Date: April 11, 1980
Agency: USDA-FSQS
Contact: Bartie Woods
Phone: (202) 447-5627
Decision Calendar #FSQS 040-20

Draft Impact Analysis

1. Title: Prohibition of PCB-Containing Equipment or Machinery and Liquid Polychlorinated Biphenyls (PCBs) in Federally Inspected Meat Plants, Poultry Product Plants, and Egg Product Plants

2. Nature of Proposed Action and Groups Impacted: This Food Safety and Quality Service (FSQS) proposed regulation would amend the Federal meat inspection regulations, the Federal poultry product inspection regulations, and the Federal regulations governing the inspection of eggs and egg products by establishing the requirement that no equipment or machinery, other than capacitors containing less than three pounds of PCB liquid, and no separately maintained liquids in USDA inspected establishments shall contain PCBs. This proposed regulation represents the selection of Option IV discussed later in Section 5--Options Considered.

As an adjunct to other actions, the Department is already implementing some aspects of Option II, an information and education campaign, conducted in order to assure that all regulated establishments and other impacted groups are informed as to the purpose and need for controlling exposure to PCBs. The regulated establishments include the approximately 7,000 federally inspected meat and poultry plants, the approximately 120 federally inspected egg processing plants, and all plants inspected by States under the "at least equal to" provisions of the Federal Meat and Poultry Inspection Acts. As part of the information and education campaign, the Department has issued for distribution the booklet Polychlorinated Biphenyls: An Alert for Food and Feed Facilities to all inspection personnel. The booklet has been published by the Environmental Protection Agency in cooperation with the Department of Agriculture and the Food and Drug Administration (FDA).

The Department has also implemented Option III by publishing a proposed ban on PCBs in all new or replacement equipment.

This FSQS proposal would require all regulated establishments to either remove all equipment or machinery which contains PCBs, except capacitors containing less than three pounds of PCB liquid, from their establishment or drain and flush this equipment so that it would no longer contain PCBs in the liquid medium at a level greater than 50 ppm by weight. Further, any liquids containing PCBs above 50 ppm stored on the premises for any reason would have to be removed.

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The level of 50 ppm has been previously used by the Environmental Protection Agency (EPA) as a level below which the EPA has not regulated the disposal, marking, manufacture, processing, distribution in commerce, and use of PCBs under the Toxic Substances Control Act (TSCA) of 1976.

This action would have direct impact on those firms that now own PCB-containing machinery or equipment not excluded by the above-noted exception. Available information indicates that the applicable equipment will generally be electrical equipment such as transformers and capacitors. This action would also impact the utility companies that own transformers that are installed on the premises of regulated firms. The proposed action would impact those Federal and State inspectors who would be responsible for assuring compliance with the regulation. The proposed action would also impact the Federal and State agencies responsible for the proper transportation, storage and disposal of PCBs. The consuming public may also be affected to the extent that this proposal increases manufacturing costs that are passed on to consumers in terms of retail price increases. The public would benefit from the reduced PCB hazard.

3. Background:

Polychlorinated biphenyls (PCBs) are part of a broad group of organic chemicals known as chlorinated hydrocarbons. PCBs were produced in the United States from 1929 to 1977. (Since July 1979, the manufacture of PCBs has been prohibited). Because of their almost complete resistance to fire and explosion, their high dielectric performance and their excellent heat transfer properties, PCBs were primarily used in electrical transformers, capacitors, heat-transfer systems and hydraulic systems.

Research and studies conducted during the past 15 years have demonstrated numerous adverse health effects associated with various levels of exposure to PCBs. The accumulation of adverse health effects data has led to various Federal regulations aimed at controlling human exposure. However, the existing regulations controlling the use of PCBs have tended to exempt those uses in "enclosed systems" such as transformers and capacitors. During this same period of time there have been a number of incidents where human food supplies have been contaminated by PCBs from totally enclosed systems such as transformers and non-totally enclosed systems such as hydraulic systems and heat transfer systems. These cases of environmental contamination have resulted either from leaking industrial equipment or from industrial accidents such as the recent case at Pierce Packing Company in Billings, Montana, where an inactive transformer stored in a warehouse was accidentally ruptured causing the PCB-containing cooling fluids to enter the human food chain via contaminated animal by-products used in the preparation of animal feed products. The effects of the accident were discovered in 19 States and two foreign countries. While the total costs of the accident in Billings may never be known, it has been estimated that the costs to locate, remove, and destroy the contaminated products ran into millions of dollars.

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On December 20, 1979, there was a PCB leakage from a capacitor in a federally inspected hog slaughtering establishment in Iowa. Only the quick actions of plant officials and an FSQS inspector in recognizing and containing the problem prevented another potentially massive contamination incident.

In summary, the events of recent years have led to conclusions that (1) the potential adverse health effects from PCB exposure are serious, (2) allowing the use of PCBs in enclosed systems does not insure against accidental exposure, and (3) the environmental contamination from a single incident can easily become very widespread.

4. Purpose and Need for the Action:

The purpose of this action is to reduce the likelihood of an incident of food contamination involving PCBs and thereby reduce the overall threat to public health that these substances represent. PCBs have not been manufactured in the United States since 1977. The EPA completed a rulemaking on May 31, 1979 (44 FR 31514), that prohibits all manufacturing, processing, distribution in commerce, and non-totally enclosed use of PCBs after July 2, 1979, that is not specifically authorized or exempted by EPA. The EPA rule did provide certain exceptions. EPA followed the Toxic Substances Control Act mandate to allow the use of PCBs in "totally enclosed" systems, such as those found in transformers and capacitors, and also authorized uses of PCBs in a few "non-totally enclosed" systems, such as in hydraulic systems and heat transfer systems.

Thus, existing EPA rules have not significantly reduced the likelihood of PCB contamination in FSQS regulated plants because (1) there remain existing inventories of new and used replacement equipment and machinery that still contain these substances, and (2) the EPA rules have not affected the use of equipment and machinery currently owned by the plants.

The Department recognizes that the likelihood of an industrial accident is small and that the probability of an accident involving a specific piece of equipment is minute. However, the Department is also now more aware of how serious, costly and widespread one incident can become and, therefore, recognizes the potential value of preventing the use of a single piece of equipment.

On February 29, 1980, the Department published a proposal (44 FR 13471) which would prohibit the entry of new or replacement equipment or machinery containing PCBs onto the premises of any establishment or plant regulated under the Federal Meat Inspection Act, the Poultry Products Inspection Act, or the Egg Products Inspection Act. Preventing the installation of any further equipment from existing inventories, such as transformers and capacitors containing PCBs, would at a minimum prevent an increase in the likelihood of an accidental PCB spill, and should decrease the likelihood as existing equipment is discarded voluntarily.

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The proposal currently being considered would address the equipment and machinery already in use. If all PCB-containing equipment were to be removed from FSQS regulated plants the small probability of a costly industrial accident would be even further reduced.

In developing the February 29th proposal, the Department considered an option that would require the removal of all existing PCB-containing equipment as well as the prohibition of the introduction of any new equipment into the affected plants. However, it was determined that the more serious economic burden involved in requiring the removal of existing equipment made it necessary to obtain more information on the economic, technical and social impacts of such an action before an adequately supported proposal could be developed.

Before the proposal prohibiting new and replacement PCB-containing equipment was published on February 29th, the Department had initiated an intensive effort to collect inventory data from all federally inspected meat and poultry plants on the number of transformers and capacitors (and bulk PCB liquid) in existence that either do or could contain PCBs. A letter initiating this effort was sent to the Regional Directors on February 7, 1980, requesting that the regional offices become the focal point in the collection process. The Department is currently collecting, reviewing, correcting and storing all input from the data collection. When an individual plant's input is reviewed and approved it is entered into a data file. The cut-off date for this Draft Impact Analysis was April 8, 1980. As of April 8, 1980, approximately 80 percent of the data had been collected, and approximately 75 percent had been entered into the data file. The analysis presented in the following sections of this paper is based on a preliminary analysis of the responses from almost 5,600 out of a total of approximately 7,400 plants in the FSQS's Establishment Information System. The Department will continue to analyze the data collected during the ensuing public comment period. After the public comment period, a Final Impact Statement will be prepared that will be based on a detailed analysis of the responses from all federally inspected meat and poultry plants.

5. Options Considered:

A. In its decision to propose regulatory action on PCBs, USDA considered four options. A brief description of each follows:

Option I--Take no regulatory action. This option was rejected in the earlier decision to publish a proposed ban of PCBs in all new or replacement equipment.

Option II--Take no mandatory regulatory action but conduct an information and education campaign in order to assure that all regulated establishments and other impacted groups are informed as to the purpose and need for controlling exposure to PCBs. This option has already been implemented to a certain degree. A new focus could be to encourage plant managers to voluntarily replace existing equipment containing PCBs

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with non-PCB equipment. The information and education campaign would attempt to reach the managers of all plants under FSQS jurisdiction. This campaign would stress the seriousness of PCB contamination and the unnecessary liability associated with maintaining equipment containing PCBs when replacement equipment is available.

Option III--Ban PCBs in all new or replacement equipment. Under this option, the Department would propose no further regulatory action at the current time and proceed as a first step with the rule-making that has already been initiated in the February 29, 1980, proposal to ban the introduction of any new or replacement equipment containing PCBs into a plant under FSQS jurisdiction.

Option IV--Ban any PCB-containing equipment, other than capacitors containing less than three pounds of PCB liquid, and any liquid PCBs from all meat, poultry, or egg processing establishments under FSQS jurisdiction. Such a ban would supersede the ban on all new or replacement equipment containing PCBs that would result if the proposal of February 29, 1980, were to be made a final regulation following the comment period.

B. Comparison and Discussion of Options:

Option I--Take no regulatory action.

The option was rejected when the Department published its proposal on February 29, 1980, to ban PCBs in all new or replacement equipment. This option was totally unresponsive to the potential public health hazard represented by the use of equipment or machinery containing PCBs in plants under FSQS jurisdiction.

Option II--Information and Education Campaign.

Under this option the Department would conduct an information and education (I&E) campaign that would encourage plant managers to voluntarily replace existing equipment containing PCBs. A new target group would be the utility industry. Information collected has shown that a significant number of the existing transformers in federally inspected meat and poultry plants are owned by the utilities. The removal (voluntary or mandatory) of this equipment would require the cooperation of the utilities. Increased understanding of the potential public health problem would probably help.

An I&E campaign might have some success as managers would become more informed as to the potential hazards and liabilities resulting from continued use of PCB-containing equipment. Utilities might replace their equipment containing PCBs if they were more aware of the potential problems.

In November 1979, the EPA conducted a limited number (19) of indepth, on-site investigations at various food/agricultural plants. The purpose of these investigations was to conduct a risk assessment of the use and

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storage of PCBs by various industries. The investigations did identify factors that could be part of an I&E campaign. For example, these investigations found that some facilities use spill containment structures around their transformers and capacitors. This type of safety feature and others could be stressed through I&E. (Mandatory safety features like containment structures were not considered as a regulatory option because they do not necessarily provide protection during storage, transportation and installation.)

Following an I&E campaign, plant managers would be making more informed choices concerning the replacement of existing equipment. It is known that product liability will have an influence on these decisions. Concern for the public health should also influence these decisions. However, it can be assumed that under a voluntary program some plant managers will elect to do nothing. This option leaves an economic decision in the hands of one or more individuals that can ultimately have an effect on thousands or millions of consumers.

In addition, some plant operators, finding as a result of the campaign that they had PCB-containing equipment in their plants and fearing mandatory controls, may elect to remove their equipment or liquid cheaply and improperly, thus greatly increasing the hazard to food products and their immediate environment.

Option III--Ban PCBs in all new and replacement equipment.

As stated earlier, the Department on February 29, 1980, published a proposed regulation that would prohibit the introduction of any new or replacement equipment containing PCBs in a plant under FSQS jurisdiction after the effective date of the regulation. Under this option, the Department would proceed with that rulemaking process but not propose a regulation addressing existing equipment containing PCBs at the present time. The February 29th proposal has some attractive features. First, the ban on new or replacement equipment would apply to all firms in the same manner even though the impact may not be the same for all firms. Second, the proposed ban is simple in that it would not create any disposal problems. Finally, the February 29th proposal is not a retroactive regulation since it would affect only future capital investment decisions. In contrast, regulating existing equipment would have an impact on capital investment decisions that have already been made. It can be argued that regulations that affect future decisions can be accounted for in planning and, therefore, are not as economically disruptive as those that would impact decisions that have already been made.

On the other hand, the proposal of February 29th has some limitations. It does not address the public health hazard posed by the PCB-containing equipment already existing in plants under FSQS jurisdiction. With the ban on manufacturing of PCBs and the increasing availability of non-PCB equipment, it appears likely that the public health threat from existing equipment is of a greater magnitude than that from new or replacement

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equipment that might contain PCBs. In the Draft Impact Analysis accompanying the February 29th proposal, it was estimated that at most, five percent of the existing number of transformers and capacitors would be replaced or added each year. Therefore, it would be many years before the new equipment would be plentiful enough to pose an equal public health threat, even if all new and replacement equipment contained PCBs. It is known that non-PCB equipment is already being purchased. Therefore, Option III does not affect the largest element of the potential public health hazard, that represented by the use of existing PCB equipment and machinery in plants under FSQS jurisdiction.

Option IV--Ban on essentially all PCB-containing equipment.

This option would result in the elimination of liquid PCBs, except those found in small capacitors, from the premises of meat, poultry and egg products establishments under FSQS jurisdiction. This ban would be effective 6 months after publication of the final regulation. If enacted, this option would supersede any existing ban on only new or replacement equipment containing PCBs.

The costs associated with a ban on new or replacement equipment are addressed in a previous impact analysis. For this option, only the additional costs for addressing existing equipment are discussed. The following discussions and analyses refer primarily to the approximately 7,400 plants in the Establishment Information System maintained by the Meat and Poultry Inspection Program. Essentially all plants in this system are under mandatory Federal meat and poultry inspection. The exact number of plants may change on any given day.

A ban on all PCB-containing equipment would also affect the following other types of establishments:

--The approximately 120 federally inspected egg processing plants. Under the Egg Products Inspection Act, processing is defined to mean manufacturing egg products, including breaking eggs or filtering, mixing, blending, pasteurizing, stabilizing, cooling, freezing, drying, or packaging egg products.

It is assumed that egg processing plants will be affected similarly to federally inspected meat and poultry plants.

--The approximately 5,200 State-inspected meat and poultry plants in the 32 States still conducting cooperative State inspection programs. The State-inspected plants are regulated under the "at least equal to" provisions of the Federal Meat and Poultry Inspection Acts. Without data to show otherwise it must be assumed that these plants will be affected at the same rate as the federally inspected meat and poultry plants. This assumption should result in a maximum cost estimate since the State-inspected plants are, in general, smaller and should, therefore, have fewer transformers and capacitors.

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As stated earlier, the Department is in the process of developing a detailed inventory of existing equipment in federally inspected meat and poultry plants that either contain or may contain PCBs. Data is being collected from the approximately 7,400 plants in the Establishment Information System.

As of April 8, 1980, the Department had input data from 5,570 plants entered into the equipment inventory data base. Data from an estimated 1,830 plants remain to be collected and/or entered. The following represents a preliminary analysis of that data. The data will be further analyzed in the next few months.

Of the 5,570 plants entered into the data base as of April 8, 1980, 4,541 had reported a negative response. That is, these plants reported that they have neither liquid filled capacitors nor liquid filled transformers, nor bulk PCBs on their premises. Thus, it appears that approximately 80 percent of the federally inspected plants will not be impacted by a regulation requiring the removal of existing PCB-containing equipment.

Of the 5,570 plants in the data base, 1,029 (or 18.5 percent) reported capacitors and/or transformers. Data from most of these 1,029 plants (but not all) was used in the preliminary analysis.

Capacitors:

As of April 8, 1980, the data base contained entries from 236 plants that had reported the existence of capacitors. Table I shows the number of capacitors reported by type of plant and the total Kilo Volt Amperes Reactive (KVAR) for the capacitors which is employed as a measure of the size of the equipment which can be readily obtained. As shown in Table I, 236 plants reported a total of 4,808 capacitors with a total of 138 thousand KVAR. It is assumed that all the capacitors are plant-owned and that they all contain PCBs and would have to be replaced since capacitors cannot be drained and flushed. This assumption should generate a maximum cost estimate since the figure of 4,808 includes all reported capacitors, some of which contain less than three pounds of PCB liquid. In some cases size was not available. In addition, the analysis has not accounted for any salvage value. This should also ensure that the estimate for total replacement costs is a maximum cost estimate. At present, the total replacement cost for a capacitor is estimated to include approximately $10 per KVAR for the equipment and another $10 per KVAR for installation of the equipment. Thus, the total estimated replacement costs for the 4,808 capacitors is 2.76 million dollars for the 236 plants reporting capacitors.

Replacement costs exceed depreciated costs since some of the equipment is nearing the end of its useful life and would have to be replaced in any event. If it is assumed that the average age of the equipment is equal to half the useful life, then a simple method of estimating depreciated costs is to discount the replacement costs by 50 percent. This method values all the equipment at its current replacement cost but assumes that half the useful product life has been used up.

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In conducting this analysis, it was recognized that transformers and capacitors do not have a well-defined distribution for product life. The remaining expected useful life is not a variable that can be predicted accurately. Some existing equipment has been operating in plants for over 60 years and could continue to operate for 60 more. However, it could also fail tomorrow. In general, transformers and capacitors tend to be outgrown as opposed to worn out. Therefore, a good method of discounting replacement costs for an estimate of depreciated costs is not available. It is known that firms have benefited from the use of the equipment. The use of capacitors results in lower power costs. All the equipment has presumably been depreciated to some degree. Therefore, it was decided that some discounting was necessary, and the 50 percent level was used.

The total depreciated costs for the 236 plants to replace the 4,808 capacitors is then estimated to be approximately 1.38 million dollars. To estimate a maximum cost (or worst case) for the approximately 7,400 plants in the Establishment Information System, some assumptions must be made. A total of 1,029 plants out of 5,570 have reported capacitors and/or transformers. Of the 1,029 plants, 236 (or 23 percent) reported capacitors. For a maximum estimate it is assumed that 50 percent of the remaining 1,830 plants (915 plants) will report some equipment and that 210 (23 percent) will report capacitors. It is then assumed that the 210 plants will have the same number and size of capacitors per plant as the 236 reporting plants have resulting in an additional cost of 1.26 million dollars. Using these assumptions, the total depreciated cost for replacing all capacitors in federally inspected meat and poultry plants is estimated to be 2.64 million dollars (1.38 million + 1.26 million). In total, there are approximately 5,300 plants that are either federally-inspected egg processing plants, or State inspected meat and poultry plants. If these plants are affected in the same proportion as the Federal meat and poultry plants, then the costs to these would be 72 percent of 2.64 million dollars or approximately 1.9 million dollars.

Transformers:

As of April 8, 1980, the data base contained entries from approximately 800 plants that had reported the existence of liquid-filled transformers on their premises. Transformers were reported as being either plant owned or utility owned. They were also recorded by the type of fluid they contain. Transformers containing fluid labeled as Askarel, Aroclor, Inerteen, etc., can be positively identified as PCB-containing transformers. Those containing mineral oil, transformer oil, or an unspecified fluid may contain PCBs. Each of these would have to be tested on a case-by-case basis. This analysis assumes that 50 percent of the transformers filled with mineral oil, transformer oil or some unspecified fluid will contain PCBs above 50 ppm. For this analysis, it has also been assumed that utilities would replace the transformers they own at no capital cost to the plants since they can use the units elsewhere at no capital costs to themselves. Table II summarizes the data on utility-owned transformers. A total of 40 utility-owned PCB transformers were reported by 14 plants. The total KVA of these units

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is 46,000. A total of 2,393 utility-owned "possible" PCB transformers were reported by 457 plants. Half the total KVA of these units is 380,000 KVA. Thus, utilities would be replacing units totalling 426,000 (380,000 + 46,000) KVA. The installation costs are estimated to be approximately $12 per KVA for a total of 5.1 million dollars. It is expected that the firms could have to pay some of these costs. Discounted by 50 percent, these installation costs are 2.55 million dollars.

Table III summarizes the data on plant-owned transformers. As shown in Table III, 63 firms reported a total of 249 PCB transformers with a total KVA of 174,000. In addition, 229 firms reported a total of 1,581 "possible" PCB transformers with a total KVA of 576,000. Replacement costs run $12 per KVA for equipment and another $12 per KVA for installation. Adding the KVA of PCB transformers to 50 percent of the KVA for "possible" PCB transformers results in a total of 462,000 KVA. At a cost of $24 per KVA the total replacement costs would be 11.1 million dollars. This total added to the installation costs for utility-owned transformers results in a total cost of 16.2 million dollars. Discounting by 50 percent (to account for age of equipment) results in a cost of 8.1 million dollars. Approximately 800 plants reported transformers, including both plant owned and utility owned.

To estimate a maximum cost for all plants in the Establishment Information System, it is assumed that 50 percent of the remaining 1,830 plants (or 915 plants) will report equipment and that 75 percent (based on approximately 800 out of 1,029) of the 915 plants or 686 plants will report transformers. Using the average size and number of units per plant, the total additional costs would be 6.86 million dollars for a total of 14.96 million dollars (8.1 plus 6.86). The 6.86 million dollars would consist of 2.16 million dollars for installing utility-owned transformers and 4.7 million dollars to replace plant-owned transformers. Thus, the total cost to replace transformers is estimated to be approximately 15 million dollars for all federally inspected meat and poultry plants. This figure could possibly be cut in half if firms would choose to drain and flush transformers rather than replace them. This assumes adequate disposal facilities and no unanticipated disposal costs.

It is not legal now to sell the used PCB-containing equipment commercially. However, firms could sell the equipment directly to another firm not in a food or feed industry.

As with capacitors, it is assumed that similar costs up to 72 percent might be encountered by the egg processing firms and the State inspected firms.

Total costs (transformers and capacitors) are summarized in Table IV. Assuming replacement of transformers, the total costs to federally inspected meat and poultry plants is estimated to be 17.6 million

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dollars. Using draining and flushing instead of replacement, the total could drop to 12.48 million dollars. Similar figures for the State and egg plants are 12.67 million dollars and 8.98 million dollars respectively. Assuming replacement of all transformers, the total maximum cost of Option IV is estimated to be 30.3 million dollars for all Federal and State inspected plants.

Distribution of Costs:

Under Option IV, the distribution of costs varies widely. For example, reported data show that 4,541 plants have no existing PCB equipment and, therefore, would experience no additional costs over and above those costs associated with a ban on new or replacement equipment. In contrast, the reported data show that one firm, (at 8 separate plants) would have total replacement costs of $1.1 million dollars assuming no draining and flushing, no discounting for age of equipment, and no selling of the used equipment. After discounting by 50 percent that one firm represents $550,000 or over 3 percent of the total costs to federally-inspected plants. That firm also had over a billion dollars worth of net sales in 1979. Another firm (at 5 plants) reported equipment representing over $1.3 million in replacement cost assuming no draining and flushing, no sales and no discounting. Some of the equipment, however, was owned by utilities. This second firm also had over $1 billion of net sales in 1979.

In summary, while most plants (75 to 80 percent) would experience little or no additional costs under Option IV, a few large plants could experience true costs up to and over $500,000. This analysis did not explore the economic incentives such as investment tax credits or accelerated depreciation that might be available to firms that purchase new capital equipment for environmental purposes.

Federal Costs:

Options II, III and IV all have some associated increased Federal costs. However, most of the additional workload can be easily absorbed by the personnel already in the regulated establishments. Option IV may generate some laboratory testing requirements. As mentioned earlier, all transformers that "may" contain PCBs need to be tested on a case-by-case basis. The Agency would probably conduct some testing for quality control or compliance purposes. Compliance testing would also be conducted to check for the level of 50 ppm when drain and flush procedures would be used.

6. Public Comments:

The proposal to amend the Federal meat, poultry, and egg products inspection regulations will be published in the Federal Register. Interested persons will be invited to submit written comments concerning the proposal. The comment period will extend for 60 days after the date of publication.

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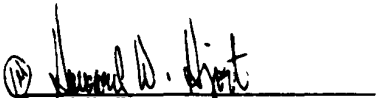
7. Approval:

Approved:



Howard W. Hjort
Director, Economics, Policy
Analysis and Budget

5-1-80
Date

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Table I

INVENTORY DATA ON CAPACITORS IN MEAT AND POULTRY PLANTS

TYPE OF PLANT	Number of Plants Reporting Capacitors	Number of Capacitors	TOTAL KVAR
Meat Plants	108	2,068	66,445
Poultry Plants	33	758	16,072
Combination Meat/Poultry Plants	92	1,914	54,218
Unclassified as of April 8, 1980	3	68	1,345
TOTAL	236	4,808	138,080

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Table II

INVENTORY DATA ON UTILITY-OWNED TRANSFORMERS IN MEAT AND POULTRY PLANTS

TYPE OF PLANT	Number of Plants Reporting PCB Transformers	Number of PCB Transformers	Total KVA for PCB Transformers	Number Plants Reporting Transformers that May Contain PCBs	Number of Transformers that May Contain PCBs	Total KVA for Transformers that May Contain PCBs
Meat Plants	8	34	39,095	256	1,161	353,605
Poultry Plants	2	2	4,000	64	380	142,092
Combination Meat/Poultry Plants	4	4	3,030	124	738	226,308
Unclassified as of April 8, 1980	0	0	0	13	114	38,415
TOTAL	14	40	46,125	457	2,393	760,420

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Table III

INVENTORY DATA ON PLANT-OWNED TRANSFORMERS IN MEAT AND POULTRY PLANTS
(April 8, 1980)

TYPE OF PLANT	Number of Plants Reporting PCB Transformers	Number of PCB Transformers	Total KVA for PCB Transformers	Number Plants Reporting Transformers that May Contain PCBs	Number of Transformers that May Contain PCBs	Total KVA for Transformers that May Contain PCBs
Meat Plants	32	103	77,858	113	735	240,226
Poultry Plants	2	7	750	36	352	87,553
Combination Meat/Poultry Plants	27	134	89,679	76	483	246,143
Unclassified as of April 8, 1980	2	5	5,500	4	11	2,478
TOTAL	63	249	173,787	229	1,581	576,400

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Table IV

SUMMARY OF ESTIMATED COSTS
(millions of dollars)

	COSTS TO REPLACE ALL LIQUID FILLED CAPACITORS	COSTS TO INSTALL ALL UTILITY-OWNED TRANSFORMERS[1/]	COSTS TO REPLACE ALL PLANT-OWNED TRANSFORMERS	COSTS TO DRAIN AND REFILL ALL PLANT-OWNED TRANSFORMERS
Federally Inspected Meat and Poultry Plants[2/]	2.64	4.71	10.25	5.13
State Inspected Plants; Egg Processing Plants; (72 percent)	1.9	3.39	7.38	3.69
TOTAL	4.54	8.1	17.63	8.82

1/ It is not clear who would pay installation costs. It is assumed the utilities could use the equipment elsewhere.

2/ Also includes a few plants receiving voluntary, reimbursable inspection services.

NOTE: All costs in this table have been reduced by 50 percent to account for average age of the equipment.

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Agency Clearances:

M A. Gilson, for — 4/23/80

V. H. Berry
Deputy Administrator
Meat and Poultry Inspection Program

Date

John W. McCutchen — 23 Apr 80

John W. McCutchen
Acting Director
Policy and Program Planning

Date

Thomas A. Gruenberg — 25 April 80

~~Donald L. Houston~~
Administrator
Acting

Date

Carol Foreman — 28 April 80

Carol Tucker Foreman
Assistant Secretary for Food
and Consumer Services

Date

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