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SEP 1 1984

9/15/84

Ref: SA/JOL

NOTE FOR: Jack Metzger, IE

SUGGESTED QUESTIONS FOR AEC/ROC PER YOUR REQUEST

o The AEC/ROC telex begs several questions:

- How were they able to pin down the dates that the contaminated steel was manufactured? The response strongly suggests AEC/ROC had prior knowledge of a contaminating event. When were the inspections at Taiyang and Y-Sheng conducted?
- Was Taiyang the source of the contaminated steel or did Taiyang use scrap steel from another source that was already contaminated?
- What levels of contamination were found by the AEC/ROC? Alternatively, what is "slightly contaminated" equivalent to in terms of mR/hr at contact and $\mu\text{Ci/gm}$? (It would be useful to see if their data is comparable to California's.)
- Were any other steel products manufactured by Taiyang which were exported to the U.S.?
- What was the source of the contamination?
- Is the Taiyang plant decontaminated?
- Sales of fittings from Taiyang and Taiwan Speco are suspended. What about Y-Sheng?
- Taiwan Speco reportedly has no stock. What about Taiyang and Y-Sheng?
- Is there any chance contaminated steel has been exported to the U.S. through a distributor in another country (either physically or thru "paper" transfers)?
- Were any contaminated fittings distributed locally in Taiwan? If so, what action did AEC/ROC take?

9404120188 930629
PDR FOIA
KAWATA93-203 PDR

Joe L. Lubenau, OSF

Abz

FACILITY: Western American Manufacturer
Valencia, California
and other Non-Licensees

Licensee Emergency Classification
 Notification of Unusual Event
 Alert
 Site Area Emergency
 General Emergency
 Not Applicable

SUBJECT: FIXED COBALT-60 CONTAMINATED PLUMBING FITTINGS - UPDATE
(See PNO-V-84-57 dated 8/31/84)

This updates the earlier Preliminary Notification on the subject. Based on information which the State of California developed at Western American Manufacture, the contaminated fittings were imported from Taiwan. We now have information from Taiwan relating to further distribution of potentially contaminated fittings in the U.S. and California has access to a list of customers of Western American Manufacture who potentially may have received contaminated fittings. The details follow.

According to a Taiwan telex dated 9/6/84, surveys at the manufacturer and distributor of fittings showed very low radiation levels. Taiwan suspended any further shipments from the Taiwan distributors. The Taiwan telex indicated that the radioactive fittings were limited to 1 inch "Ts" and 1 1/4 inch locknuts and manufactured in January-February of 1983. The contaminated "Ts" and locknuts were exported to the U.S. in February-March of 1983. Surveys by the Taiwanese indicated that none of the items manufactured after February 1983 contained any radioactivity.

NRC/California licensee that first returned a contaminated "T" to a California hardware store surveyed the store's remaining fittings from Taiwan; no radioactivity was found. The "T" that was returned showed 0.05-0.07 mR/hr. The State of California took 20 fittings from the distributor, Western American Manufacturers, to have analyzed for amounts of radioactivity. The 20 fittings were removed from one of 23 unopened boxes. The highest radiation level was found on one 350 gram "T" and indicated 0.08 milliroentgens per hour. The California laboratory analysis showed one nanocurie of Co-60 per gram of the "T" (one nanocurie equals 0.001 microcurie). The NRC limit for unrestricted use is 0.2 mrems per hour. The remaining 19 pieces analyzed showed about one fifth as much radioactivity as the "T".

Taiwan has indicated that Short Line Products (SLP) of Boston, Massachusetts had ordered fittings from Taiwan. Investigation by the Commonwealth of Massachusetts found that SLP was only a sales office and kept no inventory of fittings except for three as show pieces. A radiation survey of the show pieces showed no radioactivity. Further, SLP personnel stated they did very little business with Taiwan and only occasionally placed an order for a customer with the distributor in Taiwan. Taiwan then sent fittings to the customer directly. At SLP there were no names of customers, only invoice numbers. SLP is a small business involved in the sale of many items, not just pipe fittings. Region I will followup to verify that no records were kept.

On Friday, September 7, 1984, it was learned that Western American Manufacturer possessed boxes of "T"s instead of 23. One box, containing 100 "Ts", had been distributed. Potential recipients were 77 hardware stores in California, Oregon, Arizona, Texas, 14 lumber and hardware stores in Southern California, S and P Industries in Louisville, Kentucky, and ACE Hardware in Oakbrook, Illinois (thought to be a distributor). All of the above States had been notified. It was determined through contacts by Kentucky S and P Industries have received no "Ts" from Taiwan since December 1983. "Ts" received prior to December 1983, had been sold to stores. S and P Industries have no fittings in their possession at this time. ACE Hardware in Oakbrook, Illinois was a billing office with no hardware in its possession.

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ause of the low radiation levels found on the fittings surveyed thus far, it is not pected that radiation levels above releasable limits will be found on the fittings.

So far, there has been no media interest. The above information is current as of noon, 9/10

Contact: J. R. Metzger, IE 492-4947; L. I. Cobb, IE 492-4935

H St. _____	MNBB _____	Phillips _____	E/W _____	Willste _____	Air Rights _____	Mail _____
Chairman Pallidino	EDO	NRR	IE	NMSS		ADM:DM
Comm. Zech	PA		OIA	RES		DOT:Tra
Comm. Bernthal	MPA		AEOD			Only
Comm. Roberts						
Comm. Asselstine		Regions: _____				
SECY		INPO _____ NSAC _____				
ACRS		Licensee: _____				
CA		Resident Inspector: _____				
PDR						

NOV 30 1984

MEMORANDUM FOR: Those on Attached Distribution

FROM: Richard E. Cunningham, Director
Division of Fuel Cycle and Material Safety

SUBJECT: SUMMARY REPORT ON CONTAMINATION INCIDENT
INVOLVING PIPE FITTINGS IMPORTED FROM TAIWAN

The attached report summarizes the regulatory actions taken after the initial discovery of contamination in a one-inch galvanized pipe tee, including tracing the contaminated pipe fittings to their source, determining the degree of contamination in the steel and the extent of distribution of contaminated steel products, assessing the risks to public health and safety, and concluding that no regulatory action is required. The steps taken to develop the basis for the staff's conclusion regarding the extent of the risk to public health and safety are described, and the advice to Agreement States and to users and distributors of the contaminated pipe fittings is noted.

Original Signed by
Richard E. Cunningham

Richard E. Cunningham, Director
Division of Fuel Cycle and
Material Safety, NMSS

- bcc:
- B. Grimes, IE
 - L. I. Cobb, IE
 - J. R. Metzger, IE
 - J. D. Lafleur, IP
 - J. O. Lubenau, SP
 - F. L. Ingram, PA
 - W. E. Thompson, FCUF
 - B. Singer, FCMC
 - V. L. Miller, FCML
 - L. C. Rouse, FCAF
 - C. E. MacDonald, FCTC
 - R. M. Wilde, FCMS

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DATE	11/ /84	11/13/84	11/14/84	11/14/84	11/ /84

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Mr. Denton, NRR
Mr. Minogue, RES
Dr. Murley, Regional Administrator, Region I
Mr. O'Reilly, Regional Administrator, Region II
Mr. Keppler, Regional Administrator, Region III
Mr. Martin, Regional Administrator, Region IV
Mr. Martin, Regional Administrator, Region V

CONTAMINATION INCIDENT
Cobalt-60 In Pipe Fittings From Taiwan

NOV 30 1984

Detection of Contamination

On Wednesday, August 29, 1984, health physicists at GA Technologies, La Jolla, California, detected radioactivity in an unused pipe tee during a routine check to clear the tee for release to unrestricted areas. The radioactivity was tentatively identified as cobalt-60 and the surface radiation level was measured as less than 0.2 mrads per hour (later measured more accurately as 0.05-0.07 mr per hr). GA reported the contamination to the California Radiation Control office, which in turn reported it to the Region V office of the Nuclear Regulatory Commission.

Tracing the Source of the Contamination

California State inspectors found no additional contaminated pipe fittings at the local hardware store where the tee had been purchased, but located and embargoed 23 boxes of contaminated fittings (100 tees and lock nuts per box) at the wholesale supplier in Valencia, California. One box of pipe fittings had apparently been distributed to customers. The fittings were found to have been imported from Taiwan. Samples were sent to the California Department of Health laboratory for analysis. The analysis confirmed that the radioactivity was cobalt-60, with no other radionuclide present, and that the concentration of the contaminant was less than one nanocurie per gram (0.21 nanocuries per gram in the highest reading sample). The highest radiation reading of a sample was 0.08 mr per hr. The Preliminary Notification reports given in Attachment A summarize the findings.

Determining the Extent of Spread of Contaminated Fittings

Information obtained by telegraph from the Taiwan Atomic Energy Council disclosed that the pipe fittings had been manufactured by the Taiyang Company in Taiwan during the period from January 27 to February 8, 1983. The texts of the telegrams are contained in Attachment B. The Taiwan analysis of the incident led them to estimate that a 10 to 20-millicurie source of cobalt-60 had been mixed with 76.8 tons of scrap in a single batch of steel that was cast into products including the pipe fittings exported to the United States. According to their sales records, during the time after the batch of contaminated steel was melted and cast, export shipments had been made only to two United States distributors, one in Valencia, California, and the other in Sharon, Massachusetts.

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The Taiwan analysis of contaminated steel pieces showed 0.15 nanocuries per gram in the highest sample, with a surface radiation level of 0.10 mr per hr. Sales of products from Taiyang Company and Taiwan Speco, a Taiwan distributor, have been suspended by the Taiwan authorities until radiation detection systems are installed and procedures developed for checking products. The Taiwan Atomic Energy Council will also spot check products to be exported. Agreement State inspectors and NRC Regional Offices have checked with the American distributors of pipe fittings imported from Taiyang.

Investigating the Location and Use of Contaminated Fittings

The distributor in Valencia, California, identified the following customers who made purchases of pipe fittings of the type found to have been contaminated with cobalt-60.

A chain of 77 stores in four states

A chain of 14 hardware stores

A hardware distributor in Addison, Illinois

A distributor in Louisville, Kentucky.

- Regions II and V notified states where hardware stores are located, advising them that there is possibility of radioactive contamination in pipe fittings.
- Region III conducted a survey of the warehouse at the hardware distribution center located in Addison, Illinois, and found one bin containing about 120 tees, seven of which had small amounts of contamination. The seven tees were analyzed and found to contain cobalt-60 in concentrations well below one nanocurie per gram.
- Region II checked with the distributor in Louisville, Kentucky, and found that all fittings from their December 1983 shipment of Taiwanese fittings had been sold to hardware stores. They have received no shipments from Taiwan since December 1983.

The distributor in Sharon, Massachusetts, was found to be only a sales office that arranges shipments directly to customers. This distributor has no warehouse and no stock on hand. They stated to Region I that they had only one order for pipe fittings from Taiwan in 1983 which might have contained contaminated fittings. That order, consisting of 800 pieces, was drop-shipped to a firm in Miami, Florida, an Agreement State. Surveys made by State officials showed some fittings with small amounts of contamination, about the same as found in other places, less than one nanocurie per gram.

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Notification of Other Agencies

The U. S. Department of State and the U. S. Customs were notified by telephone of the detection of cobalt-60 contamination in pipe fittings imported from Taiwan. They were advised that the level of contamination is apparently less than the maximum permissible concentrations and that considerable distribution of the fittings within the United States has already occurred. Both agencies indicated appreciation for being informed but stated that they planned to take no action.

The emergency response system was used to notify the Department of Energy, Federal Emergency Management Agency, Environmental Protection Agency, and the Department of Health and Human Services of the occurrence of the incident.

Radiological Assessment

The NRC Regional offices found contaminated pipe fittings imported from Taiwan in several locations. All had radiation levels below 0.08 mr per hour at the surface and contained only cobalt-60 as the contaminant. The cobalt-60 content of all samples analyzed was well below one nano-curie per gram. The Taiwan analyses of pieces still in Taiwan showed the highest radiation level to be 0.1 mr per hour at the surface of the fitting, with a cobalt-60 content of 0.15 nanocuries per gram. The Taiwan authorities reported that the steel melting furnace showed no contamination upon inspection, and fittings manufactured after March 1983 were not contaminated. The maximum radiation dose that any person would be likely to receive might come from being in close proximity to a place where the pipe fittings are stored, or are installed in a plumbing system. The dose rate drops to less than 10 percent of the surface dose when the distance from the surface of the contaminated fitting is two inches or more, even when a number of contaminated fittings are stored in a box. Thus, the maximum radiation dose to any individual is certain to be less than that calculated for constant exposure to the pipe fitting at a distance of two inches:

$0.1 \text{ mrem/hr at surface} \times 10 \text{ percent} \times 24 \text{ hr/day} \times 365 \text{ days/yr} = 88 \text{ mrem/yr}$

The validity of this method of estimating is supported by the measured radiation levels of 0.004 to 0.05 mr per hr at the surface of a box of contaminated fittings (less than two inches from the surface of the closest fittings) and readings in the same range for the stock of all 23 boxes. (See Attachment C for measured data provided by the State of California.)

This theoretical maximum exposure is on the order of that received from natural background radiation along the East coast of the United States, is well below the maximum level of radiation (500 mrem per yr) recommended for exposure of the public by the International Commission on Radiological Protection (ICRP) and permitted by 10 CFR Part 20, and is also below the 100 mrem/yr average annual dose recommended by the ICRP. Further, the whole body dose equivalent which would actually be received would be several orders of magnitude less than this theoretical maximum since it is based upon continuous exposure, with no allowance

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for occupancy factors or increased distance from the source. An estimate of the average exposure likely to be received by a member of the public might be based on the more realistic assumption of a person staying at an average distance of 1 meter from the surface of a contaminated pipe fitting for about 12 hours a day. In this case the radiation exposure would be much smaller:

$$0.1 \text{ mrem/hr at surface} \times (1/100 \text{ cm})^2 \times 12 \text{ hr/day} \times 365 \text{ days/yr} = 0.04 \text{ mrem/yr}$$

A potential second source of radiation exposure also exists from the leaching of the cobalt-60 into drinking water. This potential source can be evaluated by comparing the total quantity of cobalt-60 in a tee to the maximum permissible body burden (MPBB):

$$1 \text{ nanocurie/gm (maximum)} \times 350\text{gm} = 350 \text{ nanocuries}$$

which is less than one tenth of the occupational MPBB of 10 microcuries (ICRP II). The calculated quantity is a maximum value and any leaching that occurs would likely involve only a very small fraction of the cobalt-60 over a long period of time. Even if several fittings were used in a single run of pipe, there is no likelihood that the maximum permissible body burden would be exceeded.

Regulatory Conclusion

Based upon results of the analyses of the cobalt-60 contaminated pipe fittings from several suppliers, including some located in Taiwan, it is likely that none of the products contained cobalt-60 concentrations above one nanocurie per gram. No contaminated product was found to have radiation levels above 0.1 mr per per hour at the surface.

The calculated, theoretical, maximum exposure to any individual possessing one or more contaminated pipe fittings is very low and constitutes no significant risk to the general public or to the maximally exposed individual. Accordingly, the staff concludes that there is no threat to public health and safety, and therefore, no regulatory action is required.

Noting that unnecessary exposure to radiation should be avoided, if practicable, unless there is a resulting benefit, the staff has suggested to possessors of the contaminated fittings that they arrange to return them to their supplier or to the manufacturer in Taiwan in exchange for new, uncontaminated fittings. The distributor in Valencia, California, has indicated a willingness to make such exchanges for their customers and return the contaminated fittings to Taiwan.

ATTACHMENT A

THREE PRELIMINARY NOTIFICATION REPORTS ON
COBALT-60 CONTAMINATED PIPE FITTINGS FROM TAIWAN

EMERGENCY NOTIFICATION OF EVENT OR UNUSUAL OCCURRENCE—PNO-V-84-57 Date: 08/31/84

This preliminary notification constitutes EARLY notice of events of POSSIBLE safety or public interest significance. The information presented is as initially received without verification or evaluation and is basically all that is known by IE staff on this date.

FACILITY: Western American Manufacture
Valencia, California
Non-licensee
California Agreement State Response

Licensee Emergency Classification
 Notification of Unusual Event
 Alert
 Site Area Emergency
 General Emergency
 Not Applicable

SUBJECT: FIXED COBALT-60 CONTAMINATED PLUMBING FITTINGS

Very slightly contaminated (less than 0.2 mrad per hour, the unrestricted NRC release limit at the surface) plumbing fittings were found by a California/NRC licensee. The contamination appears to be, at first analysis, cobalt-60 fixed into the steel. The contaminated fittings (piping unions and tees, 1" to 1-1/2" in diameter of galvanized steel) have been traced through a local hardware store to a California distributor Western American Manufacture, Valencia, California. The California Radiation Control inspectors have surveyed and embargoed these fittings containing the fixed radioactivity. Twenty (20) representative samples have been sent to the State of California, Department of Health Laboratory for further analysis. The results are expected to be available on September 4, 1984.

Western American Manufacture purchases the fittings directly from Taiwan Speco Co. Limited, Taipei, Taiwan under the Coia Brand trademark. Efforts are underway through International Programs (IP) to contact the Taiwanese government. The State of California is following up local distribution within the State and will contact NRC with further developments or if the distribution is found to cross State or international boundaries.

NRC staff including IE, NMSS, IP, PA, EDO, OSP, RV have implemented the Interim Plan for NRC Response to Materials Contamination Incidents.

NRC Region V is following the State's progress and standing by to provide technical assistance if requested.

Region V was informed of this event by telephone from the State of California on August 30, 1984.

There has been no media interest at this time. This information is current as of noon (PDT), August 31, 1984

CONTACT: J. W. Hornor, RV, 463-3760; R. D. Thomas, RV, 463-3763

DISTRIBUTION

H St.	MNSB	Phillips	E/W	Willace	Air Rights	Mail:
Chairman Pallidino	EDO	NRR	IE	NMSS		ADM:DMB
Comm. East	PA		OIA	RES		DOT:Trans
Comm. Central	NPA		AECD			Only
Comm. Roberto	ELD					
Comm. Association						
SECY		Regions:				
ACRS		INPO	NSAC			
		Licensee:				

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PRELIMINARY NOTIFICATION OF EVENT OF UNUSUAL OCCURRENCE--PNO-IE-84-02 Date: 9/10/84

FACILITY: Western American Manufacturer
Valencia, California ~
and other Non-Licensees

Licensee Emergency Classification
 Notification of Unusual Event
 Alert
 Site Area Emergency
 General Emergency
 Not Applicable

SUBJECT: FIXED COBALT-60 CONTAMINATED PLUMBING FITTINGS - UPDATE
(See PNO-V-84-57 dated 8/31/84)

This updates the earlier Preliminary Notification on the subject. Based on information which the State of California developed at Western American Manufacture, the contaminated fittings were imported from Taiwan. We now have information from Taiwan relating to further distribution of potentially contaminated fittings in the U.S. and California has access to a list of customers of Western American Manufacture who potentially may have received contaminated fittings. The details follow.

According to a Taiwan telex dated 9/6/84, surveys at the manufacturer and distributor of fittings showed very low radiation levels. Taiwan suspended any further shipments from the Taiwan distributors. The Taiwan telex indicated that the radioactive fittings were limited to 1 inch "Ts" and 1 1/4 inch locknuts and manufactured in January-February of 1983. The contaminated "Ts" and locknuts were exported to the U.S. in February-March of 1983. Surveys by the Taiwanese indicated that none of the items manufactured after February 1983 contained any radioactivity.

The NRC/California licensee that first returned a contaminated "T" to a California hardware store surveyed the store's remaining fittings from Taiwan; no radioactivity was found. The "T" that was returned showed 0.05-0.07 mR/hr. The State of California took 20 fittings from the distributor, Western American Manufacturers, to have analyzed for amounts of radioactivity. The 20 fittings were removed from one of 23 unopened boxes. The highest radiation level was found on one 350 gram "T" and indicated 0.08 milliroentgens per hour. The California laboratory analysis showed one nanocurie of Co-60 per gram of the "T" (one nanocurie equals 0.001 microcurie). The NRC limit for unrestricted use is 0.2 mrems per hour. The remaining 19 pieces analyzed showed about one fifth as much radioactivity as the "T".

Taiwan has indicated that Short Line Products (SLP) of Boston, Massachusetts had ordered fittings from Taiwan. Investigation by the Commonwealth of Massachusetts found that SLP was only a sales office and kept no inventory of fittings except for three as show pieces. A radiation survey of the show pieces showed no radioactivity. Further, SLP personnel stated they did very little business with Taiwan and only occasionally placed an order for a customer with the distributor in Taiwan. Taiwan then sent fittings to the customer directly. At SLP there were no names of customers, only invoice numbers. SLP is a small business involved in the sale of many items, not just pipe fittings. Region I will followup to verify that no records were kept.

On Friday, September 7, 1984, it was learned that Western American Manufacturer possessed 24 boxes of "T"s instead of 23. One box, containing 100 "Ts", had been distributed. Potential recipients were 77 hardware stores in California, Oregon, Arizona, Texas, 14 lumber and hardware stores in Southern California, S and P Industries in Louisville, Kentucky, and ACE Hardware in Oakbrook, Illinois (thought to be a distributor). All of the above States had been notified. It was determined through contacts by Kentucky that S and P Industries have received no "Ts" from Taiwan since December 1983. "Ts" received prior to December 1983, had been sold to stores. S and P Industries have no fittings in their possession at this time. ACE Hardware in Oakbrook, Illinois was a billing office with no hardware in its possession.

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Because of the low radiation levels found on the fittings surveyed thus far, it is not expected that radiation levels above releasable limits will be found on the fittings.

So far, there has been no media interest. The above information is current as of noon, 9/10/84.

Contact: J. R. Metzger, IE 492-4947; L. I. Cobb, IE 492-4935

H St. _____	MNBB _____	Phillips _____	E/W _____	Willste _____	Air Rights _____	Mail: _____
Chairman Pallidino	EDO	NRR	IE	NMSS		ADM:DMB
Comm. Zech	PA		OIA	RES		DOT:Trans
Comm. Bernthal	MPA		AEOD			Only
Comm. Roberts						
Comm. Asselstine		Regions: _____				
SECY		INPO _____ NSAC _____				
ACRS		Licensee: _____				
CA		Resident Inspector: _____				
PDR						

FACILITY: Western American Manufacturer
Valencia, California
and other Non-Licensees

Licensee Emergency Classification
 Notification of Unusual Event
 Alert
 Site Area Emergency
 General Emergency
 Not Applicable

SUBJECT: FIXED COBALT-60 CONTAMINATED PLUMBING FITTINGS - UPDATE
(See PNO-V-84-57 dated 8/31/84 and PNO-IE-84-02 dated 9/10/84)

This updates the earlier IE Preliminary Notification on the subject. We now have additional information on the extent of the contamination on the fittings and information from Taiwan in response to questions raised by the NRC.

According to a Taiwan telex dated 9/12/84, it was believed that 10-20 millicuries of cobalt-60 was mixed with 76.8 tons of scrap iron at the Taiyang Company in Taiwan. According to the telex, however, further investigation is being conducted. According to Taiyang's sales records, the contaminated fittings were manufactured during the period January 27 - February 8, 1983. As a result of tests conducted on several fittings by a Taiwan laboratory, the highest radiation level was 0.104 mrem per hour or 0.152 nanocuries per gram of metal. According to the Taiyang sales records, exports of fittings were limited to Western American Manufacturer and Short Line Products, with delivery dates of March 1 and March 22, 1984 to Western American and February 11 and March 1, 1983 to Short Line Products. The Taiwan telex also stated that the melting furnace showed no contamination and it has been preliminarily verified that fittings manufactured after March of 1983 showed no contamination. Sales of products from Taiyang and Taiwan Speco have been suspended and the two companies have been ordered to install radiation detection systems and develop procedures to check products. The Taiwan Council will spot check products to be exported after the detection systems are functioning and procedures implemented.

Additional locations and surveys of pipe-fittings ("Ts") in the U.S. revealed the following:

- ° It was determined that Short Line Products did have names of customers. One order consisting of 800 pieces that were manufactured in January - March 1983 was dropped-shipped to a firm in Miami, Florida, an Agreement State. Surveys made by Miami officials showed only small amounts of contamination, about the same as in other places, less than one nanocurie per gram.
- ° It was determined that ACE Hardware in Oakbrook, IL had a warehouse in Addison, IL. Inspectors from the NRC Region III office conducted a survey at the warehouse and found one bin containing about 120 "Ts", 7 of which had small amounts of contamination. The 7 "Ts" were taken to be analyzed and found to contain cobalt-60.

Based on the information provided by the Taiwanese in their most recent telex dated 9/12/84, and the results of the surveys made in the U.S., the NRC plans no further action on this matter.

So far, there has been no media interest. The above information is current as of noon, 9/14/84.

Contact: J. R. Metzger, IE 492-4947; L. I. Cobb, IE 492-4935

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ATTACHMENT B

TELETYPES TO AND FROM TAIWAN CONCERNING
CONTAMINATED PIPE FITTINGS

COPY

9
SEP 04 1984 2040
440366 CHST UI
26554 SINOATOM

MR. YU SUNG
DIRECTOR
SCIENCE DIVISION
CCNAA

RESPONDING TO MR. WU'S TELEX OF 8/31/84.

1. AFTER INVESTIGATION, WE FOUND THAT PIPE FITTINGS OF THE NAME "COIN BRAND" WERE MANUFACTURED BY TAI-YANG METAL INDUSTRIAL CO., LTD. OF NO. 2 SECT. 3 HSIN-SHENG S. ROAD, TAIPEI TEL (02) 392-2657) WHICH EXPORTS AS WELL. TAIWAN SPECO CO., LTD IS ONLY AN EXPORTER.
2. AT THAT TIME OF EXPORTING THE SAID SPECS FITTINGS TO "WESTERN AMERICAN MANUFACTURER" I.E. FEB-MARCH 1983 BY TAIWAN SPECO CO. THE ONLY OTHER COMPANY WHICH RECEIVED THE PIPE FITTINGS MADE BY TAI-YANG WAS "SHORT LINE PRODUCTS LTD." (128 POND STREET SHARON, MASS 02067). BUT IT NEEDS TO FIND OUT WHETHER THE PRODUCTS RECEIVED BY SHORT LINE PRODUCTS LTD., ARE CONTAMINATED OR NOT.
3. WE HAVE GOTTEN THE PACKING LIST NUMBERS OF CONTAMINATED PIPE FITTINGS FROM TAIWAN SPECO CO. WHICH WERE INFORMED BY "WESTERN AMERICAN MANUFACTURER". THE DETAIL IS BEING INVESTIGATED AND WILL BE FORWARDED SOON.
4. PLEASE INFORM ME THE DEVELOPMENT OF THIS MATTER IN THE U.S.A.

REGARDS,
YU HAO LEE
SECRETARY GENERAL
AEC/ROC
9/4/84
440363 CHST UI
26554 SINOATOM

REPLY VIA ITT

SEP 06 1984 0508*
440363 CHST UI
26554 SINOATOM

C
O
P
Y

MR. YU SUNG

SUBJ: PIPE FITTINGS

(1) TAIWAN SPECO HAS CLEARED WITH WESTERN AMERICAN MANUFACTURER LTD. THAT THE CONTAMINATED FITTINGS ARE 1" TEES AND 1-1/4" LOCKNUTS. IT AS STATED BY MR. WU'S TELEX THAT 1" TO 1-1/2" FITTINGS WERE INCLUDED.

(2) FROM TAIYANG'S SALES RECORDS, THE CONTAMINATED FITTINGS WERE MANUFACTURED IN LATE JANUARY TO EARLY FEBRUARY 1983 AND EXPORTED IN FEB-MARCH PERIOD 1983. BUT 1-1/4" LOCKNUTS WERE SHIPPED IN APRIL 1984.

(3) INSPECTIONS AT TAIYANG THE MANUFACTURER AND Y-SHENG THE DOMESTIC DISTRIBUTOR DISCOVERED ONLY A FEW HUNDRED PIECES OF SLIGHTLY CONTAMINATED FITTINGS WHICH WERE MADE IN JAN-FEB PERIOD OF 1983. THE EXPORTING COMPANY TAIWAN SPECO DOES NOT HAVE ANY STOCK.

(4) PRODUCTS WHICH ARE IN STOCK AND WERE MADE AFTER MARCH 1983 SHOWED NO CONTAMINATION.

(5) THE FITTINGS IN QUESTION WERE SHIPPED TO COHART PRODUCTS INC. P.O. BOX 55549 VALENSIA, CALIF 91355, WHICH HAS THE SAME ADDRESS AS WESTERN AMERICAN MANUFACTURER.

(6) SALES OF FITTINGS FROM TAIYANG AND TAIWAN SPECO ARE SUSPENDED.

REGARDS
YU HAO LEE
SECRETARY GENERAL
AEC/ROC
9/6/84*
440363 CHST UI
26554 SINOATOM

REPLY VIA ITT

COPY

ITT GA 73526164**
440363 CHST UI
09 07 1656V
28164 ROCNSC

GA
MR YU-HAO LEE
SECRETARY GENERAL
AEC

1. NRC SENDS THE FOLLOWING QUESTIONS TODAY. CAN YOU ANSWER THEM ASAP?

- (1) WHAT WAS THE CAUSE OF THE CONTAMINATION?
- (2) AT WHAT STAGE DID THE COBALT 60 ENTER THE MANUFACTURING PROCESS? WHEN DID THE CONTAMINATION OCCUR?
- (3) WHAT IS THE TOTAL AMOUNT OF THE COBALT 60 CONTAMINATION INVOLVED?
- (4) WHAT PRODUCTS IN ADDITION TO THE TEES AND PIPING UNIONS MIGHT BE CONTAMINATED?
- (5) WHAT IS THE MAXIMUM CONCENTRATION OF COBALT 60 ESTIMATED FOR SUCH PRODUCTS? WHAT ARE THE ASSOCIATED SURFACE RADIATION LEVELS?
- (6) WHAT IS THE QUANTITY OF PRODUCTS INVOLVED?
- (7) WHAT KIND AND HOW MANY SUCH PRODUCTS HAVE BEEN EXPORTED TO THE U.S.? WHEN WERE EXPORTS MADE AND TO WHOM WERE THEY SHIPPED?
- (8) DOES COBALT 60 CONTAMINATION PRESENTLY EXIST IN MANUFACTURING PLANT AND IF SO WHAT STEPS ARE TAKEN TO DECONTAMINATE OR OTHERWISE PREVENT CONTAMINATION OF PRODUCTS SHIPPED TO THE U.S.?

2. RE DR SHELDON SCHWARTZ'S VISIT TO TAIWAN, KINDLY ARRANGE SOMEBODY TO MEET HIM AT THE AIRPORT. HE'LL ARRIVE ON SEPT 11 -AT 8:50 PM VIA CX411.

THANKS AND REGARDS

YU SUNG

MR. YU SUNG
DIRECTOR
SCIENCE DIV./CCNAA

COPY

1. REF YOUR TELEX OF SEPT. 7. REGARDING THE INQUIRIES MADE BY NRC WE ARE CHECKING WITH TAIYANG COMPANY FOR ORIGIN OF MATERIAL AND CAUSE OF CONTAMINATION.

2. (I) IT IS JUDGED THAT CO-60 GOT IN DURING IRON MELTING PROCESS. AS TO WHETHER IT WAS MIXED IN THE SCRAP IRON OR IN OTHER ADDITIVES, FURTHER INVESTIGATION IS BEING MADE BY THE COUNCIL.

(II) FROM TAIYANG'S SALES RECORD, THE CONTAMINATED FITTINGS WERE PRODUCED DURING THE PERIOD OF JAN 27 - FEB 8, 1983.

3. ACCORDING TO PRELIMINARY ESTIMATION THE ACTIVITY OF THE CO-60 SOURCE THAT CAUSED THE CONTAMINATION IS IN THE ORDER OF 10-20 MCI.

4. CONTAMINATED ITEMS, EXCEPT 1" TEE AND 1-1/4" LOCK NUT FOUND IN THE STATES, INCLUDE THE FOLLOWING PRODUCTS LOCALLY: 3/4" SOCKET, 1/2" UNION 3/4" X 1/2" BRS, 2-1/2" X 1-1/2" BRS 1-1/4 X 3/4" BRS and 1/2" X 3/8" RBO, WE HAVE NO PROOF YET THAT THE ABOVE PRODUCTS ARE ALREADY SOLD TO U.S. BUT ARE MAKING FURTHER INVESTIGATION.

5. AS A RESULT OF EXAMINATION BY NATIONAL LABORATORY, THE MOST BADLY CONTAMINATED ITEM IS THE 3/4" SOCKET, THE SPECIFIC ACTIVITY OF WHICH FOR CO-60 IS 1.52×10^{-4} UCI/G WITH SURFACE DOSE RATE AT 0.104 MRAD/HR.

6. ACCORDING TO PRODUCTION STATISTICS OF TAIYANG CO. TOTAL PRODUCTS WEIGHTS FROM JAN 27 to FEB 8, 1983 ARE 76.8 TONS.

7. (I) QUANTITY OF CONTAMINATED ITEMS EXPORTED TO THE U.S. IS UNDER INVESTIGATION BY TAIYANG. WE WILL INFORM YOU AS SOON AS IT IS AVAILABLE.

(II) ACCORDING TO SALES RECORD OF TAIYANG, FIRMS IN THE US THAT HAVE IMPORTED TAIYANG PRODUCTS WITH CONTAMINATIONS INCLUDE WESTERN MANUFACTURER AND SHORT LINE PRODUCTS, LTD. DELIVERY DATE TO WESTERN AMERICAN MANUFACTURER IS MARCH 1 AND 22 1984 WITH THE 1-1/4" LOCK NUT BEING DELIVERED ON APRIL 12, 1984. DELIVERY TO SHORT LINE PRODUCTS, LTD WAS MADE ON FEB 11 and MARCH 1, 1983 RESPECTIVELY.

8. ACCORDING TO IN SITU SURVEY BY THIS COUNCIL AT THE PLANT, THE MELTING FURNACE BEARS NO CONTAMINATION. AND FROM SPOT CHECK OF WAREHOUSE PRODUCTS, IT IS PRELIMINARILY VERIFIED THAT PRODUCTS MANUFACTURED AFTER MARCH 1983 SHOW NO CONTAMINATION. TO PREVENT FURTHER SALES OF CONTAMINATED PRODUCTS, SALES OF FITTINGS FROM YAIYANG AND TAIWAN SPECO ARE SUSPENDED. THE COUNCIL IS ORDERING TAIYANG TO ESTABLISH A RADIATION DETECTION SYSTEM WITH PROPER PROCEDURES. PRODUCTS OF TAIYANG WILL NOT BE ALLOWED TO EXPORT UNTIL THE REQUIRED MEASURES ARE IMPLEMENTED AND PRODUCTS ARE SPOT CHECKED BY THIS COUNCIL. PRODUCTS ALREADY CONTAMINATED WILL BE SUSPENDED FOR SALE AND DISPOSED AS WASTE.

9. YOUR TELEX OF SEPT 7 WAS RELAYED TO MY OFFICE BY THE SCIENCE COUNCIL BY MAIL. IT REACHED ME ON SEPT 12.

REGARDS
YU HAO LEE
SECRETARY GENERAL
AEC/ROC
9/12/84

COPY

SEP 14 1984 0242
440363 CHST UI
26554 SINOATOM

MR. YU SUNG
DIRECTOR
SCIENCE DIVISION/CCNAA

REFER TO THE TELEX OF SEP 12

1. WESTERN AMERICAN MANUFACTURE INFORMED US THAT 23 PACKAGES OF 1" TEES AND 1-1/2 PACKAGES OF 1-1/4" LOCK NUTS WERE FOUND CONTAMINATED AT THEIR WAREHOUSE. TAI-YANG CO. HAD ALSO INFORMED THIS COUNCIL ABOUT 6 (SIX) TONS OF PRODUCTS, WHICH WERE MADE IN THAT PERIOD, WERE EXPORTED TO SHORT LINE PRODUCTS LTD. PLEASE ADVISE WHETHER ANY INVESTIGATION IS DONE AT SHORT LINE.

2. ACCORDING TO OUR INVESTIGATION AND ANALYSIS, IT IS MOST LIKELY THAT THE CO-60 SOURCE CAME TOGETHER WITH IRON SCRAPS, NOT WITH THE ADDITIVES (I.E. ZN, MN, OR SI). AS WE KNOW, MOST OF THE SCRAPS COMES FROM SALVAGES OF SHIPS OF FOREIGN COUNTRIES, ONLY A SMALL PORTION COMES FROM USED STEEL OR LOCAL ORIGIN. WE ARE LOOKING INTO DIFFERENT POSSIBILITIES FOR THIS CONTAMINATION SOURCE.

3. PLEASE INQUIRE THE ECONOMIC DIVISION OF CCNAA IF THEY HAD RECEIVED THE REPORTS ABOUT THIS CONTAMINATION EVENT, FROM OUR BOARD OF FOREIGN TRADE OR INDUSTRIAL DEVELOPMENT BUREAU, IF NOT, PLEASE INFORM THEM ALL THE INVESTIGATION REPORTS WE HAVE GIVEN YOU BEFORE.

WE'LL KEEP YOU INFORMED OF ANY FURTHER INFORMATION.

REGARDS,
YU HAO LEE
SECRETARY GENERAL
AEC/ROC
8/14/84*
440363 CHST UI
26554 SINOATOM

REPLY VIA ITT

U.S. NUCLEAR REGULATORY COMMISSION
OFFICE OF INTERNATIONAL PROGRAMS
WASHINGTON, D. C. 20555
TLX: 710-824-0412

PRIORITY

UNCLASSIFIED

SEPT. 20, 1984

A. GORE/J. D. LAFLEUR, JR., IP

49-27131

XX

bcc: JDLafleur
AMGore ✓
RDHauber
Taiwan file

MR. YU HAO LEE
SECRETARY GENERAL
ATOMIC ENERGY COMMISSION
TAIPEI, REPUBLIC OF CHINA
TELEX: 26554 SINOATOM

IN REFERENCE TO YOUR CABLE OF SEPTEMBER 14, TAI-YANG CO. STATED
THAT ABOUT SIX TONS OF PRODUCTS WERE EXPORTED TO SHORT LINE
PRODUCTS DURING THE SUBJECT TIME PERIOD. AN INITIAL INVESTIGATION
AT SHORT LINE SHOWS ONLY ONE ORDER OF 800 PIECES MANUFACTURED
DURING THE JANUARY-MARCH 1983 PERIOD ^{WERE} RECEIVED. CAN THE AEC
VERIFY THIS SIX-TON FIGURE? NRC APPRECIATES YOUR ASSISTANCE IN
THIS MATTER.

REGARDS, JOSEPH D. LAFLEUR, JR., NRC.

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OFFICE	IP	IR	IP	1	1	UNCLASSIFIED
SURNAME	AMGore/atp	RDHauber	JDLafleur			
DATE	9/20/84	9/29/84	9/29/84			