatment or disposal of hazardous waste. These permits shall be issued under terms and conditions set by the agency and issued for five years and then subject to renewal. All permits are subject to revocation for failure to comply with permit conditions.

The bill requires certain design and operating standards be met before a permit will be issued. The legislation also requires the regulatory agency to establish a schedule of fees to cover the costs of processing permit applications, on-site monitoring, certification of personnel to operate the facilities, and other areas the agency feels are necessary to assure compliance. The act also provides for interim operational status for existing facilities that are operating under valid permits and have applied for new permits.

In order to ensure compliance, the act provides for the owner/operator of a permitted facility to maintain records, make reports, install and use monitoring equipment, take samples and perform tests that the agency requires. This section authorizes the agency to examine all records pertaining to the site and enter and inspect the facility. All records required under the act are available for public inspection unless they are limited by a confidentiality request.

Along with assuring financial responsibility during the life of the disposal facility, provisions must be made to ensure that money is available to meet standards for closure and post-closure monitoring and maintenance. States have taken various approaches to ensure these requirements are met. The states of Michigan and Wisconsin have established good examples of how this may be accomplished.

Michigan legislation illustrates a method by which a state may handle the issue of ensuring the availability of funds to respond to accidents during the facility's operating life. Michigan's Hazardous Waste Management Act requires that an application for a permit "contain the name and residence of the applicant, the location of the proposed facility or existing disposal facility, and other information considered necessary by the director *including proof of financial capability*" (emphasis added).[20] The rules proposed under this section require that the owner/operator of a disposal facility shall have and maintain liability insurance for sudden and accidental occurrences in the amount of $1 million per occurrence with an annual aggregate per firm of $2 million, exclusive of legal defense costs, for claims arising out of injury to persons or property from the operations of each hazardous waste facility.

Both Michigan and Wisconsin require the owner/operator to establish closure and post-closure plans and include these in their permit applications. The Michigan bill requires the operator to remain responsible for the site for 15 years following closure. At the end of this period, if the agency determines the site does not have a foreseeable alternative use, the state may assume responsibility for long-term maintenance and all claims for damages that may occur.[21] This section requires the owner/operator to file as part of a license application a surety bond or other suitable instrument, or establish a secured trust fund to cover the costs of closure and post-closure maintenance.[22]

In Wisconsin, the legislation requires the owner to maintain the site for a maximum of 30 years after closure.[23] The act states that no operating plan may be approved by the agency "unless the applicant submits a bond, deposit, proof of an established escrow account or other proof of financial responsibility ensuring that the applicant and any successor in interest will comply with the closure and long-term care requirements of the plan."[24]

Michigan and Wisconsin have developed trust funds funded by surcharges on owners/operators of hazardous waste

disposal facilities. These funds will be used to pay for all costs of long-term care of a site accruing after the responsibility of the owner has been terminated.

Enforcement

FEDERAL STANDARDS

The key to accomplishing the purposes of RCRA—controlling waste management practices that endanger public health or the environment and promoting resource conservation and recovery—is strict enforcement of the regulatory program. Strict enforcement will force generators to utilize permitted treatment and disposal facilities.

In the past, costs associated with disposal of wastes were artificially low. The costs associated with resource recovery and waste reduction techniques are relatively high and there have been few incentives to incorporate these techniques into the industry's waste management practices. Because of the high costs of environmentally sound waste management, market forces may cause industries to turn to resource recovery and waste reduction rather than allowing their by-products to enter the waste streams. It would become important to ensure that all wastes are properly managed.

Strict enforcement means devoting adequate financial and human resources to ensure that the waste is controlled from "cradle to grave." In addition to adequate resources there must be strict penalties for violations of the regulatory program. The federal program sets out minimum standards. For those states seeking interim authorization, legislation must provide for civil penalties or criminal fines of up to $1000 per day. The EPA regulations also require public participation in the state enforcement process. This participation may take the form of allowing the citizens the right of intervention in any civil or administrative action to obtain remedies, or some assurance that the enforcement authority will investigate and provide written responses to citizen complaints and not oppose citizen intervention where permissive intervention may be authorized by statute. Additionally, the state must have a surveillance program that ensures compliance with the regulations.

For those states seeking final authorization, their program should include a compliance evaluation program that provides for reports and notices, an independent inspection and surveillance program, entry, inspection and monitoring authority, and proper evidence-gathering procedures. The enforcement authority should allow the state to stop unauthorized activities, sue for permit violation without need for permit revocation, and provide for civil and criminal fines of up to $10,000 per day and criminal penalties of up to six months' imprisonment for each violation. Finally, the enforcement program must meet the same public participation standards discussed above.

STATE ACTION

The first step in ensuring an effective enforcement program is providing adequate resources to properly investigate irregularities in the system.

Both Arkansas and California have developed innovative ways to finance this investigation. Arkansas is statutorily authorized to recover the costs of investigating and establishing the violation from the offender in a civil action.[25] California has established a fee system which requires each operator of a hazardous waste disposal site to pay a fee to the state based on the number and weight of shipments the site receives. The fees are deposited in the Hazardous Waste Control Account which is used to pay for the administrative costs of the program.[26]

Many states have also imposed stringent penalties for violations of their hazardous waste laws. For example, the Arkansas act provides for criminal and civil penalties. The criminal penalties include a fine of up to $10,000 and/or imprisonment for up to one year. Each day of the violation is considered as a separate offense. Civil penalties include a fine not to exceed $25,000 per day of violation, payment of any expenses reasonably incurred by the state in removing, correcting, or abating any adverse effects resulting from the violation, and compensation for any actual damages resulting from the violation.[27]

Legislation in Florida provides that any person who knowingly violates the act is subject to criminal penalties of $25,000 per day for each violation, imprisonment not to exceed one year, or both for the first offense; and $50,000 per day for each violation, imprisonment not to exceed two years, or both for the second offense.[28]

Pennsylvania passed legislation during the summer of 1980 that allows any citizen with an interest in a case to intervene in all actions for civil penalties and injunctive relief. The act also declares that any violation of the act or regulations amounts to a public nuisance. Any person committing a nuisance is liable for the costs of abating any pollution caused by the violation. The act creates a presumption that any person who treats, stores or

disposes of hazardous waste is liable, without proof of fault, negligence, causation or violation of regulations, for all damages, contamination or pollution within 2500 feet of the perimeter of the area where the activities took place. Finally, the act creates absolute liability for all criminal violations of the act, excepting those requiring knowing or intentional conduct.[29]

Chapter VI
Additional State Issues

The EPA state program requirements discussed in Chapter V are minimum requirements for a state hazardous waste program. There are additional subjects that may be considered by state legislatures that go beyond implementation of the federal requirements. These subjects, key political issues in many states, include:

- the role state government will have in planning and assessing the needs of the state in the area of hazardous waste management;
- the proper procedures for choosing hazardous waste facilities;
- the establishment of a program to remedy problems associated with abandoned hazardous waste sites; and
- the respective roles the public and private sectors should have in developing and owning hazardous waste facilities.

This chapter discusses these subjects and provides examples of innovative state responses to them.

Planning

INTRODUCTION

Although no federal standards for planning were issued in the hazardous waste regulations, subtitle D of RCRA calls for comprehensive state waste management planning. The guidelines for this section suggest that the appropriate state agency assess hazardous waste management techniques. This planning serves to identify the state's hazardous waste problem and evaluates the state's needs in terms of quantity and the types of facilities necessary to manage these hazardous wastes safely.

Comprehensive planning involves agency identification of the amounts and types of wastes produced within the state—this means information concerning waste generation and disposal plans of generators currently operating in the state as well as those planning to establish operations. The information required from these generators should include general information, waste characterization, means of storage and transportation, and treatment and disposal methods. Following an examination of available management technologies, a decision may be made concerning the most appropriate technology.

There are two methods available to help identify the hazardous wastes generated within a state. One approach is to use the information obtained through the notification requirement in Section 3010 of RCRA. The information obtained through this process can be made readily available to the planning authority

which then considers what specific facility features would be most suitable to manage such wastes. A major fault in using this system as the sole means of planning is that the notification requirement only assesses most recent production. Future trends on the amount of waste produced are not identified, thereby producing incomplete information for use in the planning process.

Conducting a statewide hazardous waste survey is an alternative or additional method of gathering adequate planning data. Complete and accurate data are essential to the success of a survey. Although legislation may require a response to survey questions, many states have used a voluntary survey. Where response is not mandatory, a combination of mailed questionnaires, followed by on-site visits, has generated greater and more accurate responses.

The second stage of the planning effort involves analyzing the data to determine the best way to effectively manage the waste. In New York, for example, the Environmental Facilities Corporation has been legislatively mandated to "prepare a comprehensive program for the ultimate disposal of industrial hazardous waste in New York." The corporation is using the Industrial Hazardous Waste Generation Inventory to conduct a region-by-region analysis of the state's needs for additional waste management capacity. Among other things, the study will recommend a suitable treatment, disposal, and storage system to manage adequately the waste generated within a particular region. Once the best strategies are identified, the state may want to actively promote the development of these through financial incentives, issuance of franchises or state ownership.

STATE ACTION

A number of states have been quite active in the area of planning. A majority of states have undertaken surveys to determine the nature of their problem.

The state of Minnesota, however, has gone a step further in its legislatively required planning effort. A detailed examination of this effort is warranted. One of the main purposes of the Minnesota Waste Management Act of 1980 is to provide for systematic and coordinated waste management by integrating the planning process with facility promotion and development.[39] The act establishes a Waste Management Board (WMB) that is responsible for hazardous waste management planning, promoting better waste management practices and siting of hazardous waste facilities. A policy decision made in enacting this law was that these responsibilities should be separated from the regulatory functions of the Minnesota Pollution Control Agency. It was felt these efforts would conflict with a regulatory program.

Under the act, a nine-member WMB provides the lead in the state's planning activities. The WMB must submit reports to a statutorily created Legislative Commission on Waste Management concerning:

- liability and long-term care of hazardous waste facilities;
- the issues associated with private sector investment in hazardous waste management;
- interstate cooperation in hazardous waste management;
- alternative strategies, methods and technologies for hazardous waste management; and
- compensation to local communities for the adverse effects of hazardous waste facilities.

These reports, which will include legislative recommendations, will form the basis for a proposed hazardous waste management plan.

The plan must include: a description of the types and volume of hazardous waste which will be generated through the year 2000; objectives for reducing, to the greatest feasible extent, the need for land disposal of hazardous waste; and "a conclusion as to the irreducible minimum of disposal capacity which will be needed in the state through the year 2000." By spring 1982, following public hearings, this plan must be adopted.

At the same time that the management plan is adopted, the WMB must issue, consistent with the management plan, at least one certificate of need for a disposal facility that is consistent with the management plan. This certificate of need will be based on the plan's statements concerning the projected need for a land disposal facility.

This certification and planning process is closely integrated with Minnesota's siting process. The act requires the WMB to search for sites for commercial hazardous waste processing and disposal facilities. The WMB must select at least three preferred sites in the state for each of three types of processing facilities—a chemical processing facility, a commercial incinerator, and a transfer and storage facility. The WMB must also select six "candidate sites" for a hazardous waste landfill. These sites must be certified by the Pollution Control Agency as environmentally suitable for the use intended.

The selection of the land disposal site from among the candidate sites will take approximately two years, during which

six members will be added to the WMB, one representing each of the candidate sites.

For land disposal facilities, local project review committees from the area surrounding each of the six candidate sites will be established by the governor. Each local committee, which will be entitled to technical and financial assistance to ensure effective participation in the review process, will select one representative to act as a temporary member of the WMB. Based on the five WMB reports, environmental impact statements on disposal facilities at each of the six candidate sites, the waste management plan, permits that have been issued by the regulatory agency for facilities at each site and public hearings, the WMB will make a final decision on the site or sites for the disposal facility or facilities for which it has previously certified the need. This decision is final, supersedes and preempts all conflicting requirements of state agencies and political subdivisions.

In the case of commercial processing facilities, the law does not require selection of a site. The initiative in site selection comes from a private developer. The WMB then conducts an *ad hoc* review of the proposal, with six temporary members added for this review. The temporary members come from the community where the facility is proposed. The WMB may override local government restrictions only at those sites chosen as preferred sites during the planning process.

The Minnesota Legislature, in establishing this process, recognized the need to integrate planning with the need for siting new facilities.

Siting Hazardous Waste Facilities

INTRODUCTION

With implementation of the federal and state regulatory systems it is expected there will be a shift from on-site disposal facilities to off-site commercial facilities. This, in part, will be the result of the high cost associated with permitting on-site facilities. Additionally, strict enforcement will force generators to use permitted facilities as opposed to "midnight dumping." For these reasons, and others, recent EPA estimates have determined there will be a demand for 50 to 125 new commercial off-site facilities. In order for a "cradle-to-grave" program to work and the public health and the environment to be protected, sites for environmentally sound facilities must be found.

Studies show that very few new facilities have been sited in the United States. This failure has been due to widespread—and understandable—public opposition to the establishment of nearby facilities. Public opposition to these facilities is based on fear. This fear is due to the public's lack of understanding of the technologies involved, lack of confidence in industry's or government's capability to manage wastes safely, the perception that few benefits are associated with the facility and finally, the possibility of a disaster similar to the one at New York's Love Canal.

Most state agencies are generally given authority to permit a facility at a site that has been proposed by industry. After hearings to allow for public concerns, the agency decides whether or not to grant the permit. This approach leaves the siting choice up to industry—and does little to assure a community that the facility will be safe.

Industry and the state agency do present technical studies at the hearings to show compliance with regulations, but the public often does not understand the intent of the studies or the terms used. Moreover, the community often questions the fairness of being asked to bear so large a share of the environmental costs of modern industry—a question rarely addressed by facility sponsors or the agency. There is also the question of which source to believe—if any.

One way to improve the prospects for successful siting and thereby increase the likelihood of public acceptance of a site is to allow adequate public participation in decision-making. Public participation programs usually have two functions: to keep the public informed of government activities, and to allow for substantive public input into government decisions. It is true, as a recent report prepared for the EPA stressed, that "a public consultation program, no matter how effective, cannot be expected to overcome community opposition to a hazardous waste management facility." What it can do is win public respect for the siting process by responding to public concerns. Without this respect, the siting decision may be delayed by years of political and legal battles over the site.

The EPA has issued regulations on public participation programs for RCRA activities. These regulations require the decision-making agency to conduct a continuing program for public information and participation in the development of a decision. The approaches include hearings, public meetings and the use of public advisory groups.

It is not easy to determine the best level of public participation. When there is too much, opponents may effectively

block ever legitimate and generally accepted siting attempts. When there is too little, opponents may delay siting through political or legal channels. A balance is needed that allows participation from all interested parties, while preserving the capacity to make necessary decisions.

Another option that may aid in encouraging local acceptance is to allow the community itself to determine what compensation is needed to site a facility in the area. It has been suggested that the compensation could take any one of several forms—including payments to local governments in lieu of taxes, direct payments to landowners, purchase of buffer zones or development rights of adjacent lands, and provision for recreational areas.

STATE ACTION

Table VI-A on page 36 provides examples of some innovative state approaches to establishing new hazardous waste facilities. In the interest of brevity, the details of the specific approaches have been omitted. The table provides good examples of alternatives to a permit system. It must be noted, however, that at the date of writing, no new facilities have been sited under these approaches.

Abandoned Sites Program

INTRODUCTION

The EPA estimates that perhaps 32,000 to 51,000 waste disposal sites may contain hazardous wastes. Several thousand of these sites may contain significant quantities of hazardous wastes, and as many as 500 to 800 sites have been abandoned.

The term "abandoned site" refers to an inactive hazardous waste disposal or storage facility whose owner cannot be identified or has gone bankrupt and subsequently cannot afford the cost of cleanup, or a location where illegal dumping has taken place. The cleanup of the site often becomes public responsibility.

The size and scope of environmental and public health problems presented by abandoned sites is compounded by the incremental discovery of many small abandoned sites. These sites, however, are not easily identifiable.

There is disagreement about the procedure to use in identifying abandoned sites. It has been suggested that the EPA utilize investigators trained in law enforcement techniques to identify sites, their contents, owners, operators, and former owners and operators. Others have suggested the use of aircraft

reconnaissance, organized citizen search groups, rewards provided to those who know of past chemical dumping, or partial immunity from prosecution for cooperating industries. Another approach would direct inquiries concerning the size and location of hazardous waste disposal sites to generators, haulers, storers and disposers of hazardous waste, and to state and local governments.

As abandoned sites are identified, technical, financial and legal mechanisms must be considered in responding to the problems.

The technical options for cleanup of these sites are contingent upon a determination of the public health hazard presented by the site and the chemical and physical conditions at the site. Consequently, appropriate responses may vary on a site specific basis. Contaminated material can be removed, certain chemicals at the site can be contained or removed for incineration or reburial at a secure landfill, or groundwater monitoring procedures can be instituted. While addressing the problems of chemical cleanup, it may be necessary to relocate residents who might be adversely affected by exposure to toxic substances. If contamination is irremediable, the possibility of permanent relocation of residents and compensation for loss of health and homes must be addressed.

As dangers are discovered, liability for cleanup costs must be fixed. In cases where responsible parties cannot be identified, availability and access to public monies to carry out these measures will require serious consideration. The problem is that most sites cannot be traced to a financially responsible party. Consequently, emergency cleanup costs become a matter of public responsibility.

Although RCRA does not provide funds to abate the problems at these sites, there are some federal funds available for cleanup under other laws. Section 311 of the Clean Water Act provides a limited amount of money to abate hazardous waste contamination to navigable waters. Non navigable surface waters and groundwater—the area most often contaminated by improper management techniques—are not protected under these provisions. A concept has been developed whereby federal, and/or private monies would be used to establish funds to finance emergency cleanup.

Questions have been raised concerning the source of contributions to these funds. State legislatures may not desire to increase taxes to support a new program because state budgets are currently straining to support existing programs. Never-

Table VI-A

State Hazardous Waste Plan	AZ	CT	FL	KS	KY	MD	MA	MI	MN	NE	NY	OH	OR	PA	TN	WA
Developed by:																
1 Existing department	●	●	●	●		●				●	●	●	◐	●	●	●
2 State board/committee					●		●	●	●							
3 Includes inventory of potential sites						●			●							
How Siting Process is Initiated																
4 State initiative	●			●		●			●		●			●		●
5 Developer		●	●		●	●	●	●	●	●		●	●	●	●	
Certificate of Public Necessity by:																
6 Existing department														●		
7 State siting board		●				●		●	●		◐					
Public Participation																
Local representatives participate in																
8 State siting board						●		●	●		●			●		
9 State plan and/or criteria								●	●					●		
10 Local review board required			●				●		●	●						
11 Public hearings required near site	●	●	●		●	●	●	●	●	●	●	●	●	●	●	●
Notices of permit application sent to																
12 Local governments		●	●	●	●	●	◐	●	●	●	●	●	●	●		
13 Property owners		●				◐	●		◐		●					
14 Options for incentives/compensation		●			●		●					●				
15 Citizen suits							●		●			●			●	
Siting Impasse Resolved Through:																
16 State preemption	●	●	●	●		◐		●	●			◐		●	●	
17 Mediation/arbitration							●									
18 Local veto					●					●	◐					
Permit Approval Authority Given by:																
19 Existing department	●	◐	●	◐	●	●	●	●	●	●	●	●	●	●	●	●
20 State siting board		●				●		◐	●		●	●				
21 Local review committee					●		●			◐				●		
Siting Provisions Apply to:																
22 On-site facility only																
23 Off-site facility only		●					●		●							
24 Both on-site and off-site facility			●	●	●	◐		●						◐	●	
State Assistance for Facility Development																
25 Public financing					●							●				
26 Bonding authority									●			●				
27 Eminent domain	●						●		●							
28 State ownership/operation	●			●		◐		●	●	●		●	●			●
29 Incentives for resource recovery				●				◐	●	●		●	●	●		
Special Provisions	◐		●		●			●	◐			●		●	◐	●