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The Honorable Edward Zorinsky
United States Senate

Dear Senator Zorinsky:

As requested in your July 12, 1977, letter we have looked into the practices followed by the Veterans Administration (VA) and the Department of Defense (DOD) in buying medical X-ray film. Both VA and DOD purchase substantial quantities of general purpose and special purpose film.

General purpose film is commonly used for X-rays of the skull, chest, arms, legs, and hands. It will accommodate the widest range of exposure settings, and the setting used depends on the thickness of tissue and bone structure in the areas of the body being examined. Short exposures are required for areas with minimal tissue and bone thickness; long exposures are needed for areas with thicker tissue and bone.

Certain X-rays such as vascular studies, require very short exposures; other X-rays such as those used in conjunction with cancer therapy require very long exposures. For these studies, special purpose film is available.

VA PROCUREMENT PROCEDURES

VA medical facilities purchase X-ray film from the General Services Administration's Federal Supply Schedule (FSS). X-ray film is made available on the FSS through one-year contracts with various film manufacturers. The FSS is considered the mandatory source of supply for X-ray film for the VA and other agencies of the Executive Branch of the Government except DOD and the Postal Service. However, all Federal agencies are allowed to use the FSS.

The FSS is divided into sections which list the X-ray film available for purchase. The criteria for using the different sections varies. Section A of the FSS contains only general purpose X-ray film and is intended to be VA's primary source of supply. This film is made available through a one-year contract to the lowest bidder. The contract for Section A has been awarded to GAF Corporation or Eastman Kodak Company for the past four years as shown below.

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<u>Contractor</u>	<u>Contract Period</u>
GAF Corporation	July 1, 1977 - June 30, 1978
GAF Corporation	July 1, 1976 - June 30, 1977
GAF Corporation	July 1, 1975 - June 30, 1976
Eastman Kodak Company	July 1, 1974 - June 30, 1975

If a VA hospital's radiology service does not believe the Section A film is adequate, it must justify using an alternative FSS source to the hospital's supply service. If the justification is adequate, the hospital's supply service orders the film requested.

The Supply and Radiology Services at VA's Central Office do not get involved in approving justifications for using an alternative source. Officials from these services said that they are not in a position to judge which film a hospital should use and the decision should be made by the individuals responsible for diagnosing patients under the conditions which exist at their hospitals.

The alternative source of procurement available to VA and other Federal agencies is Section B of the FSS. This section contains both general and special purpose film, and all types, sizes and speeds of medical X-ray film are available. This film is also supplied through one-year contracts with the film manufacturers. Manufacturers under contract to supply film under FSS Section B for the period October 1, 1976 to September 30, 1977 were:

<u>Contractor</u>	<u>Film brand</u>
Minnesota Mining & Manufacturing Company	3M
E. I. DuPont DeNemours & Company	Cronex
Eastman Kodak Company	Kodak
Low X-Ray Division of IPCO Hospital Supply	Agfa-Gevaert
GAF Corporation	GAF <u>a/</u>

a/Since GAF Corporation had the contract for FSS Section A, they were not allowed to provide general purpose medical X ray film under Section B. However, GAF Corporation did provide special purpose film under FSS Section B.

As shown below, prices for general purpose film were higher in the FSS Section B than in Section A during the fiscal year 1977 contracting period.

Prices of General Purpose Medical X-ray Film a/
(500 sheets)

<u>Size</u>	<u>Section A</u>	<u>Section B</u>		
	<u>GAF</u>	<u>Kodak</u>	<u>Cronex</u>	<u>3M</u>
5" X 12"	\$ 87.52	\$ 100.55	\$ 100.40	\$ None
7" X 17"	167.90	181.85	181.89	180.25
8" X 10"	111.47	124.80	124.96	123.83
9½" X 9½"	125.00	139.90	139.98	138.71
10" X 12"	164.58	182.75	182.69	181.03
11" X 14"	211.11	232.15	232.13	229.97
14" X 14"	269.00	293.25	293.41	290.75
14" X 17"	325.00	354.30	354.50	351.26

a/Agfa-Gevaert prices are not included because total sales during this period were only about \$520.

We contacted officials at the Omaha and Des Moines VA hospitals to find out how those hospitals had justified purchasing Kodak rather than GAF film. We also contacted the Washington, D.C. VA hospital to determine what X-ray film they used.

Omaha VA hospital

The Chief of Supply Service at the Omaha VA hospital said that the hospital had obtained GAF film from FSS Section A for the past two fiscal years; however, in July 1977, they changed to Kodak. The Chief of Radiology justified the change on the basis that Kodak was superior to GAF. He said that Kodak X-ray film results in easier to read X-rays and requires less retakes. Thus, diagnosis decisions are more easily reached.

The Chief of Supply Service said that the cost of GAF film purchased from Section A during the period October 1976 through June 1977 was about \$49,000. If the hospital had purchased Kodak film from Section B during the same period, the cost would have been about \$51,000, a difference of \$2,000 over about 9 months.

Des Moines VA hospital

Officials at the Des Moines VA hospital said they had been using Kodak film for the past three years with good results. During the period from February 23, to March 2, 1977, hospital officials conducted a test to compare X-rays obtained using GAF film and chemicals with those using Kodak film and chemicals. A summary of the test results prepared by the acting Chief of the Radiology Service referred to certain deficiencies in the GAF film when compared to Kodak. The test showed that GAF X-rays had:

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- heavier, higher fog level and less contrast,
- poor resolution and lack of detail exhibition, and
- wide variation in the quality of film.

The acting Chief of Radiology Service concluded that GAF film and chemicals were not acceptable for use in the hospital's radiology service.

Based on the test results, the Des Moines hospital continued to purchase Kodak film. From August 1, 1976 to July 31, 1977, the Des Moines VA hospital purchased about \$28,700 of Kodak X-ray film.

Washington VA hospital

In contrast with the situations at the Des Moines and Omaha VA hospitals, the Washington, D.C. VA hospital has been using GAF X-ray film for many years and has found it satisfactory. In fact, in fiscal year 1975, when Kodak was awarded the contract to supply film for Section A, the Washington VA hospital requested permission to obtain GAF film from FSS Section B.

The justification for deviation stated, in part, that GAF film had proven to be very satisfactory for supportive services to patient treatment, and the radiology service believed that GAF film would be more compatible with present methodologies.

The variations in radiologists' opinions of GAF film, as discussed above, indicate that both individual and hospital experience strongly influence the choice of X-ray film.

DOD PROCUREMENT PROCEDURES

The Defense Personnel Support Center (DPSC), located in Philadelphia, Pennsylvania is responsible for purchasing and stocking general purpose X-ray film for DOD. Contracts are awarded for a one-year period to the lowest bidder. GAF Corporation had this contract in the 1976 contract period; Minnesota Mining & Manufacturing Company had it in the 1975 and 1977 periods.

In a report ^{1/} to the Secretary of Defense (see enclosure), we noted that many military hospitals were not using the DPSC-stocked film for a variety of reasons. Chief radiologists told us that

- the DPSC film produced lower quality X-rays in less detail than the film regularly used;

^{1/}Letter report to the Secretary of Defense concerning X-ray film procurement (MWD-76-75, January 15, 1976)

- locally purchased film assured physicians of quality X-rays;
- doctors did not want to change from a film that gives good results to one with unknown qualities;
- a radiologist preferred using the film he used throughout his training and had no experience with DPSC-stocked film; and
- the best quality film available should be purchased to obtain the best results.

Radiology consultants to the Army and Air Force Surgeons General also believed the DPSC-stocked film was not as good as other brands. The radiology consultants said they did not have much input into DPSC's decision regarding what X-ray film to stock and did not comment on the film's acceptability when DPSC changed film manufacturers.

In our report we recommended that DOD, with appropriate input from radiologists,

- establish quality standards for its X-ray film,
- insure that DPSC stocks film that meets the standards, and
- use large-volume, central procurement for X-ray film needs, if money can be saved.

Since our report was issued, the Chairman of the Defense Medical Material Board informed the Commander of DPSC that the military services and the Board had concluded that a critical need existed for each radiologist to have the X-ray film which best suited his individual professional expertise. The Chairman explained that the interpretive nature of the professional services rendered and the dependence of these interpretations upon the sensitive chemical and physical properties of radiographic film required radiologists to possess and maintain a high degree of confidence in the film used. He said this confidence level is achieved by using a particular film over an extended period of time with dependable results. He indicated that it was the professional judgment of the radiology consultants, in consonance with the Board, that individual radiologists should be permitted to acquire the brand of film in which they had confidence.

In accordance with these conclusions, DPSC issued solicitations for bids on four brands of film--Kodak, Cronex, GAF, and 3M. The closing date for these solicitations was September 16, 1977; DPSC expects that indefinite quantity contracts will be awarded to these manufacturers in October 1977. Under the new procedure, DPSC will discontinue stocking

X-ray film; hospitals in the United States will take delivery of X-ray film directly from the contractor. For overseas requirements, DPSC will direct the manufacturers to send film to designated U.S. ports where it will be packaged for shipment to the requesting organizations. Under this new approach, DOD will also reclaim silver from used X-ray film and furnish it to the film suppliers. The price of the film will be reduced by the value of the silver provided.

TOTAL FEDERAL X-RAY FILM
PROCUREMENTS FROM FSS

We obtained data showing total X-ray film procured through the FSS during the 1975, 1976, and 1977 contract periods. As shown in the table below, GAF's sales have increased over 100 percent since 1975.

Federal Supply Schedule
X-ray Film Procurement (note a) (note b)

<u>Film</u>	<u>1975</u>	<u>1976</u>	<u>c/d/ 1977</u>
GAF	\$ 1,324,227	\$ 3,353,282	\$ 3,314,532
Kodak	10,103,031	8,364,924	5,977,416
Cronex	7,397,096	8,818,350	8,697,052
3M	43,179	49,499	127,832
	<u>\$18,867,533</u>	<u>\$20,586,055</u>	<u>\$18,116,832</u>

a/The contract period for FSS Section A does not coincide exactly with that of the contracts for FSS Section B. Section A contracts run from July 1 through June 30, while Section B contracts run from October 1 through September 30. We have shown procurement from the two contract periods as one contract year's procurement.

b/These are sales figures compiled by the suppliers under the various FSS contracts for sales to all Government agencies. These figures do not include Government purchases outside FSS contracts.

c/Since 1977 figures for FSS Section B procurements were only available through June 30, 1977, we included an estimate for the period July 1, 1977, through September 30, 1977.

d/Does not include about \$520 in fiscal year 1977 sales by Agfa-Gevaert. A VA contracting officer told us there were no Agfa-Gevaert sales in fiscal years 1975 and 1976.

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As pointed out in your constituent's letter, radiologists do develop preferences for particular brands of X-ray film. They feel more confident of making proper diagnoses when using the brand of film which has produced good results. This appears to be borne out by the views of the Des Moines VA hospital officials who preferred Kodak film as well as the Washington VA hospital officials who preferred GAF film. Further, it appears that both DOD and VA strongly believe that the individuals who have responsibility for diagnosing patients should have the flexibility to choose the X-ray film they believe most appropriate.

We trust the information presented here and in the enclosed letter will serve your purpose.

Sincerely yours,


Gregory J. Hart
Director

Enclosure