

DEPARTMENT OF HEALTH SERVICES  
RADIOLOGIC HEALTH BRANCH  
P.O. BOX 942732, MS-178  
SACRAMENTO, CA 94234-7320  
(916) 445-0931



August 4, 2000

Mr. Fred Combs  
Nuclear Regulatory Commission  
Office of State and Tribal Programs  
OWFN-3C10  
11555 Rockville Pike  
Rockville, MD 20852

Dear Mr. Combs:

Enclosed please find a copy of a Cease and Desist Order, which was issued by the California Department of Health Services's Radiologic Health Branch on July 24, 2000. As you can see, the Order is directed to various persons and mandates the decontamination of the property at 170 West Providencia St., Burbank, CA.

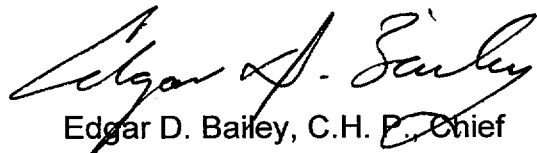
Please be advised that the issuance of this Order does not alter the RHB's position, as outlined in my November 5, 1996 letter to Ross A. Scarano of the U.S. Nuclear Regulatory Commission (NRC), that the regulatory responsibility for ensuring that the site is cleaned up to currently acceptable levels rests with the NRC.

In addition, I have never received a response to my November 5, 1996 letter to Mr. Scarano. I would appreciate NRC's providing me with a response, and I am enclosing a copy of my letter. If one has been sent previously, I apologize and ask that you provide me with a copy.

If you any questions, you may contact me at (916) 322-3482.

Thank you.

Sincerely,



Edgar D. Bailey, C.H. P., Chief

Enclosures

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STATE OF CALIFORNIA—HEALTH AND WELFARE AGENCY

PETE WILSON, Governor

## DEPARTMENT OF HEALTH SERVICES

14744 P STREET  
D. BOX 942732  
ACRAMENTO, CA 94234-7320  
(916) 445-0931



November 5, 1996

Mr. Ross A. Scarano, Director  
Division of Nuclear Materials Safety  
U. S. Nuclear Regulatory Commission  
Region IV  
611 Ryan Plaza Drive, Suite 400  
Arlington, Texas 76011-8064

Dear Mr. Scarano:

This letter is in response to your letter of April 8, 1996, regarding the current radiologic status of two sites in Burbank, California, formerly licensed by either the U. S. Nuclear Regulatory Commission (NRC) or its predecessor, the U. S. Atomic Energy Commission (AEC).

We appreciate the efforts currently being made to reassess these sites that were previously released for unrestricted use by the NRC and the AEC. As you are aware, the Radiologic Health Branch (RHB) has participated or assisted in a number of these onsite and laboratory evaluations. Mr. H. Dean Chaney of your staff is to be especially commended for his professionalism and diligence in conducting these reviews and making sure that the RHB has been informed of them and included in the actual site visits.

Earlier this year, RHB participated with the NRC in surveys and laboratory analyses of the levels of radiological contamination at facilities located at 703 South Main Street and 170 West Providencia Street, in Burbank. Based upon the findings from these efforts, the NRC considers both facilities to be contaminated above release limits established by current NRC policy.

In your letter you stated that the regulatory responsibility for ensuring that these sites are cleaned up to the currently acceptable levels lies with the State of California and RHB, under the terms of the Agreement between the NRC and the State of California. We do not agree with that conclusion.

It is our opinion that the regulatory responsibility and authority, if any, to force the cleanup of these sites rests with the NRC.

Mr. Ross A. Scarano

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November 5, 1996

In coming to our conclusion regarding which agency has regulatory responsibility for these sites, several factors were considered.

Both sites were authorized use locations on licenses issued by the AEC. Usage of radioactive materials at the 703 South Main Street ceased many years before the Agreement was effective. It is unclear how long there was work being conducted at the 170 West Providencia Street site, but it appears that the use of radioactive materials ceased prior to California becoming an Agreement State. Other information suggests that there may have been an effective AEC or NRC license (for special nuclear materials, perhaps) at that location even after California was an Agreement State.

We can find no evidence that either site was ever licensed by the State of California.

You correctly asserted that when California became an Agreement State on September 1, 1962, the Agreement gave the state certain rights and responsibilities with regard to byproduct, source, and small quantities of special nuclear materials. These rights and responsibilities are explicitly delineated in California Health and Safety Code section 115235. A careful review of the provisions of this statute discloses no requirement that California exercise regulatory authority over sites previously licensed by the AEC where those licenses were terminated by the AEC prior to California becoming an Agreement State. California acted in full faith and reliance that any sites released by the AEC met the release criteria in effect at that time. It should be noted that those criteria were essentially the same as those in present NRC policies and guidance.

Neither does the Agreement explicitly give California authority over sites released by the NRC after the Agreement became effective, for example, a special nuclear materials license or a reactor license.

It is our belief that the Agreement does not transfer regulatory authority or responsibility for regulatory oversight over sites in the state formerly released by the AEC or NRC, provided there is not a licensable quantity of radioactive material present.

As you are aware, at previously identified sites such as the Aerojet facility, there has been a responsible company in existence which eagerly stepped up to conduct the necessary surveys, evaluations, and cleanups even though the property was no longer owned/occupied by them. In those cases, RHB and NRC have worked together to ensure that appropriate efforts were undertaken and completed. These two sites in Burbank may pose an entirely different scenario in that there may not be such a company. Responsible parties may have to be determined, after possibly lengthy and expensive legal review of

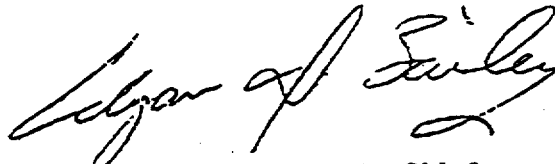
Mr. Ross A. Scarano  
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the existing companies and the current owners, to determine which party or parties are legally and financially responsible for the cleanup of these sites. It is our opinion that such costs should be borne by the NRC since State of California appears to have had no part in creating the problem and was not informed until recently that such a problem existed.

We presume that after you have reconsidered the facts related to these two sites, you will agree with our conclusion regarding regulatory authority and responsibility. RHB stands ready to assist you in your efforts.

If you have any questions regarding our position and expectations, or want to discuss them, please let me know.

Sincerely,

A handwritten signature in cursive script, reading "Edgar D. Bailey".

Edgar D. Bailey, C.H.P., Chief

**DEPARTMENT OF HEALTH SERVICES**  
**RADIOLOGIC HEALTH BRANCH**  
P.O. BOX 942732, MS-178  
SACRAMENTO, CA 94234-7320  
(916) 445-0931



July 24, 2000

**BY CERTIFIED MAIL**

**TO:** Joseph A. Thomson and Virginia Thomson,  
Trustees of the Thomson Family Trust  
831 Foothill Drive.  
Glendale, CA 91201

ICN Pharmaceuticals, Inc.  
3300 Hyland Ave.  
Costa Mesa, CA 92525  
Attn: Tosh Ushino, Radiation Safety Officer

Nucor Corporation, Inc.  
2100 Rexford Rd.  
Charlotte, NC 28211-3484

Rhone-Poulenc, Inc.  
500 Arcola Road  
Collegeville, PA 19426-3930

**CEASE AND DESIST ORDER**  
**170 WEST PROVIDENCIA STREET, BURBANK, CA**

You are advised that California Health and Safety Code section 114715 states:

No person shall bury, throw away, or in any manner dispose of radioactive wastes within the state except in a manner and at locations as will result in no significant radioactive contamination of the environment.

Your are further advised that California Health and Safety Code section 115165 states:

It shall be unlawful for any person to use, manufacture, produce, knowingly transport, transfer, receive, acquire, own, or possess, any source of ionizing radiation unless licensed by or registered with the department in accordance with this chapter and regulations issued thereunder.

You are further advised that California Health and Safety Code section 115185 states in part:

If the department determines that any object, building, structure, or premises is contaminated by radioactive material and constitutes a hazard to the public health, it shall order the person who has control of the object, building, structure, or premises to cease to use or occupy and to exercise due caution to prevent others from using or occupying the object, building, structure, or premises, except to the extent necessary to accomplish the decontamination, or to the extent necessary to accomplish the disposal of the object, building, or structure as radioactive waste. The normal use or occupancy of the object, building, structure, or premises may not be resumed until decontamination has been accomplished and a release obtained from the department. ...

You are further advised that California Health and Safety Code section 115180 states:

The term "decontamination," as used in this chapter, means the reduction of the level of contamination from radioactive material to the level that the department determines is reasonably necessary to eliminate the hazard to public health that is caused by the contamination of any object, building, structure, or premises. Any order by the department pursuant to Section 115185 shall prescribe the level to which the contamination is required to be reduced in order to eliminate the hazard to the public health.

You are further advised that California Health and Safety Code section 115200 states:

If the contamination of the object, building, structure, or premises resulted from the negligence of another person, then the department may require that person to pay all reasonable and necessary costs incurred by the department in seizing and decontaminating or disposing of the object, building, structure, or premises and may maintain any action necessary to recover those costs.

The Department of Health Services (Department) has reason to believe that you or persons for whose actions you are liable possess or have possessed licensable radioactive material at 170 West Providencia Street, Burbank, California (Providencia Property) and/or have unlawfully disposed of radioactive material at the Providencia Property which resulted in significant radioactive contamination of the environment.

In particular, the Department believes that during the 1950's and the early 1960's, Isotope Specialties Company manufactured radioactive sealed sources and tracing materials at the Providencia Property. In addition, the Department believes that Research Chemicals Corporation performed operations at the Providencia Property involving the use of thorium/rare earth ores. The Department also has reason to believe that Isotope Specialties Company and/or Research Chemicals Corporation stored at the Providencia Property other radioactive materials, which were acquired from other users of radioactive materials. Finally, the Department believes that the Providencia Property is currently owned by and in the control of Joseph A. Thomson and Virginia Thomson or the Thomson Family Trust.

The Department further believes that the Providencia Property is contaminated by radioactive material and constitutes a hazard to the public health. A partial survey has been conducted by Rogers & Associates Engineering Unit, Dames & Moore. The report of the survey, "Site Characterization of Residual Radioactivity from Former Radioactive Materials License Operations Thomson Property, Burbank, California" (September 1999, Rogers & Associates Engineering Unit, Dames & Moore, Inc.) (Site Characterization Report), gives some indication of the potential radioactive contamination at the Providencia Property. A copy of the "Summary and Conclusions" portion of the Site Characterization Report is attached hereto.

According to the Site Characterization Report, the survey was not completed because of the great extent of radioactive contamination found. The Site Characterization Report demonstrated that several locations were contaminated by radioactive material and that there was also unknown radioactive contamination. The Department believes that the survey indicated that there is a strong possibility that radioactive waste or material could be buried beneath the buildings and areas outside the buildings, such as the outdoor loading area and driveway.

The Department believes that the contamination at the Providencia Property consists of at least the following: Cesium-137, Thorium-230, Thorium-232 and its decay products, Cobalt-60 and Strontium-90, Europium-154, uranium, tritium and radium.

This contamination has caused the following risk to public health. The partial survey conducted at the site found "radiation exposure rates in boreholes in the area used to store Co-60 [Cobalt-60] during the former license operations indicated exposure rates of about 200 mrem/hr [emphasis added] or higher." (Site Characterization Report, page 6-2.) By comparison, a person who is exposed to 100 millirem over any period of time would incur an increased risk of fatal cancer of five in 100,000. (See National Council on Radiation Protection and Measurements, Report No. 116, p. 3.) In addition, the Department has reason to believe that any underground radioactive contamination at the site could result in contamination of the ground water.

BASED ON THE HAZARD TO PUBLIC HEALTH CAUSED BY THE ABOVE-DESCRIBED VIOLATIONS AND RADIOACTIVE CONTAMINATION, IT IS HEREBY ORDERED, EFFECTIVE IMMEDIATELY, THAT YOU CEASE TO USE OR OCCUPY AND TO EXERCISE DUE CAUTION TO PREVENT OTHERS FROM USING OR OCCUPYING 170 WEST PROVIDENCIA STREET, BURBANK, CALIFORNIA, WITH KNOWN CONTAMINATION EXCEPT AS APPROVED BY THE DEPARTMENT OR TO THE EXTENT NECESSARY TO ACCOMPLISH THE DECONTAMINATION OR DISPOSAL OF 170 WEST PROVIDENCIA STREET, BURBANK, CALIFORNIA.

IT IS FURTHER ORDERED THAT YOU DECONAMINATE 170 WEST PROVIDENCIA STREET, BURBANK, CALIFORNIA TO A LEVEL WHICH WILL RESULT IN NO GREATER THAN 25 MILLIREM PER YEAR TOTAL EFFECTIVE DOSE EQUIVALENT (TEDE) TO MAXIMALLY EXPOSED PERSONS OF THE CRITICAL GROUP ON SITE, CONSIDERING APPROPRIATE LAND USE SCENARIO AND EXPOSURE FROM ALL PATHWAYS. IT IS ALSO ORDERED THAT YOU EXPEND ALL EFFORTS TO ATTAIN THAT EXPOSURE WHICH IS AS LOW AS REASONABLY ACHIEVABLE.

IT IS FURTHER ORDERED THAT YOU, PRIOR TO COMMENCING DECONTAMINATION, SUBMIT TO THE DEPARTMENT, AND OBTAIN APPROVAL FROM THE DEPARTMENT OF, A WORKPLAN WHICH SHALL PROVIDE FOR THE FOLLOWING: 1) ADDITIONAL CHARACTERIZATION WHICH SHALL ENCOMPASS ALL RADIOACTIVE CONTAMINATED AREAS ON SITE; AND, IF NECESSARY 2) REMEDIATION WORKPLAN; 3) WORKPLAN FOR CONDUCTING FINAL STATUS SURVEY; AND 4) FINAL CLEARANCE REPORT WHICH INCLUDES A DOSE ASSESSMENT THAT DEMONSTRATES ATTAINMENT OF THE NO GREATER THAN 25 MILLIREM PER YEAR EXPOSURE REQUIREMENT IDENTIFIED ABOVE.

IT IS FURTHER ORDERED THAT YOU MAY NOT RESUME OR PERMIT ANY PERSON TO RESUME OCCUPANCY OF 170 WEST PROVIDENCIA STREET, BURBANK, CALIFORNIA UNTIL DECONTAMINATION HAS BEEN ACCOMPLISHED AND A RELEASE OBTAINED FROM THE DEPARTMENT.

DATE

July 24, 2000

ORDERED BY

  
Edgar D. Bailey, C.H.P., Chief  
Radiologic Health Branch



Cease and Desist Order  
170 West Providencia Street,  
Burbank, CA  
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Cc: Martha Sharp, Esq.  
Loeb & Loeb LLP  
1000 Wilshire Blvd.  
Suite 1800  
Los Angeles, CA 90017-2475  
(Counsel for Joseph A. and Virginia Thomson)

Martha H. McKeith, Esq.  
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Los Angeles, CA 90012-2601  
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Bryan Brown, Esq.  
McCutcheon, Doyle, Brown & Enersen  
LLP  
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Suite 4400  
Los Angeles, CA 90071  
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2049 Century Park East  
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Los Angeles, CA 90067  
(Counsel for ICN Pharamaceutical, Inc.)

D&M-RAE-9824/2-1

**SITE CHARACTERIZATION OF RESIDUAL RADIOACTIVITY  
FROM FORMER RADIOACTIVE MATERIALS LICENSE OPERATIONS  
THOMSON PROPERTY, BURBANK CALIFORNIA**

*Prepared For*  
**Joseph Thomson**

September 1999

*Prepared by*  
**Rogers & Associates Engineering Unit  
Dames & Moore, Inc.  
515 East 4500 South  
Salt Lake City, UT 84107**

## 6. SUMMARY AND CONCLUSIONS

Isotope Specialties Company (IS) manufactured radioactive sealed sources and tracing materials (used in pharmaceutical applications) during the 1950's and early 1960's, in Burbank, California, at 170 West Providencia (denoted as "Site") under a radioactive materials license. Research Chemicals Corporation (RBC) also performed operations at the Site, using thorium/rare earth ores, apparently under a separate license. There were several name changes and changes in corporate identity and ownership during the operations at the site.

The Site has subsequently been used by the present property owner (Joseph Thomson) and leased to others for commercial/industrial operations. Part of the site is vacant; however the rear area is used as an impound lot for Burbank, the front area is rented to adjoining properties for parking, and a tenant/proposed owner uses some of the front offices. The lease for the impound lot was apparently terminated in September 1999, after the site characterization was performed.

In the mid 1990's the U.S. Nuclear Regulatory Agency (NRC) initiated a program to review former sites where radioactive licensing activities had been terminated. Based on the review of the license and records for termination of license for the site, NRC performed a site inspection. The NRC site inspection identified several areas throughout the Site which contain elevated gamma radiation levels. The California Department of Health Services, Radiologic Health Branch (California RHB) participated in the inspection. Based on the inspector's findings, it was concluded that the Site contains radioactive contamination above the NRC's current residual radioactivity criteria for release of such facilities for unrestricted use, and that additional decontamination is necessary.

A Sampling and Analysis Plan (SAP), supplemented in response to requests from the California Radiologic Health Branch (RHB) (Bernhardt 1998, Bernhardt 1999), was prepared to characterize the Site. This site characterization report provides results from implementing the SAP. The RHB required that the SAP be performed under a radioactive materials license,

and. Surface Technology Systems Inc. (STS), a member of the Rogers and Associates Engineering Team for the site characterization, provided the license. The site characterization was performed during March 29-through April 17, -1999. Due to the contamination of radioactivity found on the site, RHB requested that the Site be kept under license and that access to contaminated areas of the Site be controlled. The STS license has been kept active at the site and periodic visits are made to the site to ensure controls are being properly maintained.

Implementation of the SAP included extensive sampling and analysis of samples, comprehensive radiation survey of the site, and performing special investigations to more completely characterize the presence of residual contamination at the Site. The results from the site investigation indicate that residual contamination on the surface and at several subsurface locations exceeds the Interim DCGLs (see Chapter 1) in the SAP (Bernhardt 1999). The primary radionuclide contaminant on the site is Cs-137. However, there are also areas with extensive contamination of Th-230 and Th-232 and its decay products. Limited remediation removed contaminated material above the normal regulatory definition of source material of 0.05 percent of total uranium and thorium by weight (estimated concentration in removed materials was about 1 percent). There is still contamination in at least one area with a source material content of about 0.5 percent by weight. Because of the relatively high levels of radiation exposure found in several subsurface locations, the levels of contamination were not fully characterized in all of the subsurface areas. Specifically, radiation exposure rates in boreholes in the area used to store Co-60 during the former license operations indicated potential exposure rates of about 200 mrem/hr or higher. There was also a steel sump in the area of former hot cells with an exposure rate in the milliroentgen per hour range (mR/hr). Cs-137 concentrations in samples exceeded several thousand picocuries per gram (Interim DCGL is 15 pCi/g) and concentrations of Th-230 in several samples exceeded several thousand picocuries per gram (Interim DCGL of 10 pCi/g of total thorium). Low concentrations of residual Sr-90 (maximum of 3 pCi/g) were found in several locations, but all identified concentrations of Sr-90 were below the Interim DCGL of 5 pCi/g).

The subsurface contamination that was found was generally related to specific areas of the former licensed operations (e.g., Co-60 storage pool or the Hot Cells), or based on surface