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CONGRESSMEN QUESTION DOE AUTHORITY TO STOP 2ND ROUND HLW SITE WORK

By Friday, June 13, a bipartisan group of thirteen "key" members of the U. S. House and Senate is expected to have signed and forwarded a letter to DOE Secretary Herrington stating that the decision to halt the work on the second round repository (See EXCHANGE, Vol. 5, No. 9) "violates the clear statutory mandate of the NWPA [Nuclear Waste Policy Act]". The letter is to be signed by Senate Energy Chairman James McClure, House Interior Chairman Morris Udall, Senators Laxalt, Domenici, Simpson, Symms, Daniel Evans, Gramm, Hecht, Gorton, Bennett Johnston, and Lloyd Bentson and Representative Morrison. It points out that the Act, including the provisions for a second repository, struck a "delicate and carefully considered balance," and warns the Secretary that his "decision to postpone indefinitely the Department's site specific work on the second repository program could destroy the delicate balance and might ultimately lead to an erosion of the technical balance and political compromise that was so essential to enactment of the Act in the first place."

(See **2nd Round** in **the HLW Focus**)

SC ADOPTS BARNWELL SITE USE RULES ALLOWS INVOICING OF SURCHARGES

On the very last day of their session (June 5), the South Carolina Legislature approved legislation that gives the Department of Health and Environmental Control (DHEC) the authority to carry out the State's responsbilities and "powers" as provided in the Low-Level Radioactive Waste Policy Amendments Act of 1985 (LLRWPAA), but does not provide the agency any discretion to allow generators in regions or states not a compliance to continue to use the South Carolina facility as was possible under the provisions of the LLRWPAA. However, generators, waste processors and brokers will be pleased to learn that the bill will allow for the site operator -- Chem Nuclear -- to invoice out-of-region users for the surcharge set in the LLRWPAA, rather than require payment upon receipt of a waste shipment. (See **Barnwell** pg. 2)

EG&G IDAHO LOW LEVEL WASTE PROGRAM STAFF PROVIDE PENNSYLVANIA STATE OFFICIALS WITH A CRITICAL REVIEW OF SIERRA CLUB COMMENTS ON DIOXIN EMMISIONS FROM LLRW INCINERATOR --- SEE INFORMATION BRIEF INSIDE.

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(Barnwell from pg. 1)

Site Volume Restrictions

The South Carolina bill sets the overall cap on the LLRW that can be accepted at the Barnwell facility for the next seven years at 8.4 million cubic feet. The annual cap is set at 1.2 million cubic feet. This parallels the provisions of the LLRWPAA.

The annual cap is also allowed to be exceeded according to the scheme outlined in the LLRWPAA (i.e., the cap can be increased by 10% after **all** operating sites reach their respective volume caps, or via use of the "emergency allocation" process) and, if in a prior year, the annual cap was not reached. If the annual cap is not achieved in any year the bill provides that the remainder can be "banked" for future use. However, no more than an additional 200,000 cubic feet can be "used" from the bank in any given year.

The legislation sets the total utility allocation at all the currently operating facilities for the seven year period at 11.9 million cubic feet. DHEC has the responsibility of monitoring and setting the allocations at as per the guidelines outlined in the Act.

Site Access

The DHEC is given the sole responsibility for carrying out the provisions of the bill including determining whether states or regions are not in compliance with the milestones specified in the LLRWPAA. The determination would be made by the seven-member DHEC Board. Once it is determined that a region or state is not in compliance, the legislation directs that the Board **must impose the applicable penalties as allowed under the LLRWPAA and deny access.**

Surcharge Payments

Though Washington and Nevada are requiring that surcharges due from generators in unsited regions be paid either prior to or at the time of shipment of waste to their respective facilities, the SC legislature decided to allow payment of the fees to the state by the site operator -- Chem Nuclear -- up to sixty (60) days following receipt of the waste at the site. Chem Nuclear is required to keep the state apprised of any site users that do not pay the surcharge within this period of time. Any generator, who is so identified, is to be denied site access until the surcharge is paid and from that point on will be required to prepay the required fee.

Future Use of Site

Under provisions of the Southeast Compact the Barnwell facility is to "cease" operation as a regional LLRW disposal facility on December 31, 1992. The legislation directs DHEC to prepare a study on the use of the site past this date and also stipulates that any operation of the facility after January 1, 1993 must be approved by the legislature. **

NRC STAFF GIVEN DIRECTION ON MIXED WASTE BY COMMISSION

As a result of the NRC Waste Management staff presentation to the full Commission on possible alternative actions NRC could take to deal with the ongoing jurisdictional conflict with EPA over "mixed waste" (hazardous and radioactive) (SECY-86-142, See EXCHANGE, Vol. 5, No. 8) the Commission is now requesting further staff work including an analysis of NRC's authority to temporarily prohibit the disposal of mixed waste at the currently operating disposal facilities.

The EXCHANGE has learned that a June 5 memo from Commission Secretary Samuel Chilk to Victor Stello the Executive Director for Operations, requests that:

- o The NRC Office of General Counsel and the Executive Legal Director develop a paper for submission to the Commission that analyzes NRC authority to temporarily prohibit the disposal of mixed waste at the currently operating disposal sites and to limit the volume of mixed waste accepted for disposal by requiring the maximum treatment of the waste;

- An analysis of fundamental inconsistencies between RCRA and NRC's Part 61 that cannot be resolved technically be completed. This analysis is to identify the conditions under which RCRA permits migration of hazardous waste from land disposal facilities and alternatives that would allow LLRW sites to meet RCRA requirements;

- The NRC staff meet again with EPA RCRA staff to try to obtain agreement on a course of action to deal with mixed waste. The staff is directed to discuss with EPA the possibility of accelerating the promulgation of EPA mixed waste standards.

According to the schedule stipulated in the memo, the staff effort is to be completed and reviewed by the Commission in early July. **

POSITION AVAILABLE:

The **Illinois Department of Nuclear Safety** is seeking resumes for the position of **Chief Legal Counsel** in their Springfield office. The Department of Nuclear Safety is a cabinet-level state agency. Its programs include: emergency planning and response to radiological accidents; nuclear power plant monitoring; inspection and escort of spent fuel shipments; low-level radioactive waste management; regulation of radioactive materials and x-ray equipment; and, environmental monitoring and radiochemistry. It now has a staff of over 160 people.

The Chief Legal Counsel would serve as legal advisor to the Director and agency staff. Specific duties would include: serving as legal advisor on Departmental policy matters, rules, regulations and procedures; overseeing and managing preparation of legal opinions regarding powers, duties and authority of the Department, and interpretations of state and federal statutes governing activities of the Department; supervising, assigning and reviewing work of a small legal staff performing research and drafting legislation, rules, regulations and contracts; liaison with the Attorney General's Office; substituting for the Director at conferences and meetings; recommending revisions in legislation; drafting and supervising drafting of legislation and amendments and testifying before legislative committees; initiating, coordinating and reviewing investigations and recommending enforcement action to the Director; and, working with outside legal counsel on a variety of administrative and court proceedings.

IDNS is an Equal Opportunity Employer and encourages applications from qualified minority and female candidates. Resume should be sent to: Terry R. Lash, Ph.D., Director, Illinois Department of Nuclear Safety, 1035 Outer Park Drive, Springfield, Illinois 62704. (217) 546-8100.

STATES IN COMPLIANCE WITH LLRWPAA

According to information uncovered as of June 11, three of the five New England states - Maine, Vermont, and Massachusetts that are not in compliance with the July 1, 1986, LLRWPAA milestone -- member of a compact -- have taken the available option under the LLRWPAA of formally notifying the Governors of the states with operating disposal facilities -- NV, WA, SC -- that their respective states are taking action to meet their responsibilities under the Act. As this edition of the Exchange went to print, neither Rhode Island nor New Hampshire had exercised this option. New York, as reported below, is not expected to do so.

Officials from the sited-states are scheduled to discuss which states and-or regions are in compliance with the milestones of the LLRWPAA sometime next week (June 15) via a telephone conference call. **

IN NEW YORK

According to reports this past week there has been some movement toward resolution of the stalemate on the New York LLRW siting bill. The EXCHANGE has learned that key N.Y. Senate members have accepted the concept of requiring permits for the transport of LLRW but no specifics have been agreed to. New York will be out-of-compliance by July 1 if the siting bill does not pass, and if Governor Cuomo elects not to opt to formally notify the sited state Governors certifying that the state will accept responsibility for the disposal of LLRW. As of this date the view is that the Governor will not exercise this certification option. **

IN THE SOUTHEAST

The Southeast Compact Commission will meet on July 14, in Columbia, SC in Room 101 of the Blatt Building in the Capitol Complex to select the next host state for the SE regional LLRW facility. (All firearms are to be checked prior to entry !)

ON THE MOVE

ICF Technology Incorporated has appointed **William N. Hedeman, Jr.**, to its Board of Directors. Hedeman, who currently is of counsel to Beveridge & Diamond, P.C., as well as to Multinational Business Services, Inc,., is the former Deputy Assistant Administrator for Water for the U.S. Environmental Protection Agency (EPA). Previously, he was Director of EPA's Office of Emergency and Remedial Response (1981-85), and Director of EPA's Office of Federal Activities (1979-81).

CALL FOR PAPERS

The Ninth Annual Symposium on **Geotechnical and Geohydrological Aspects of Waste Management** sponsored by Colorado State University, February 2-6 1987, is seeking papers for presentation dealing with geotechnical and geohydrological technology as it is related to the management of all waste materials. Papers can deal with specific topics such as clay liner technology, stability analysis of waste impoundments, or design of monitoring equipment for ground water quality investigations. Subjects including regulatory aspects, social concerns, risk assessment and case histories are also encouraged. Interested contributors must submit a **one-page abstract** by **July 18, 1986** to: Annual Symposium on Waste Management; Geotechnical Engineering Program; Civil Engineering Department, Colorado State University, Fort Collins, Colorado 80523. (303) 491-6081.

The one-page abstract must contain the affiliation, position and addresses of the authors/instructors. Abstracts will be reviewed and authors notified of acceptance by August 22, 1986. Completed papers are required by October 31, 1986. Papers will be presented February 4-6, 1987.

CALL FOR MINI-COURSE PROPOSALS

The University of Colorado Geotechnical Engineering Program is soliciting proposals for mini-courses relating to any specific topic within the waste management industry to be taught in conjunction

with their **Ninth Annual Symposium on Geotechnical and Geohydrological Aspects of Waste Management,** February 2-7, 1987. These mini-courses will be presented Feb. 2 and 3, prior to the Symposium which begins on Feb. 4, 1987. Each mini-course must be designed to be presented in a four-hour time period. Longer courses can be offered as separate four-hour courses. Proposals should include a general description of the course materials, length of course, and maximum number of students. Courses will be selected which transfer the latest information on waste disposal technology to those involved in the industry, and acceptance will be subject to a memorandum of understanding between the instructor and the Symposium Organizing Committee.

Proposal for mini-courses must be submitted by July 18, 1986, include the affiliation and position of the authors-/instructors and their addresses, and **be clearly labeled as a mini-course.** For further information contact: Annual Symposium on Waste Management, Geotechnical Engineering Program, Civil Engineering Department, Colorado State University, Fort Collins, Colorado 80523; (303) 491-6081.

REPORTS OF NOTE (LLRW)

Intact Decommissioning of Nuclear Power Plants: A Dose Asessment (AIF/NESP-034). A report from the Atomic Industrial Forum National Environmental Studies Project, based on a study conducted by Ebasco Services Inc. of New York. This report examines the potential radiological consequences to workers and the public of an approach to the decommissioning of nuclear power plants which differs from the three currently recognized options of immediate dismantlement: "mothballing" followed by dismantlement, and entombment. In "intact" decommissioning, fuel and solid and liquid radioactive wastes are first removed as they would be during the other decommissioning options. All radioactive systems and components within a defined intact decommissioning boundary are then left in place, while structures outside the boundary are removed. Virtually no other preparatory work would be performed. The report concludes that, in the first 100 years, radiation exposure consequences to both the public and to workers would be considerably lower with intact decommissioning than with any of the other options. Beyond that time, the radiation risks would be essentially the same as those calculated for the other recognized decommissioning procedures. Since the study is intended as a preliminary technical and radiological evaluation, no attempt is made to treat costs, although it is to be hoped that the conclusions of the report will prompt both regulators and the nuclear industry to reevaluate the need for the expensive maintenance and security requirments of mothballing and entombment.

Copies of the report are available to non-NESP sponsors and the public through the AIF Publications Office, 7101 Wisconsin Ave., Bethesda, MD 20814. For more information contact Scott Leiper, NESP Project Manager at 301-654-9260.

A Joint DOE/NRC Field Study of Tracer Migration in the Unsaturated Zone; (LA-10575-MS; UC-70B); Los Alamos National Laboratory, Low Alamos, New Mexico 87545. The results of a joint DOE/NRC field experiment to evaluate leaching and transport of solutes in a sandy silt backfill used for shallow land burial operations at Los Alamos are presented for steady-state and unsteady-state flow conditions. The migration of iodide, bromide, and lithium through the backfill material is studied as functions of depth and time and they are compared with one another.

The bromide and iodide tracer data are used to estimate the diffusion coefficient, the tortuosity factor, and dispersivity. These values are used to calculate effective dispersion coefficients for subsequent analyses of the retardation factor and the distribution coefficient for lithium using least squares procedures.

EG&G REVIEW OF "SIERRA CLUB'S COMMENTS" ON DIOXIN EMISSIONS ASSOCIATED WITH LLRW INCINERATION

The following brief contains verbatim excerpts from a review of the Sierra Club's comments on Babcock & Wilcox's Environmental Assessment of the LLRW incineration facility proposed to be located in Parks Township, PA. The review was conducted by the National Low Level Waste Program staff at EG&G Idaho at the request of the state of Pennsylvania. The verbatim "excerpts" published below deal only with the EG&G critique of the Sierra Club's comments regarding dioxin emissions. The complete review addresses all critical Sierra Club comments on the B&W EA prepared as part of the NRC licensing process.

EG&G GENERAL REVIEW COMMENTS

The Sierra Club has ... criticized Babcock and Wilcox's (B&W) EA on the proposed Aerojet Mobile Volume Reduction System incinerator to be located in Parks Township, Pennsylvania, because it does not address the risks associated with the possible release of dioxin from the incinerator. Some experiments have shown dioxins to be extremely toxic to some laboratory animals. Considerable ongoing research is focused on determining the human health effects of dioxin exposure, although it is generally accepted that humans are much less susceptible to the acute toxic of dioxin than are the most susceptible laboratory animals.

Risk assessment for dioxin in airborne incinerator effluent streams is problematic, since (a) human health effects are not well characterized, (b) the chemistry of dioxin formation and destruction is not well understood, and (c) knowledge of the environmental transport and fate of dioxin is incomplete. Regardless of these uncertainties in estimating the actual health risks of dioxin, risk assessment of potential dioxin emissions from municipal waste incinerators has already received a great deal of attention. Municipal waste incinerators were thought to be a potentially significant source of dioxin. These incinerators handle large volumes of wastes containing poly-vinyl chloride, which is a potential source of chlorine for the formation of dioxin. The Fred C. Hart and Associates, Inc. study for the city of New York's municipal incinerator (cited by the Sierra Club) and the EPA's Municipal Incinerator Risk Assessment are examples of the effort which has been directed towards risk assessment for dioxin, and towards resolving the public health issues surrounding the incineration of wastes. The relationship of these studies to the hazard assessment of the proposed B&W-Aerojet incinerator is that dioxin emissions from the combustion of large quantities of solid wastes containing PVC have been evaluated for municipal incinerators and have been determined to represent no significant health impact.

The B&W incinerator, designed and constructed by Aerojet, should be expected to emit much lower levels of dioxins than a municipal incinerator because of its highly efficient off-gas treatment system, and because it was designed to provide combustion conditions suitable for burning hazardous materials. Recent studies indicate that cooling of incinerator off-gas to less than 110°C converts most of the dioxin present in the off-gas to filterable solid particles. The B&W system will cool the off-gas to 110° C before the HEPA filtration system, providing an additional mechanism for removal of any dioxin which may be present in the off-gas. This removal mechanism is independent of combustion efficiency (i.e., the organic chemical destruction factor for the combustion chamber) so that the proposed incinerator has a further advantage over typical municipal incinerators.

RESPONSE TO SPECIFIC SIERRA CLUB COMMENTS ON DIOXIN EMISSIONS

Sierra Club - The incineration of typical LLRW (with high PVC content) will result in release of dioxins, and create a possible health hazard.

Response - In the **general** context of combustion of solid wastes that contain poly-vinyl chloride (PVC), dioxins may be formed during incineration, and do represent a **potential** health and environmental concern. The Sierra Club's comment that dioxins should be addressed in B&W's environmental analysis is valid. However, the Sierra Club is apparently unaware of EPA's risk assessment for dioxins from municipal waste combustion (U.S. EPA 1981).

The EPA evaluated the potential dioxin hazards posed by five municipal incinerators. Five different mathematical models were used to determine an upper limit for cancer risk. EPA concluded that risks to public health from these municipal waste combustors were minimal. Since this study, EPA has also evaluated a sixth incinerator with apparently higher dioxin emissions than for the other five facilities; the Agency also concluded for this case that no significant health hazards result from dioxin emissions (U.S. EPA 1983). At present, neither EPA nor NRC attempts to regulate the potential formation and/or release of dioxins from incinerators processing low-level radioactive waste.

Recently, the New York City Department of Sanitation completed an extensive risk assessment of potential public health impacts associated with predicted dioxin emissions from an incinerator proposed for resource recovery. The facility is designed to handle 3,000 tons of municipal waste each day. It does not have off-gas treatment, but is designed with a high-efficiency fabric filter. Auxiliary burners are provided to maintain minimum combustion chamber temperatures. The risk assessment for this proposed facility is quite extensive (and was cited in the Sierra Club document) and contains a good literature review on health and environmental concern associated with dioxins (Fred C. Hart Associates, Inc. 1984). This risk assessment used worst-case assumptions for three potential pathways of exposure: inhalation, ingestion, and dermal absorption. Health risks were estimated and compared to available standards and guidelines on dioxins. The study concluded that exposures were far below these criteria. It should be pointed out that in order to be conservative, this risk assessment assumed no environmental losses or degradation of dioxins.

The relevance of these studies to the proposed Aerojet incinerator is that dioxin emissions from the combustion of solid wastes containing PVC have been evaluated and determined to represent no significant health impact. The B&W-Aerojet incinerator should be expected to emit even lower levels of dioxin because of off-gas treatment, a charcoal bed, and HEPA filters. Off-gas cooling provided in the Aerojet design has a beneficial effect on dioxin releases. Recent studies indicate that dioxin will be predominantly associated with the solid, particulate phase of the effluent rather than in gaseous form (Teller and Lauber, 1983; Neilsen, et.al., 1985). Off-gas cooling to less than 110^{o} C followed by HEPA filtration is estimated to remove 99% of the dioxin which would be released if the off-gas exited at 220^{o} C.

Sierra Club - The Sierra Club states that very low levels of dioxin - "on the order of a grain of sand in a swimming pool" - can cause devastating health effects.

Response - While this statement could be useful to indicate that dioxin is known to be quite toxic, it can give rise to an erroneous view of how humans may be exposed to dioxin in the environment. The hazard posed by a chemical depends on its mobility and availability to humans as well as its intrinsic toxicity.

The following quote from the Fred C. Hart Associates Inc. study gives a reasonable summary of the current understanding of the environmental fate of dioxin. "Little is known about the actual fate of dioxins in the environment and the data are conflicting. Dioxins are relatively persistent compounds which are comparatively stable to environmental degradation. They have an affinity for binding to soils, sediments, and particulate matter, such as fly ash. Since dioxins are not very water soluble and they bind to soils, they do not migrate substantially either vertically or horizontally. Volatilization from soils through vapor phase transport is dependent on ambient temperature and is thought to be a major removal

pathway. The half-life of dioxin in soil depends on complex environmental conditions and has been reported to range from one-half year up to twelve years. The primary removal mechanism of dioxin from water is through adsorption by sediment or biota, although volatilization and photodegradation may occur to some extent. Polychlorinated dioxins in the atmosphere are present in the particulate-sorbed or vapor phase state. They may be removed from the air by atmospheric deposition or photochemical degradation" (Fred C. Hart Associates, Inc. 1984). A wide variety of natural processes also act to reduce the impact of fly-ash bound dioxin which has settled onto environmental surfaces. Materials in the surface dust layers are considered to be relatively available for ingestion. A modeling study (not based on field measurements) by Thibodeaux and Lipsky (1985) indicates that natural processes (e.g., photolytic degradation, evaporation) can reduce the concentration of dioxin in these surface dust layers by a factor of 10^4 to 10^6 below that of the original flyash/dust fallout.

Little is known about toxic and other health effects of dioxins on humans. Most information is derived from cases of accidental exposure to mixtures of dioxins and it has been difficult to make assessments based on these uncontrolled exposures. A variety of symptoms have been reported (e.g., hair loss, nervous disorders, respiratory problems), but chloracne has been most frequently associated with dioxin exposures in humans. Animal studies indicate that a particular form of dioxin (2, 3, 7, 8 - TCDD) shows considerable variation in toxicity and varying effects among species (Fred C. Hart Associates, Inc. 1984). Chemical and Engineering News (May 27, 1985, p. 41-44) has recently reviewed studies on dioxin in the environment presented at the annual meeting of the American Chemical Society; the review concludes that although more and better data are being considered, controversy still exists regarding the hazard to humans.

Sierra Club - The combustion conditions in the proposed incinerator do not ensure that dioxin releases from the incinerator are negligible, especially taking into account the high PVC content expected for the waste material and the incinerator's batch feed cycle.

Response - Dioxin formation and destruction in waste combustion has been studied for other incinerator facilities. The hazard assessment performed for the NY City Department of Sanitation (cited previously) addresses this problem for municipal waste incineration. Three possible mechanisms for the formation of dioxin from different waste materials were considered:

- "that the compounds (dioxins) are trace components of refuse and do not undergo thermal transformation,
- that the compounds are produced from precursors such as PCBs, chlorophenols, and similar materials,
- that the compounds are formed **de novo** from materials that are unrelated to dioxins, such as PVC and other plastics, petroleum products, chlorocarbons, and inorganic chloride ions."

The conclusion was that all three formation routes are possible, but that actual dioxin release from an incinerator cannot be determined by simply considering the concentration of various materials (such as PVC) in the incoming waste. It is clear that PVC is a potential source of chlorine for formation of dioxin, but the fraction of PVC-derived dioxin generated in an incinerator largely depends upon the operating conditions of that incinerator. The New York City Department of Sanitation report cites a study where "no significant increases in dioxin concentrations (for waste with 0.6% PVC content) over emission levels without added PVC in the waste," were observed in tests of a full scale waste incinerator. Although it is not possible to generalize from this experiment to other situations, these results indicate that there is no simple relationship between PVC content in the incoming waste and dioxin release.

The conditions leading to the destruction of dioxin in combustion are better characterized than are the mechanisms for its generation. The nominal operating conditions for the B&W-Aerojet incinerator are essentially the conditions recommended for destruction of dioxin (Fred C. Hart and Assoc., Inc., 1984; ASME, 1981; Oberacker, 1984).

Sierra Club - The Sierra Club commented that a batch-fed controlled air incinerator such as the proposed B&W incinerator will not burn as evenly as an incinerator with continuous, presized fuel feed. This may lead to incomplete combustion, lower retention times, and an increase in dioxin releases.

Response - Batch loaded incinerators do not burn at an even rate, while incinerators designed for continuous feed with preprocessed, shredded waste do burn at a relatively constant rate. Incinerator manufacturers generally take into account the transient operating characteristics (including the periodic peaks in combustion gas flow) of batch feed incinerators. An incinerator designer might choose either batch feed or continuous feed; there are no compelling reasons to prefer one over the other.

The proposed incinerator is a relatively small scale operation, since the total combustible dry active waste generated in the Northeast is roughly equivalent to the municipal waste generated by a city of 7000 people. The batch feed, controlled air type incinerator is very commonly used in such small applications, without any special considerations for dioxin hazards.

Although Aerojet has not given a rationale for their selection of a batch feed incinerator design, the inherently simpler batch feed system may have some safety advantages over continuous feed designs. The drawbacks associated with use of a shredder are possible generation of dust, increased maintenance, and additional cost. Maintenance on a dusty piece of equipment could increase the risk of worker exposure and facility contamination. **

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REPORTS OF NOTE (LLRW)

Evaluation of the Potential for De-Regulated Disposal of Very Low Level Wastes from Nuclear Power Plants (AIF/NESP-035). A report of the Atomic Industrial Forum National Environmental Studies Project, based on a study performed by General Physics Corporation of Columbia, Maryland. It points out a need to establish, by law, that there are levels of radioactivity so low that they represent an insignificant risk to public health and safety. All materials not exceeding these levels could be considered "beneath regulatory concern" and could be used or disposed of without regard for their radiological properties. The cost of shipping these essentially non-radioactive materials is high, and disposing of them at licensed low-level waste burial sites consumes the limited space at those sites. The result is an increase in costs that are passed on to the consumer, the ratepayer and the taxpayer. Both the NRC and the EPA now expend considerable effort in monitoring activities that have no effect on public health or safety and which divert attention and limited resources from more important matters. Progress has been slow in establishing the regulatory basis for a generic threshold level because of the absence of an adequate data base. This NESP report is an effort to provide that data base by examining several low-level waste streams from nuclear power plants and thoroughly evaluating the benefits, risks and costs of exempting them from the requirements of 10 CFR Parts 20 and 61. The data and analyses presented could be used in support of either a generic rulemaking on low level wastes or a request to NRC for exemption of a particular waste stream. The findings will also provide an important part of the nuclear industry's input to EPA's low level waste standard currently under development as 40 CFR 193.

The report is available to non-NESP sponsors and the public through the AIR Publications at 7101 Wisconsin Avenue, Bethesda, MD 20814, at a cost of $75.00. For more information please contact Scott Leiper, NESP Project Manager, at 301-654-9260.