

J. MICHAEL CAREY  
City Clerk

FRANK T. MARTINEZ  
Executive Officer

When making inquiries  
relative to this matter  
refer to File No.

02-0657

TY OF LOS ANGEL  
CALIFORNIA



JAMES K. HAHN  
MAYOR

Office of the  
CITY CLERK  
Council and Public Services  
Room 395, City Hall  
Los Angeles, CA 90012  
Council File Information - (213) 978-1043  
General Information - (213) 978-1133  
Fax: (213) 978-1040

HELEN GINSBURG  
Chief, Council and Public Services Division

PLACE IN FILES

APR 26 2002

DEPUTY *gc*

April 24, 2002

RE: INCLUSION IN THE CITY'S 2001-02 LEGISLATIVE PROGRAM SUPPORT OF SB 1623 (ROMERO) WHICH WOULD ESTABLISH VARIOUS RESTRICTIONS ON THE DISPOSAL OF RADIOACTIVE WASTE

I HEREBY CERTIFY that the attached motion, as amended, and resolution were adopted by the Los Angeles City Council at its meeting held April 9, 2002 and transmitted to the Mayor forthwith. The Mayor concurred with the Council action on April 19, 2002.

*J. Michael Carey*

J. MICHAEL CAREY, CITY CLERK

By

*Kim Hahn*

Deputy



J. MICHAEL CAREY  
City Clerk

FRANK T. MARTINEZ  
Executive Officer

When making inquiries  
relative to this matter  
refer to File No.

02-0657

CITY OF LOS ANGELES  
CALIFORNIA



JAMES K. HAHN  
MAYOR

Office of the  
CITY CLERK  
Council and Public Services  
Room 395, City Hall  
Los Angeles, CA 90012  
Council File Information - (213) 978-1043  
General Information - (213) 978-1133  
Fax: (213) 978-1040

HELEN GINSBURG  
Chief, Council and Public Services Division

April 24, 2002

Honorable James Hahn, Mayor  
Chief Legislative Analyst  
Councilmember Padilla  
Councilmember Holden  
Department of Environmental Affairs

RE: INCLUSION IN THE CITY'S 2001-02 LEGISLATIVE PROGRAM SUPPORT OF SB  
1623 (ROMERO) WHICH WOULD ESTABLISH VARIOUS RESTRICTIONS ON THE  
DISPOSAL OF RADIOACTIVE WASTE

I HEREBY CERTIFY that the attached motion, as amended, and resolution  
were adopted by the Los Angeles City Council at its meeting held April  
9, 2002 and transmitted to the Mayor forthwith. The Mayor concurred  
with the Council action on April 19, 2002.

City Clerk

cc: 8 Certified copies sent to Sacramento Representatives

RECEIVED

May 02 APR 10 8 22 20

DEPUTY MAYOR

FORTHWITH

RECEIVED

City Clerk's Office Stamp

2002 APR 10 PM 2:16

CITY CLERK

BY \_\_\_\_\_ DEPUTY

SUBJECT TO MAYOR'S CONCURRENCE

COUNCIL FILE NO. 02-0657

COUNCIL DISTRICT NO. \_\_\_\_\_

COUNCIL APPROVAL DATE April 9, 2002

RE: INCLUSION IN THE CITY'S 2001-02 LEGISLATIVE PROGRAM SUPPORT OF SB 1623 (ROMERO) WHICH WOULD ESTABLISH VARIOUS RESTRICTIONS ON THE DISPOSAL OF RADIOACTIVE WASTE

**APR 22 2002**

LAST DAY FOR MAYOR TO ACT \_\_\_\_\_  
(10 Day Charter requirement as per Charter Section 231H)

DO NOT WRITE BELOW THIS LINE - FOR MAYOR OFFICE USE ONLY

APPROVED

\*DISAPPROVED

\*Transmit objections in writing  
pursuant to Charter Section 231H

DATE OF MAYOR APPROVAL OR DISAPPROVAL APR 19 2002

James H. Hall  
MAYOR

steno\020657a

APR 19 2002  
B&M  
certified  
not  
Sec Reps  
Padilla  
Hale  
Dept. Environment  
affairs

RECEIVED  
CITY CLERK'S OFFICE  
2002 APR 19 PM 1:27  
CITY CLERK  
BY \_\_\_\_\_ DEPUTY

**VERBAL MOTION**

I HEREBY MOVE that Council CLOSE today's Public Hearing regarding Item No. 37 (CF 02-0657) on today's Council agenda relative to the status of reported radioactive waste dumped in the City's landfills, in the anticipation of a comprehensive report to be prepared and presented by the Department of Environmental Affairs.

PRESENTED BY \_\_\_\_\_

ALEX PADILLA  
Councilmember, 7th District

SECONDED BY \_\_\_\_\_

NATE HOLDEN  
Councilmember, 10th District

April 9, 2002  
CF 02-0657  
020657a.mot

**MOTION  
ADOPTED  
\* AS AMENDED  
APR 09 2002  
SEE Attached Motion  
Los Angeles City Council  
FORTHWITH**

\*ADOPTED as AMENDED by Council action on 4-9-02. *[Signature]*

RESOLUTION

*Amended 37 3 7 A*

WHEREAS, any official position of the City of Los Angeles with respect to legislation, rules, regulations or policies proposed to or pending before a local, state or federal government body or agency must have first been adopted in the form of a Resolution by the City Council with the concurrence of the Mayor; and

WHEREAS, recent reports stress that Rocketdyne's Santa Susana Field Laboratory dumped low-level radioactive waste at the Bradley Landfill in Sun Valley for the majority of the past decade without the knowledge of State waste regulators or local officials; and

WHEREAS, reports further indicate that the amount of low-level radioactive waste dumped at this landfill is unknown as is the potential impact to the public health of the region; and

WHEREAS, reports also represent that the State's Department of Health Services currently uphold policies which permit this type of disposal of radioactive waste; and

WHEREAS, the State Senate introduced SB 1623 (Romero) on February 21, 2002 in order protect the public from disposal of potentially harmful radioactive waste; and

WHEREAS, SB 1623 (Romero) would prohibit the disposal of radioactive waste at a hazardous waste disposal facility, but would allow the disposal of naturally occurring radioactive materials at specified facilities if these facilities are expressly authorized for such disposal and they comply with various restrictions; and

WHEREAS, SB 1623 (Romero) would also prohibit any person from burying, throwing away, or disposing of radioactive waste within the State except at a disposal facility specifically licensed for that kind of radioactive waste; and

WHEREAS, SB 1623 (Romero) would in addition prohibit the disposal of radioactive waste at a solid waste facility as specified; and would require the State's Integrated Waste Management Board to adopt regulations requiring testing and screening criteria relative to the radioactivity of submitted solid waste material; and

WHEREAS, the City should support SB 1623 (Romero) since it is committed to ensuring the public health of the region;

NOW, THEREFORE, BE IT RESOLVED, with the concurrence of the Mayor, that by the adoption of this Resolution, the City of Los Angeles hereby includes in its 2001-2002 Legislative Program SUPPORT of SB 1623 (Romero) which would establish various restrictions on the disposal of radioactive waste thereby protecting the public from potentially harmful effects.

*Amendment +*  
*RESOL.*  
**ADOPTED**

APR 09 2002

Los Angeles City Council

TO THE MAYOR FORTHWITH

PRESENTED BY:

NATE HOLDEN

Councilmember, 10<sup>th</sup> District

SECONDED BY:

COUNCIL VOTE

Apr 9, 2002 11:21:57 AM, #1

ITEM NO. (37)

Adopt as Amended

BERNSON	Yes
GALANTER	Yes
GARCETTI	Yes
GREUEL	Yes
HAHN	Absent
HOLDEN	Yes
LABONGE	Absent
MISCIKOWSKI	Yes
PACHECO	Yes
PERRY	Absent
REYES	Yes
*RIDLEY-THOMAS	Yes
WEISS	Absent
ZINE	Yes
PADILLA	Yes

Present: 11, Yes: 11 No: 0

# SENATE CALIFORNIA LEGISLATURE

STATE CAPITOL  
SACRAMENTO, CALIFORNIA  
95814

#32

APR 09 2002

DEPUTY

KE

April 8, 2002

The Honorable Alex Padilla  
City Council President  
Los Angeles City Hall  
200 North Spring St., Room 465  
Los Angeles, CA 90012

FAX: (213) 847-0707

RE: Statewide Standards for Disposal of Radioactive Waste

Dear Council President Padilla:

This letter is regarding the Council's efforts relative to disposal of radioactive waste at the Bradley Landfill. We understand that Council President Padilla is asking the City Council to consider an investigation of disposal of radioactive waste at the Bradley Landfill. This letter is sent for two reasons:

- 1) To express our support for the investigation; and
- 2) To ask the Council to pass a resolution in support of SB 1623 which addresses this issue at a statewide level.

We support your efforts relative to Bradley and share your concern that radioactive waste not be disposed of at any facility which is not licensed and designed to receive such waste. Your leadership on this will help assure that this type of dumping never occurs again.

We also respectfully ask that the City Council support efforts to correct the overriding statewide public policy that allowed for disposal at Bradley to begin with. The problems experienced at Bradley are in large part due to the lax enforcement actions by the State Department of Health Services and their weak radioactive waste disposal standards.

Attached is a letter we sent to DHS asking them to adopt more stringent and appropriate standards. We respectfully ask the City Council to support this effort.

The Senate Select Committee on Urban Landfills recently held a hearing on this issue. Attached is a staff briefing paper prepared for that hearing, and a video tape of testimony provided at that hearing for your review as you further consider this issue. In short, this policy issues centers around the California Department of Health Services' (DHS) failure to properly regulate disposal of radioactive waste.

DHS policies which currently allow:

- 1) Disposal of radioactive waste from decommissioned sites at any of California's 170 landfills at radioactive levels which are far greater than radioactive levels allowed for disposal of the same material from active sites regulated by DHS.
- 2) Disposal of radioactive waste without notice to landfill operators, waste haulers, the community living near the landfill, or others who may want to know this kind of information.
- 3) Disposal of radioactive waste at the least stringent standard possible.
- 4) Disposal of radioactive waste without any tracking of where the material was disposed of.
- 5) Transportation on California highways of radioactive waste for disposal. This would be without any warning label requirements, notification to local authorities, or any manifesting or monitoring of any kind.
- 6) Any of California's 170 landfills that are allowed by DHS to take radioactive waste to expose the public to radiation levels that are 12.5 times higher (1250%) than exposure levels anticipated for the now-defeated Ward Valley Low Level Radioactive Waste Repository.

Radioactive waste generators and disposal facilities alike are relying on DHS to enforce regulations that require radioactive waste to go to waste facilities specifically licensed and designed for such waste. DHS' actions and policies raise serious questions about whether DHS is adequately protecting public health and safety and the environment.

As chair and member of the Senate Select Committee on Urban Landfills, we have been working closely with environmentalists, public health advocates, and landfill operators including Waste Management, Inc. the operator of the Bradley Landfill. It is clear to us that landfill operators are strongly opposed to this kind of disposal. They are ill-equipped to take this material and want no part of allowing it into their landfills. The problem is that DHS allows this disposal and the landfill operator has no way of knowing when this material is disposed of in the landfill.



We have authored SB 1623 to provide a clear line in law to define radioactive waste which cannot be disposed of in landfills and to provide safeguards for operations of landfills to assure that they do not take this kind of material.

We applaud your efforts and appreciate your consideration of our request for support of changing the statewide policy.

Please feel free to contact Michael Miiller at (916) 324-7062 or Pat Henning at (916) 445-7928 if you need further information.

Sincerely,

  
GLORIA ROMERO  
24<sup>th</sup> Senate District

  
RICHARD ALARCÓN  
20<sup>th</sup> Senate District

Attachment: SB 1623 bill text  
Staff briefing paper

cc: James Hahn, Mayor  
Full Los Angeles City Council  
Detrich Allen, Los Angeles Department of Environmental Affairs

# SENATE CALIFORNIA LEGISLATURE

STATE CAPITOL  
SACRAMENTO, CALIFORNIA  
95814

April 8, 2002

Diana Bonta, R.N., Director  
Department of Health Services  
P. O. Box 942732  
Sacramento, CA 94234-7320

RE: Statewide Standards for Disposal of Radioactive Waste

Dear Dr. Bonta:

As you may have read, the Los Angeles City Council is investigating the disposal of radioactive waste at the Bradley Landfill. This letter is sent for two reasons:

- 1) To request that DHS cooperate fully with the City of Los Angeles on the investigation; and
- 2) To ask DHS to seriously consider reviewing its policies and adopt a more stringent and appropriate standard for disposal of radioactive waste.

Your existing policy of 1 millirem for active sites and 25 millirems for closed sites seems unsupportable and without foundation. On one hand you say that the 25-millirem standard is safe, yet you use a more stringent standard for active sites regulated by your department. It seems absurd that the same identical material coming from similar sites can be subject to different disposal standards depending on whether the site is currently operational.

The United States General Accounting Office states that 25 millirems per year of radiation exposure causes cancer deaths in one in 1,000 people. This is clearly an unacceptable and high-risk standard for disposal.

When you testified before the Senate Select Committee on Urban Landfills, your staff acknowledged that DHS has the full authority to adopt a more stringent standard. We urge you to work with public health and environmental advocates to do so immediately.

Page 2  
April 8, 2002  
Dr. Diana Bonta

Please feel free to contact Michael Miiller at (916) 324-7062 or Pat Henning at (916) 445-7928 if you need further information.

Sincerely,

*Gloria Romero*  
GLORIA ROMERO  
24<sup>th</sup> Senate District

*Richard Alarcón*  
RICHARD ALARCÓN  
20<sup>th</sup> Senate District

cc: Los Angeles Mayor James K. Hahn  
Alex Padilla, Los Angeles City Council President  
Full Los Angeles City Council  
Detrich Allen, Los Angeles Department of Environmental Affairs  
Susan Kennedy, Office of the Governor

# California State Senate

SENATOR GLORIA ROMERO, CHAIR



## SELECT COMMITTEE ON URBAN LANDFILLS

MEMBERS  
SEN. RICHARD ALARCÓN  
SEN. BOB MARGETT  
SEN. BYRON SHER  
SEN. NELL SOTO  
VACANT  
CONSULTANT  
MICHAEL MILLER

### **Deregulation of Disposal of Radioactive Waste**

**Tuesday, March 19, 2002**

**9:30 to Noon**

**State Capitol, Room 2040**

### **Staff Briefing Paper**

<b><u>Summary</u></b>	<b>Page 1</b>
<b><u>Potential Options for the California Legislature</u></b>	<b>Page 7</b>
<b><u>Brief History of Recent Regulation of Radioactive Waste</u></b>	<b>Page 8</b>
<b><u>Questions asked of DHS</u></b>	<b>Page 9</b>
<b><u>Statement from Opponents Relative to Alleged 100 Millirems Standard vs. 25 Millirem Regulation</u></b>	<b>Page 13</b>
<b><u>Additional Background</u></b>	<b>Page 16</b>

### **Summary:**

**The Waste Stream – California's waste stream can be broken into three basic component parts:**

- **Municipal Solid Waste – Typical refuse disposed of in homes and places of business. This material is recycled, reused, or disposed of in California landfills. (Regulated by the Integrated Waste Management Board, and local enforcement agencies.)**
- **Hazardous Waste – Includes such items as batteries, florescent lights, televisions, and other materials that contain lead, mercury, or other hazardous materials. This material must be disposed of in a specially designed hazardous waste landfill. (Regulated by the Department of Toxic Substances Control.)**

- **Radioactive Waste** – This material is generated by nuclear energy, medical, research, and other facilities that produce radiation. This material must be disposed of in a facility especially designed to take radioactive waste and cannot be disposed of in a hazardous waste or municipal solid waste facility. (There are no radioactive waste repositories in California. California radioactive waste generators use facilities in Utah and South Carolina for disposal.)

***The DHS Regulation*** – In November 2001, a new regulation took effect that provided guidelines for the cleanup and decertification of a nuclear reactor, or any other facility licensed by the Department of Health Services (DHS). The regulation provides the framework for determining how the land may be used in the future. DHS states it moved this regulation forward to provide stringent guidelines to protect the public from exposure to unsafe levels of radiation.

The new regulation provides for a standard of less than an average of 25 millirems per year of radiation exposure (up to 100 or 500 millirems per year under certain circumstances) as the exposure level for cleanup and decertification by DHS ("Decertification" indicates that a facility is no longer operational and does not have radioactive material warranting licensure and regulatory oversight by DHS.) DHS states that prior to the adoption of this regulation, the standard was 100 millirems.

⚡ DHS claims it has no standards of its own and has relied on federal Nuclear Regulatory Commission (NRC) standards for decommissioning a facility and releasing radioactive material for unregulated disposal.

⚡ DHS claims the regulation was not subject to environmental review under the California Environmental Quality Act when it was proposed because the regulation was an effort to tighten standards. Additionally, DHS claims the NRC standards were adopted after the completion and review of a generic environmental impact statement by NRC.

⚡ However, it should be noted that while DHS claims it must rely on federal guidelines and standards for decommissioning facilities, in April 1994, DHS adopted a guidance document for cleanup of radioactivity on closing military bases for unrestricted public use of property.

That guidance document specifically provided that decommissioning, closure, cleanup, and decertification of the military facility, "should not result in a cancer risk of 10<sup>-6</sup> to 10<sup>-4</sup> and should be consistent with the cancer risks resulting from residual chemical carcinogens." This exposure in cancer risks is between 1 in 10,000 people to 1 in one million— Far less than the 25 millirem per year exposure limits authorized by DHS' new regulation.

Opponents of the new DHS regulation – namely the Committee to Bridge the Gap, Southern California Federation of Scientists, Los Angeles Chapter of Physicians for Responsibility, and the Sierra Club – claim that this regulation doesn't tighten up health standards, nor is it restricted to clean up, decertification, and subsequent land use.

Instead, according to the opponents of the regulation, DHS is interpreting its new rule to allow radioactive waste to be disposed of in unlicensed sites, such as municipal solid waste landfills.

Thus, the regulation represents the first time in California history where the state has adopted a policy effectively deregulating the handling and disposal of radioactive waste.

California has long used a case-by-case review when reviewing facilities seeking to be decertified. That review was predicated on eliminating the risk of radioactive exposure to the public. Additionally, the NRC regulations upon which DHS states it is relying, also requires a case-by-case review.

The July, 1997 Generic Environmental Impact Statement (GEIS) in Support of Rulemaking on Radiological Criteria for License Termination of NRC-Licensed Nuclear Facilities specifically states "...the NRC continues to use on a case-by-case basis criteria and practices described in several NRC guidance documents. . ."

One of those documents, a letter to Stanford University from the NRC dated April 21, 1982 states "... radiation from gamma emitting isotopes is also acceptable if the potential exposure to individuals is less than 10 millirems per year . . ."

Additionally, the GEIS states, "This approach using these criteria ensures protection of public health and safety by guiding decommission decisions and generally keeping potential radiological doses to a small fraction of NRC's public dose limit given in 10 CFR Part 20."

Clearly, it appears the NRC never envisioned its regulations would be used to decommission facilities emitting more than 10 millirems per year of radiation.

Finally, the GEIS appears to assume that materials from decommissioned facilities will be disposed of in licensed low-level waste facilities. The GEIS states, "These evaluations included the following . . . impacts to members of the public who are exposed to . . . resulting from the transportation of waste to licensed disposal sites. . . . "Other environmental impacts evaluated . . . include the following . . . impacts on low-level waste disposal capacity."

The GEIS includes a clear statement on disposal – "Low-level waste generated by the decommissioning process will be disposed of in planned low-level waste burial facilities." There is no indication in the document that disposal of radioactive waste in landfills was ever intended or anticipated.

Opponents further claim the DHS regulation was adopted without proper notification to interested parties, and without full public comment.

***Unrestricted Disposal of Radioactive Waste*** – Opponents claim that, after the close of public comment on the proposed regulation, DHS sent a letter jointly to U.S. Senator

Barbara Boxer and state Senator Sheila Kuehl. The letter stated that the regulation had the force and effect of deregulating the disposal of low level radioactive waste. According to DHS, this regulation allows the unlimited disposal of radioactive waste with an exposure averaging less than 25 millirems per year. This means that this material, which is commonly radioactive dirt and debris, can be disposed of at municipal solid waste landfills or any other location in California.

DHS states this material is perfectly safe and presents no danger whatsoever to the public health and safety, or to the environment. DHS claims people are exposed to higher levels of radiation in a cross-country flight or by living in a house at a high altitude in Denver, Colorado.

Opponents dismiss this argument and point to a 1994 report by the General Accounting Office which provides that exposure at 25 millirems per year presents a risk of one cancer death in 1000 people. Opponents also point to assertions by the United States Environmental Protection Agency that this level of exposure is the equivalent of the average person having to endure approximately 300 chest x-rays over one's lifetime.

*Competing Cleanup Standards* – The NRC and U.S. Department of Energy (DOE) appear to rely on public health and safety standards that are significantly lower than the standards used by the U.S. Environmental Protection Agency (EPA). These competing standards have come to light recently in a debate over the clean up and disposal of materials from the Rocketdyne Santa Susana Field Laboratory (SSFL) in Simi Valley.

On March 15, 2002, U.S. Senators Barbara Boxer and Dianne Feinstein wrote letters to DOE and EPA demanding that EPA's Superfund standards be utilized at SSFL. This would prohibit contamination above EPA's one-in-a-million (10<sup>-6</sup>) basic risk level for cleanup. This equates to about 0.5 millirems per year instead of the 25 millirems per year allowed by NRC and DOE.

DHS's regulation, as interpreted by DHS, would appear to allow disposal from SSFL at 25 millirems per year regardless of concerns raised by Senators Boxer and Feinstein. Material has been disposed of in the past from SSFL at the Bradley Landfill and at the Safety Kleen Landfill. Neither facility knew it was accepting radioactive waste at the time.

SSFL was used in the 1950's by the federal government to test nuclear reactors and rocket engines.

*Notification* – Opponents further claim the DHS regulation was adopted without notice to the California Integrated Waste Management Board (CIWMB), local enforcement agencies, landfill operators, organized labor representing workers who work in landfills, waste haulers, residents living near landfills, or others who may be exposed to this material. Additionally, opponents claim that landfills are not equipped to take low level radioactive waste.

DHS states it's working with the CIWMB and the Department of Toxic Substances Control (DTSC) to establish any necessary safeguards. However, it appears DHS has made only minimal efforts to meet with CIWMB staff and address these issues.

*Is DHS working with CIWMB?* – According to a chronology of meetings between staff from DHS and CIWMB, Dr. Kevin Reilly and Dr. Edgar Bailey from DHS attended the April 25, 2001 meeting of the CIWMB. At that meeting, the members of the Board directed CIWMB staff to meet with DHS to improve agency coordination on prevention and control of radioactive materials at solid waste facilities.

On June 18, 2001, Julie Nauman, Deputy Director, CIWMB, wrote to Dr. Reilly conveying that CIWMB staff had requested a meeting, but had received no response.

On July 18, 2001, staff from DHS and the CIWMB finally met. The following issues were discussed:

- 1) DHS approved cleanup sites where radioactive waste was disposed of in a municipal solid waste landfill. There have been at least two such cases in recent history. The first was the disposal of waste from the Rocketdyne facility (Santa Susana Field Laboratory) at the Bradley Landfill in Los Angeles. The other was material which was disposed of most likely at the Ox Mountain Landfill in San Mateo County. The details of the Ox Mountain case are unknown to committee staff.
- 2) Coordination between DHS and CIWMB *cleanup* programs. Procedures for coordination and appropriate contacts were established for CIWMB when encountering radioactive materials at *CIWMB cleanup sites*. This kind of coordination is critical for clean up of burn dumps in San Diego which have been found to contain radioactive waste material.
- 3) Coordination on oversight of municipal solid waste landfills. This was deferred to a future meeting and no follow up meetings have been conducted. However, CIWMB staff has contacted DHS to inquire about resolution of radioactive materials detected at the Otay Landfill in San Diego County.

On September 28, 2001, CIWMB staff contacted DHS staff to inquire if DHS had a recent rulemaking that could affect the disposal of radioactive waste at landfills. DHS stated that it wasn't aware of any such rulemaking. (NOTE: The Office of Administrative Law approved DHS' regulations on October 15, 2001. A Notice of Intent to sue DHS (to block the regulation) was filed in Superior Court on October 9, 2001.)

On January 12, 2002, the Los Angeles Times ran a story about this issue. Subsequent to that news story, there have been several informal contacts initiated by CIWMB requesting information from DHS on the regulation and the lawsuit. DHS has provided information as requested.



***If Disposal of Radioactive Material in Landfills is Appropriate, Adequate Protections are needed at Landfills*** -- The regulation took effect November 15, 2001. Three months later, DHS has yet to provide guidelines for landfills that may accept radioactive waste under this regulation. There are no procedures or policies in place at landfills to take radioactive waste. There are minimal portal procedures, no ground water testing for radioactivity, no testing for radioactivity at the perimeter, and no decontamination procedures in California's 170 municipal solid waste landfills.

Such protective policies could have been adopted in the form of emergency regulations, which would have been approved within 60 days and taken effect immediately. To date, no such emergency regulation has even been proposed.

***Conclusion*** -- It appears the November 2001 regulation promulgated and as interpreted by DHS, is intended to deregulate the disposal of certain radioactive waste. According to DHS, landfills can, on an ongoing basis, take unlimited amounts of radioactive material under this regulation, as long as the exposure is less than an average 25 millirems per year per aggregate shipment. The radioactivity in these landfills will therefore likely rise as they take this material and may subject landfill workers and those living near landfills to radiation exposure of 25 millirems per year.

### **Potential Options for the California Legislature:**

- 1) Do nothing. If the Legislature believes the existing standard is sufficient, there is no need to do anything.
- 2) Just as the Congress in 1992 overturned NRC policies attempting to deregulate radioactive wastes and permit them to be disposed of in municipal landfills or recycled into consumer products, the Legislature can step in and overturn the DHS policies which similarly deregulate radioactive waste in California.
- 3) The Legislature may simply require radioactive waste to be disposed of in licensed facilities specially designed for radioactive wastes, as has been the basic requirement for decades. The Legislature could also opt to remove DHS' power to unilaterally exempt waste from these requirements.

### **Potential exemptions from radioactive waste disposal requirements to consider:**

- 1) Historically, certain oil drilling muds and geothermal pipe scale have had elevated levels of Naturally Occurring Radioactive Materials (NORM) or Technologically Enhanced Naturally Occurring Radioactive Materials (TENORM) that are not licensed by NRC, and have been disposed of in certain Class I and Class II facilities in California (operated by Safety Kleen and to a lesser extent Waste Management). NORM and TENORM should, with certain improved controls, be allowed to continue to go to Class I and II facilities whose permits so provide. Class III facilities, however, should be protected from receiving any radioactive wastes.
- 2) Medical, biotech, and academic users of radioactive materials generally use short-lived isotopes that are stored-to-decay (i.e., kept for 10-20 half-lives and then disposed of as regular garbage.) The Legislature may want that practice to continue.
- 3) Certain consumer items have small quantities of radioactive material added – e.g., Coleman lantern mantles. It may be overreaching to ask consumers to dispose of those items in licensed radioactive waste facilities.

## **Brief History of Recent Regulation of Radioactive Waste:**

In 1990, the U.S. Nuclear Regulatory Commission (NRC) proposed a "Below Regulatory Concern" (BRC) Policy that would have deregulated a significant portion of radioactive waste. (It would have used a 1 to 10 millirem/year cutoff for the deregulation.)

The BRC Policy Statement would have permitted radioactive waste at that level to be:

- (1) disposed of in municipal landfills;
- (2) placed into consumer products;
- (3) left in place at contaminated sites and released for unrestricted use; or
- (4) recycled.

Congress objected because it was opposed to radioactive waste ending up in spoons, zippers, or kid's braces, or being dumped in municipal landfills not licensed or designed to handle the substance. Congress passed a provision in the Energy Policy Act of 1992, expressly overturning the NRC BRC Policy Statement.

Since that time, NRC has not adopted any new regulation for items 1, 2, and 4 (i.e., has not attempted to try again with a regulation or policy to permit radioactive waste to go to municipal landfills or be recycled.)

In 1997, NRC adopted cleanup regulations for contaminated sites, setting a 25 mrem/yr cleanup level (which EPA has said is nonprotective; moreover, several states have adopted stricter regulations). Nothing in the cleanup regulations adopted by NRC, and now by California, mention permitting releases to municipal landfills or metal recyclers.

NRC and California had no specific cleanup regulations prior to the 1997 NRC rules, so it cannot be said that the rules were a tightening of cleanup regulations. Furthermore, the recently adopted cleanup rules now permit sites to be left contaminated with up to 500 millirem/year of waste. This indicates that the policies are in no way more stringent.

The 1992 Energy Policy Act expressly gave states the authority to regulate more strictly any radioactive material, or use, which the NRC might try subsequently to deregulate.

EPA has confirmed that the State could adopt far stricter cleanup rules; for example. NRC and DHS concede that DHS is permitted to adopt stricter cleanup rules than the NRC rules, if it wishes.

The bottom line, however, is that the longstanding requirement is that radioactive waste must go to licensed disposal sites. NRC effort to relax that requirement in 1990 was overturned by Congress, and NRC has not attempted to revive such a policy since. DHS's new policy deregulating radioactive waste and permitting it to go to unlicensed sites is a degradation of public protection that was done with no public notice and no environmental review.

### **Questions asked of DHS:**

On February 6, the committee chair sent a letter to DHS Director Diana Bonta asking the following questions. Their reply was received by committee staff on March 8 and will be provided to committee Members.

- 1) Ed Bailey, Chief of the DHS Radiological Health Branch, stated that shipments of radioactive waste to other than licensed radioactive waste disposal facilities have historically been less than 1 millirem/year. Please confirm this in writing and provide us with a listing of all such shipments in the last decade (waste generator, recipient location, nature of waste, date, etc.) and the estimated radiation dose. Please identify the regulatory basis for permitting each such shipment (i.e., whether an application for an alternative means of disposal had been submitted, a request for an exemption, a shipment from a released site, or some other basis). Please also provide any available documentation on each such shipment.
- 2) Mr. Bailey stated that there had been approximately 6000 sites licensed to possess radioactive materials, and only 2000 active sites, with approximately 4000 sites having been released since 1962. He indicated the Department did not have good records for releases in the early years, although most had "zero contamination".

Question: For releases of such sites approved by the Department in the last ten years (up to the effective date in November 2001 of the recent regulations), please provide a breakdown as follows:

- (a) How many were released with zero contamination estimated; how many with an estimated dose from the contamination of up to 1 millirem/year;
  - (b) How many with an estimated dose of greater than 1 millirem to up to 15 millirem/year;
  - (c) How many with an estimated dose of greater than 15 millirem to up to 25 millirem/year;
  - (d) How many with an estimated dose of greater than 25 millirem/year up to 100 millirem/year; and
  - (e) How many with an estimated dose of greater than 100 millirem/year up to 500 millirem/year.
  - (f) For all releases estimated to result in doses of 1 millirem/year or greater, please identify the site, the date released, and the estimated dose, and provide the supporting documentation.
- Please provide the actual estimated dose for each released site, not the standard purportedly employed.

- 3) Department staff mentioned that it performed calculations indicating that 10,000 shipments of radioactive waste to a single municipal landfill would produce only 2 1/2 times the dose as a single shipment. Please provide the documents containing the full calculations.

- 4) Mr. Bailey asserted that calculations of dose for release of any contaminated site were based on the most conservative assumptions possible, including rural residential future use. Please provide documents showing where in the regulations, or in any associated guidance, it is stated that site specific inputs for the dose calculation at the site of contamination are not to be used, but rather specified generic conservative assumptions, including any requirement that rural residential future use, must be presumed. For the Rocketdyne site, please provide documents showing the inputs for the calculation of dose at that site for the approved release criteria, including whether one used rural, residential, or suburban-residential scenarios, and what crop consumption figures were used.
- 5) To assure that we all have the same understanding of the new regulation, please confirm the following:
- (a) Department staff stated that the new regulation "is not a disposal regulation but rather a cleanup and license termination regulation."
  - (b) Department staff also stated that prior to adoption of this regulation, the Department had no specific regulation for cleanup and license termination, let alone for deregulation of waste (on other than a case-by-case basis).
  - (c) Department staff also agreed that the State was free to have adopted a regulation that was below the 25 millirem/year figure chosen in the cleanup rule, that it was not bound by that precise figure in the NRC rule but could adopt a more protective standard.
  - (d) Department staff said, under its interpretation of the new regulation, radioactively contaminated modular buildings, for example, from a decommissioned reactor complex could be given to a school system for use as children's classrooms, so long as the contamination in those buildings and at the decommissioned site is less than 25 millirem/year.
- 6) Please also confirm that under the Department's interpretation of the new regulations regarding nuclear sites that have been or are being decommissioned,
- (a) radioactively contaminated metals could be sold to metal recyclers to be melted down and recycled into the consumer metal supply,
  - (b) radioactively contaminated soil and other materials could be transferred to farms and ranches,
  - (c) radioactively contaminated materials could be given to day care centers and other facilities not licensed to receive radioactive materials,
  - (d) radioactively contaminated tools and other usable items could be sold to members of the public, and
  - (e) radioactively contaminated materials could be disposed of at municipal landfills and Class I and II landfills not licensed for radioactive waste. For each of the above, please confirm whether it is the Department's policy to permit in certain cases each of the above from operating nuclear facilities, pursuant to its asserted authority to grant applications for alternative methods of disposal and exemptions from the Department's regulations.

- 7) Department staff mentioned something to the effect that the San Onofre nuclear plant has, in its Technical Specifications, a provision purportedly permitting it to declare as non-radioactive certain radioactive wastes and dispose of them at municipal landfills. Please provide us a copy of any such Tech Spec, including any similar ones for other nuclear reactors in the state.
- 8) The new regulation adopted by the Department actually permit cleanups to occur at 100 millirem and even 500 millirem/year under certain circumstances. Would shipments to municipal landfills be permitted from those sites? If not, please identify where in the new regulation that disposal of 100 millirem or 500 millirem/year materials is prohibited yet 25 millirems is allowed.
- 9) Department staff indicated that any legislation should not have the unintended effect of capturing items such as fertilizers in which there is an elevated level of natural potassium-40. Were there to be a generalized ban on radioactive waste going to unlicensed disposal sites, i.e., a barring of a "Below Regulatory Concern" (BRC) policy, does the Department have other suggestions as to types (as opposed to dose levels) of materials with added radioactivity that the legislation should be crafted so as to not capture? If so, please provide.
- 10) For operating nuclear facilities, what guidance does DHS use for approving a request for alternative means of disposal or an exemption permitting disposal at an unlicensed site? What dose limit is used for evaluating and approving such requests? Please provide any specific guidance documents and/or policy statements.
- 11)
  - (a) Please provide all departmental guidance documents and policies used for determining when radioactive material can be released for disposal at unlicensed sites.
  - (b) Please provide any Departmental guidance documents and policies for determining when contaminated sites can be released for unrestricted use.
  - (c) How are such policies adopted by the Department; what public notice is there and opportunity for comment?
- 12) Department staff indicated that they use the standard estimates of risk from radiation used by most other agencies nationwide. Staff indicated they use an estimate of the risk from 25 millirem as  $1.25 \times 10^{-5}$ . Please confirm that figure. Please also confirm that over a 70 year lifetime of 25 millirem/year, the risk would be 70 times that or  $8.6 \times 10^{-4}$ , or approximately a 1 in 1000 lifetime risk of fatal cancer (1 fatal cancer in every 1000 people exposed).
- 13) Department staff stated that they are working with the Integrated Waste Management Board and the Department of Toxic Substances Control on a variety of disposal related issues. Please provide a list of dates, participants, and the outcome of those meetings.

- 14) Since the new regulation appears to have an effect on disposal of material, please provide a list of all waste companies, waste haulers, landfill operators, local enforcement agencies, state regulatory agencies, environmental organizations, and community based groups representing residents living near landfills that received notice of the proposed regulation. Please provide a list of any inquiries the Department received from such groups on the regulation while it was still being reviewed, and any comments submitted on the proposed regulation.

**Statement from Opponents Relative to Alleged 100 Millirems Standard vs. 25 Millirem Regulation:**

DHS, in its attempt to defend its new regulation, claims it is actually an improvement on its own past practices and policies in this area. It says its previous regulations allowed release for unrestricted use and terminate licenses for contaminated facilities, and shipment of wastes to unlicensed facilities, at doses to the public of 100 millirem per year (or about 700 extra chest x-rays over one's lifetime, sufficient to produce a fatal cancer in 1 in every 286 people). This is completely incorrect, for the following reasons:

1. DHS admitted that, up until this new regulation, it had, to the best of its knowledge, never permitted radioactive wastes to go to a municipal landfill at doses greater than 1 millirem. Thus the 25 millirem new rule worsens the situation 25-fold.
2. DHS likewise admitted that this new regulation is a cleanup rule, not a waste disposal rule, and that prior to this new regulation, DHS had *no* specific cleanup rule whatsoever. The 25 millirem rule thus is new and cannot be an improvement over past rules, when there were in fact no rules permitting release of land with contamination remaining, let alone no rule permitting as a general matter radioactive wastes to be disposed of at certain levels in unlicensed sites.
3. Most telling, however, is DHS' own cleanup/license termination regulations in effect prior to this new rule. DHS regulations provide for the following:

Specific licenses shall be terminated by written notice to the licensee when the Department determines that:

- (1) Radioactive material has been properly disposed;
- (2) Reasonable effort has been made to eliminate residual radioactive contamination, if present; and
- (3) A radiation survey has been performed which demonstrates that the premises are suitable for release for unrestricted use; or other information submitted by the licensee is sufficient to demonstrate that the premises are suitable for unrestricted use.

Section 30256 (k) of Title 17 of the California Code of Regulations, emphasis added.

Thus, the DHS regulations in force for years required that all contamination at a radiation site be cleaned up "eliminated residual radioactive contamination" before it can have its license terminate and be released for unrestricted use. The new regulation, permitting license termination and unrestricted use at 25 millirem (and in some circumstances, at 100 and even 500 millirem annual dose) thus is a dramatic degradation of environmental and public health protections.



Note also the requirement that all radioactive material be properly disposed of before a license can be terminated. Section 30470 of Title 17 of the California Code of Regulations, adopting the NRC requirements for land disposal of radioactive waste, requires that all licensed radioactive waste be disposed of at a licensed treatment or disposal facility. Section 30256 (k) (1) and (2) require that *all* radioactive contamination be removed from a licensed site wishing to close and *all* of that contamination be disposed of properly; Section 30470 defines that proper disposal as requiring a licensed facility designed for that purpose. It is clear the new regulation is a drastic relaxing of these protection standards, permitting contamination at high levels to remain in place at former nuclear sites and permitting radioactive waste from them to be sent to unlicensed disposal sites.

4. Additionally, DHS' claim that in the past its regulations permitted release of contaminated sites from their licenses and transmittal of their wastes to unlicensed sites at dose levels of 100 millirem/year is simply not correct.

a. As indicated above, the actual regulations for cleanup and disposal said cleanup was to eliminate the contamination and all waste had to go to licensed sites.

b. Additionally, DHS has conceded it had no specific cleanup rules in the past permitting levels of contamination to remain; that this is the first such regulation.

c. Furthermore, the 100 millirem/year standard DHS now cites has nothing to do with permitting such exposures at unlicensed sites, or to be used as a standard for license termination or transfer of radioactive wastes to other than licensed disposal facilities. The 100 millirem standard (adopted from the NRC's 10 CFR 20.1301) states expressly: "Each licensee shall conduct *operations* so that – (1) The total effective dose equivalent to individual members of the public from the licensed operation shall not exceed [100 millirem] in a year..." (*emphasis added*) [The only change DHS has made in this NRC rule is to change "licensee" to "user", which it defines in its regulations as any person licensed to possess radioactive material or registered as possessing a reportable source of radiation. 17 CCR 30100 (aa)]

The 100 millirem rule (lowered to 25 millirem/yr years ago for nuclear fuel cycle facilities) thus applies only to licensed entities and to their operations. It is the requirement that if you have a license, you must not exceed 100 millirem/year at the fenceline. It is absolutely not a rule that says if the dose is less than 100 millirem, no license is needed. The rule is just the opposite – one is *required* to have a license to possess radioactive material, and under that license one *must* keep doses less than 100 millirem.

If one accepted DHS's defense here, no user of radioactive materials anywhere in California would have to have a license, because by definition they are to keep doses below 100 millirem/year. The regulation is just the opposite.

It applies only to licensees and their operations; it does not permit doses that high at unlicensed sites (decommissioned facilities or unlicensed municipal waste dumps) nor at sites that are not operational nuclear facilities (again, shut-down nuclear facilities or municipal waste dumps that aren't operational nuclear sites).

**Additional Background (based on information gathered in discussions with both DHS and opponents to the regulation):**

Decades long efforts to see the implementation and operation of the controversial Ward Valley "low-level" radioactive waste facility near the Colorado River have failed. There is currently no site in California to take radioactive waste material.

Consequently, any site wishing to dispose of such material must send the material to one of two facilities. One is located in South Carolina, and the other in Utah. (The Envirocare facility in Utah and the Barnwell facility in South Carolina.) The cost for disposal at such sites is \$100 to \$500 *per cubic foot* of material. This compares with a cost of \$30 to \$50 *per ton* for disposal in California landfills.

DHS has recently adopted a regulation that would permit radioactive wastes to go to California's solid waste landfills. However, these facilities are not designed or licensed for such wastes. Arguably, this would, in essence, create 170+ unlicensed radioactive waste facilities in the state.

In mid-2000, DHS issued a notice of proposed rulemaking on radiation protection standards. The proposed rules included standards for cleaning up contaminated nuclear sites and permitting subsequent use of that land. DHS states that this waste material is perfectly safe for humans.

There was nothing in the notice of proposed rulemaking that would permit wastes from these sites to be sent to unlicensed municipal landfills.

In either December of 2000 or January of 2001 (the letter is undated), DHS wrote to U.S. Senator Barbara Boxer and State Senator Sheila Kuehl, responding to questions they had posed. The questions had been submitted after disclosures that the Rocketdyne nuclear facility in Southern California had shipped radioactive waste to the Bradley Municipal Landfill in the north San Fernando Valley, the Hugo Neu Prowler metal recycler in San Pedro (where it was melted down into consumer products), and the Santa Clara Ranch in Ventura County.

Additionally, reactor support modular buildings had been sold to the Shandon School District in San Luis Obispo County for use as classrooms without being first checked for radioactivity. (In that case, subsequent measurements found no radioactivity but there was asbestos, lead and mercury and the trailers had to be retrieved and disposed of in a hazardous waste facility.)

In its letter replying to the Boxer/Kuehl questions, DHS disclosed, apparently for the first time, that its policy was to permit radioactive wastes to go to such unlicensed sites. It based its policy in part on the proposed regulation, which had not yet been adopted. These disclosures occurred after the close of the public comment period, so the public (and other agencies such as the CIWMB) had no notice that the proposed rules would impact the state's solid waste landfills.

In November 2001, the DHS regulations became final. Coupled with DHS' interpretation of other regulations, which it asserts give it virtually unbridled authority to exempt generators of radioactive waste from the normal requirement to dispose of such wastes only at licensed radioactive waste disposal sites (e.g., the Envirocare facility in Utah and Barnwell in South Carolina), DHS' current position is that it can deregulate much radioactive waste and permit it to be sent to unlicensed municipal waste sites, schools, farms, and other such unlicensed entities. Furthermore, DHS says the municipal landfill operators, nearby public, etc. are not required to be notified that the waste is radioactive.

Under the current policy, radioactive wastes can be sent to the following:

- 1) Municipal Solid Waste Landfills (Class III)
- 2) Hazardous Waste Landfills Not Licensed for Radioactive Wastes (Class I & II)
- 3) Farms
- 4) Schools
- 5) Other Unlicensed Sites

Radioactively contaminated materials can be sold or given away to the following:

- 1) Metal recyclers for melting down into consumer metal supply and used in all consumer products – spoons, belt buckles, zippers, children's braces, etc.
- 2) Members of the public for surplus tools, motors, pumps, etc.

No notice is required to municipal landfill owners, metal recyclers, schools, or members of the public that the materials they are receiving have residual radioactive contamination.

The standards applied by DHS differ for allowing radioactive waste to go to unlicensed recipients, depending on whether the radioactive contamination originated at a decommissioned nuclear site or an operating site.

- 1) If the wastes are from a decommissioned site, each shipment to an unlicensed site is authorized if it is estimated that were the waste to remain at the site of generation, it would produce no more than an average dose of 25 millirem/year
- 2) If the wastes are from an operating site, each shipment to an unlicensed site may be approved by DHS, on a case by case basis, if the dose is estimated as less than 1 millirem/year.

*Consider the following:* A 2 millirem/year shipment of waste from an operating site must be sent to a licensed radioactive waste facility, whereas a 24 millirem/year shipment (12 times hotter) can go to a municipal landfill under DHS' regulation if it comes from a decommissioned site.

According to opponents of the regulations, there are certain risks from radiation doses at these levels.

- 1) 25 millirem/year is the equivalent of approximately 300 additional chest X-rays over one's lifetime, or an X-ray every four months of one's life from conception to death.
- 2) Such a dose yields a risk of 1 in a 1000 lifetime fatal cancer risk, i.e., one death produced from such exposure per thousand people exposed, according to the risk estimates accepted by radiation protection agencies.
- 3) Most other carcinogens are regulated at a 1 in a million risk of cancer incidence, falling back to no more than 1 in 10,000 under exceptional circumstances.

The dose is estimated under the DHS regulation as follows:

- 1) A licensee runs a computer program to estimate potential doses to the public were the waste to be left in place at the site of generation. This is based on assumptions about various environmental pathways: ingestion of contaminated ground or surface water, consumption of food grown in a backyard garden in contaminated soil, resuspension of contaminated dirt, etc.
- 2) It is based on site-specific inputs based on where the waste was generated, not where it is to be sent.
- 3) These inputs include depth to groundwater, type of soil, climate, prospective future use of the land (i.e., suburban residential or rural residential).
- 4) If the computer program suggests an average dose of less than 25 millirem/year to the public from the contaminated at the site where it is generated, DHS policy now permits that waste to be shipped anywhere. Opponents are concerned that the conditions at the recipient location may be quite different and the resulting dose to the public different.
- 5) Each shipment to an unlicensed site is permitted if the dose estimated for leaving the waste at the site of generation is less than 25 millirem/year; multiple shipments to the same unlicensed site are permitted, however, making the true dose higher than 25 millirem. DHS states that this higher dose is only a nominal difference.

The dose to people at unlicensed sites under DHS regulation compares to doses from licensed radioactive waste disposal sites as follows:

- 1) DHS estimated that the maximum dose to a member of the public from the proposed licensed Ward Valley radioactive waste disposal facility would be less than 2 millirem/year.
- 2) That means that each shipment to a municipal landfill, according to the new DHS policy, could produce 12.5 times the dose to the public as *all shipments combined over 30 years from all radioactive waste generators in California, Arizona and the Dakotas to a single licensed radwaste disposal facility.*
- 3) The DHS 25 millirem deregulation policy is based on an *average* dose to a member of the critical exposed group, whereas the limitation for a licensed site is based on the maximally exposed individual. Since the average dose can be 1/10<sup>th</sup> of the maximum dose, each shipment to an unlicensed municipal landfill can therefore produce doses to the public many times higher than that permitted from an entire licensed "low-level" radioactive waste site.
- 4) EPA generally requires cleanup of contaminated nuclear sites to a risk level of one in a million, or roughly .05 millirem/year. Each shipment to an unlicensed site could thus result in contamination levels 500 times higher than the risk EPA prefers to clean Super Fund sites to.
- 5) The proposed disposal site at Yucca Mountain Nevada, depository for the entire nation's high level waste – the most dangerous radioactive material in the country – is not supposed to produce a dose of more than 15 millirem/year at any point over the next 10,000 years. Thus, the dose permitted by DHS for each shipment to an unlicensed municipal landfill is 67% higher than the dose permitted by EPA for all shipments combined to the nation's proposed *high level* waste repository ten thousand years from now.

DHS claims, that it reduced permissible doses.

- 1) DHS claims that prior to adoption of the new regulation, it released contaminated nuclear sites (and authorized shipments to unlicensed disposal sites) at 100 millirem/year, so its 25 millirem/year regulation is an improvement.
- 2) DHS states that, to the best of its knowledge, it has never authorized shipments of radioactive wastes to municipal landfills at doses over 1 millirem / year. Thus the regulation arguably relaxes rather than tightens its past practice, permitting 25 times higher dose per shipment.
- 3) DHS states that, until this new regulation, there were *no* specific regulations for cleaning up contaminated sites.
- 4) DHS points to a regulation permitting 100 millirem/year doses. However, that regulation (10 CFR 20.1301 and the parallel state rule) on its face only applies to users of radioactive materials who are licensed or registered with the state and

only to doses from their operations. The new DHS policy permits doses to members of the public from wastes that are no longer under license or state registration and are not from operating sites but are closed and decommissioned. Municipal landfills are not licensed radioactive materials users and have never been subject to the rules cited by DHS for licensed radioactive users such as nuclear sites.

DHS claims that time was running out on a requirement to adopt the "federal" standards.

- 1) There is nothing in the NRC regulations (10 CFR 20.1401 *et seq.*) cited by DHS that authorizes shipping radioactive waste to municipal landfills. The rules are simply cleanup standards for contaminated sites so that their license can be terminated and the site used for some other purpose.
- 2) In 1990, NRC did try to create a "Below Regulatory Concern" (BRC) Policy that would have explicitly allowed wastes (at 1-10 millirem/year, far below the DHS policy) to go to municipal landfills or be recycled into consumer products. Congress quickly overturned the NRC Policy. The Energy Policy Act of 1992 expressly rescinded the NRC BRC policy and gave to the state's the right to more strictly enforce anything that NRC might subsequently try to deregulate. Since Congress overturned the previous effort, NRC has *never* adopted a regulation that would deregulate wastes so as to permit them to be disposed of in municipal landfills.
- 3) EPA has stated that states are free to adopt more protective cleanup rules, and has formally non-concurred with the regulations on cleanup that California has adopted. EPA says they are non-protective of public health and could result in remaining contamination at "cleaned up" sites so high that EPA might have to go back in and list such sites as Superfund sites. EPA's cleanup standards are generally 500 – 10,000 times more protective than the standards DHS has just adopted. Senator Kuehl has introduced legislation that would roll back this part of the DHS regulations and require cleanups at essentially the EPA levels. But in any case, there is not a word in the NRC rules adopted by DHS that permits wastes to go to municipal landfills; that is DHS's policy pronouncement attempting to piggyback on the cleanup rules.

**Introduced by Senator Romero**  
**(Coauthors: Senators Chesbro, Escutia, and Kuehl)**  
**(Coauthors: Assembly Members Koretz, Longville, Lowenthal,**  
**Strom-Martin, and Washington)**

February 21, 2002

---

An act to amend Sections 114715, 114990, and 115060 of, to add Article 9.8 (commencing with Section 25209.10) to Chapter 6.5 of Division 20, and to add Chapter 10 (commencing with Section 115300) to Part 9 of Division 104 of, the Health and Safety Code, and to add Section 43022.5 to the Public Resources Code, relating to radiation.

**LEGISLATIVE COUNSEL'S DIGEST**

SB 1623, as introduced, Romero. Radiation Safety Act of 2002.

(1) The existing hazardous waste control law prohibits any person from managing any hazardous waste, except as provided in that law, or in the regulations adopted by the Department of Toxic Substances Control. A violation of the hazardous waste control laws is a crime.

This bill would prohibit the disposal of radioactive waste at a hazardous waste disposal facility, but would allow the disposal of certain naturally occurring radioactive materials (NORM or TENORM waste) at a Class I or a Class II facility, as defined, if the facility's permit expressly authorizes the disposal of that waste and the facility complies with regulations that the department would be required to adopt imposing specified conditions upon the disposal of that waste.

Since the violation of these requirements would be a crime, the bill would impose a state-mandated local program by creating a new crime.

(2) Existing law prohibits any person from burying, throwing away, or disposing of radioactive waste except in a manner that will result in no significant radioactive contamination of the environment.



The existing Radiation Control Law requires the State Department of Health Services, among other things, to issue licenses, and prohibits the state department from issuing a license to receive radioactive material for disposal unless specified requirements are satisfied, including that the land on which the radioactive waste are to be buried is owned by the federal or state government.

Under existing law, the Southwestern Low-Level Radioactive Waste Disposal Compact specifies that California is to serve as the state required to host the regional low-level radioactive waste disposal facility for the permanent isolation of low-level radioactive waste pursuant to specified federal requirements and the requirements of the host state. A violation of the provisions regulating radioactive waste is a crime.

This bill would enact the Radiation Safety Act of 2002 and would require any license issued pursuant to the Radiation Control Law by the state department pursuant to that law to also comply with the requirements of the Radiation Safety Act of 2002. The bill would prohibit any person from burying, throwing away, or disposing of radioactive waste within the state except at a disposal facility specifically licensed for that kind of radioactive waste. The bill would prohibit the state department from adopting any exemption from that requirement.

The bill would prohibit any generator or owner of radioactive waste from disposing of radioactive waste, or any materials containing byproduct, source, or special nuclear material, or transmitting to any person or entity for disposal, that material or waste, except at a specified licensed facility. The bill would prohibit any person from disposing of NORM or TENORM waste, except as specified above, or from recycling radioactive material, as specified. The bill would also prohibit any person from transferring a radioactive item containing radioactive contamination, for reuse by a person who is not licensed, or transferring or delivering any radioactive material to a person not possessing a license or permit specifically authorized to possess radioactive material.

The bill would specify the burden of proof with regard to enforcement actions under the act and would exclude, from the act, specified materials and activities, including the reuse or recycling of a radioactive item by an unlicensed federal entity, to the extent the item remains on the property, and under the control, of the federal entity.

(3) The existing California Integrated Waste Management Act of 1989 requires the California Integrated Waste Management Board to adopt and review regulations setting forth standards for solid waste handling. The term "solid waste" is defined, for the purpose of the act, as excluding radioactive waste regulated pursuant to the Radiation Control Law and the board has no enforcement or regulatory authority with regard to a facility that accepts low-level radioactive waste.

This bill would prohibit any person from disposing of radioactive waste, as defined, at a solid waste facility that meets the requirements of a class III waste management unit and would require the board to adopt regulations requiring testing and screening criteria, and specified notifications, with regard to radioactivity in solid waste material being submitted for disposal at a solid waste facility.

(4) The bill would declare that the provisions of the bill are severable and that if any provision of the bill or its application is held invalid, that invalidity would not affect other provisions or applications that can be given effect without the invalid provision or application.

(5) The California Constitution requires the state to reimburse local agencies and school districts for certain costs mandated by the state. Statutory provisions establish procedures for making that reimbursement.

This bill would provide that no reimbursement is required by this act for a specified reason.

Vote: majority. Appropriation: no. Fiscal committee: yes. State-mandated local program: yes.

*The people of the State of California do enact as follows:*

1 SECTION 1. Article 9.8 (commencing with Section  
2 25209.10) is added to Chapter 6.5 of Division 20 of the Health and  
3 Safety Code, to read:

4  
5 Article 9.8. Low-Level Radioactive Waste

6  
7 25209.10. For purposes of the this article, the following  
8 definitions shall apply:

9 (a) "Class I" and "Class II" facility means a hazardous waste  
10 facility issued a hazardous waste facilities permit pursuant to  
11 Section 25200 that is classified as either a Class I or Class II waste  
12 management unit pursuant to Chapter 15 (commencing with

1 Section 2510) of Division 3 of Title 23 of the California Code of  
2 Regulations.

3 (b) "NORM" means naturally occurring radioactive material,  
4 including radionuclides that are present in rocks, soil, minerals,  
5 and ground or surface water at concentrations that occur naturally  
6 and are present in the accessible environment. NORM does not  
7 include low-level waste, source material, special nuclear material,  
8 or byproduct material, as defined in Section 114985.

9 (d) "Radioactive waste" means any discarded radioactive  
10 material with radioactivity above background level when  
11 measured with the best available technology.

12 (e) "Radioactive material" includes, but is not limited to, all of  
13 the following:

14 (1) Byproduct material, as defined in Sections 2014 (e) (1) and  
15 2014 (e) (2) of the Atomic Energy Act of 1954 (42 U.S.C. Sec.  
16 2014 and following).

17 (2) Source and special nuclear material as defined in  
18 subdivisions (e) and (f) of Section 114985, respectively.

19 (3) NORM.

20 (4) TENORM.

21 (5) Wastes from the Formerly Utilized Sites Remedial Action  
22 Program operated by the United States Army Corps of Engineers  
23 (FUSRAP), irrespective of when and where the wastes were  
24 generated.

25 (f) "TENORM" means technologically enhanced naturally  
26 occurring radioactive material, including radionuclides that are  
27 naturally present in rocks, soil, minerals, and ground or surface  
28 water and that past or present human activities, unrelated to the  
29 production of radioactive material, have incidentally concentrated  
30 or exposed to the accessible environment. TENORM does not  
31 include low-level waste, source material, special nuclear material,  
32 or byproduct material, as defined in Section 114985.

33 25209.11. Notwithstanding any other provision of law, except  
34 as permitted by Section 25209.12, radioactive waste may not be  
35 disposed of at a hazardous waste disposal facility that is subject to  
36 this chapter.

37 25209.12. (a) NORM and TENORM waste may be disposed  
38 of at a Class I or a Class II hazardous waste disposal facility only  
39 if the hazardous waste facilities permit for that facility expressly  
40 authorizes the disposal of NORM or TENORM waste and the

1 facility complies with the regulations adopted pursuant to this  
2 section.

3 (b) The department, in consultation with the California  
4 Integrated Waste Management Board, shall adopt regulations  
5 requiring all of the following conditions for the disposal of NORM  
6 or TENROM waste:

7 (1) The generator of NORM or TENORM waste shall provide  
8 a notice to the waste transporter and the facility operator, which  
9 shall include, but is not limited to, a notice that the waste material  
10 includes NORM or TENORM waste, the radioactive levels of that  
11 waste, and the origin on the waste.

12 (2) The facility shall comply with testing and screening criteria  
13 to measure radioactivity in waste material being disposed of at a  
14 facility.

15 (3) The facility shall provide notice to the hazardous waste  
16 transporter and the public in the form of signage and written  
17 notices at the facility.

18 (4) The facility shall implement procedures for hazardous  
19 waste transporters and facility operators to respond to situations  
20 where workers or the public are exposed to unexpected and  
21 potentially dangerous levels of radiation. These procedures shall  
22 include, but are not limited to, decontamination efforts, criteria  
23 for, and a process of notice to, appropriate public agencies, and  
24 detailed record keeping of these incidents.

25 SEC. 2. Section 114715 of the Health and Safety Code is  
26 amended to read:

27 114715. (a) No person shall bury, throw away, or in any  
28 manner dispose of radioactive wastes within the state except in a  
29 manner and at locations as will result in no significant radioactive  
30 contamination of the environment in a disposal facility  
31 specifically licensed or permitted to dispose that kind of  
32 radioactive waste pursuant to Chapter 8 (commencing with  
33 Section 114960) or as provided in Article 9.8 (commencing with  
34 Section 25209.10) of Chapter 6.5 of Division 20.

35 (b) Notwithstanding subdivision (c) of Section 115060, the  
36 department may not adopt any exemptions from the requirements  
37 of subdivision (a).

38 SEC. 3. Section 114990 of the Health and Safety Code is  
39 amended to read:

1 114990. (a) The department is designated as the agency  
2 responsible for the issuance of licenses *pursuant to this chapter*. In  
3 carrying out its duties under this section, the department may enter  
4 into an agreement with the Division of Occupational Safety and  
5 Health and other state and local agencies to conduct technical  
6 evaluations of license applications prior to issuance of licenses.  
7 The agreements shall also include provisions for conducting  
8 inspections in accordance with Section 115095.

9 (b) *Any license issued by the department pursuant to this*  
10 *chapter shall also comply with the requirements of Chapter 10*  
11 *(commencing with Section 115300).*

12 SEC. 4. Section 115060 of the Health and Safety Code is  
13 amended to read:

14 115060. (a) The department shall provide by rule or  
15 regulation for general or specific licensing of persons to receive,  
16 possess, or transfer radioactive materials, or devices or equipment  
17 utilizing these materials. That rule or regulation shall provide for  
18 amendment, suspension, or revocation of licenses.

19 (b) The department may require registration and inspection of  
20 sources of ionizing radiation other than those that require a specific  
21 license, and compliance with specific safety standards to be  
22 adopted by the department.

23 (c) (1) The department may exempt certain sources of ionizing  
24 radiation or kinds of uses or users from the licensing or registration  
25 requirements set forth in this section when the department makes  
26 a finding that the exemption of these sources of ionizing radiation  
27 or kinds of uses or users will not constitute a significant risk to the  
28 health and safety of the public.

29 (2) *Any exemption made pursuant to this subdivision shall be*  
30 *adopted as a regulation pursuant to Chapter 3.5 (commencing*  
31 *with Section 11340) of Part 1 of Division 3 of Title 2 of the*  
32 *Government Code.*

33 (d) Regulations adopted pursuant to this chapter may provide  
34 for recognition of other state or federal licenses as the department  
35 may deem desirable, subject to registration requirements as the  
36 department may prescribe.

37 (e) The department shall adopt registration and certification  
38 regulations for mammography equipment. These regulations shall  
39 include, but not be limited to, all of the following requirements:

(1) An X-ray machine used for mammography shall be specifically designed for mammography and inspected by the department, or deemed satisfactory by the department based upon evidence of certification by the American College of Radiology mammography accreditation program, or an accreditation program that the department deems equivalent before it is certified.

(2) That all persons who have a certificate for mammography equipment follow a quality assurance program to be adopted by the department to ensure the protection of the public health and safety.

(3) That quality assurance tests, as determined by the department, are performed on all mammography equipment located in a mobile van or unit after each relocation of the mobile van or unit to a different location for the purpose of providing mammography. This equipment shall be recalibrated if images are not of diagnostic quality as determined by the department. A written record of the location of mobile vans or units with dates and times shall be maintained and available for inspection by the department.

~~On or after July 15, 1993, all~~ All mammography equipment shall be registered with and certified by the department. If this mammography equipment is certified by a private accreditation organization, the department shall take into consideration evidence of this private certification when deciding to issue a mammogram certification.

(5) All licenses, permits, and certificates issued by the department pursuant to this chapter and the Radiologic Technology Act (~~Section 27~~ *Chapter 6 (commencing with Section 114840)*) relating to the use of mammography equipment shall be publicly posted pursuant to this section and regulations adopted by the department.

(f) To further ensure the quality of mammograms, the department shall require all mammogram facilities, other than mobile units or vans, to operate quickly and efficiently so as to ensure that the facilities are able to develop mammograms of diagnostic quality prior to when the patient leaves the facility.

SEC. 5. Chapter 10 (commencing with Section 115300) is added to Part 9 of Division 104 of the Health and Safety Code, to read:

## CHAPTER 10. RADIATION SAFETY ACT OF 2002

115300. This chapter shall be known and may be cited as the Radiation Safety Act of 2002.

115301. For purposes of this chapter, the following definitions shall apply:

(a) "Background" means the local level of radioactivity from nature of like materials without enhancement by human activity, plus the local levels of fallout from nuclear weapons testing and the local deposition of fallout from past nuclear accidents located elsewhere in the world, including, but not limited to, the nuclear accident in Chernobyl.

(b) "Low-level radioactive waste," has the same meaning as defined in subdivision (m) of Section 114985, but also includes byproduct, source material, or special nuclear material as defined in subdivisions (d), (e), and (f), respectively, of Section 114985, whether produced by a licensed or unlicensed entity.

(c) "NORM" means naturally occurring radioactive material, including radionuclides that are present in rocks, soil, minerals, and ground or surface water at concentrations that occur naturally and are present in the accessible environment. NORM does not include low-level waste, source material, special nuclear material, or byproduct material, as defined in Section 114985.

(d) "Radioactive waste" means any discarded radioactive material with radioactivity above the background level when measured with the best available technology.

(e) "Radioactive material" includes, but is not limited to, all of the following:

(1) Byproduct material, as defined in Sections 2014 (e) (1) and 2014 (e) (2) of the Atomic Energy Act of 1954 (42 U.S.C. Sec. 2014 and following).

(2) Source and special nuclear material, as defined in subdivisions (e) and (f) of Section 114985.

(3) NORM.

(4) TENORM.

(5) Wastes from the Formerly Utilized Sites Remedial Action Program operated by the United States Army Corps of Engineers (FUSRAP), irrespective of when and where the wastes were generated

1 (f) "TENORM" means technologically enhanced naturally  
2 occurring radioactive material, including radionuclides that are  
3 naturally present in rocks, soil, minerals, and ground or surface  
4 water, and that past or present human activities, unrelated to the  
5 production of radioactive material, have incidentally concentrated  
6 or exposed to the accessible environment. TENORM does not  
7 include low-level waste, source material, special nuclear material,  
8 or byproduct material, as defined in Section 114985.

9 115302. (a) (1) No generator or owner of radioactive waste  
10 may dispose of, or transmit to any person or entity for disposal,  
11 radioactive waste in this state, except to a facility possessing a  
12 specific license or permit issued pursuant to Chapter 8  
13 (commencing with Section 114960) to dispose of that particular  
14 type and amount of radioactive waste.

15 (2) No generator or owner of radioactive waste may dispose of,  
16 or transmit to any person or entity for disposal, any material  
17 containing byproduct, source, or special nuclear material in this  
18 state, except to a facility possessing a specific license, as defined  
19 in subdivision (h) of Section 114985, to dispose of byproduct,  
20 source, or special nuclear material in accordance with a license  
21 issued pursuant to Chapter 8 (commencing with Section 114960).

22 (3) Except as authorized pursuant to Article 9.8 (commencing  
23 with Section 25209.10) of Chapter 6.5 of Division 20, no person  
24 may dispose of NORM or TENORM waste.

25 (b) No person may recycle radioactive material, or material  
26 containing radioactive contamination in the state, so that the  
27 radioactivity is transferred or delivered to a person who is not  
28 licensed pursuant to Chapter 8 (commencing with Section  
29 114960).

30 (c) No person may transfer a radioactive item, or item  
31 containing radioactive contamination, to a person for reuse who is  
32 not licensed pursuant to Chapter 8 (commencing with Section  
33 114960).

34 (d) No person may transfer or deliver radioactive material to a  
35 person not possessing a license or permit specifically authorizing  
36 possession of that radioactive material pursuant to Chapter 8  
37 (commencing with Section 114960, or as provided in Article 9.8  
38 (commencing with Section 25209.10) of Chapter 6.5 of Division  
39 20 with regard to NORM and TENORM waste.



(e) With regard to any enforcement action taken to enforce this chapter, IS a rebuttable presumption that the material that is the subject of the enforcement action is contaminated and the person handling the material shall bear the burden of proof in that enforcement action to demonstrate, with high confidence, that the material is not contaminated.

115303. This chapter does not apply to any of the following materials or activities:

(a) Short-lived radioactive materials of the type that are commonly used in medicine, biotechnology, and academia, that are at the end of their storage-to-decay period, and that are managed by an approved storage-to-decay program, including an onsite facility or a centralized facility.

(b) Liquid and gaseous radioactive effluents and releases to sanitary sewers, of the types, amounts, and concentrations specified in the regulations adopted by the Nuclear Regulatory Commission or the department.

(c) Scintillation liquids from research and animal tissues containing the amounts of tritium and carbon-14 specified in Section 20.2005 of Title 10 of the Code of Federal Regulations, as that section read on January 1, 2003.

(d) The technetium-99 associated with molybdenum-99 radioisotope generators of the type used in medicine.

(e) Radioactive materials intentionally inserted into products for their radioactive purpose and that are specifically exempted by the Nuclear Regulatory Commission from Part 30 (commencing with Section 30.1) and Part 40 (commencing with Section 40.1) of Title 10 of the Code of Federal Regulations, as those regulations read on the date of enactment of the Energy Policy Act of 1992 (P.L. 102-486).

(f) The reuse or recycling of a radioactively contaminated item by a person licensed to possess that item, pursuant to Chapter 8 (commencing with Section 114960), to the extent that the item remains on the licensed site and is subject to regulatory control of its onsite use, but does include the transfer of that item for recycling or reuse by, or to, a person who does not possess a license to possess that item, or to any other person.

(g) The reuse or recycling of a radioactive item by an unlicensed federal entity, to the extent the item remains on the property of the federal entity and under its control.

1 SEC. 6. Section 43022.5 is added to the Public Resources  
2 Code, to read:

3 43022.5. (a) For purposes of this section, "radioactive  
4 waste" has the same meaning as defined in Section 115301 of the  
5 Health and Safety Code.

6 (b) Notwithstanding any other provision of law, no person may  
7 dispose of radioactive waste at a solid waste facility that meets the  
8 requirements of a class III waste management unit pursuant to  
9 Chapter 15 (commencing with Section 2510) of Division 3 of Title  
10 23 of the California Code of Regulations.

11 (c) The board shall adopt regulations requiring both of the  
12 following:

13 (1) Testing and screening criteria, that shall be used to measure  
14 radioactivity in solid waste material being submitted for disposal  
15 of at a solid waste facility.

16 (2) The provision of notice to solid waste haulers and the public  
17 in the form of signage and written notices at the solid waste facility.

18 SEC. 7. The provisions of this act are severable. If any  
19 provision of this act or its application is held invalid, that invalidity  
20 shall not affect other provisions or applications that can be given  
21 effect without the invalid provision or application.

22 SEC. 8. No reimbursement is required by this act pursuant to  
23 Section 6 of Article XIII B of the California Constitution because  
24 the only costs that may be incurred by a local agency or school  
25 district will be incurred because this act creates a new crime or  
26 infraction, eliminates a crime or infraction, or changes the penalty  
27 for a crime or infraction, within the meaning of Section 17556 of  
28 the Government Code, or changes the definition of a crime within  
29 the meaning of Section 6 of Article XIII B of the California  
30 Constitution.



**WASTE MANAGEMENT**

Tuesday, April 9, 2002  
LOS ANGELES CITY COUNCIL  
Statement for the Record on  
ITEM NO. (37)  
Supplemental Agenda

9081 Tujunga Avenue  
Sun Valley, California 91352  
(818) 767-6180  
(818) 252-3247 Fax

Doug Corcoran  
Site Manager  
Bradley Landfill  
Waste Management

#37  
APR 09 2002

DEPUTY

KE

**RE: ALLEGED DISPOSAL OF LOW-LEVEL RADIOACTIVE WASTE  
FROM ROCKETDYNE AT BRADLEY LANDFILL**

On behalf of management and the employees at Waste Management, I am here today tell you what we know about the issues raised last week, and to put our support solidly on the side of improving the law regulating low level radioactive materials.

At the Bradley Landfill, we are in the business of accepting municipal solid waste (MSW), not radioactive waste. To keep radioactive waste out of our landfill, we presently do more than the law requires to safeguard the health and safety of our employees, our customers, and the general public. To go one step further, our Sacramento staff has been working to effect new laws and regulations that will strengthen radioactive waste disposal standards in California.

**Everyone here needs to know that we have not and we will not knowingly accept waste that exceeds radioactivity standards set by the Department of Health Services, or another regulatory agency.** Further, while we were unaware of the nature of the Rocketdyne shipments at the time, we are confident that the public is protected from the material Rocketdyne shipped to Bradley. The material, mainly concrete, dirt and other inert material, was checked by Rocketdyne, The Oakridge Institute of Science and Education, The California Department of Health Services Radiological Health Branch, and the EPA, all of whom confirmed the "release of the material for unrestricted use."

I am available if you have any questions about our operations: 818-252-3147.

A Division of Waste Management of California, Inc.

## **Radiological Cleanup of the Santa Susana Field Laboratory and Waste Disposal to the Bradley Landfill**

**The Boeing Company has not shipped radioactive waste to any municipal landfills or hazardous waste landfills.**

### **SSFL Radiological Cleanup**

- Rocketdyne has met and exceeded all federal and state radiation cleanup standards in its radiological cleanup at the Santa Susana Field Laboratory (SSFL).
- Radiation cleanup standards in use by Rocketdyne at SSFL have been approved by the Department of Energy (DOE) and by the California Department of Health Services (DHS).
- These cleanup standards are consistent with the cleanup standards of the Nuclear Regulatory Commission (NRC) and the Environmental Protection Agency (EPA) and are fully protective of the public and environment.
- For all remediated facilities, federal and state agencies have confirmed by confirmatory sampling and measurement, that these strict cleanliness standards have been met.
- Federal and state agencies have released and cleared buildings, land and waste for "unrestricted use".

### **Waste Disposal**

- Building debris from demolished buildings, and soil, that has been released and cleared by federal and state agencies, can be sent to municipal landfills, without any further regulatory controls. Such material does not pose a health risk to the public or the environment.

### **Background Radiation**

- The average natural background radiation level in the US is approximately 300 millirem/year. Federal and state cleanup standards are very small fractions of this exposure level and less than the variability of natural background.
- The National Academy of Sciences and the Health Physics Society state that there is no scientific evidence that small variations in radiation exposure, less than the variability in natural background radiation levels, result in any increase in cancer risks.

MAY-02 00 13:25 FROM:PUBLIC ITIONS

8185861100

8185865194

PAGE:01

Steve Lafflam  
Division Director  
Safety, Health &  
Environmental Affairs

The Boeing Company  
6633 Canoga Ave.  
P.O. Box 7922  
Canoga Park, CA 91309-7922

May 2, 2000  
In reply refer to 2000RC1944

The Honorable Dianne Feinstein  
United States Senator  
312 N. Spring St., Ste. 1748  
Los Angeles, CA 90012

Attention: Ms. Haleh Khavari

Subject: Building Demolition and Disposal  
Santa Susana Field Laboratory (SSFL), Ventura County, California

Dear Ms. Khavari:

In response to your request for further information regarding the radiological cleanup of the SSFL, please find enclosed a chart describing where released materials from U.S. Department of Energy (DOE) funded projects at the SSFL are sent for disposal.

The formal cleanup, survey and release process at SSFL is fully regulated and ensures that each facility meets all federal and state requirements. This process includes three surveys by Rocketdyne, the Oak Ridge Institute of Science and Education (ORISE) and the California Department of Health Services (DHS) Radiological Health Branch (RHB). Subsequently, when all surveys confirm that the facility meets state and federal standards established to protect public health, the facility is released for unrestricted use.

On January 10-12, 2000, the Environmental Protection Agency (EPA) performed a fourth inspection of several buildings that had already been formally released for unrestricted use by the U.S. Department of Energy (DOE) and the DHS. The EPA had scheduled this final inspection to provide additional assurance to the community that cleanup at the SSFL has been completed correctly and safely. All measurements conducted by EPA verified previous findings indicating the buildings were safe for unrestricted use.

Although there is no formal regulatory requirement for EPA to approve the demolition or disposal of released radiological buildings, we certainly support their efforts. The official process of releasing a building for unrestricted use means: the cleanup standards have been met; the regulatory agency imposes no further radiological controls or oversight for the building; and the building (or any other material from that building) can be safely used for any other purpose without any further radiological controls.

If I can provide any additional information, please let me know.

Sincerely,

  
Steve Lafflam  
Division Director  
Safety, Health & Environmental Affairs

SRL: bl  
Enclosure

cc with enclosure: Senator Boxer's Office/Johanna Williams



## Rocketdyne Material Disposal

Type of Recipient	Locations Receiving Material* From DOE-funded Projects
Landfill	Bradley Landfill Kettleman Hills
Metal Recycler	Hugo-Neu Prowler
Private Property	Santa Clara Ranch

\* Material released for unrestricted use from prior radiological facilities. This includes demolished building debris, such as concrete and metal, and soil.

# **California Integrated Waste Management Board**

## **Board Meeting**

**April 24-25, 2001**

### **AGENDA ITEM 37**

#### **ITEM**

**Discussion Of Department Of Health Services Determinations Regarding Low-Level Radioactive Waste And The Board's Authority Regarding Disposal Of Low Level Radioactive Waste At Solid Waste Landfills**

#### **I. SUMMARY**

The U.S. Department of Energy (DOE) recently approved shipment of contaminated soils with residual levels of radioactivity to the Buttonwillow Class I hazardous waste landfill for disposal. The contaminated soils were generated from cleanup activities at the Boeing-Rocketdyne Santa Susana Field Laboratory facility in Ventura County. The DOE decision has triggered inquiries as to the overall prevention and control of radioactive materials at nonhazardous municipal solid waste facilities.

The purpose of this item is to provide an overview of the basic regulatory and public health aspects of radioactive wastes, information regarding the Boeing-Rocketdyne case, and a summary of key issues and findings regarding the control of radioactive materials at solid waste facilities under authority of the Integrated Waste Management Board (Board).

#### **II. PREVIOUS BOARD ACTION – N/A**

#### **III. OPTIONS FOR THE BOARD**

This is an informational and discussion item only. No Board action is required. The Board may decide to provide direction to staff on the information presented and issues raised during the discussion.

#### **IV. STAFF RECOMMENDATION – N/A**

#### **V. ANALYSIS**

##### **Background**

Radioactive decay or radiation is the release of energy and/or particles from the transformation or disintegration of unstable isotopes. Materials which emit radiation in the form of ionizing radiation are considered radioactive. Ionizing radiation can pose severe acute and/or chronic health effects from internal and/or external exposure depending on the type of radiation (alpha or beta particles or gamma ray electromagnetic) and exposure pathway. Exposure is characterized

April 24-25, 2001

relative to biological effects in humans by Roentgen Equivalent Man or (rem). Although radiation created by humans is of primary concern, radiation is also naturally occurring. The total average human dosage from background radiation is estimated at 360 mrem/yr with 300 mrem from natural sources and 62 mrem from consumer products and medical processes.

Disposal of radioactive waste is a complex issue, not only because of the nature of the waste, but also the complicated regulatory structure for dealing with radioactive waste. Of the five general categories of radioactive wastes, prevention and control of low-level radioactive wastes and naturally occurring radioactive materials is of primary concern with regard to solid waste facilities in California.

Low-level radioactive waste (LLW) is radioactively contaminated industrial or research waste such as paper, rags, plastic bags, protective clothing, cardboard, packaging material, organic fluids, and water treatment residues. LLW is generated by government facilities, utilities, industries, and institutional facilities. Naturally occurring radioactive materials (NORM) generally contain radionuclides found in nature but can be concentrated through human activity such as mineral extraction, power generation (coal ash), water treatment, and oil and gas production.

#### Regulatory Oversight of Radioactive Waste

The California Department of Health Services (DHS), Radiologic Health Branch has regulatory authority over radioactive waste pursuant to Chapter 6.5 (commencing with Section 25100) of Division 20 and Chapter 8 (commencing with Section 114960) of Part 9 of Division 104 of the Health and Safety Code. Activities involving nuclear reactors and reactor fuels are regulated by the U.S. Nuclear Regulatory Commission (NRC). Pursuant to Public Resources Code (PRC) Section 43210, the Board has no enforcement or regulatory authority over radioactive waste.

DHS has authority to release decontaminated cleanup sites within their jurisdiction to unrestricted use based on radioactivity. DHS applies a release standard of 25 mrem/yr for release of sites for unrestricted use. Under this standard, a site will be considered acceptable for unrestricted use if the residual radioactivity that is distinguishable from background radiation results in a dose that does not exceed 25 mrem/yr, and the residual radioactivity has been reduced to levels that are as low as reasonably achievable. DHS has determined that compliance with this standard would result in no significant risk to public health or the environment regardless of whether or not soils from the site were moved to another location. Therefore, soil with residual radioactivity from sites approved for unrestricted use would no longer be regulated or controlled by DHS and potentially could be transported for use as construction fill or landfill cover or disposal at a municipal solid waste landfill.

DHS may also approve on a case-by-case basis an alternate method of disposal of radioactive materials to other than a licensed radioactive waste disposal facility. Board staff is unaware of any cases where DHS has approved alternate transfer or disposal of radioactive materials to a solid waste facility.



### Boeing-Rocketdyne Case

DHS applied a release standard of 15 mrem/yr for unrestricted use for a portion of this site located in Ventura County. Approximately 100,000 cubic feet of soils under this standard were approved for disposal at the Buttonwillow Class I hazardous waste disposal facility in Kern County. The Department of Toxic Substances Control (DTSC) and DHS concurred that these soils do not present a radiologic health hazard and may legally and safely be disposed of at a permitted Class I hazardous waste facility.

Based on Board staff discussion with DTSC, the Boeing-Rocketdyne soils in question would not be allowed for disposal to a municipal solid waste landfills because the soils also contained heavy metals at concentrations exceeding the threshold for hazardous levels.

### Detection and Prevention of Radioactive Materials at Solid Waste Facilities

As with radioactive wastes, the Board does not have authority to regulate hazardous wastes. Although DTSC has regulatory authority over hazardous waste, load checking programs are required by the Board to detect and prevent disposal hazardous wastes under Title 27, California Code of Regulations (27 CCR), Section 20870.

Load checking programs are an important part of protecting public health and the environment at solid waste facilities. The Board does not have a regulation requiring load checking programs to detect and prevent disposal of radioactive waste. However, landfills may implement load checking programs for radioactive waste on their own and such requirements may be applied by a Local Enforcement Agency (LEA) under solid waste facility permit terms and conditions.

Board staff has conducted training sessions for Board and LEA staff regarding radioactivity, with the focus on ensuring the health and safety of inspectors. Personal protective equipment for monitoring radioactivity are increasingly being used by Board and LEA inspectors. Cases have occurred where detection of radioactivity at solid waste landfills has been triggered by alarm systems at the landfill gate or by inspector monitoring equipment. Appropriate health and safety measures are immediately taken if this occurs and the cases are referred for appropriate action to DHS and/or the Local Radiologic Health Department. Guidance documents are available to assist in detection and prevention of radioactive waste at solid waste facilities such as: Conference of Radiation Control Program Directors (CRCPD) Publication 98-3, Detection and Prevention of Radioactive Contamination in Solid Waste Facilities.

In addition, Board staff has encountered radioactive materials in unique circumstances during investigation of closed, illegal, and abandoned disposal sites (e.g. 38<sup>th</sup> St. Burn Dump site, City of San Diego). In those cases, the U.S. Environmental Protection Agency Emergency Response and Radiologic Health Departments are contacted to address any necessary emergency actions to protect public health.

## **Key Issues and Findings**

The following is a summary of questions covering key issues and findings regarding radioactive materials at nonhazardous municipal solid waste facilities:

1. Discussion is needed with DHS concerning the approval processes for unrestricted use sites and alternate disposal methods, in addition to the proper procedures for coordination between DHS and the Board regarding radioactive wastes detected at solid waste facilities. Do these processes incorporate adequate Board and/or LEA notification and/or involvement?
2. Are there specific cases identifiable where DHS has approved an alternative disposal method to a solid waste facility or where unrestricted use site soils were transported to a solid waste facility?
3. Are revised or new regulatory standards needed to detect and prevent radioactive materials from being disposed of at solid waste facilities? What are the appropriate monitoring methods and procedures?
4. What are the appropriate standards of radioactivity that would protect public health and the environment at solid waste facilities from unregulated materials such as naturally occurring radioactivity? If unregulated materials are detected at levels exceeding appropriate health standards, what remedial action measures should be taken and what agenc(ies) would provide oversight?

**Fiscal Impacts - N/A**

## **VI. FUNDING INFORMATION – N/A**

## **VII. ATTACHMENTS - None**

## **VIII. CONTACTS**

Name: Scott Walker  
Name: Julie Nauman

Phone: (916) 341-6319  
Phone: (916) 341-6361

**CITY OF LOS ANGELES SPEAKER CARD**

Date

04-09-2002

APR 09 2002

DEPUTY

Council File No., Agenda Item, or Case No.

#37

I wish to speak before the

LOS ANGELES CITY COUNCIL

Name of City Agency, Department, Committee or Council

Do you wish to provide general public comment, or to speak for or against a proposal on the agenda? ( ) For proposal

( ) Against proposal

Name: DOUG CORCORAN ☒ General comments

Business or Organization Affiliation: WASTE MANAGEMENT'S BRADLEY LANDFILL

Address: 9081 TUJUNGA AVENUE, SUN VALLEY 91352

Street

City

State

Zip

Business phone: 818-252-3147 Representing: WASTE MANAGEMENT

CHECK HERE IF YOU ARE A PAID SPEAKER AND PROVIDE CLIENT INFORMATION BELOW:

☐

Client Name: Phone #:

Client Address: Street City State Zip

Please see reverse of card for important information and submit this entire card to the presiding officer or chairperson.

CITY OF LOS ANGELES SPEAKER CARD

Date

4-9-02

APR 09 2002  
DEPUTY

Council File No., Agenda Item, or Case No.

#37

I wish to speak before the

City Council  
Name of City Agency, Department, Committee or Council

Do you wish to provide general public comment, or to speak for or against a proposal on the agenda? ☒ For proposal

☐ Against proposal

☐ General comments

Name: Dan Hirsch

Business or Organization Affiliation: Committee to Bridge the Gap

Address: 1637 Butler Ave Ste. #203 LA CA 90025  
Street City State Zip

Business phone: (310) 478-0829 Representing:

CHECK HERE IF YOU ARE A PAID SPEAKER AND PROVIDE CLIENT INFORMATION BELOW: ☐

Client Name: Phone #:

Client Address: Street City State Zip

Please see reverse of card for important information and submit this entire card to the presiding officer or chairperson.

**CITY OF LOS ANGELES SPEAKER CARD**

Date 4/9/02

APR 09 2002

Council File No., Agenda Item, or Case No.

#37

I wish to speak before the City Council  
Name of City Agency, Department, Committee or Council

Do you wish to provide general public comment, or to speak for or against a proposal on the agenda? ☒ For proposal  
( ) Against proposal  
Name: Senator Gloria Romero ( ) General comments

Business or Organization Affiliation: \_\_\_\_\_

Address: \_\_\_\_\_  
Street City State Zip

Business phone: \_\_\_\_\_ Representing: \_\_\_\_\_

CHECK HERE IF YOU ARE A PAID SPEAKER AND PROVIDE CLIENT INFORMATION BELOW: ☐

Client Name: \_\_\_\_\_ Phone #: \_\_\_\_\_

Client Address: \_\_\_\_\_  
Street City State Zip

Please see reverse of card for important information and submit this entire card to the presiding officer or chairperson.

**CITY OF LOS ANGELES SPEAKER CARD**

Date

4-9-02

APR 09 2002

Council File No., Agenda Item, or Case No.

#37

DEPUTY

City Council

I wish to speak before the

Name of City Agency, Department, Committee or Council

Do you wish to provide general public comment, or to speak for or against a proposal on the agenda? ☒ For proposal

☐ Against proposal

☐ General comments

Name: Senator Richard Alarcon

Business or Organization Affiliation: \_\_\_\_\_

Address: \_\_\_\_\_

Street

City

State

Zip

Business phone: \_\_\_\_\_

Representing: \_\_\_\_\_

**CHECK HERE IF YOU ARE A PAID SPEAKER AND PROVIDE CLIENT INFORMATION BELOW:**

☐

Client Name: \_\_\_\_\_

Phone #: \_\_\_\_\_

Client Address: \_\_\_\_\_

Street

City

State

Zip

Please see reverse of card for important information and submit this entire card to the presiding officer or chairperson.

37

Blurb is for Tuesday Supplemental, April 9, 2002.

02-0657 - DEPARTMENT OF ENVIRONMENTAL AFFAIRS TO REPORT relative to the status of reported radioactive waste dumped in the City's landfills including the extent of this practice and the hazards, if any, this may pose to City residents.

(Pursuant to adoption of Motion (Padilla - Holden - Greuel) on April 5, 2002)

020657.b1

J. MICHAEL CAREY  
City Clerk

FRANK T. MARTINEZ  
Executive Officer

When making inquiries  
relative to this matter  
refer to File No.

# CITY OF LOS ANGELES

CALIFORNIA



JAMES K. HAHN  
MAYOR

Office of the  
**CITY CLERK**  
Council and Public Services  
Room 395, City Hall  
Los Angeles, CA 90012  
Council File Information - (213) 978-1043  
General Information - (213) 978-1133  
Fax: (213) 978-1040

HELEN GINSBURG  
Chief, Council and Public Services Division

02-0657

April 5, 2002

Councilmember Padilla  
Councilmember Holden  
Councilmember Greuel  
Chief Legislative Analyst  
Department of Environmental Affairs

RE: STATUS OF REPORTED RADIOACTIVE WASTE DUMPED IN THE CITY'S LANDFILLS  
INCLUDING THE EXTENT OF THIS PRACTICE AND THE HAZARDS, IF ANY, THIS MAY  
POSE TO CITY RESIDENTS

At the meeting of the Council held April 5, 2002, the following action was  
taken:

Attached report adopted .....	_____
Attached motion (Padilla - Holden - Greuel) adopted.....	_____ X
Attached resolution ( - ) adopted.....	_____
Mayor concurred.....	_____
FORTHWITH.....	_____ X
Mayor approved.....	_____
Mayor vetoed.....	_____
To the Mayor FORTHWITH.....	_____
Mayor failed to act - deemed approved.....	_____
Findings adopted.....	_____ X

*J. Michael Carey*

City Clerk  
kw

steno\020657



**M O T I O N**

Disturbing reports have surfaced that low-level radioactive waste might have been dumped at the Bradley Landfill in Sun Valley for much of the past decade without the knowledge of state waste regulators or local officials.

A state Senate inquiry into the change of state regulations governing cleanup of sites that use radioactive material, which range from cancer clinics to top-secret defense contractors, has indicated that the state Department of Health Services created a loophole that allowed the practice in order to bring state rules in line with federal Department of Energy standards.

~~dumped~~ The inquiry also revealed, disturbingly, that these radioactive materials were being ~~dumped~~ without the knowledge of the local jurisdiction, and without the knowledge of the local operator.

The City needs an immediate assessment of the extent of this practice on the landfills located in the City, and an independent assessment of the dangers which this may pose to our residents.

I THEREFORE MOVE that the Council determine, as provided in Section 54954.2(b)(2) of the Government Code, and pursuant to Rule 23 of the Rules of the City Council, that there is a need to take immediate action on this matter AND that the need for action came to the attention of the City Council subsequent to the posting of the agenda for today's Council meeting.

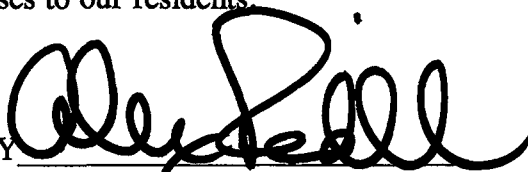
I FURTHER MOVE that the Department of Environmental Affairs be directed to immediately review the status of reported radioactive waste dumped in the City's landfills and to report back at the Council's next meeting with a comprehensive report including the extent of this practice and the hazards, if any, which this poses to our residents.

*Findings and Motion*  
**ADOPTED**

APR 0 5 2002

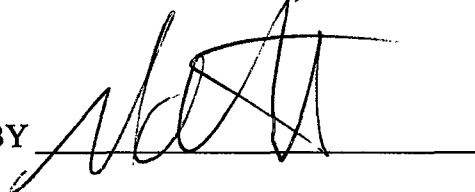
LOS ANGELES CITY COUNCIL  
**FORTHWITH**

PRESENTED BY



ALEX PADILLA  
Councilmember, 7<sup>th</sup> District

SECONDED BY



April 5, 2002  
ak

COUNCIL VOTE

Apr 5, 2002 12:19:39 PM, #13

Special 2 - Padilla  
Voting on Item(s): *Findings Adopted*  
Roll Call

BERNSON	Absent
GALANTER	Yes
GARCETTI	Absent
GREUEL	Yes
HAHN	Yes
HOLDEN	Yes
LABONGE	Yes
MISCIKOWSKI	Absent
PACHECO	Yes
PERRY	Yes
REYES	Yes
*RIDLEY-THOMAS	Yes
WEISS	Yes
ZINE	Absent
PADILLA	Yes

Present: 11, Yes: 11 No: 0

COUNCIL VOTE

Apr 5, 2002 12:21:37 PM, #14

Special 2 - Padilla  
Voting on Item(s): *Motion Adopted*  
Roll Call

BERNSON	Absent
GALANTER	Yes
GARCETTI	Absent
GREUEL	Yes
HAHN	Yes
HOLDEN	Yes
LABONGE	Yes
MISCIKOWSKI	Absent
PACHECO	Yes
PERRY	Yes
REYES	Yes
*RIDLEY-THOMAS	Yes
WEISS	Yes
ZINE	Absent
PADILLA	Yes

Present: 11, Yes: 11 No: 0