

federa register

September 5, 1973—Pages 23923-24184

WEDNESDAY, SEPTEMBER 5, 1973

WASHINGTON, D.C.

Volume 38 ■ Number 171

Pages 23923-24184

PART I



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federal register

Phone 523-5240

Area Code 202



Published daily, Monday through Friday (no publication on Saturdays, Sundays, or on official Federal holidays), by the Office of the Federal Register, National Archives and Records Service, General Services Administration, Washington, D.C. 20408, under the Federal Register Act (49 Stat. 500, as amended; 44 U.S.C. Ch. 15) and the regulations of the Administrative Committee of the Federal Register (1 CFR Ch. I). Distribution is made only by the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402.

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Weekly List of Public Laws

This is a listing of public bills enacted by Congress and approved by the President, together with the law number, the date of approval, and the U.S. Statutes citation. Subsequent lists will appear every Wednesday in the FEDERAL REGISTER, and copies of the laws may be obtained from the U.S. Government Printing Office.

NOTE: There were no laws signed by the President during the week.

Rules and Regulations

This section of the FEDERAL REGISTER contains regulatory documents having general applicability and legal effect most of which are keyed to and codified in the Code of Federal Regulations, which is published under 50 titles pursuant to 44 U.S.C. 1510.

The Code of Federal Regulations is sold by the Superintendent of Documents. Prices of new books are listed in the first FEDERAL REGISTER issue of each month.

Title 6—Economic Stabilization

CHAPTER I—COST OF LIVING COUNCIL

PART 150—COST OF LIVING COUNCIL PHASE IV PRICE REGULATIONS; EXEMPTION OF CERTAIN POSTAL RATES

The purpose of this amendment is to exempt from the operation of the Phase IV price stabilization regulations those second-, third-, and fourth class postal rates for which phased increases have been scheduled under section 3626 of title 39, United States Code.

On February 1, 1971, under the authority of the Postal Reorganization Act (Public Law 91-375), the Postal Service requested the Postal Rate Commission to submit to the Governors of the Postal Service a recommended decision on changes in rates of domestic postage and fees for domestic postal services (36 FR 2431; 36 FR 2571).

On June 5, 1972, the Postal Rate Commission transmitted to the Governors of the Postal Service its Recommended Decision (Commission Docket No. R71-1) in which it recommended permanent rates and fees. On June 23, 1972, the Governors approved the permanent rates and fees recommended by the Postal Rate Commission and the Board of Governors determined the effective date thereof.

Among the permanent rates approved by the Governors were a series of phased increases in the reduced rates then existing for certain second-, third-, and fourth class mail.

In accordance with the action of the Governors and the Board of Governors, the Postal Service placed the first round of phased increases in effect as of 12:01 a.m., July 6, 1972 (37 FR 13148). The second round of increases due to go into effect on July 6, 1973, did not go into effect because of the price freeze that existed between June 13 and August 12, 1973.

Under the Phase IV price regulations that went into effect on August 12, 1973, all increases in postal rates are subject to the prenotification requirements of Subpart H of Part 150 of those regulations.

In view of the extensive consideration already given to the economic justification for and the impact of the phased increases and the fact that a precise long-range schedule for their implementation was published over a year ago, the Council has determined the prenotification under the Phase IV price stabilization program should not be required and that these increases should be exempt from the operation of the price stabilization regulations.

Accordingly § 150.54(a) of title 6, Code of Federal Regulations is amended effective September 1, 1973, to read as follows:

§ 150.54 Certain price adjustments.

(a) *Federal and State and local governments.*—(1) Prices charged for any work, service, publication, report, document, benefit, privilege, authority, use, franchise, license, permit, certificate, registration, or similar thing of value or utility (including reduced postal rates for which phased increases are set forth in Part II of the FEDERAL REGISTER of July 1, 1972 (37 FR 13148-13150), but not including any other postal rates) performed, furnished, provided, granted, prepared, issued, or transferred by any Federal department, agency, or other instrumentality including any wholly owned Government corporations as defined in the Government Corporation Control Act of 1945, as amended (but not including the U.S. Postal Service and the Postal Rate Commission with respect to postal rates other than those reduced rates for which phased increases are provided under 39 U.S.C. 3626) are exempt.

(Economic Stabilization Act of 1970, as amended, Pub. L. 92-210, 85 Stat. 743; Pub. L. 93-28, 87 Stat. 27; E.O. 11695, 38 FR 1473; E.O. 11730, 38 FR 19345; Cost of Living Council Order No. 14; 38 FR 1489)

Issued in Washington, D.C., on August 30, 1973.

JOHN T. DUNLOP,
Director,
Cost of Living Council.

[FR Doc. 73-18766 Filed 8-31-73; 10:26 am]

Title 7—Agriculture

CHAPTER I—AGRICULTURAL MARKETING SERVICE (STANDARDS, INSPECTIONS, MARKETING PRACTICES), DEPARTMENT OF AGRICULTURE

PART 51—FRESH FRUITS, VEGETABLES AND OTHER PRODUCTS (INSPECTION, CERTIFICATION AND STANDARDS)

Standards for Grades of Fresh Tomatoes¹

On April 24, 1973, a notice of proposed rulemaking was published in the FEDERAL REGISTER (38 FR 10106) regarding the revision of United States Standards for Grades of Fresh Tomatoes (7 CFR 51.1855-51.1877). These grade standards are issued under authority of the Agri-

¹ Packing of the product in conformity with the requirements of these standards shall not excuse failure to comply with the provisions of the Federal Food, Drug and Cosmetic Act or with applicable State laws and regulations.

cultural Marketing Act of 1946 (60 Stat. 1087, as amended; 7 U.S.C. 1621-1627), which provides for the issuance of official U.S. grades to designate different levels of quality for the voluntary use of producers, buyers and consumers. Official grading services are also provided under this act upon request of any financially interested party and upon payment of a fee to cover the cost of such services.

Statement of considerations leading to the revision of the grade standards.—The U.S. Standards for Grades of Fresh Tomatoes were last revised in December 1956. In October 1961 they were amended by adding a new color classification section.

During 1970 the Florida Tomato Committee requested that size requirements in the standards be changed to correspond to the size classifications used in the Florida marketing order.

In April 1971, a study draft to consider revision of the standards was prepared and distributed. In this study draft a new "vine ripe" definition was proposed but was not included in the formal proposal because certifying stage of maturity at harvest would be prohibitively expensive. Also included were size specifications based on Florida size requirements with no overlap.

At the request of the Western Growers Association, research size studies were conducted by the University of California at Davis and published in January 1973. In February, USDA's Agricultural Marketing Service representatives attended a meeting of producers and technical advisors to discuss results of these studies. Out of this meeting agreement was reached on diameter requirements with corresponding descriptive terms. These were approved by the Tomato Division of the United Fresh Fruit and Vegetable Association in a resolution adopted and transmitted to the Department requesting revision of the grade standards. Also published in the proposal was a new definition of "mature" to state specifically that the tomato must have reached a stage of development that would insure proper completion of the ripening process. The color classification section was revised to require that when color terms are used tomatoes must be mature. An optional "Standard Weight" requirement was requested specifying that the amount of overfill in each container marked to designate net weight be restricted to 1½ pounds.

Following publication of the proposal in the FEDERAL REGISTER copies were widely distributed to individuals and to groups and organizations of tomato growers, shippers, receivers, and consumers. Information concerning the pro-

posal was carried in newspapers and trade publications.

The period for comments ended on June 30, 1973 and twelve letters of comment were received in response to the proposal. Most comments were from growers and shippers, or organizations representing them. Three letters were from consumers who were not interested in technical details of the standards, but were interested in being able to buy better quality and more uniformly sized tomatoes in retail stores.

Most of the views expressed by members of the fresh tomato industry specified the points in the proposal which were acceptable or those which were considered undesirable. There was unfavorable response concerning the proposal to limit the 1½ pound restriction on amount of overflow in each container marked to designate net weight and the 10 percent tolerance provided for containers failing to meet "Standard Weight" requirements. Grower and shipper groups recommended that a 2 pound restriction and 15 percent tolerance be provided which would more nearly reflect the new advances made in mechanical weighing and high speed machine filler equipment. The "Standard Weight" requirement is offered for optional use.

A major grower-shipper group strongly objected to implied mandatory replacement of the old numerical size designations by new size terms. Growers feel that optional use of numerical size designations should be maintained during the transition in order to facilitate orderly marketing of tomatoes. However, comments from grower, shipper and receiver groups favor the proposed diameter specifications set forth in the optional Size section.

November 1, 1973 and February 1, 1974 were recommended by industry groups as suitable effective dates. December 1, 1973 appears to offer a compromise which will not cause undue hardship in any producing area.

After consideration of all relevant matters presented by interested persons, the revision as so proposed is hereby adopted, subject to the following changes as set forth below.

These standards shall become effective on December 1, 1973, and will thereupon supersede the United States Standards for Fresh Tomatoes which have been in effect since June 28, 1957 (7 CFR 51.1855-51.1877).

Dated August 22, 1973.

E. L. PETERSON,
Administrator,
Agricultural Marketing Service.

GRADES

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51.1856	U.S. Combination.
51.1857	U.S. No. 2.
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SIZE

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COLOR CLASSIFICATION

51.1860 Color classification.

TOLERANCES

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51.1861	Tolerances.
	APPLICATION OF TOLERANCES
51.1862	Application of tolerances.
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51.1864	Similar varietal characteristics.
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51.1874	Serious damage.
51.1875	Missshapen.
51.1876	Very serious damage.
51.1877	Classification of defects.

AUTHORITY.—Secs. 203, 205, 60 Stat. 1087, as amended, 1090 as amended; 7 U.S.C. 1622, 1624.

GRADES

§ 51.1855 U.S. No. 1.

"U.S. No. 1" consists of tomatoes which meet the following requirements:

- Basic requirements:
 - Similar varietal characteristics;
 - Mature;
 - Not overripe or soft;
 - Clean;
 - Well developed;
 - Fairly well formed; and,
 - Fairly smooth.
- Free from:
 - Decay;
 - Freezing injury; and
 - Sunscald.
- Not damaged by any other cause.
- For tolerances see § 51.1861.

§ 51.1856 U.S. Combination.

"U.S. Combination" consists of a combination of U.S. No. 1 and U.S. No. 2 tomatoes: *Provided*, That at least 60 percent, by count, meet the requirements of U.S. No. 1 grade.

- For tolerances see § 51.1861.

§ 51.1857 U.S. No. 2.

"U.S. No. 2" consists of tomatoes which meet the following requirements:

- Basic requirements:
 - Similar varietal characteristics;
 - Mature;
 - Not overripe or soft;
 - Clean;
 - Well developed;
 - Reasonably well formed; and,
 - Not more than slightly rough.
- Free from:
 - Decay;
 - Freezing injury; and,
 - Sunscald.
- Not seriously damaged by any other cause.
- For tolerances see § 51.1861.

§ 51.1858 U.S. No. 3.

"U.S. No. 3" consists of tomatoes which meet the following requirements:

- Basic requirements:
 - Similar varietal characteristics;
 - Mature;
 - Not overripe or soft;
 - Clean;
 - Well developed; and,
 - May be missshapen.
- Free from:
 - Decay; and,
 - Freezing injury.
- Not seriously damaged by:
 - Sunscald.
- Not very seriously damaged by any other cause.
- For tolerances see § 51.1861.

SIZE

§ 51.1859 Size.

(a) The size of tomatoes packed in any type container, when specified according to the size designations set forth in Table I, shall be within the ranges of diameters specified for the respective designations.

(1) In determining compliance with the size designations the measurement for minimum diameter shall be the largest diameter of the tomato measured at right angles to a line from the stem end to the blossom end. The measurement for maximum diameter shall be the smallest dimension of the tomato determined by passing the tomato through a round opening in any position.

TABLE I

Size designations	Inches		Millimeters ¹	
	Minimum diameter ²	Maximum diameter ²	Minimum diameter ²	Maximum diameter ²
Extra small or 7 × 8.....	1 28/32	2 4/32	48	54
Small or 7 × 7.....	2 4/32	2 9/32	54	55
Medium or 6 × 7.....	2 9/32	2 17/32	58	61
Large or 5 × 6.....	2 17/32	2 28/32	64	73
Extra large or 5 × 6 and 6 × 8.....	2 28/32	3 15/32	73	88
Maximum large or 4 × 5 and larger.....	3 15/32		88	

¹ Conversion to metric equivalent made to nearest whole millimeter (mm).

² Will not pass through a round opening of the designated diameter when tomato is placed with the greatest transverse diameter across the opening.

³ Will pass through a round opening of the designated diameter in any position.

(b) In lieu of specifying size according to the above size designations, the size of tomatoes in any type container may be specified in terms of minimum diameter or of minimum and maximum diameters expressed in whole inches, whole inches and not less than thirty-

second inch fractions thereof, or millimeters, in accordance with the facts.

- For tolerances see § 51.1861.

COLOR CLASSIFICATION

§ 51.1860 Color classification.

(a) The following terms may be used, when specified in connection with the

grade statement, in describing the color as an indication of the stage of ripeness of any lot of mature tomatoes of a red fleshed variety:

(1) *Green*.—"Green" means that the surface of the tomato is completely green in color. The shade of green color may vary from light to dark;

(2) *Breakers*.—"Breakers" means that there is a definite break in color from green to tannish-yellow, pink or red on not more than 10 percent of the surface;

(3) *Turning*.—"Turning" means that more than 10 percent but not more than 30 percent of the surface, in the aggregate, shows a definite change in color from green to tannish-yellow, pink, red, or a combination thereof;

(4) *Pink*.—"Pink" means that more than 30 percent but not more than 60 percent of the surface, in the aggregate, shows pink or red color;

(5) *Light red*.—"Light red" means that more than 60 percent of the surface, in the aggregate, shows pinkish-red or red: *Provided*, That not more than 90 percent of the surface is red color; and,

(6) *Red*.—"Red" means that more than 90 percent of the surface, in the aggregate, shows red color.

(b) Any lot of tomatoes which does not meet the requirements of any of the above color designations may be designated as "Mixed Color".

(c) For tolerances see § 51.1861.

TOLERANCES

§ 51.1861 Tolerances.

In order to allow for variations incident to proper grading and handling in each of the foregoing grades, the following tolerances, by count, are provided as specified:

(a) *U.S. No. 1*.—(1) *For defects at shipping point*.—Ten percent for tomatoes in any lot which fail to meet the requirements for this grade: *Provided*, That not more than one-half of this tolerance, or 5 percent, shall be allowed for defects causing very serious damage, including therein not more than 1 percent for tomatoes which are soft or affected by decay; and,

(2) *For defects en route or at destination*.—Fifteen percent for tomatoes in any lot which fail to meet the requirements for this grade: *Provided*, That included in this amount not more than the following percentages shall be allowed for defects listed:

(i) Five percent for tomatoes which are soft or affected by decay;

(ii) Ten percent for tomatoes which are damaged by shoulder bruises or by discolored or sunken scars on any parts of the tomatoes; and,

(iii) Ten percent for tomatoes which are otherwise defective: *And provided further*, That not more than 5 percent shall be allowed for tomatoes which are

very seriously damaged by any cause, exclusive of soft or decayed tomatoes.

(b) *U.S. Combination*.—(1) *For defects at shipping point*.—Ten percent for tomatoes in any lot which fail to meet the requirements of the U.S. No. 2 grade: *Provided*, That not more than one-half of this tolerance, or 5 percent, shall be allowed for defects causing very serious damage, including 1 percent for tomatoes which are soft or affected by decay; and,

(2) *For defects en route or at destination*.—Fifteen percent for tomatoes in any lot which fail to meet the requirements of the U.S. No. 2 grade: *Provided*, That included in this amount not more than the following percentages shall be allowed for defects listed:

(i) Five percent for tomatoes which are soft or affected by decay;

(ii) Ten percent for tomatoes which are seriously damaged by shoulder bruises or by discolored or sunken scars on any parts of the tomatoes; and,

(iii) Ten percent for tomatoes which are otherwise defective: *And provided further*, That not more than 5 percent shall be allowed for tomatoes which are very seriously damaged by any cause, exclusive of soft or decayed tomatoes.

(c) *U.S. No. 2*.—(1) *For defects at shipping point*.—Ten percent for tomatoes in any lot which fail to meet the requirements of this grade: *Provided*, That not more than one-half of this tolerance, or 5 percent, shall be allowed for defects causing very serious damage, including therein not more than 1 percent for tomatoes which are soft or affected by decay; and,

(2) *For defects en route or at destination*.—Fifteen percent for tomatoes in any lot which fail to meet the requirements for this grade: *Provided*, That included in this amount not more than the following percentages shall be allowed for defects listed:

(i) Five percent for tomatoes which are soft or affected by decay;

(ii) Ten percent for tomatoes which are seriously damaged by shoulder bruises or by discolored or sunken scars on any parts of the tomatoes; and,

(iii) Ten percent for tomatoes which are otherwise defective: *And provided further*, That not more than 5 percent shall be allowed for tomatoes which are very seriously damaged by any cause, exclusive of soft or decayed tomatoes.

(d) *U.S. No. 3*.—(1) *For defects at shipping point*.—Ten percent for tomatoes in any lot which fail to meet the requirements of this grade: *Provided*, That not more than one-half of this tolerance, or 5 percent, shall be allowed for tomatoes which are very seriously damaged by insects and not more than one-tenth of the tolerance, or 1 percent, for tomatoes which are soft or affected by decay; and,

(2) *For defects en route or at destination*.—Fifteen percent for tomatoes in any lot which fail to meet the requirements for this grade: *Provided*, That included in this amount not more than the following percentages shall be allowed for defects listed:

(i) Five percent for tomatoes which are soft or affected by decay;

(ii) Ten percent for tomatoes which

are very seriously damaged by shoulder bruises or by discolored or sunken scars on any parts of the tomatoes; and,

(iii) Ten percent for tomatoes which are otherwise defective: *And provided further*, That not more than 5 percent shall be allowed for tomatoes which are very seriously damaged by insects.

(e) *For off size*. Ten percent for tomatoes in any lot which are smaller than the specified minimum diameter, or larger than the specified maximum diameter.

(f) *For off color*. Ten percent for tomatoes in any lot which fail to meet the color specified, including therein not more than 5 percent for tomatoes which are green in color, when any term other than "Green" is specified.

APPLICATION OF TOLERANCES

§ 51.1862 Application of tolerances.

The contents of individual packages in the lot, based on sample inspection, are subject to the following limitations:

(a) For packages which contain more than 5 pounds (2.27 kg), and a tolerance of 10 percent or more is provided, individual packages shall have not more than 1½ times the tolerance specified, and for a tolerance of less than 10 percent individual packages shall have not more than double the tolerance specified, except that at least one defective and one off size specimen may be allowed in any package: *Provided*, That the averages for the entire lot are within the tolerances specified for the grade; and,

(b) For packages which contain 5 pounds (2.27 kg) or less individual packages shall have not more than 4 times the tolerance specified, except that at least one tomato which is soft, or affected by decay, and one off-size specimen may be permitted in any package: *Provided*, That the averages for the entire lot are within the tolerances specified for the grade.

§ 51.1863 Standard weight.

(a) When packages are marked to a net weight of 15 pounds (6.80 kg) or more, the net weight of the contents shall not be less than the designated net weight and shall not exceed the designated weight by more than 2 pounds (0.91 kg).

(b) In order to allow for variations incident to proper sizing, not more than 15 percent, by count, of the packages in any lot may fail to meet the requirements for standard weight.

DEFINITIONS

§ 51.1864 Similar varietal characteristics.

"Similar varietal characteristics" means that the tomatoes are alike as to firmness of flesh and shade of color (for example, soft-fleshed, early maturing varieties are not mixed with firm-fleshed, midseason or late varieties, or bright red varieties mixed with varieties having a purplish tinge).

§ 51.1865 Mature.

"Mature" means that the tomato has reached the stage of development which will insure a proper completion of the ripening process, and that the contents

* Shipping point, as used in these standards, means the point of origin of the shipment in producing area or at port of loading for ship stores or overseas shipment, or in the case of shipments from outside the continental United States, the port of entry into the United States.

of two or more seed cavities have developed a jelly-like consistency and the seeds are well developed.

§ 51.1866 Soft.

"Soft" means that the tomato yields readily to slight pressure.

§ 51.1867 Clean.

"Clean" means that the tomato is practically free from dirt or other foreign material.

§ 51.1868 Well developed.

"Well developed" means that the tomato shows normal growth. Tomatoes which are ridged and peaked at the stem end, contain dry tissue, and usually contain open spaces below the level of the stem scar, are not considered well developed.

§ 51.1869 Fairly well formed.

"Fairly well formed" means that the tomato is not more than moderately kidney-shaped, lop-sided, elongated, angular, or otherwise moderately deformed.

§ 51.1870 Fairly smooth.

"Fairly smooth" means that the tomato is not conspicuously ridged or rough.

§ 51.1871 Damage.

"Damage" means any specific defect described in § 51.1877, table II; or an equally objectionable variation of any one of these defects, any other defect, or any combination of defects, which materially detracts from the appearance, or the edible or marketing quality of the tomato.

§ 51.1872 Reasonably well formed.

"Reasonably well formed" means that the tomato is not decidedly kidney-shaped, lop-sided, elongated, angular, or otherwise decidedly deformed.

§ 51.1873 Slightly rough.

"Slightly rough" means that the tomato is not decidedly ridged or grooved.

§ 51.1874 Serious damage.

"Serious damage" means any specific defect described in § 51.1877, table II; or an equally objectionable variation of any one of these defects, any other defect, or any combination of defects, which seriously detracts from the appearance, or the edible or marketing quality of the tomato.

§ 51.1875 Misshapen.

"Misshapen" means that the tomato is decidedly kidney-shaped, lop-sided, elongated, angular or otherwise decidedly deformed: *Provided*, That the shape is not affected to an extent that the appearance or the edible quality of the tomato is very seriously affected.

§ 51.1876 Very serious damage.

"Very serious damage" means any specific defect described in § 51.1877, table II; or an equally objectionable variation of any one of these defects, any other defect, or any combination of defects, which very seriously detracts from the appearance, or the edible or marketing quality of the tomato.

§ 51.1877 Classification of defects.

TABLE II

REFERENCES TO AREA, AGGREGATE AREA, LENGTH OR AGGREGATE LENGTH ARE BASED ON A TOMATO HAVING A DIAMETER OF 2 1/2 INCHES (64 MM).¹

Factor	Damage	Serious damage	Very serious damage
Cuts and broken skins	Not shallow or not well healed, or shallow, well healed cut more than 1/8 inch (3mm) in length, or other shallow, well healed skin breaks aggregating more than a circle 1/4 inch (10mm) in diameter.	Not shallow or not well healed, or shallow, well healed cut more than 1/8 inch (3mm) in length, or other shallow, well healed skin breaks aggregating more than a circle 1/4 inch (10mm) in diameter.	Fresh or healed and extending through the tomato wall.
Puffiness	Open space in 1 or more locules materially detracts from appearance of tomato cut through center at right angles to a line from stem to blossom end.	Open space in 1 or more locules seriously detracts from appearance of tomato cut through center at right angles to a line from stem to blossom end.	Open space in 2 or more locules very seriously detracts from appearance of tomato cut through center at right angles to a line from stem to blossom end.
Catfaces	Scars are rough or deep, channels are very deep or wide, channels extend into a locule, or a fairly smooth catface aggregating more than a circle 1/4 inch (10mm) in diameter.	Scars are rough or deep, channels are very deep or wide, channels extend into a locule, or a fairly smooth catface aggregating more than a circle 1/4 inch (10mm) in diameter.	Channels extend into the locule, wall has been weakened to the extent that slight pressure will cause a tomato to leak, or a fairly smooth catface aggregating more than a circle 1/4 inch (10mm) in diameter.
Scars (other than catfaces)	No depth and aggregating more than a circle 1/8 inch (3mm) in diameter.	No depth and aggregating more than a circle 1/8 inch (3mm) in diameter.	No depth and aggregating more than a circle 1/8 inch (3mm) in diameter.
Growth Cracks (radiating from or concentric to stem scar)	Not well healed, more than 1/4 inch (3 mm) in depth, individual radial cracks more than 1/4 inch (3 mm) in length, aggregate length of all radial cracks more than 1 inch (25 mm) measured from edge of stem scar. Any lot of tomatoes which are at least turning may have cracks which are not well healed provided they are not leaking.	Not well healed, more than 1/4 inch (3 mm) in depth, individual radial cracks more than 1/4 inch (3 mm) in length, aggregate length of all radial cracks more than 1 inch (25 mm) measured from edge of stem scar. Any lot of tomatoes which are at least turning may have cracks which are not well healed provided they are not leaking.	Not well healed, more than 1/4 inch (3 mm) in depth, individual radial cracks more than 1 inch (25 mm) in length, aggregate length of all radial cracks more than 2 1/4 inches (73 mm) measured from edge of stem scar. Any lot of tomatoes which are at least turning may have cracks which are not well healed provided they are not leaking, not more than 1/4 inch (3 mm) in depth, individual radial cracks are not more than 3/4 inch (19 mm) in length.
Hall	Deep, rough, not well healed and corked over, or fairly smooth, shallow hallmarks aggregating more than a circle 1/4 inch (10 mm) in diameter.	Deep, rough, not well healed and corked over, or fairly smooth, shallow hallmarks aggregating more than a circle 1/4 inch (10 mm) in diameter.	Fresh, very deep or fairly smooth, shallow hall marks aggregating more than a circle 1/4 inch (10 mm) in diameter.
Insect injury	Materially detracts from the appearance or any insect is present in the fruit.	Seriously detracts from the appearance or any insect is present in the fruit.	Very seriously detracts from the appearance or any insect is present in the fruit.

¹ Conversion to metric equivalent made to nearest whole millimeter.

[FR Doc. 73-18558 Filed 9-4-73; 8:45 am]

CHAPTER III—ANIMAL AND PLANT HEALTH INSPECTION SERVICE, DEPARTMENT OF AGRICULTURE

PART 354—OVERTIME SERVICES RELATING TO IMPORTS AND EXPORTS

Commuted Traveltime Allowances

The purpose of this amendment is to establish commuted traveltime periods as nearly as may be practicable to cover the time necessarily spent in reporting to and returning from the place at which an employee of the Plant Protection and Quarantine Programs performs overtime or holiday duty when such travel is performed solely on account of such overtime or holiday duty. Such establishment depends upon facts within the knowledge of the Animal and Plant Health Inspection Service.

Therefore, pursuant to the authority conferred upon the Deputy Administrator, Plant Protection and Quarantine Programs, by 7 CFR 354.1 of the regulations concerning overtime services relating to imports and exports, the administrative instructions appearing at 7 CFR 354.2, as amended, February 28, 1973 (38 FR 5340), April 9, 1973 (38 FR 9006), July 30, 1973 (38 FR 20233), and

August 21, 1973 (38 FR 22466), prescribing the commuted traveltime that shall be included in each period of overtime or holiday duty are further amended by adding (in appropriate alphabetical sequence) or deleting the information as shown below:

§ 354.2 Administrative instructions prescribing commuted traveltime.

COMMUTED TRAVELTIME ALLOWANCES (In hours)

Location covered	Served from	Metropolitan area	
		Within	Outside
Delete:			
Georgia:			
Savannah.....		1	
Add:			
Georgia:			
Savannah.....		2	
Texas:			
Point Comfort.....		1	

(64 Stat. 561; 7 U.S.C. 2280.)

Effective date.—The foregoing amendment shall become effective on September 5, 1973.

It is to the benefit of the public that this instruction be made effective at the earliest practicable date. Accordingly, pursuant to 5 U.S.C. 553, it is found upon good cause that notice and public procedure on this instruction are impracticable, unnecessary, and contrary to the public interest, and good cause is found for making it effective less than 30 days after publication in the FEDERAL REGISTER.

Done at Washington, D.C., this 29th day of August 1973.

LEO G. K. IVERSON,
Deputy Administrator, Plant
Protection and Quarantine
Programs.

[FR Doc.73-18670 Filed 9-4-73;8:45 am]

CHAPTER VII—AGRICULTURAL STABILIZATION AND CONSERVATION SERVICE

SUBCHAPTER B—FARM MARKETING QUOTAS AND ACREAGE ALLOTMENTS

PART 725—FLUE-CURED TOBACCO

Subpart—Proclamations, Determinations, and Announcements of National Marketing Quotas and Referendum Results

Marketing Quota Referendum Results

Basis and purpose.—Section 725.3 is revised pursuant to and in accordance with the Agricultural Adjustment Act of 1938, as amended, to proclaim the results of the flue-cured tobacco marketing quota referendum for the three marketing years beginning July 1, 1974. The Secretary proclaimed national marketing quotas for flue-cured tobacco for the 1974-75, 1975-76, and 1976-77 marketing years, and announced the amount of the national marketing quota for the 1974-75 marketing year (38 FR 18233). The Secretary announced (38 FR 18254) that a referendum would be held on July 17, 1973, to determine whether flue-cured tobacco producers were in favor of or opposed to marketing quotas for the three marketing years beginning July 1, 1974. Since the only purpose of this proclamation is to announce the results of the referendum, it is hereby found and determined that with respect to this proclamation, application of the notice, public procedure and effective date provisions of 5 U.S.C. 553 is unnecessary.

Section 725.3 is revised to read as follows and § 725.4 is deleted, except that the material previously appearing in these sections remain in full force and effect as to the crops to which it was applicable:

§ 725.3 Results of the flue-cured tobacco marketing quota referendum for the three-year period beginning July 1, 1974.

In a referendum of farmers engaged in the production of the 1973 crop of flue-cured tobacco held on July 17, 1973, 100,466 farmers voted. Of those voting, 99,004 or 98.5 percent favored quotas for a period of three years beginning July 1, 1974, and 1,462 or 1.5 percent were opposed to quotas. Therefore, the national marketing quota of 1,179 million pounds for flue-cured tobacco proclaimed (38 FR 18233) for the 1974-75 marketing year

will be in effect for such year, and marketing quotas on such kind of tobacco will be in effect for the three marketing years beginning July 1, 1974.

§ 725.4 [Deleted].

(Secs. 312, 317, 375; 52 Stat. 46, as amended, 79 Stat. 66, 52 Stat. 86, as amended; 7 U.S.C. 1312, 1314c, 1375.)

Signed at Washington, D.C., on August 28, 1973.

GLENN A. WEIR,
Acting Administrator, Agricultural
Stabilization and Conservation
Service.

[FR Doc.73-18709 Filed 9-4-73;8:45 am]

CHAPTER XIV—COMMODITY CREDIT CORPORATION, DEPARTMENT OF AGRICULTURE

SUBCHAPTER B—LOANS, PURCHASES, AND OTHER OPERATIONS

[CCC Grain Price Support Regulations, 1973 Crop Corn Supplement]

PART 1421—GRAINS AND SIMILARLY HANDLED COMMODITIES

Subpart—1973 Crop Loan and Purchase Program

On October 7, 1972, notice of proposed rulemaking regarding loan and purchase rates for 1973 crop corn and detailed operating provisions to carry out the 1973 crop corn loan and purchase program was published in the FEDERAL REGISTER (37 FR 21332). No data, views, or recommendations were filed by interested persons.

The General Regulations Governing Price Support for the 1970 and Subsequent Crops, published in the FEDERAL REGISTER at 35 FR 7363 and 7781, and any amendments thereto, and the 1970 and Subsequent Crops Corn Loan and Purchase Program Regulations, published in the FEDERAL REGISTER at 35 FR 13969, and any amendments to such regulations, are further supplemented for the 1973 crop of corn.

The material previously appearing in these §§ 1421.111 through 1421.116 shall remain in full force and effect as to the crops to which it is applicable.

- Sec.
- 1421.111 Availability.
 - 1421.112 Compliance requirements.
 - 1421.113 Warehouse charges.
 - 1421.114 Maturity of loans.
 - 1421.115 Delivery period.
 - 1421.116 Loan and purchase rates, premiums, and discounts.

AUTHORITY: Sec. 4, 62 Stat. 1070, as amended (15 U.S.C. 714b). Interpret or apply sec. 5, 62 Stat. 1072, secs. 105, 401, 63 Stat. 1051, as amended (15 U.S.C. 714c, 7 U.S.C. 1421, 1441).

§ 1421.111 Availability.

A producer desiring to participate in the program through loans must request a loan on his 1973 crop of eligible corn on or before June 30, 1974. To sell eligible corn to CCC, a producer must execute and deliver to the appropriate county ASCS office, on or before July 31, 1974, a purchase agreement (Form CCC-614) indicating the approximate quantity of 1973 crop corn he may sell to CCC. *Provided*, That in any area where it is de-

termined by the State ASC committee that producers may not be able to or cannot store corn safely on the farm for the full storage period because of insects, adverse climatic conditions, or other factors affecting the safe storage of corn, the final date for requesting loans and purchases on farm stored corn shall be such earlier dates as are established by the State ASC committee. Public announcement of the final dates shall be made sufficiently in advance of such dates to allow producers a reasonable period of time to request loans and purchases.

§ 1421.112 Compliance requirements.

A producer shall be eligible for a loan or purchase with respect to the corn being tendered if the producer complies with the 1973 set-aside program appearing in regulations published in Part 775 of this title pertaining to Feed Grain Set-Aside Program for crop years 1971-73, and any amendments thereto, on the farm on which such corn was produced.

§ 1421.113 Warehouse charges.

Subject to the provisions of § 1421.96, the schedule of deductions set forth in this section shall apply to corn stored in an approved warehouse operating under the Uniform Grain Storage Agreement.

SCHEDULE OF DEDUCTIONS FOR STORAGE CHARGES FOR MATURITY DATE OF JULY 31, 1974

Storage start date: ¹	Deduction (cents per bushel)
Prior to Aug. 3, 1973	15
Aug. 3 to Aug. 27	14
Aug. 28 to Sept. 21	13
Sept. 22 to Oct. 16	12
Oct. 17 to Nov. 10	11
Nov. 11 to Dec. 5	10
Dec. 6 to Dec. 30	9
Dec. 31, 1973 to Jan. 24, 1974	8
Jan. 25 to Feb. 18	7
Feb. 19 to Mar. 15	6
Mar. 16 to Apr. 9	5
Apr. 10 to May 4	4
May 5 to May 29	3
May 30 to June 23	2
June 24 to July 31, 1974	1

¹ All dates inclusive.

§ 1421.114 Maturity of loans.

Loans made on demand but not later than July 31, 1974.

§ 1421.115 Delivery period.

(a) *Regular delivery period.*—The regular delivery period shall begin August 1, 1974.

(b) *Where producer may not be in a position to store corn safely.*—In areas where it is determined by the State ASC committee that some producers may not be in a position to store corn safely on the farm for the full storage period (for reasons set forth in § 1421.111), the State ASC committee may establish an earlier delivery period prior to maturity (in addition to the regular delivery period) during which any producer in such areas may voluntarily deliver corn which is under farm storage loan. Eligible corn not under loan may also be delivered to CCC for purchase in the earlier delivery period. Such earlier delivery period, if

established, shall begin at least 30 days after the final date of availability of loans established by the State ASC committee, but not before April 1, 1974. CCC will accept deliveries of corn during such early delivery period, provided the producer notifies the county ASCS office within the time specified by the county ASCS office that he wants to deliver the corn.

(c) Where producers cannot store corn safely.—If the State ASC committee determines that producers in an area cannot store corn safely on the farm for the full storage period (for reasons set forth in §1421.111), all farm storage loans in such area shall be called. Producers having eligible corn not under loan who elect to make deliveries from farm storage for purchase by CCC shall also be required to deliver during the delivery period for loans except that individual producers may keep corn in farm storage until the regular loan maturity date if (1) such corn is shelled, (2) the producer has satisfactory storage facilities, and (3) either the State ASC committee approves or the county ASC committee approves where the State ASC committee has authorized determinations. Any earlier delivery period established shall begin at least 30 days after the final date of availability of loans established by the State ASC committee and not before April 1, 1974.

§ 1421.116 Loan and purchase rates, premiums, and discounts.

County basic loan and purchase rates for corn and the schedule of premiums and discounts are contained in this section. Farm stored loans will be made at the basic rate for the county where the corn is stored, adjusted only for the weed control discount where applicable. The rate for warehouse stored corn loans shall be the basic rate for the county where the corn is stored, adjusted by the premiums and discounts prescribed in paragraphs (b) and (c) of this section. Notwithstanding § 1421.23(c), settlement for corn delivered from other than approved warehouse storage shall be based on the basic rate for the county in which the producer's customary delivery point is located, and on the quality and quantity of the corn delivered as shown on the warehouse receipts and accompanying documents issued by an approved warehouse to which delivery is made, or if applicable, the quality and quantity delivered as shown on a form prescribed by CCC for this purpose.

(a) Basic county rates.—Basic county rates for corn grading No. 2 and containing from 15.1 through 15.5 percent moisture are as follows:

County	Rate per bushel
ALABAMA	
All Counties.....	\$1.20
ARIZONA	
All Counties.....	1.26
ARKANSAS	
All Counties.....	1.17
CALIFORNIA	
All Counties.....	1.26

COLORADO

County	Rate per bushel	County	Rate per bushel
Adams.....	\$1.14	La Plata.....	\$1.22
Alamosa.....	1.18	Larimer.....	1.14
Arapahoe.....	1.15	Las Animas.....	1.15
Archuleta.....	1.20	Liholun.....	1.13
Baca.....	1.11	Logan.....	1.12
Bent.....	1.14	Mesa.....	1.23
Boulder.....	1.14	Moffat.....	1.23
Cheyenne.....	1.10	Montezuma.....	1.25
Conejos.....	1.18	Montrose.....	1.23
Costilla.....	1.18	Morgan.....	1.14
Crowley.....	1.14	Otero.....	1.16
Custer.....	1.17	Ouray.....	1.25
Delta.....	1.23	Phillips.....	1.10
Dolores.....	1.25	Pitkin.....	1.21
Douglas.....	1.16	Prowers.....	1.10
Eagle.....	1.21	Pueblo.....	1.16
Ebert.....	1.15	Rio Blanco.....	1.23
El Paso.....	1.16	Rio Grande.....	1.21
Fremont.....	1.17	Routt.....	1.20
Garfield.....	1.23	Seguache.....	1.19
Grand.....	1.17	San Miguel.....	1.25
Huerfano.....	1.17	Sedgwick.....	1.10
Jefferson.....	1.16	Washington.....	1.12
Kiowa.....	1.10	Weld.....	1.14
Kit Carson.....	1.10	Yuma.....	1.09

CONNECTICUT

County	Rate per bushel
All counties.....	\$1.29

DELAWARE

All counties.....	\$1.23
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FLORIDA

All counties.....	\$1.21
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GEORGIA

All counties.....	\$1.21
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HAWAII

All counties.....	\$1.57
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IDAHO

All counties.....	\$1.23
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ILLINOIS

County	Rate per bushel	County	Rate per bushel
Adams.....	\$1.08	Jefferson.....	\$1.10
Alexander.....	1.12	Jersey.....	1.10
Bond.....	1.10	Jo Daviess.....	1.09
Boone.....	1.08	Johnson.....	1.11
Brown.....	1.09	Kane.....	1.10
Bureau.....	1.08	Kankakee.....	1.08
Calhoun.....	1.09	Keokuk.....	1.09
Carroll.....	1.06	Knox.....	1.09
Cass.....	1.10	Lake.....	1.10
Champaign.....	1.07	La Salle.....	1.09
Christian.....	1.09	Lawrence.....	1.10
Clark.....	1.08	Lee.....	1.08
Clay.....	1.09	Livingston.....	1.08
Clinton.....	1.10	Logan.....	1.09
Coles.....	1.07	McDonough.....	1.08
Cook.....	1.11	McHenry.....	1.09
Crawford.....	1.09	McLean.....	1.08
Cumberland.....	1.08	Macon.....	1.09
De Kalb.....	1.09	Macoupin.....	1.10
De Witt.....	1.08	Madison.....	1.10
Douglas.....	1.07	Marion.....	1.09
Du Page.....	1.10	Marshall.....	1.09
Edgar.....	1.07	Mason.....	1.09
Edwards.....	1.11	Massac.....	1.12
Efingham.....	1.09	Menard.....	1.09
Fayette.....	1.09	Mercer.....	1.06
Ford.....	1.07	Monroe.....	1.11
Franklin.....	1.11	Montgomery.....	1.09
Fulton.....	1.09	Morgan.....	1.10
Gallatin.....	1.12	Moultrie.....	1.07
Greene.....	1.10	Ogle.....	1.07
Grundy.....	1.09	Peoria.....	1.09
Hamilton.....	1.11	Perry.....	1.11
Hancock.....	1.07	Platt.....	1.07
Hardin.....	1.12	Pike.....	1.09
Henderson.....	1.07	Pope.....	1.12
Henry.....	1.07	Pulaski.....	1.12
Iroquois.....	1.08	Putnam.....	1.09
Jackson.....	1.11	Randolph.....	1.11
Jasper.....	1.09	Richland.....	1.10

ILLINOIS—Continued

County	Rate per bushel	County	Rate per bushel
Rock Island.....	\$1.06	Vermillion.....	\$1.07
St. Clair.....	1.11	Wabash.....	1.11
Saline.....	1.11	Warren.....	1.08
Sangamon.....	1.09	Washington.....	1.11
Schuyler.....	1.09	Wayne.....	1.10
Scott.....	1.10	White.....	1.11
Shelby.....	1.08	Whiteside.....	1.07
Stark.....	1.09	Will.....	1.10
Stephenson.....	1.07	Williamson.....	1.11
Tazewell.....	1.09	Winnebago.....	1.07
Union.....	1.11	Woodford.....	1.09

INDIANA

Adams.....	\$1.07	Lawrence.....	\$1.11
Allen.....	1.07	Madison.....	1.05
Bartholomew.....	1.09	Marion.....	1.06
Benton.....	1.07	Marshall.....	1.08
Blackford.....	1.07	Martin.....	1.11
Boone.....	1.05	Miami.....	1.07
Brown.....	1.09	Monroe.....	1.09
Carroll.....	1.06	Montgomery.....	1.06
Cass.....	1.07	Morgan.....	1.07
Clark.....	1.12	Newton.....	1.08
Clay.....	1.07	Nobel.....	1.07
Clinton.....	1.05	Ohio.....	1.12
Crawford.....	1.12	Orange.....	1.11
Davies.....	1.11	Owen.....	1.07
Dearborn.....	1.12	Parke.....	1.06
Decatur.....	1.09	Perry.....	1.12
De Kalb.....	1.07	Pike.....	1.11
Delaware.....	1.06	Porter.....	1.09
Dubois.....	1.11	Posey.....	1.12
Eikhart.....	1.08	Pulaski.....	1.08
Fayette.....	1.08	Putnam.....	1.06
Floyd.....	1.12	Randolph.....	1.07
Fountain.....	1.06	Ripley.....	1.11
Franklin.....	1.11	Rush.....	1.07
Fulton.....	1.08	St. Joseph.....	1.08
Gibson.....	1.12	Scott.....	1.12
Grant.....	1.08	Shelby.....	1.07
Greene.....	1.09	Spencer.....	1.12
Hamilton.....	1.05	Starke.....	1.08
Harrison.....	1.12	Steuben.....	1.07
Hancock.....	1.06	Sullivan.....	1.09
Hendricks.....	1.03	Switzerland.....	1.12
Henry.....	1.06	Tippecanoe.....	1.06
Howard.....	1.06	Tipton.....	1.05
Huntington.....	1.07	Union.....	1.09
Jackson.....	1.11	Vanderburgh.....	1.12
Jasper.....	1.08	Vermillion.....	1.06
Jay.....	1.07	Vigo.....	1.07
Jefferson.....	1.12	Wabash.....	1.07
Jennings.....	1.11	Warren.....	1.05
Johnson.....	1.07	Warrick.....	1.12
Knox.....	1.11	Washington.....	1.12
Kosciusko.....	1.08	Wayne.....	1.07
LaGrange.....	1.07	Wells.....	1.07
Lake.....	1.09	White.....	1.07
La Porte.....	1.09	Whitley.....	1.07

IOWA

Adair.....	\$1.04	Dallas.....	\$1.03
Adams.....	1.05	Davis.....	1.05
Allamakee.....	1.03	Decatur.....	1.05
Appanoose.....	1.05	Delaware.....	1.04
Audubon.....	1.04	Des Moines.....	1.06
Benton.....	1.04	Dickinson.....	1.00
Black Hawk.....	1.02	Dubuque.....	1.05
Boone.....	1.02	Emmett.....	1.00
Bremer.....	1.02	Fayette.....	1.03
Buchanan.....	1.03	Floyd.....	1.00
Buena Vista.....	1.01	Franklin.....	1.00
Butler.....	1.01	Fremont.....	1.05
Calhoun.....	1.02	Greene.....	1.03
Carroll.....	1.03	Grundy.....	1.02
Cass.....	1.04	Guthrie.....	1.04
Cedar.....	1.06	Hamilton.....	1.01
Cerro Gordo.....	1.00	Hancock.....	1.00
Cherokee.....	1.02	Hardin.....	1.02
Chickasaw.....	1.01	Harrison.....	1.05
Clarke.....	1.04	Henry.....	1.06
Clay.....	1.01	Howard.....	1.01
Clayton.....	1.04	Humboldt.....	1.00
Clinton.....	1.06	Ida.....	1.03
Crawford.....	1.03	Iowa.....	1.04

RULES AND REGULATIONS

MISSOURI—Continued

Table with 4 columns: County, Rate per bushel, County, Rate per bushel. Lists counties from Christian to Wright with their respective rates.

MONTANA

All counties.....\$1.14

NEBRASKA

Table with 4 columns: County, Rate per bushel, County, Rate per bushel. Lists counties from Adams to Nemaha with their respective rates.

NEBRASKA—Continued

Table with 4 columns: County, Rate per bushel, County, Rate per bushel. Lists counties from Nuckolls to Scotts Bluff with their respective rates.

NEVADA

All Counties.....\$1.27

NEW HAMPSHIRE

All Counties.....\$1.29

NEW JERSEY

All Counties.....\$1.25

NEW MEXICO

Table with 4 columns: County, Rate per bushel, County, Rate per bushel. Lists counties from Curry to Quay with their respective rates.

NEW YORK

All Counties.....\$1.24

NORTH CAROLINA

All Counties.....\$1.22

NORTH DAKOTA

All Counties.....\$.98

OHIO

Table with 4 columns: County, Rate per bushel, County, Rate per bushel. Lists counties from Adams to Wyandot with their respective rates.

OKLAHOMA

Table with 4 columns: County, Rate per bushel, County, Rate per bushel. Lists counties from Beaver to Harmon with their respective rates.

OREGON

All counties.....\$1.24

PENNSYLVANIA

All counties.....\$1.29

RHODE ISLAND

All counties.....\$1.22

SOUTH CAROLINA

All counties.....\$1.22

SOUTH DAKOTA

Table with 4 columns: County, Rate per bushel, County, Rate per bushel. Lists counties from Aurora to Hyde with their respective rates.

TENNESSEE

Table with 4 columns: County, Rate per bushel, County, Rate per bushel. Lists counties from Anderson to Hamblen with their respective rates.

TENNESSEE—Continued

County	Rate per bushel	County	Rate per bushel
Morgan	\$1.21	Steward	\$1.18
Oblon	1.16	Sullivan	1.23
Overton	1.20	Sumner	1.19
Perry	1.18	Tipton	1.16
Pickett	1.20	Trousdale	1.19
Polk	1.21	Unicoi	1.23
Putnam	1.20	Union	1.22
Rhea	1.21	Van Buren	1.20
Roane	1.22	Warren	1.20
Robertson	1.18	Washington	1.23
Rutherford	1.19	Wayne	1.18
Scott	1.21	Weakley	1.16
Squatchie	1.20	White	1.20
Sevier	1.23	Williamson	1.19
Shelby	1.16	Wilson	1.19
Smith	1.19		

TEXAS

County	Rate per bushel	County	Rate per bushel
Armstrong	\$1.14	Hemphill	\$1.14
Bailey	1.14	Hockley	1.16
Briscoe	1.14	Hutchinson	1.14
Carson	1.14	King	1.16
Castro	1.14	Lamb	1.14
Childress	1.15	Lipscomb	1.14
Cochran	1.16	Lubbock	1.16
Collingsworth	1.15	Moore	1.14
Cottle	1.16	Motley	1.16
Crosby	1.16	Ochiltree	1.14
Dallam	1.14	Oldham	1.14
Deaf Smith	1.14	Parmer	1.14
Dickens	1.16	Potter	1.14
Donley	1.15	Randall	1.14
Floyd	1.14	Roberts	1.14
Gray	1.14	Sherman	1.14
Hale	1.14	Swisher	1.14
Hall	1.15	Wheeler	1.15
Hansford	1.14	All other counties	1.19
Hartley	1.14		

UTAH

All Counties	\$1.26
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VERMONT

All Counties	\$1.29
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VIRGINIA

All Counties	\$1.23
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WASHINGTON

All Counties	\$1.21
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WEST VIRGINIA

All Counties	\$1.22
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WISCONSIN

County	Rate per bushel	County	Rate per bushel
Adams	\$1.09	Juneau	\$1.09
Ashland	1.09	Kenosha	1.11
Barron	1.07	Kewaunee	1.12
Bayfield	1.06	La Crosse	1.06
Brown	1.11	Lafayette	1.07
Buffalo	1.06	Langlade	1.11
Burnett	1.05	Lincoln	1.10
Calumet	1.11	Manitowoc	1.12
Chippewa	1.07	Marathon	1.10
Clark	1.09	Marquette	1.11
Columbia	1.09	Marquette	1.10
Crawford	1.05	Menominee	1.11
Dane	1.09	Milwaukee	1.11
Dodge	1.10	Monroe	1.07
Door	1.12	Oconto	1.11
Douglas	1.03	Oneida	1.11
Dunn	1.07	Outagamie	1.10
Eau Claire	1.07	Ozaukee	1.11
Florence	1.11	Pepin	1.06
Fond du Lac	1.10	Pierce	1.06
Forest	1.11	Polk	1.05
Grant	1.05	Portage	1.10
Green	1.08	Price	1.09
Green Lake	1.10	Racine	1.11
Iowa	1.08	Richland	1.07
Iron	1.10	Rock	1.09
Jackson	1.07	Rusk	1.08
Jefferson	1.10	St. Croix	1.06

WISCONSIN—Continued

County	Rate per bushel	County	Rate per bushel
Sauk	1.08	Walworth	1.10
Sawyer	1.08	Washburn	1.07
Shawano	1.11	Washington	1.10
Sheboygan	1.11	Waukesha	1.10
Taylor	1.09	Waupaca	1.11
Trempealeau	1.06	Waushara	1.10
Vernon	1.05	Winnebago	1.11
Vilas	1.11	Wood	1.09

WYOMING

All Counties	\$1.14
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(b) Premiums—(1) Moisture.

	Cents per bushel
14.0 or less	+1½
14.1 through 14.5	+1
14.6 through 15.0	+½
15.0 through 15.5	0

(2) Broken corn and foreign material:

	Cents per bushel
Percent: 2.0 or less	+1
(The premiums in this subsection (b) shall not apply to sample grade corn.)	

(c) Discounts—(1) Class.

	Cents per bushel
Mixed	-2
(2) Test weight per bushel.	
Pounds:	
53.0 through 53.9	-1
52.0 through 52.9	-2
51.0 through 51.9	-3
50.0 through 50.9	-4
49.0 through 49.9	-5

(3) Total damage.

	Cents per bushel
Percent:	
5.1 through 6.0	-½
6.1 through 7.0	-1

(4) Heat damage.

	Cents per bushel
0.21 through 0.50 percent	-½

(5) Broken corn and foreign material.

	Cents per bushel
3.1 through 4.0 percent	-1

(6) Weed control laws.

	Cents per bushel
(Where required by § 1421.25)	-10

(7) Other.—Amounts determined by

CCC to represent market discounts for quality factors not specified above which affect the value of the corn such as (but not limited to) moisture, weevily, musty, sour, and rodent excreta. Such discounts will be established not later than the time delivery of corn to CCC begins and will thereafter be adjusted from time to time as CCC determines appropriate to reflect changes in market conditions. Producers may obtain schedules of such factors and discounts at county ASCS offices approximately 1 month prior to the loan maturity date.

Effective date September 4, 1973.

Signed at Washington, D.C., August 24, 1973.

GLENN A. WEIR,
Acting Executive Vice President,
Commodity Credit Corporation.

[FR Doc.73-18516 Filed 8-4-73; 8:45 am]

[Amdt. 1]

SUBCHAPTER B—LOANS, PURCHASES, AND OTHER OPERATIONS

PART 1430—DAIRY PRODUCTS

Price Support Program for Milk

The United States Department of Agriculture has announced an increase, effective August 10, 1973, in the price support level for manufacturing milk for the remainder of the marketing year which ends March 31, 1974 through purchases by Commodity Credit Corporation (CCC) of dairy products under the price support program as provided herein. Accordingly § 1430.282 (a)(1) and (b)(1), as published in the FEDERAL REGISTER on March 27, 1973 (38 FR 7982), are revised to read as follows:

§ 1430.282 Price support program for milk.

(a)(1) The general levels of prices to producers for milk will be supported from March 15, 1973 through August 9, 1973, at \$5.29 per hundredweight, and from August 10, 1973 through March 31, 1974, at \$5.61 per hundredweight for manufacturing milk.

(b)(1) CCC will consider offers of butter, Cheddar cheese, and nonfat dry milk in bulk containers meeting specifications in the announcements at the following prices:

Commodity and location	Produced March 15- August 9, 1973	Produced on or after August 10, 1973
	(Cents per pound)	(Cents per pound)
Butter: U.S. Grade A or Higher: New York, N.Y., and Jersey City, Newark and Secaucus, New Jersey	62.00	62.00
Seattle, Wash., Washington, San Francisco, Calif., California, Alaska, Hawaii, Oregon, Arizona, New Mexico, Texas, Louisiana, Mississippi, Alabama, Georgia, Florida, and South Carolina.	61.00	61.00
U.S. Grade B: 2 cents per pound less than the price for U.S. Grade A.		
Cheddar cheese: (Standard moisture basis, 37.8-39.0%) ¹	62.00	65.00
Nonfat dry milk, spray process: 50-pound bags with sealed closures ² .	37.50	41.40

¹ For cheese which is offered on a "dry" basis (less than 37.8 percent moisture) the price per pound shall be as indicated in Form ASCS-150.

² If upon inspection Type II bags with stitched bottom and top closures do not fully comply with specifications for such closures, the price paid will be subject to a discount of .25 cent (¼ cent) per pound of nonfat dry milk.

Effective date.—September 5, 1973.

Signed at Washington, D.C., August 27, 1973.

GLENN A. WEIR,
Acting Executive Vice President,
Commodity Credit Corporation.

[FR Doc.73-18710 Filed 9-4-73; 8:45 am]

Title 9—Animals and Animal Products

CHAPTER 1—ANIMAL AND PLANT HEALTH INSPECTION SERVICE, DEPARTMENT OF AGRICULTURE

SUBCHAPTER C—INTERSTATE TRANSPORTATION OF ANIMALS (INCLUDING POULTRY) AND ANIMAL PRODUCTS; EXTRAORDINARY EMERGENCY REGULATION OF INTRASTATE ACTIVITIES

PART 82—EXOTIC NEWCASTLE DISEASE; AND PSITTACOSIS OR ORNITHOSIS IN POULTRY

Area Released From Quarantine

This amendment excludes a portion of San Bernardino County in California from the areas quarantined because of exotic Newcastle disease. Therefore, the restrictions pertaining to the interstate movement of poultry, mynah and psittacine birds, and birds of all other species under any form of confinement, and their carcasses and parts thereof, and certain other articles from quarantined areas, as contained in 9 CFR Part 82, as amended, will not apply to the excluded area.

Pursuant to the provisions of sections 1, 2, 3, and 4 of the Act of March 3, 1905, as amended, sections 1 and 2 of the Act of February 2, 1903, as amended, sections 4, 5, 6, and 7 of the Act of May 29, 1884, as amended, and sections 3 and 11 of the Act of July 2, 1962 (21 U.S.C. 111, 112, 113, 115, 117, 120, 123, 124, 125, 126, 134b, 134f), Part 82, Title 9, Code of Federal Regulations, is hereby amended in the following respects:

In § 82.3, in paragraph (a) (1) relating to the State of California, subdivision (iii) relating to San Bernardino County is deleted.

(Secs. 4-7, 23 Stat. 32, as amended; secs. 1 and 2, 32 Stat. 791-792, as amended; secs. 1-4, 33 Stat. 1264, 1265, as amended; secs. 3 and 11, 76 Stat. 130, 132; 21 U.S.C. 111-113, 115, 117, 120, 123-125, 134b, 134f; 37 FR 28464, 28477.)

Effective date.—The foregoing amendment shall become effective August 30, 1973.

The amendment relieves certain restrictions presently imposed but no longer deemed necessary to prevent the spread of exotic Newcastle disease, and must be made effective immediately to be of maximum benefit to affected persons. It does not appear that public participation in this rulemaking proceeding would make additional relevant information available to the Department.

Accordingly, under the administrative procedure provisions in 5 U.S.C. 553, it is found upon good cause that notice and other public procedure with respect to the amendment are impracticable and unnecessary, and good cause is found for making it effective less than 30 days after publication in the FEDERAL REGISTER.

Done at Washington, D.C., this 30th day of August, 1973.

G. H. WISE,
Acting Administrator, Animal
and Plant Health Inspection
Service.

[FR Doc.73-18744 Filed 9-4-73;8:45 am]

SUBCHAPTER D—EXPORTATION AND IMPORTATION OF ANIMALS (INCLUDING POULTRY AND ANIMAL PRODUCTS)

PART 97—OVERTIME SERVICES RELATING TO IMPORTS AND EXPORTS

Administrative Instructions Prescribing Commuted Travel Time Allowances

The purpose of this amendment is to establish commuted travel time periods as nearly as may be practicable to cover the time necessarily spent in reporting to and returning from the place at which an employee of Veterinary Services performs overtime or holiday duty when such travel is performed solely on account of overtime or holiday duty. Such establishment depends upon facts within the knowledge of the Animal and Plant Health Inspection Service.

Therefore, pursuant to the authority conferred upon the Deputy Administrator, Veterinary Services, Animal and Plant Health Inspection Service by § 97.1 of the regulations concerning overtime services relating to imports and exports (9 CFR 97.1), administrative instructions 9 CFR 97.2 (1973 ed.), as amended January 26, 1973 (38 FR 2442) and June 19, 1973 (38 FR 15953), prescribing the commuted travel time that shall be included in each period of overtime or holiday duty, are hereby amended by adding to or deleting from the respective "lists" therein as follows:

WITHIN METROPOLITAN AREA

TWO HOURS

Add:
Port of Savannah (served from Savannah, Georgia).

OUTSIDE METROPOLITAN AREA

FOUR HOURS

Add:
Barron, Wisconsin (when served from Eau Claire, Wisconsin).

SIX HOURS

Add:
Barron, Wisconsin (when served from St. Paul, Minnesota).

OUTSIDE METROPOLITAN AREA

ONE HOUR

Delete:
Port of Savannah (served from Savannah, Georgia).

(64 Stat. 561; 7 U.S.C. 2280.)

Effective date.—The foregoing amendment shall become effective September 5, 1973.

It is to the benefit of the public that these instructions be made effective at the earliest practicable date. Accordingly, pursuant to 5 U.S.C. 553, it is found upon good cause that notice and public procedure on these instructions are impracticable, unnecessary, and contrary to the public interest, and good cause is found for making them effective less than 30 days after publication in the FEDERAL REGISTER.

Done at Washington, D.C., this 29th day of August, 1973.

J. M. HEJL,
Acting Deputy Administrator,
Veterinary Services, Animal
and Plant Health Inspection
Service.

[FR Doc.73-18745 Filed 9-4-73;8:45 am]

Title 12—Banks and Banking

CHAPTER V—FEDERAL HOME LOAN BANK BOARD

SUBCHAPTER B—FEDERAL HOME LOAN BANK SYSTEM

[No. 73-1245]

PART 526—LIMITATIONS ON RATE OF RETURN

Amendment Relating to Certificate Accounts of \$100,000 or More

AUGUST 28, 1973.

The Federal Home Loan Bank Board considers it advisable to amend § 526.5-1 of the regulations for the Federal Home Loan Bank System (12 CFR 526.5-1) to increase from 5 percent to 10 percent the percentage of total savings which member institutions may have outstanding in certificate accounts of \$100,000 or more paying a return at a rate in excess of 6.75 percent. Accordingly, the Federal Home Loan Bank Board hereby amends said § 526.5-1 by revising paragraph (b) thereof to read as set forth below, effective August 29, 1973.

Since affording notice and public procedure on the above amendment would delay it from becoming effective for a period of time and since it is in the public interest that such amendment becomes effective as soon as possible, the Board hereby finds that notice and public procedure thereon are contrary to the public interest under the provisions of 12 CFR 508.11 and 5 U.S.C. 553(b); and the Board hereby finds that publication of such amendment for the 30-day period specified in 12 CFR 508.14 and 5 U.S.C. 553(d) prior to the effective date thereof is unnecessary since it relieves restrictions; and the Board hereby provides that such amendment shall become effective as hereinbefore set forth.

§ 526.5-1 Certificate accounts of \$100,000 or more.

(b) **Percentage limitation.**—No member institution may pay a return at a rate in excess of 6.75 percent per annum on any certificate account of \$100,000 or more if, as a result of the issuance of such certificate account, the total amount of all such certificate accounts then outstanding, on which a return is being paid at a rate in excess of 6.75 percent per annum, would exceed 10 percent of the institution's total savings accounts outstanding at the end of its most recent distribution period for regular accounts.

(Sec. 5B, 47 Stat. 727, as added by sec. 4, 80 Stat. 824, as amended by Public Law 91-151, sec. 2(b), 83 Stat. 371; sec. 17, 47 Stat. 736, as amended; 12 U.S.C. 1425b, 1437. Reorg. Plan

No. 3 of 1947, 12 FR 4981, 3 CFR, 1943-48 Comp., p. 1071.)

By the Federal Home Loan Bank Board.

[SEAL] EUGENE M. HERRIN,
Assistant Secretary.

[FR Doc.73-18740 Filed 9-4-73;8:45 am]

Title 14—Aeronautics and Space

CHAPTER I—FEDERAL AVIATION ADMINISTRATION, DEPARTMENT OF TRANSPORTATION

[Docket No. 73-EA-59; Amdt. 39-1709]

PART 39—AIRWORTHINESS DIRECTIVE

DeHavilland Aircraft

The Federal Aviation Administration is amending section 39.13 of Part 39 of the Federal Aviation Regulations so as to issue an airworthiness directive applicable to deHavilland DHC-6 type airplanes.

There have been reports of propellers on DHC-6 aircraft inadvertently autofeathering, thereby overtorquing the engine with resultant damage to the engine. Because this deficiency can exist or develop in other aircraft of similar type design, an airworthiness directive is being issued which will require deactivation of the autofeather system, placarding and revision of Vmc speeds.

Since the foregoing involves a certain hazard to air safety, expeditious adoption of this amendment is required and, therefore, notice and public procedure hereon are impractical and cause exists for making the amendment effective in less than 30 days. In consideration of the foregoing and pursuant to the authority delegated to me by the Administrator, 14 CFR 11.89 (31 FR 13697) § 39.13 of Part 39 of the Federal Aviation Regulations is amended by adding the following new airworthiness directive:

DeHAVILLAND: Applies to deHavilland Aircraft of Canada, Ltd., Model DHC-6 aircraft Series 100 and 200, serial numbers 6 through 230 inclusive, incorporating Modification No. 6/1278 (Propeller Autofeather system) and Series 300 Serial Numbers 130, 210, 231 through 290 inclusive (less Serial Numbers 265, 270, 277, 281, and 283).

Compliance required within 200 hours after the effective date of this AD unless already accomplished.

To prevent inadvertent autofeathering, accomplish the following:

1. (a) Deactivate the autofeather system by disconnecting the circuit breaker marked "PROP AUTO-FEATHER" in the panel behind the copilot's position.

(b) Install placard stating "Auto-feather System Deactivated" adjacent to autofeather select switch.

(c) Revise Vmc speed on airspeed limitation placard above pilot's position as follows:

Series 100 (Long-Nose)----- "68 kts. CAS"
Series 200----- "68 kts. CAS"
Series 300----- "70 kts. CAS"

2. The accomplishment of deHavilland Modifications Nos. 6/1472 and 6/1459 as applicable or an equivalent modification approved by the Chief, Engineering and Manu-

facturing Branch, FAA, Eastern Region, nullifies the applicability of this airworthiness directive.

(MOT approved Flight Manual Supplements Nos. 13, 14, and 19 pertain to and validate aircraft operations under OAR 3 or SFAR 23.)

(Note: Canadian Ministry of Transport Airworthiness Directives CF-73-4 and CA-73-9 cover the same subject.)

This amendment is effective September 11, 1973.

(Sections 313(a), 601, and 603 of the Federal Aviation Act of 1958 (49 U.S.C. 1354(a), 1421, and 1423), and section 6(c) of the Department of Transportation Act (49 U.S.C. 1655(c).)

Issued in Jamaica, N.Y. on Aug. 27, 1973.

ROBERT H. STANTON,
Director, Eastern Region.

[FR Doc.73-18683 Filed 9-4-73;8:45 am]

[Airspace Docket No. 73-SW-36]

PART 71—DESIGNATION OF FEDERAL AIRWAYS, AREA LOW ROUTES, CONTROLLED AIRSPACE, AND REPORTING POINTS

Alteration and Revocation of VOR Federal Airways

On July 10, 1973, a notice of proposed rulemaking (NPRM) was published in the Federal Register (38 FR 18383) stating that the Federal Aviation Administration (FAA) was considering an amendment to Part 71 of the Federal Aviation Regulations that would alter several VOR Federal Airways in the vicinity of Oklahoma City, Okla., and revoke those airways determined to be unnecessary. Subsequent to publication of the notice, it was determined that realignment of V-210 southwest of Okmulgee, Okla., should be via the Okmulgee 241° radial rather than via the 244° radial proposed in the notice. Since this change from the notice is minor in nature, further notice and public procedure are unnecessary and that change is made herein.

Interested persons were afforded an opportunity to participate in the proposed rulemaking through the submission of comments. All comments received were favorable.

In consideration of the foregoing, Part 71 of the Federal Aviation Regulations is amended, effective 0901 G.m.t., November 8, 1973, as hereinafter set forth.

Section 71.123 (38 FR 307, 1962, and 9488) is amended as follows:

1. In V-272: "INT Oklahoma City 107° and McAlester, Okla., 292° radials; McAlester, Okla." is deleted and "to McAlester, Okla." is substituted therefor.

2. In V-210: "Oklahoma City, Okla., 282° radials; Oklahoma City." is deleted and "Oklahoma City, Okla., 282° radials; Oklahoma City; INT Oklahoma City 109° and Okmulgee, Okla., 241° radials; Okmulgee." is substituted therefor.

3. In V-15: "Okmulgee, Okla., including an E alternate and also a W alternate via INT Ardmore 006° and Okmulgee

245° radials;" is deleted and "Okmulgee, Okla., including an E alternate:" is substituted therefor.

4. In V-164: "Oklahoma City, including a W alternate via INT Ardmore 327° and Oklahoma City 180° radials and also an E alternate via INT Ardmore 006° and Oklahoma City 107° radials." is deleted and "to Oklahoma City, including a W alternate via INT Ardmore 327° and Oklahoma City 180° radials." is substituted therefor.

(Sec. 307(a) of the Federal Aviation Act of 1958 (49 U.S.C. 1348(a)); Sec. 6(c) of the Department of Transportation Act (49 U.S.C. 1655(c).)

Issued in Washington, D.C., on August 27, 1973.

H. B. HELSTROM,
Chief, Airspace and Air
Traffic Rules Division.

[FR Doc.73-18697 Filed 9-4-73;8:45 am]

[Airspace Docket No. 73-SO-54]

PART 71—DESIGNATION OF FEDERAL AIRWAYS, AREA LOW ROUTES, CONTROLLED AIRSPACE, AND REPORTING POINTS

Alteration of Federal Airway Segments

The purpose of this amendment to Part 71 of the Federal Aviation Regulations is to renumber airway segments in the Orlando, Fla.-Cross City, Fla., area, and to eliminate a small section of airway between the Center Hill, Fla., and the Homo, Fla., Intersections.

Miami Center peak day traffic surveys for 1967 through 1972 indicated that no IFR traffic operated along the segment of airway between Center Hill and Homo during the survey periods. Since an air traffic control requirement for this airway segment no longer exists, action is taken herein to discontinue its designation.

The proximity and alignments of V-159 and V-159W northwest of Orlando have resulted in pilots' misunderstanding as to the assigned airway. Revocation of V-295 between the Center Hill and Homo Intersections, and renumbering V-159W between Ocala, Fla., and Orlando and V-159 between Cross City and Ocala as V-295 will eliminate this potential hazard.

Since the renumbering of existing airways is merely an editorial procedure with no substantive change in airspace assignment, and since it is a minor matter upon which the public is not particularly interested, notice and public procedure thereon are unnecessary. However, since sufficient time must be allowed for these changes to be reflected on appropriate aeronautical charts, the effective date will be more than 30 days after publication in the FEDERAL REGISTER.

In consideration of the foregoing, Part 71 of the Federal Aviation Regulations is amended, effective 0901 G.m.t., November 8, 1973, as hereinafter set forth.

Section 71.123 (38 FR 307 and 16633) is amended as follows:

a. In V-159 "Ocala, Fla., including a west alternate via INT Orlando 283 and Ocala 156 radials" is deleted and "Ocala, Fla." is substituted therefor.

b. In V-295 "Orlando; INT Orlando 283 and Cross City, Fla., 150 radials; Cross City" is deleted and "Orlando; INT Orlando 283 and Ocala, Fla., 156 radials; Ocala; Cross City, Fla." is substituted therefor.

(Sec. 307(a) of the Federal Aviation Act of 1958 (49 U.S.C. 1349(a); Sec. 6(c) of the Department of Transportation Act (49 U.S.C. 1655(c).))

Issued in Washington, D.C., August 27, 1973.

CHARLES H. NEWPOL,
Acting Chief, Airspace and
Air Traffic Rules Division.

[FR Doc.73-18696 Filed 9-4-73;8:45 am]

[Airspace Docket No. 73-EA-50]

PART 71—DESIGNATION OF FEDERAL AIRWAYS, AREA LOW ROUTES, CONTROLLED AIRSPACE, AND REPORTING POINTS

Alteration of Control Zone and Transition Area

On page 18385 of the FEDERAL REGISTER for July 10, 1973, the Federal Aviation Administration published proposed regulations which would alter the Bradford, Pa., Control Zone (38 FR 360) and Transition Area (38 FR 453).

Interested parties were given 30 days after publication in which to submit written data or views. No objections to the proposed regulations have been received.

In view of the foregoing, the proposed regulations are hereby adopted, effective 0901 G.m.t., November 8, 1973.

(Section 307(a) of the Federal Aviation Act of 1958, 72 Stat. 749; (49 U.S.C. 1348) and section 6(c) of the Department of Transportation Act (49 U.S.C. 1655(c).))

Issued in Jamaica, N.Y., on August 17, 1973.

L. J. CARDINALI,
Acting Director, Eastern Region.

1. Amend § 71.171 of Part 71 of the Federal Aviation Regulations by deleting the description of the Bradford, Pa., control zone and by substituting the following in lieu thereof:

Within a 5-mile radius of the center 41°-48'09"N., 78°38'27"W. of Bradford Regional Airport, Bradford, Pa.; within 3.5 miles each side of the Bradford, Pa. VORTAC 139° radial, extending from the VORTAC to 10 miles southeast of the VORTAC.

2. Amend § 71.181 of Part 71 of the Federal Aviation Regulations by deleting the description of the Bradford, Pa., transition area and by substituting the following in lieu thereof:

That airspace extending upward from 700 feet above the surface within a 12-mile radius of the center, 41°48'09" N., 78°38'27" W., of Bradford Regional Airport, Bradford, Pa.; within 3.5 miles each side of the Bradford Regional Airport ILS localizer southeast

course, extending from the OM to 11.5 miles southeast of the OM; within 5 miles each side of the Bradford, Pa., VORTAC 139° radial, extending from the VORTAC to 11.5 miles southeast of the VORTAC; within 5 miles each side of the Bradford, Pa., VORTAC 316° radial, extending from the VORTAC to 18.5 miles northwest of the VORTAC.

[FR Doc.73-18694 Filed 9-4-73;8:45 am]

[Airspace Docket No. 73-SW-43]

PART 71—DESIGNATION OF FEDERAL AIRWAYS, AREA LOW ROUTES, CONTROLLED AIRSPACE, AND REPORTING POINTS

Designation of Transition Area

The purpose of this amendment to Part 71 of the Federal Aviation Regulations is to designate the Brownfield, Tex., transition area.

On July 13, 1973, a notice of proposed rulemaking was published in the FEDERAL REGISTER (38 FR 18685) stating the Federal Aviation Administration proposed to designate a 700-foot transition area at Brownfield, Tex.

Interested persons were afforded an opportunity to participate in the rulemaking through submission of comments. All comments received were favorable.

In consideration of the foregoing, Part 71 of the Federal Aviation Regulations is amended, effective 0901 G.m.t., November 8, 1973, as hereinafter set forth.

In § 71.181 (38 FR 435), the following transition area is added:

BROWNFIELD, TEX.

That airspace extending upward from 700 feet above the surface within a 5-mile radius of Brownfield, Tex., Terry County Airport (latitude 33°10'29" N., longitude 102°11'29" W.) and within 3.5 miles each side of a 200° bearing from the Brownfield nondirectional beacon (latitude 33°10'45" N., longitude 102°11'30" W.) extending from the 5-mile radius area to 8 miles south of the radio beacon.

(Sec. 307(a), Federal Aviation Act of 1958 (49 U.S.C. 1348); Sec. 6(c), Department of Transportation Act (49 U.S.C. 1655(c).))

Issued in Fort Worth, Tex., on August 24, 1973.

ALBERT H. THURBURN,
Acting Director,
Southwest Region.

[FR Doc.73-18695 Filed 9-4-73;8:45 am]

Title 21—Food and Drugs

CHAPTER I—FOOD AND DRUG ADMINISTRATION, DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE

SUBCHAPTER C—DRUGS

PART 135—NEW ANIMAL DRUGS

Nitrofurans in the Feed of Animals

A proposal regarding the use of nitrofurans in animal feeds was published in the FEDERAL REGISTER of April 20, 1973 (38 FR 9830). Two comments were received, both from drug manufacturers, and both opposed the proposed action. A review of the comments reflects certain issues of concern which, along with the

responses of the Commissioner of Food and Drugs, are as follows:

1. It was stated that the use of nitrofurans derivative substances in animal feeds does not create a hazard to human and animal health in that the natural incidence of bacterial resistance to nitrofurans is not important, its infective nature is limited and does not develop readily, and the prophylactic use of nitrofurans in animal feeds should not lead to an increase in the salmonella reservoir.

The original charge of the Antibiotic Task Force was to gather and review all current information regarding human and animal health hazards associated with the use of subtherapeutic levels of antibacterial agents in the feed of food-producing animals. The complete review of the subject by the task force is evidenced by the extensive documentation supporting the report. Although the text of the report dealt with antibacterial drugs in general and did not refer specifically to nitrofurans, it was not the intent of the task force to exclude such drugs from safety and efficacy considerations.

A review of the literature cited by the respondent, a reexamination of the documentation in the task force reports, and a survey of the remaining current literature indicate that while there is insufficient evidence to resolve the concerns of the Task Force on Use of Antibiotics in Animal Feeds, there is sufficient question to invoke the authority under section 512(1) of the act fully to investigate these issues in order to obtain more definitive data to resolve them.

Information regarding the question raised by the task force on nitrofurans drugs is meager. Available information does support that, upon occasion, the gram-negative enterobacteria do develop increased resistance to nitrofurans and this resistance is transferable to other enterobacteria. The effect of nitrofurans on the salmonella reservoir in food-producing animals has not been adequately documented.

2. It was stated that nitrofurans derivatives should be excluded from the requirements of the announcement because of a variety of uses and routes of use of several derivatives. The intent of the Antibiotic Task Force was to examine the broad categories of antibacterial drugs for their effects on human and animal health. Based on evidence to be presented to the task force and more recent literature; there is no reason to believe that the several nitrofurans derivatives will not behave in a similar manner regarding the initiation of resistance in enterobacteria, the transfer of such resistance, or the effect on the salmonella reservoir or the gram negative enteric flora of food-producing animals.

Based on the information above, the Commissioner concludes that nitrofurans drugs clearly fall within the area of concern of the task force. Therefore, such drugs should fall within the purview of § 135.109. In addition, the Commissioner concludes that the timetable for submission of the initial report and the final end point for receipt of all data

should be adjusted to allow sponsors of nitrofurans periods of time consistent with those allowed for those antibiotic drugs other than the tetracyclines, streptomycin, dihydrostreptomycin, penicillin, and the sulfonamides.

Therefore, pursuant to provisions of the Federal Food, Drug, and Cosmetic Act (secs. 512, 701(a), 52 Stat. 1055, 82 Stat. 343-351; 21 U.S.C. 360b, 371(a)) and under authority delegated to the Commissioner (21 CFR 2.120), § 135.109 is amended by revising the section heading, paragraphs (a), (b)(1), (2), and (3); and (f)(1) to read as follows:

§ 135.109 Antibiotic, nitrofurans, and sulfonamide drugs in the feed of animals.

(a) The Commissioner of Food and Drugs will propose to revoke currently approved subtherapeutic (increased rate of gain, disease prevention, etc.) uses in animal feed of antibiotic and sulfonamide drugs whether granted by approval of new animal drug applications, master files and/or antibiotic or food additive regulations, by no later than April 20, 1975, or the nitrofurans drugs by no later than September 5, 1975, unless data are submitted which resolve conclusively the issues concerning their safety to man and animals and their effectiveness under specific criteria established by the Food and Drug Administration based on the guidelines included in the report of the FDA task force on the use of antibiotics in animal feeds. All persons or firms previously marketing identical, related, or similar products except the nitrofu-

ran drugs not the subject of an approved new animal drug application must submit a new animal drug application by July 19, 1973, or by December 4, 1973, in the case of nitrofurans drugs, if marketing is to continue during the interim. New animal drug entities with antibacterial activity not previously marketed, now pending approval or submitted for approval prior to, on, or following the effective date of this publication, shall satisfy such criteria prior to approval.

(b) Any person interested in developing data which will support retaining approval for such uses of such antibiotic, nitrofurans, and sulfonamide drugs pursuant to section 512(1) of the Federal Food, Drug, and Cosmetic Act shall submit to the Commissioner the following:

(1) By July 19, 1973, records and reports of completed, ongoing, or planned studies, including protocols, on the tetracyclines, streptomycin, dihydrostreptomycin, penicillin, and the sulfonamides; for all other antibiotics by October 17, 1973; and for the nitrofurans drugs by March 4, 1974. The Food and Drug Administration encourages sponsors to consult with the Bureau of Veterinary Medicine on protocol design and plans for future studies.

(2) By April 20, 1974, data from completed studies on the tetracyclines, streptomycin, dihydrostreptomycin, the sulfonamides, and penicillin assessing the effect of the subtherapeutic use of the drug in feed on the salmonella reservoir in the target animal as compared to that in nonmedicated controls. Failure to complete the salmonella studies for any

of these drugs by that time will be grounds for proceeding to immediately withdraw approval.

(3) By April 20, 1975, data satisfying all other specified criteria for safety and effectiveness, including the effect on the salmonella reservoir for any antibiotic or sulfonamide drugs and by September 5, 1975, for the nitrofurans drugs, approved for subtherapeutic use in animal feeds. Drug efficacy data shall be submitted for any feed-use combination product containing such drug and any feed-use single ingredient antibiotic, nitrofurans, or sulfonamide not reviewed by the National Academy of Sciences—National Research Council, Drug Efficacy Study covering drugs marketed between 1938 and 1962.

(f) * * *
 (1) Those antibiotic, nitrofurans, and sulfonamide drugs which fail to meet the prescribed criteria for subtherapeutic uses but which are found to be effective for therapeutic purposes will be permitted in feed only for high-level, short-term therapeutic use and only by or on the order of a licensed veterinarian.

Effective date.—This order shall be effective September 5, 1973.

(Secs. 512, 701(a), 52 Stat. 1055, 82 Stat. 343-351; (21 U.S.C. 360b, 371(a)).)

Dated August 28, 1973.

SAM D. FINE,
 Associate Commissioner
 for Compliance.

[FR Doc.73-18712 Filed 9-4-73; 8:45 am]

Title 24—Housing and Urban Development

CHAPTER X—FEDERAL INSURANCE ADMINISTRATION, DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT

SUBCHAPTER B—NATIONAL FLOOD INSURANCE PROGRAM

[Docket No. FI-197]

PART 1914—AREAS ELIGIBLE FOR THE SALE OF INSURANCE

Status of Participating Communities

Section 1914.4 of Part 1914 of Subchapter B of Chapter X of Title 24 of the Code of Federal Regulations is amended by adding in alphabetical sequence a new entry to the table. In this entry, a complete chronology of effective dates appears for each listed community. Each date appearing in the last column of the table is followed by a designation which indicates whether the date signifies the effective date of the authorization of the sale of flood insurance in the area under the emergency or the regular flood insurance program. The entry reads as follows:

§ 1914.4 Status of participating communities.

State	County	Location	Map No.	State map repository	Local map repository	Effective date of authorization of sale of flood insurance for area
Missouri	Newton	Seneca, City of				Aug. 30, 1973.
Mississippi	Lafayette	Oxford, City of				Emergency.
Pennsylvania	Columbia	Beech Creek, Township of				Do.
Do.	Lycoming	Montgomery, Township of				Do.
Do.	Junata	Walker, Township of				Do.
Vermont	Rutland	Rutland, City of				Do.

(National Flood Insurance Act of 1968 (title XIII of the Housing and Urban Development Act of 1968), effective Jan. 28, 1969 (33 F.R. 17804, Nov. 28, 1968), as amended (secs. 408-410, Public Law 91-152, Dec. 24, 1969), 42 U.S.C. 4001-4127; and Secretary's delegation of authority to Federal Insurance Administrator, 34 F.R. 2680, Feb. 27, 1969)

Issued August 24, 1973.

GEORGE K. BERNSTEIN,
 Federal Insurance Administrator.

[FR Doc.73-18632 Filed 9-4-73; 8:45 am]

RULES AND REGULATIONS

[Docket No. FI-198]

PART 1914—AREAS ELIGIBLE FOR THE SALE OF INSURANCE

Status of Participating Communities

Section 1914.4 of Part 1914 of Subchapter B of Chapter X of Title 24 of the Code of Federal Regulations is amended by adding in alphabetical sequence a new entry to the table. In this entry, a complete chronology of effective dates appears for each listed community. Each date appearing in the last column of the table is followed by a designation which indicates whether the date signifies the effective date of the authorization of the sale of flood insurance in the area under the emergency or the regular flood insurance program. The entry reads as follows:

§ 1914.4 Status of participating communities

State	County	Location	Map No.	State map repository	Local map repository	Effective date of authorization of sale of flood insurance for area
Colorado	Boulder	Broomfield, City of.	I 08 013 0253 01	Colorado Water Conservation Board, Room 102, 1845 Sherman St., Denver, Colo. 80203.	City Manager, City of Broomfield, No. 8 Garden Office Center, Broomfield, Colo. 80020.	Feb. 18, 1972. Emergency. Sept. 7, 1973. Regular.
				Colorado Division of Insurance, 106 State Office Bldg., Denver, Colo. 80203.		
Florida	Volusia	Daytona Beach, City of.	I 12 127 0780 05 through I 12 127 0780 12	Department of Community Affairs, 2571 Executive Center Circle East, Howard Bldg., Tallahassee, Fla. 32301.	City Manager, City of Daytona Beach, P.O. Box 551, Daytona Beach, Fla. 32015.	Sept. 11, 1970. Emergency. Sept. 7, 1973. Regular.
Do	do	Daytona Beach Shores, City of.	I 12 127 0782 02	do	City Hall, 3050 South Atlantic Ave., Daytona Beach Shores, Fla. 32016.	Jan. 29, 1971. Emergency. Sept. 7, 1973. Regular.
Do	do	Holly Hill, City of.	I 12 127 1410 01 I 12 127 1410 02	do	City Manager, City of Holly Hill, Ten Sixty Five Ridgewood Ave., Holly Hill, Fla. 32017.	May 14, 1971. Emergency. Sept. 7, 1973. Regular.
Do	do	Ormond Beach, City of.	I 12 127 2375 05 through I 12 127 2375 11	do	Ormond Beach City Hall, 22 South Beach St., Ormond Beach, Fla. 32074.	Nov. 20, 1970. Emergency. Sept. 7, 1973. Regular.
Do	Alachua	Unincorporated areas.				Aug. 29, 1973. Emergency. Do.
Do	Palm Beach	North Palm Beach, Village of.				Do.
Illinois	Du Page	Clarendon Hills, Village of.				Do.
Louisiana	Calcasieu Parish	DeQuincy, City of.				Do.
Massachusetts	Middlesex	Bedford, Town of.	I 25 017 0090 01 through I 25 017 0090 04	Division of Water Resources, Water Resources Commission, State Office Bldg., 100 Cambridge St., Boston, Mass. 02202. Massachusetts Division of Insurance, 100 Cambridge St., Boston, Mass. 02202.	Office of the Board of Selectmen, Town of Bedford, Bedford, Mass. 01730.	Apr. 2, 1971. Emergency. Sept. 7, 1973. Regular.
Missouri	Cole	Portage Des Sioux, City of.				Aug. 29, 1973. Emergency. Do.
Pennsylvania	Clinton	Chapman, Township of.				Do.
Do	Lebanon	North Londonderry, Township of.				Do.
Do	Tioga	Putnam, Township of.				Do.
Do	Westmoreland	Manor, Borough of.				Do.
Texas	Fort Bend and Harris	Missouri City, City of.				Do.
Virginia		Richmond, City of.				Do.
Do	York	Poquoson, Town of.				Do.
Wisconsin	Kewaunee	Algoma, City of.				Do.

(National Flood Insurance Act of 1968 (title XIII of the Housing and Urban Development Act of 1968), effective Jan. 28, 1969 (33 F.R. 17804, Nov. 28, 1968), as amended (secs. 408-410, Public Law 91-152, Dec. 24, 1969), 42 U.S.C. 4001-4127; and Secretary's delegation of authority to Federal Insurance Administrator, 34 F.R. 2680, Feb. 27, 1969)

Issued August 24, 1973.

GEORGE K. BERNSTEIN,
Federal Insurance Administrator.

[FR Doc. 73-18633 Filed 9-4-73; 8:45 am]

[Docket No. FI-200]

PART 1914—AREAS ELIGIBLE FOR THE SALE OF INSURANCE

Status of Participating Communities

Section 1914.4 of Part 1914 of Subchapter B of Chapter X of Title 24 of the Code of Federal Regulations is amended by adding in alphabetical sequence a new entry to the table. In this entry, a complete chronology of effective dates appears for each listed community. Each date appearing in the last column of the table is followed by a designation which indicates whether the date signifies the effective date of the authorization of the sale of flood insurance in the area under the emergency or the regular flood insurance program. The entry reads as follows:

§ 1914.4 Status of participating communities

State	County	Location	Map No.	State map repository	Local map repository	Effective date of authorization of sale of flood insurance for area
California	San Diego	El Cajon, City of				Aug. 31, 1973, Emergency.
Connecticut	Fairfield	Shelton, City of				Do.
Do.	New Haven	Southbury, Town of				Do.
New York	Monroe	Spencerport, Village of				Do.
Do.	Suffolk	Shelter Island, Town of				Do.
North Carolina	Wake	Raleigh, City of				Do.
Pennsylvania	Columbia	Briar Creek, Borough of				Do.
Do.	Lawrence	New Castle, City of				Do.
Do.	McKean	Keating, Township of				Do.

(National Flood Insurance Act of 1968 (title XIII of the Housing and Urban Development Act of 1968), effective Jan. 28, 1969 (33 F.R. 17804, Nov. 28, 1968), as amended (secs. 408-410, Public Law 91-152, Dec. 24, 1969), 42 U.S.C. 4001-4127; and Secretary's delegation of authority to Federal Insurance Administrator, 34 F.R. 2680, Feb. 27, 1969)

Issued August 24, 1973.

GEORGE K. BERNSTEIN,
Federal Insurance Administrator.

[FR Doc.73-18634 Filed 9-4-73;8:45 am]

Title 25—Indians

CHAPTER I—BUREAU OF INDIAN AFFAIRS, DEPARTMENT OF THE INTERIOR
SUBCHAPTER W—MISCELLANEOUS ACTIVITIES
PART 256—OFF-RESERVATION TREATY FISHING

Identification Cards

The authority to issue regulations on Indian affairs is vested in the Secretary of the Interior by 5 U.S.C. 301 and sections 463 and 465 of the Revised Statutes (25 U.S.C. 2 and 9).

Part 256, Subchapter W, Chapter I, Title 25, of the Code of Federal Regulations is amended by revising section 256.3 (b). This revision extends to December 31, 1974, the deadline for issuing temporary identification cards as evidence of entitlement to exercise fishing rights secured by treaty to tribal members who do not have approved current membership rolls. The revision is prepared under the authority contained in 5 U.S.C. 301 and sections 463 and 465 of the Revised Statutes (25 U.S.C. 2 and 9).

Since this revision extends a deadline for issuing temporary identification cards to tribal members to be used in connection with treaty fishing rights, advance notice and public procedure thereon would delay extension of the deadline for issuing the identification cards and is deemed contrary to the public interest. Therefore, advance notice and public procedure are dispensed with under the

exception provided in subsection (b) (B) of 5 U.S.C. 553 (1970).

Since this revision extends the deadline to allow tribal members to receive needed identification cards, the 30-day deferred effective date is dispensed with under the exception provided in subsection (d) (1) of 5 U.S.C. 553 (1970). Accordingly, these regulations will become effective on September 5, 1973.

As revised, § 256.3 reads as follows:

§ 256.3 Identification cards.

(b) No such card shall be issued to any Indian who is not on the official membership roll of the tribe which has been approved by the Secretary of the Interior. *Provided*, That until December 31, 1974, a temporary card may be issued to any member of a tribe not having an approved current membership roll who submits evidence of his entitlement thereto satisfactory to the issuing officer and, in the case of a tribally issued card, to the countersigning officer. Any Indian claiming to have been wrongfully denied a card may appeal the decision in accordance with Part 2 of this chapter.

No further changes are made in the text of Part 256.

WILLIAM L. ROGERS,
Deputy Assistant Secretary
of the Interior.

AUGUST 30, 1973.

[FR Doc.73-18761 Filed 9-4-73;8:45 am]

Title 32—National Defense

CHAPTER VII—DEPARTMENT OF THE AIR FORCE

SUBCHAPTER A—ADMINISTRATION
PART 809—ISSUE AND CONTROL OF IDENTIFICATION (ID) CARDS

Miscellaneous Amendments

This update clarifies the dependent status of a surviving parent/parent-in-law; requires designation of one primary and one or more alternate issuing officials, as considered necessary, and requires the issuing official be identified by letter to the Publications Distribution Office (PDO) along with the issuing official's signature specimen; directs that all waivers of conditions granting benefits and privileges be forwarded to appropriate office of primary responsibility; requires all designation of an individual outside the issuing activity to conduct an inventory of cards; requires periodic unscheduled security police inspection of ID cards at entrances to Air Force installations; expands commissary patronage to members of the household who do not reside in the same household as the sponsor; identifies children acquired through subsequent marriage by widows for eligibility for certain privileges; deletes requirement for dependency determination for husbands of female members for medical care; states that the original determination for medical care must always be made by the Air Force Ac-

counting and Finance Center; requires the recording of supporting documents such as marriage certificates and birth certificates on DD Form 1172, item 18; prohibits use of facsimile signature stamps on AF Form 279 and DD Form 1172; prohibits signing of ID cards by issuing officials until all required data has been entered on the card; permits civilian employees of benefits and privilege sources to confiscate ID cards under certain conditions; outlines data required to support cases forwarded to Headquarters United States Air Force, Office of The Judge Advocate General, Directorate of Civil Law, Litigation Division, for possible referral to Department of Justice; directs issuing officials to obtain all ID cards, including emergency requirements, from the PDO only; revises procedures for accountability, inventory, and transfer of ID cards; initiates new control procedures for retrieval of ID cards at the time of discharge and separation; and announces that signatures appearing on Navy verified DD Forms 1172 will be accepted.

Part 809, Subchapter A of Chapter VII of Title 32 of the Code of Federal Regulations is amended as follows:

1. Section 809.4 is amended by: deleting the note following paragraph (f) (6) (ii); revising paragraph (h); and amending paragraph (1) by adding new subparagraphs (2) through (4).

§ 809.4 Definitions.

(h) *Issuing activity.*—An agency or person authorized, upon receipt of a properly certified application, to issue one of the ID cards listed in this part. (This activity must have the necessary photographing and laminating facilities.) Commissioned officers, warrant officers, noncommissioned officers (grades E-5 through E-9), and civilians (GS-5 and above) may be authorized to authenticate ID cards. A noncommissioned officer (grade E-4) who is the noncommissioned officer in charge or a civilian (GS-4) who is chief of the pass issuing facility may be authorized to authenticate ID cards.

(1) (1) * * *

(2) The staffs of National Red Cross Societies and those of other Voluntary Aid Societies, duly recognized and authorized by their governments, who may be employed in the same duties as the personnel in subparagraph (1) of this paragraph, are placed in the same category as such personnel if the staffs of such societies are subject to military laws and regulations.

(3) The religious, medical, and hospital personnel of hospital ships and their crews.

(4) The religious, medical, and hospital personnel assigned to the medical or spiritual care of members of the Armed Forces and other persons at sea who are wounded, sick, or ship-

wrecked, including forced landings at sea by or from aircraft.

2. Section 809.7 is amended by revising items 1a, 1b, 2b, 4, 4a, 4b, 5b, 8a, 8b, 12, 12a, 12b, 13, 13a, 13b, 17, and 17a; adding

1. * * *					
a. Lawful wife.....	Yes	Yes	(3)	Yes	Yes
b. Lawful husband.....	Yes	Yes	(3)	Yes	Yes
2. * * *					
b. Unremarried widower.....	Yes	Yes	Yes	No	No
4. Honorably discharged veteran of armed forces, totally (100%) disabled as result of service-connected disability and so certified by the Veterans Administration.	No	No	(3)	Yes	Yes
a. Lawful wife.....	No	No	(3)	Yes	Yes
b. Lawful husband.....	No	No	(3)	Yes	Yes
5. * * *					
b. Unmarried widower.....	No	No	Yes	No	No
8. * * *					
a. Lawful wife.....	Yes	Yes	(3)	Yes	Yes
b. Lawful husband.....	Yes	Yes	No	Yes	Yes
12. Foreign military member of NATO in United States and his dependents in United States:	Yes	Yes	(25)	(20)	(20)
a. Lawful wife.....	Yes	Yes	(25)	(20)	(2)
b. Lawful husband.....	Yes	Yes	(25)	(20)	(2)
13. Foreign military member in United States other than NATO and his dependents in United States:	No	Yes	(25)	(20)	(2)
a. Lawful wife.....	No	(23)	(25)	(20)	(2)
b. Lawful husband.....	No	(23)	(25)	(20)	(2)
17. Medal of Honor recipients.....	No	No	(3)	Yes	Yes
a. Lawful wife.....	No	No	(3)	Yes	Yes
19. * * *					
a. Children who were acquired through subsequent marriage:					
(1) Under 21 years of age.....	No	No	(3)	(7)	Yes
(2) Over 21 years of age.....	No	No	(3)	(7)	(7)

NOTES.—1. Adopted children and stepchildren (except for medical care), illegitimate children, parents, and parents-in-law must be dependent upon the member for over half of their support. Unmarried legitimate children under age 21 are not subject to dependency provisions. Red Cross Personnel: Only uniformed paid American National Red Cross Personnel are eligible for exchange privileges.

3. If a member of the sponsor's household, designated his agent in writing on DD Form 1172, item 18, and acting in the sponsor's behalf. (A sponsor's child residing in the household of a divorced spouse or other noneligible recipient who is not a sponsor may not be designated as an agent.) A parent/parent-in-law, stepparent, parent by adoption, or ward must be dependent upon the sponsor for over half of their support and reside in a household maintained by or for the sponsor. Children who are 21 years of age or older and unmarried and who are dependent upon the sponsor for over half of their support or who reside in a household maintained by or for the sponsor and who are either legitimate or are adopted children, stepchildren, or wards and who are (a) incapable of self-support because of a mental or physical handicap or (b) have not passed their 23d birthday and are enrolled in a full-time course of study at an approved institution of higher learning may be designated as agent. (See Part 823 of this chapter for designation of other types of agents.)

25. Officers and enlisted men of the Armed Forces of foreign nations, when on duty with the U.S. Armed Forces under competent orders issued by the Air Force, Army, Navy, or Marine Corps, and their dependents as defined in Part 823 of this chapter, if designated in writing by the sponsor on DD Form 1172, item 18.

3. Section 809.10 is amended by revising paragraphs (a) and (g) and adding new paragraphs (h) and (i) as follows:

item 19a; revising Notes 1 and 3; deleting Notes 25 and 26; and adding a new Note 25 as follows:

§ 809.7 Chart of entitlements to benefits and privileges.

§ 809.10 Command responsibility.

(a) Designate and revoke verifying/issuing activities and individuals in writing. For issuing activities, one primary and one or more alternate official(s) as considered necessary will be designated. An absence of 30 days or more by the primary issuing official will require that accountability be transferred to a new primary issuing official. The letter designating the issuing official will be furnished to the PDO with a specimen signature (DD Form 577, Signature Card) of the issuing official included. The commander of a unit geographically separated from the Unit Personnel Record Group (UPRGp) may act as the verifying activity if he has sufficient information to make an appropriate judgment.

(g) Forward requests for waivers of conditions granting benefits and privileges direct to the Office of Primary Responsibility (OPR) for the benefit or privilege involved.

(h) Appoint in writing an individual assigned outside the issuing activity to conduct the inventory required by section 809.15(b) (5).

(i) Ensure that periodic, unscheduled security police checks of identification cards are conducted at entrances to Air Force installations.

4. Section 809.11 is amended by adding a new paragraph (d) (2) (iii) (f) and revising paragraph (d) (6) as follows:

§ 809.11 Action by verifying activity.

(d) (2) (iii)

(f) *Parents/parents-in-law.*—(1) The original determination for Medical Care in Uniformed Services Facilities (MC (US)) must always be made at Air Force Accounting and Finance Center. Basic Allowance for Quarters (BAQ) determinations may not be used for MC (US).

(2) Subsequent applications may be made without submission to Air Force Accounting and Finance Center if a copy of the original AFAFC determination is present and the sponsor certifies in writing on DD Form 1172, item 18, that dependency and residency have not changed since the original determination.

(6) Annotate on DD Form 1172, item 18, that supporting documents such as marriage certificate, birth certificate, adoption decree, divorce decree, death report, dependency determination from Air Force Accounting and Finance Center, etc., have been reviewed personally to establish eligibility of dependents. Personal data will be updated upon presentation of the source document.

5. Section 809.13 is amended by revising paragraph (d) (5) as follows:

§ 809.13 Action by issuing activity.

(d)

(5) Have issuing official sign the card. The use of facsimile signature stamps to authenticate ID cards is prohibited; however, the signature element itself may be stamped. Cards will not be authenticated by issuing official until all required data has been entered on the card.

6. Section 809.14 is amended by revising the introductory text and paragraph (a) as follows:

§ 809.14 Retrieval, confiscation, and appeal procedures.

ID cards are Government property. Any commissioned or noncommissioned officer or security policeman, in performing his duties may confiscate an ID card that has expired, is being fraudulently used, or is presented by a person not entitled to it. Civilian employees of benefit and privilege sources may confiscate expired cards, obviously altered cards, and cards presented by a person named on a "wanted list" (for example, bad checks, shoplifting, divorces, over eligible age, etc.). Such cardholders will be furnished AF Form 52, Evidential and Acquired Property Record (or similar form), as a receipt for the confiscated card. The AF Form 52 is prepared in triplicate; one copy furnished cardholder, one copy to be used as transmittal to security policy, and one copy

to be retained by the retrieving activity. When a CBPO activity learns of a change in dependency status affecting entitlement to DD Form 1173 (for example, divorce, marriage of children, overage, etc.) that activity will send complete information to the Personal Affairs Section (Officer or Airman Records Unit for non-Base-Level Military Personnel System (BLMPS) CBPOs). The Personal Affairs Section or Officer or Airman Records Unit will act to recover the dependent's card through the sponsor or his commander. If such action is unsuccessful, they will comply with paragraph (a) of this section. File evidence of such interim and final actions with the DD Form 1172. If the DD Form 1173 is retrieved, DD Form 1172 will be destroyed or appropriately annotated. A suspense period of 30 days from date of notice to the sponsor will be established for completing CBPO action.

(a) *Retrieval.*—Although authorities will make every effort to retrieve cards on a voluntary basis, they do not have the authority to seize ID cards by force from persons not subject to military law. If a person not subject to military law refuses to surrender an ID card on demand, recourse may be a suit to recover the property. If a card cannot be retrieved voluntarily, the circumstances will be reported in writing to the nearest chief, security police. A copy of the letter will be furnished all base benefit and privilege sources. If all attempts to achieve voluntary surrender of the ID card fail, forward the case file to Headquarters, United States Air Force, Office of the Judge Advocate General, Directorate of Civil Law, Litigation Division, Washington, D.C. 20314, for possible referral to the Department of Justice, with an information copy of the referral to the Air Force Military Personnel Center, Randolph Air Force Base, Texas 78148. Case files shall contain the following documents and information.

7. Section 809.15 is amended by revising paragraph (b) (3) and (4) and adding new paragraphs (b) (5) and (6) as follows:

§ 809.15 Supply and accountability of forms.

(b) (2)

(3) *Accounting for missing forms.*—The issuing officer will inventory incoming blank forms when he initially accepts them and will immediately enter each card serial number on AF Form 355.

(4) *Accounting for damaged forms.*—The issuing officer will annotate AF Form 335 to reflect forms unsuitable for issue and retain those cards until the inventory prescribed in subparagraph (5) of this paragraph is completed.

(5) *Inventory of unissued/damaged forms.*—An inventory will be conducted every 6 months or when the issuing officer is relieved. All inventories will include a physical count encompassing verification of each card serial number. If the inventorying official cannot account for a form he will investigate,

file a report of the facts with the installation commander, and note the results on AF Form 335. AF Form 145, Certificate of Destruction of Material, evidencing destruction of unused/damaged cards will be signed and witnessed then stapled to the pertinent AF Form 335. Dispose of AF Form 145 in conjunction with AF Form 335.

(6) *Transfer of forms to alternate issuing official.*—The primary issuing official will transfer by AF Form 213 a 1 month's supply of ID cards to each designated alternate issuing official.

8. Section 809.16 is amended by revising paragraph (a) as follows:

§ 809.16 Destruction of confiscated and surrendered cards, receipts, and destruction certificates.

(a) If the destruction authority has custody of the receipts for the ID cards destroyed and the cards are not replaced by reason of discharge or separation, he will cut the cards in half and staple that portion bearing the cards serial number to the receipt. Information regarding unrecovered cards (for example, address of dependents not collocated with the sponsor) should be annotated on the pertinent receipt. In these instances, the sponsor will also be instructed to mail/turn in dependents' unrecovered card(s) as soon as possible to the separation activity. A preaddressed indicia envelope will be furnished the separatee for this purpose. Related AF Form 279 and DD Form 1172 will be filed in the separatee's Relocation Preparation Project Folder for disposition.

9. Section 809.61 is amended by revising paragraph (b) as follows:

§ 809.61 Issue by other services.

(b) The parent service will complete section IV and the applicable items of DD Form 1172, section II, and return it to the applicant/sponsor for presentation to any service installation having the proper facility for issuing the card. Every effort will be made to assist individuals of other services in obtaining proper identification credentials by assisting in the preparation of the application and directing the applicant to the nearest parent service installation. Facsimile signatures on applications verified by Navy personnel will be accepted.

10. Section 809.62 is amended by revising paragraph (a) and (c) and adding a new paragraph (b) as follows:

§ 809.62 Persons entitled to USIP card.

(a) Dependents 10 years of age or over of members of the Uniformed Services (on active duty, entitled to retired pay, or deceased).

(b) Dependents under 10 years of age of members of the Uniformed Services (on active duty, entitled to retired pay, or deceased) when such dependents are residing with a divorced spouse or in a household of which the sponsor is not the

head. DD Form 1173 may be issued to dependents under 10 years of age when unusual circumstances require unquestionable proof of relationship and entitlement.

(c) Veterans discharged under honorable conditions from the Uniformed Services of the United States with a one hundred percent (100%) service-connected disability as certified by the Veterans Administration, their eligible dependents, and surviving dependents.

(10 U.S.C. 8012.)

By Order of the Secretary of the Air Force.

JOHN W. FAHRNEY,
Colonel, USAF Chief, Legislative Division, Office of The Judge Advocate General.

[FR Doc.73-18576 Filed 9-4-73;8:45 am]

Title 36—Parks, Forests, and Memorials
CHAPTER II—FOREST SERVICE,
DEPARTMENT OF AGRICULTURE
PART 221—TIMBER
Cancellation of Contracts

Correction

NOTE.—In FR Doc. 73-18485 appearing at page 23403 of the issue for Thursday, August 30, 1973, the text of the amendment was inadvertently omitted. The complete document should read as follows:

On April 23, 1973, the FEDERAL REGISTER (38 FR 10010) contained a notice that the Department of Agriculture proposed to amend Part 221 of Title 36, Code of Federal Regulations, by amending § 221.17, Cancellation of Contracts.

Interested parties were given 60 days to submit written comments on the proposed amendment.

Fifteen written comments were received. Based on the information available, the proposed amendment will be changed by revising paragraph (a)(4) as set forth below; and by adding a citation of authority as set forth below.

Accordingly, with these changes and additions, the proposed revision is adopted as set forth below.

Effective date.—This amended regulation is effective on September 10, 1973.

PAUL A. VANDER MYDE,
Deputy Assistant Secretary for Conservation, Research, and Education.

AUGUST 27, 1973.

§ 221.17 Cancellation of Contracts.

(a) Timber sale contracts and permits may be canceled:

(1) For serious or continued violation of their terms.

(2) Upon application, or with the consent of, the purchaser, when such action is of advantage to the United States or not prejudicial to its interests.

(3) Upon application of the purchaser if the value of the timber remaining to be cut is diminished materially because of

catastrophic damage caused by forces beyond the control of the purchaser resulting in (i) physical change in the sale area or access to it, or (ii) damage to timber remaining to be cut.

(4) For conviction of violation of criminal statutes or for violation of civil standards, orders, permits, or other regulations for the protection of environmental quality issued by a Federal agency, state agency, or political subdivision thereof, in the conduct of operations thereunder, on National Forest land, unless compliance with such laws or regulations would preclude performance of other contractual requirements.

(5) Upon determination by the Chief, Forest Service, that operations, thereunder would result in serious environmental degradation or resource damage.

(b) Cancellation will be by the Chief, Forest Service. Authority to cancel contracts under paragraph (a), items 1-4 of this section, may be delegated to regional foresters for sales within their authorization. All contract cancellations under paragraph (a), item (5) of this section, shall be by the Chief, Forest Service, whose decision shall be the final agency decision.

(30 Stat. 34, 35, as amended (16 U.S.C. 476, 551).)

[FR Doc.73-18485 Filed 8-29-73;8:45 am]

Title 38—Pensions, Bonuses, and Veterans' Relief

CHAPTER I—VETERANS ADMINISTRATION

PART 21—VOCATIONAL REHABILITATION AND EDUCATION

Veterans' Educational Assistance; Entitlement Charges

On page 19417 of the FEDERAL REGISTER of July 20, 1973, there was published a notice of proposed regulatory development to amend § 21.1045 to provide for charging of entitlement proportionately to the educational assistance or training allowance paid when a reduction in the monthly allowance was required due to excessive absences. Interested persons were given 30 days in which to submit comments, suggestions, or objections regarding the proposed regulation.

No written objections have been received and the proposed regulation is hereby adopted without change and is set forth below.

Effective date.—This VA regulation is effective August 29, 1973.

Approved August 29, 1973.

By direction of the Administrator.

[SEAL] FRED B. RHODES,
Deputy Administrator.

In § 21.1045(a), subparagraph (6) is added to read as follows:

§ 21.1045 Entitlement charges.

(a) *Residence courses* * * *

(6) *Excessive absences and less than full payment for job training.*—Where deductions are made throughout an en-

rollment period, the combined portions of a month for which deductions were made will be computed and no entitlement charge will be made for the combined deductions. Where the computation results in a period of time other than a full month, or other than exactly $\frac{3}{4}$, $\frac{1}{2}$ or $\frac{1}{4}$ fractional part of a month, the figure will be raised to the next higher quarter fraction of a month.

[FR Doc.73-18717 Filed 9-4-73;8:45 am]

Title 43—Public Lands: Interior

SUBTITLE A—OFFICE OF THE SECRETARY OF THE INTERIOR

PART 4—DEPARTMENT HEARINGS AND APPEALS PROCEDURES

Mine Health and Safety Hearings and Appeals

Incident to the establishment within the Department of the Interior of the Mining Enforcement and Safety Administration and the transfer to it of functions of the Bureau of Mines relating to, inter alia, mining health and safety and assessment and compliance under the Federal Coal Mine Health and Safety Act of 1969 (P.L. 91-173, 30 U.S.C. secs. 801-960) and the Federal Metal and Nonmetallic Mine Safety Act (P.L. 89-577, 30 U.S.C. secs. 721-740), by Secretarial Order No. 2953, notice of which was published in the FEDERAL REGISTER on July 13, 1973 (38 FR 18695-18696), the following amendments are made to regulations in Subpart F—Special Rules Applicable to Mine Health and Safety Hearings and Appeals, of Part 4—Department Hearings and Appeals Procedures, Title 43, Code of Federal Regulations, to provide necessary changes in nomenclature to conform with the Secretarial Order:

In the sections specified below, the words "Bureau" and "Bureau of Mines" are deleted wherever they appear, and the words "Mining Enforcement and Safety Administration" are substituted therefor:

Secs.
4.506(e)
4.507(a)(1), 4.507(a)(2)
4.508(c)
4.520
4.521
4.531
4.540(a), 4.540(b)
4.543(b)
4.544(a)
4.545
4.587
4.651(e)
4.652
4.661
4.663(a)

Since these amendments are made because of internal Department organization and practice, the prior notice and public procedure provisions of 5 U.S.C. sec. 553 are inapplicable, and the amendments shall be effective as of July 16, 1973, the date on which the Mining En-

forcement and Safety Administration became operative.

Dated August 29, 1973.

JAMES T. CLARKE,
Assistant Secretary of the Interior.
[FR Doc. 73-18684 Filed 9-4-73; 8:45 am]

Title 49—Transportation

CHAPTER V—NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION, DEPARTMENT OF TRANSPORTATION

[Docket No. 73-9; Notice 2]

PART 570—VEHICLE IN USE INSPECTION STANDARDS

This notice adds Part 570, Vehicle In Use Inspection Standards, to Chapter V, Title 49, Code of Federal Regulations.

Part 570 does not in itself impose requirements on any person. It is intended to be implemented by the States through the highway safety program standards issued under the Highway Safety Act (23 U.S.C. 402) with respect to inspection of motor vehicles with a gross vehicle weight rating of 10,000 pounds or less, except motorcycles and trailers. General provisions regarding vehicle inspection are set forth in NHTSA Highway Safety Program Manual Vol. 1, Periodic Motor Vehicle Inspection. Standards and procedures are adopted for hydraulic service brake systems, steering and suspension systems, tire and wheel assemblies.

Interested persons have been afforded an opportunity to participate in the making of these amendments by a notice of proposed rulemaking published in the FEDERAL REGISTER on April 2, 1973 (38 FR 8451), and due consideration has been given to all comments received in response to the notice, insofar as they relate to matters within the scope of the notice. Except for editorial changes, and except as specifically discussed herein, these amendments and the reasons therefore are the same as those contained in the notice.

Policy considerations.—A total of 120 comments were received in response to the notice. These comments were submitted by State motor vehicle agencies, national safety organizations, motor vehicle associations, vehicle and equipment manufacturers, antique car clubs and owners, public interest groups, and individual citizens. The commenters were predominantly in favor of periodic motor vehicle inspection (PMVI) and the establishment of uniform motor vehicle in use safety standards throughout the United States.

As the NHTSA stated in the prior notice, cost-benefit factors were the primary policy consideration in developing the inspection standards and procedures. The primary concern of the States was the socioeconomic impact on the motoring public as well as the impact on the State itself. The general consensus was that the proposed inspection requirements would require a significant increase in facilities, operating personnel, and equipment. Though cost effectiveness was a predominant concern the

States nevertheless felt that inspections should include vehicles over 10,000 pounds gross vehicle weight and be extended to include other vehicle systems. Several States expressed concern for the cost of implementing the proposed standards, estimating it at from \$10 to \$14 per car. Even though these States favored PMVI and now have PMVI or random inspection they felt that implementation costs would have a decided economic impact.

NHTSA has responded to these comments allowing an optional road test as a check of service brake system performance, adopting neither of the proposed parking brake procedures, and simplifying test procedures where possible so that tests may be conducted with a minimum added expenditure for equipment, personnel, and facilities. These matters will be discussed subsequently.

The establishment of the proposed standards as "minimum requirements" was questioned by several States as leading to a "watering down" of current requirements in those States which currently meet or exceed them. The NHTSA repeats its intent that the standards are not intended to supplant State standards that establish a higher performance or to discourage them from establishing or maintaining standards for other vehicle systems not covered by NHTSA.

A number of comments were derived from antique car clubs and individual owners who believe that antique, special interest, and vintage cars should be exempt from the proposed standards. These comments should be directed to the States. Each State has its own definitions and registration requirements for vehicles of this nature, and the NHTSA intends the States to implement Part 570 to the extent that it is compatible with its current requirements for these special vehicles.

Several respondents commented that the proposed standard should be expanded to include lighting, glazing, exhaust, wipers, horns, controls, and instrumentation systems. The consensus was that the cost-benefit ratio would materially increase if these systems were included in the proposed standard since inspection of these systems does not require time-consuming procedures or special tools, and corrective measures are less costly to the owner. Some considered it contradictory that safety systems covered by the Federal standards must meet safety performance requirements at the time of manufacture and not during the service life of the vehicle. As the NHTSA stated in the prior notice, the initial Federal effort is intended to cover those vehicles and vehicle systems whose maintenance in good order has proven critical to the prevention of traffic accidents. Requirements for motorcycles and trailers, and for less critical systems are under study, and the NHTSA intends to take such rulemaking action in the future as may be appropriate to cover them.

Applicability.—A frequent comment was that the standards and procedures should be extended to cover vehicles

whose GVWR exceeds 10,000 pounds. Because braking and steering and suspension systems on these vehicles differ materially from those on lighter vehicles, different criteria must be established and the proposed standards simply cannot be extended to cover them. The NHTSA, however, is developing appropriate inspection standards and procedures for heavy vehicles and will propose them in a notice to be issued by mid-October 1973.

Brake systems.—Several comments were received questioning the procedure for determining operability of the brake failure indicator lamp. In some vehicles the parking brake indicator and service brake system failure indicator use the same lamp and the methods of simulating failure vary.

It is realized that the procedure specified by the standard is general in nature and cannot cover all possible systems. In those vehicles where a lamp test cannot be executed in the normal manner the test will have to be conducted in accordance with the manufacturer's specifications, as determined by the vehicle inspector.

The brake system integrity test for fluid leakage has been modified on the basis of comments that it was not stringent enough. It was proposed that decrease in pedal height under 125 pounds force for 10 seconds should not exceed one-quarter of an inch. The requirement adopted is that there be no perceptible decrease in pedal height when 125 pounds of force is applied to the brake pedal and held for 30 seconds.

The brake pedal reserve test has been adopted substantially as proposed, and specifies that the engine be operating at the time of the test. Vehicles with full power (central hydraulic) brake systems are exempted from this test as the service brake performance test will be adequate to test such systems.

The service brake performance test offers the option of a road test, or testing upon a drive-on platform or roller-type brake analyzer (originally proposed under the title "Brake equalization"). States that conduct random inspections, and those that designate agents to perform vehicle inspections, objected strenuously to a test requiring the use of roller-type or drive-on test equipment. Consequently, an alternate test has been adopted which requires vehicles to stop from 20 mph in 25 feet or less without leaving a 12-foot wide lane. It is intended that this option be used only by States where it is current practice, and it is hoped that such States where practicable will change to the drive-on brake platform or roller-type brake analyzer tests. The terms "crimped" and "damaged" have been eliminated as causes for rejection of brake hoses, as redundant. If brake discs and drums are not embossed with safety tolerances, the requirement has been added that they be within the manufacturer's recommended specifications.

The primary concern regarding power assist units was that the brake pedal will rise instead of falling on a full-power

brake system when tested according to the procedure proposed. In view of the basic design of a full-power brake system this test would not be a proper check of system operation, and will not be required. As noted earlier, the service brake performance test will be used as the primary test of the full-power brake performance. To accord with the terminology of Standard No. 105a this section has been renamed "Brake power units."

The parking brake system inspection proposal proved controversial. The NHTSA proposed two objective, alternate tests, the first requiring the system to hold the vehicle on a 17 percent grade, and the second requiring the system to stop the vehicle from 20 mph within 54 feet. The first was objected to principally on the ground that each inspection station would have to construct a 17 percent grade. This would present problems for both in-line and bay-type inspection facilities. The stopping distance test, on the other hand, was opposed as a dynamic test more appropriate for service brake evaluation. In view of these objections, the parking brake inspection requirements were not adopted.

Steering and suspension systems.—The primary objections to the steering wheel test for free play concerned the test condition with the engine off on vehicles equipped with power steering, the linear measure of system free play (instead of angular measure to eliminate the variance due to steering wheel diameters), and the 2 inch free play limit for rack and pinion type steering gear.

The tolerance proposed and adopted for steering wheel free play is 2 inches for wheels of 16 inches diameter or less, since few passenger car steering wheels exceed this diameter. However, a table of free play values for older vehicles with steering wheels over 16 inches in diameter has been added to the standard. The requirement to have the engine running is being added to the procedure since steering wheel play can be greater with the engine off than with the engine on for cars equipped with power steering. Steering play on cars equipped with rack and pinion type steering will require further review to determine if the 2 inch tolerance should be changed.

Some comments argued that wheel alignment tolerances were considered too restrictive in the toe-in condition, and too lenient in toe-out. Some comments recommended visual inspection of tire wear as criteria to determine alignment. However, visual inspection of tire wear is not considered a valid method of checking alignment, and therefore was not adopted as an alternate method. No consensus of alternative values could be derived from the comments, and the proposed tolerances of 30 feet per mile have been adopted.

The requirements for the condition of shock absorber mountings, shackles, and U-bolts have been changed from "tight" to "securely attached" as a clarification.

Tire and wheel assembly standards and inspection procedures.—Several comments were received suggesting that rim

deformation in excess of one-sixteenth of an inch be permitted, as the proposed tolerance would result in rejection of otherwise safe vehicles. The primary concern of the requirement is air retention, and since vehicles with wheel deformation of one-sixteenth of an inch apparently perform satisfactorily in service without hazard the deformation tolerance has been increased to three thirty-seconds of an inch runout for both lateral and radial bead seat areas.

Effectivity.—Several commenters questioned the proposed effective date, 30 days after publication of the final rule. The NHTSA considers it in the public interest that minimum Federal standards for motor vehicles in use become effective without further delay. Implementation by the States will take place within the context of their highway safety programs, and the plans approved by the NHTSA under the Highway Safety Act, 23 U.S.C. 402.

In consideration of the foregoing, Title 49, Code of Federal Regulations is amended by adding Part 570 to read as set forth below.

Effective date.—September 28, 1973. Since this part does not in itself impose requirements on any person it is determined for good cause shown that an effective date earlier than 180 days after publication of the final rule is in the public interest.

(Secs. 103, 108, 119, Pub. L. 89-563, 80 Stat. 718, 15 U.S.C. 1392, 1397, 1407; delegation of authority at 49 CFR 1.51.)

Issued on August 29, 1973.

JAMES B. GREGORY,
Administrator.

570.1	Scope.
570.2	Purpose.
570.3	Applicability.
570.4	Definitions.
570.5	Service brake system.
570.6	Brake power unit.
570.7	Steering systems.
570.8	Suspension systems.
570.9	Tires.
570.10	Wheel assemblies.

AUTHORITY: Secs. 103, 108, 119, Public Law 89-563, 80 Stat. 718, 15 U.S.C. 1392, 1397, 1407; delegation of authority at 49 CFR 1.51.

§ 570.1 Scope.

This part specifies standards and procedures for inspection of hydraulic service brake systems, steering and suspension systems, and tire and wheel assemblies of motor vehicles in use.

§ 570.2 Purpose.

The purpose of this part is to establish criteria for the inspection of motor vehicles by State inspection systems, in order to reduce death and injuries attributable to failure or inadequate performance of motor vehicle systems.

§ 570.3 Applicability.

This part does not in itself impose requirements on any person. It is intended to be implemented by States through the highway safety program standards issued under the Highway Safety Act (23 U.S.C. 402) with respect to inspection of

motor vehicles with gross vehicle weight rating of 10,000 pounds or less, except motorcycles or trailers.

§ 570.4 Definitions.

Unless otherwise indicated, all terms used in this part that are defined in 49 CFR Part 571, Motor Vehicle Safety Standards, are used as defined in that part.

§ 570.5 Service brake system.

(a) **Failure indicator.**—The brake system failure indicator lamp, if part of a vehicle's original equipment, shall be operable. (This lamp is required by Federal Motor Vehicle Safety Standard No. 105, 49 CFR 571.105, on every new passenger car manufactured on or after January 1, 1968, and on other types of motor vehicles manufactured on or after September 1, 1975.)

(i) **Inspection procedure.**—Apply the parking brake and turn the ignition to start, or verify lamp operation by other means indicated by the vehicle manufacturer that the brake system failure indicator lamp is operable.

(b) **Brake system integrity.**—The brake system shall demonstrate integrity as indicated by no perceptible decrease in pedal height under a 125 pound force applied to the brake pedal or by no illumination of the brake system failure indicator lamp. The brake system shall withstand the application of force to the pedal without failure of any line or other part.

(i) **Inspection procedure.**—With the engine running on vehicles equipped with power brake systems, and the ignition turned to "on" in other vehicles, apply a force of 125 pounds to the brake pedal and hold for 30 seconds. Note any decrease in pedal height, and whether the lamp illuminates.

(c) **Brake pedal reserve.**—When the brake pedal is fully depressed, the distance that the pedal has traveled from its free position shall be not greater than 80 percent of the total distance from its free position to the floorboard or other object that restricts pedal travel.

(i) **Inspection procedure.**—Measure the distance (i) from the free pedal position to the floorboard or other object that restricts brake pedal travel. Depress the brake pedal, and with the force applied measure the distance (ii) from the depressed pedal position to the floorboard or other object that restricts pedal travel. Determine the percentage as

$$\frac{A-B}{A} \times 100.$$

The engine must be operating when power-assisted brakes are checked. The pedal reserve check is not required for vehicles equipped with full-power (central hydraulic) brake systems, or to vehicles with brake systems designed to operate with greater than 80 percent pedal travel.

(d) **Service brake performance.**—Compliance with one of the following performance criteria will satisfy the requirements of this section. Verify that tire inflation pressure is within the limits rec-

commended by vehicle manufacturer before conducting either of the following tests.

(1) *Roller-type or drive-on platform tests.*—The force applied by the brake on a front wheel or a rear wheel shall not differ by more than 20 percent from the force applied by the brake on the other front wheel or the other rear wheel respectively.

(i) *Inspection procedure.*—The vehicle shall be tested on a drive-on platform, or a roller-type brake analyzer with the capability of measuring equalization. The test shall be conducted in accordance with the test equipment manufacturer's specifications. Note the left to right brake force variance.

(2) *Road test.*—The service brake system shall stop the vehicle in a distance of 25 feet or less from a speed of 20 miles per hour without leaving a 12-foot-wide lane.

(i) *Inspection procedure.*—The road test shall be conducted on a level (not to exceed plus or minus one percent grade) dry, smooth, hard-surfaced road that is free from loose material, oil, or grease. The service brakes shall be applied at a vehicle speed of 20 miles per hour and the vehicle shall be brought to a stop as specified. Measure the distance required to stop.

(c) *Brake hoses and assemblies.*—Brake hoses shall not be mounted so as to contact the vehicle body or chassis. Hoses shall not be cracked, chafed, or flattened.

(i) *Inspection procedure.*—Examine visually, inspecting front brake hoses through all wheel positions from full left to full right for conditions indicated.

NOTE.—To inspect for (f), (g), and (h) below, remove at a minimum one front wheel and one rear wheel.

(f) *Disc and drum condition.*—If the drum is embossed with a maximum safe diameter dimension or the rotor is embossed with a minimum safety thickness dimension, the drum or disc shall be within the appropriate specifications. These dimensions will be found on motor vehicles manufactured since January 1, 1971, and may be found on vehicles manufactured for several years prior to that time. If the drums and discs are not embossed, the drums and discs shall be within the manufacturer's specifications.

(i) *Inspection procedure.*—Examine visually for condition indicated, measuring as necessary.

(g) *Friction materials.*—On each brake the thickness of the lining or pad shall not be less than one thirty-second of an inch over the rivet heads, or the brake shoe on bonded linings or pads. Brake linings and pads shall not have cracks or breaks that extend to rivet holes except minor cracks that do not impair attachment. Drum brake linings shall be securely attached to brake shoes. Disc brake pads shall be securely attached to shoe plates.

(i) *Inspection procedure.*—Examine visually for conditions indicated, and measure height of rubbing surface of lining over rivet heads. Measure bonded lin-

ing thickness over shoe surface at the thinnest point on the lining or pad.

(h) *Structural and mechanical parts.*—Backing plates and caliper assemblies shall not be deformed or cracked. System parts shall not be broken, misaligned, missing, binding, or show evidence of severe wear. Automatic adjusters and other parts shall be assembled and installed correctly.

(i) *Inspection procedure.*—Examine visually for conditions indicated.

§ 570.6 Brake power unit.

Vacuum hoses shall not be collapsed, abraded, broken, improperly mounted, or audibly leaking. With residual vacuum exhausted and a constant 25 pound force on the brake pedal, the pedal shall fall slightly when the engine is started, demonstrating integrity of the power assist system. This test is not applicable to vehicles equipped with full power brake system as the service brake performance test shall be considered adequate test of system performance.

(i) *Inspection procedure.*—With engine running, examine hoses visually and aurally for conditions indicated. Stop engine and apply service brakes several times to destroy vacuum in system. Depress brake pedal with 25 pounds of force and while maintaining that force, start the engine. If brake pedal does not fall slightly under force when the engine starts, there is a malfunction in the power assist system.

§ 570.7 Steering systems.

(c) *System play.*—Lash or free play in the steering system shall not exceed values shown in Table 1.

(i) *Inspection procedure.*—With the engine on and the wheels in the straight ahead position, turn the steering wheel in one direction until there is a perceptible movement of a front wheel. If a point on the steering wheel rim moves more than the value shown in Table 1 before perceptible return movement of the wheel under observation, there is excessive lash or free play in the steering system.

TABLE 1.—STEERING SYSTEM FREE PLAY VALUES

Steering wheel diameter (inches):	Lash (inches)
16 or less.....	2
18.....	2½
20.....	2½
22.....	2½

(b) *Linkage play.*—Free play in the steering linkage shall not exceed one-quarter of an inch.

(i) *Inspection procedure.*—Elevate the front end of the vehicle to load the ball joints. Insure that wheel bearings are correctly adjusted. Grasp the front and rear of a tire and attempt to turn the tire and wheel assembly left and right. If the free movement at the front or rear tread of the tire exceeds one-quarter inch there is excessive steering linkage play.

(c) *Free turning.*—Steering wheels shall turn freely through the limit of travel in both directions.

(i) *Inspection procedure.*—Turn the steering wheel through the limit of travel in both directions. Feel for binding or

jamming in the steering gear mechanism.

(d) *Alignment.*—Toe-in and toe-out shall not exceed 30 feet per mile, as recorded on a scuff gauge, or equivalent measuring device.

(i) *Inspection procedure.*—Use instructions of measuring device manufacturer.

(e) *Power steering system.*—The power steering system shall not have cracked or slipping belts, or insufficient fluid in the reservoir.

(i) *Inspection procedure.*—Examine fluid reservoir and pump belts for conditions indicated.

§ 570.8 Suspension system.

(a) *Suspension condition.*—Ball joint seals shall not be cut or cracked. Structural parts shall not be bent or damaged. Stabilizer bars shall be connected. Springs shall not be broken, or extended by spacers. Shock absorber mountings, shackles, and U-bolts shall be securely attached. Rubber bushings shall not be cracked, extruded out from or missing from suspension joints. Radius rods shall not be missing or damaged.

(i) *Inspection procedure.*—Examine front and rear end suspension parts for conditions indicated.

(b) *Shock absorber condition.*—There shall be no oil on the shock absorber housing attributable to leakage by the seal, and the vehicle shall not continue free rocking motion for more than two cycles.

(i) *Inspection procedure.*—Examine shock absorbers for oil leaking from within, then with vehicle on a level surface, push down on one end of vehicle and release. Note number of cycles of free rocking motion. Repeat procedure at other end of vehicle.

§ 570.9 Tires.

(a) *Tread depth.*—The tread on each tire shall be not less than two thirty-seconds of an inch deep.

(i) *Inspection procedure.*—Passenger car tires have tread depth indicators that become exposed when tread depth is less than two thirty-seconds of an inch. Inspect for indicators in any two adjacent major grooves at three locations spaced approximately equally around the outside of the tire. For vehicles other than passenger cars, it may be necessary to measure tread depth with a tread gauge.

(b) *Type.*—Vehicles should be equipped with tires on the same axle that are matched in nominal size, construction, and profile.

(i) *Inspection procedure.*—Examine visually. A major mismatch in nominal size, construction, and profile between tires on the same axle, or a major deviation from the size as recommended by the manufacturer (e.g. as indicated on the glove box placard on 1968 and later passenger cars) are causes for rejection.

(c) *General condition.*—Tires shall be free from chunking, bumps, knots, or bulges evidencing cord, ply, or tread separation from the casing or other adjacent materials.

(i) *Inspection procedure.*—Examine visually for conditions indicated.

(d) *Damage.*—Tire cords or belting materials shall not be exposed, either to the naked eye or when cuts or abrasions on the tire are probed.

(i) *Inspection procedure.*—Examine visually for conditions indicated, using an awl if necessary to probe cuts or abrasions.

§ 570.10 Wheel assemblies.

(a) *Wheel integrity.*—A tire rim, wheel disc, or spider shall have no visible cracks, elongated bolt holes, or indication of repair by welding.

(i) *Inspection procedure.*—Examine visually for conditions indicated.

(b) *Deformation.*—The lateral and radial runout of each rim bead area shall not exceed three thirty-seconds of an inch total indicated runout.

(i) *Inspection procedure.*—Using a runout indicator gauge, and a suitable stand, measure lateral and radial runout of rim bead through one full wheel revolution and note runout in excess of three thirty-seconds of an inch.

(c) *Mounting.*—All wheel nuts and bolts shall be in place and tight.

(i) *Inspection procedure.*—Check wheel retention for conditions indicated.

[FR Doc.73-18720 Filed 9-4-73;8:45 am]

CHAPTER X—INTERSTATE COMMERCE COMMISSION

SUBCHAPTER A—GENERAL RULES AND REGULATIONS

[Service Order 1104; Amdt. 7]

PART 1033—CAR SERVICE

Penn Central Transportation Co.

At a session of the Interstate Commerce Commission, Railroad Service Board, held in Washington, D.C., on the 27th day of August 1973.

Upon further consideration of Service Order No. 1104, (37 FR 15307, 22986; 38 FR 3512, 8445, 14754, 18024, and 20621), and good cause appearing therefor:

It is ordered, That: Section 1033.1104 *Service Order No. 1104* (Penn Central Transportation Company, George P. Baker, Richard C. Bond, and Jervis Langdon, Jr., Trustees, authorized to operate over tracks of the Erie Lackawanna Railway Company) be, and it is hereby, amended by substituting the following paragraph (e) for paragraph (e) thereof:

(e) *Expiration date.*—The provisions of this order shall expire at 11:59 p.m., October 31, 1973, unless otherwise modified, changed, or suspended by order of this Commission.

Effective date.—This amendment shall become effective at 11:59 p.m., August 31, 1973.

(Secs. 1, 12, 15, and 17(2), 24 Stat. 379, 383, 384, as amended; 49 U.S.C. 1, 12, 15, and 17(2). Interprets or applies Secs. 1(10-17), 15(4), and 17(2), 40 Stat. 101, as amended, 54 Stat. 911; 49 U.S.C. 1(10-17), 15(4), and 17(2).)

It is further ordered, That a copy of this amendment shall be served upon the Association of American Railroads, Car Service Division, as agent of all railroads subscribing to the car service and car hire agreement under the terms of that agreement, and upon the American Short Line Railroad Association; and that notice of this amendment be given to the general public by depositing a copy in the Office of the Secretary of the Commission at Washington, D.C., and by filing it with the Director, Office of the Federal Register.

By the Commission, Railroad Service Board.

[SEAL] ROBERT L. OSWALD,
Secretary.

[FR Doc.73-18752 Filed 9-4-73;8:45 am]

[Rev. S.O. 1110-A]

PART 1033—CAR SERVICE

Penn Central Transportation Co.

At a session of the Interstate Commerce Commission, Railroad Service Board, held in Washington, D.C., on the 27th day of August 1973.

Upon further consideration of Revised Service Order No. 1110 (37 FR 19616, 22871, 23236; 38 FR 878, 3333, 5636, 8446, 10942, 14755, 18025, and 20621), and good cause appearing therefor:

It is ordered, That:

§ 1033.1110 [Reserved]

Section 1033.1110 *Service Order No. 1110*, (Penn Central Transportation Company, George P. Baker, Richard C. Bond, and Jervis Langdon, Jr., Trustees, required to restore service at the Buttonwood (Wilkes-Barre), Pennsylvania, Gateway and to reroute traffic originally routed via that gateway) be, and it is hereby vacated and set aside.

(Secs. 1, 12, 15, and 17(2), 24 Stat. 379, 383, 384, as amended; 49 U.S.C. 1, 12, 15, and 17(2). Interprets or applies Secs. 1(10-17), 15(4), and 17(2), 40 Stat. 101, as amended, 54 Stat. 911; 49 U.S.C. 1(10-17), 15(4), and 17(2).)

It is further ordered, That this order shall become effective at 12:01 a.m., September 1, 1973; that copies of this order and direction shall be served upon the Association of American Railroads, Car Service Division, as agent of the railroads subscribing to the car service and car hire agreement under the terms of that agreement, and upon the American Short Line Railroad Association; and that notice of this order shall be given to the general public by depositing a copy in the Office of the Secretary of the Commission at Washington, D.C., and by filing it with the Director, Office of the Federal Register.

By the Commission, Railroad Service Board.

[SEAL] ROBERT L. OSWALD,
Secretary.

[FR Doc.73-18753 Filed 9-4-73;8:45 am]

[S.O. 1118; Amdt. 1]

PART 1033—CAR SERVICE

Providence and Worcester Co.

At a session of the Interstate Commerce Commission, Division 3, held in Washington, D.C., on the 28th day of August 1973.

Upon further consideration of Service Order No. 1118 (38 FR 2761), and good cause appearing therefor:

It is ordered, That:

Section 1033.1118 *Service Order No. 1118* (Providence and Worcester Company authorized to operate over tracks of Penn Central Transportation Company, George P. Baker, Richard C. Bond, and Jervis Langdon, Jr., trustees; Penn Central Transportation Company, George P. Baker, Richard C. Bond, and Jervis Langdon, Jr., trustees, authorized to operate over tracks of Providence and Worcester Company) be, and it is hereby, amended by substituting the following paragraph (g) for paragraph (g) thereof:

(g) *Expiration date.*—This order shall expire at 11:59 p.m., February 3, 1974, unless otherwise modified, changed, or suspended by order of this Commission.

Effective date.—This amendment shall become effective at 11:59 p.m., August 31, 1973.

(Secs. 1, 12, 15, and 17(2), 24 Stat. 379, 383, 384, as amended; 49 U.S.C. 1, 12, 15, and 17(2). Interprets or applies Secs. 1(10-17), 15(4), and 17(2), 40 Stat. 101, as amended, 54 Stat. 911; 49 U.S.C. 1(10-17), 15(4), and 17(2).)

It is further ordered, That a copy of this amendment shall be served upon the Association of American Railroads, Car Service Division, as agent of the railroad subscribing to the car service and car hire agreement under the terms of that agreement, and upon the American Short Line Railroad Association; and that notice of this amendment shall be given to the general public by depositing a copy in the Office of the Secretary of the Commission at Washington, D.C., and by filing it with the Director, Office of the Federal Register.

By the Commission, Division 3.

[SEAL] ROBERT L. OSWALD,
Secretary.

[FR Doc.73-18750 Filed 9-4-73;8:45 am]

[S.O. 1122, Amdt. 1]

PART 1033—CAR SERVICE

Texas Export Railroad Co.

At a session of the Interstate Commerce Commission, Railroad Service Board, held in Washington, D.C., on the 23d day of August 1973.

Upon further consideration of Service Order No. 1122 (38 FR 4667), and good cause appearing therefor:

It is ordered, That:

Section 1033.1122 *Service Order No. 1122*, the Texas Export Railroad Company authorized to operate over tracks

abandoned by Chicago, Rock Island and Pacific Railroad Company be, and it is hereby, amended by substituting the following paragraph (f) for paragraph (f) thereof:

(f) *Expiration date.*—The provisions of this order shall expire at 11:59 p.m., October 31, 1973, unless otherwise modified, changed, or suspended by order of this Commission.

Effective date.—This amendment shall become effective at 11:59 p.m., August 31, 1973.

(Secs. 1, 12, 15, and 17(2), 24 Stat. 379, 383, 384, as amended; 49 U.S.C. 1, 12, 15, and 17(2). Interprets or applies Secs. 1(10-17), 15(4), and 17(2), 40 Stat. 101, as amended, 54 Stat. 911; 49 U.S.C. 1(10-17), 15(4), and 17(2).)

It is further ordered, That a copy of this amendment, shall be served upon the Association of American Railroads, Car Service Division, as agent of all railroads subscribing to the car service and car hire agreement under the terms of that agreement, and upon the American Short Line Railroad Association; and that notice of this amendment be given to the general public by depositing a copy in the Office of the Secretary of the Commission at Washington, D.C., and by filing it with the Director, Office of the Federal Register.

By the Commission, Railroad Service Board.

[SEAL] JOSEPH M. HARRINGTON,
Acting Secretary.

[FR Doc.73-18751 Filed 9-4-73;8:45 am]

SUBCHAPTER B—PRACTICE AND PROCEDURE

[Ex Parte No. 275]

PART 1115—ISSUANCE OF SECURITIES, ASSUMPTION OF OBLIGATIONS, AND FILING OF CERTIFICATES AND REPORTS

Expanded Definition of "Securities"

At a general session of the Interstate Commerce Commission, held at its office in Washington, D.C., on the 16th day of August 1973.

It appearing, that the Commission, on the date hereof, has made and filed its report in this proceeding upon further consideration setting forth its conclusions and findings and its reasons therefor, which report is hereby referred to and made a part hereof; and

It further appearing, that since the proposed amendments to existing regulations relate to matters of practice and procedure resulting from the herein proceeding, further notice and public proceedings under 5 U.S.C. 553 are not necessary and good cause exists for making otherwise employed by a carrier, and as additionally including, but not being limited to, loan agreements, credit agreements the amendments effective within 60 days after publication thereof in the

FEDERAL REGISTER:

It is ordered, That the term "securities" as found in section 20a of the Interstate Commerce Act be henceforth interpreted as including, among other things, all agreements creating a present or future interest in or indebtedness of a carrier, or in property owned, leased or mortgages, chattel mortgages, advances, deeds of trust, equipment trusts, security agreements, purchase agreements whose terms do not provide for full payment of the purchase price at consummation and leases of operating property or real property, but shall not at this time be interpreted to include agreements entered into for the sole purpose of acquiring motor carrier operating property;

It is further ordered, That Part 1115 of Subchapter B of Chapter X of Title 49 of the Code of Federal Regulations be, and it is hereby, amended by adding new material¹ to Form BF-6, referred to in § 1115.1:

It is further ordered, That this order shall become effective on October 23, 1973.

And it is further ordered, That notice of this order shall be given to the general public by depositing a copy of this notice in the Office of the Secretary of this Commission at Washington, D.C., and by filing a copy with the Director, Office of the Federal Register.

By the Commission.

[SEAL] ROBERT L. OSWALD,
Secretary.

[FR Doc.73-18749 Filed 9-4-73;8:45 am]

Title 10—Atomic Energy

CHAPTER I—ATOMIC ENERGY COMMISSION

PART 110—UNCLASSIFIED ACTIVITIES IN FOREIGN ATOMIC ENERGY PROGRAMS

Information on Production of Special Nuclear Material

The Atomic Energy Commission hereby announces amendments to its regulation in 10 CFR, Part 110, which are intended to broaden the general authorization contained therein to include the furnishing to recipients everywhere of unclassified information pertaining to the production of special nuclear material which is (1) published, or (2) contained in certain patent applications, or (3) unpublished, provided that such unpublished information will be made available to the public within 60 days after the furnishing thereof.

Pursuant to section 4 of the Administrative Procedure Act (5 U.S.C. 553), the Commission has found that good cause exists for making this amendment effective without the customary 30-day

¹ Filed as part of the original document.

notice period. Accordingly, pursuant to the Atomic Energy Act of 1954, as amended, and sections 552 and 553 of Title 5 of the United States Code, the following amendment to Title 10, Chapter I, Code of Federal Regulations, Part 110 is published as a document subject to codification to be effective on September 5, 1973.

1. Section 110.7(b) of 10 CFR Part 110, is amended to read as follows:

§ 110.7 Generally authorized activities.

(b) Pursuant to section 57(b)(2) of the Act, the Atomic Energy Commission has determined that any activity not generally authorized pursuant to paragraph (a) of this section, which constitutes directly or indirectly engaging in the production of any special nuclear material outside of the United States, will not be inimical to the interest of the United States, and is authorized by the Atomic Energy Commission, provided that it:

(1) Does not involve the communication of Restricted Data or other classified defense information; and

(2) Is not in violation of other provisions of law; and either

(3) Is limited to participation in (i) meetings of or conferences sponsored by educational institutions, laboratories, scientific or technical organizations; (ii) international conferences held under the auspices of a nation or group of nations; or (iii) exchange programs approved by the Department of State; or

(4) Is limited to the furnishing of information which is available to the public in published form¹ or which will be made available to the public in published form within 60 days after the furnishing thereof.

2. The footnote (1) to 10 CFR 110.7 is amended to read as follows:

¹ For purposes of this section, "information which is available to the public in published form" shall include, but not be limited to, any information contained in an application filed in accordance with the regulations of the U.S. Patent Office and eligible for foreign filing under 35 U.S.C. sec. 184. In addition, information which is available from the Commission pursuant to 5 U.S.C. sec. 552 shall, for purposes of this section, be deemed to be information available to the public in published form.

(Secs. 57, 161, 68 Stat. 932, 948, as amended, (42 U.S.C. 2077, 2201); for the purposes of sec. 223, 69 Stat. 958, as amended, (42 U.S.C. 2273); §§ 110.10 and 110.11 issued under sec. 161.0, 68 Stat. 950, as amended, (42 U.S.C. 2201[o]).)

Dated at Germantown, Md., this 29th day of August 1973.

For the Atomic Energy Commission.

GORDON M. GRANT,
Acting Secretary of the Commission.

[FR Doc.73-18935 Filed 9-4-73;11:00 am]

Proposed Rules

This section of the FEDERAL REGISTER contains notices to the public of the proposed issuance of rules and regulations. The purpose of these notices is to give interested persons an opportunity to participate in the rulemaking prior to the adoption of the final rules.

DEPARTMENT OF THE TREASURY

Customs Service

[19 CFR Parts 24 and 141]

IDENTIFICATION AND IMPORTER NUMBERS

Proposed Amendment To Require Importers of Record and Ultimate Consignees To File for an Importer's Identification Number and To Submit This Number With All Consumption Entries

Notice is hereby given that under the authority of Revised Statute 251, as amended, sections 484, 624, 46 Stat. 722, as amended, 759; 5 U.S.C. 301, 19 U.S.C. 66, 1484, and 1624, it is proposed to amend sections 24.5(a) and 141.61(d) of the Customs regulations to require importers of record and ultimate consignees to file for an importer's identification number and to submit this number with all consumption entries.

Under the present regulations, the importer of record and ultimate consignee must file with the first dutiable formal entry or first request for service resulting in a bill or refund check, an application for an importer's number on Customs Form 5106 (section 24.5(a)) and must furnish this number on Customs Form 5101 (section 141.61(d)) with each dutiable consumption entry. The importer's number is necessary to permit identification of the importer of record or ultimate consignee of merchandise.

At present, the importer of record or ultimate consignee of free merchandise is not required to file the aforementioned information. The proposed amendment requires these numbers for free as well as dutiable consumption entries.

Accordingly, it is proposed to amend paragraph (a) of § 24.5, to read as follows:

§ 24.5 Filing identification number.

(a) Each person, business firm, Government agency, or other organization shall file Customs Form 5106, Notification of Importer's Number or Application for Importer's Number, or Notice of Change of Name or Address, with the first formal entry which he submits or the first request for services that will result in the issuance of a bill or a refund check upon adjustment of a cash collection. Customs Form 5106 shall also be filed for the ultimate consignee for which such entry is being made.

It is also proposed to amend the first sentence in paragraph (d) of § 141.61, to read as follows:

§ 141.61 Completion of entry papers.

(d) *Customs Form 5101.*—A Customs Form 5101 (Entry Record) shall be prepared by the importer and all three copies, with carbon paper left in, shall be presented with each consumption entry, and with each warehouse, appraisal, vessel repair, or drawback entry. * * *

Prior to the adoption of the amendment consideration will be given to any relevant data, views, or arguments which are submitted in writing to the Commissioner of Customs, Attention: Regulations Division, Washington, D.C. 20229, and received not later than October 5, 1973.

Written material or suggestions submitted will be available for public inspection in accordance with § 103.3(b) of the Customs regulations (19 CFR 103.3(b)), at the Regulations Division, Headquarters, United States Customs Service, Washington, D.C., during regular business hours.

Approved August 28, 1973.

[SEAL] VERNON D. ACREE,
Commissioner of Customs.

[FR Doc.73-18735 Filed 9-4-73; 8:45 am]

DEPARTMENT OF THE INTERIOR

Bureau of Indian Affairs

[25 CFR Part 221]

IRRIGATION OPERATION AND MAINTENANCE CHARGES

Water Charges on the Ahtanum Indian Irrigation Project

AUGUST 24, 1973.

These proposed regulations are being considered for issuance under the authority delegated to the Commissioner of Indian Affairs by the Secretary of the Interior in Section 15(a) of Secretarial Order 2508 (10 BIAM 2.1) and redelegated by the Commissioner to the Area Director in 10 BIAM 3.

Notice is hereby given that it is proposed to modify Section 221.1 of Part 221, Subchapter T, Chapter I, of Title 25 of the Code of Federal Regulations by changing the rate for annual operation and maintenance assessments on the Ahtanum Indian Irrigation Project for Calendar Year 1974 and subsequent years. This modification is proposed pursuant to the authority contained in the Acts of August 1, 1914 (38 Stat. 583), and March 7, 1928 (45 Stat. 210).

The purpose of this modification is to increase the assessment rate to more ac-

curately reflect the actual operation and maintenance costs based on the previous year's operating experience and the anticipated program of work.

The public is welcome to participate in the rule making process of the Department of the Interior. Accordingly, interested persons may submit written comments, views, or arguments with respect to the proposed rates to the Area Director, Portland Area Office, Bureau of Indian Affairs, Post Office Box 3785, Portland, Oregon 97208, on or before October 5, 1973.

Section 221.1 of Chapter I, Title 25, of the Code of Federal Regulations is revised to read as follows:

§ 221.1 Charges.

Pursuant to the provisions of the Acts of August 1, 1914, and March 7, 1928 (38 Stat. 583 and 45 Stat. 210; 25 U.S.C. 385, 387), the operation and maintenance charges on lands of the Ahtanum Indian Irrigation Project, Yakima Indian Reservation, Washington, for the Calendar Year 1974 and subsequent years until further notice, are hereby fixed at \$3.75 per acre per annum for each irrigable acre of land to which water can be delivered from the project works.

RICHARD M. BALSIGER,
Acting Area Director.

[FR Doc.73-18662 Filed 9-4-73; 8:45 am]

[25 CFR Part 221]

IRRIGATION OPERATION AND MAINTENANCE CHARGES

Water Charges on the Toppenish-Simcoe Indian Irrigation Project

AUGUST 24, 1973.

These proposed regulations are being considered for issuance under the authority delegated to the Commissioner of Indian Affairs by the Secretary of the Interior in section 15(a) of Secretarial Order 2508 (10 BIAM 2.1) and redelegated by the Commissioner to the Area Director in 10 BIAM 3.

Notice is hereby given that it is proposed to modify § 221.73 of Part 221, Subchapter T, Chapter I, of Title 25 of the Code of Federal Regulations by changing the basic rate for annual operation and maintenance assessments on the Toppenish-Simcoe Indian Irrigation Project for Calendar Year 1974 and subsequent years. This modification is proposed pursuant to the authority contained in the Acts of August 1, 1914 (38 Stat. 583), and March 7, 1928 (45 Stat. 210).

The purpose of this modification is to increase the assessment rate to more ac-

curately reflect the actual operation and maintenance costs based on the previous year's operating experience and the anticipated program of work.

The public is welcome to participate in the rule making process of the Department of the Interior. Accordingly, interested persons may submit written comments, views, or arguments with respect to the proposed rates to the Area Director, Portland Area Office, Bureau of Indian Affairs, Post Office Box 3785, Portland, Oregon 97208, on or before October 5, 1973.

Section 221.73 of Chapter I, Title 25 of the Code of Federal Regulations is revised to read as follows:

§ 221.73 Charges.

Pursuant to the provisions of the Acts of August 1, 1914, and March 7, 1928 (38 Stat. 583 and 45 Stat. 210; 25 U.S.C. 385, 387), the operation and maintenance charges for the lands under the Toppenish-Simcoe Irrigation Project, Yakima Indian Reservation, Washington, for the Calendar Year 1974 and subsequent years until further notice, are hereby fixed as follows:

All lands for which application for water is made and approved by Program Engineer, per acre..... \$4.10

RICHARD M. BALSIGER,
Acting Area Director.

[FR Doc.73-18683 Filed 9-4-73;8:45 am]

[25 CFR Part 221]

IRRIGATION OPERATION AND MAINTENANCE CHARGES

Basic and Other Water Charges on the Wapato Indian Irrigation Project

AUGUST 24, 1973.

These proposed regulations are being considered for issuance under the authority delegated to the Commissioner of Indian Affairs by the Secretary of the Interior in section 15(a) of Secretarial Order 2508 (10 BIAM 2.1) and redelegated by the Commissioner to the Area Director in 10 BIAM 3.

Notice is hereby given that it is proposed to modify § 221.86 of Part 221, Subchapter T, Chapter I of Title 25 of the Code of Federal Regulations by changing the basic rate for annual operation and maintenance assessments on the Wapato Indian Irrigation Project for Calendar Year 1974 and subsequent years. This modification is proposed pursuant to the authority contained in the Acts of August 1, 1914 (38 Stat. 583), and March 7, 1928 (45 Stat. 210).

The purpose of this modification is to increase the assessment rate to more accurately reflect the actual operation and maintenance costs based on the previous year's operating experience and the anticipated program of work.

The public is welcome to participate in the rule making process of the Department of the Interior. Accordingly, interested persons may submit written comments, views, or arguments with respect to the proposed rates to the Area Director, Portland Area Office, Bureau of Indian Affairs, Post Office Box 3785, Port-

land, Oregon 97208, on or before October 4, 1973.

Section 221.86 of Chapter I, Title 25, of the Code of Federal Regulations is revised to read as follows:

§ 221.86 Charges.

The operation and maintenance charges on assessable lands under the Wapato Indian Irrigation Project, Yakima Indian Reservation, Washington, are hereby fixed as follows:

(a) Pursuant to the provisions of the Acts of August 1, 1914, and March 7, 1928 (38 Stat. 583, 45 Stat. 210; 25 U.S.C. 385, 387), the basic operation and maintenance assessment rates for the Calendar Year 1974 and subsequent years until further notice are:

(1) Minimum charges for all tracts in noncontiguous single ownership.....	\$10.80
(2) Flat rate upon all farm units or tracts for each assessable acre except Additional Works lands.....	10.80
(3) Storage operation and maintenance. For all lands with a storage water right, known as "B" lands, in addition to other charges per acre....	0.60
(4) Flat rate upon all farm units or tracts for each assessable acre of Additional Works lands.....	11.30

(b) Pursuant to the provisions of the Act of September 26, 1961 (75 Stat. 680), there shall be assessed and collected from all lands except Additional Works lands, beginning with the Calendar Year 1967 and until further notice but not to exceed a period of 10 years, an annual per acre charge of \$0.20 to defray the cost of replacing a wooden pipeline.

RICHARD M. BALSIGER,
Acting Area Director.

[FR Doc.73-18681 Filed 9-4-73;8:45 am]

DEPARTMENT OF AGRICULTURE

Agricultural Marketing Service

[7 CFR Part 26]

GRAIN SORGHUM

Proposed Revision of U.S. Standards

Pursuant to section 4 of the United States Grain Standards Act, as amended (82 Stat. 762, 7 U.S.C. 76), notice is hereby given according to the administrative procedure provisions of Section 553 of Title 5, United States Code, that the U.S. Department of Agriculture has under consideration a proposed revision of the Official Grain Standards of the United States for Grain Sorghum (7 CFR 26.551 et seq.).

Statement of considerations.—The United States Grain Standards Act provides for official U.S. standards to designate the levels of quality of grain for voluntary use by producers, merchandisers, and consumers in the domestic marketing of grain and for mandatory use in the export marketing of grain. Official grading service is provided under the Act upon request of the applicant and payment of a fee to cover the cost of the service.

At present, yellow grain sorghum is traded under three names; grain sorghum, sorghum, and milo. The multi-

plicity of names is confusing and does not facilitate or promote the orderly marketing of grain sorghum. The officially recognized botanical name for the commodity is *Sorghum vulgare*, and the officially recognized common name is "sorghum." Grain sorghum is a recognized synonym for sorghum. Milo is a recognized type of sorghum but not all sorghum sold in commercial channels is milo. To avoid the multiplicity of names, and to provide an accurate but short name, it has been proposed that the name in the standards be shortened from "grain sorghum" to the officially recognized name "sorghum." If the proposal is adopted, inspectors would be authorized, for a period of time, to show both names on certificates to help applicants meet contract commitments.

Sorghum breeders and producers of sorghum seed have requested a change in the classing of sorghum under the U.S. standards. They propose that the class White Sorghum be redefined to reduce the maximum limit for sorghum of other colors. They also propose that the class Yellow Sorghum be redefined to include mixtures of sorghum with white seedcoats along with those seedcoat colors presently allowed in the class.

The present definition for the class White Grain Sorghum permits up to 10 percent of sorghum with seedcoats of other colors before the sorghum is graded "Mixed." Only limited acreage of white sorghum is now produced in the United States but new white sorghum varieties are available and should be more acceptable to producers if the proposed change in classing is approved. Feeding studies using white sorghum show an increased feed efficiency of 4 to 7 percent above some red sorghum. Many poultry feeders prefer white sorghum to sorghum of other colors. White sorghum is also stated to be more suitable than sorghum of other colors for wet milling (including starch production), brewing, and flour production for human food. For these reasons, it is proposed to permit only 2 percent of sorghum with seedcoats of other colors in the class White Sorghum.

The present definition for the class Yellow Grain Sorghum includes sorghum with yellow, salmon-pink, and red colored seedcoats. In addition, it allows not more than 10 percent of sorghum of other classes, including white seedcoats. Accordingly, mixtures of sorghum with yellow seedcoats with more than 10 percent of sorghum with white seedcoats are graded "Mixed." Mixtures of yellow and white sorghum are subject to price discounts, but research indicates that the feeding quality of white sorghum normally may be equal to or superior to that of yellow sorghum. For these reasons, it is proposed to redefine the class Yellow Grain Sorghum to include sorghum with white seedcoats in any amount, except an amount that meets the requirements for white sorghum.

The proposed change in the classing of yellow sorghum should also be helpful to inspectors in classing hybrid varieties. Such varieties frequently have seedcoats

with varying tinges or shades of color. If the proposed change in classing is approved, kernels having colors varying between yellow and white will be classified as Yellow Sorghum.

The proposed changes in the U.S. standards for sorghum would be as follows:

1. Shorten the name of the grain from "grain sorghum" to "sorghum"—to use a shorter, more official, and more acceptable name.
2. Change the definition for the class Yellow Sorghum by adding sorghum with white seedcoats—to permit mixtures of yellow, white, salmon-pink, and red sorghum to be graded as Yellow Sorghum.
3. Change the definition for the class White Sorghum to require that white sorghum shall have white seedcoats and contain not more than 2.0 percent of sorghum with seedcoats or subcoats of other colors—to further restrict the quantity of other colors that can be mixed with white sorghum and still be classified as White Sorghum.
4. Revise the format of the standards by:
 - a. Arranging the terms in alphabetical order—for ease in use.
 - b. Deleting the definition for "Grades" from "Terms Defined"—the term is adequately defined in "Grades, Grade Requirements, and Grade Designations."
 - c. Including "Moisture" and "Test weight per bushel" under "Terms Defined"—these terms were previously included in "Principles Governing Application of Standards."
 - d. Incorporating the term "crotalaria seed" under U.S. Sample grade (§ 26.557) and showing numerical limits for crotalaria seed and stones—to more clearly define the grade.
5. Add to the definition for sorghum a definition for whole kernels—to more clearly define the basic requirements for sorghum.
6. Add "sorghum alnum" to the definition for "nongrain sorghum"—to provide for the proper designation of this commercially grown forage sorghum.
7. Add "triticale" to the definition for "other grains"—to provide for the proper designation of this new grain.
8. Include in the definition for "damaged kernels" the term "insect-bored kernels"—to clearly identify insect-bored kernels as damaged kernels.
9. Define the term "distinctly low quality"—to more clearly identify the term.
10. Add the sections "Temporary adjustment in equipment and procedures" (§ 26.553) and "Percentages" (§ 26.554) to "Principles Governing Application of Standards."
11. Redefine "Broken kernels, foreign material, and other grains"; "Docket"; "Moisture"; "Test weight"; and "Basis of determination"—to show information that is considered significant to the meaning and application of the standards.
12. Clarify the definition for percentages—to provide for uniformity in expressing percentages for grade determinations.
13. Make nonsubstantive changes of an editorial nature.

The Department proposes that the U.S. Standards for Grain Sorghum be revised to read as follows:

OFFICIAL GRAIN STANDARDS OF THE UNITED STATES FOR SORGHUM¹
TERMS DEFINED

§ 26.551 Definitions.

For the purposes of these standards the following terms shall have the meanings stated below:

(a) *Broken kernels, foreign material, and other grains.*—All material, including whole kernels of sorghum and pieces of kernels or sorghum (except dockage) which may be removed from a test portion of the original sample by use of an approved device, and by handpicking a portion of the sample, in accordance with procedures prescribed in the Grain Inspection Manual.² For the purpose of this paragraph "approved device" shall include the Carter Dockage Tester and any other equipment that is approved by the Administrator as giving equivalent results.³

(b) *Classes.*—The following four classes:

(1) *Brown sorghum.*—Sorghum with brown seedcoats or brown subcoats which contains not more than 10.0 percent of sorghum of other colors.

(2) *White sorghum.*—Sorghum with white seedcoats which contains not more than 2.0 percent of sorghum with seedcoats or subcoats of other colors.

(3) *Yellow sorghum.*—Sorghum with yellow, salmon-pink, red, or white seedcoats, or white but spotted seedcoats, which contains not more than 10.0 percent of sorghum with brown seedcoats or subcoats and which does not meet the requirements for the class White Sorghum.

(4) *Mixed sorghum.*—Sorghum which does not meet the requirements for any of the classes Brown Sorghum, Yellow Sorghum, or White Sorghum.

(c) *Damaged kernels (total).*—Kernels and pieces of kernels of sorghum and other grains which are heat-damaged, sprout-damaged, frost-damaged, badly ground-damaged, badly weather-damaged, mold-damaged, diseased, insect-bored, or otherwise materially damaged.

(d) *Distinctly low quality.*—Sorghum which is obviously of inferior quality because it contains foreign substances or because it is in an unusual state or condition, and which cannot be graded by use of the other grading factors provided in the standards.

(e) *Dockage.*—Material of small par-

¹ Compliance with the provisions of these standards does not excuse failure to comply with the provisions of the Federal Food, Drug, and Cosmetic Act, or other Federal laws.

² Grain Inspection Manual, GR Instruction 918-6, revised August 28, 1972. Copies may be obtained from the Grain Division, Agricultural Marketing Service, U.S. Department of Agriculture, 6525 Belcrest Road, Hyattsville, Maryland 20782.

³ Requests for information concerning approved devices and procedures, criteria for approved devices, and request for approval of devices should be directed to the Grain Division, Agricultural Marketing Service, U.S. Department of Agriculture, 6525 Belcrest Road, Hyattsville, Maryland 20782.

ticle size (2 1/2/64 inches or less in diameter), including pieces of sorghum, which may be removed from a test portion of the original sample by use of an approved device in accordance with procedures prescribed in the Grain Inspection Manual.² For the purpose of this paragraph "approved device" shall include the Carter Dockage Tester and any other equipment that is approved by the Administrator as giving equivalent results.³

(f) *Heat-damaged kernels.*—Kernels and pieces of kernels of sorghum and other grains which are materially discolored and damaged as a result of heating.

(g) *Moisture.*—Water content in sorghum as determined by an approved device in accordance with procedures prescribed in the Grain Inspection Manual.² For the purpose of this paragraph "approved device" shall include the Motomco Moisture Meter and any other equipment that is approved by the Administrator as giving equivalent results.³

(h) *Nongrain sorghum.*—Seeds of broomcorn, johnsongrass, sorghum alnum, sorghum-sudangrass hybrids, sorgrass, sudangrass, and sweet sorghum (sorgo).

(i) *Other grains.*—Barley, corn, cultivated buckwheat, einkorn, emmer, flaxseed, hull-less barley, nongrain sorghum, oats, Polish wheat, popcorn, poulard wheat, rice, rye, soybeans, spelt, sweet corn, triticale, wheat, and wild oats.

(j) *Sorghum.*—Grain which, before the removal of dockage, consists of 50.0 percent or more of whole kernels of sorghum (*Sorghum vulgare*) excluding nongrain sorghum and which contains not more than 10.0 percent of other grains for which standards have been established under the United States Grain Standards Act. Whole kernels, for purposes of this determination, shall be sorghum with 1/4 or less of the kernel removed.

(k) *Stones.*—Concreted earthy or mineral matter and other substances of similar hardness that do not disintegrate readily in water.

(l) *Test weight per bushel.*—Test weight per bushel shall be the weight per Winchester bushel (2,150.42 cubic inches capacity) as determined on a test portion of the original sample by an approved device in accordance with instructions in the Grain Inspection Manual.² For the purpose of this paragraph "approved device" shall include the Fairbanks-Morse or Ohaus Test Weight Per Bushel Apparatus and any other equipment that is approved by the Administrator as giving equivalent results.³ Test weight per bushel shall be stated in terms of whole and half pounds; a fraction of a pound when equal to or greater than one-half shall be stated as one-half and when less than one-half shall be disregarded; e.g., 51.1 through 51.4 shall be 51.0, and 51.5 through 51.9 shall be 51.5.

PRINCIPLES GOVERNING APPLICATION OF STANDARDS

§ 26.552 Basis of determination.

Each determination of "broken kernels, foreign material, and other grains"

shall be determined on a test portion of the grain sample when free from dockage. Each determination of "class," "damaged kernels," "heat-damaged kernels," and "stones" shall be determined on a test portion of the grain sample when free from "dockage," and that part of the "broken kernels, foreign material, and other grains" which will pass through an equilateral triangular opening, the inscribed circle of which is 0.0781 (5/64) inch in diameter. All other determinations shall be on a test portion of the original sample.

§ 26.553 Temporary adjustments in equipment and procedures.

The equipment and procedures referred to in the sorghum standards are applicable to sorghum produced and harvested under normal environmental conditions. Abnormal environmental conditions during the production and harvest of sorghum may require temporary adjustments in the procedures or equipment. When these adjustments are necessary, Grain Division Field Offices and Official Inspection Agencies will be notified in writing of the change.

§ 26.554 Percentages.

Percentages shall be determined on the basis of weight and shall be rounded off as follows:

(a) When the figure to be rounded is followed by a figure greater than 5, round to the next higher figure, e.g., 0.46, report as 0.5.

(b) When the figure to be rounded is followed by a figure less than 5, round to the next lowest figure, e.g., 0.54, report as 0.5.

(c) When the figure to be rounded is even and it is followed by the figure 5, retain the even figure. When the figure to be rounded is odd and it is followed by 5, round the figure to the next highest number, e.g., 0.45, record as 0.4; 0.55, record as 0.6.

Percentages, except for dockage and for classes in "Mixed Sorghum," shall be stated in whole and tenth percent to the nearest tenth percent. The percentage of dockage when equal to one percent or more shall be stated as a whole percent; a fraction of a percent shall be disregarded. The percentage of each class in "Mixed Sorghum" shall be stated to the nearest whole percent.

The percentage of "broken kernels, foreign material, and other grains" shall be the sum of the percentage determined for the mechanically separated portion and the percentage determined for the handpicked portion in accordance with instructions in the Grain Inspection Manual.¹

§ 26.555 [Reserved]

§ 26.556 [Reserved]

GRADES, GRADE REQUIREMENTS, AND GRADE DESIGNATIONS

§ 26.557 Grades and grade requirements for all classes of sorghum. (See also § 26.559.)

Grade	Minimum test weight per bushel	Moisture	Maximum limits of—		
			Damaged kernels		Broken kernels, foreign material, and other grains
			Total	Heat-damaged kernels	
Pounds	Percent	Percent	Percent	Percent	
U.S. No. 1	57.0	13.0	2.0	0.2	4.0
U.S. No. 2	58.0	14.0	5.0	0.5	8.0
U.S. No. 3 ¹	53.0	15.0	10.0	1.0	12.0
U.S. No. 4	51.0	18.0	15.0	3.0	15.0

U.S. Sample grade shall be sorghum which—
 (a) Does not meet the requirements for the grades U.S. Nos. 1, 2, 3, or 4,
 (b) Contains more than 7 stones which have a weight in excess of 0.2 percent of the sample weight or more than 2 crotalaria seeds (*Crotalaria* spp.) per 1,000 grams of sorghum,
 (c) Has a musty, sour, or commercially objectionable foreign odor (except smut odor), or
 (d) Is badly weathered, heating, or distinctly low quality.

¹ Sorghum which is distinctly discolored shall not be graded higher than U.S. No. 3.

§ 26.558 Grade designations.

The grade designations for sorghum shall include in the following order: (a) The letters "U.S.," (b) the number of the grade or the words "Sample grade," (c) the class, (d) each applicable special grade (see § 26.560), and (e) when applicable, the word "dockage" together with the percentage thereof. The grade designation for the class "Mixed Sorghum" shall include, following the words "Mixed Sorghum," the approximate percentages of each class of sorghum in the mixture in the order of predominance.

SPECIAL GRADES, SPECIAL GRADE REQUIREMENTS, AND SPECIAL GRADE DESIGNATIONS

§ 26.559 Special grades and special grade requirements.

A special grade, when applicable, is supplemental to the grade assigned under § 26.557. Such special grades are established and determined as follows:

(a) *Smutty sorghum*.—Smutty sorghum shall be sorghum which is covered with smut spores or which contains 20 or more smut masses in 100 grams of sorghum.

(b) *Weevily sorghum*.—Weevily grain sorghum shall be grain sorghum which is infested with live weevils or other live insects injurious to stored grain.

§ 26.560 Special grade designations.

The grade designation for smutty or weevily sorghum shall include, following the class, the word(s) "Smutty" or "Weevily," as warranted, and all other information prescribed in § 26.558.

Comments and effective date.—The United States Grain Standards Act, as amended, requires that public notice shall be given on any amendment of the standards and that no changes shall become effective less than 1 year after promulgation thereof, unless, in the judgment of the Secretary, the public health, interest, or safety require that they become effective sooner. It is desirable that new standards become effective before the beginning of harvest to minimize possible disruption of normal marketing procedures. A limited poll of members of the trade and Federal agencies indicate no objection to an effective date of June 1, 1974. If the proposed revision as set forth herein is adopted in whole or in part,

it is intended that the revision would be made effective on or about June 1, 1974.

Public hearings on the proposed revision will not be held but all persons who desire to submit written data, views, or arguments on this proposal should file them in duplicate with the Hearing Clerk, U.S. Department of Agriculture, Room 112, Administration Building, Washington, D.C. 20250, not later than October 22, 1973. Any persons who desire to submit their views orally in an informal manner should so advise the Director, Grain Division, Agricultural Marketing Service, U.S. Department of Agriculture, 6525 Belcrest Road, Hyattsville, Maryland 20782 (telephone (301) 436-8776) so that arrangements may be made for such submission by October 23, 1973. A summary of such views will be made and furnished for verification to the person making the submission and if approved may be filed by him in the Office of the Hearing Clerk. All comments so filed will be available for public inspection during official hours of business (7 CFR 1.27(b)). Consideration will be given to all comments filed with the Hearing Clerk, and to all other information available to the U.S. Department of Agriculture, in arriving at a decision on the proposed revision of the grain sorghum standards.

Copies of the current grain sorghum standards may be obtained from the Director, Grain Division, Agricultural Marketing Service, 6525 Belcrest Road, Hyattsville, Maryland 20782, or from any field office of the Grain Division. Field office locations can be found in the telephone directory.

Done at Washington, D.C., on August 27, 1973.

E. L. PETERSON,
 Administrator,
 Agricultural Marketing Service.

[FR Doc.73-18559 Filed 9-4-73; 8:45 am]

Animal and Plant Health Inspection Service

[9 CFR Parts 102, 104]

VIRUSES, SERUMS, TOXINS, AND ANALOGOUS PRODUCTS

Proposed Miscellaneous Amendments

Notice is hereby given in accordance with the provisions contained in section

553(b) of title 5, United States Code (1966), that it is proposed to amend certain of the regulations relating to viruses, serums, toxins, and analogous products in Part 102 and Part 104 of title 9 CFR issued pursuant to the provisions of the Virus-Serum-Toxin Act of March 4, 1913 (21 U.S.C. 151-158).

These proposed amendments would include a revision of the regulations pertaining to the importation of biological products. As revised, they would be recodified in a new Part 104, titled "Permits for Biological Products." The title of Part 102 would be changed to "Licenses for Biological Products." These changes would not only emphasize the regulations pertaining to permits but would further differentiate these regulations from those pertaining to other permits issued by Animal and Plant Health Inspection Service, thus making them more readily available to interested people.

The need for three types of permits would be specified in § 104.1, including one for transit shipments. Such permits would be authorized in § 104.2 and conditions under which a permit would not be issued would be specified. Need for an application would be prescribed in § 104.3.

The three types of permits—Research and Evaluation, Distribution and Sale, and Transit Shipment would be provided in § 104.4, § 104.5, and § 104.6, respectively, with the conditions under which each will be issued included. The format for the permit would be authorized in § 104.7.

These proposed amendments would make biological products imported for Distribution and Sale subject to the same test and release requirements currently being applied to licensed products prepared in the United States. They would also provide for the disposition of shipments which do not comply with such requirements or which might otherwise not be eligible for entry.

1. Part 102 is amended by changing the title to read:

PART 102—LICENSES FOR BIOLOGICAL PRODUCTS

2. Part 102 is amended by deleting § 102.25, § 102.26, § 102.27, and § 102.28.

3. Chapter I of Title 9 of the Code of Federal Regulations is amended by adding a new Part 104 to read:

PART 104—PERMITS FOR BIOLOGICAL PRODUCTS

Sec.

- 104.1 Permit required.
- 104.2 Permit authorized.
- 104.3 Permit application.
- 104.4 Products for research and evaluation.
- 104.5 Products for distribution and sale.
- 104.6 Products for transit shipment only.
- 104.7 Product permit.
- 104.8 Illegal shipments.

AUTHORITY: 37 Stat. 832-833; 21 U.S.C. 151-158.

§ 104.1 Permit required.

Unless otherwise authorized or directed by the Deputy Administrator, each permit to import a biological product into the United States shall be issued in ac-

cordance with the regulations in this part.

(a) No biological product shall be brought into the United States unless a permit has been issued for such product. A separate U.S. Veterinary Biological Product Permit shall be required for each shipment of biological product to be imported; *Provided*, That, a permit shall also be required for each transit shipment of biological products moved through the United States.

(b) Each person importing biological products shall hold an unexpired, unsuspended, and unrevoked permit issued by Veterinary Services. Such person shall reside within the United States, or operate a business establishment within the United States, or both.

§ 104.2 Permit authorized.

(a) Veterinary Services is authorized to issue three types of permits for importing biological products. They shall be:

- (1) U.S. Veterinary Biological Product Permit for Research and Evaluation;
- (2) U.S. Veterinary Biological Product Permit for Distribution and Sale; or
- (3) U.S. Veterinary Biological Product Permit for Transit Shipment Only.

(b) A permit shall not be issued for a biological product from countries known to have exotic diseases, including but not limited to foot-and-mouth disease, rinderpest, fowl pest (fowl plague), swine vesicular disease, Newcastle disease, and African swine fever, if in the opinion of the Deputy Administrator, such products may endanger the livestock or poultry of this country.

(c) A permit shall not be issued until an inspector has determined the condition of the equipment and facilities of the producer, of the applicant, or of both if such a determination is considered necessary by the Deputy Administrator.

(d) A permit shall not be issued for a biological product prepared in the United States, exported, and presented for re-entry except as provided in § 104.4(d).

§ 104.3 Permit application.

(a) Each person desiring to import a biological product shall make written application to Veterinary Services for a permit. Blank forms of application shall be furnished upon request.

(b) The application shall specify the type of permit required, the port of entry at which the product shall be cleared through Customs, the estimated quantity involved, and the anticipated date on which the importation shall be made.

§ 104.4 Products for research and evaluation.

(a) An application for a U.S. Veterinary Biological Product Permit to import a biological product for Research and Evaluation shall be accompanied by a brief description of such product, methods of propagating antigens including composition of medium, species of animals or cell cultures involved, degree of inactivation or attenuation,

recommendations for use, and the proposed plan of evaluation.

(b) A permit to import a biological product for Research and Evaluation shall not be issued unless scientific capabilities of the investigator are determined to be adequate to safeguard domestic animals and protect public health, interest, or safety from any deleterious effects which might result from such product. Special restrictions shall be specified as part of the permit when such restrictions are deemed necessary or advisable by the Deputy Administrator.

(c) A biological product shall not be imported for Research and Evaluation which is not packaged and labeled in accordance with § 112.9 of this subchapter.

(d) When a licensed product has been exported from the United States, a permit may be issued to the producer for a small quantity of such product for in vitro Research and Evaluation tests; *Provided*, That, the importation of such product will not endanger the livestock or poultry of this country.

§ 104.5 Products for distribution and sale.

An application for a U.S. Veterinary Biological Product Permit to import a biological product for Distribution and Sale shall be accompanied by supporting material necessary to satisfy the requirements provided in this section.

(a) A permit shall not be issued unless the conditions under which the biological product is to be prepared or the methods to be used are such as to reasonably insure that the product is pure, safe, potent, and efficacious.

(1) Three copies of blueprints of the producing foreign establishment shall be submitted with the application unless satisfactory plans are on file with Veterinary Services from a previous application. The production facilities to be used for each product prepared at the establishment shall be designated.

(2) The manufacturer shall submit written authorization for properly accredited inspectors to inspect without previous notification, and at such times as may be demanded by the aforesaid inspectors, all parts of the establishment in which biological products shall be prepared, all processes of preparation, and all records relative to such preparation.

(3) The manufacturer shall furnish written assurance that a biological product to be imported for Distribution and Sale shall be prepared under the supervision of a person competent by education and experience to handle all matters pertaining to the preparation of such product and that each biological product shall be prepared in accordance with the regulations applicable to the product or in a manner acceptable to the Deputy Administrator so as to carry out the purposes of the Act.

(4) The methods to be used in the preparation of each biological product shall be written into an approved Outline of Production prepared in accordance with the applicable provisions of Part 114 of this subchapter. Three cop-

ies of such Outline of Production shall be submitted to Veterinary Services and be approved before the permit is issued.

(5) Data shall be furnished by the applicant which establishes that the product involved complies with the provisions of the Act and the regulations issued pursuant thereto. When deemed necessary to obtain required information, Veterinary Services may require that the product be tested under field conditions within or outside the United States as the occasion demands.

(b) The permittee shall furnish the following:

(1) Adequate facilities for storing all imported biological products. An inspection of such facilities shall be made by inspectors before a permit is issued and additional inspections shall be made at any time subsequent to the importation of the biological products if deemed necessary by the Deputy Administrator;

(2) Information regarding all claims to be made on labels and advertising matter used in connection with or related to the biological product to be imported;

(3) Mounted copies of final container labels, carton labels, and enclosures to be used with the imported product as provided in Part 112 of this subchapter; and

(4) Samples of each serial from each shipment of biological products imported or offered for importation. Such samples shall be collected, examined, and tested in a manner specified by the Deputy Administrator. The biological products being sampled shall not be further distributed by the permittee until released by Veterinary Services.

§ 104.6 Products for transit shipment only.

An application for a permit for Transit Shipment Only shall be required when a biological product is being shipped from one foreign country to another foreign country by way of the United States. The shipment shall move under a permit subject to the following restrictions:

(a) The shipment shall be confined to the carrier at all times when such shipment is to transit the United States on the same carrier on which it arrived. If the shipment is to be transferred to a carrier other than the one on which it shall arrive into the United States, a schedule of arrival and departure of each shipment shall be furnished by the permittee to Veterinary Services prior to arrival in the United States.

(b) The permittee shall be responsible to Veterinary Services for handling, storing, and forwarding of the biological product. Veterinary Services shall be notified of all shipments received and forwarded by the permittee and an accurate accounting shall be made.

§ 104.7 Product permit.

(a) A permit shall be numbered, shall be dated, and shall be in the following form:

U.S. VETERINARY BIOLOGICAL PRODUCT PERMIT
No. _____
RESEARCH AND EVALUATION OR DISTRIBUTION
AND SALE
OR
TRANSIT SHIPMENT ONLY

(Insert One)

Issued at Washington, D.C. on _____

Expires: _____

This permit is issued pursuant to the terms of the Act of Congress approved March 4, 1913 (37 Stat. 832), governing the preparation, sale, barter, exchange, shipment, and importation of veterinary biological products. So far as the jurisdiction of the U.S. Department of Agriculture is concerned, _____ is authorized to import _____ prepared by _____ into the United States through the port of _____

Importation shall be made subject to the following special conditions:

This permit may be revoked if the permittee violates or fails to comply with said Act, the regulations made thereunder, or the conditions specified herein.

Veterinary Services, Animal and
Plant Health Inspection Service.

(b) The purpose for which the product is imported shall be specified on the permit as for Research and Evaluation, Distribution and Sale, or Transit Shipment Only.

(c) A permit shall not be used after the date specified.

§ 104.8 Illegal shipments.

(a) Biological products which are presented for importation without a permit having been issued shall be returned to the country of origin at the expense of the importer or in lieu thereof, destroyed by Department personnel.

(b) Biological products for Distribution and Sale presented for importation under a permit and found to be worthless, contaminated, dangerous, or harmful shall, within a period of 30 days after such finding, be returned to the country of origin at the expense of the importer or in lieu thereof, destroyed by Department personnel; *Provided*, That such product shall not be returned to the country of origin while bearing a U.S. permit number on the label.

Interested persons are invited to submit written data, views, or arguments regarding the proposed regulations to Deputy Administrator, Veterinary Services, Animal and Plant Health Inspection Service, U.S. Department of Agriculture, Washington, D.C. 20250. All comments received on or before November 3, 1973, will be considered.

All written submissions made pursuant to this notice will be made available for public inspection at Biologics Staff, Veterinary Services, Animal and Plant Health Inspection Service, Room 828-A, Federal Center Building #1, Hyattsville, Maryland 20782, at such times and places and in a manner convenient to the public business (7 CFR 1.27(b)).

Done at Washington, D.C., this 30th day of August 1973.

G. H. WISE,
Acting Administrator, Animal and
Plant Health Inspection Service.

[FR Doc.73-18743 Filed 9-4-73;8:45 am]

DEPARTMENT OF
TRANSPORTATION

Coast Guard

[46 CFR Part 146]

[CGD 73-173 PH]

CORROSIVE MATERIALS

Dangerous Cargoes; Miscellaneous
Amendments

The Coast Guard is considering amending the dangerous cargo regulations in 46 CFR 146 pertaining to corrosive materials to:

1. Revise the packaging for the articles crotonaldehyde, diethylamine and propylene oxide.

2. Change the classification of caustic soda and phosphoric acid to corrosive materials.

3. Add a "grandfather" clause to the definition of corrosive materials.

4. Revise the definition of corrosive materials.

5. Add inside plastic receptacles to the corrosive solids exemption.

6. Revise the packaging authorized for corrosive liquids N.O.S. and corrosive solid N.O.S.

7. Revise the packages for certain corrosive liquids to authorize tank car and tank trucks and a specification 2U liner for use with a DOT-37M and 6D Steel overpacks.

Written comments.—Interested persons are invited to participate in this proposed rulemaking by submitting written data, views, or arguments to the Executive Secretary, Marine Safety Council, U.S. Coast Guard Headquarters (GCMC/82), Room 8234, 400 Seventh Street SW., Washington, D.C. 20590. (Telephone 202-426-1477). Each person submitting comments should include his name and address, identify the notice (CGD 73-173 PH), and give reasons for any recommendations. Comments received will be available for examination by interested persons in Room 8234, Department of Transportation, Nassif Building, 400 Seventh Street SW., Washington, D.C. Copies will be furnished upon payment of fees prescribed in 49 CFR 7.81.

Public hearing.—The Coast Guard will hold a hearing on September 25, 1973, at 0930 a.m. in Conference Room 8332, Department of Transportation, Nassif Building, 400 Seventh Street SW., Washington, D.C. Interested persons are invited to attend the hearing and present oral or written statements on this proposal. It is requested that anyone desiring to attend the hearing notify the Executive Secretary at least ten days in advance of the time needed for his presentation. Written summaries or

copies of oral presentations are encouraged.

Closing date for comments.—All communications received before October 5, 1973, will be evaluated before final action is taken on this proposal. The proposed regulations may be changed in the light of comments received.

By a separate document published at page 5946 of the February 12, 1973, issue of the FEDERAL REGISTER, the Hazardous Materials Regulations Board of the Department of Transportation amended Title 49 of the Code of Federal Regulations. Also the Board has proposed to amend the definition of corrosive materials in a document published at page 4270 of the February 12, 1973, issue of the FEDERAL REGISTER. For reasons fully stated in these documents the Board has proposed these changes.

The hazardous materials regulations of the Department of Transportation in Title 49 apply to shippers by water, air, and land, and to carriers by air and land. The adoption of this proposed amendment to Title 46 would make the proposal of the Hazardous Materials Regulations Board applicable to carriers by water.

The Coast Guard proposes to incorporate the substance of the Board's proposal in 46 CFR Part 146.

In consideration of the foregoing, it is proposed to amend Part 146 of Title 46 of the Code of Federal Regulations as follows:

§ 146.21-100 [Amended]

1. Striking out in § 146.21-100 "Table D—Classification: Inflammable liquids" for the articles "Crotonaldehyde" and

"propylene oxide" in column four the entries following the words "Outside Containers" and inserting in place thereof the following:

Carboys (DOT-1A) boxed, glass not over 5 gal cap.

Carboys (DOT-1D or 1EX (STC)) boxed, glass.

Wooden boxes, W1C (DOT-15A, 15B, 15C, 16A, 19A).

Fiberboard boxes, W1C (12B, 12P).

Metal barrels or drums (DOT-5, 5A, 5B, 5C, 5P, 17C (STC), 17E (STC)).

Steel barrels or drums (DOT-37P) NRC not over gal. cap.

Cylinders as prescribed for any compressed gas except acetylene.

Tank cars complying with DOT regulations (trainships only).

Tank trucks complying with DOT regulations (trainships and trailerships only).

2. Striking out in § 146.21-100 "Table D—Classification: Inflammable liquids" for the article "Diethylamine" the entries in columns 1, 2, and 3 and inserting in proper alphabetical sequence the following article in table D:

In column 1

Diethylamine

In column 2

Clear colorless liquid.
Flashpoint below 0° F
Miscible with water

In column 3

Red

In column 4

Carboys (DOT-1A) boxed glass not over 5 gal cap.

Carboys (DOT-1D, 1EX (STC)) boxed, glass

Wooden boxes, W1C (12B, 12P)

Metal barrels or drums:
(DOT-5, 5A, 5B, 5C, 5P, 17C (STC), 17E (STC))

(DOT-37P) NRC not over 5 gal cap.

Cylinders as prescribed for any compressed gas except acetylene

Tank cars complying with DOT regulations (trainships only)

Tank trucks complying with DOT regulations (Trainships and Trailerships only)

In columns 5, 6 and 7 not permitted

§ 146.04-5 [Amended]

3. Striking out in § 146.04-5 "List of explosives and other dangerous articles and combustible liquids" the entries in all three columns for the articles "Caustic soda, solid", "Phosphoric acid" and "Sodium hydroxide" and inserting in proper alphabetical sequence the following articles:

Article	Classed as—	Label required
Caustic soda, dry, solid, flake, bead, or granular.	Cor.....	Corrosive.
Phosphoric acid, liquid, or phosphoric acid solution.	Cor.....	Do.
Sodium hydroxide dry, solid, flake, bead or granular. See Caustic soda.	Cor.....	Do.

§ 146.27-100 [Amended]

4. Striking out in § 146.27-100 "Table K—Classification: Hazardous articles the entries in column one for Caustic soda, solid and Sodium hydroxide and in all seven columns for the article Phosphoric acid.

§ 146.23-100 [Amended]

5. Adding to § 146.23-100 in proper alphabetical sequence the following articles:

Descriptive name of article	Characteristic properties caution marking required	Label required	Required conditions for transportation			
			Cargo vessel	Passenger vessels	Ferry vessels, passenger of vehicle	Railroad car ferry, passenger of vehicle
Caustic soda dry, solid, flake, bead or granular. Sodium hydroxide dry, solid, flake, bead, or granular.	A solid in the form of white flakes, powder lumps. Keep dry. In contact with moisture gives off corrosive pungent vapor and evolves heat. Caustic to skin. May destroy organic materials.	Corrosive...	Stowage: "On deck under cover", "Tween decks", "Under deck". Outside containers: Metal, wooden, or fiberboard box or case. W1C. Metal drum. Fiber drum not exceeding 550 lb net weight or 55 gal. capacity must include a moisture barrier. Plastic drum or pail not over 80 lb net weight and not over 6 gal capacity. Bags complying with DOT regulations not over 110 lb net weight. Metal portable tank or closed bin not over 600 gal capacity and 7,000 lb gross weight. Fiberglass or rubber tank or closed bin not over 74 ft ³ capacity. Metal siftproof cargo tank or tankcar or hopper type or pneumatic vehicle.	Stowage: "On deck under cover", "Tween deck", "Under deck". Outside containers. Same containers as authorized for cargo vessels.	Ferry stowage: (AA). Outside containers. Same containers as authorized for cargo vessels.	Ferry stowage: (BB). Outside containers. Same containers as authorized for cargo vessels.
Phosphoric acid, liquid, or phosphoric acid solution.	Usually shipped in aqueous solutions varying from 50 percent to 88 percent. Odorless ordinarily, has no warning properties. May cause painful burns.	Corrosive...	Stowage: "On deck protected", "On deck under cover", "Tween deck", "Under deck away from heat". Outside containers: Carboys boxed glass, earthenware, clay, or stone (DOT-1A) not over 13 gal. capacity. Carboys, boxed, lead (DOT-1B) not over 13 gal. capacity. Carboys in kegs, glass, earthenware, clay, or stone (DOT-1C) not over 13 gal. capacity. Carboys, boxed, glass (DOT-1D) not over 6½ gal. capacity. Carboys in plywood drums, glass (DOT-1E) not over 7 gal. capacity. Carboys, boxed, glass, earthenware, clay, or stone (DOT-1X) STC, for export only, not over 6 gal. capacity.	Stowage: "On deck protected", "On deck under cover", "Tween decks", "Under deck away from heat". Outside containers: Same containers as authorized for cargo vessels.	Ferry Stowage: (AA). Outside containers: Same containers as authorized for cargo vessels.	Ferry Stowage: (BB). Outside containers: Same containers as authorized for cargo vessels.

Descriptive name of article	Characteristic properties caution marking required	Label required	Required conditions for transportation			
			Cargo vessel	Passenger vessels	Ferry vessels, passenger of vehicle	Railroad car, ferry, passenger of vehicle
			Carboys, lead, metal-jacketed (DOT-28) not over 15 gal capacity.			
			Steel barrels or drums (DOT-5A) not over 100 gal capacity.			
			Steel barrels or drums (DOT-5C) not over 100 gal capacity.			
			Metal drums (DOT-5M) not over 55 gal capacity.			
			Metal barrels or drums: (DOT-17H, 37A, 37B) STC, lined, not over 5 gal capacity. (DOT-37P) NRC, not over 5 gal capacity.			
			Metal drums, rubber-lined (DOT-5D) not over 110 gal capacity.			
			Metal drums, lead-lined (DOT-5H) not over 110 gal capacity.			
			Metal drums (DOT-17C, 17E, 17F) STC, not over 55 gal capacity.			
			Cylindrical steel overpack: (DOT-6D, 37M (NRC)), WIC DOT-2S, 2SL, or 2N, not over 55 gal capacity.			
			Rubber drums (DOT-43A) not over 30 gal capacity.			
			Wooden barrels or kegs: (DOT-10A) asphalt, paraffin, or wax lined not over 50 gal capacity. (DOT 11A, 11B) WIC, not over 200 lb net weight.			
			Wooden boxes: (DOT-15A, 15B, 15C, 16A, 19A) WIC, not over 200 lb gross weight. (DOT-16A) WIC polyethylene 2U, not over 200 lb gross weight. (DOT-16D) WIC (DOT-2T, 2TL, 2S, 2SL) not over 15 gal capacity.			
			Fiberboard boxes: (DOT-12A, 12B), WIC not over 65 lb gross weight. (DOT-12P) WIC (DOT-2U polyethylene) not over 5 gal capacity.			
			Plywood or wooden box or drum (DOT-15P, 22C) WIC (DOT-2T) not over 15 gal capacity.			
			Fiber drum (DOT-21P) WIC DOT-2S, 2SL, or 2U not over 30 gal capacity.			
			Tank trucks complying with DOT regulations (trainships and trailerships only).			
			Cylinder as prescribed for any compressed gas except acetylene.			
			Tank cars complying with DOT regulations (trainships only).			

6. Revising paragraph (a) (1) in the definition for corrosive materials (§ 146.23-1) and adding a note to the definition to read as follows:

§ 146.23-1 Definition of corrosive materials.¹

(a) * * *

(1) A material is considered to be destructive or to cause irreversible alteration in human skin tissue if when tested on the intact skin of the albino rabbit by the technique described in 21 CFR 191.11 the structure of the tissue at the site of contact is destroyed or changed irreversibly. For the purpose of these regulations the test is modified and described as follows:

(i) Corrosion to the human skin is evaluated by a patch-test technique on the intact skin of healthy albino rabbits, each weighing 2 to 3 kilograms. A minimum of six subjects must be used for this test. The back of each animal is clipped free of hair to provide at least two test sites, each being not less than 4 square inches in area.

(ii) Liquid test materials (0.5 milliliter) or solid or semisolid test materials (0.5 gram) are introduced under a 1.5 by 1.5 inch 12-ply gauze patch which is

¹ A corrosive material, not subject to the definition previously in effect in § 146.23-1 packaged before December 31, 1973, may be shipped and transported without being subject to any of the requirements in 46 CFR Part 146 until December 31, 1974. As of January 1, 1975, these materials may not be shipped or transported unless they are in compliance with 46 CFR 146.

secured in place by two 1/2 x 4 inch strips of adhesive tape in the form of an X.

(iii) The animals are immobilized in stocks and the trunk of each animal is loosely wrapped with an impervious material, such as a rubberized cloth, for an exposure period of 4 hours. (The impervious wrap should be applied in such a manner that the palm of the analyst's hand can be easily placed between the wrap and the animal's back.)

(iv) After 4 hours of exposure, the patches are removed and the resulting reactions are evaluated.

(v) Following this initial reading, all test sites are washed with an appropriate solvent to prevent further exposure.

(vi) Readings are again made at 24 and 48 hours after the initial application.

7. Revising the exemptions for corrosive solids contained in paragraph (a) (2) of § 146.23-30 as follows:

§ 146.23-30 Exemptions for corrosive solids.

(a) * * *

(2) Corrosive solids in inside earthenware, glass, plastic, or paper receptacles of not more than 5 pounds capacity each or in inside metal, rigid fiber, or composition cans or cartons, or rigid plastic receptacles of not more than 10 pounds capacity each, over-packed in metal, wooden or fiberboard outside containers not exceeding 25 pounds net weight each, are, unless otherwise provided in this part, exempt from specification packaging, marking, other than name of contents, and labelling requirements.

§ 146.23-100 [Amended]

8. Revise the entries in § 146.23-100 for the article corrosive liquids N.O.S. as follows:

(a) By striking out in column 4, 6 and 7 the words "Cylindrical steel overpack: (DOT-6D, 37M (NRC)), WIC DOT 2S or 2SL, not over 55 gal cap" and insert in place therefor the words "Cylindrical steel overpack: (DOT-6D, 37M (NRC)), WIC, DOT 2S, 2SL or 2U not over 55 gal. cap."

(b) By adding in columns 4, 6, and 7 directly after the words "Outside Containers" the following:

Cylinders as prescribed for any compressed gas except acetylene
 Tank cars complying with DOT regulations (trainships only)
 Tank trucks complying with DOT regulations (trailership and trainships only.)

9. Striking out in § 146.23-100 for the article corrosive solids N.O.S. in columns 4, 5, 6, and 7 the entries following the words "Outside containers" and insert in place thereof the following:

Metal, wooden or fiberboard boxes or cases WIC
 Metal drums
 Fiber drums not exceeding 550 lbs net wt or 55 gal. cap. must include a moisture barrier.
 Plastic drum or pail not over 80 lbs net wt and not over 6 gal. cap.
 Bag complying with DOT regulations not over 110 lbs net wt.
 Metal portable tank or closed bin of not over 660 gal. cap. and 7000 lbs gr. wt.
 Fiberglass or rubber tank or closed bin of not over 74 cubic ft. cap.

Metal soft proof cargo tank or tank car, or hopper-type or pneumatic bulk vehicle.

10. Revising § 146.23-100 as follows:

(a) By striking out the entries for cylindrical steel overpacks in column 4 for the articles "Acids, liquids N.O.S." and "Antimony pentachloride solution" and by adding to column 4 of the same two articles the following entries:

Cylindrical steel overpack:
(DOT-6D, 37M (NRC)), WIC DOT 28, 28L or 2U not over 55 gal. cap.
Cylinders are prescribed for any compressed gas except acetylene
Tank cars complying with DOT regulations (trainships only)
Tank trucks complying with DOT regulations (trainships and trailerships only)

(b) By striking out the entries for cylindrical steel overpacks in columns 4, 5, 6, and 7 for the articles Chromic acid solution; Compounds cleaning, liquid; Drugs, chemicals, medicines or cosmetics N.O.S.; Formic acid and Hydroiodic acid and by adding to columns 4, 5, 6, and 7 of the same 5 articles the following entries:

Cylindrical steel overpack:
(DOT-6D, 37M (NRC)), WIC DOT-28, 28L or 2U not over 55 gal. cap.
Cylinders as prescribed for any compressed gas except acetylene
Tank cars complying with DOT regulations (trainships only)
Tank trucks complying with DOT regulations (trainships and trailerships only)
(R.S. 4472 as amended; R.S. 4417a, as amended; Sec. 1, 19 Stat. 252, 49 Stat. 1889, sec. 6(b)(1), 80 Stat. 937; 46 U.S.C. 170, 391a, 49 U.S.C. 1655(b)(1); 49 CFR 1.46(b).)

W. F. REA, III,
Rear Admiral, U.S. Coast Guard,
Chief, Office of Merchant
Marine Safety.

August 23, 1973.

[FR Doc. 73-18529 Filed 9-4-73; 8:45 am]

Federal Aviation Administration

[14 CFR Part 39]

[Docket No. 73-80-60]

GRUMMAN G-159 AIRPLANES

Proposed Airworthiness Directive

The Federal Aviation Administration is considering amending Part 39 of the Federal Aviation Regulations by adding an airworthiness directive applicable to Grumman Model G-159 airplanes.

There has been extensive corrosion of a G-159 engine mount that if allowed to progress could have resulted in failure of the mount and possible loss of the aircraft. Since this condition is likely to exist or develop in other airplanes of the same type, the proposed airworthiness directive would require inspection and reinspection of the engine mounts.

The proposed airworthiness directive is related to Amendment 39-114 (30 FR 10155), AD 65-18-3 which requires an inspection of the support tubes of the engine mount assemblies of British Aircraft Corporation Vickers Viscount

Models 744, 745D and 810 series airplanes for corrosion. Vickers also manufactured the virtually identical engine mount for the Grumman Model G-159 airplanes; however, AD 65-18-3 was not applicable to these aircraft as the original corrosion protection scheme for the Model G-159 mount was deemed equivalent to that required by AD 65-18-3.

Interested persons are invited to participate in the making of the proposed rule by submitting such written data, views, or arguments as they may desire. Communications should identify the docket number and should be submitted in duplicate to the Federal Aviation Administration, Office of the Regional Counsel, P.O. Box 20636, Atlanta, Georgia 30320. All communications received on or before October 1, 1973, will be considered by the Administrator before taking action upon the proposed rule.

The proposals contained in this notice may be changed in the light of comments received. All comments will be available, both before and after the closing date for comments in the Rules Docket for examination by interested persons.

The amendment is proposed under the authority of sections 313(a), 601 and 603 of the Federal Aviation Act of 1958 (49 U.S.C. 1354(a), 1421, 1423) and of section 6(c) of the Department of Transportation Act (49 U.S.C. 1655(c)).

In consideration of the foregoing, it is proposed to amend § 39.13 of Part 39 of the Federal Aviation Regulations by adding the following new airworthiness directive:

GRUMMAN AMERICAN AVIATION CORPORATION (GAAC); Applies to all Grumman Model G-159 airplanes certificated in all categories.

Compliance required as indicated.

To detect and prevent corrosion of the bore surfaces of the support tubes of the engine mount assemblies, left and right, Vickers drawing number 81037, sheet 29, accomplish the following:

(a) Engine mount inspection and reinspection categories are established as follows:

(1) Engine mount has not been inspected for corrosion or reprotected since manufactured.

(2) Engine mount has not been inspected for corrosion, but has been reprotected in accordance with Grumman Aircraft Engineering Corporation (GAEC) Customer Bulletin (CB) Number 182 or an FAA approved equivalent.

(3) Engine mount has been inspected for corrosion by X-ray or an FAA approved equivalent and reprotected in accordance with GAEC, CB Number 182 or an FAA approved equivalent, prior to September 1966.

(4) Engine mount has been inspected for corrosion by X-ray or an FAA approved equivalent and reprotected in accordance with GAEC, CB Number 182 or an FAA approved equivalent subsequent to September 1966.

(b) For categories (a) (1), (a) (2), and (a) (3) above, within 60 days from the effective date of this AD, comply with paragraph (d). Engine mounts inspected in accordance with paragraph (d) (3), found free of corrosion, and reprotected, must be reinspected and reprotected in accordance with paragraph (d) (3) at intervals not to exceed seven (7) years. The repetitive inspection may be discontinued when paragraph (d) (1) or (d) (2) is complied with.

(c) For category (a) (4) above, comply with paragraph (e) within seven (7) years from the date of initial inspection and reinspection.

(d) (1) Install a new engine mount which has been protected in accordance with GAAC CB Number 241, Addendum No. 1 or an FAA approved equivalent, or

(2) Overhaul the engine mount in accordance with GAAC CB Number 241, Addendum No. 2 and reinspect in accordance with Addendum No. 1 or FAA approved equivalents, or

(3) Inspect the engine mount for corrosion in accordance with GAAC CB Number 241, Addendum No. 3, and reinspect in accordance with Addendum No. 1 or FAA approved equivalents.

(e) (1) Install a new engine mount which has been protected in accordance with GAAC CB Number 241, Addendum No. 1, or an FAA approved equivalent, or

(2) Overhaul the engine mount in accordance with GAAC CB Number 241, Addendum No. 2, and protect in accordance with Addendum No. 1, or FAA approved equivalents.

(f) If during the course of any inspection corrosion is discovered, comply with paragraph (e) before further flight.

(g) New or overhauled engine mounts which have been protected in accordance with GAAC CB Number 241, Addendum No. 1, or an equivalent, require no further action.

Issued in East Point, Georgia, on August 14, 1973.

DUANE W. FREER,
Acting Director,
Southern Region.

[FR Doc. 73-18699 Filed 9-4-73; 8:45 am]

Federal Aviation Administration

[14 CFR Parts 61 and 121]

[Docket No. 10453; Notice No. 73-23]

FLIGHT TRAINING AND FLIGHT CHECKING

Proposed Requirements

The Federal Aviation Administration is considering amending Parts 61 and 121 of the Federal Aviation Regulations to change certain flight training and flight checking requirements prescribed by those parts; to clarify certain requirements of Subpart N of Part 121 with respect to the requirement for FAA-approved check airmen used in training programs under Part 121; and to amend the proficiency check requirements of Subpart O to permit the entire proficiency check to be conducted in an approved visual simulator if the pilot being checked accomplishes two actual landings in the appropriate airplane, and if the next required proficiency check is conducted in the same manner or in accordance with Appendix F of Part 121.

Interested persons are invited to participate in the making of the proposed rule by submitting such written data, views, or arguments as they may desire. Communications should identify the regulatory docket or notice number and be submitted in duplicate to: Federal Aviation Administration, Office of the General Counsel, Attention: Rules Docket, AGC-24, 800 Independence Avenue SW., Washington, D.C. 20591. All com-

munications received on or before December 6, 1973, will be considered by the Administrator before taking action on the proposed rule. The proposals contained in this notice may be changed in the light of comments received. All comments submitted will be available, both before and after the closing date for comments in the Rules Docket, for examination by interested persons.

In response to a number of petitions for rulemaking and recommendations received from the Air Transport Association of America (ATA), Western Airlines (WAL), American Airlines (AAL), and United Airlines (UAL), and pursuant to a continuing review by FAA of flight training and checking, and type rating programs, the FAA has decided to issue this NPRM which proposes changes to those programs that would permit more extensive use of flight simulators and training devices and would eliminate or clarify certain other requirements.

Insofar as the proposals contained in this notice are responsive to amendments petitioned for by ATA on May 13, 1971, and June 16, 1972, by WAL on April 21, 1971, by AAL on October 26, 1970, by UAL on May 6, 1971, and June 8, 1971, this notice should be considered as a partial grant of the rule making petitioned for. Changes or amendments recommended by the petitioners which are not included in this notice continue to be studied and will be treated further at a later time by rule making or otherwise.

No attempt has been made in this notice to identify those changes recommended by individual petitioners, or those which the FAA proposes on its own initiative. All of the changes proposed herein are calculated to make training and checking programs more efficient and more effective through selectively increased utilization of simulators and training devices.

The FAA has previously indicated its awareness of the rapidly developing field of simulator technology. Amendment 121-55 (35 FR 84, January 3, 1970), effective on February 2, 1970, which amended Part 61 and Part 121 training programs, stated that the FAA would continue to explore possibilities for translating that new technology into regulations which provide for the safest and most effective training programs possible. Recent operating experience and conclusions drawn from FAA surveillance of training and check programs support the validity of that policy, and the proposals contained in this notice are made in furtherance of that policy.

Pursuant to an exemption from the requirements of § 121.424(b) and paragraph II(d) of Appendix E to Part 121 (Exemption No. 1318, issued May 14, 1971, and Exemption No. 1318B, issued December 10, 1971), issued in response to an ATA petition (on behalf of American, Delta, Eastern, Ozark, Pan American, Piedmont, Trans World, and United Airlines), initial, upgrade, and transition flight training on takeoffs with a simulated failure of the most critical powerplant (after V₁ and before V₂) was conducted by these air carriers, with exten-

sive use of visual and nonvisual simulators. This test training program was completed on May 20, 1972, and was conducted in an attempt to validate the theory that a satisfactory transfer of learning from the simulator to the airplane occurred when training in the "Engine-out" maneuver was conducted in a visual or nonvisual simulator.

The training program and study was conducted subject to certain conditions and limitations, as follows: (1) Each pilot trained under the exemption received V₁ engine-out training to proficiency in a visual simulator, a nonvisual simulator, or an airplane at altitude; (2) each pilot performed a minimum of one V₁ engine-out maneuver in the airplane during a PIC type rating flight test or second in command qualification flight check; (3) if a pilot's first V₁ engine-out maneuver was unsatisfactory, it was counted as a failure for purposes of the test program (unless not the result of gross error and subject to retesting in the maneuver later in the flight test); if a second engine-out maneuver was performed unsatisfactorily, the pilot was issued a Notice of Disapproval of Application (FAA Form 8060-5) for an ATR or type rating; (4) pilots whose performance of the engine-out maneuver was unsatisfactory during the flight test in the airplane were required to be retrained in accordance with the certificate holders' approved training program; (5) the acceptable level of performance was that level applicable to the conduct of maneuvers required by Appendix A to Part 61; (6) data collection and compilation was made in a form and manner satisfactory to the Administrator.

Guidelines for performance evaluation by Airmen Certification Inspectors were issued (FAA Order 8430.9, June 18, 1971).

Data on 1,098 pilots trained and checked during the program was compiled. Of that number 715 (361 PIC's and 354 SIC's) were trained in the visual simulator, 376 (144 PIC's and 232 SIC's) were trained in the non-visual simulator, and seven were trained in the airplane at altitude. Flight checking resulted in 54 failures with an overall failure rate of 4.9 percent, which the FAA considers to be an acceptable value validating the "transfer of learning" theory and supporting the changes proposed herein permitting more extensive use of the visual simulator and non-visual simulator. The program results indicate that training on the engine-out maneuver can be successfully conducted in either the visual or non-visual simulator. However, since a higher failure rate of 7.8 percent was indicated for 204 pilots transitioning to airplanes with engines mounted in dissimilar positions (i.e., fuselage-mounted to wing-mounted), and for initial training (i.e., prop to jet), and because there is some degree of difficulty of assessing pilot performance of this VFR maneuver in a non-visual simulator, it is felt that training and checking for this maneuver, with certain specified exceptions, ought to be conducted in a visual simulator.

A clarifying change to § 121.401 of Part 121 is proposed to make it clear that the check airmen required to be provided for a training program must be "approved" check airmen.

It is proposed to amend § 121.441 to permit the entire proficiency check, other than the initial second-in-command proficiency check, to be conducted in an approved visual simulator if the pilot being checked accomplishes at least two landings in the appropriate airplane during a line check or other flight check conducted by a pilot check airman. If a pilot proficiency check is conducted in accordance with this provision, the next required proficiency check would have to be conducted in the same manner, or in accordance with the various and specific requirements of Appendix F of Part 121 and substitution of a course of training in an airplane simulator under § 121.409 would not be permitted. It is anticipated that this provision would afford substantial efficiencies and advantages in simulator use and in airplane utilization if line checks are conducted with the same frequency as required proficiency checks. However, the two required landings could be accomplished on a check flight other than a line check, at the option of the certificate holder.

Appendix A of Part 61 (Practical Test Requirements for Airline Transport Pilot Certificates and Associated Class and Type Ratings), and Appendices E (Flight Training Requirements) and F (Proficiency Check Requirements) of Part 121, would be changed as follows:

APPENDIX A TO PART 61

Paragraph I(a). Oral equipment examination may be waived by person conducting check if the applicant has satisfactorily completed, within the preceding 60 days, a Part 121 approved training program that includes training in a cockpit procedural trainer or simulator.

Par. II(d). For additional type rating in an airplane group with engines mounted in similar positions or from wing-mounted engines to aft fuselage-mounted engines the takeoff with failure of the most critical power plant may be performed in a nonvisual simulator.

Par. III(c)(2). Performance of the manually controlled ILS approach would be permitted in a visual simulator in lieu of inflight. The person conducting the check may require the maneuver to be performed inflight.

Par. III(d). The circling approach maneuver would not be required for a pilot employed by a certificate holder subject to the operating rules of Part 121 if the certificate holder's manual prohibits a circling approach to be conducted in weather conditions below 1,000—3 (ceiling and visibility).

Par. V(b). The landing in sequence from an ILS approach would be permitted in a visual simulator in lieu of inflight, and where a simulator approved for the landing maneuver out of an ILS approach is used, the approach may be continued through the landing, and credit given for one of the three landings

required by Section V. The person conducting the check may require the maneuver to be performed in flight.

Par. V(d). The maneuver to a landing with simulated powerplant failure would be permitted in a visual simulator for all airplanes (presently permitted only in 3-engine airplanes). Landing with simulated failure of the most critical powerplant would be required in flight if the applicant performs the simulated powerplant landing maneuver in a visual simulator. The person conducting the check may require the maneuver to be performed in flight.

Par. V(e). The circling approach maneuver would not be required for a pilot employed by a certificate holder subject to the operating rules of Part 121 if the certificate holder's manual prohibits a circling approach in weather conditions below 1,000—3 (ceiling and visibility).

Par. V(g). The zero-flap visual approach would not be required if the Administrator has determined that the probability of flap extension failure on a specific airplane type is extremely remote due to system design. In making this determination, the Administrator determines whether checking on slats-only and partial-flap approaches is necessary.

APPENDIX E TO PART 121

Par. II(d). Takeoffs with a simulated failure of the most critical powerplant would be permitted to be accomplished in a visual simulator in place of the present requirement that they be performed in flight. For transition training in an airplane group with engines mounted in similar positions, or from wing-mounted to aft fuselage-mounted engines, the maneuver could be performed in a nonvisual simulator.

Par. II(e). Rejected takeoffs to be accomplished during a normal takeoff run would be permitted in a visual simulator in lieu of inflight.

Par. III(a), (b), (e), (f)(10) and (11). Flight maneuvers and procedures under these paragraphs could all be accomplished in a nonvisual simulator.

Par. III(1)(2). Transition and upgrade training in ILS instrument approaches would be permitted in a visual simulator in lieu of inflight.

Par. III(m)(1). All training in non-precision approaches would be permitted in a training device in lieu of the present requirement for such training in a visual simulator.

Par. III(m)(2). The additional non-precision instrument approach and missed approach required by this paragraph would be performed in a visual simulator.

Par. III(n). Transition and upgrade

training in circling approaches would be permitted in a visual simulator in lieu of the present in flight requirement. In addition, training in the circling approach maneuver would not be required for a second-in-command if the certificate holder's manual prohibits the SIC from performing a circling approach in operations under this Part.

Par. III(o). Transition and upgrade training in zero-flap approaches would be permitted in a visual simulator in lieu of the present inflight requirement. Training in the zero-flap maneuver would not be required if the Administrator has determined that the probability of flap extension failure on that type airplane is extremely remote due to system design. In making this determination, the Administrator determines whether training on slats-only and partial-flap approaches is necessary.

Par. III(p)(1). Transition and upgrade training in missed approaches from ILS approaches would be permitted in the visual simulator in lieu of the present inflight requirement.

Par. III(p)(2) and (3). All training in other missed approaches and missed approaches that include a complete approved missed approach procedure would be permitted in a training device in lieu of the present visual simulator requirement.

Par. III(p)(4). Transition and upgrade training in missed approaches that include a powerplant failure would be permitted in a visual simulator in lieu of the present inflight requirement.

Par. IV(c). Transition and upgrade training for landing in sequence from an ILS instrument approach would be permitted in a visual simulator in lieu of the present inflight requirement.

Par. IV(e). Transition and upgrade training in maneuvering to a landing with simulated powerplant failure in all airplanes would be permitted in a visual simulator in lieu of the present inflight requirement.

Par. IV(f). Transition and upgrade training for landing under simulated circling approach conditions would be permitted in a visual simulator in lieu of the present inflight requirement.

Par. IV(g). Transition and upgrade training in rejected landings would be permitted in a visual simulator in lieu of the present inflight requirement.

Par. IV(h). Transition and upgrade training in zero-flap landings would be permitted in a visual simulator in lieu of the present inflight requirement.

Par. IV(i). Initial, transition, and upgrade training in manual reversion would be permitted in a visual simulator in lieu of the present inflight requirement. For transition training in landings, the night

landing requirement may be met during the operating experience required by § 121.434 of this Part by performing a normal landing when a check pilot serving as pilot-in-command is occupying a pilot station.

APPENDIX F TO PART 121

Par. II(d). In an airplane group with aft fuselage-mounted engines, the take-off maneuver with failure of the most critical powerplant would be permitted in a nonvisual simulator in lieu of a visual simulator.

Par. III(d). The circling approach maneuver would not be required for a second-in-command if the certificate holder's manual prohibits a second-in-command from performing a circling approach in operations under Part 121.

Par. III(e). The symbols "B*" and "P*" would be deleted from the "In-flight" column (as superfluous), and the symbol associated with III(e)(1) in the "Visual Simulator" column changed to "B*." At least one missed approach would be required to be performed in

Par. V(d). The maneuver to a landing with simulated power plant failure would be permitted in a visual simulator for all airplanes (presently permitted only in 3-engine airplanes). Landing with simulated failure of the most critical power plant would be required in flight, if the pilot performs the simulated power plant landing maneuver in a visual simulator. For other than the pilot-in-command, the maneuver may be performed with a simulated loss of power of the most critical power plant only.

These amendments are proposed under the authority of sections 313(a), 601, 602, 604, and 607 of the Federal Aviation Act of 1958 (49 U.S.C. 1354(a), 1421, 1422, 1424, and 1427), and section 6(c) of the Department of Transportation Act (49 U.S.C. 1655(c)).

In consideration of the foregoing, it is proposed to amend Parts 61 and 121 of the Federal Aviation Regulations as set forth below.

Issued in Washington, D.C., on August 24, 1973.

C. R. MELUGIN, Jr.,
Acting Director,
Flight Standards Service.

1. It is proposed to amend paragraphs I(a), II(d), III(c), III(d), V(b), V(d), V(e), and V(g) of Appendix A of Part 61 to read as follows:

APPENDIX A

PRACTICAL TEST REQUIREMENTS FOR AIRLINE
TRANSPORT CERTIFICATES AND ASSOCIATED
CLASS AND TYPE RATINGS

• • • • •

Maneuver/procedures	Required in airplanes		Permitted				
	Simulated instrument conditions	Inflight	Visual simulator	Nonvisual simulator	Training device	Waiver Provisions of § 61.147(c)	
<p>I. Preflight.</p> <p>* (a) Equipment examination (oral). As part of the practical test, the equipment examination must be closely coordinated with, and related to, the flight maneuvers portion, but may not be given during the flight maneuvers portion. Notwithstanding § 61.21, the equipment examination may be given to an applicant who has completed a ground school that is part of an approved training program under Part 121 of this chapter for the airplane type involved and who is recommended by his instructor. The equipment examination may be waived by the person conducting the check if the applicant has satisfactorily completed, within the preceding 60 days, a Part 121 approved training program that includes training in a cockpit procedural trainer or simulator. The equipment examination must be repeated if the flight maneuvers portion is not satisfactorily completed within 60 days. The equipment examination must cover—</p> <p>• • • • •</p> <p>II. Takeoffs.</p> <p>• • • • •</p> <p>* (d) Powerplant failure. One takeoff with a simulated failure of the most critical powerplant—</p> <p>(1) At a point after V_1 and before V_2 that in the judgment of the person conducting the check is appropriate to the airplane type under the prevailing conditions; or</p> <p>(2) At a point as close as possible after V_1 when V_1 and V_2 or V_1 and V_R are identical; or</p> <p>(3) At the appropriate speed for non-transport category airplanes.</p> <p>For additional type rating in an airplane group with engines mounted in similar positions or from wing mounted engines to aft fuselage-mounted engines this maneuver may be performed in a non-visual simulator.</p> <p>• • • • •</p> <p>III. Instrument Procedures.</p> <p>• • • • •</p> <p>(c) • • • • •</p> <p>#(2) At least one manually controlled ILS approach with a simulated failure of one powerplant. The simulated failure should occur before initiating the final approach course and must continue to touchdown or through the missed approach procedure.</p> <p>• • • • •</p> <p>(d) • • • • •</p> <p>(1) • • • • •</p> <p>(2) • • • • •</p> <p>(3) • • • • •</p> <p>When the maneuver is performed in an airplane, it may be waived as provided in § 61.147(c) if local conditions beyond the control of the pilot prohibit the maneuver or prevent it from being performed as required.</p> <p>The circling approach maneuver is not required for a pilot employed by a certificate holder subject to the operating rules of Part 121 of this chapter, if the certificate holder's manual prohibits a circling approach in weather conditions below 1000-3 (ceiling and visibility).</p> <p>• • • • •</p> <p>V. Landings and Approaches to Landings.</p> <p>• • • • •</p> <p>#(b) Landing in sequence from an ILS instrument approach except that if circumstances beyond the control of the pilot prevent an actual landing, the person conducting the check may ac-</p>					X	X*	
			X				
		X		X			
							X*

Maneuver/procedures	Required in airplane		Permitted			
	Simulated instrument conditions	Inflight	Visual simulator	Nonvisual simulator	Training device	Waiver provisions of § 61.157 (c)
cept an approach to a point where in his judgment a landing to a full stop could have been made. In addition, where a simulator approved for the landing maneuver out of an ILS approach is used, the approach may be continued through the landing and credit given for one of the three landings required by this section.						
<p>• • • • •</p> <p>#(d) Maneuvering to a landing with simulated powerplant failure, as follows:</p> <p>(1) In the case of 3-engine airplanes, maneuvering to a landing with an approved procedure that approximates the loss of two powerplants (center and one outboard engine); or</p> <p>(2) In the case of other multiengine airplanes, maneuvering to a landing with a simulated failure of 50 percent of available powerplants, with the simulated loss of power on one side of the airplane.</p> <p>If an applicant performs this maneuver in a visual simulator, he must, in addition maneuver inflight to a landing with a simulated failure of the most critical powerplant.</p> <p>* (e) Except as provided in paragraph (f), landing under simulated circling approach conditions, except that if circumstances beyond the control of the pilot prevent a landing, the person conducting the check may accept an approach to a point where in his judgment a landing to a full stop could have been made.</p> <p>The circling approach maneuver is not required for a pilot employed by a certificate holder subject to the operating rules of Part 121 of this chapter, if the certificate holder's manual prohibits a circling approach in weather conditions below 1000-3 (ceiling and visibility).</p> <p>• • • • •</p> <p>#(e) A zero-flap visual approach to a point where, in the judgment of person conducting the check, a landing to a full stop on the appropriate runway could be made. This maneuver is not required for a particular airplane type if the Administrator has determined that the probability of flap extension failure on that type is extremely remote due to system design. In making this determination, the Administrator determines whether checking on slats only and partial flap approaches is necessary.</p> <p>• • • • •</p>			X*			
			X*			
			X*			

2. By amending § 121.401 (a) (4) to read as follows:

§ 121.401 Training program: General.

(a) * * *

(4) Provide enough flight instructors, simulator instructors, and approved check airmen to conduct required flight training and flight checks, and simulator training courses permitted under this Part.

• • • • •

3. By amending § 121.441 by adding a new flush paragraph following paragraph (e) to read as follows:

§ 121.441 Proficiency checks.

(e) * * *

However, the entire proficiency check (other than the initial second-in-command proficiency check) required by this section may be conducted in an approved visual simulator if the pilot being

checked accomplishes at least two landings in the appropriate airplane during a line check or other check conducted by a pilot check airman. If a pilot proficiency check is conducted in accordance with this paragraph, the next required proficiency check for that pilot must be conducted in the same manner, or in accordance with Appendix F of this part, and a course of training in an airplane simulator under § 121.409 may not be substituted therefor.

4. By amending paragraphs II(d); II(e); III(a), (b), (e), and (f) (10) and (11); III(l); III(m); III(n); III(o); III(p) (1); III(p) (2); III(p) (3); III(p) (4); IV(c); IV(e); IV(f); IV(g); IV(h); IV(i); and the final flush paragraph following paragraph IV(i) of Appendix E to Part 121 to read as follows:

APPENDIX E

FLIGHT TRAINING REQUIREMENTS

• • • • •

Maneuvers/procedures	Initial tr.					Transition tr.					Upgrade tr.				
	A/P		Simu.			A/P		Simu.			A/P		Simu.		
	Inflight	Static	Visual simulator	Nonvisual simulator	Training device	Inflight	Static	Visual simulator	Nonvisual simulator	Training device	Inflight	Static	Visual simulator	Nonvisual simulator	Training device
APPENDIX E															
II. Takeoffs:															
(d) Takeoffs with a simulated failure of the most critical powerplant—															
(1) At a point after V ₁ and before V ₂ that in the judgment of the person conducting the training is appropriate to the airplane type under the prevailing conditions; or			B					AT						BU	
(2) At a point as close as possible after V ₁ when V ₁ and V ₂ or V ₁ and V _r are identical; or															
(3) At the appropriate speed for nontransport category airplanes.															
For transition training in an airplane group with engines mounted in similar positions, or from wing-mounted engines to aft fuselage mounted engines, the maneuver may be performed in a nonvisual simulator.															
(e) Rejected takeoffs accomplished during a normal takeoff run after reaching a reasonable speed determined by giving due consideration to aircraft characteristics, runway length, surface conditions, wind direction and velocity, brake heat energy, and any other pertinent factors that may adversely affect safety of the airplane.				B				AT							BU
Training in at least one of the above takeoffs must be accomplished at night.															
III. Flight Maneuvers and Procedures:															
(a) Turns with and without spoilers				B					AT						BU
(b) Tank and Mach buffet				B					AT						BU
(c)															
(d)															
(e) Runaway and jammed stabilizer				B					AT						BU
(f) Normal and abnormal or alternate operation of the following systems and procedures:															
(1)															
(2)															
(3)															
(4)															
(5)															
(6)															
(7)															
(8)															
(9)															
(10) Automatic or other approach aids				B					AT						BU
(11) Stall warning devices, stall avoidance devices, and stability augmentation devices.				B					AT						BU
(i) ILS instrument approaches that include the following:															
(1) Normal ILS approaches (manually controlled).	B														
(2) Manually controlled ILS approaches with a simulated failure of one powerplant which occurs before initiating the final approach course and continues to touch down or through the missed approach procedure.	B							AT							BU
(m) Instrument approaches and missed approaches other than ILS which include the following:															
(1) Nonprecision approaches that the trainee is likely to use.			B		B				AT		AT				BU
(2) In addition to subparagraph (1) of this paragraph, at least one other nonprecision approach and missed approach procedure that the trainee is likely to use.															B
(n) Circling approaches which include the following:	B														
(1)									AT						BU
(2)															
(3)															
Training in the circling approach maneuver is not required for a SIC if the certificate holder's manual prohibits the SIC from performing a circling approach in operations under this Part.															
(o) Zero-flap approaches. Training in this maneuver is not required for a particular airplane type if the Administrator has determined that the probability of flap extension failure on that type airplane is extremely remote due to system design. In making this determination, the Administrator determines whether training on slats only and partial flap approaches is necessary.	B								AT						BU
(p) Missed approaches which include the following:															
(1) Missed approaches from ILS approaches.	B								AT						BU
(2) Other missed approaches.															
(3) Missed approaches that include a complete approved missed approach procedure.						B					AT				B
(4) Missed approaches that include a powerplant failure.	B								AT						BU

Maneuvers/procedures	Initial tr.					Transition tr.					Upgrade tr.				
	A/P		Simu.			A/P		Simu.			A/P		Simu.		
	Inflight	Static	Visual simulator	Nonvisual simulator	Training device	Inflight	Static	Visual simulator	Nonvisual simulator	Training device	Inflight	Static	Visual simulator	Nonvisual simulator	Training device
IV. Landings and Approaches to Landings.....															
(c) Landing in sequence from and ILS instrument approach.....	B							AT					BU		
(d) * * *															
(e) Maneuvering to a landing with simulated powerplant failure, as follows:	P		S					AT					BU		
(1) Except as provided in subparagraph (3) of this paragraph, in the case of 3-engine airplanes, maneuvering to a landing with an approved procedure that approximates the loss of two powerplants (center and one out-board engine).	P		S					AT					BU		
(2) Except as provided in subparagraph (3) of this paragraph, in the case of other multiengine airplanes, maneuvering to a landing with a simulated failure of 50 percent of available powerplants, with the simulated loss of power on one side of the airplane.															
(3) Notwithstanding the requirements of subparagraphs (1) and (2) of this paragraph, flight crewmembers who satisfy those requirements in a visual simulator must also:															
(i) Maneuver at altitude inflight with an approved procedure that approximates the loss of two powerplants (center and one outboard for 3-engine airplanes); or with the simulated failure of 50 percent of available powerplants (other multiengine airplanes) with the simulated loss of power on one side of the airplane.															
(ii) Take inflight training in one-engine inoperative landings; and															
(iii) In the case of flight crewmembers other than the pilot in command, perform the maneuver with the simulated loss of power of the most critical powerplant only; and															
(iv) In the case of a second-in-command upgrading to a pilot-in-command and who has not previously performed the maneuvers required by this paragraph in flight, meet the requirements of this paragraph applicable to initial training for pilots-in-command.															
(f) Landing under simulated circling approach conditions.....	B							AT					BU		
(g) Rejected landings that include a normal missed approach procedure after the landing is rejected. For the purpose of this maneuver the landing should be rejected at approximately 50 feet and approximately over the runway threshold.	B							AT					BU		
(h) Zero-flap landings if the Administrator finds that maneuver appropriate for training in the airplane.	P							PP, PJ AT					PS		
(i) Manual reversion (if appropriate).....			B										BU		
Training in landings and approaches to landings must include the types and conditions provided in IV (a) through (i) but more than one type may be combined where appropriate.															
Training in one of the above landings must be accomplished at night. For transitioning pilots, this requirement may be met during the operating experience required under § 121.434 of this Part by performing a normal landing when a check pilot serving as pilot-in-command is occupying a pilot station.	B					AT							BU		

5. By amending paragraphs II(d), III(d), III(e), V(d)(1), and V(d)(2), and adding a new paragraph immediately following V(d)(2) of Appendix F to Part 121 to read as follows:

APPENDIX F
PROFICIENCY CHECK REQUIREMENTS

Maneuver/procedures	Required		Permitted			
	Simulated instrument conditions	Inflight	Visual simulator	Nonvisual simulator	Training device	Waiver provisions of § 121.441 (d)
II. Takeoffs.						
(d) Powerplant failure. One takeoff with a simulated failure of the most critical powerplant— (1) At a point after V ₁ and before V ₂ that in the judgment of the person conducting the check is appropriate to the airplane type under the prevailing conditions; or (2) At a point as close as possible after V ₁ when V ₁ and V ₂ or V ₁ and V ₂ are identical; or (3) At the appropriate speed for non-transport category airplanes. In an airplane group with aft fuselage-mounted engines this maneuver may be performed in a non-visual simulator.			B*			
III. Instrument Procedures.						
(d) * * * * (1) * * * * (2) * * * * (3) * * * * The circling approach maneuver is not required for a second-in-command if the certificate holder's manual prohibits a second-in-command from performing a circling approach in operations under this Part.						
(e) Missed approach. (1) Each pilot must perform at least one missed approach from an ILS approach. (2) Each pilot-in-command must perform at least one additional missed approach.			B*	P*		
(d) Maneuvering to a landing with simulated powerplant failure as follows: (1) In the case of 3-engine airplanes, maneuvering to a landing with an approved procedure that approximates the loss of two powerplants (center and one outboard engine); or (2) In the case of other multiengine airplanes, maneuvering to a landing with a simulated failure of 50 percent of available powerplants, with the simulated loss of power on one side of the airplane. Notwithstanding the requirements of subparagraphs (d) (1) and (2) of this paragraph, in a proficiency check for other than a pilot in command, the simulated loss of power may be only the most critical powerplant. However, if a pilot satisfies the requirements of subparagraphs (d) (1) or (2) of this paragraph in a visual simulator, he must, in addition, maneuver in flight to a landing with a simulated failure of the most critical powerplant.			B*	B*		

[FR Doc.73-18624 Filed 9-4-73;8:45 am]

Federal Aviation Administration

[14 CFR Part 71]

[Airspace Docket No. 73-SO-59]

TRANSITION AREA

Proposed Alteration

The Federal Aviation Administration is considering an amendment to Part 71 of the Federal Aviation Regulations that would alter the Charleston, S.C. transition area.

Interested persons may submit such written data, views or arguments as they may desire. Communications should be submitted in triplicate to the Federal Aviation Administration, Southern Region, Air Traffic Division, P.O. Box 20636, Atlanta, Ga. 30320. All communications received on or before October 5, 1973, will be considered before action is taken on the proposed amendment. No hearing

is contemplated at this time, but arrangements for informal conferences with Federal Aviation Administration officials may be made by contacting the Chief, Airspace and Procedures Branch. Any data, views, or arguments presented during such conferences must also be submitted in writing in accordance with this notice in order to become part of the record for consideration. The proposal contained in this notice may be changed in light of comments received.

The official docket will be available for examination by interested persons at the Federal Aviation Administration, Southern Region, Room 770, 3400 Whipple Street, East Point, Ga.

The Charleston transition area described in § 71.181 (38 FR 435) would be amended as follows:

"* * * long. 80°00'0" W.) * * *"
would be deleted and "* * * long. 80°-

00'00" W.); within 3 miles each side of the 280° bearing from Johns Island RBN (lat 32°42'09" N., long. 80°00'10" W.), extending from the 6.5 mile radius area to 8.5 miles west of the RBN * * * would be substituted therefor.

The proposed alteration is required to provide controlled airspace protection for IFR aircraft executing the proposed NDB RWY 9 Instrument Approach Procedure to Johns Island Airport, utilizing the Johns Island (private) Nondirectional Radio Beacon.

(Sec. 307(a), Federal Aviation Act of 1958 (49 U.S.C. 1348(a)); Sec. 6(c), Department of Transportation Act (49 U.S.C. 1655(c)).)

Issued in East Point, Ga., on August 24, 1973.

DUANE W. FREER,
Acting Director, Southern Region.

[FR Doc.73-18698 Filed 9-4-73;8:45 am]

Federal Highway Administration

[23 CFR Part 770]

AIR QUALITY GUIDELINES FOR USE IN FEDERAL-AID HIGHWAY PROGRAMS

Proposed Guidelines

Pursuant to the requirement in section 109(b) of the Federal-Aid Highway Act of 1970 (23 U.S.C. 109(j)) the Federal Highway Administration proposes to issue guidelines to assure that highways constructed pursuant to Title 23, United States Code, are consistent with any approved plan for the implementation of any ambient air quality standard for any air quality control region designated pursuant to the Clean Air Act, as amended (42 U.S.C. 1857, et seq.).

Also, pursuant to section 4332(2)(C), title 42, U.S.C., the Federal Highway Administration has prepared a draft environmental impact statement for the proposed air quality guidelines. Copies of the draft environmental impact statement may be obtained for review by writing to the Environmental Development Division, Office of Environmental Policy, Federal Highway Administration, Washington, D.C. 20590.

Interested persons may participate in the proposed promulgation of air quality guidelines by submitting such written data, views, or arguments as they may desire. Comments may also be submitted on the draft environmental impact statement. Communications should be submitted to the above address before October 15, 1973. All such communications will be considered before action is taken on the proposed guidelines. Copies of all such submissions received will be available for examination at the Office of the Environmental Development Division, Federal Highway Administration, Room 3246, 400 7th Street SW., Washington, D.C.

This notice of proposed guidelines is issued under the authority of Section 6 of the Department of Transportation Act, 49 U.S.C. 1655, and the delegation of authority by the Secretary of Transportation at 49 CFR 1.48.

The guidelines proposed as Part 770, Subpart B of Title 23, Code of Federal Regulations, are set forth below.

Issued on August 30, 1973.

NORBERT T. TIEMANN,
Federal Highway Administrator.

Chapter 1 of Title 23, CFR, would be amended by adding a new part, "Part 770, Subpart B—Air Quality Guidelines" as follows:

PART 770

Subpart B—Air Quality Guidelines

Sec.	
770.200	Purpose.
770.201	Definitions for use in this memorandum.
770.202	Policy.
770.203	Application.
770.204	Procedure.

Authority: 23 U.S.C. 109(j), 23 U.S.C. 315, and 49 CFR 1.48(b).

§ 770.200 Purpose.

To promulgate air quality guidelines for use in planning and construction of proposed highway improvements constructed pursuant to United States Code, Title 23.

§ 770.201 Definitions for use in this memorandum.

(a) *Highway agency.*—The agency with the primary responsibility for initiating and implementing the planning, design, and construction of highways. For highway sections financed with Federal-aid highway funds, the highway agency will generally be the appropriate State highway department or State department of transportation.

(b) *Environmental Protection Agency (EPA).*—The Federal agency established pursuant to 5 U.S.C., App. Reorganization Plan of 1970, No. 3.

(c) *Environmental impact statement (EIS).*—A detailed statement prepared in response to 42 U.S.C., 4332 (section 102(2) (C) of the National Environmental Policy Act of 1969).

(d) *Urban Transportation Planning Process (3-C) Planning Process.*—The continuing, comprehensive and cooperative planning process established pursuant to 23 U.S.C., 134.

(e) *Policy Board (Policy Committee, Coordinating Committee, etc.).*—That group of local officials, individuals, or representatives of agencies or organizations which has been designated by the State to provide policy guidance and direction in the conduct of the urban transportation planning process in an urbanized area.

(f) *Urban transportation plans and programs.*—Proposed areawide plans and proposed capital improvement programs developed through the urban transportation planning process.

(g) *National Ambient Air Quality Standards.*—The National Ambient Air Quality Standards established pursuant to 42 U.S.C., 1857 (section 109 of the Clean Air Act of 1970).

(h) *Air quality control region.*—An interstate or intrastate area designated by the Administrator of EPA pursuant to

42 U.S.C. 1857 (section 107 of the Clean Air Act of 1970).

(i) *Highway Section.*—A highway development proposal of substantial length between logical termini (major crossroads, population centers, major traffic generators, or similar major highway control elements) as normally included in a single location study or multiyear highway improvement program.

(j) *Highway project.*—All or a portion of a highway section which would result in a specific construction contract.

(k) *Air pollution control agency.*—The State, local, or multi-State agency as defined by 42 U.S.C., 1857 (section 302(b) of the Clean Air Act of 1970).

(l) *State implementation plan (SIP).*—The plan required by 42 U.S.C., 1857 (section 110 of the Clean Air Act of 1970), to attain and maintain a national ambient air quality standard.

§ 770.202 Policy.

Highway agencies planning, constructing, and maintaining highways pursuant to 23 U.S.C., shall consult with appropriate local, State and Federal air pollution control agencies and assure that decisions on highways are consistent with approved State Implementation Plans and that adequate consideration is given to preservation and enhancement of air quality.

§ 770.203 Application.

(a) The continuing review procedure described in § 770.204a shall be a requirement for each transportation planning process established pursuant to 23 U.S.C., 134. The requirements set forth in § 770.204a shall initially be accomplished by April 1, 1974, and shall thereafter be reviewed as a part of subsequent annual certification actions.

(b) The procedures for consideration of air quality described in § 770.204b shall apply to the processing of proposed Federal-aid highway construction projects.

(c) The procedure for review of construction specifications described in § 770.204b shall be accomplished by April 1, 1974. The changes in specifications resulting from this procedure shall be reflected in all plan specification and estimate (PS&E) submissions received after July 1, 1974.

§ 770.204 Procedures.

Comprehensive planning for land use, air quality and transportation are interdependent. These planning activities should be closely coordinated in the conceptual stages and throughout the highway project development process. The highway agency shall follow the appropriate procedures outlined in paragraphs (a) through (c) of this section in order to assure that the planning and construction of highways are consistent with the State Implementation Plan for attainment and maintenance of air quality standards.

(a) *Urban transportation plans and programs.*—(1) To insure that land use and transportation planning conducted pursuant to 23 U.S.C. 134 and air quality

planning conducted pursuant to 42 U.S.C. 1857 and the plans resulting therefrom are coordinated, the responsible highway agency in cooperation with each 3C planning agency shall establish a continuing review procedure with the cognizant air pollution control agency to:

(i) Assess the consistency of the transportation plan and program with the approved State Implementation Plan;

(ii) Annually solicit comments from the cognizant air pollution control agency including its assessment of the consistency of the plan and program with the approved State Implementation Plan prior to plan approval by the policy board.

(iii) Identify and resolve differences with the cognizant air pollution control agency.

(2) The highway agency shall require the policy board to annually determine the consistency of the current transportation plan and program with the approved State Implementation Plan. The highway agency shall furnish FHWA a record of this determination along with any written comments solicited from the cognizant air pollution control agency and the policy boards' disposition of these comments.

(3) The Regional Federal Administrator, in consultation with the Regional Administrator of the Environmental Protection Agency, shall annually review the record on the determination of consistency of the transportation plan and program with the approved State Implementation Plan as specified in paragraph (2) above and shall assess the degree of coordination in the planning process between planning for transportation and air quality planning. Any deficiencies shall be cited to the highway agency. Significant deficiencies shall be considered grounds for withholding planning certification.

(b) *Highway projects.*—(1) The following procedures shall apply to highway sections for which an environmental impact statement (EIS) is circulated or a negative declaration is considered by the FHWA division engineer after October 15, 1973.

(i) The environmental analysis necessary to determine the need for an EIS should include an appropriate consideration of air quality.

(ii) The level of detail of the air quality analysis for the highway section shall be commensurate with the complexity of the highway proposal and with prevalent meteorological conditions. If implementation of the highway proposal is anticipated to have a significant air quality impact, comments on the consistency of the highway proposal with the approved State Implementation Plan shall be solicited from the cognizant air pollution control agency.

(iii) The draft EIS shall include an identification of the air quality impact of the proposal, a brief summary of the results of consultation with the cognizant air pollution control agency, comments

received from the cognizant air pollution control agency, and the highway agency's tentative finding on the consistency of each alternative under consideration with the approved State Implementation Plan.

(iv) The final EIS shall, as may be necessary, refine and update the information included in the draft EIS.

(v) The final EIS may be adopted by the FHWA only after a determination that the proposed highway improvement is consistent with the State Implementation Plan. The determination on consistency shall be made by the Regional Federal Highway Administrator. In making this determination the Regional Federal Highway Administrator shall consider the following:

(A) The comments received from the cognizant air pollution control agency resulting from the requirements of §§ 770.204a and 770.204b and those of the agency designated pursuant to 40 CFR 51.18 (38 FR 15834, June 18, 1973). Where issues raised by either agency have not been resolved by the highway agency or division engineer prior to submission of the EIS to the FHWA Regional Administrator, the Regional Federal Highway Administrator shall not make a positive determination of consistency without first consulting with the EPA Regional Administrator.

(B) The adequacy and the conclusions of the air quality analysis made as a part of the location study and summarized in the EIS.

(C) Comments received as part of the EIS procedure and the disposition of these comments.

(vi) For those highway improvements for which a negative declaration is prepared, the FHWA division engineer's concurrence in the document shall be evidence that he has determined that the proposal will have no significant air quality impacts.

(2) The following procedures shall apply to the consideration of air quality for those highway sections for which the draft EIS is (or was) circulated for comment, but for which a final EIS is not adopted by the FHWA Regional Administrator prior to October 15, 1973:

(i) Prior to the processing of final EIS, the highway agency, in consultation with the FHWA division engineer, shall review the draft EIS and make a written determination on the adequacy of the air quality discussion included in the draft EIS. If the determination is positive, the final EIS may be processed following procedures established in PPM 90-1. The adoption of the final EIS by the Regional Federal Administrator shall be evidence of his positive finding on the consistency of the proposal with the State Implementation Plan.

(ii) If the determination concludes that additional information and/or analysis are necessary, the draft EIS shall be revised accordingly. A copy of the revised draft EIS shall then be furnished to appropriate local, State or Fed-

eral agencies with expertise in air quality for review and comment. Thirty days should be allowed for comment by interested agencies.

(iii) Comments received shall be incorporated and addressed in the final EIS as required in PPM 90-1. Adoption of the final EIS by the Regional Federal Highway Administrator shall be evidence of his positive finding on the consistency of the proposal with the State Implementation Plan.

(3) The following procedures shall apply to those highway sections for which a final EIS is approved by the Regional Federal Highway Administrator before October 15, 1973, and for which authorization to proceed with grading and drainage work on the highway section are requested after January 1, 1974:

(i) Prior to requesting additional FHWA authorizations (except preliminary engineering), the highway agency, in consultation with the FHWA division engineer, shall review the final EIS and make a written determination on the adequacy of the discussion of air quality included in the final EIS. If the determination is positive, concurrence by the FHWA division engineer shall be evidence of his finding that the highway proposal is consistent with the State Implementation Plan.

(ii) If the determination concludes that additional information or analysis are necessary, a supplemental EIS shall be prepared and distributed for review and comment to appropriate local, State and Federal agencies with expertise in air quality. Thirty days shall be allowed for comment by interested agencies.

(iii) Comments received shall be processed following the procedures outlined in PPM 90-1. Adoption of the supplement to the final EIS by the Regional Federal Highway Administrator shall be evidence of his positive finding on the consistency of the highway proposal with the State Implementation Plan.

(c) *Construction of highways.*—(1) The highway agency shall review its current construction specifications to determine whether allowable construction procedures, or the use of specific equipment or materials are consistent with the State Implementation Plan. As a part of this review the highway agency shall send a copy of its construction specifications to the cognizant air pollution control agency for review and comment.

(2) Comments received from the cognizant air pollution control agency and revisions to the construction specifications resulting from reviews by both agencies shall be sent to FHWA for approval.

(3) A similar review procedure shall be followed whenever the highway agency determines that significant changes have been made in either the highway agency specifications affecting air quality or in the State Implementation Plan.

Effective date.—August 30, 1973.

[FR Doc. 73-18719 Filed 9-4-73; 8:45 am]

COST ACCOUNTING STANDARDS BOARD

[4 CFR Parts 331, 351, 400, 401, 402, 403, 404]

NEGOTIATED DEFENSE PRIME CONTRACTS AND SUBCONTRACTS

Miscellaneous Amendments

Parts 331, 351, 401, and 402, and portions of part 400 of the Cost Accounting Standards Board's Standards, rules and regulations have been required for use in negotiated defense prime contracts and subcontracts since October 1, 1972. Parts 403 and 404 of the Board's rules and regulations have been included in such contracts since July 1, 1973. The Board believes that minor changes to those regulations will clarify the understanding of all who use them. It therefore proposes to amend those parts as indicated below. None of the proposed amendments modifies the meaning and effect of the affected materials, and the Board does not believe that the amendments proposed, if finally adopted, make substantive changes in any of those issuances.

The Board, in publishing these proposed amendments for comment, intends to provide maximum public notice and opportunity for the public to participate in its deliberations. The Board notes, however, that since the proposed amendments do not modify its published rules, regulations and Cost Accounting Standards, but only clarify them, publication and promulgation as described in section 7191(A) of Public Law 91-379 are not required. The proposed changes are summarized in the following paragraphs.

Parts 331 and 351 are renumbered to facilitate insertion of any future amendments or modifications to those parts.

The contract clause at § 331.5 is modified to restate the fact that the benefits to contractors who have not been required to file a Disclosure Statement are equal to the benefits provided to contractors who have filed such a Statement. Those benefits are in fact already derived from section (a) (5) of the Contract Clause, but the proposed amendment of section (a) (4) of that Clause states this fact more clearly.

Parts 401, 402, 403, and 404, containing Cost Accounting Standards and Part 400, Definitions, are modified to make all definitions set out in these parts uniform between Part 400 and the individual Cost Accounting Standards and to follow the practice of defining phrases only in the singular. Nonetheless in determining the meaning of any Standard, words importing the singular shall extend to the plural and words importing the plural shall include the singular unless the context shows clearly that a more limited meaning was intended.

The Cost Accounting Standards Board solicits comment on the proposed amendments from any interested persons on any matter which will assist the Board in its consideration of the amendments. Interested persons should sub-

mit written data, advice and arguments concerning the proposed amendments to the Cost Accounting Standards Board, 441 G Street NW., Washington, D.C. 20548.

To be given consideration by the Board in its determination relative to final adoption of the proposed amendments, written comments must be made to arrive no later than October 8, 1973. All written comments made pursuant to this notice will be made available for public inspection at the Board's offices during regular business hours.

1. Changes in section numbering in Part 331 and Part 351. Also revision in wording of paragraph (a)4 of § 331.50 *Contract Clause*. Parts 331 and 351 of Title 4 of the Code of Federal Regulations would be revised to read as follows:

PART 331—CONTRACT COVERAGE

Sec.	
331.10	Purpose and scope.
331.20	Definitions.
331.30	Applicability, exemption, and waiver.
331.40	Solicitation notice.
331.50	Contract clause.
331.60	Post-award disclosure.
331.70	Interpretation.
331.80	Effective date.

AUTHORITY: Sec. 103, 84 Stat. 796 (50 U.S.C. App. 2168).

§ 331.10 Purpose and scope.

The regulations contained in this part are promulgated to implement the standards and the rules and regulations established by the Cost Accounting Standards Board pursuant to 50 U.S.C. App. 2168 (Public Law 91-379, August 15, 1970). The requirements set forth herein shall be binding upon all relevant Federal agencies and upon defense contractors and subcontractors.

§ 331.20 Definitions.

(a) A "relevant Federal agency" is any Federal agency making a national defense procurement and any agency whose responsibilities include review, approval, or other action affecting such a procurement.

(b) A "defense contractor" is any contractor entering into a contract with the United States for the production of material or the performance of services for the national defense.

(c) A "defense subcontractor" is any person other than the United States who contracts, at any tier, to perform any part of a defense contractor's contract.

(d) "National defense" is any program for military and atomic energy production or construction, military assistance to any foreign nations, stockpiling, space, and directly related activity.

(e) The definition of "established catalog or market prices of commercial items sold in substantial quantities to the general public" set out in the Armed Services Procurement regulation (32 CFR 3.807-1(b)), in effect at the date of the contract, shall be used.

(f) A "negotiated subcontract" is any subcontract except a firm fixed-price subcontract made by a contractor or subcontractor after receiving offers from at

least two firms not associated with each other or such contractor or subcontractor, providing (1) the solicitation to all competing firms is identical, (2) price is the only consideration in selecting the subcontractor from among the competing firms solicited, and (3) the lowest offer received in compliance with the solicitation from among those solicited is accepted.

(g) A "Disclosure Statement" is the Disclosure Statement required by Cost Accounting Standards Board regulation (Part 351 of this chapter).

§ 331.30 Applicability, exemption, and waiver.

(a) The head of each relevant Federal agency shall cause or require the clause set forth in § 331.50 captioned COST ACCOUNTING STANDARDS to be inserted in all negotiated defense contracts in excess of \$100,000, other than contracts entered into by the agency where the price is based on: (1) Established catalog or market prices of commercial items sold in substantial quantities to the general public, or (2) prices set by law or regulation. Additionally, all solicitations, likely to result in a contract in which the clause set forth in § 331.50 must be inserted, shall include the notice set forth in § 331.40 captioned DISCLOSURE STATEMENT—COST ACCOUNTING PRACTICES AND CERTIFICATION.

(b) The requirements of paragraph (a) of this section shall not be applicable to:

(1) Any contract made pursuant to a special method of procurement known as "Small Business Restricted Advertising";

(2) Any contract made with a small business pursuant to partial small business set-aside procedures; or

(3) Any contract entered into under authority of section 8(a) of the Small Business Act (15 U.S.C. 637(a)).

(4) Any contract made with a labor surplus area concern pursuant to procedures providing for a partial set-aside for such concern as set out in ASPR 1-804, 32 CFR 1.804; and FPR 1-1.804, 41 CFR 1-1.804.

(5) Any contract awarded to the Canadian Commercial Corp. in accordance with the terms of the agreement of July 27, 1956, as amended, between the Department of Defense Production (Canada) and the U.S. Departments of the Army, the Navy, the Air Force, and the Defense Supply Agency.

(6) Any contract awarded to Western Electric Co. for materials, supplies, or services which are standard items of the Bell System. This paragraph 6 expires on June 30, 1973.

(c) (1) Upon request of the Secretary of Defense, the Deputy Secretary of Defense, or the Assistant Secretary of Defense (Installation and Logistics), or outside the Department of Defense, of officials in equivalent positions, the Cost Accounting Standards Board may waive all or any part of the requirements of paragraph (a) of this section with respect to a contract or subcontract to be

performed within the United States, or a contract or subcontract to be performed outside the United States by a domestic concern. A domestic concern is an incorporated concern incorporated in the United States or an unincorporated concern having its principal place of business in the United States. (In the context of this subparagraph, "concern" refers to a prospective or actual contractor. Thus, a contract with a foreign subsidiary or foreign branch or business office of a U.S. corporation would not be a contract with a domestic concern. Conversely, a contract executed by a foreign salesman or agent on behalf of a domestic concern would nevertheless be a contract with a domestic concern since the basic contractual and legal responsibility resides with the domestic concern.) Any request for a waiver shall describe the proposed contract or subcontract for which waiver is sought and shall contain (i) an unequivocal statement that the proposed contractor or subcontractor refuses to accept a contract containing all or a specified part of the Cost Accounting Standards clause and the specific reason for that refusal, (ii) a statement whether the proposed contractor or subcontractor has accepted any prime contract or subcontract with any Federal department or agency containing the Cost Accounting Standards clause, (iii) the amount of the proposed award and the sum of all awards by the department or agency requesting the waiver to the proposed contractor or subcontractor in each of the preceding 3 years, (iv) a statement that no other source of the supplies or services being procured is available to satisfy the needs of the agency on a timely basis, (v) a statement of any alternative methods of fulfilling the project or program needs and the agency's reasons for rejecting such alternatives, (vi) a statement of the steps being taken by the procuring agency to establish other sources of supply for future procurements of the products or services for which a waiver is being requested, and (vii) any other information that may aid the Board in evaluating the requested waiver.

(2) Upon request of the Secretary of Defense, the Deputy Secretary of Defense, or the Assistant Secretary of Defense (Installation and Logistics), or outside the Department of Defense, of officials in equivalent positions, the Cost Accounting Standards Board may waive all or any part of the requirements of paragraph (a) of this section with respect to a proposed contract or subcontract to be performed outside the United States by a foreign government or a foreign concern. A foreign concern is a concern that is not a domestic concern, as defined in paragraph (c) (1) of this section. Any request for a waiver shall describe the proposed contract or subcontract for which waiver is sought and shall contain (i) the amount of the proposed award and the sum of all awards by the department or agency requesting the waiver to the proposed contractor or subcontractor in each of the preceding 3 years, (ii) a statement that no other

source of the supplies or services being procured is available to satisfy the needs of the agency on a timely basis, (iii) a statement of any alternative methods of fulfilling the project or program needs and the agency's reasons for rejecting such alternatives, (iv) a statement of the steps being taken by the procuring agency to establish other sources of supply for future procurements of the products or services for which a waiver is being requested, and (v) any other information that may aid the Board in evaluating the requested waiver.

(3) In the event the agency head determines that it is impractical to secure a required Disclosure Statement in accordance with the contract clause and § 331.60, he may authorize award of such contract or subcontract. He shall within 30 days thereafter submit a report to the Cost Accounting Standards Board, setting forth all material facts.

(4) The authority in this § 331.30(c) shall not be delegated.

§ 331.40 Solicitation notice.

DISCLOSURE STATEMENT—COST ACCOUNTING PRACTICES AND CERTIFICATION

(a) Any contract in excess of \$100,000 resulting from this solicitation, except contracts where the price negotiated is based on: (a) Established catalog or market prices of commercial items sold in substantial quantities to the general public, or (b) prices set by law or regulation, will be subject to the requirements of the Cost Accounting Standards Board. Any offeror submitting a proposal, which, if accepted, will result in a contract subject to the requirements of the Cost Accounting Standards Board must, as a condition of contracting, submit a Disclosure Statement as required by regulations of the Board. The Disclosure Statement must be submitted as a part of the offeror's proposal under this solicitation unless, in compliance with agency procedures, the offeror has already submitted a Disclosure Statement disclosing the practices used in connection with the pricing of this proposal, or unless post-award submission has been authorized by the Contracting Officer in accordance with regulations of the Cost Accounting Standards Board (see 4 CFR 331.60). If an applicable Disclosure Statement has already been submitted, the offeror may satisfy the requirement for submission by providing the following information:¹

CERTIFICATION (APPLICABLE ONLY TO PROPOSALS RESULTING IN CONTRACTS SUBJECT TO COST ACCOUNTING STANDARD BOARD REQUIREMENTS)

By submission of this offer, the offeror certifies that his practices used in estimating costs in pricing this proposal are consistent with the cost accounting practices disclosed in the applicable Disclosure Statement.

§ 331.50 Contract clause.

The following clause shall be inserted in all contracts subject to Cost Accounting Standards Board requirements:

COST ACCOUNTING STANDARDS

(a) Unless the Cost Accounting Standards Board has prescribed rules or regulations exempting the contractor or this contract from

¹ The agency issuing the solicitation should specify the data which it will accept if any in lieu of resubmission of a Disclosure Statement already submitted.)

standards, rules, and regulations promulgated pursuant to 50 U.S.C. App. 2168 (Public Law 91-379, August 15, 1970), the contractor, in connection with this contract shall:

(1) By submission of a Disclosure Statement, disclose in writing his cost accounting practices as required by regulations of the Cost Accounting Standards Board. The required disclosures must be made prior to contract award unless the Contracting Officer provides a written notice to the contractor authorizing post-award submission in accordance with regulations of the Cost Accounting Standards Board. The practices disclosed for this contract shall be the same as the practices currently disclosed and applied on all other contracts and subcontracts being performed by the contractor and which contain this Cost Accounting Standards clause. If the contractor has notified the Contracting Officer that the Disclosure Statement contains trade secrets and commercial or financial information which is privileged and confidential, the Disclosure Statement will be protected and will not be released outside of the Government.

(2) Follow consistently the cost accounting practices disclosed pursuant to paragraph (a)(1) of this section in accumulating and reporting contract performance cost data concerning this contract. If any change in disclosed practices is made for purposes of any contract or subcontract subject to Cost Accounting Standards Board requirements, the change must be applied prospectively to this contract, and the Disclosure Statement must be amended accordingly. If the contract price or cost allowance of this contract is affected by such changes, adjustment shall be made in accordance with paragraph (a)(4) or (a)(5) of this section, as appropriate.

(3) Comply with all Cost Accounting Standards in effect on the date of award of this contract or if the contractor has submitted cost or pricing data, on the date of final agreement on price as shown on the contractor's signed certificate of current cost or pricing data. The contractor shall also comply with any Cost Accounting Standard which hereafter becomes applicable to a contract or subcontract of the contractor. Such compliance shall be required prospectively from the date of applicability to such contract or subcontract.

(4) (i) Agree to an equitable adjustment as provided in the changes clause of this contract if the contract cost is affected by a change which, pursuant to paragraph (a)(3) of this section, the contractor is required to make to his established cost accounting practices whether such practices are covered by a Disclosure Statement or not.

(ii) Negotiate with the contracting officer to determine the terms and conditions under which a change to either a disclosed cost accounting practice or an established cost accounting practice, other than a change under paragraph (a)(4)(i) of this section, may be made. A change to a practice may be proposed by either the Government or the contractor, provided, however, that no agreement may be made under this provision that will increase costs paid by the United States.

(5) Agree to an adjustment of the contract price or cost allowance, as appropriate, if he or a subcontractor fails to comply with an applicable Cost Accounting Standard or to follow any practice disclosed pursuant to paragraphs (a)(1) and (a)(2) of this section and such failure results in any increased costs paid by the United States. Such adjustment shall provide for recovery of the increased costs to the United States together with interest thereon computed at the rate determined by the Secretary of the Treasury pursuant to Public Law 92-41, 85 Stat. 97, or 7 percent per annum, whichever is less, from the time the payment by the United States

was made to the time the adjustment is effected.

(b) If the parties fail to agree whether the contractor or a subcontractor has complied with an applicable Cost Accounting Standard, rule, or regulation of the cost Accounting Standards Board and as to any cost adjustment demanded by the United States, such failure to agree shall be a dispute concerning a question of fact within the meaning of the disputes clause of this contract.

(c) The contractor shall permit any authorized representatives of the head of the agency, of the Cost Accounting Standards Board, or of the Comptroller General of the United States to examine and make copies of any documents, papers, or records relating to compliance with the requirements of this clause.

(d) The contractor shall include in all negotiated subcontracts which he enters into the substance of this clause except paragraph (b) of this section, and shall require such inclusion in all other subcontracts or any tier, except that this requirement shall apply only to negotiated subcontracts in excess of \$100,000 where the price negotiated is not based on:

(1) Established catalog or market prices of commercial items sold in substantial quantities to the general public, or

(2) Prices set by law or regulation.

However, if this is a contract with an agency which permits subcontracts to appeal final decisions of the contracting officer directly to the head of the agency or his duly authorized representative, then the contractor shall include the substance of paragraph (b) as well.

NOTE: In any case where a subcontractor determines that the Disclosure Statement information is privileged and confidential and declines to provide it to his contractor or higher tier subcontractor, the contractor may authorize direct submission of that subcontractor's Disclosure Statement to the same Government offices to which the contractor was required to make submission of his Disclosure Statement. Such authorization shall in no way relieve the contractor of liability as provided in paragraph (a)(5) of this clause. In view of the foregoing and since the contract may be subject to adjustment under this clause by reason of any failure to comply with rules, regulations, and Standards of the Cost Accounting Standards Board in connection with covered subcontracts, it is expected that the contractor may wish to include a clause in each such subcontract requiring the subcontractor to appropriately indemnify the contractor. However, the inclusion of such a clause and the terms thereof are matters for negotiation and agreement between the contractor and the subcontractor, provided that they do not conflict with the duties of the contractor under its contract with the Government. It is also expected that any subcontractor subject to such indemnification will generally require substantially similar indemnification to be submitted by his subcontractors.

(e) The terms defined in § 331.20 of Part 331 of Title 4, Code of Federal Regulations (4 CFR 331.20) shall have the same meanings herein. As there defined, "negotiated subcontract" means "any subcontract except a firm fixed-price subcontract made by a contractor or subcontractor after receiving offers from at least two firms not associated with each other or such contractor or subcontractor, providing (1) the solicitation to all competing firms is identical, (2) price is the only consideration in selecting the subcontractor from among the competing firms solicited, and (3) the lowest offer received in compliance with the solicitation from among those solicited is accepted."

§ 331.60 Post-award disclosure.

(a) As specified in the solicitation notice and contract clause set forth in § 331.50, Disclosure Statements must be submitted by offerors required to make disclosure prior to contract award unless the contracting officer authorizes in writing post-award submission. As specified in the contract clause set forth in § 331.50, Disclosure Statements must be submitted by prospective subcontractors required to make disclosure prior to subcontract award unless the contracting officer at the request of the contractor authorizes in writing post-award submission.

(b) Post-award submission may be authorized only when the contracting officer has made a written determination that such authorization is essential (1) to the national defense, (2) because of the public exigency, or (3) to avoid undue hardship. Each determination shall set forth facts which clearly support the determination to authorize post-award submission, and a copy of the determination shall be included in the contract file. Authorization issued pursuant to this paragraph shall specify the time, not to exceed 90 days after contract or subcontract award, by which disclosure must be made.

§ 331.70 Interpretation.

(a) Increased costs paid by the United States as referred to in paragraph (a) (5) of the Cost Accounting Standards clause in § 331.50 shall be deemed to have resulted whenever the cost paid by the Government results from application of practices other than the contractor's disclosed practices or from failure to comply with applicable Cost Accounting Standards, and such cost is higher than it would have been had the disclosed practices been followed or applicable Cost Accounting Standards been complied with.

(b) In negotiated firm fixed-price type contracts, however, "increased costs" cannot be interpreted in terms of a higher level of costs reimbursed during contract performance, since in such contracts the price to be paid would normally be the price agreed to. That price will have been based on the requirement that the contractor use his disclosed practices and comply with applicable Cost Accounting Standards. Subsequently, if the contractor fails during contract performance to follow his disclosed practices or to comply with applicable Cost Accounting Standards, any increased cost to the United States by reason of that failure must be measured by the difference between the cost estimates used in negotiations and the cost estimates that would have been used had the contractor proposed on the basis of the practices actually used during contract performance. (In cases where an offset of decreased costs allocated to firm fixed-price contracts against increased costs allocated to cost reimbursement type contracts may be involved, the provisions of paragraph (f) of this section shall apply.)

(c) The statutory requirement underlying this interpretation is that the United States not pay increased costs, including a profit enlarged beyond that in the contemplation of the parties to the contract when the contract costs, price, or profit is negotiated, by reason of a contractor's failure to use applicable Cost Accounting Standards or to follow his disclosed practices. In making price adjustments under paragraph (a) (5) of the Cost Accounting Standards clause in § 331.50, in fixed-price or cost-reimbursement incentive contracts, or contracts providing for prospective or retroactive price redetermination, the Federal agency shall apply this requirement appropriately in the circumstances.

(d) The contractor and the contracting officer may enter into an agreement as contemplated by paragraph (a) (4) (B) of the Cost Accounting Standards clause in § 331.50, covering a change in practice proposed by the Government or the contractor for all of the contractor's contracts for which the contracting officer is responsible, provided that the agreement does not permit any increase in the cost paid by the Government. Such agreement may be made final and binding, notwithstanding the fact that experience may subsequently establish that the actual impact of the change differed from that agreed to.

(e) To facilitate agreements with a contractor who has a large number of contracts affected by a proposed change in his disclosed cost accounting practices or affected by application of Cost Accounting Standards, contracting agencies are urged to establish procedures under which the contractor may seek, and in proper cases obtain, agreement with a single official concerning the impact of the proposed change or application of standards upon all such contracts of that agency.

(f) In one circumstance an adjustment to the contract price or of cost allowances pursuant to paragraph (a) (4) (B) of the Cost Accounting Standards clause in § 331.50 may not be required when an amendment to disclosed or established practices is estimated to result in increased costs being paid under a particular contract by the United States. This circumstance may arise when a contractor is performing two or more contracts, subject to Cost Accounting Standards Board rules, regulations, and standards, with an agency or agencies of the United States, and when he proposes to change a practice disclosed for all such contracts. The amendment may increase the cost paid under one or more of the contracts, while decreasing the cost paid under one or more of the contracts. In such case, the Government will not pursuant to paragraph (a) (4) (B) require price adjustment for any increased costs paid by the United States so long as the costs decreased under one or more contracts are at least equal to the increased cost under the other affected contracts, provided that the contractor and all affected contracting officers agree on the

method by which the price adjustments are to be made for all affected contracts. In this situation, the contracting agencies would, of course, require an adjustment of the contract price or cost allowances, as appropriate, to the extent that the increases under certain contracts were not offset by the decreases under the remaining contracts.

(g) Where, through inadvertence, the contractor has failed to use applicable Cost Accounting Standards or to follow his disclosed practices and has not notified his contracting officer or officers of that failure, if the result of that failure is to increase costs paid under one or more contracts, while decreasing costs paid under one or more contracts, the contracting officer or officers of the agency or agencies concerned are urged, in the interest of administrative convenience, to negotiate the adjustment of the contract prices or cost allowances, as appropriate, of the affected contracts by requiring repayment of only the difference between the estimated price increases and the estimated price decreases, together with any applicable interest.

§ 331.80 Effective date.

The Disclosure Statement requirement at § 331.40 shall be included in all applicable solicitations issued on or after July 1, 1972, and all resulting contracts shall contain the contract clause at § 331.50. In any event, any other contract which is within the jurisdiction of the Cost Accounting Standards Board and which is awarded on or after October 1, 1972, shall contain that contract clause. Relevant Federal agencies shall notify the Cost Accounting Standards Board not later than June 1, 1972, of the action taken to implement this regulation.

PART 351—BASIC REQUIREMENTS

Sec.	
351.10	[Reserved]
351.20	Purpose.
351.30	Definitions.
351.40	Filing requirements.
351.50	Contract awards.
351.60	Forms.
351.70	Submission.
351.80	Incorporation of Disclosure Statement.
351.90	Adequacy of Disclosure Statement.
351.100	Effect of filing Disclosure Statement.
351.110	Early filing.
351.120	Amendment of Disclosure Statement.
351.130	Instructions and information.
351.140	Disclosure Statement.

APPENDIX

AUTHORITY: Sec. 103, 84 Stat. 796; (50 U.S.C. App. 2168).

§ 351.10 [Reserved]

§ 351.20 Purpose.

This regulation is promulgated pursuant to section 719 of the Defense Production Act of 1950, as amended by 84 Stat. 796 (Public Law 91-379), to provide the means by which affected persons can satisfy the requirements established by that law for disclosure of their cost ac-

counting practices and to promulgate the Disclosure Statement form. The regulation also sets forth the administrative procedures to be followed by the Cost Accounting Standards Board and relevant Federal agencies in connection with such disclosures.

§ 351.30 Definitions.

A "profit center" is the smallest organizationally independent segment of a company which has been charged by management with profit and loss responsibilities.

§ 351.40 Filing requirement.

(a) The requirements of this part are applicable to all defense contractors who enter into negotiated national defense contracts with the United States in excess of \$100,000 other than contracts where the price negotiated is based on (1) established catalog or market prices of commercial items sold in substantial quantities to the general public, or (2) prices set by law or regulation. A separate Disclosure Statement must be submitted covering the practices of each of the contractor's profit centers, divisions, or similar organizational units whose costs included in the total price of any contract exceed \$100,000, except where such costs are based on (i) established catalog or market prices of commercial items sold in substantial quantities to the general public or (ii) prices set by law or regulation. If the cost accounting practices under contracts are identical for more than one organizational unit, then only one Statement need be submitted for those units, but each such organizational unit must be identified. A Disclosure Statement will also be required for each Corporate or Group Office whose costs are allocated to one or more corporate segments performing contracts covered by Public Law 91-379.

(b) The requirements also apply to each subcontractor of whatever tier under a prime contract subject to these provisions provided the subcontract would, if it were a prime contract with the United States, be covered by the above statement of applicability for negotiated national defense contracts.

(c) The practices disclosed pursuant to these requirements shall be followed on all contracts and subcontracts subject to Public Law 91-379 being performed by the contractor or subcontractor.

(d) The Cost Accounting Standards Board will not make Disclosure Statements public in any case when the contractor files its statement specifically conditioned on the Government's agreement to treat the Disclosure Statement as confidential information.

(e) Every contractor and subcontractor covered by this subchapter must submit a Disclosure Statement as a condition of contracting. In order to minimize the administrative burdens upon contracting agencies, the initial requirement for filing is a phased requirement. Each company which together with its subsidiaries received net awards of negotiated national defense prime contracts during Federal fiscal years 1971 (July 1, 1970

through June 30, 1971) totaling more than \$30 million must submit completed Disclosure Statements prior to receipt of any contract containing the clause set forth in § 331.50 of this chapter. From time to time, the Board will announce the dates of applicability to other contractors and subcontractors. Because a failure to submit an adequate, timely Disclosure Statement may result in the denial of a contract or subcontract award, relevant Federal agencies should act promptly to assure that affected companies submit Disclosure Statements as prescribed herein at the earliest possible time.

§ 351.50 Contract awards.

(a) After October 1, 1972, no relevant Federal agency shall award any national defense contract subject to this regulation to any contractor who during Federal fiscal year 1971 received net awards of negotiated contracts totaling \$30 million or more unless such contractor has submitted a completed Disclosure Statement as required herein. As set forth in the contract clause at § 331.50 of this chapter, the contracting officer may, in certain circumstances, authorize post-award submission, notwithstanding the requirement of this section.

(b) No subcontract shall be awarded to any subcontractor required to file a Disclosure Statement pursuant to the filing requirement of § 351.40 unless the subcontractor has satisfied that requirement by submitting such Statement to the Government in the manner prescribed by agency regulations and agreed to with the prime contractor under whom the subcontract is to be awarded.

§ 351.60 Forms.

Disclosure Statements shall contain complete and accurate responses to the items set forth in § 351.140. For the convenience of persons required to submit Disclosure Statements, the Cost Accounting Standards Board has devised a form, Form No. CASB-DS-1, which should be used. Copies of the form may be requested by relevant Federal agencies for distribution to affected contractors and subcontractors from the Administrative Officer of the Cost Accounting Standards Board, 441 G Street NW., Washington, DC 20548. If for any reason, copies of the form cannot be obtained, the required information shall be supplied in a form substantially in accord with the arrangement set forth in § 351.140.

§ 351.70 Submission.

Each national defense contractor shall submit a copy of each Disclosure Statement, and any amendments thereto in accordance with the method prescribed by each Federal agency for which the contractor is performing or proposes to perform contracts subject to the rules, regulations, and standards of the Cost Accounting Standards Board. Concurrently, a copy shall also be submitted to the Cost Accounting Standards Board, 441 G Street NW., Washington, DC 20548.

§ 351.80 Incorporation of Disclosure Statement.

Every solicitation subject to the standards, rules, and regulations of the Cost Accounting Standards Board shall contain a provision allowing the contractor to identify and incorporate by reference, a Disclosure Statement already on file which will be applicable to that solicitation. Such identification and incorporation shall satisfy the requirement for disclosure as a condition of contracting. Agencies may, nonetheless, require submission of additional copies of such Disclosure Statement to the extent deemed necessary.

§ 351.90 Adequacy of Disclosure Statement.

Federal agencies shall prescribe regulations by which each will determine that a Disclosure Statement has adequately disclosed the practices required to be disclosed by Cost Accounting Standards Board's standards, rules, and regulations. Agencies are urged to coordinate development of such regulations. The Disclosure Statement submitted to the Cost Accounting Standards Board in accordance with § 351.70, is for evaluation and development of Board programs only. Consequently, such submission to the Board does not satisfy the requirement for disclosure as a condition of contracting, nor does any action by the Board with respect to such statement constitute a finding of any kind regarding the adequacy of the statements as submitted.

§ 351.100 Effect of filing Disclosure Statement.

Unless the Federal agency involved provides otherwise either by regulation or by specific notice to the contractor involved, a Disclosure Statement submitted to the agency or incorporated by reference shall be presumed adequate to meet the requirement that disclosure be made as a condition of contracting. The fact that the condition of contracting has been met shall serve only to establish what the contractor's cost accounting practices are or are proposed to be. In the absence of specific regulation or agreement, a disclosed practice shall not, by virtue of such disclosure, be deemed to have been approved by the agency involved as a proper, approved or agreed practice for pricing proposals or accumulating and reporting contract performance cost data.

§ 351.110 Early filing.

In order to permit orderly processing of Disclosure Statements, all prospective contractors and subcontractors are urged to submit Disclosure Statements as soon as possible. Notwithstanding such early filings, contractors will be bound to adhere to disclosed practices only with respect to contracts under which the contractor would otherwise be required to adhere to his disclosed practices pursuant to § 351.40.

§ 351.120 Amendment of Disclosure Statement.

(a) Disclosure Statement amendments may be submitted at any time.

Contractors are reminded, however, that any amendments to Disclosure Statements must be made applicable prospectively to all contracts and subcontracts subject to Cost Accounting Standards. For this reason, all relevant Federal agencies are strongly urged to establish interagency procedures for promptly coordinating agency activities stemming from changes in disclosed practices.

(b) Disclosure Statements must be amended for practices that must be changed to comply with Cost Accounting Standards which become applicable subsequent to the initial filing of the Disclosure Statements. Equitable adjustment of contract price or cost allowance will be made as set out in paragraph (a) (4) (A) of § 331.50 of this chapter.

(c) Disclosure Statements must also be amended for changes in practices voluntarily agreed to by the parties. In this event, the contractor and the contracting officer(s) may enter into an agreement as contemplated by paragraph (a) (4) (B) of § 331.50 of this chapter. Such agreement may specify the impact that a Government or contractor proposed change in practice shall be deemed to have on costs paid under one or more existing contract(s) for which the contracting officer(s) is responsible. Such agreement may be made final and binding, notwithstanding the fact that experience may subsequently establish that actual impact of the change differed from that agreed to.

(d) Amendments shall be submitted to the same offices, including the Cost Accounting Standards Board, to which submission would have to be made were an original Disclosure Statement being filed. Revised data for Items 1.4.0 through 1.7.0, 8.1.0 and 8.2.0 must be submitted annually at the beginning of the contractor's fiscal year. If fewer than five of the other items in the Disclosure Statement on file are changed, a letter notice precisely identifying the Disclosure Statement, the specific items being amended, and the nature of the changes will suffice. If five or more items are changed, the entire Disclosure Statement shall be resubmitted. Resubmitted Disclosure Statements must be accompanied by a notation specifying the items which have been changed and the nature of the change.

§ 351.130 Instructions and information.

The following instructions and information shall be used by persons completing Disclosure Statements.

INSTRUCTIONS AND INFORMATION

(a) This Disclosure Statement has been designed to meet the requirements of Public Law 91-379, and persons completing it are to describe their contract cost accounting practices. For timing of requirement to file a Disclosure Statement, see § 351.40. A statement must be submitted by all defense contractors who enter into negotiated national defense contracts with the United States in excess of \$100,000 other than contracts where the price negotiated is based on (1) established catalog or market prices of commercial items sold in substantial quantities to the general public, or (2) prices set by law or regulation. A separate Disclosure State-

ment must be submitted covering the practices of each of the contractor's profit centers, divisions, or similar organizational units, whose costs included in the total price of any contract exceed \$100,000, except where such costs are based on (1) established catalog or market prices of commercial items sold in substantial quantities to the general public, or (2) prices set by law or regulation. If the cost accounting practices under contracts are identical for more than one organizational unit, then only one statement need be submitted for those units, but each such organizational unit must be identified. A Disclosure Statement will also be required for each corporate or group office when costs are allocated to one or more corporate segments performing contracts covered by Public Law 91-379, but only Part VIII of the statement need be completed.

(b) The statement must be signed by an authorized signatory of the reporting unit.

(c) The disclosure of a cost accounting practice by a contractor does not determine the allowability of particular items of cost. Irrespective of the practices disclosed by a contractor, the question of whether or not, or the extent to which, a specific element of cost is allowed under a contract remains for consideration in each specific instance. Contractors are cautioned that the determination of the allowability of cost items will remain a responsibility of the contracting officers pursuant to the provisions of the applicable procurement regulations.

(d) Unless the Federal agency involved provides otherwise, either by regulation or by specific notice to the contractor involved, a Disclosure Statement submitted to the agency or incorporated by reference should be presumed adequate to meet the requirement that disclosure be made as a condition of contracting. In the absence of specific regulations or agreement, a disclosure practice should not, by virtue of such disclosure, be deemed to have been approved by the agency involved as a proper, approved, or agreed practice for pricing proposals or accumulating and reporting contract performance cost data.

(e) The individual Disclosure Statement may be used in audits of contracts or in negotiation of prices leading to contracts. The authority of the audit agencies and the contracting officers is in no way abrogated by the material presented by the contractor in his Disclosure Statement. Contractors are cautioned that their disclosures in response to the items herein must be complete and accurate; the practices disclosed may have a significant impact on ways in which contractors will be required to comply with Cost Accounting Standards.

(f) This Disclosure Statement should be answered by checking the appropriate box or inserting the applicable Code letter which most nearly describes the reporting unit's cost accounting practices. Part I of the statement asks for general information concerning the reporting unit. Part VIII covers Corporate and Group (Intermediate) offices whose costs are allocated to one or more segments performing contracts covered by Public Law 91-379. Part VIII should be completed by each such office, and care should be taken to insure proper identification of such offices on the cover of the Disclosure Statement. In short, while a Corporation or group office may have more than one reporting unit submitting Disclosure Statements, only one statement need be submitted to cover the Corporate or Group Office operations.

(g) A number of questions in this statement may need narrative answers requiring more space than is provided. In such instances, the reporting unit should use the continuation sheets provided or a facsimile thereof. The number of the question involved should be

indicated and the same coding required to answer the questions in the statement should be used in presenting the answer in the continuation sheet. The reporting unit should indicate on the last continuation sheet used, the number of such sheets that were used.

(h) Contractors to whom Public Law 91-379 is applicable are required to follow consistently their disclosed practices in pricing contract proposals and in accumulating and reporting contract performance cost data. If deviation from disclosed practices results in increased costs being paid by the Government, contractors will be required to repay to the Government the amount of the increased costs together with interest charges.

(i) Public Law 91-379 contains an access to records clause, section 719(j) of the Law states:

"For the purpose of determining whether a defense contractor or subcontractor has complied with duly promulgated cost accounting standards and has followed consistently his disclosed cost accounting practices, any authorized representative of the head of the agency concerned, of the Board, or of the Comptroller General of the United States shall have the right to examine and make copies of any documents, papers, or records of such contractor or subcontractor relating to compliance with such cost accounting standards and principles."

§ 351.140 Disclosure Statement.

The data which are required to be disclosed are set forth in detail in the Disclosure Statement form CASB-DS-1 which will be devised by the Cost Accounting Standards Board and will be arranged substantially as set forth below.

2. Changes for consistency of style in definitions in Parts 400, 401, 402, 403, and 404. In the indicated sections the definition of "actual costs," "indirect cost pools," "tangible capital assets," and "home office" would be changed to read as follows:

PART 400—DEFINITIONS

Section 400.1 is amended to read as follows:

§ 400.1 Definitions.

(a) * * *
Actual cost.—Amount determined on the basis of cost incurred as distinguished from forecasted cost. Includes standard cost properly adjusted for applicable variance.

* * * * *
Indirect cost pool.—Grouping of incurred costs identified with two or more cost objectives but not identified specifically with any final cost objective.

* * * * *
Tangible capital asset.—An asset that has physical substance, more than minimal value, and is expected to be held by an enterprise for continued use or possession beyond the current accounting period for the services it yields.

PART 401—COST ACCOUNTING STANDARD—CONSISTENCY IN ESTIMATING, ACCUMULATING, AND REPORTING COSTS

Section 401.30 is amended to read as follows:

§ 401.30 Definitions.

(a) * * *

(2) *Actual cost.*—Amount determined on the basis of cost incurred as distinguished from forecasted cost. Includes standard cost properly adjusted for applicable variance.

(4) *Indirect cost pool.*—Grouping of incurred costs identified with two or more cost objectives but not identified specifically with any final cost objective.

PART 402—COST ACCOUNTING STANDARD—CONSISTENCY IN ALLOCATING COSTS INCURRED FOR THE SAME PURPOSE

Section 402.30 is amended to read as follows:

§ 402.30 Definitions.

(a) * * *

(2) *Cost objective.*—A function, organizational subdivision contract or other work unit for which cost data are desired and for which provision is made to accumulate and measure the cost of processes, products, jobs, capitalized projects, etc.

(6) *Indirect cost pool.*—Grouping of incurred costs identified with two or more cost objectives but not identified specifically with any final cost objective.

PART 403—ALLOCATION OF HOME OFFICE EXPENSES TO SEGMENTS

Section 403.30 is amended to read as follows:

§ 403.30 Definitions.

(a) * * *

(2) *Home office.*—An office responsible for directing or managing two or more, but not necessarily all, segments of an organization. It typically establishes policy for, and provides guidance to the segments in their operations. It usually performs management, supervisory, or administrative functions, and may also perform service functions in support of the operations of the various segments. An organization which has intermediate levels, such as groups, may have several home offices which report to a common home office. An intermediate organization may be both a segment and a home office.

(5) *Tangible capital asset.*—An asset that has physical substance, more than minimal value, and is expected to be held by an enterprise for continued use or possession beyond the current accounting period for the services it yields.

§ 403.50 [Amended]

In line six of § 403.50(c) (2), change “§ 331.5” to “§ 331.50”.

§ 403.70 [Amended]

In § 403.70, in lines three and eight change “§ 351.4” to “§ 351.40”; and in

line thirteen change “§ 351.5” to “§ 351.50”.

PART 404—CAPITALIZATION OF TANGIBLE ASSETS

Section 404.30 is amended to read as follows:

§ 404.30 Definitions.

(a) * * *

(4) *Tangible capital asset.*—An asset that has physical substance, more than minimal value, and is expected to be held by an enterprise for continued use or possession beyond the current accounting period for the services it yields.

ARTHUR SCHOENHAUT,
Executive Secretary.

[FR Doc.73-18685 Filed 9-4-73;8:45 am]

ENERGY POLICY OFFICE

[32A CFR Chapter XIII]

PROPANE

Mandatory Allocation Program; Public Hearing

On June 11-14, 1973, hearings were held concerning the operation of the voluntary allocation program for petroleum products and the need for a mandatory allocation program. These hearings indicated that shortages of certain products were being experienced in certain parts of the country. In the Energy Policy Office statement of August 9, 1973, it was indicated that a particularly difficult problem exists with propane.

Propane represents a very small fraction of our national fuel supplies. However, it is critical to certain needs such as drying of crops and heating of rural residences and trailers. Studies just concluded by the Federal Government have determined that the propane situation has continued to deteriorate. Diversion of propane from traditional agricultural and residential users to industrial and utility users will result in an absolute shortage of propane for these traditional high priority users.

Since propane supplies have been diverted from traditional high priority customers such that they do not have sufficient supplies to meet their demands this winter, a Mandatory Allocation System for propane is being established pursuant to section 203(a)(3) of the Economic Stabilization Act of 1970, as amended. Specifically this regulation aims to redirect available supplies of propane back to high priority users, encourage refiners to maximize available supplies of propane, and restrict end use consumption of propane by nonpriority users.

The Energy Policy Office also recognizes that higher prices may be necessary in order for an allocation program to be most effective, to encourage conservation, and to induce increased production and importation of propane. Accordingly, the Energy Policy Office has requested that the Cost of Living Council examine the relationship between the proposed allocation system and the

Phase IV price regulations. Specifically, the Council has been asked to consider the possible amendment of the regulations to (1) provide that (a) sales of propane redirected from one purchaser to another purchaser may be made at the current sales contract price to the first purchaser, and (b) the second purchaser may roll this purchase price into his selling price for all propane sales, and (2) allow (a) sales of propane embargoed from shipment from storage to be made at a price not to exceed the purchase cost plus applicable transportation, storage, handling, and sales expense, and (b) the purchaser of such propane to roll this purchased price into his selling price for all propane sales.

It is highly desirable that refiners maximize the production and sale of propane. This can be accomplished by substituting other gaseous fuels for propane used as refinery fuel. However, as those alternate fuels have higher-valued uses, refiners cannot be expected to make that substitution without allowance for the higher costs incurred. The Energy Policy Office has requested the Cost of Living Council to consider additional actions to provide necessary incentives.

As required by section 203(a)(3) of the Economic Stabilization Act, a public hearing will be held on the proposed regulation. If the regulations are to become effective in time to significantly redirect to priority customers the supply of propane available this winter, it is necessary to shorten the notice period for the public hearing and comment. Therefore, the public hearing will be held in Washington, D.C. beginning at 9 a.m. (E.S.T.) Friday, September 7, 1973, in the General Services Administration auditorium, 18th and F Streets NW., Washington, D.C. 20240, for the purpose of receiving comments and testimony on all phases of the Proposed Program to Establish a Mandatory Allocation Program for Propane.

In addition, interested persons are invited to submit twenty (20) copies of any written comments on the proposal to the Office of Oil and Gas, Department of the Interior, Washington, D.C. 20240, Attention: L. A. D'Andrea. Comments received no later than September 7th will be considered.

JOHN A. LOVE,
Director,
Energy Policy Office.

AUGUST 31, 1973.

A new EPO REG. 3 is added to 32A CFR Chapter XIII to read as follows:

EPO REG. 3—MANDATORY ALLOCATION PROGRAM FOR PROPANE

- Sec.
- 1 Purpose and intent.
 - 2 Definitions.
 - 3 Priority allocations.
 - 4 Constraints on shipments from propane storage.
 - 5 Pricing provisions.
 - 6 Force majeure.
 - 7 Exceptions.
 - 8 Access to records.

AUTHORITY: Sec. 203(a)(3), Economic Stabilization Act as amended by PL 93-28; 12 USC 1904 (Note); EO 11695, 38 FR 1473; COLC Order 39, 38 FR 22910.

Sec. 1. Purpose and intent.

The purpose of this regulation is to assure that available supplies of propane are directed to those customers to whom propane is essential for their physical well-being or for the production of agricultural commodities. These regulations shall be in effect through April 30, 1974. Through this period supplies of propane will probably be insufficient to meet all market requirements. Hence, nonpriority users can expect to receive less than their full requirements and should plan to operate accordingly.

Sec. 2. Definitions.

"Priority customers" are those end use customers who use propane for (a) agricultural production (such as tractor fuel, poultry and pig brooding and crop drying), (b) food processing, (c) residential cooking and heating, (d) mass transit vehicles, and (e) buildings housing medical and nursing patients.

"Propane" is, for purposes of this regulation, a hydrocarbon whose chemical composition is predominantly C₃H₈. Propane-Butane mixes used to supply customers are included in this definition.

An "end use customer" is any final consumer of propane whether for fuel, raw material, or other use.

"Reseller" means a firm or that part of such a firm which carries on the trade or business of purchasing propane, and reselling it without substantially changing its form.

"Supplier" is any firm who produces propane in a natural gasoline plant, refinery, or elsewhere, or who imports propane for sale, transfer, or exchange to another supplier, reseller, or an end use customer. Suppliers shall include those producers of natural gas who have their gas processed for their account by others.

Sec. 3. Allocation system.

(a) **Priority Allocation.**—(1) All propane suppliers and resellers must first provide for the entire requirements of their priority customers for propane before making sales to nonpriority customers. Suppliers to resellers shall also provide the supplies that those resellers need to meet the requirements of their priority customers. In those instances where a reseller is supplied by more than one supplier, his needs for his priority customers shall be supplied to him in the same proportion as those suppliers sold to him in the year ended April 30, 1973.

(2) Resellers shall certify to their suppliers (in the proportions referenced in the previous sentence) their requirements of the resellers' priority customers. Such certifications shall be in the hands of their suppliers prior to the end of each month, and shall project their priority customers needs from that date through April 30, 1974. Resellers shall certify to their suppliers by September 30, 1973 (in the proportions referenced above) the

amount of propane sold to nonpriority customers during the period September 1, 1972, through April 30, 1973. These reports shall be certified for correctness by an officer of the reporting company. The provisions of 18 U.S.C. 1001 shall apply to all submissions made.

(3) All propane received by resellers under priority certification shall be sold only to priority customers.

(4) Priority users or resellers to priority users of propane who are unable to find a supplier may be assigned to a supplier by the Office of Oil and Gas. Sales made at the request of the Federal Government in the base period will not be included in establishing proportional base period sales.

(5) Suppliers who do not have sufficient propane to meet needs of their priority customers and the needs of their reseller's priority customers may be assigned to another supplier by the Office of Oil and Gas to meet the balance of the priority needs of the supplier being assigned.

(b) **Nonpriority Allocation.**—(1) Suppliers will determine their total supplies of propane available for sale or internal use as a raw material during the period September 1, 1973, through April 30, 1974. From this amount they will subtract the requirements for their priority customers and the amounts certified to them by resellers as being required for reseller priority customers; leaving the supplier with a net available supply.

(2) The supplier will calculate an allocation fraction as follows: Divide the net available supply by the sum of the suppliers sales to nonpriority customers, internal raw material uses, and nonpriority sales to resellers as certified above, all during the period September 1, 1972, through April 30, 1973. This allocation fraction will be reported monthly by all suppliers to the Office of Oil and Gas.

(3) The amount which must be offered for sale or which may be used as a raw material by a supplier during the period September 1, 1973, through April 30, 1974, shall be equal to the sale to that particular customer or reseller or internal consumption during the base period September 1, 1972, through April 30, 1973, multiplied by the allocation fraction. In no event, however, shall a supplier be required to use an allocation fraction greater than 1.0. In the event a supplier's net available propane is of sufficient magnitude that its allocation fraction exceeds 1.0, the supplier may make allocations based on an allocation fraction of 1.0 and sell or use any surplus propane at its own discretion.

(4) The intent is that natural gasoline plants, refiners and others who produce or supply propane will sell to those suppliers, resellers, or end use customers the same proportion of their total propane available for sale, transfer or use after deduction of sales for priority customers as they sold in the year ending April 30, 1973. Sales made to customers of record during the base period to com-

ply with this section are "redirected sales."

Sec. 4. Constraints on shipments from propane storage.

(a) All operators of propane storage facilities who store propane in excess of ½ million gallons for the account of any interest other than suppliers shall report to the Office of Oil and Gas within 10 days of the effective date of this regulation the total volume and locations of propane held by each such account. This same information shall be reported as of the end of each month within 5 days of the close of that month.

(b) Operators of such storage facilities shall not release for shipment from September 1, 1973, through April 30, 1974, to nonpriority consumers any quantity of propane which exceeds shipments from such storage to those respective consumers during the period September 1, 1972, through April 30, 1973. Amounts of such shipments in the base period shall be reported to the Office of Oil and Gas no later than September 15, 1973, by the operators of the propane storage facilities.

(c) No restrictions are imposed, however, on the release of propane for shipment to priority customers or to resellers for sale to priority customers or to suppliers who sell to priority customers, or to hardship cases certified by the Office of Oil and Gas. In the event propane embargoed for release from storage is purchased by suppliers, the volume purchased must be included in the supplier's total available propane. In the event propane embargoed for release from storage is purchased by priority customers or by resellers for sale to priority customers, the priority customer or reseller shall immediately notify his supplier of the volume purchased. The supplier will reduce the volume of propane budgeted for delivery to that priority customer or reseller by the volume of the reported purchase. The intent of this provision is to redirect propane supplies to conventional market channels. Owners of propane embargoed from shipment from storage are urged to sell such embargoed product to historic propane marketers.

Sec. 5. Pricing provision.

No seller of propane may charge a price in excess of the price authorized under Subpart L of Part 150, Title 6, Code of Federal Regulations.

Sec. 6. Force majeure.

No person shall be held liable by any other person for damages or penalties for any act or failure to act resulting directly or indirectly from compliance with this regulation or any other rule, regulation, or order issued pursuant to the mandatory allocation program for propane notwithstanding that this regulation or any other such rule, regulation, or order shall thereafter be declared by judicial or other competent authority to be invalid.

Sec. 7. Exceptions.

(a) In the event of exceptional hardship as a direct result of this program,

persons may petition the Office of Oil and Gas for relief. In the event the Office of Oil and Gas, after thorough investigation, determines that relief is warranted, it may certify hardship and allow the petitioner the right to purchase and/or ship certain volumes of propane embargoed for release from storage.

(b) As stated in section 1, non-priority users can expect to receive less than their full requirements of propane during the period of this allocation program. This does not constitute exceptional hardship.

Sec. 8. Access to records.

At its discretion, the Office of Oil and Gas may request data, in a form that it may prescribe, from suppliers, resellers, users, and persons who store or transport propane. The Office of Oil and Gas may also conduct onsite investigations as it deems necessary.

[FR Doc.73-18834 Filed 8-31-73;12:50 pm]

FEDERAL MARITIME COMMISSION

[46 CFR Part 542]

[General Order ...; Docket No. 73-48]

REMOVAL OF OIL AND HAZARDOUS SUBSTANCES

Financial Responsibility; Extension of Time for Comments

The Commission published notice of proposed rulemaking in this proceeding August 14, 1973 (38 FR 21941), inviting comments of interested parties on or before September 4, 1973.

The proposed rules would establish regulations for the implementation of hazardous substance financial responsibility requirements imposed by the Federal Water Pollution Control Act Amendments of 1972.

Counsel for Shipowners Protection and Indemnity Associations have requested a 60 day enlargement of time to file comments. As grounds therefor counsel cites difficulty of obtaining instructions from clients located in diverse overseas localities and suggests the urgency for the early issuance of the rules is lessened by the fact that the Environmental Protection Agency's (EPA) list of hazardous substances might not be ready until after January 1, 1974.

The Commission's proposed rules are closely patterned after existing rules relating to oil pollution financial responsibility requirements. Detailed or prolonged analysis would therefore appear unnecessary. Additionally, the form or content of any rules adopted here is not dependent on whatever form EPA's list of hazardous substances may take and comment thereon need not await issuance of the list. In any event we have no concrete assurances when the EPA will in fact disclose its list of hazardous substances. It is also noted that under the terms of the Federal Water Pollution Control Act amendments of 1972, the financial responsibility provisions, as they relate to hazardous substances, become effective October 18, 1973.

Under the above circumstances the request for 60 day enlargement appears

excessive. However, a limited extension of 15 days does seem warranted.

Accordingly, time for filing comments on the notice of proposed rulemaking in this proceeding is hereby enlarged to and including September 19, 1973.

By the Commission.

[SEAL] JOSEPH C. POLKING,
Assistant Secretary.
[FR Doc.73-18738 Filed 9-4-73;9:45 am]

INTERSTATE COMMERCE COMMISSION

[49 CFR Part 1131]

[Ex Parte No. 67 (Sub-No. 2)]

STATE REGISTRATION OF EMERGENCY TEMPORARY AND TEMPORARY AUTHORITY

Notice of Proposed Rulemaking

Section 210a(a) of the Interstate Commerce Act, as amended (49 U.S.C. 310a(a)), enables the provision of service in interstate or foreign commerce for which there is an immediate and urgent need to a point or points or within a territory having no carrier service capable of meeting such need when this Commission, in its discretion and without hearings or other proceedings, grants temporary authority for such service by a common or contract carrier by motor vehicle. Regulations governing the issuance of temporary authorities can be found at 49 CFR Part 1131. It has come to our attention that certain State requirements concerning the registration of temporary authorities issued by us are generating delays in the provision of motor carrier services for which this Commission has found an immediate and urgent need. It is believed that such delay-causing State regulations are a burden upon interstate commerce and are prohibiting the shipping and traveling public from receiving service they immediately and urgently require. Such State regulations do not appear to be in the public interest and cannot be allowed to operate to the detriment of the public and in conflict with the principles of this Commission's economic regulation of the motor carrier industry.

The second proviso of § 1023.11 provides that a motor carrier is not to be required to register with any State emergency or temporary authority which is not to remain in effect in excess of 30 days provided: (a) the carrier has previously registered its other authority with the State and identified its vehicles as otherwise required by Part 1023, and (b) furnished to the State a telegram or other written communication describing the emergency or temporary operating authority and stating that the operations will be conducted in full conformity with the requirements for uniform registration. This regulation has been in effect for 18 months and the existence of certain problems has become evident. First, carriers are not required to register emergency temporary authority which is not to remain in effect for over 30 days if they meet the conditions in (a) and (b)

above. Because emergency temporary authorities are often extended to 60 and 90 days, the 30-day limitation in § 1023.11 tends to nullify the intent of the regulation and delay the rendition of urgently needed motor carrier service.

Condition (a) above permits carriers to take advantage of this section if they have previously registered their other interstate authority with the State. A carrier which receives emergency temporary authority from this Commission and has no previously registered interstate authority (because it has no other authority from this Commission) is being required to file with the States copies of its emergency temporary authority in compliance with 49 CFR 1023.13. This process usually takes between 10 and 14 days. The carrier cannot operate during this period although it has shown an urgent need for its service. Its 30-day emergency authority is reduced by 10 to 14 days in such instances.

Condition (b) above requires that a telegram or letter be furnished to States describing the authority. Certain States have apparently refused to accept telegrams for the carriers and insist that this Commission must originate the communication. This also reduces the time period of a temporary authority and prohibits a carrier from providing a service urgently required.

Based on the foregoing, it is proposed that 49 CFR Part 1131 be amended by the addition of the following new section, presently untitled:

§ 1131.-----

Notwithstanding the provisions of § 1023.11 of this subchapter, a motor carrier shall not be required to file with a State Commission an emergency or temporary operating authority having a duration of 90 consecutive days or less if such carrier has: (a) registered its other authority granted by the Interstate Commerce Commission authorizing operations in or through the involved State (a carrier possessing no other such authority may qualify for this exception upon compliance only with condition (b) below) and identified its vehicles or drive-away operation under the provisions of those standards set forth at §§ 1023.31-1023.42 of this subchapter, both inclusive; and (b) furnished to the State Commission a telegram or other written communication from the motor carrier describing such emergency or temporary operating authority and stating that operation thereunder shall be in full accord with the requirements of those standards set forth at § 1023.1 et seq., of this subchapter.

The statutory authority for this action is to be found in part II of the Interstate Commerce Act, including particularly sections 210a(a), 204(a) (1) and (6), and 202(b) thereof [49 U.S.C. 310a(a), 304(a) (1) and (6), and 302(b)].

It does not appear that the action proposed herein will have a significant effect upon the quality of our human environment within the meaning of the National Environmental Policy Act of 1969.

PROPOSED RULES

PROCEDURAL MATTERS

Oral hearings do not appear to be necessary at this time and none is contemplated. Any person wishing to present views and evidence either in support of, or in opposition to, the action proposed in this order may do so by the submission of written data, views, or arguments.

It is ordered, That, based on the foregoing explanation, a proceeding be, and it is hereby, instituted under part II of the Interstate Commerce Act, and particularly sections 202(b), 204(a)(1) and (6), and 210a(a) thereof, and 5 U.S.C. 553 and 559 (the Administrative Procedure Act), for the purpose of determining whether the adoption of the above-described procedures is reasonable and necessary in the public interest, and

for the purpose of taking such other and further action as the facts and circumstances may justify or require.

It is further ordered, That no hearings be scheduled for the receipt of oral testimony unless a need therefor should later appear, but that any person interested in making representations in favor of, or against the proposed regulations is hereby invited to do so by the submission of written data, views, or arguments. An original and 15 copies of such data, views, or arguments shall be filed with the Commission on or before October 1, 1973. All such statements will be considered as evidence and as a part of the record in the proceeding.

And it is further ordered, That a copy of this Notice and Order be served on the

National Association of Regulatory Utility Commissioners, that written materials or suggestions submitted will be available for public inspection at the Offices of the Interstate Commerce Commission, 12th and Constitution, Washington, D.C., during regular business hours; and that notice to the general public of the matter here under consideration will be given by depositing a copy of this notice in the Office of the Secretary of the Commission for public inspection and by filing a copy thereof with the Director, Office of the Federal Register.

By the Commission.

[SEAL] JOSEPH M. HARRINGTON,
Acting Secretary.

[FR Doc.73-18758 Filed 9-4-73; 8:45 am]

Notices

This section of the FEDERAL REGISTER contains documents other than rules or proposed rules that are applicable to the public. Notices of hearings and investigations, committee meetings, agency decisions and rulings, delegations of authority, filing of petitions and applications and agency statements of organization and functions are examples of documents appearing in this section.

DEPARTMENT OF STATE

[Public Notice CM-61]

SHIPPING COORDINATING COMMITTEE SUBCOMMITTEE ON CODE OF CONDUCT FOR LINER CONFERENCES

Notice of Meeting

A meeting of the Subcommittee on the Code of Conduct for Liner Conferences will be held at 1:30 p.m. on Thursday, September 20, in Room 1105, Department of State, Washington, D.C., to discuss United States positions on the draft Code of Conduct for Liner Conferences in regard to the October meeting of the Special Group on UNCTAD of the OECD Maritime Transport Committee and regarding the UN Conference of Plenipotentiaries on the Code, scheduled to convene November 12, 1973.

The meeting will be closed to the public, under a determination to do so, made under the provisions of section 10(d) of Public Law 92-463. (This meeting will follow the public meeting scheduled for 10 a.m. that morning, which had been announced in the FEDERAL REGISTER on August 13, 1973.)

For information regarding the meeting, contact Mr. Richard K. Bank, Secretary, Shipping Coordinating Committee, Department of State, Washington, D.C. 20520, area code 202-632-0704.

Dated August 23, 1973.

RICHARD K. BANK,
Executive Secretary,
Shipping Coordinating Committee.

[FR Doc.73-18731 Filed 9-4-73;8:45 am]

[Public Notice CM-62]

STUDY GROUP 2 OF THE U.S. NATIONAL COMMITTEE FOR THE INTERNATIONAL RADIO CONSULTATIVE COMMITTEE (CCIR)

Notice of Meeting

The Department of State announces that Study Group 2 of the U.S. National Committee for the International Radio Consultative Committee (CCIR) will meet on September 27, 1973, at 9:30 a.m., in Room 521-J, Federal Office Building, 600 Independence Avenue SW., Washington, D.C.

Study Group 2 deals with matters relating to the communications for scientific satellites, space probes, spacecraft, exploration satellites (e.g., meteorological and geodetic), and to interference problems concerning the radioastronomy and radar astronomy services. The principle item on the agenda will be the approval of Study Group 2 papers pre-

pared for the final meeting of the Study Groups in 1974. Subsequent to their approval by Study Group 2 the papers will be circulated to the U.S. National Committee prior to sending them to Geneva.

Members of the general public who desire to attend the meeting on September 27 will be admitted up to the limits of the capacity of the meeting room.

Dated August 27, 1973.

GORDON L. HUFFCUTT,
Chairman,
U.S. CCIR National Committee.

[FR Doc.73-18732 Filed 9-4-73;8:45 am]

[Public Notice CM-60]

STUDY GROUPS 10 AND 11 OF THE U.S. NATIONAL COMMITTEE FOR THE INTERNATIONAL RADIO CONSULTATIVE COMMITTEE (CCIR)

Notice of Meeting

The Department of State announces that Study Groups 10 and 11 of the U.S. National Committee for the International Radio Consultative Committee (CCIR) will meet jointly on September 19, 1973, under the chairmanship of Mr. A. Prose Walker of the Federal Communications Commission (FCC). The meeting will convene at 10:00 a.m., in Room A-110, FCC Annex (Howich Building), 1229 20th Street NW., Washington, D.C.

Study Group 10 deals with questions relating to sound broadcasting; Study Group 11 deals with questions relating to television broadcasting. The agenda for the meeting will include consideration of the draft documents being developed as proposed contributions by the U.S. to the international meetings of the Study Groups in 1974.

Members of the general public who desire to attend the meeting on September 19 will be admitted up to the limits of the capacity of the meeting room.

Dated August 29, 1973.

GORDON L. HUFFCUTT,
Chairman,
U.S. CCIR National Committee.

[FR Doc.73-18730 Filed 9-4-73;8:45 am]

DEPARTMENT OF THE TREASURY

Office of the Secretary

EXPANDED METAL, OF BASE METAL, FROM JAPAN

Antidumping; Determination of Sales at Less Than Fair Value

AUGUST 30, 1973.

Information was received on January 12, 1973, that expanded metal, of

base metal, from Japan was being sold at less than fair value within the meaning of the Antidumping Act, 1921, as amended (19 U.S.C. 160 et seq.) (referred to in this notice as "the Act").

A "Withholding of Appraisal Notice" is being published concurrently with this notice.

I hereby determine that, for the reasons stated below, expanded metal, of base metal, from Japan is being, or is likely to be, sold at less than fair value within the meaning of section 201(a) of the Act (19 U.S.C. 160(a)).

Statement of reasons on which this determination is based.—The information currently before the U.S. Customs Service indicates that the proper basis of comparison for fair value purposes is between purchase price and adjusted home market price.

Purchase price was calculated on the basis of the f.o.b. Japanese port price, with deductions for included transportation charges and, where appropriate, inspection fees and insurance costs.

Adjusted home market price was calculated on the basis of a weighted average of the delivered prices, with deductions for transportation costs. An adjustment was made for differences in credit charges and packing costs.

The comparisons revealed that purchase price was lower than the adjusted home market price.

The United States Tariff Commission is being advised of this determination.

This determination is published pursuant to section 201(c) of the Act (19 U.S.C. 160(c)).

[SEAL] JAMES B. CLAWSON,
Acting Assistant Secretary
of the Treasury.

[FR Doc.73-18862 Filed 9-4-73;8:45 am]

EXPANDED METAL, OF BASE METAL, FROM JAPAN

Antidumping; Withholding of Appraisal Notice

AUGUST 30, 1973.

Information was received on January 12, 1973, that expanded metal, of base metal, from Japan was being sold at less than fair value within the meaning of the Antidumping Act, 1921, as amended (19 U.S.C. 160 et seq.) (referred to in this notice as "the Act"). The information was the subject of an "Antidumping Proceeding Notice" which was published in the FEDERAL REGISTER of February 26, 1973, on page 5195. The "Antidumping Proceeding Notice" indicated that there was evidence on record concerning injury or likelihood of

injury or prevention of establishment of an industry in the United States.

Pursuant to section 201(b) of the Act (19 U.S.C. 160(b)), notice is hereby given that there are reasonable grounds to believe or suspect that the purchase price (section 203 of the Act; 19 U.S.C. 162) of expanded metal, of base metal, from Japan is less, or is likely to be less, than the foreign market value (section 205 of the Act; 19 U.S.C. 164).

Customs officers are being directed to withhold appraisement of expanded metal, of base metal, from Japan in accordance with section 153.48, Customs Regulations (19 CFR 153.48).

In accordance with sections 153.32(b) and 153.37, Customs Regulations (19 CFR 153.32(b), 153.37), interested persons may present written views or arguments, or request in writing that the Secretary of the Treasury afford an opportunity to present oral views.

Any requests that the Secretary of the Treasury afford an opportunity to present oral views should be addressed to the Commissioner of Customs, 2100 K Street NW., Washington, D.C. 20229, in time to be received by his office not later than September 12, 1973. Such requests must be accompanied by a statement outlining the issues wished to be discussed.

Any written views or arguments should likewise be addressed to the Commissioner of Customs in time to be received by his office not later than September 19, 1973.

This notice, which is published pursuant to § 153.34(a), Customs regulations (19 CFR 153.34(a)), shall become effective upon publication in the FEDERAL REGISTER. It shall cease to be effective on December 5, 1973, unless previously revoked.

[SEAL] JAMES B. CLAWSON,
Acting Assistant Secretary
of the Treasury.

[FR Doc.73-18863 Filed 9-4-73; 8:45 am]

DEPARTMENT OF THE INTERIOR
Bureau of Land Management
WORLAND DISTRICT ADVISORY BOARD
Notice of Meeting

AUGUST 28, 1973.

Notice is hereby given that the Worland, Wyoming, District Advisory Board will hold a business meeting on September 11, 1973, at the Worland District Office of the Bureau of Land Management, 1700 Robertson Avenue, Worland, Wyoming. The agenda for the meeting will include an explanation and discussion of the proposed Wyoming State district reorganization, weed and brush herbicide control and information on wildhorse regulations.

The meeting will be open to the public and will start at 9:30 a.m. m.d.t.

Any interested person may file a written statement for consideration by the board by sending it to the chairman, in care of the cochairman: Worland Dis-

trict Manager, P.O. Box 119, Worland, Wyoming 82401.

RICHARD E. CLEVELAND,
Worland District Manager.

[FR Doc.73-18706 Filed 9-4-73; 8:45 am]

National Park Service
NATIONAL REGISTRY OF NATURAL
LANDMARKS

Revision of List

Pursuant to authority contained in the Act of August 21, 1935 (49 Stat. 666, 16 U.S.C. 461), the National Park Service, Department of the Interior is administering and implementing a natural areas program, including the National Registry of Natural Landmarks. It is the purpose of this notice to revise the National Registry of Natural Landmarks as published in the FEDERAL REGISTER of January 29, 1972 at page 1496.

It is the purpose of this revised notice, through publication of the following information and list of sites, to apprise the public as well as governmental agencies, associations, and all other organizations and individuals interested in the preservation of nationally significant natural areas, of the objectives of the Natural Landmarks Program, of the methods used in identifying potential natural landmarks, and of the criteria used in evaluating natural areas. Sites listed in this notice have been determined to be eligible for inclusion in the National Registry of Natural Landmarks. Those which have been registered are indicated by an asterisk.

Dated August 16, 1973.

ERNEST ALLEN CONNALLY,
Associate Director,
National Park Service.

THE NATURAL LANDMARKS PROGRAM

I. THE NATIONAL REGISTRY OF NATURAL
LANDMARKS AND PROCEDURES FOR
REGISTRATION

A. Program Objective.—The objective of the Natural Landmarks Program is to assist in the preservation of a variety of significant natural areas which, when considered together, will illustrate the diversity of the country's natural history. This objective is attained through identification of sites eligible for inclusion in the national registry. Natural landmark registration is voluntary and does not change ownership.

Inclusion in the national registry is intended to (1) encourage the preservation of sites illustrating the geological and ecological character of the United States, (2) enhance the educational and scientific value of sites thus preserved, (3) strengthen cultural appreciation of natural history, and (4) foster a wider interest and concern in the conservation of the Nation's natural heritage.

B. Inventory of natural areas.—To provide a logical and scientific basis for the selection of natural landmarks which adequately represent the natural his-

tory of the United States the National Park Service has developed a system of natural history themes as follows:

LANDFORMS OF THE PRESENT

Plains, plateaus, mesas.
Cuestas and hogbacks.
Mountain systems.
Works of volcanism.
Hot water phenomena.
Sculpture of the land.
Eolian landforms.
River systems and lakes.
The work of glaciers.
Seashores, lakeshores, islands.
Coral islands, reefs, atolls.
Earthquake phenomena.
Caves and springs.
Meteor impact sites.

GEOLOGICAL HISTORY OF THE EARTH

Precambrian.
Cambrian—Early Silurian.
Late Silurian—Devonian.
Mississippian—Triassic.
Permian—Cretaceous.
Paleocene—Eocene.
Oligocene—Recent.

LAND ECOSYSTEMS

Tundra.
Boreal forest.
Pacific forest.
Dry coniferous forest and woodland.
Eastern deciduous forest.
Grassland.
Chaparral.
Deserts.
Tropical ecosystems.

AQUATIC ECOSYSTEMS

Marine environments.
Estuaries.
Streams.
Underground ecosystems.
Lakes and ponds.

A prime product of the natural history theme studies is an inventory of the country's natural areas. Evaluation focuses attention on these areas and often stimulates communities to take action in preserving significant sites.

C. Natural landmarks criteria.—The National Registry of Natural Landmarks parallels, at the national level, the National Register of Historic Places, in that it lists the natural areas that are nationally significant (natural landmarks) similar in importance to the historical or archeological areas that are nationally significant (national historic landmarks) listed in the National Register of Historic Places. The difference between the two registers is that the National Register of Historic Places includes, in addition to national historic landmarks, historic areas administered by the National Park Service and historic places of State and local significance.

To be eligible for natural landmark designation, a site must be nationally significant as possessing exceptional value or quality in illustrating or interpreting the natural heritage of our Nation, and must present a true, accurate, essentially unspoiled example of natural history.

Examples of the kinds of areas which could qualify for natural landmark designation are:

1. Outstanding geological formations or features significantly illustrating geologic processes.

2. Significant fossil evidence of the development of life on earth.

3. An ecological community significantly illustrating characteristics of a physiographic province or a biome.

4. A biota of relative stability maintaining itself under prevailing natural conditions, such as a climatic climax community.

5. An ecological community significantly illustrating the process of succession and restoration to natural condition following disruptive change.

6. A habitat supporting a vanishing, rare, or restricted species.

7. A relict flora or fauna persisting from an earlier period.

8. A seasonal haven for concentrations of native animals, or a vantage point for observing concentrated populations, such as a constricted migration route.

9. A site containing significant evidence illustrating important scientific discoveries.

10. Examples of the scenic grandeur of our natural heritage.

D. Implementation.—If, after study by the National Park Service, the site is considered to possess the requisite characteristics for eligibility, it is proposed to the Advisory Board on National Parks, Historic Sites, Buildings and Monuments of the Secretary of the Interior for consideration. The Advisory Board, authorized by the Act of August 21, 1935 (49 Stat. 667; 16 U.S.C. 463), is composed of 11 nonsalaried members who are appointed by the Secretary and who are competent in the fields of history, archeology, architecture, or human geography. The Advisory Board's recommendation is transmitted to the Secretary and, if approved by him, the Secretary may announce that the site is eligible for registration. The owner is then invited to apply for a certificate and bronze plaque designating the site a registered natural landmark.

Registration as a natural landmark requires agreement by the landowner to preserve, insofar as possible, the significant natural values contained in the site. In applying for such registration the owner agrees to so manage the site as to prevent the destruction or deterioration of the values upon which landmark status is based. He relinquishes none of his rights and privileges as to use of the land. Neither does the Department of the Interior gain any possessory interest in lands so designated, but will, upon request, provide consultative assistance in protecting and interpreting the natural values of the site.

Should the natural integrity of an eligible site deteriorate from either natural or man-induced causes, to the extent that national significance is lost, the site will be removed from the National Registry of Natural Landmarks.

The National Park Service will evaluate new sites and reevaluate designated sites periodically to determine their current eligibility for landmark status. Addi-

tions to and deletions from the National Registry of Natural Landmarks will be published at intervals in the FEDERAL REGISTER.

II. SITES ELIGIBLE FOR INCLUSION IN THE NATIONAL REGISTRY OF NATURAL LANDMARKS

(Sites which have been registered are indicated by an asterisk.)

ALABAMA

*Cathedral Caverns, Marshall County—4 miles northeast of Grant.

*Shelta Cave, Madison County—within city limits of Huntsville.

ALASKA

*Aniakchak Crater, 24 air miles southeast of Port Heiden.

*Arrigetch Peaks, 250 miles northwest of Fairbanks.

*Bogoslof Island, 25 miles north of Umnak Island in the Aleutian Archipelago.

*Brown Bear Refuge, 200 miles southwest of Anchorage.

*Clarence Rhode National Wildlife Range, on the Bering Sea coast between Hooper Bay and Kipruk.

*Lake George, 44 miles northeast of Anchorage.

*Malaspina Glacier, 25 miles west of Yakutat.

Middletown Island, 155 miles southeast of Anchorage.

*Mount Veniaminof, 20 miles northeast of Port Moller on the Alaska Peninsula.

*Shishaldin Volcano, 50 miles west of Cold Bay in the Aleutian Archipelago.

*Simeonof National Wildlife Refuge, in the Shumagin Island Group south of the Alaska Peninsula.

*Unga Island, in the Shumagin Island Group, 500 miles southwest of Anchorage.

*Walker Lake, 250 air miles northwest of Fairbanks.

*Walrus Islands, 375 miles southwest of Anchorage in Bristol Bay.

*Worthington Glacier, 30 miles east of Valdez.

AMERICAN SAMOA

Aunuu Island—Off the northeast coast of Tutuila Island.

Cape Taputapu—On the western tip of Tutuila Island.

Fogamoa Crater—On the southwest coast of Tutuila Island.

Leala Shoreline—On the southwest coast of Tutuila Island.

Matafao Peak—1½ miles south of the city of Pago Pago.

Rainmaker Mountain—East of Pago Pago Harbor.

Valava Strait—On the north-central coast of Tutuila Island.

ARIZONA

*Barringer Meteor Crater, Coconino County—15 miles west of Winslow.

Hualapai Valley Joshua Trees, Mohave County—45 miles north of Kingman.

*Patagonia-Sonoita Creek Sanctuary, Santa Cruz County—1 mile from Patagonia, south of Sierra Vista.

Willcox Playa, Cochise County—4 miles south of Willcox.

ARKANSAS

Mammoth Spring, Fulton County—north-east of Mammoth Spring.

CALIFORNIA

Amboy Crater, San Bernardino County—west of the town of Amboy.

*Audubon Canyon Ranch, Marin County—20 miles northwest of San Francisco.

Cinder Cone Natural Area, San Bernardino County—24 miles east of Baker.

*Elder Creek, Mendocino County—4 miles north of Branscomb.

*Emerald Bay, El Dorado County—16 miles south of Tahoe City.

*Miramar Mounds, San Diego County—12 miles north of central San Diego.

*Point Lobos, Monterey County—near Carmel.

*Pygmy Forest, Mendocino County—5 miles southeast of Fort Bragg.

*Rainbow Basin, San Bernardino County—8 miles north of Barstow.

*Rancho La Brea, Los Angeles County—Hancock Park, Wilshire Boulevard, Los Angeles.

*San Andreas Fault, San Benito County—at Cienega Winery, 8 miles south of Hollister.

*Sand Hills, Imperial County—15 miles west of Yuma.

Tijuana River Estuary, San Diego County—between the city of Imperial Beach and the U.S.-Mexico International Boundary.

*Trona Pinnacles, San Bernardino County—7 miles south of Argus.

Turtle Mountains Natural Area, San Bernardino County—30 miles south-southwest of Needles.

COLORADO

*Garden of the Gods, El Paso County—10 miles northeast of Pikes Peak.

Lost Creek Scenic Area, Park County—40 miles southwest of Denver.

Raton Mesa, Las Animas County—10 miles south of Trinidad.

Slumgullion Earthflow, Hinsdale County—2 miles south of Lake City.

*Summit Lake, Clear Creek County—13 miles southwest of Idaho Springs.

CONNECTICUT

*Bartholomew's Cobble, Litchfield County, Conn. and Berkshire County, Mass., 1 mile west of Ashley Falls, Mass. (See also Massachusetts.)

Bingham Pond Bog, Litchfield County—1 mile east of the New York State boundary.

Chester Cedar Swamp, Middlesex County—2 miles west-southwest of the village of Chester.

*Dinosaur Trackway, Hartford County—5 miles south of Hartford.

Pachaug-Great Meadow Swamp, New London County—1½ miles northeast of the village of Voluntown.

FLORIDA

*Big Cypress Bend, Collier County—1 mile west of Florida 29 on Tamiami Trail (U.S. 41).

*Corkscrew Swamp Sanctuary, Collier County—25 miles southeast of Fort Myers.

*Ichetucknee Springs, Columbia and Suwannee Counties—Ichetucknee Springs State Park, 22 miles southwest of Lake City.

Lignumvitae Key, Monroe County—one-half mile north of U.S. 1 causeway, near north end of Matecumbe Key.

*Manatee Springs, Levy County—Manatee Springs State Park, 50 miles west-southwest of Gainesville.

*Rainbow Springs, Marion County—4 miles north-northeast of Dunnellon.

*Reed Wilderness Seashore Sanctuary, Martin County—8 miles south of Stuart.

*Silver Springs, Marion County—5 miles northeast of Ocala.

*Wakulla Springs, Wakulla County—15 miles south of Tallahassee.

GEORGIA

*Cason J. Callaway Memorial Forest, Harris County—1 mile west of Hamilton.

*Marshall Forest, Floyd County—near Rome.

*Wassaw Island, Chatham County—14 miles south of Savannah, in the Atlantic Ocean.

GUAM

**Facpi Point*—On the southwest coast of Guam.

**Fouha Point*—On the southwest coast of Guam—1 mile northwest of the village of Umatac.

**Mount Lamiam*—3 miles north-northeast of the village of Umatac.

**Punta de Dos Amantes*—2 miles north of the village of Tumon.

HAWAII

**Diamond Head, Island of Oahu*—in city of Honolulu.

**Iao Valley, Island of Maui*—West of the city of Wailuku.

**Kanaha Pond, Island of Maui*—1 mile west of Kahului Airport.

**Koolau Range Pali, Island of Oahu*—3 miles south of the village of Kaneohe, Koolau District.

**Makalawena Marsh, Island of Hawaii*—near Kawikahale Point.

**Mauna Kea, Island of Hawaii*—25 miles west-northwest of the city of Hilo.

**North Shore Cliffs, Island of Molokai*—Between the villages of Halawa and Kalaupapa.

IDAHO

**The Great Rift, Power County*—25 miles northwest of American Falls.

ILLINOIS

**Allerton Natural Area, Piatt County*—28 miles southwest of Champaign.

**Forest of the Wabash, Wabash County*—3 miles south of Mount Carmel.

**Heron Pond and Wildcat Bluff Nature Preserve, Johnson County*—5 miles southwest of Vienna.

**Horseshoe Lake Nature Preserve, Alexander County*—11 miles northwest of Cairo.

**Mississippi Palisades, Carroll County*—North of Savanna.

**Volo Bog Nature Preserve, Lake County*—1½ miles north-northwest of Volo.

**Wauconda Bog Nature Preserve, Lake County*—South of the village of Wauconda.

INDIANA

**Bear Creek Canyon, Fountain County*—7 miles northeast of Covington.

**Big Walnut Creek, Putnam County*—35 miles west of Indianapolis.

**Cowles Bog, Porter County*—10 miles west of Michigan City.

**Donaldson Cave System and Woods, Lawrence County*—Spring Mill State Park, 5 miles east of Mitchell.

**Ohio Coral Reef (Falls of the Ohio)*—in Ohio River, between Jeffersonville, Ind., and Louisville, Ky. (See also Kentucky.)

**Pine Hills Natural Area, Montgomery County*—15 miles west-southwest of Crawfordsville.

**Pinhook Bog, La Porte County*—4 miles south of Waterford.

**Rise at Orangeville, Orange County*—south of West Road in Orangeville.

**Tolliver Swallowhole, Orange County*—4 miles north-northwest of Paoli.

**Wesley Chapel Gulf, Orange County*—2 miles east-southeast of Orangeville.

**Wyandotte Cave, Crawford County*—Harrison-Crawford State Forest, 30 miles west of New Albany.

IOWA

**Cayler Prairie, Dickinson County*—5 miles west of West Okoboji.

**Hayden Prairie, Howard County*—12 miles northwest of Cresco.

**White Pine Hollow Preserve, Dubuque County*—20 miles northwest of Dubuque.

KANSAS

**Baker University Wetlands, Douglas County*—3 miles south of Lawrence.

**Monument Rocks Natural Area, Gove County*—23 miles south of Oakley.

KENTUCKY

**Lilly Cornett Woods, Letcher County*—25 miles southeast of Hazard.

**Ohio Coral Reef (Falls of the Ohio)*—in Ohio River between Louisville, Ky., and Jeffersonville, Ind. (See also Indiana.)

MAINE

**Colby-Marston Preserve, Kennebec County*—2 miles north of the village of Belgrade.

**Crystal Bog, Aroostook County*—4 miles southeast of Patten.

**Gulf Hayas, Piscataquis County*—14 air miles east of Greenville.

**Meddybemps Heath, Washington County*—3 miles west of the village of Meddybemps.

**Monhegan Island, Lincoln County*—10 miles south of Port Clyde, in the Atlantic Ocean.

**Mount Katahdin, Piscataquis County*—20 miles north of Millinocket.

**Orono Bog, Penobscot County*—6 miles southwest of Old Town.

**Passadumkeag Marsh and Boglands, Penobscot County*—2 miles east of Passadumkeag.

**Penney Pond—Joe Pond Complex, Kennebec County*—2½ miles south of the village of Belgrade.

MARYLAND

**Battle Creek Cypress Swamp, Calvert County*—on Md. 506, between Bowens and Port Republic.

**Cranesville Swamp Nature Sanctuary, Garrett County, Md., and Preston County, W. Va.*—9 miles north of Terra Alta, W. Va. (See also West Virginia.)

**Sugar Loaf Mountain, Frederick County*—16 miles south of Frederick.

MASSACHUSETTS

**Acushnet Cedar Swamp, Bristol County*—northwest of New Bedford.

**Bartholomew's Cobble, Berkshire County, Mass., and Litchfield County, Conn.*—1 mile west of Ashley Falls, Mass. (See also Connecticut.)

**Fannie Stebbins Refuge, Hampden County*—5 miles south of Springfield.

**Gay Head Cliffs, Dukes County*—on western tip of Martha's Vineyard.

**Lynnfield Marsh, Essex and Middlesex Counties*—between Wakefield and South Lynnfield.

**Poutwater Pond, Worcester County*—north of Holden.

MICHIGAN

**Grand Mere Lakes, Berrien County*—2 miles southwest of Stevensville.

**Warren Woods Natural Area, Berrien County*—3 miles north of Three Oaks.

MINNESOTA

**Ancient River Warren Channel, Traverse and Big Stone Counties, Minn., and Roberts County, S. Dak.*—near Browns Valley, Minn. (See South Dakota.)

**Itasca Natural Area, Clearwater County*—30 miles southwest of Bemidji.

**Lake Agassiz Peatlands, Koochiching County*—30 airline miles south of International Falls.

MISSISSIPPI

**Chestnut Oak Disjunct, Calhoun County*—16 miles north of Bruce.

**Mississippi Petrified Forest, Madison County*—17 miles north of Jackson.

MISSOURI

**Maramec Spring, Phelps County*—Maramec Spring Park, 8 miles southeast of St. James.

**Mark Twain and Cameron Caves, Marion County*—2 miles southeast of Hannibal.

**Marvel Cave, Stone County*—50 miles south of Springfield.

MONTANA

**Bug Creek Fossil Area, McCone County*—34 miles southeast of Port Peck.

**Glacial Lake Missoula, Sanders County*—12 miles north of Perma.

**Hell Creek Fossil Area, Garfield County*—16 miles north of Jordan.

NEBRASKA

**Fontenelle Forest, Sarpy County*—1 mile south of Omaha.

NEVADA

**Hot Creek Springs and Marsh, Nye County*—35 miles south of Lund.

**Ichthyosaur Site, Nye County*—20 miles east of the town of Gabbs.

**Lunar Crater, Nye County*—70 miles east-northeast of Tonopah.

**Ruby Marsh, Elko and White Pine Counties*—50 miles south-southeast of Elko.

**Timber Mountain Caldera, Nye County.*

**Valley of Fire, Clark County*—35 miles northeast of Las Vegas.

NEW HAMPSHIRE

**East Inlet Natural Area, Coos County*—northeast of Second Connecticut Lake.

**Floating Island, Coos County*—2½ miles east-northeast of Errol.

**Franconia Notch, Grafton County*—16 miles south of Littleton.

**Heath Pond Bog, Carroll County*—2 miles northeast of Center Ossipee.

**Madison Boulder, Carroll County*—3 miles north of Madison.

**Pondicherry Wildlife Refuge, Coos County*—2 miles northeast of Whitefield Airport in Jefferson.

**Spruce Hole Bog, Strafford County*—2 miles west-southwest of Durham.

NEW JERSEY

**Great Falls of Paterson, Passaic County*—Paterson.

**Great Swamp, Morris County*—7 miles south of Morristown.

**Moggy Hollow Natural Area, Somerset County*—2 miles east of Far Hills.

**Riker Hill Fossil Site, Essex County*—in the borough of Roseland.

**Stone Harbor Bird Sanctuary, Cape May County*—Stone Harbor Borough.

**Sunfish Pond, Warren County*—3 miles northeast of the Delaware Water Gap.

**Troy Meadows, Morris County*—near Troy Hills.

NEW MEXICO

**Grants Lava Flow, Valencia County*—extends about 25 miles south from Grants, between New Mexico 117 on the east and New Mexico 53 on the west.

NEW YORK

**Bear Swamp, Albany County*—3 miles south of the village of Westerlo.

**Bergen-Byron Swamp, Genesee County*—between Bergen and Byron.

**Big Reed Pond, Suffolk County*—3 miles west of Montauk Point.

**Deer Lick Nature Sanctuary, Cattaraugus County*—4 miles southeast of Gowanda.

**Dexter Marsh, Jefferson County*—2 miles southwest of the town of Dexter.

**Ellenville Fault-Ice Caves, Ulster County*—5 miles southeast of Ellenville.

**Fall Brook Gorge, Livingston County*—1½ miles south of Genesee.

**Fossil Coral Reef, Genesee County*—4 miles northwest of Le Roy.

**Gardiner's Island, Suffolk County*—100 miles east of New York City, in Block Island Sound off Long Island.

**Hart's Woods, Monroe County*—10 miles southeast of Rochester.

*Ironaides Island, Jefferson and St. Lawrence Counties—in St. Lawrence River, 8 miles northeast of town of Alexandria Bay.
 *Lakeview Marsh and Barrier Beach, Jefferson County—20 miles southwest of Watertown.

*McLean Bogs, Tompkins County—1½ miles east-southeast of the village of McLean.

*Mendon Ponds Park, Monroe County—11 miles south of Rochester.

*Mianus River Gorge, Westchester County—2 miles south of Bedford.

*Montezuma Marshes, Seneca County—4 miles northeast of Seneca Falls.

*Moss Lake Bog, Allegany County—2 miles southwest of Houghton.

*Oak Orchard Creek Marsh, Genesee and Orleans Counties—7 miles south-southeast of Medina.

*Petrified Gardens, Saratoga County—4 miles west of Saratoga Springs.

*Round Lake, Onondaga County—2 miles northeast of Fayetteville.

*Thompson Pond, Dutchess County—20 miles east of Kingston.

*Zurich Bog, Wayne County—9 miles north of the city of Newark.

NORTH DAKOTA

*Two-Top Mesa and Big Top Mesa, Billings County—14 airline miles northwest of Fairfield.

OHIO

*Brown's Lake Bog, Wayne County—11 miles southwest of Wooster.

*Buzsardroost Rock-Lynx Prairie, Adams County—75 miles east of Cincinnati.

*Cedar Bog, Champaign County—7 miles north of Springfield.

*Clear Fork Gorge, Ashland County—4 miles south of Loudenville.

*Clifton Gorge, Greene County—10 miles south of Springfield.

*Cranberry Bog, Licking County—20 miles east of Columbus.

*Dysart Woods, Belmont County—11 miles southwest of St. Clairsville.

*Glacial Grooves State Memorial, Erie County—on Kelleys Island, 5 miles off-shore from Marblehead.

*Glen Helen Natural Area, Greene County—in Yellow Springs.

*Holden Natural Areas, Lake and Geauga Counties—30 miles east of Cleveland.

*Hueston Woods, Butler and Preble Counties—4½ miles north of Oxford.

*Mentor Marsh, Lake County—near Painesville.

*Tinkers Creek Gorge, Cuyahoga County—12 miles southeast of Cleveland.

OREGON

*Crown Point, Multnomah County—24 miles east of Portland.

*Horse Ridge Natural Area, Deschutes County—16 miles southeast of Bend.

*John Day Fossil Beds, Grant County—40 miles west of town of John Day on Oregon 19.

PENNSYLVANIA

*Bear Meadows Natural Area, Centre County—6 miles southeast of State College.

*Box Huckleberry Site, Perry County—1 mile south of New Bloomfield.

*Cook Forest, Clarion County—Cook Forest State Park.

*Ferncliff Peninsula Natural Area, Fayette County—Ohio State Park, 20 miles southeast of Connellsville.

*Ferncliff Wildflower and Wildlife Preserve, Lancaster County—3 miles west of Wakefield.

*Florence Jones Reineman Wildlife Sanctuary, Perry and Cumberland Counties—8 miles northwest of Carlisle.

*Hawk Mountain Sanctuary, Berks County—30 miles north of Reading.

*Hearts Content Scenic Area, Warren County—14 miles southwest of Warren.

*Hemlocks Natural Area, Perry County—12 miles south of Blain.

*Hickory Run Boulder Field, Carbon County—in the Pocono Plateau region.

*Lake Lacawac, Wayne County—25 miles east of Scranton.

*McConnell's Mill State Park, Lawrence County—40 miles north of Pittsburgh.

*Pine Creek Gorge, Tioga County—12-mile roadless stretch between Ansonia and Blackwell.

*Presque Isle, Erie County—near the city of Erie.

*Snyder-Middleswarth Natural Area, Snyder County—5 miles west of Troxelville.

*Susquehanna Water Gaps, Perry County—18 miles north of Harrisburg.

*The Glens Natural Area, Sullivan and Luzerne Counties—in Ricketts Glen State Park, 25 miles east of Williamsport.

*Tincicum Wildlife Preserve, Philadelphia County—Philadelphia.

*Tionesta Scenic and Research Natural Areas, Warren and McKean Counties—7 miles south of Ludlow.

*Wissahickon Valley, Philadelphia County—Fairmount Park, Philadelphia.

SOUTH DAKOTA

*Ancient River Warren Channel, Roberts County, S. Dak., and Traverse and Big Stone Counties, Minn., near Browns Valley, Minn. (See also Minnesota.)

*Bear Butte, Meade County—5 miles north of Fort Meade.

*Fort Randall Eagle Roost, Charles Mix County—directly below Fort Randall Dam, on the Missouri River.

*Sieche Hollow, Marshall and Roberts Counties—10 miles northwest of Sisseton.

*Snake Butte, Washabaugh County—Pine Ridge Reservation.

TENNESSEE

*Dick Cove, Franklin County—2½ miles northwest of Sewanee.

*McAnulty's Woods, Hardeman County—within the city limits of Bolivar.

*Reelfoot Lake, Lake and Obion Counties—near Tiptonville.

*Savage Gulf, Grundy County—25 miles southeast of McMinnville.

TEXAS

*Attwater Prairie Chicken Preserve, Colorado County—55 miles west of Houston.

*Caverns of Sonora, Sutton County—16 miles southwest of Sonora.

*Devil's Sinkhole, Edwards County—9 miles northeast of Rocksprings.

*Dinosaur Valley, Somervell County—just west of Glen Rose.

*Enchanted Rock, Llano and Gillespie Counties—12 miles southwest of Oxford.

*Ezell's Cave, Hays County—within city limits of San Marcos.

*Longhorn Cavern, Burnet County—Longhorn Cavern State Park, 11 miles southwest of Burnet.

*Natural Bridge Caverns, Comal County—16 miles west of New Braunfels.

*Odessa Meteor Crater, Ector County—10 miles southwest of Odessa.

*Santa Ana National Wildlife Refuge, Hidalgo County—7 miles south of Alamo.

UTAH

*Cleveland-Lloyd Dinosaur Quarry, Emery County—7 miles east of Cleveland.

*Joshua Tree Natural Area, Washington County—10 miles southwest of St. George.

VERMONT

*Barton River Marsh, Orleans County—3 miles south of Newport.

*Camel's Hump, Chittenden and Washington Counties—midway between Montpelier and Burlington.

*Franklin Bog, Franklin County—1 mile east-northeast of the village of Franklin.

*Lake Willoughby Natural Area, Orleans County—Westmore Township.

*Little Otter Creek Marsh, Addison County—2 miles north-northwest of Ferrisburg.

*Molly Bog, Lamoille County—3½ miles northeast of the village of Stowe.

VIRGINIA

*Great Dismal Swamp, Nansemond County—20 miles west of Norfolk.

*Seashore Natural Area—Virginia Beach, near Cape Henry.

WASHINGTON

*Ginkgo Petrified Forest, Kittitas County—29 miles east of Ellensburg.

*Grand Coulee, Grant County—between towns of Grand Coulee and Soap Lake.

*Mima Mounds, Thurston County—west of Little Rock.

*Nisqually Delta, Pierce and Thurston Counties—15 miles east of Olympia.

*Point of Arches, Clallam County—10 miles south of Cape Flattery.

*Steptoe Butte, Whitman County—50 miles south of Spokane.

WEST VIRGINIA

*Cathedral Park, Preston County—4 miles west of U.S. 219, on U.S. 50.

*Cranesville Swamp Nature Sanctuary, Preston County, W. Va., and Garrett County, Md.—9 miles north of Terra Alta, W. Va. (See also Maryland.)

*Germany Valley Karst Area, Pendleton County—between Riverston and Mouth of Seneca.

WISCONSIN

*Ridges Sanctuary, Door County—60 miles northeast of Green Bay.

WYOMING

*Como Bluff, Carbon and Albany Counties—5 miles east of Medicine Bow.

*Crooked Creek Natural Area, Big Horn County—15 miles northeast of Lovell.

*Lance Creek Fossil Area, Niobrara County—25 miles north of Lusk.

*Two Ocean Pass, Teton County—on the Continental Divide in Teton National Forest.

[FR Doc.73-18582 Filed 9-4-73;8:45 am]

Office of the Secretary

[INT FES 73-51]

CASCADE IRRIGATION DISTRICT REHABILITATION & BETTERMENT PROGRAM, YAKIMA, WASH.

Availability of Supplement to Final Environmental Statement

The Department of the Interior has prepared a supplement to the Final Environmental Statement on the rehabilitation and betterment program for the Cascade Irrigation District in central Washington. The supplement was prepared as a result of changes in the project proposal.

Copies are available for inspection at the following locations:

Office of Ecology, Room 7620, Bureau of Reclamation
 Department of the Interior
 Washington, D.C. 20240
 Telephone: (202) 234-4991
 Division of Engineering Support, Technical Services Branch
 E & R Center, Denver Federal Center
 Denver, Colorado 80235
 Telephone: (303) 234-3007
 Office of the Regional Director, Bureau of Reclamation

P.O. Box 043, Boise, Idaho 83724
 Telephone: (208) 342-2711, Ext. 2109
 Yakima Project Office, Bureau of Reclamation
 P.O. Box 1377, Yakima, Washington 98901
 Telephone: (509) 248-4810, Ext. 316

Single copies of the draft statement may be obtained on request to the Commissioner of Reclamation or the Regional Director. In addition, copies may be purchased from the National Technical Information Service, Department of Commerce, Springfield, Virginia 22151. Please refer to the statement number above.

Dated August 29, 1973.

JOHN M. SEIDL,
 Deputy Assistant
 Secretary of the Interior.

[FR Doc. 73-18723 Filed 9-4-73; 8:45 am]

DEPARTMENT OF AGRICULTURE

Soil Conservation Service

NARGE CREEK FLOOD PREVENTION PROJECT MEASURE, TRADEWATER RIVER AREA PROJECT, KY.

Availability of Final Environmental Statement

Pursuant to section 102(2)(C) of the National Environmental Policy Act of 1969, the Soil Conservation Service, Department of Agriculture has prepared a final environmental statement for the Narge Creek Flood Prevention Project Measure, USDA-SCS-RC&D-ES-(ADM)-73-RD-1(F).

The environmental statement concerns a plan for flood prevention and land drainage. The planned works of improvement include conservation land treatment, supplemented by 6.2 miles of channel modification.

The final environmental statement was filed with CEQ on August 21, 1973.

Copies are available for inspection during regular working hours at the following locations:

USDA, Soil Conservation Service
 Washington Office, South Agriculture Building
 Room 5105A, 12th Street and Independence Avenue SW,
 Washington, D.C. 20250

USDA, Soil Conservation Service
 333 Waller Avenue
 Lexington, Kentucky 40504
 Narge Creek Project, Kentucky
 Notice of Availability of Final Environmental Statement

Copies are also available from the National Technical Information Service, U.S. Department of Commerce, Springfield, Va. 22151, for \$4 each. Please refer to the name and number of statement when ordering.

Copies of the environmental statement have been sent to various Federal, State, and local agencies as outlined in the Council on Environmental Quality Guidelines.

(Catalog of Federal Domestic Assistance Program No. 10.901, National Archives Reference Services.)

Dated August 28, 1973.

EARL E. FENTON,
 Acting Deputy Administrator for
 Field Services, Soil Conservation
 Service.

[FR Doc. 73-18741 Filed 9-4-73; 8:45 am]

POCOTALICO RIVER BASIN JOINT SURVEY—INTERIM REPORT, W. VA. Availability of Final Environmental Statement

Pursuant to section 102(2)(C) of the National Environmental Policy Act of 1969, the Soil Conservation Service, U.S. Department of Agriculture, and the Corps of Engineers, U.S. Department of the Army, have prepared a final environmental statement for the Pocotalico River Basin Joint Survey—Interim Report, Roane, Jackson, Putnam, and Kanawha Counties, West Virginia, USDA-SCS-ES-RB-(LEG)-73-1(F).

The environmental statement concerns an interim plan to provide a water supply source for four small rural communities, as well as measures for flood prevention, streamflow regulation, incidental recreation, and watershed protection. The planned works of improvement consist of two multiple-purpose structures for floodwater and sediment detention, water supply, and streamflow regulation storage. Incidental recreation facilities will be installed at both sites. Conservation land treatment will be applied on the drainage areas above the two structures.

The final environmental statement was transmitted to CEQ on August 24, 1973.

Copies are available for inspection during regular working hours at the following locations:

Soil Conservation Service, USDA, South Agriculture Building,
 Room 5227, 14th and Independence Avenue SW,
 Washington, D.C. 20250
 Soil Conservation Service, USDA, 209 Prairie Avenue
 P.O. Box 865
 Morgantown, West Virginia 26505

Copies are available for purchase from the National Technical Information Service, U.S. Department of Commerce, Springfield, Virginia 22151. Please order by name and number of statement given above. The estimated cost is \$5.50.

(Catalog of Federal Domestic Assistance Program No. 10.906, National Archives Reference Services.)

Dated August 28, 1973.

J. W. HAAS,
 Acting Deputy Administrator
 for Water Resources, Soil
 Conservation Service, USDA.

[FR Doc. 73-18742 Filed 9-4-73; 8:45 am]

DEPARTMENT OF COMMERCE National Technical Information Service GOVERNMENT-OWNED INVENTIONS Notice of Availability for Licensing

The inventions listed below are owned by the U.S. Government and are available for licensing in accordance with the GSA Patent Licensing Regulations.

Copies of patent applications, either paper copy (PC) or microfiche (MF), can be purchased from the National Technical Information Service (NTIS), Springfield, Virginia 22151, at the prices cited. Requests for copies of patent applications must include the PAT-APPL number and the title. Requests for licensing information should be directed to the address cited with each copy of the patent application.

Paper copies of patents cannot be purchased from NTIS but are available from the Commissioner of Patents, Washington, D.C. 20231, at \$0.50 each. Requests for licensing information should be directed to the address cited below for each agency.

DOUGLAS J. CAMPION,
 Patent Program Coordinator,
 National Technical Information
 Service.

- U.S. DEPARTMENT OF HEALTH, EDUCATION AND WELFARE, National Institutes of Health, Chief, Patent Branch, Westwood Building, Bethesda, Maryland 20014.
 Patent Application 291,180 Direct Digital Control Pipette; filed 22 September 1972; PC\$3.00/MF\$0.95.
 Patent Application 354,098 Isolation and Purification of Active Principle, Fruit of *Synsepalum Dulcificum* and Method of Treatment of Obesity; filed 24 April 1973; PC\$3.00/MF\$0.95.
 Patent Application 275,777 Countercurrent Chromatography with Flow Through Coil Planet Centrifuge; filed 27 July 1972; PC\$3.00/MF\$0.95.
 Patent Application 330,647 Non Contact Photographic Identification Device or Labeling Gamma Camera Images; filed 8 February 1973; PC\$3.00/MF\$1.45.
 Patent 3,715,281 Transgrow; filed 23 October 1970, patented 6 February 1973; not available NTIS.
 U.S. DEPARTMENT OF COMMERCE, Assistant General Counsel for Administration, Washington, D.C. 20230.
 Patent 3,312,949 Stack Forming Synchronizer for a Sorting Machine; filed 6 April 1964, patented 4 April 1967, not available NTIS.
 Patent 3,410,100 High Vacuum Baffle Using Cooled Chevron Shaped Members; filed 18 March 1965, patented 12 November 1968; not available NTIS.
 Patent 3,571,597 System for Phase Stabilizing Widely Separated Oscillators; filed 14 October 1969, patented 23 March 1971; not available NTIS.
 Patent 3,329,957 Antenna System Employing Human Body as Radiator; filed 5 May 1969, patented 4 July 1967; not available NTIS.
 Patent 3,397,392 Information Storage and Category Selector; filed 31 October 1966, patented 13 August 1968; not available NTIS.
 Patent 3,273,160 Identifying Recorder with Illumination Means; filed 15 May 1964, patented 13 September 1966; not available NTIS.

U.S. ATOMIC ENERGY COMMISSION, Assistant General Counsel for Patents, Washington, D.C. 20545.

Patent Application 223,270 A Hemodialyzer with Tapered Slit Blood Ports and Baffles; filed 3 February 1972; PC\$3.00/MP\$0.95.

U.S. DEPARTMENT OF THE INTERIOR, Branch of Patents, 18th and C Streets NW., Washington, D.C. 20240.

Patent Application 50,313 Removal of Sulfur Oxides from Gases with Calcium Phosphates and Phosphate Rock; filed 26 June 1970; PC\$3.00/MP\$0.95.

Patent 3,739,077 Multiple Conductor Bundle Support and Spacer; filed 31 May 1972, patented 12 June 1973; not available NTIS.

Patent 3,737,384 Decomposition of Halogenated Organic Compounds Using Metallic Couples; filed 23 December 1970, patented 5 June 1973; not available NTIS.

Patent 3,725, 235 Dynamically Formed Electrolysis Membranes; filed 23 March 1971, patented 3 April 1973; not available NTIS.

Patent 3,725,260 Separation of Pesticides from Lipids by GEL Permeation Chromatography; filed 28 December 1971, patented 3 April 1973; not available NTIS.

[FR Doc.73-18726 Filed 9-4-73; 8:45 am]

Office of the Secretary

ESTIMATES OF VOTING AGE POPULATION; JULY 1, 1972

Correction

In FR Doc. 73-13896 appearing at page 18476 in the issue of Wednesday, July 11, 1973, make the following changes:

1. The first entry in the second column for the State of Alabama reading "2,249" should read "2,294".

2. The eighteenth entry in the second column for the State of California reading "424" should read "324".

3. The first entry in the second column for the State of Maryland reading "2,697" should read "2,679".

4. The ninth entry in the second column for the State of Texas reading "228" should read "288".

DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT

[Docket No. D-73-253]

ASSISTANT REGIONAL ADMINISTRATOR ET AL.

Delegation of Authority

The officers appointed to the following listed positions in Region IX (San Francisco) are hereby designated to serve as Acting Deputy Regional Administrator, Region IX (San Francisco), during a vacancy in the position of, or during the absence of, the Deputy Regional Administrator, with all the powers, functions, and duties re-delegated or assigned to the Deputy Regional Administrator: *Provided*, That no officer is authorized to serve as Acting Deputy Regional Administrator unless all other officers whose titles precede his in this designation are unable to act by reason of absence: *Provided, further*, That if an officer designated below is serving as Acting Regional Administrator, the officer whose title follows his in this designation shall serve as Acting Deputy Regional Administrator:

1. Assistant Regional Administrator for Administration.
2. Assistant Regional Administrator for Equal Opportunity.
3. Assistant Regional Administrator for Housing Management.
4. Regional Counsel.
5. Assistant Regional Administrator for Community Development.
6. Assistant Regional Administrator for Housing Production and Mortgage Credit.
7. Assistant Regional Administrator for Community Planning and Management.

This designation supersedes the designation effective as of January 8, 1973 (38 FR 8188, March 29, 1973).

Effective as of the 6th day of August, 1973.

ROBERT H. BAIDA,
Regional Administrator,
Region IX (San Francisco).

[FR Doc.73-18708 Filed 9-4-73; 8:45 am]

[Docket No. D-73-253]

DEPUTY REGIONAL ADMINISTRATOR REGION IX, ET AL.

Delegation of Authority

The officers appointed to the following listed positions in Region IX (San Francisco) are hereby designated to serve as Acting Regional Administrator, Region IX (San Francisco), during the absence of the Regional Administrator with all the powers, functions, and duties re-delegated or assigned to the Regional Administrator: *Provided*, That no officer is authorized to serve as Acting Regional Administrator unless all other officers whose title precede his in this designation are unable to act by reason of absence:

1. Deputy Regional Administrator.
2. Assistant Regional Administrator for Administration.
3. Assistant Regional Administrator for Equal Opportunity.
4. Assistant Regional Administrator for Housing Management.
5. Regional Counsel.
6. Assistant Regional Administrator for Community Development.
7. Assistant Regional Administrator for Housing Production and Mortgage Credit.
8. Assistant Regional Administrator for Community Planning and Management.

(Delegation effective May 4, 1962, 27 FR 4319; Interim Order II, 31 FR 815, January 21, 1966.)

This designation supersedes the designation effective as of January 8, 1973 (38 FR 7414, March 21, 1973).

Effective as of the 6th day of August, 1973.

ROBERT H. BAIDA,
Regional Administrator
Region IX (San Francisco).

[FR Doc.73-18707 Filed 9-4-73; 8:45 am]

DEPARTMENT OF TRANSPORTATION

Federal Highway Administration

CONNECTICUT

Proposed Action Plan

The Connecticut Department of Transportation has submitted to the

Federal Highway Administration of the U.S. Department of Transportation a proposed Action Plan as required by Policy and Procedure Memorandum 90-4 issued on June 1, 1973. The Action Plan outlines the organizational relationships, the assignments of responsibility, and the procedures to be used by the State to assure that economic, social and environmental effects are fully considered in developing highway projects and that final decisions on highway projects are made in the best overall public interest, taking into consideration: (1) needs for fast, safe and efficient transportation; (2) public services; and (3) costs of eliminating or minimizing adverse effects.

The proposed Action Plan is available for public review at the following locations:

1. Connecticut Department of Transportation
Room 203
24 Wolcott Hill Road
Wethersfield, Connecticut 06109
2. Federal Highway Administration
Division Office
990 Wethersfield Avenue
Hartford, Connecticut 06114
3. FHWA Regional Office—Region 1
4 Normanskill Boulevard
Delmar, New York 12054
4. U.S. Department of Transportation
Federal Highway Administration
Environmental Development Division
Nassif Building, Room 3246
400 7th Street, S.W.
Washington, D.C. 20590

Comments from interested groups and the public on the proposed Action Plan are invited. Comments should be sent to the FHWA Regional Office shown above before September 28, 1973.

Issued on August 30, 1973.

NOBERT T. TIEMANN,
Federal Highway Administrator.

[FR Doc.73-18718 Filed 9-4-73; 8:45 am]

National Highway Traffic Safety Administration

[Docket No. EX 73-8; Notice 1]

AVANTI MOTOR CORPORATION

Petition for Temporary Exemption

Avanti Motor Corporation of South Bend, Indiana, has applied for temporary exemption of its Avanti II from portions of Standard No. 208 and Standard No. 215 on grounds of substantial economic hardship.

Avanti manufactures 100 to 125 passenger cars a year. It requests an exemption until January 1, 1974, from the seat belt interlock requirements of 49 CFR 571.208, Standard No. 208 (paragraph S4.1.2.3) and an exemption until September 1, 1976, from the bumper corner impact requirements of 49 CFR 571.215, Standard No. 215 (paragraph S5.2).

In support of its petition for a 4-month exemption from the interlock requirements Avanti states that the hardship is caused "by the mere fact that we do not have the 1974 required interlock system

available, and will not be able to secure both the components and the electrical mechanism to operate those components before our 1974 model", scheduled for introduction January 1, 1974. The interlock option was published as an amendment to Standard No. 208 on February 24, 1972 (37 FR 3911). Avanti has been working on its system since January 1973, and intends to incorporate components from systems manufactured by General Motors, American Motors, Checker Motors, and Jim Robbins Seat Belt Co. Avanti does not explain why these components will not be available for its use as of September 1, 1973, the effective date of the interlock option. Forty vehicles are scheduled for production during the requested exemption period.

Avanti petitions for a 3-year exemption from Standard No. 215 on the basis of the need to liquidate \$93,345 of inventory of noncomplying parts, and to re-design and retool front and rear bumpers and fenders. It states that "studies and prototype work have been conducted over the past year" and it briefly describes modifications "which we are presently developing by hand for testing" that it hopes will meet the corner impact requirements. Avanti estimates that its existing tooling can be modified during the 3-year exemption period for \$38,000. Lead time on most steel components in small volume is estimated as 15 to 18 months, and the company states that it is difficult, owing to its small size, to find sources interested in producing a low volume of components to its specifications.

Avanti has submitted an itemized list of affected components in inventory showing unit cost, total cost, and estimated cost to modify existing tooling. It has also submitted financial information for the period August 1, 1964, to September 30, 1972. The company submits that its net worth at the end of fiscal year 1972 was \$303,587.09 and its net income after Federal income taxes \$23,235.50. The financial statements for the last 3 years were prepared without audit and the preparing certified public accountant expresses no opinion on them.

This notice of receipt of a petition for a temporary exemption is published in accordance with the NHTSA regulations on this subject (49 CFR 555.7), and does not represent any agency decision or other exercise of judgment concerning the merits of the petition.

Interested persons are invited to submit comments on the petition of Avanti described above. Comments should refer to the docket number and be submitted to: Docket Section, National Highway Traffic Safety Administration, Room 5221, 400 Seventh Street, S.W., Washington, D.C. 20590. It is requested but not required that five copies be submitted.

All comments received before the close of business on the comment closing date indicated below will be considered. The application and supporting materials, and all comments received, are available for examination in the docket

both before and after the closing date. Comments received after the closing date will also be filed and will be considered to the extent possible. Notice of disposition of the petition will be published in the FEDERAL REGISTER pursuant to the authority indicated below.

Comment closing date.—OCTOBER 5, 1973.

Proposed effective date.—Date of issuance of exemption.

(Sec. 3, Pub. L. 92-548, 86 Stat. 1159, 15 U.S.C. 1410; delegations of authority at 49 CFR 1.51 and 49 CFR 501.8.)

Issued on AUGUST 28, 1973.

ELWOOD T. DRIVER,
Acting Associate Administrator,
Motor Vehicle Programs.

[FR Doc.73-18738 Filed 9-4-73;8:45 am]

AMERICAN REVOLUTION BICENTENNIAL COMMISSION

HERITAGE '76 PROGRAM COMMITTEE

Notice of Meeting

Notice is hereby given, pursuant to Executive Order 11671, that the following American Revolution Bicentennial Commission Heritage '76 Program Committee meeting will be held on September 19, 1973:

HERITAGE '76 PROGRAM COMMITTEE

The Heritage '76 Program Committee will hold an open meeting (with the exception of the closed portion of the meeting asterisked below) on September 19, 1973, at 740 Jackson Place, N.W., Washington, D.C., at 10 a.m.

The Committee is composed of ten Commission members, three non-Commission members, and five Heritage '76 Advisory Panel Members. The agenda items to be discussed are:

Fiscal 1975 Heritage budget*.
Proposal for a guidebook to communities on the use of revenue sharing funds for historic preservation.
Review of the Bicentennial Proposal of the Advisory Council on Historic Preservation.
Request for official recognition by Boston 200 for the 200th Anniversary of the Boston Tea Party.

Dated August 28, 1973.

HUGH A. HALL,
Acting Director, American Revolution Bicentennial Commission.

[FR Doc.73-18724 Filed 9-4-73;8:45 am]

CIVIL AERONAUTICS BOARD

[Docket No. 25772]

AERLINTE EIREANN TEORANTA

Postponement of Prehearing Conference and Hearing

In the matter of amendment of foreign air carrier permit service to Boston as intermediate point.

Notice is hereby given that a prehearing conference and hearing in the above-entitled application, which was previously assigned to be held on September 11, 1973, is hereby postponed until

October 10, 1973, at 10 a.m. (local time), in Room 503, Universal Building, 1825 Connecticut Avenue NW., Washington, D.C., before Administrative Law Judge Ross I. Newmann.

Since it is contemplated that hearing in this proceeding may be held immediately following conclusion of the prehearing conference, any person objecting to this procedure should notify the Administrative Law Judge on or before October 5, 1973.

Dated at Washington, D.C., August 29, 1973.

[SEAL] ROSS I. NEWMANN,
Administrative Law Judge.

[FR Doc.73-18736 Filed 9-4-73;8:45 am]

[Docket No. 20724]

REMANDED ATLANTA-DETROIT/ CLEVELAND/CINCINNATI INVESTIGATION

Notice of Oral Argument

Notice is hereby given, pursuant to the provisions of the Federal Aviation Act of 1958, as amended, that oral argument in the above-entitled matter is assigned to be held before the Board on October 10, 1973, at 10:00 a.m. (local time), in Room 1027, Universal Building, 1825 Connecticut Avenue, NW., Washington, D.C.

Dated at Washington, D.C., August 29, 1973.

[SEAL] RALPH L. WISER,
Chief Administrative Law Judge.

[FR Doc.73-18737 Filed 9-4-73;8:45 am]

ENVIRONMENTAL PROTECTION AGENCY

[FIFRA Docket Nos. 146 and 293; Reg. No. 218-586]

ALLIED CHEMICAL CORP.

Determination and Order

Under authority granted by the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) (7 U.S.C. 135b(c)), the Administrator of the Environmental Protection Agency on May 3, 1972, prohibited the aerial application of pesticides containing Mirex in coastal counties or parishes and on or near rivers, streams, lakes, ponds, and other aquatic areas (37 FR 10987). On June 30, 1972, the Administrator issued a Determination and Order (37 FR 13299) granting a stay of his May 3 prohibition with respect to aerial spraying of Hawaiian pineapple fields in the fall of 1972 to control mealybug wilt. The Administrator's stay was conditioned upon the implementation of a monitoring program approved by the Environmental Protection Agency.

Pending the completion of a public hearing on registrations of pesticides containing Mirex which this Agency has called pursuant to section 6(b)(2) of the FIFRA, as amended in 1972, the Acting Administrator of the Environmental Protection Agency issued a Determination and Order dated May 25, 1973, which extended through the 1973 spraying season the stay approved initially on

May 30, 1972. Again, however, the prohibition against aerial spraying was stayed only on condition that a monitoring program approved by this Agency would be conducted in conjunction with spraying.

In compliance with the Administrator's Order of June 30, 1972, a monitoring program was instituted to measure the effects of Mirex when used to control mealybug wilt in Hawaii. Since results of laboratory experiments and other information had indicated that Mirex is acutely toxic to certain species of aquatic biota, the monitoring program was aimed predominantly at marine biota found in waters adjacent to those islands on which Mirex was sprayed. On these islands there are no rivers or streams in which significant numbers of other aquatic biota can be found.

As reflected in the Administrator's Order of May 25, 1973, however, information gained from this monitoring program has consistently indicated that Mirex is not accumulating significantly in marine biota. I have therefore determined to modify the required monitoring program to reduce the number of samples taken in offshore waters and to require that additional samples be collected from terrestrial biota inhabiting the islands on which Mirex is sprayed. This will allow us to determine whether greater sampling in this area would indicate occurrence of any residues in inland species. Specifically, I will require that the following elements be included in a monitoring program to be implemented in conjunction with the fall 1973 spraying of Mirex in Hawaii:

1. Aquatic sampling to be limited to those organisms which were positive for Mirex in previous samples;
2. Monitoring to include at least one terrestrial area of sufficient acreage (2,500-5,000 acres) to provide multiple sites where Mirex is likely to accumulate, i.e., ravines, water courses, (dry irrigation areas where soil or water movement occurs intermittently);
3. Terrestrial monitoring to include soils, small mammals, and birds, with each of these groups yielding five samples for a total of fifteen per collection;
4. Baseline (pre-spraying) samples to be collected for terrestrial species monitored;
5. Sampling collections to be made during the 1st, 4th, 12th, and 18th weeks after spraying, and also during the 24th and 36th weeks if samples containing any residues of Mirex are collected during the 12th and 18th weeks.
6. Monitoring areas, species to be sampled, and sampling and reporting methodology to be determined in conjunction with the Environmental Center and the Zoology Department of the University of Hawaii.

In thus revising the monitoring program, however, I do not wish to imply that the provisions of any order issued by this Agency are hereby extended to authorize spraying operations in Hawaii after the fall of 1973. Approval for further aerial spraying in Hawaii will be granted only if warranted by the results of monitoring done in coming months and by the record adduced at the im-

pending public hearing on Mirex registrations.

CHARLES L. ELKINS,
Acting Assistant Administrator
for Hazardous Materials Control.

AUGUST 31, 1973.

[FR Doc.73-18864 Filed 9-4-73;8:45 am]

FEDERAL HOME LOAN BANK BOARD

[H. C. 162]

AMERICAN FINANCIAL CORP. AND UNITED DAIRY FARMERS INVESTMENT CO.

Receipt of Application for Approval of Acquisition of Control of Evers Savings Association

AUGUST 30, 1973.

Notice is hereby given that the Federal Savings and Loan Insurance Corporation has received an application from the American Financial Corporation and the United Dairy Farmers Investment Company, Cincinnati, Ohio, savings and loan and bank holding companies, for approval of their acquisition of control of Evers Savings Association, Cincinnati, Ohio, an uninsured institution, under the provisions of section 408(e) of the National Housing Act, as amended (12 U.S.C. 1730a(e)), and § 584.4 of the Regulations for Savings and Loan Holding Companies, said acquisition to be effected by the exchange of cash for the stock of Evers Savings Association. Following the acquisition it has proposed that said association be merged into the Hunter Savings Association, an insured subsidiary of the applicants. Comments on the proposed acquisition should be submitted to the Director, Office of Examinations and Supervision, Federal Home Loan Bank Board, Washington, D.C. 20552, on or before October 5, 1973.

[SEAL] EUGENE M. HERRIN,
Assistant Secretary,
Federal Home Loan Bank Board.

[FR Doc.73-18739 Filed 9-4-73;8:45 am]

FEDERAL RESERVE SYSTEM

FROST BANK CORPORATION

Proposed Retention of Data Processing Center

Frost Bank Corporation of San Antonio, Texas, has applied, pursuant to § 4(c) (8) of the Bank Holding Company Act (12 U.S.C. 1843(c) (8)) and § 225.4 (b) (2) of the Board's Regulation Y, for permission to retain the assets of Data Processing Center, San Antonio, Texas, an operating division of a wholly owned subsidiary, Main Plaza Corporation in San Antonio, Texas. Notice of the application was published on July 26, 1973, in the San Antonio Light, a newspaper circulated in San Antonio, Texas.

Applicant states that the proposed subsidiary would perform the activities of data processing services of an accounting nature for banks and other enterprises. Such activities have been specified by the Board in § 225.4(a) of Regulation Y as permissible for bank holding companies,

subject to Board approval of individual proposals in accordance with the procedures of § 225.4(b).

Interested persons may express their views on the question whether consummation of the proposal can "reasonably be expected to produce benefits to the public, such as greater convenience, increased competition, or gains in efficiency, that outweigh possible adverse effects, such as undue concentration of resources, decreased or unfair competition, conflicts of interests, or unsound banking practices." Any request for a hearing on this question should be accompanied by a statement summarizing the evidence the person requesting the hearing proposes to submit or to elicit at the hearing and a statement of the reasons why this matter should not be resolved without a hearing.

The application may be inspected at the offices of the Board of Governors or at the Federal Reserve Bank of Dallas.

Any views or requests for hearing should be submitted in writing and received by the Secretary, Board of Governors of the Federal Reserve System, Washington, D.C. 20551, not later than September 24, 1973.

Board of Governors of the Federal Reserve System, August 28, 1973.

[SEAL] THEODORE E. ALLISON,
Assistant Secretary of the Board.

[FR Doc.73-18677 Filed 9-4-73;8:45 am]

Federal Reserve Bank of New York MIDLANTIC BANKS, INC., NEWARK, NEW JERSEY

Order Approving Acquisition of Bank

Midlantic Banks, Inc., Newark, New Jersey, a bank holding company within the meaning of the Bank Holding Company Act, has applied for approval of the Board of Governors of the Federal Reserve System, under § 3(a) (3) of the Act (12 U.S.C. 1842(a) (3)), to acquire 100 percent of the voting shares (less directors' qualifying shares) of Midlantic National Bank of Somerset, Bernardsville, New Jersey (Bank), a proposed new bank.

Notice of the application, affording opportunity for interested persons to submit comments and views, has been given in accordance with § 3(b) of the Act. The time for filing comments and views has expired, and none has been received. The application has been considered in light of the factors set forth in § 3(c) of the Act (12 U.S.C. 1842(c)).

Applicant controls seven banks with aggregate deposits of \$1.4 billion,¹ representing 7.1 percent of total deposits in commercial banks in New Jersey, and is the third largest banking organization in the State. Inasmuch as Bank is a proposed new bank, the level of concentration of banking resources would not be immediately increased in any relevant area.

¹ Bank data are as of December 31, 1972.

Bank would be competing in the Plainfield banking market, which includes most of Somerset County, where Bank will be located, and small portions of Union and Middlesex Counties.

An office of one of Applicant's banking subsidiaries is located 9.2 miles north-east of Bernardsville in Madison, Morris County. The proposal is not likely to raise barriers to entry by other outside organizations because the Plainfield market is expected to remain attractive for further de novo entry, and a large number of independent banks are available as footholds for outside organizations. While consummation of Applicant's proposal will introduce home office protection in Bernardsville, the town is already subject to branch office protection. In addition, legislation recently signed by the Governor of New Jersey would eliminate home office protection for subsidiaries of multi-bank holding companies in 1975. Accordingly, it is concluded that consummation of the proposed acquisition would not have any adverse effect on existing or potential competition in any relevant area.

The financial and managerial resources of Applicant and its subsidiary banks are satisfactory. Bank, as a proposed new bank, has no financial or operating history; however, its prospects as a subsidiary of Applicant are good and are consistent with approval. Considerations relating to the convenience and needs of the area to be served lend some weight toward approval, since Bank will constitute an additional source of full banking services.

It is the judgment of the Federal Reserve Bank of New York that the proposed acquisition would be in the public interest and that the application should be approved.

On the basis of the record, the application is approved for the reasons summarized above. The transaction shall not be consummated (a) before the thirtieth calendar day following the effective date of this order or (b) later than three months after that date, and (c) Midlantic National Bank of Somerset, Bernardsville, New Jersey, shall be opened for business not later than six months after the effective date of this order. Each of the periods described in (b) and (c) may be extended for good cause by the Board, or by the Federal Reserve Bank of New York pursuant to delegated authority.

By order of the Federal Reserve Bank of New York, acting for the Board of Governors of the Federal Reserve System pursuant to delegated authority, effective August 24, 1973.

FRED W. PIDERIT, JR.,
Vice President,

Federal Reserve Bank of New York.

[FR Doc.73-18678 Filed 9-4-73;8:45 am]

GENERAL SERVICES ADMINISTRATION

CERTAIN INDUSTRY AND PROFESSIONAL ASSOCIATIONS

Notice of Meeting

The General Services Administration will conduct a meeting on September 6, 1973, for the purpose of obtaining views from industry and professional associations related to furnishing comments and recommendations on proposed Federal Procurement Regulations which might affect contractors.

The meeting is scheduled for Thursday, September 6, 1973, at the GSA Headquarters Building, 18th and F Streets NW., Washington, D.C., 9 a.m.-4 p.m., in the main Auditorium, First Floor, main entrance.

Because of space limitations, attendance is subject to advance acceptance. For additional information contact:

Harold E. Roach, Office of Procurement Management, GSA, Room 5116, 18th and F Streets NW., Washington, D.C. 20405, 202-343-7794.

Dated at Washington, D.C., on August 29, 1973.

TED TRIMMER,
Associate Administrator.

[FR Doc.73-18721 Filed 9-4-73;8:45 am]

INTERIM COMPLIANCE PANEL (COAL MINE HEALTH AND SAFETY)

ASHLAND MINING CORP. AND SMITH AND STOVER COAL CO.

Opportunity for Public Hearing

Applications for Renewal Permits for Noncompliance with the Interim Mandatory Dust Standard (2.0 mg/m³) have been received as follows:

- (1) ICP Docket No. 20015, Ashland Mining Corporation, Ashland No. 11B Mine, USEM ID No. 46 02132 0, Ashland, West Virginia, Section ID No. 001 (1st Left Section).
- (2) ICP Docket No. 20237, Smith & Stover Coal Company, Hunter-Burma Slope Mine, USEM ID No. 46 01505 0, Whitby, West Virginia, Section ID No. 004-0 (1st Right), Section ID No. 004-1 (1st Right).

In accordance with the provisions of section 202(b)(4) (30 U.S.C. 842(b)(4)) of the Federal Coal Mine Health and Safety Act of 1969 (83 Stat. 742, et seq., Public Law 91-173), notice is hereby given that requests for public hearing as to an application for renewal may be filed within 15 days after publication of this notice. Requests for public hearing must be filed in accordance with 30 CFR Part 505 (35 F.R. 11296, July 15, 1970), as amended, copies of which may be obtained from the Panel on request.

A copy of the application is available for inspection and requests for public hearing may be filed in the office of the Correspondence Control Officer, Interim

Compliance Panel, Room 800, 1730 K Street NW., Washington, D.C. 20006.

August 30, 1973.

GEORGE A. HORNBECK,
Chairman,
Interim Compliance Panel.

[FR Doc.73-18727 Filed 9-4-73;8:45 am]

NATIONAL ADVISORY COUNCIL ON THE EDUCATION OF DISADVANTAGED CHILDREN

BUDGET AND LEGISLATIVE MATTERS

Notice of Meeting

Notice is hereby given, PL 92-463, that the next meeting of the National Advisory Council on the Education of Disadvantaged Children will be held at 1-7 p.m., September 6, 1973 and from 9 a.m.-4 p.m., September 7, 1973, located at 425 Pennsylvania Building, 13th St. NW., Room 1012, Washington, D.C. 20004.

The National Advisory Council on the Education of Disadvantaged Children is established under section 148 of the Elementary and Secondary Education Act (20 U.S.C. 2411) to advise the President and the Congress on the effectiveness of compensatory education to improve the educational attainment of Disadvantaged Children.

The meeting is called to discuss the budget for FY 1974 and to plan for the legislative calendar affecting education programs.

Because of limited space for the public meeting of September 6 and 7 all persons wishing to attend should call for reservations at Area Code 202/382-6945 by September 5, 1973.

Records shall be kept of all Council proceedings and shall be available for public inspection at the Office of the National Advisory Council on the Education of Disadvantaged Children, located in Room 1012, 425 13th St., NW., Washington, D.C. 20004.

Signed at Washington, D.C. on August 29, 1973.

ROBERTA LOVENHEIM,
Executive Director.

[FR Doc.73-18877 Filed 9-4-73;8:45 am]

NATIONAL ENDOWMENT FOR THE HUMANITIES

SUMMER SEMINARS FOR COLLEGE TEACHERS PANEL

Notice of Meeting

AUGUST 30, 1973.

Pursuant to Public Law 92-463, the Federal Advisory Committee Act, notice is hereby given that a meeting of the Summer Seminars for College Teachers Panel will take place in Washington, D.C. on September 7.

The purpose of the meeting is to examine dossiers of individuals recom-

mended to the Endowment in the field of English as possible seminar directors in the Summer Seminar program.

Based on section b (4) and (6) of 5 U.S.C. 552, the meeting will not be open to public participation. It is suggested that those desiring more specific information contact the Advisory Committee Management Officer Mr. John W. Jordan, 806 15th Street NW., Washington, D.C. 20506, or call Area Code 202-382-2031.

JOHN W. JORDAN,
Advisory Committee
Management Officer.

[FR Doc.73-18746 Filed 9-4-73; 8:45 am]

SUMMER SEMINARS FOR COLLEGE TEACHERS PANEL

Notice of Meeting

AUGUST 30, 1973.

Pursuant to Public Law 92-463, the Federal Advisory Committee Act, notice is hereby given that a meeting of the Summer Seminars for College Teachers Panel will take place in Washington, D.C., on September 10.

The purpose of the meeting is to examine dossiers of individuals recommended to the Endowment in the field of History as possible seminar directors in the Summer Seminar program.

Based on section b(4) and (6) of 5 U.S.C. 552, the meeting will not be open to public participation. It is suggested that those desiring more specific information contact the Advisory Committee Management Officer Mr. John W. Jordan, 806 15th Street NW., Washington, D.C. 20506, or call Area Code 202-382-2031.

JOHN W. JORDAN,
Advisory Committee
Management Officer.

[FR Doc.73-18747 Filed 9-4-73; 8:45 am]

SUMMER SEMINARS FOR COLLEGE TEACHERS PANEL

Notice of Meeting

AUGUST 30, 1973.

Pursuant to Public Law 92-463, the Federal Advisory Committee Act, notice is hereby given that a meeting of the Summer Seminars for College Teachers Panel will take place in Washington, D.C., on September 14.

The purpose of the meeting is to examine dossiers of individuals recommended to the Endowment in the field of Philosophy as possible seminar directors in the Summer Seminar program.

Based on section b (4) and (6) of 5 U.S.C. 552, the meeting will not be open to public participation. It is suggested that those desiring more specific information contact the Advisory Committee Management Officer Mr. John W. Jordan, 806 15th Street NW., Washington, D.C. 20506, or call Area Code 202-382-2031.

JOHN W. JORDAN,
Advisory Committee
Management Officer.

[FR Doc.73-18748 Filed 9-4-73; 8:45 am]

SECURITIES AND EXCHANGE COMMISSION

[70-5340]

ALLEGHENY POWER SYSTEMS, INC., ET AL.

Acquisitions of Common Stock and Certain Properties; Retirement of Common Stock; Restatement of Incorporation; Designation of Holding Companies

AUGUST 27, 1973.

In the matter of Allegheny Power System, Inc., 320 Park Avenue, New York, New York 10022; Monongahela Power Co., 1310 Fairmont Avenue, Fairmont, West Virginia 26554; The Potomac Edison Co., Downsville Pike, Hagerstown, Maryland 21740; The Potomac Edison Company of Virginia, Rt. 11 South, Kernstown, Virginia 22601; The Potomac Edison Company of West Virginia, 901 Wilson Street, Martinsburg, West Virginia 25401; The Potomac Edison Company of Pennsylvania, N. Grant Street Extension, Waynesboro, Pennsylvania 17268; Monterey Utilities Corp., Monongahela Power Company Building, Fairmont, West Virginia 26554.

Notice is hereby given that Allegheny Power System, Inc. (APS), a registered holding company, its subsidiary electric utility and registered holding companies, Monongahela Power Company (Monongahela) and The Potomac Edison Company (PE), PE's subsidiary electric utility companies, The Potomac Edison Company of Virginia (PE Va.), The Potomac Edison Company of West Virginia (PE W. Va.) and The Potomac Edison Company of Pennsylvania (PE Pa.) and Monongahela's electric utility subsidiary company, Monterey Utilities Corporation (Monterey), have filed an application-declaration and amendments thereto with this Commission designating Sections 5(d), 9, 10, and 12 of the Public Utility Holding Company Act of 1935 (Act) as applicable to the proposed transactions. All interested persons are referred to the application-declaration, as amended, which is summarized below, for a complete statement of the proposed transactions.

APS proposes to simplify its corporate structure through the following steps: (i) PE Va. will acquire Monterey's common stock for cash equal to the stock's underlying book value; (ii) Monterey, PE Va., PE W. Va. and PE Pa. will merge into PE; and (iii) PE will acquire the Maryland public utility properties (Maryland properties) of Monongahela for cash equal to the Maryland properties' original cost depreciated.

In effecting the merger, PE will retain its Maryland incorporation and will also become incorporated in Virginia to assure its qualification to operate as a public utility company in that state. PE will remain qualified to do business and qualify to do business as a foreign public utility in West Virginia and Pennsylvania. Monongahela will cease operations in Maryland.

The Maryland properties and the Monterey stock will be released from the Indenture dated August 1, 1945, as sup-

plemented, between Monongahela and First National City Bank, as Trustee. Upon their acquisition by PE, the Maryland properties and the Monterey properties will become subject to the lien of the Indenture dated as of October 1, 1944, as supplemented, between PE and Chemical Bank, as Trustee (PE Indenture). The stocks of PE Va., PE W. Va., and PE Pa. are now subject to the lien of the PE Indenture. If the proposed transactions are effected, the stocks of the aforesaid PE subsidiaries will be retired and the properties of each of those subsidiaries will become subject to the lien of the PE Indenture. The cash received by Monongahela as consideration for the sale of the Maryland properties and the Monterey stock will be deposited with the Trustee under the Monongahela Indenture, subject to withdrawal as provided in that Indenture. It is stated that the proposed transactions will have no effect on the holders of the preferred stock or first mortgage bonds of PE or Monongahela.

It is proposed that PE amend and restate its Certificate of Incorporation without any change in the substance thereof. It is also proposed that PE's charter, as amended and restated, be the charter of the surviving PE company. It is stated that, subject to the consent of the state regulatory commissions having jurisdiction, the rates of PE Va., PE W. Va., PE Pa., and Monterey will be adopted by PE and there will be no effect on rates applicable to service to the customers of these companies. It is proposed that PE will, subject to the approval of the regulatory commission having jurisdiction, adopt the rates of Monongahela presently in effect for customers of the Maryland properties.

Monterey presently serves its customers with power purchased entirely from Monongahela. After the merger, PE would provide service to these former Monterey customers, purchasing the necessary power from Monongahela. Monongahela would also provide at cost other services requested by PE in connection with the Monterey properties, PE, PE Va., PE W. Va., and PE Pa. are presently parties to a Power Supply Agreement (agreement) with the Federal Power Commission. Upon implementation of the merger, applicants-declarants state that the agreement will be withdrawn and PE will provide all of the electric energy necessary to serve its customers.

Applicants-declarants request that upon consummation of the proposed transactions, a further order be issued declaring that Monongahela and PE have each ceased to be holding companies under the Act and that their registrations under the Act are no longer in effect.

Fees and expenses to be incurred in connection with the proposed transactions are to be supplied by amendment. The application-declaration states that the proposed transactions require the authorization of the State Corporation Commission of Virginia, the Public Service Commission of West Virginia, the Maryland Public Service Commission and the Public Utility Commission of

Pennsylvania. The Federal Power Commission is stated to have jurisdiction over certain rate aspects of the proposed transactions, and the application-declaration states that no other state or federal commission, other than this Commission, has jurisdiction over the proposed transactions.

Notice is further given, that any interested person may, not later than September 20, 1973, request in writing that a hearing be held with respect to the proposed transactions, stating the nature of his interest, the reasons for such request, and the issues of fact or law raised by said application-declaration, as amended, which he desires to controvert; or he may request that he be notified if the Commission should order a hearing thereon. Any such request should be addressed: Secretary, Securities and Exchange Commission, Washington, D.C. 20549. A copy of such request should be served personally or by mail (air mail if the person being served is located more than 500 miles from the point of mailing) upon the applicants-declarants at the above-stated addresses, and proof of service (by affidavit or, in case of an attorney at law, by certificate) should be filed with the request. At any time after such date, the application-declaration, as amended and as it may be further amended, may be permitted to become effective as provided in Rule 23 of the General Rules and Regulations promulgated under the Act, or the Commission may grant exemption from such rules as provided in Rules 20(a) and 100 thereof or take such other action as it may deem appropriate. Persons who request a hearing or advice as to whether a hearing is ordered will receive notice of further developments in this matter, including the date of the hearing (if ordered) and any postponements thereof.

For the Commission, by the Division of Corporate Regulation, pursuant to delegated authority.

[SEAL] GEORGE A. FITZSIMMONS,
Secretary.

[FR Doc. 73-18698 Filed 9-4-73; 8:45 am]

[70-5381]

CENTRAL POWER AND LIGHT CO.

Notice of Proposed Issue and Sale of First Mortgage Bonds at Competitive Bidding

August 28, 1973.

Notice is hereby given that Central Power and Light Company (CP&L), 120 North Chaparral Street, Corpus Christi, Texas 78403, an electric utility subsidiary company of Central and South West Corporation (Central), a registered holding company, has filed a declaration with this Commission pursuant to the Public Utility Holding Company Act of 1935 (Act), designating sections 6(a) and 7 of the Act and Rule 50 promulgated thereunder as applicable to the proposed transaction. All interested persons are referred to the declaration, which is summarized below, for a complete statement of the proposed transaction.

CP&L proposes to issue and sell, subject to the competitive bidding requirements of Rule 50 under the Act, \$46,000,000 principal amount of First Mortgage Bonds, Series M, to be dated October 1, 1973, and to mature October 1, 2003 (the "Bonds"). The interest rate (which will be a multiple of $\frac{1}{8}$ of 1 percent) and the price (which will be not less than 99 percent nor more than 102.75 percent of the principal amount of the Bonds, exclusive of the accrued interest to be added to such price) will be determined by competitive bidding. The Bonds will be issued under and secured by CP&L's Indenture of Mortgage or Deed of Trust, dated November 1, 1943, to the First National Bank of Chicago and Robert L. Grinnell, as Trustees, as amended by the indentures supplemental thereto heretofore executed (the "Mortgage"), and to be further amended by a Supplemental Indenture to be dated October 1, 1973, which contains a prohibition until October 1, 1978, against refunding the issue with the proceeds of funds borrowed at a lower effective interest cost.

The proceeds to be derived by CP&L from the sale of the Bonds (exclusive of accrued interest and after deducting expenses of issue) will be used to retire at maturity its First Mortgage Bonds, Series A, $3\frac{1}{2}$ percent, due November 1, 1973, in the principal amount of \$22,435,000, and to finance a part of the costs of additions, extensions, betterments and improvements made and to be made to its electric utility properties, including the payment of approximately \$9,700,000 of short-term notes incurred or expected to be incurred by the Company in connection with the interim financing of its construction expenditures. The proposed construction expenditures of the Company for the last two quarters of 1973 are \$43,210,000 and for the calendar year 1974 are \$102,410,000. The Bonds will be authenticated under the Mortgage against \$76,666,667 of the available unused net expenditures for bondable property of the Company, which expenditures aggregated approximately \$120,100,000 at June 30, 1973.

The fees and expenses to be paid by CP&L in connection with the issue and sale of the Bonds are estimated to total \$85,000, including legal fees of \$15,000. The fees and expenses of legal counsel for the successful bidders, to be paid by the successful bidders, are estimated at \$10,500 and \$1,250 respectively. It is stated that no state commission and no federal commission, other than this Commission, has jurisdiction over the proposed transaction.

Notice is further given that any interested person may not later than September 24, 1973, request in writing that a hearing be held on such matter, stating the nature of his interest, the reasons for such request, and the issues of fact or law raised by said declaration which he desires to controvert; or he may request that he be notified if the Commission should order a hearing thereon. Any such request should be addressed: Secretary, Securities and Exchange Commission, Washington, D.C. 20549. A copy

of such request should be served personally or by mail (air mail if the person being served is located more than 500 miles from the point of mailing) upon the declarant at the above-stated address, and proof of service (by affidavit or, in case of an attorney at law, by certificate) should be filed with the request. At any time after said date, the declaration, as filed or as it may be amended, may be permitted to become effective as provided in Rule 23 of the General Rules and Regulations promulgated under the Act, or the Commission may grant exemption from such rules as provided in Rules 20(a) and 100 thereof or take such other action as it may deem appropriate. Persons who request a hearing or advice as to whether a hearing is ordered, will receive notice of further developments in this matter, including the date of the hearing (if ordered) and any postponements thereof.

For the Commission, by the Division of Corporate Regulation, pursuant to delegated authority.

[SEAL] GEORGE A. FITZSIMMONS,
Secretary.

[FR Doc. 73-18689 Filed 9-4-73; 8:45 am]

[70-5378]

CONNECTICUT GAS CO. AND CONNECTICUT LIGHT & POWER CO.

Notice of Proposed Issue and Sale of Long-Term Notes

Notice is hereby given that The Connecticut Light and Power Company (CL&P), P.O. Box 2010, Hartford, Connecticut 06101, an exempt holding company and an electric and gas utility subsidiary of Northeast Utilities (Northeast), a registered holding company, and The Connecticut Gas Company (Connecticut Gas), a wholly owned gas utility subsidiary of CL&P, have filed a joint application-declaration and amendment thereto with this Commission pursuant to the Public Utility Holding Company Act of 1935 (Act), designating sections 6, 7, 9, 10, 12(b), and 12(f) of the Act and Rules 43, 45(b)(1), and 50(a)(3) promulgated thereunder as applicable to the following proposed transactions. All interested persons are referred to the amended joint application-declaration, which is summarized below, for a complete statement of the proposed transactions.

Connecticut Gas presently has outstanding demand notes aggregating \$425,000 which were issued to and acquired by CL&P before Northeast became a registered holding company. In addition, \$940,000 of long-term notes have been issued to and acquired by CL&P pursuant to orders of the Commission. Connecticut Gas presently has authority to issue and sell, and CL&P has authority to acquire, an additional \$235,000 of long-term notes pursuant to order of the Commission (Holding Company Act Release No. 17098). Connecticut Gas now proposes to issue and sell, and CL&P proposes to acquire, from time to time, up to an additional \$500,000 of long-term

notes (Notes) to meet its capital requirements. It is stated that the aggregate amount of all notes at any one time outstanding, including the outstanding demand and long-term notes and the \$235,000 of authorized but unissued long-term notes and the Notes proposed to be issued hereunder, will at no time exceed \$2,100,000. The funds derived from the issue and sale of the Notes will be applied towards the 1973 construction program of Connecticut Gas estimated to cost \$446,000.

The Notes will mature ten years from the date the first such Note is issued, will bear interest at a rate equal to the commercial bank prime rate for short-term loans in effect from time to time in Hartford, Connecticut (adjusted as of the date of announcement of any change in such rate) and may be repaid at any time without premium.

CL&P and the Hartford Electric Company (HELCO), an electric and gas utility subsidiary of Northeast, have announced their intention to dispose of all their gas properties. It is stated that as of May 7, 1973, the Companies commenced furnishing prospective purchasers with financial and operating information relative to the proposed disposition of the gas properties. Upon completion of the information-gathering process by the prospective purchasers, the Companies expect to commence detailed negotiations with each of the prospective purchasers concerning specific proposals for the acquisition of all or a portion of the gas properties.

It is stated that the Connecticut Public Utilities Commission has jurisdiction over the proposed transactions. The order of that Commission will be filed by amendment. No other State commission or Federal commission, other than this Commission, has jurisdiction over the proposed transactions. There are no fees or commission to be paid or incurred, directly or indirectly, in connection with the proposed transactions. Incidental services estimated to cost \$500 will be performed at cost by Northeast Utilities Service Company, an affiliated service company.

Notice is further given that any interested person may, not later than September 20, 1973, request in writing that a hearing be held on such matter, stating the nature of his interest, the reasons for such request, and the issues of fact or law raised by said joint application-declaration, as amended, which he desires to controvert; or he may request that he be notified if the Commission should order a hearing thereon. Any such request should be addressed: Secretary, Securities and Exchange Commission, Washington, D.C. 20549. A copy of such request should be served personally or by mail (air mail if the person being served is located more than 500

miles from the point of mailing) upon the applicants-declarants at the above stated address; and proof of service (by affidavit, or, in case of an attorney at law, by certificate) should be filed with the request. At any time after said date, the joint application-declaration, as amended or as it may be further amended, may be granted and permitted to become effective as provided in Rule 23 of the General Rules and Regulations promulgated under the Act, or the Commission may grant exemption from such rules as provided in Rules 20(a) and 100 thereof or take such other action as it may deem appropriate. Persons who request a hearing or advice as to whether a hearing is ordered will receive notice of further developments in this matter, including the date of the hearing (if ordered) and any postponements thereof.

For the Commission, by the Division of Corporate Regulation, pursuant to delegated authority.

[SEAL] GEORGE A. FITZSIMMONS,
Secretary.

[FR Doc.73-18690 Filed 9-4-73;8:45 am]

[File No. 500-1]

CONTINENTAL VENDING MACHINE CORP.
Order Suspending Trading

AUGUST 27, 1973.

It appearing to the Securities and Exchange Commission that the summary suspension of trading in the common stock, 10¢ par value, of Continental Vending Machine Corporation, and the 6 percent convertible subordinated debentures due September 1, 1976 being traded otherwise than on a national securities exchange is required in the public interest and for the protection of investors;

It is ordered, Pursuant to section 15(c) (5) of the Securities Exchange Act of 1934, that trading in such securities otherwise than on a national securities exchange be summarily suspended, this order to be effective for the period August 28, 1973, through September 6, 1973.

By the Commission.

[SEAL] GEORGE A. FITZSIMMONS,
Secretary.

[FR Doc.73-18686 Filed 9-4-73;8:45 am]

[File No. 500-1]

HOME-STAKE PRODUCTION CO.
Order Suspending Trading

AUGUST 27, 1973.

It appearing to the Securities and Exchange Commission that the summary suspension of trading in the common stock, \$2.50 par value, and all other securities of Home-Stake Production Company being traded otherwise than on a national securities exchange is required in the public interest and for the protection of investors;

It is ordered, Pursuant to section 15(c) (5) of the Securities Exchange Act of 1934, that trading in such securities

otherwise than on a national securities exchange be summarily suspended, this order to be effective for the period from August 28, 1973, through September 6, 1973.

By the Commission.

[SEAL] GEORGE A. FITZSIMMONS,
Secretary.

[FR Doc.73-18687 Filed 9-4-73;8:45 am]

[812-3492]

NEUWIRTH FUND, INC., ET AL.
Notice of Filing of Application for
Exemption

AUGUST 28, 1973.

In the matter of NEUWIRTH FUND, INC., NEUWIRTH CENTURY FUND, INC., NEUWIRTH INCOME DEVELOPMENT CORPORATION, NEUWIRTH MANAGEMENT AND RESEARCH CORPORATION, NEUWIRTH FINANCIAL CORPORATION, Middletown Bank Building, Middletown, New Jersey 07748 (812-3492).

Notice is hereby given that an application has been filed pursuant to section 6(c) of the Investment Company Act of 1940 (Act) by Neuwirth Fund, Inc. (Neuwirth Fund), Neuwirth Century Fund, Inc. (Century), Neuwirth Income Development Corporation (NIDCO) (collectively the "Funds"), registered under the Act as open-end management investment companies, and Neuwirth Management and Research Corporation (NMRC), investment adviser to Neuwirth Fund and Century, and Neuwirth Financial Corporation (NFC), investment adviser to NIDCO. The application requests an order of the Commission, in connection with the rendering of advisory services by NMRC to Neuwirth Fund and Century, and by NFC to NIDCO, (1) exempting applicants from sections 15(a) and 15(c) of the Act during the period from July 28 to July 31, 1973, and (2) exempting the applicants from section 15(a) of the Act during the period from August 1 to October 31, 1973. All interested persons are referred to the application on file with the Commission for a statement of the representations contained therein, which are summarized below.

On July 28, 1973, Henry Neuwirth, the controlling stockholder of NMRC and NFC, died unexpectedly. By operation of law the voting securities of NMRC and NFC owned by Neuwirth passed to his estate. As of that date the investment advisory contracts between the Funds and NMRC and NFC automatically terminated pursuant to a contract provision, as required by section 15 of the Act, providing for termination in the event of assignment. An assignment is defined by section 2(a) (4) of the Act to be any direct or indirect transfer of a controlling block of the outstanding voting securities of the assignor by a security holder of the assignor.

On July 31, 1973, a joint meeting of the Boards of Directors of the Funds was held to consider the problems arising from Neuwirth's death. At that meeting, the directors, all of whom serve on the

¹ By order dated March 7, 1973 (Holding Company Act Release No. 17905), the Commission granted CL&P's application for an exception from the competitive bidding requirements of Rule 50 with respect to its proposed sale of the outstanding securities of Connecticut Gas.

Boards of each of the Funds voted as follows: (a) to ratify the performance of NMRC under the investment advisory contracts with Neuwirth Fund and Century, and the performance of NFC under the investment advisory contract with NIDCO, for the period from July 28 to July 31, 1973; and (b) to readopt each of the investment advisory contracts for the period from August 1 to October 31, 1973, subject to sooner immediate termination upon written notice by the Board of Directors or by a majority of the outstanding voting securities of each of the Funds. It is represented that such action was necessary in order to provide for continued management of the Funds pending final decision by the shareholders of the respective Funds on the future management of the Funds.

Section 15(a) of the Act provides, among other things, that it shall be unlawful for any person to serve or act as an investment adviser of a registered investment company except pursuant to a written contract which has been approved by the vote of a majority of the outstanding voting securities of such registered investment company.

Section 15(c) of the Act provides, among other things, that it is unlawful for any registered investment company having a board of directors to enter into, renew, or perform any investment advisory or underwriting contract unless the terms of the contract and any renewal thereof are approved by the vote of a majority of the directors who are not parties to such contract or interested persons of any such party cast in person at a meeting called for the purpose of voting on such approval.

Section 6(c) of the Act provides that the Commission, by order upon application, may conditionally or unconditionally exempt any person or transaction from any provision of the Act or of any rule or regulation thereunder, if and to the extent that such exemption is necessary or appropriate in the public interest and consistent with the protection of investors and the purposes fairly intended by the policy and provisions of the Act. Applicants submit that the requested exemptions from section 15(a) and 15(c) of the Act are in the public interest and consistent with the general policies of the Act.

Notice is further given, that any interested person may, not later than September 17, 1973, at 5:30 p.m., submit to the Commission in writing a request for a hearing on the matter accompanied by a statement as to the nature of his interest, the reason for such request, and the issues, if any of fact or law proposed to be controverted, or he may request that he be notified if the Commission shall order a hearing thereon. Any such communication should be addressed: Secretary, Securities and Exchange Commission, Washington, D.C. 20549. A copy of such request shall be served personally or by mail (air mail if the person being served is located more than 500 miles from the point of mailing) upon applicants at the address stated above. Proof of such service (by affidavit, or in

the case of an attorney-at-law, by certificate) shall be filed contemporaneously with the request. At any time after said date, as provided by Rule 0-5 of the Rules and Regulations promulgated under the Act, an order disposing of the application herein may be issued by the Commission upon the basis of the information stated in said application, unless an order for hearing upon said application shall be issued upon request or upon the Commission's own motion. Persons who request a hearing, or advice as to whether a hearing is ordered, will receive notice of further developments in the matter, including the date of the hearing (if ordered) and any postponements thereof.

For the Commission, by the Division of Investment Management Regulation, pursuant to delegated authority.

[SEAL] GEORGE A. FITZSIMMONS,
Secretary.

[FR Doc.73-18691 Filed 9-4-73;8:45 am]

[811-2212]

REDWOOD FUND, INC.

Notice of Proposal Registration

AUGUST 28, 1973.

Notice is hereby given that the Commission proposes, pursuant to section 8 (f) of the Investment Company Act of 1940 (Act), to declare by order upon its own motion that Redwood Fund, Inc. (Redwood) (formerly Evergreen Fund, Inc.), 1901 Avenue of the Stars, Los Angeles, California 90067, a corporation organized under the laws of the State of California and registered under the Act as an open-end, non-diversified management investment company, has ceased to be an investment company.

Redwood was initially organized in California on June 2, 1971, under the name of El Dorado Fund, Inc. (El Dorado). On June 16, 1971, El Dorado changed its name to Evergreen Fund, Inc. (Evergreen), and on July 20, 1971, Evergreen registered under the Act by filing a Form N-8A Notification of Registration together with a Form N-8B-1 Registration Statement. On July 21, 1971, Evergreen filed a Form S-5 Registration Statement under the Securities Act of 1933 (1933 Act).

On August 23, 1971, Evergreen changed its name to Redwood, and on September 3, 1971 Redwood filed an amended Form N-8B-1 Registration Statement under the Act and a Pre-effective Amendment to the 1933 Act registration statement.

Fund has never conducted any business operations other than initial organizational activities; its registration statement under the Securities Act of 1933 never became effective and was declared abandoned on July 20, 1973; and it has abandoned any intention of making a public offering of its shares.

Section 8(f) of the Act provides, in pertinent part, that when the Commission, on its own motion, finds that a registered investment company has ceased

to be an investment company, it shall so declare by order, and upon the effectiveness of such order, which may be issued upon the Commission's own motion where appropriate, the registration of such company shall cease to be in effect.

Notice is further given that any interested person may, not later than September 21, 1973, at 5:30 p.m., submit to the Commission in writing a request for a hearing on the matter accompanied by a statement as to the nature of his interest, the reasons for such request, and the issues of fact or law proposed to be controverted, or he may request that he be notified if the Commission should order a hearing thereon. Any such communications should be addressed: Secretary, Securities and Exchange Commission, Washington, D.C. 20549. A copy of such request shall be served personally or by mail (air mail if the person being served is located more than 500 miles from the point of mailing) upon the Fund at the address stated above. Proof of service (by affidavit, or in case of an attorney-at-law, by certificate) shall be filed contemporaneously with the request. At any time after said date, as provided by Rule 0-5 of the Rules and Regulations promulgated under the Act, an order disposing of the matter herein may be issued by the Commission upon the basis of the information stated herein, unless an order for a hearing shall be issued upon request or upon the Commission's own motion. Persons who request a hearing or advice as to whether a hearing is ordered will receive notice of further developments in this matter, including the date of the hearing (if ordered) and any postponements thereof.

For the Commission, by the Division of Investment Management Regulation, pursuant to delegated authority.

[SEAL] GEORGE A. FITZSIMMONS,
Secretary.

[FR Doc.73-18692 Filed 9-4-73;8:45 am]

SMALL BUSINESS ADMINISTRATION

[License Application 09/09-5165]

RISK CAPITAL FUNDING, INC.

Application for License as a Small Business Investment Company

An application for a license to operate as a small business investment company under the provisions of section 301 (d) of the Small Business Investment Act of 1958, as amended (15 U.S.C. 661 *et seq.*), has been filed by Risk Capital Funding, Inc. (applicant), with the Small Business Administration (SBA) pursuant to 13 CFR 107.102 (1973).

The officers and directors of the applicant are as follows:

William L. Mitchell, President, General Manager, Director, 8787 Shoreham Drive, West Hollywood, California 90069.
Elaine Blaine Shepard, Secretary, Director, 1217 Oakhorne Drive, Harbor City, California 90710.
Celestus A. King III, Secretary Director, 1240 Arlington Avenue, Los Angeles, California 90019.

Phylliss Anne Stones, Treasurer, Director, 16737 Royal Ridge Road, Sherman Oaks, California 90513.
Owen W. Findley, Director, 3800 Twin Oaks Way, Oakland, California 94605.

The applicant, a California corporation, with its principal place of business at 16055 Ventura Boulevard, Encino, California 91316, will begin operations with \$155,000 of paid-in capital consisting of 155,000 shares of common stock sold to Phylliss Stones (51.61 percent), Elaine Shepard (16.13 percent), Celestus King (16.13 percent), and Owen Findley (16.13 percent).

Applicant will not concentrate its investments in any particular industry. As an applicant for a license pursuant to section 301(d) of the Small Business Investment Act of 1958, as amended, its investments will be made solely in small business concerns which will contribute to a well-balanced national economy by facilitating ownership in such concerns by persons whose participation in the free enterprise system is hampered because of social or economic disadvantages.

Matters involved in SBA's consideration of the applicant include the general business reputation and character of the proposed owners and management, and the probability of successful operation of the applicant under their management including adequate profitability and financial soundness, in accordance with the Small Business Investment Act and the SBA rules and regulations.

Any person may, not later than September 20, 1973, submit to SBA written comments on the proposed licensee. Any such communication should be addressed to the Deputy Associate Administrator for Investment, Small Business Administration, 1441 L Street NW., Washington, D.C. 20416.

A copy of this notice shall be published in a newspaper of general circulation in Encino, California.

Dated August 31, 1973.

JAMES THOMAS PHELAN,
Deputy Associate Administrator
for Investment.

[FR Doc.73-18865 Filed 9-4-73; 8:45 am]

TARIFF COMMISSION

[TEA-I-EX-9]

TERMINATION OF INCREASED TARIFFS ON CERTAIN PIANOS

Notice of Investigation and Hearing

Investigation instituted.—On August 28, 1973, the United States Tariff Commission, upon a petition filed on behalf of the National Piano Manufacturers Association, instituted an investigation in connection with the preparation of advice to the President, pursuant to section 351(d)(3) of the Trade Expansion Act of 1962, with respect to pianos (including player pianos, whether or not with keyboards), except grand pianos, of the kinds described in item 924.00 in part 2A of the Appendix to the Tariff Schedules of the United States.

An increased rate of duty was imposed by Presidential proclamation upon im-

ports of the above described pianos in 1970 following an industry investigation by the Tariff Commission under section 301(b)(1) of the Trade Expansion Act of 1962. Under the proclamation the increased rate remained in force for a period of three years. The Commission conducted an investigation in 1973 under section 351(d)(3) and, upon receiving its advice, the President extended the increased rate on the subject pianos until the close of business February 20, 1974.

The Commission's function under section 351(d)(3) is to advise the President of its judgment as to the probable economic effect that a termination of this rate would have on the industry concerned.

Public hearing ordered.—A public hearing in connection with this investigation will be held at 10:00 a.m. e.s.t. on October 30, 1973, in the hearing room, Tariff Commission Building, 8th and E Streets NW., Washington, D.C. Appearances at the hearing should be entered in accordance with § 201.13 of the Tariff Commission's Rules of Practice and Procedure.

Inspection of petition.—The petition filed in this case is available for inspection at the office of the Secretary, United States Tariff Commission, 8th and E Streets NW., Washington, D.C., and at the New York City office of the Tariff Commission located in room 437 of the Customhouse.

Issued: August 29, 1973.

By order of the Commission.

[SEAL] KENNETH R. MASON,
Secretary.

[FR Doc.73-18701 Filed 9-4-73; 8:45 am]

[23-35]

NONFAT DRY MILK

Notice of Investigation and Hearing

At the request of the President (reproduced herein), the United States Tariff Commission, on the 29th day of August 1973, instituted an investigation under subsection (d) of section 22 of the Agricultural Adjustment Act, as amended (7 U.S.C. 624), to determine whether 100,000,000 pounds of nonfat dry milk described in item 115.50 of the Tariff Schedules of the United States (TSUS) may be imported into the United States during the period beginning August 29, 1973, and ending October 31, 1973, in addition to the quota-quantity specified for such article under TSUS item 950.02, without rendering or tending to render ineffective, or materially interfering with, the price support program now conducted by the Department of Agriculture for milk, or reducing substantially the amount of products processed in the United States from domestic milk.

The text of the President's letter of August 28, 1973, to the Commission follows:

Pursuant to Section 22 of the Agricultural Adjustment Act, as amended, I have been advised by the Secretary of Agriculture,

and I agree with him, that there is reason to believe that additional supplies of nonfat dried milk may be imported during a temporary period ending October 31, 1973, without rendering or tending to render ineffective, or materially interfering with, the price support program for milk now conducted by the Department of Agriculture, or reducing substantially the amount of products processed in the United States from domestic milk.

Specifically, reference is made to the following article presently subject to Section 22 quantitative limitations under item 950.02 of the Tariff Schedules of the United States:

Dried milk, provided for in part 4 of schedule 1 of the Tariff Schedules of the United States Annotated (1972), described in item 115.50 (Dried milk, other than buttermilk, containing not over 3 percent of butterfat).

The Secretary has also advised me, pursuant to Section 22(b) of the Agricultural Adjustment Act, as amended, that a condition exists requiring emergency treatment with respect to nonfat dried milk and has, therefore, recommended that I take immediate action under Section 22(b) to authorize the importation of 100,000,000 pounds during a temporary period ending October 31, 1973. I have, therefore, this day issued a proclamation establishing a special temporary quota of 100,000,000 pounds to be effective through October 31, 1973. This quota is in addition to the quantities otherwise authorized to be imported under Section 22 quantitative limitations.

The United States Tariff Commission is, therefore, directed to make an investigation under Section 22 of the Agricultural Adjustment Act, as amended, and to make findings and recommendations as to whether 100,000,000 pounds of the above-described article may be imported during a temporary period ending October 31, 1973, in addition to the quantities otherwise authorized to be imported under Section 22 quantitative limitations, without rendering or tending to render ineffective, or materially interfering with, the price support program now conducted by the Department of Agriculture for milk, or reducing substantially the amount of products processed in the United States from domestic milk.

The Commission is directed to report its findings and recommendations at the earliest practicable date.

Sincerely,

(Signed) RICHARD NIXON.

Hearing.—A public hearing in connection with this investigation will be held in the Tariff Commission's Hearing Room, Tariff Commission Building, 8th and E Streets NW., Washington, D.C., beginning at 9:30 a.m., e.d.t., on September 10, 1973. All parties will be given opportunity to be present, to produce evidence, and to be heard at such hearing. Interested parties desiring to appear at the public hearing should notify the Secretary of the Tariff Commission, in writing, at its offices in Washington, D.C., at least by the close of business on September 7, 1973. The notification should indicate the name, address, telephone number, and organization of the person filing the request, and the name and organization of the witnesses who will testify.

Because of the limited time available, the Commission reserves the right to limit the time assigned to witnesses. Questioning of witnesses will be limited to members of the Commission and officials of the Department of Agriculture.

DEPARTMENT OF LABOR

Wage and Hour Division

CERTIFICATES AUTHORIZING THE EMPLOYMENT OF FULL-TIME STUDENTS WORKING OUTSIDE OF SCHOOL HOURS AT SPECIAL MINIMUM WAGES IN RETAIL OR SERVICE ESTABLISHMENTS OR IN AGRICULTURE

Written submissions.—Interested parties may submit written statements of information and views, in lieu of their appearance at the public hearing, or they may supplement their oral testimony by written statements of any desired length. In order to be assured of consideration, all written statements should be submitted at the earliest practicable date, but not later than the close of business on September 14, 1973.

With respect to any of the aforementioned written submissions, interested parties should furnish a signed original and nineteen (19) true copies. Business data to be treated as business confidential shall be submitted on separate sheets, each clearly marked at the top "Business Confidential", as provided for in § 201.6 of the Commission's rules of practice and procedure.

Issued: August 29, 1973.

By order of the Commission.

[SEAL] KENNETH R. MASON,
Secretary.

[FR Doc. 73-18700 Filed 9-4-73; 8:45 am]

VETERANS ADMINISTRATION

MERIT REVIEW BOARDS IN DESIGNATED MEDICAL SPECIALTIES

Establishment of Boards

Pursuant to the Federal Advisory Committee Act (Public Law 92-463), the Veterans Administration has determined that the establishment of the following Merit Review Boards (in designated medical specialties) is in the public interest in connection with the performance of duties imposed on the Veterans Administration by law:

- Merit Review Board for Alcoholism and Dependence Programs
- Merit Review Board for Basic Science Programs
- Merit Review Board for Behavioral Science Programs
- Merit Review Board for Cardiovascular Programs
- Merit Review Board for Endocrinology Programs
- Merit Review Board for Gastroenterology Programs
- Merit Review Board for Hematology Programs
- Merit Review Board for Immunology Programs
- Merit Review Board for Infectious Disease Programs
- Merit Review Board for Nephrology Programs
- Merit Review Board for Neurobiology Programs
- Merit Review Board for Oncology Programs
- Merit Review Board for Oral Biology Programs
- Merit Review Board for Respiration Programs
- Merit Review Board for Surgery Programs

Signed at Washington, D.C., this 29th day of August 1973.

[SEAL] DONALD E. JOHNSON,
Administrator.

[FR Doc. 73-18716 Filed 9-4-73; 8:45 am]

Notice is hereby given that pursuant to section 14 of the Fair Labor Standards Act of 1938 (52 Stat. 1060, as amended, 29 U.S.C. 201 et seq.), the regulation on employment of full-time students (29 CFR, Part 519), and Administrative Order No. 621 (36 FR 12819), the establishments listed in this notice have been issued special certificates authorizing the employment of full-time students working outside of school hours at hourly rates lower than the minimum wage rates otherwise applicable under section 6 of the Act. While effective and expiration dates are shown for those certificates issued for less than a year, only the expiration dates are shown for certificates issued for a year. The minimum certificate rates are not less than 85 percent of the applicable statutory minimum.

The following certificates provide for an allowance not to exceed the proportion of the total hours worked by full-time students at rates below \$1 an hour to the total number of hours worked by all employees in the establishment during the base period in occupations of the same general classes in which the establishment employed full-time students at wages below \$1 an hour in the base year; or provide the same standards authorized in certificates previously issued to the establishment.

- A & W Root Beer Drive Inn, restaurant; 2800 Elizabeth Street, Pueblo, Colo.; 7-5-74.
- Arrington's Food Market, food store; Front Street, Taylorsville, Miss.; 7-11-74.
- Baenziger Model Market, Inc., food store; No. 1, Seguin, Tex.; 1-31-74.
- Barones Food Market, food store; 1103 Holland, Saginaw, Mich.; 7-5-74.
- Barrett Community Home, Inc., nursing home; Barrett, Minn.; 6-24-74.
- Bethania Hospital, hospital; 1600 11th Street, Wichita Falls, Tex.; 6-8-74.
- Bill Crook's Food Town, food store; No. 1, Nashville, Tenn.; 6-30-74.
- W. C. Bradley Co. Farms, agriculture; Columbus, Ga.; 6-24-74.
- Burger Chef, restaurant; 1000 West Clairmont Avenue, Eau Claire, Wis.; 7-14-74.
- Carlie C. McLamb Grocery, food store; Route #2, Dunn, N.C.; 6-25-74.
- Central Market, food store; Third and Lincoln, Hebron, Neb.; 6-23-74.
- Charles Womack Garden & Nursery, agriculture; 1602 Cherokee Road, Florence, S.C.; 7-9-74.
- Checked Apron Restaurant, Inc., restaurant; 717 Riverside Drive, Macon, Ga.; 7-1-74.
- Coborn's Inc., food stores, 6-27-74; Foley, Minn.; 327 South Fifth Avenue, St. Cloud, Minn.; Six North Broadway, Sauk Rapids, Minn.
- DeByle's, Inc., apparel stores, 7-2-74; Eagle River, Wis.; Minocqua, Wis.; Rhinelander, Wis.; Wisconsin Rapids, Wis.
- Don's Rexall Pharmacy, drug store; 127 North Main Street, Monticello, Ind.; 7-18-74.
- Downtown Drugs, drug store; 110 East Broadway, Mount Pleasant, Mich.; 7-14-74.
- Eaves Restaurant Co., Inc., restaurant; Allendale, S.C.; 6-18-73 to 6-15-74.
- Elliott's Restaurant, restaurant, 2915 Knight Bridge Road Columbia, S.C.; 6-30-74.
- Ferguson Free Car Wash, service station; 2315 Ferguson Road, Cincinnati, Ohio; 6-30-74.
- Food Fair, Inc., food store; Burnside, Ky.; 7-14-74.
- Frank Dill's Bestway Market, food store; Highway 79, Dover, Tenn.; 6-21-74.
- Franks IGA Foodliner, food store; 130 South Grand Avenue, Fowlerville, Mich.; 6-29-74.
- Greenville Car Wash-East, Inc., car wash; 1522 Laurens Road, Greenville, S.C.; 7-25-74.
- H. E. B. Food Store, food stores; No. 117, Crystal City, Tex., 6-24-74; No. 119, Gatesville, Tex., 8-3-74; No. 86, Ingleside, Tex., 7-30-74; No. 114, McAllen, Tex., 7-24-74.
- Hansen's Drug Store, drug store; 20 West Eighth Street, Holland, Mich.; 7-2-74.
- Hayfield Farm, agriculture; Lehman Township, Wilkes-Barre, Pa.; 6-25-74.
- Hillside Farms, Inc., agriculture; Jackson and Kingston Townships, Wilkes-Barre, Pa.; 7-4-74.
- Holiday Inn, motel; Allendale, S.C.; 6-18-73 to 6-15-74.
- Ideal Poultry Breeding Farms, Inc., agriculture; Cameron, Tex.; 6-16-74.
- Lerner Shops, apparel stores; No. 489, Colorado Springs, Colo., 7-23-73 to 3-31-74; Nos. 411 and 462, Denver, Colo.; 7-23-73 to 6-12-74; No. 487, Englewood, Colo., 7-23-73 to 4-16-74; No. 463, Lakewood, Colo., 7-23-73 to 6-12-74; No. 406, Pueblo, Colo., 7-23-73 to 6-12-74; No. 460, Westminster, Colo., 7-23-73 to 6-12-74; No. 186, Chattanooga, Tenn., 7-15-74; No. 113, Memphis, Tenn., 7-15-74; No. 350, Irving, Tex., 8-14-73; No. 33, Lynchburg, Va., 7-15-74; No. 120, Newport News, Va., 7-15-74; Nos. 77 and 306, Norfolk, Va., 7-15-74; No. 32, Portsmouth, Va., 7-15-74; Nos. 40 and 52, Richmond, Va., 7-15-74; No. 42, Roanoke, Va., 7-15-74.
- Lobel's Youth Center, Inc., apparel store; 100 Broadway, East Paterson, N.J.; 6-30-74.
- Luke's Foodliner, food store; One Ardmore Mall, Ardmore, Okla.; 7-14-74.
- Masonic Homes Farms, agriculture; Elizabethtown, Pa.; 6-23-74.
- McDonald's Hamburgers, restaurant; 2650 West 26th Street, Erie, Pa.; 7-9-74.
- McIlhenny Co., agriculture; Avery Island, La.; 5-24-74.
- Minimax, food store; 1001 South Broadway, LaPorte, Tex.; 8-25-74.
- Minyard Food Stores, Inc., food store; 4315 Lancaster Road, Dallas, Tex.; 7-2-74.
- Morgan Floral Co., agriculture; 624 West Platte Avenue, Fort Morgan, Colo.; 7-20-74.
- Mount Carmel Home, nursing home; 18th Street and Fifth Avenue, Kearney, Neb.; 6-21-74.
- Noble Street Sure Save, food store; 1710 Noble Street, Anniston, Ala.; 6-30-74.
- Peoples Wholesale Co., food store; Water Valley, Miss.; 6-27-74.
- Pierce's Bargain Center, food store; Highway 51 South, Dyersburg, Tenn.; 7-16-74.
- Randall's Food Market, Inc., food store; 9448 Long Point Road, Houston, Tex.; 6-25-74.
- Red & White Super Market, food store; Nashville, N.C.; 6-19-74.
- Reed Drug Co., drug stores, 7-20-74; 7810 Olson Highway, Golden Valley, Minn.; 201 South Main Street, Stillwater, Minn.; 506 South Lake Avenue, White Bear Lake, Minn.

Robie's Food Center, Inc., food stores, 6-11-74; 604 South State Street, Abbeville, La.; 1001 East Main Street, Jeanerette, La.

Rohman's Thriftway, food store; 810 Main, Concordia, Mo.; 6-22-74.

St. Vincents' Home for the Aged, nursing home; 4500 Ames Avenue, Omaha, Nebr.; 6-17-74.

Schensul's Cafeteria, Inc., restaurant; 5606 West Saginaw Street, Lansing, Mich.; 7-9-74.

Sheppard's Inn Health Facility, nursing home; 300 West Culver Road, Knox, Ind.; 6-21-74.

Skinner Nursery, agriculture; 1402 Lower Silver Lake Road, Topeka, Kans.; 6-24-74.

Smith's Food King, food stores, 6-30-74, except as otherwise indicated: No. 21, Bountiful, Utah (6-20-74); No. 50, Clearfield, Utah; No. 45, Orem, Utah; No. 1, Provo, Utah; No. 18, Salt Lake City, Utah.

Stockmen's Drug Co., drug store; 116 North Main, Gordon, Nebr.; 7-5-74.

Sunnyway Foods, Inc., food store; 212 North Antrim Way, Greencastle, Pa.; 6-28-74.

Super Drive-Ins, food stores; No. 9, Clarksville, Tenn., 7-14-74; No. 2 and 5, Nashville, Tenn., 7-10-74; No. 11, Nashville, Tenn., 7-14-74.

T. G. & Y. Stores Co., variety-department store; No. 35, Ponca City, Okla.; 6-26-74.

Terrill's Super Market, food store; 119 Main Street, Marcellus, Mich.; 6-30-74.

West Allis Trading Post, Inc., hardware store; 9721 West Greenfield Avenue, West Allis, Wis.; 6-22-74.

West End Market, food store; 1220 Clydesdale, Anniston, Ala.; 6-30-74.

Wheaton Super Valu, food store; Wheaton, Minn.; 6-26-74.

Willbrandt Farms, agriculture; 693 West Wedgewood Drive, North Muskegon, Mich.; 7-10-74.

Winky's restaurant; 1140 Wayne Avenue, Indiana, Pa.; 7-5-74.

Wright's Markets, Inc., food store; 745 Shawnee Road, Lima, Ohio; 7-6-74.

The following certificates issued to establishments permitted to rely on the base-year employment experience of others were either the first full-time student certificates issued to the establishment, or provide standards different from those previously authorized. The certificates permit the employment of full-time students at rates of not less than 85 percent of the applicable statutory minimum in the classes of occupations listed, and provide for the indicated monthly limitations on the percentage of full-time student hours of employment at rates below the applicable statutory minimums to total hours of employment of all employees.

Bill Crook's Food Town, food store; No. 5, Hickory, Tenn.; sacker, stock clerk; 10 to 11 percent; 7-14-74.

Country School West, restaurant; 2908 Mount Vernon Avenue, Evansville, Ind.; 35 to 56 percent; 6-30-74.

Gee Bee, variety-department store; Queen City Boulevard, Cumberland, Md.; stock clerk, salesclerk, cashier, wrapper; 0.2 to 3 percent; 6-30-74.

Hardee's restaurants, for the occupation of general restaurant worker, 7-14-74; 4240 East Grant Road, Tucson, Ariz., 35 to 50 percent; 1233 West St. Mary's Road, Tucson, Ariz., 35 to 63 percent.

Hudson's Bestway, food store; Water Valley, Miss.; grocery clerk; 10 to 33 percent; 7-12-74.

Kentucky Fried Chicken, restaurant; 313 Havana, Aurora, Colo.; general restaurant worker; 29 to 47 percent; 7-8-74.

Kingwood Minimax, Inc., food store; 1153 Kingwood Drive, Humble, Tex.; bagger, carry-

out, janitorial, checker; 9 to 10 percent; 7-15-74.

Maple Avenue Hospital Association, hospital; Maple Avenue, DuBois, Pa.; dietary aid, custodial assistant; 2 percent; 6-30-74.

Pamplico I.G.A. Super Market, food store; Walnut Street, Pamplico, S.C.; bagger, janitorial; 15 percent; 7-10-74.

Pinkie's Grocery & Market, food store; 901 Bessemer Avenue, Llano, Tex.; carry out, sacker, stock clerk; 5 to 10 percent; 7-15-74.

RDR Discount City, variety-department stores, for the occupations of salesclerk, stock clerk, janitorial, 13 to 34 percent; 6-30-74; 315 Main Street, Swainsboro, Ga.; Millen Highway, Waynesboro, Ga.

Sloan's Discount Food, food store; 204 West Main Street, Brady, Tex.; stock clerk, salesclerk, cashier, janitorial; 8 to 15 percent; 6-26-74.

Smith's Food King, food stores, for the occupations of bagger, carry out; 26 to 33 percent; 7-8-74; No. 27, Murray, Utah; No. 28, Salt Lake City, Utah.

Super Drive-Ins, food stores, for the occupations of sacker, bottle clerk 21 to 32 percent; 6-20-74; No. 16, Antioch, Tenn.; No. 14, Memphis, Tenn.

Each certificate has been issued upon the representations of the employer which, among other things, were that employment of full-time students at special minimum rates is necessary to prevent curtailment of opportunities for employment, and the hiring of full-time students at special minimum rates will not create a substantial probability of reducing the full-time employment opportunities of persons other than those employed under a certificate. The certificate may be annulled or withdrawn, as indicated therein, in the manner provided in Part 528 of Title 29 of the Code of Federal Regulations. Any person aggrieved by the issuance of any of these certificates may seek a review or reconsideration thereof on or before October 3, 1973.

Signed at Washington, D.C., this 28th day of August 1973.

DONALD T. CRUMBACK,
Authorized Representative
of the Administrator.

[FR Doc.73-18734 Filed 9-4-73; 8:45 am]

INTERSTATE COMMERCE COMMISSION

OFFICE OF HEARINGS

[Notice 334]

ASSIGNMENT OF HEARINGS

AUGUST 30, 1973.

Cases assigned for hearing, postpone-ment, cancellation or oral argument appear below and will be published only once. This list contains prospective assignments only and does not include cases previously assigned hearing dates. The hearings will be on the issues as presently reflected in the Official Docket of the Commission. An attempt will be made to publish notices of cancellation of hearings as promptly as possible, but interested parties should take appropriate steps to insure that they are notified of cancellation or postponements of hearings in which they are interested. No amendments will be entertained after the date of this publication.

MC-FC-73486, Delta Bus Co., Saginaw, Michigan, Transeree & Henry A. Crooks, DBA Mio Bus Line, Onaway, Michigan Transferor, now being assigned hearing October 10, 1973 (1 day), at Lansing, Mich., in a hearing room to be later designated.

MC 113855 Sub 262, International Transport, Inc., now assigned September 10, 1973, at Kansas City, Mo., is cancelled and the application is dismissed.

MC 61955, Centropolis Transfer Co., Inc., now assigned September 19, 1973, at Jefferson City, Mo., will be held in City Hall Council Chambers, 238 East Heights.

MC-C-7700, East Texas Motor Freight Lines, Inc.—Investigation and Revocation of Certificates, now being assigned continued hearing October 15, 1973, at the Offices of the Interstate Commerce Commission, Washington, D.C.

MC-19227 Sub 181, Leonard Bros., Trucking Co., Inc., application is dismissed.

MC 10794 Sub 3, Perrow Motor Freight Lines, Inc., now assigned September 12, 1973, at Washington, D.C., postponed to October 16, 1973, at the Offices of the Interstate Commerce Commission, Washington, D.C.

W-1270, Mascony Transport and Ferry Service, Inc., now being assigned October 29, 1973 (1 week), at New London, Conn., in a hearing room to be later designated.

I&S 8875, Increased Fares, Port Authority Trans-Hudson Corporation, now assigned September 24, 1973, at New York, New York, is cancelled and reassigned to September 24, 1973, at Jersey City, N.J., will be held in Freeholders Chambers, Hudson County Administration Building, 595 Newark Avenue.

No. W. 1069 Sub 1, Gulf Atlantic Transport Corp., now assigned October 29, 1973, at Washington, D.C., is postponed to November 27, 1973, at the Offices of the Interstate Commerce Commission, Washington, D.C.

MC 127669 Sub 5, Cherry Hill Transit, now assigned October 29, 1973, at Trenton, N.J., is cancelled and reassigned November 26, 1973 (1 week), in Room 407, New Jersey Public Utility Commission, 28 W. State Street, Trenton, New Jersey.

[SEAL] ROBERT L. OSWALD,
Secretary.

[FR Doc.73-18755 Filed 9-4-73; 8:45 am]

CANADIAN RAILROADS

[Rev. S.O. No. 994; ICC Order No. 108; Amdt. No. 3]

Rerouting or Diversion of Traffic

Upon further consideration of I.C.C. Order No. 108 (Canadian Railroads) and good cause appearing therefor:

It is ordered, That:

I.C.C. Order No. 108 be, and it is hereby, amended by substituting the following paragraph (g) for paragraph (g) thereof:

(g) *Expiration date.*—This order shall expire at 11:59 p.m., September 15, 1973, unless otherwise modified, changed, or suspended.

It is further ordered, That this amendment shall become effective at 11:59 p.m., August 31, 1973, and that this amendment shall be served upon the Association of American Railroads, Car Service Division, as agent of all railroads subscribing to the car service and car hire agreement under the terms of that agreement, and upon the American Short Line Railroad Association; and that it

be filed with the Director, Office of the Federal Register.

Issued at Washington, D.C., August 27, 1973.

INTERSTATE COMMERCE
COMMISSION,
[SEAL] R. D. PFAHLER,
Agent.

[FR Doc.73-18760 Filed 9-4-73; 8:45 am]

FOURTH SECTION APPLICATION FOR RELIEF

AUGUST 30, 1973.

An application, as summarized below, has been filed requesting relief from the requirements of Section 4 of the Interstate Commerce Act to permit common carriers named or described in the application to maintain higher rates and charges at intermediate points than those sought to be established at more distant points.

Protests to the granting of an application must be prepared in accordance with Rule 1100.40 of the General Rules of Practice (49 CFR 1100.40) and filed within 15 days from the date of publication of this notice in the FEDERAL REGISTER.

FSA No. 42739—Iron or Steel Pipe and Related Articles to West Junction, Texas.—Filed by Southwestern Freight Bureau, Agent (No. B-428), for interested rail carriers. Rates on iron or steel pipe and related articles, in carloads, as described in the application, from points in official (including Illinois), southern and western trunk-line territories, to West Junction, Texas.

Grounds for relief—Rate relationship. Tariff—Supplement 15 to Southwestern Freight Bureau, Agent, tariff 259-F, I.C.C. No. 5080. Rates are published to become effective on October 1, 1973.

By the Commission.

[SEAL] ROBERT L. OSWALD,
Secretary.

[FR Doc.73-18754 Filed 9-4-73; 8:45 am]

[Notice 345]

MOTOR CARRIER BOARD TRANSFER PROCEEDINGS

Synopses of orders entered by the Motor Carrier Board of the Commission pursuant to sections 212(b), 206(a), 211, 312(b), and 410(g) of the Interstate Commerce Act, and rules and regulations prescribed thereunder (49 CFR Part 1132), appear below:

Each application (except as otherwise specifically noted) filed after March 27, 1972, contains a statement by applicants that there will be no significant effect on the quality of the human environment resulting from approval of the application. As provided in the Commission's Special Rules of Practice any interested person may file a petition seeking reconsideration of the following numbered proceedings on or before September 24, 1973. Pursuant to section 17(8) of the Interstate Commerce Act, the filing of such a petition will postpone the effective date of the order in that proceeding pending its disposition. The matters relied upon by petitioners must be specified in their petitions with particularity.

No. MC-FC-74356. By order of August 27, 1973, the Motor Carrier Board approved the transfer to Warner-Schuitema Moving & Storage Co., A Corporation, 327 E. Laketon Avenue, Muskegon, Mich. 49442, of the operation rights in Certificate No. MC-88087 issued March 12, 1957, to Henry L. Schuitema, doing business as Warner-Schuitema Moving & Storage Co., 327 E. Laketon Avenue, Muskegon, Mich. 49442, authorizing the transportation of household goods, between Muskegon, Mich., and points in Michigan, Illinois, Indiana, and Ohio; malt beverages, from Chicago, Ill., and Fort Wayne and South Bend, Ind., to Muskegon, Mich., and empty malt beverage containers on return; frozen fruits and frozen juices, from Benton Harbor, Frankfort, Grand Rapids, Hart, Manistee, Muskegon, and Traverse City, Mich., to points in Arkansas, Illinois, Iowa, Indiana, Kansas, Kentucky, Minnesota, Missouri, Nebraska, New York, Ohio, Oklahoma, Pennsylvania, Texas, West Virginia, and Wisconsin; and fruits processed for freezing, from Elk Rapids, Frankfort, Hart, Traverse City, Mich., to Chicago, Ill.

[SEAL] ROBERT L. OSWALD,
Secretary.

[FR Doc.73-18756 Filed 9-4-73; 8:45 am]

[Notice 118]

MOTOR CARRIER TEMPORARY AUTHORITY APPLICATIONS

AUGUST 28, 1973.

The following are notices of filing of application, except as otherwise specifically noted, each applicant states that there will be no significant effect on the quality of the human environment resulting from approval of its application, for temporary authority under section 210a(a) of the Interstate Commerce Act provided for under the new rules of Ex Parte No. MC-67 (49 CFR 1131), published in the FEDERAL REGISTER, issue of April 27, 1965, effective July 1, 1965. These rules provide that protests to the granting of an application must be filed with the field official named in the FEDERAL REGISTER publication, within 15 calendar days after the date of notice of the filing of the application is published in the FEDERAL REGISTER. One copy of such protests must be served on the applicant, or its authorized representative, if any, and the protests must certify that such service has been made. The protests must be specific as to the service which such protestant can and will offer, and must consist of a signed original and six (6) copies.

A copy of the application is on file, and can be examined at the Office of the Secretary, Interstate Commerce Commission, Washington, D.C., and also in field office to which protests are to be transmitted.

MOTOR CARRIERS OF PROPERTY

No. MC 5227 (Sub-No. 8 TA), filed August 15, 1973. Applicant: ECONOMY MOVERS, INC., P.O. Box 201, Mead, Nebr. 68041. Applicant's representative:

Gallyn L. Larsen, 521 So. 14 Street (P.O. Box 81849), Lincoln, Nebr. 68501. Authority sought to operate as a common carrier, by motor vehicle, over irregular routes, transporting: (1) Buildings, complete, knocked down, or in sections; (2) building sections and building panels; and (3) metal prefabricated structural components, from the plant site of American Buildings at Atlantic, Iowa, to points in Arizona, California, Colorado, Idaho, Kansas, Minnesota, Montana, Nebraska, Nevada, New Mexico, Wyoming, North Dakota, Oklahoma, Oregon, South Dakota, Wisconsin, Utah, Illinois, Washington, Missouri, and Arkansas, for 180 days. SUPPORTING SHIPPER: American Buildings Co., Inc., H. T. Holley, Traffic Mgr., P.O. Box 476, Atlantic, Iowa 50022. SEND PROTESTS TO: District Supervisor Carroll Russell, Interstate Commerce Commission, Bureau of Operations, 711 Federal Office Bldg., Omaha, Nebr. 68102.

No. MC 5227 (Sub-No. 9 TA), filed August 16, 1973. Applicant: ECONOMY MOVERS, INC., P.O. Box 201, Mead, Nebr. 68041. Applicant's representative: Gallyn L. Larsen, P.O. Box 81849, Lincoln, Nebr. 68501. Authority sought to operate as a common carrier, by motor vehicle, over irregular routes, transporting: (1) Buildings, complete, knocked down, or in sections; (2) building sections and building panels; and (3) metal prefabricated structural components, from the plant site of American Buildings Co., Inc. at Atlantic, Iowa, to points in Arizona, California, Colorado, Idaho, Kansas, Minnesota, Montana, Nebraska, Nevada, New Mexico, Wyoming, North Dakota, Oklahoma, Oregon, South Dakota, Wisconsin, Utah, Washington, Illinois, Missouri, Arkansas, Indiana, and Michigan, for 180 days. SUPPORTING SHIPPER: H. T. Holley, Traffic Manager, American Buildings Co., Inc., P.O. Box 476, Atlantic, Iowa 50022. SEND PROTESTS TO: Max H. Johnston, District Supervisor, Interstate Commerce Commission, Bureau of Operations, 320 Federal Building & Court House, Lincoln, Nebr. 68508.

No. MC 26396 (Sub-No. 89 TA), filed August 16, 1973. Applicant: POPELKA TRUCKING CO., doing business as THE WAGGONERS, P.O. Box 990, Livingston, Mont. 59047. Authority sought to operate as a common carrier, by motor vehicle, over irregular routes, transporting: Lumber and wood, forest, and lumber products, from points in Montana, to points in Tennessee, Arkansas, Alabama, Georgia, Louisiana, Mississippi, Pennsylvania, Kentucky, South Carolina, North Carolina, and Virginia, for 180 days. Supporting shipper: Rock Van & Storage, Inc., P.O. Box 1504, Missoula, Mont. 59801. Send protests to: Paul J. Labane, District Supervisor, Interstate Commerce Commission, Bureau of Operations, Room 222, U.S. Post Office Building, Billings, Mont. 59101.

No. MC 41706 (Sub-No. 17 TA) (Correction), filed July 30, 1973, published in the FEDERAL REGISTER issue of August 13, 1973, and republished as corrected

this issue. Applicant: TOSE, INC., 64 West Fourth Street, Bridgeport, Pa. 19405. Applicant's representative: Anthony C. Vance, 1111 E Street NW., Suite 501, Washington, D.C. 20004.

NOTE.—The purpose of this partial republication is to add some additional supporting shippers, which were omitted in previous publication.

Supporting shippers: There are approximately 14 additional statements of support attached to the application, which may be examined here at the Interstate Commerce Commission in Washington, D.C., or copies thereof which may be examined at the field office named below.

Send protests to: Ross A. Davis, District Supervisor, Interstate Commerce Commission, Bureau of Operations, Wm. J. Green, Jr., Federal Bldg., 600 Arch Street, Room 3238, Philadelphia, Pa. 19106. The rest of the application remains the same.

No. MC 43246 (Sub-No. 17 TA), filed August 20, 1973. Applicant: BUSKE LINES, INC., 123 West Tyler Street, Litchfield, Ill. 62056. Applicant's representative: Harold Buske (same address as above). Authority sought to operate as a *contract carrier*, by motor vehicle, over irregular routes, transporting: *Glass containers*, from the plantsite and warehouse facilities of Hillsboro Glass Company at or near Hillsboro, Ill., to Detroit, Mich., for 180 days. SUPPORTING SHIPPER: R. J. LaVigne, Traffic Manager, Hillsboro Glass Company, 8325 Jefferson East, Detroit, Mich. 48214. SEND PROTESTS TO: Harold C. Jolliff, District Supervisor, Bureau of Operations, Interstate Commerce Commission, Leland Office Bldg., 527 East Capitol Avenue, Room 414, Springfield, Ill. 62701.

No. MC 51146 (Sub-No. 328 TA), filed August 20, 1973. Applicant: SCHNEIDER TRANSPORT, INC., 2661 South Broadway, P.O. Box 2298 (Box zip 54306), Green Bay, Wis. 54304. Applicant's representative: Neil DuJardin (same address as applicant). Authority sought to operate as a *common carrier*, by motor vehicle, over irregular routes, transporting: *Metal containers and container parts and accessories*, from Racine, Wis., to Danville, Ill., for 180 days. SUPPORTING SHIPPER: Continental Can Company, Inc., 150 S. Wacker Drive, Chicago, Ill. 60606 (David G. Kelly, Central Region Traffic Manager). SEND PROTESTS TO: District Supervisor John E. Ryden, Interstate Commerce Commission, Bureau of Operations, 135 West Wells Street, Room 807, Milwaukee, Wis. 53203.

No. MC 83539 (Sub-No. 375 TA), filed August 13, 1973. Applicant: C & H TRANSPORTATION CO., INC., 2010 West Commerce Street (P.O. Box 5976) (Box zip 75222), Dallas, Tex. 75208. Applicant's representative: Thomas E. James (same address as applicant). Authority sought to operate as a *common carrier*, by motor vehicle, over irregular routes, transporting: *Plastic pipe, conduit, ducts, and tubes and related fittings, attachments, materials and accessories* used in the installation thereof, from Nazareth, Pa., to points in Connecticut, Delaware, the District of Columbia, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, New York, North Carolina, Pennsylvania, Rhode Island, Vermont, Virginia, and West Virginia, for 180 days. SUPPORTING SHIPPER: CARLON DIVISION, Indian Head, Inc., 23200 Chagrin Blvd., Cleveland, Ohio 44122. SEND PROTESTS TO: Gerald T. Holland, Transportation Specialist, Interstate Commerce Commission, Bureau of Operations, 1100 Commerce Street, Room 13C12, Dallas, Tex. 75202.

No. MC 110252 (Sub-No. 63 TA), filed August 16, 1973. Applicant: JAMES J. WILLIAMS, INC., Off: 5711 E. Third Avenue Mail: Box 2825, Terminal Annex, Terminal ZIP (99220), Spokane, Wash. 99206. Applicant's representative: John D. Robertson (same address as applicant). Authority sought to operate as a *common carrier*, by motor vehicle, over irregular routes, transporting: *Gasoline and diesel fuel*, from Calgary, Alberta, Canada, through the following points of entry on or near the Canadian-United States International Boundary Line: Eastport, Idaho (Yak. B.C.); Porthill, Idaho (Creston, B.C.); Metline, Wash. (Nelway, B.C.); Northport, Wash. (Wanita, B.C.); Laurier, Wash. (Cascade, B.C.); and Oroville, Wash. (Osyoos, B.C.), to points in Idaho north of the southern boundary of Idaho County and to points in Washington on and east of Highway 97, for 180 days. SUPPORTING SHIPPER: Triangle Oil Company (Owner), Time Oil Company (Dispatcher), 7716 E. Broadway Ave., Spokane, Wash. 99220. SEND PROTESTS TO: L. D. Boone, Transportation Specialist, Interstate Commerce Commission, Bureau of Operations, 6049 Federal Office Bldg., Seattle, Wash. 98104.

No. MC 111045 (Sub-No. 106 TA), filed August 16, 1973. Applicant: REDWING CARRIERS, INC., Post Office Box 426, 7809 Palm River Rd., Tampa, Fla. 33601. Applicant's representative: J. V. McCoy (same address as above). Authority sought to operate as a *common carrier*, by motor vehicle, over irregular routes, transporting: *Molten sulphur*, in bulk, in tank vehicles, from Savannah, Ga., to Fernandina Beach, Fla., for 180 days. SUPPORTING SHIPPER: Texasgulf Inc., 811 Rusk Avenue, Room 1704, Houston, Tex. 77002. SEND PROTESTS TO: District Supervisor Joseph B. Teichert, Interstate Commerce Commission, Bureau of Operations, 5720 SW. 17th St., Room 105, Miami, Fla. 33155.

No. MC 113666 (Sub-No. 80 TA), filed August 16, 1973. Applicant: FREEPORT TRANSPORT, INC., 1200 Butler Road, Freeport, Pa. 16229. Applicant's representative: Daniel R. Smetanick (same address as above). Authority sought to operate as a *common carrier*, by motor vehicle, over irregular routes, transporting: *Refractory products*, except in bulk, from Farber, Mo., to the International Boundary line between the

United States and Canada located in Vermont, Maine, New Hampshire, New York, Michigan, and Minnesota, for 180 days. SUPPORTING SHIPPER: North American Refractories Co., 1012 National City E-6th Building, Cleveland, Ohio 44114. SEND PROTESTS TO: John J. England, District Supervisor, Bureau of Operations, Interstate Commerce Commission, 2111 Federal Bldg., Pittsburgh, Pa. 15222.

No. MC 114604 (Sub-No. 18 TA), filed August 1, 1973. Applicant: CAUDELL TRANSPORT, INC., State Farmers Market, No. 33, Forest Park, Ga. 30050. Applicant's representative: Frank D. Hall, Suite 713, 3384 Peachtree Road NE., Atlanta, Ga. 30326. Authority sought to operate as a *common carrier*, by motor vehicle, over irregular routes, transporting: *Bananas, plantains, and pineapples*, from Tampa, Fla., to points in North Carolina, Mississippi, Tennessee, Alabama, Georgia, and South Carolina, for 180 days.

NOTE.—Applicant intends to tack authority sought with existing authority where possible.

SUPPORTING SHIPPERS: Parker Banana Company, P.O. Box 1273, Municipal Docks, Tampa, Fla., and Turbana Banana Corporation, P.O. Box 9249, Coral Gables, Fla. 33134. SEND PROTESTS TO: William L. Scroggs, District Supervisor, Interstate Commerce Commission, Bureau of Operations, 1252 West Peachtree Street NW., Room 309, Atlanta, Ga. 30309.

No. MC 115311 (Sub-No. 157 TA), filed August 1, 1973. Applicant: J & M TRANSPORTATION CO., INC., P.O. Box 488, Milledgeville, Ga. 31061. Applicant's representative: Paul M. Daniell, Suite 1600 First Federal Bldg., Atlanta, Ga. 30303. Authority sought to operate as a *common carrier*, by motor vehicle, over irregular routes, transporting: *Lumber*, from the plantsite of Georgia-Pacific Corporation at Bellville, Ga., and Warrenton, Ga., to points in Alabama, Florida, North Carolina, South Carolina, Tennessee, Kentucky and Georgia, for 180 days. SUPPORTING SHIPPER: Georgia-Pacific Corporation, P.O. Box 909, Augusta, Ga. 30903. SEND PROTESTS TO: William L. Scroggs, District Supervisor, Interstate Commerce Commission, Bureau of Operations, Room 309, 1252 W. Peachtree Street, NW., Atlanta, Ga. 30309.

No. MC 117439 (Sub-No. 44 TA), filed August 21, 1973. Applicant: BULK TRANSPORT, INC., Mlg.: P.O. Box 89, Off.: U.S. Highway 190, Port Allen, La. 70767. Applicant's representative: John Schwab, P.O. Box 3036, Baton Rouge, La. 70821. Authority sought to operate as a *common carrier*, by motor vehicle, over irregular routes, transporting: *Mineral grit and blast-cleaning grit*, in bulk, in tank vehicles, from New Orleans, La., to points in Mississippi and Alabama, for 180 days. SUPPORTING SHIPPER: Standard Paint & Varnish Co., P.O. Box 826, Harvey, La. 70058, Mr. George Malochee, Office Mgr. SEND PROTESTS

TO: Ray C. Armstrong, Jr., District Supervisor, Interstate Commerce Commission, Bureau of Operations, T-9038 U.S. Postal Service Bldg., 701 Loyola Avenue, New Orleans, La. 70113.

No. MC 127577 (Sub-No. 4 TA), filed August 20, 1973. Applicant: D. DONNELLY, LIMITED, 191 Murray Street, Montreal, Quebec, Canada. Applicant's representative: W. Norman Charles, 80 Bay Street, Glens Falls, N.Y. 12801. Authority sought to operate as a *common carrier*, by motor vehicle, over irregular routes, transporting: *Magnetite*, in bulk, in dump vehicles, from Tahawus, N.Y., to Port of Entry on the International Boundary Line between the United States and Canada at or near Champlain, N.Y., for 180 days. SUPPORTING SHIPPER: Quebec Iron and Titanium Corporation, Tracy, Quebec, Canada. SEND PROTESTS TO: District Supervisor Paul D. Collins, Interstate Commerce Commission, Bureau of Operations, 52 State Street, Room 5, Montpelier, Vt. 05602.

No. MC 128375 (Sub-No. 100 TA), filed August 16, 1973. Applicant: CRETE CARRIER CORPORATION, 1444 Main, P.O. Box 249, Lincoln, Nebr. 68501. Applicant's representative: Duane W. Acklie (same address as above). Authority sought to operate as a *contract carrier*, by motor vehicle, over irregular routes, transporting: *Rejected, returned, replacement, recalled, and obsolete motor vehicle parts, accessories and related items*, from points in the United States, to the facilities of the Maremont Corporation at or near Loudon, Pulaski, and Nashville, Tenn., for 180 days. SUPPORTING SHIPPER: Anthony T. Santella, The Maremont Corporation, 168 North Michigan Avenue, Chicago, Ill. 60601. SEND PROTESTS TO: Max H. Johnston, District Supervisor, Interstate Commerce Commission, Bureau of Operations, 320 Federal Building & Court House, Lincoln, Nebr. 68508.

No. MC 128383 (Sub-No. 37 TA), filed August 13, 1973. Applicant: PINTO TRUCKING SERVICE, INC., 1414 Calcon Hook Road, Sharon Hill, Pa. 19079. Applicant's representative: Gerald K. Gimmel, 666 Eleventh St. NW., Washington, D.C. 20001. Authority sought to operate as a *common carrier*, by motor vehicle, over irregular routes, transporting: *General commodities* (except commodities in bulk, Class A and B explosives, and motor vehicles requiring the use of special equipment), between Chicago O'Hare International Airport, at or near Chicago, Ill.; Weir-Cook Airport at or near Indianapolis, Ind.; the Greater Cincinnati Airport at or near Cincinnati, Ohio; the Hopkins International Airport at or near Cleveland, Ohio; and the Greater Pittsburgh Airport at or near Pittsburgh, Pa., restricted to the transportation of traffic having a prior or subsequent movement by air or moving in a substitute for air service, for 180 days. SUPPORTING SHIPPERS: Skyline Air Freight, 1511 Carmen Dr., Elk Grove, Ill. 60007; Five Star Air Freight, 3rd & Governor Printz Blvd., Lester, Pa. 19118;

U.S. Air Freight, O'Hare International Airport, Chicago, Ill. 60006; Air France, 1350 Avenue of the Americas, New York, N.Y. 10019; Bor-Air Freight, 351 West 38th Street, New York, N.Y. 10018; and Forty-Four Air Freight, 126-30 37th Avenue, Corona, N.Y. 11368. SEND PROTESTS TO: Peter R. Guman, District Supervisor, Interstate Commerce Commission, Bureau of Operations, Federal Bldg., Room 3238, 600 Arch Street, Philadelphia, Pa. 19106.

No. MC 134291 (Sub-No. 2 TA), filed August 16, 1973. Applicant: JOSEPH R. ST. HILAIRE, doing business as ST. HILAIRE'S DELIVERY SERVICE, Bristol, Conn. 06010. Applicant's representative: J. Aiden Connors, 145 East 49th Street, New York, N.Y. 10017. Authority sought to operate as a *contract carrier*, by motor vehicle, over irregular routes, transporting: *Manuscripts, proofs, page proofs, art work, film, magazines, printed matter*, between the plant site of American Can Company, Bristol Printing Division, Bristol, Conn., on the one hand, and, on the other, points in Nassau and Suffolk Counties, N.Y.; Newark, N.J.; New York, N.Y., Commercial Zone as defined by the Commission, Trenton, N.J.; Philadelphia, Pa., Commercial Zone, Wilmington, Del., and Baltimore, Md., for 180 days. SUPPORTING SHIPPER: American Can Company—Printing Division, Bristol Plant, 50 Emmett Street, Bristol, Conn. 06010. SEND PROTESTS TO: David J. Kieran, District Supervisor, Interstate Commerce Commission, Bureau of Operations, 135 High Street, Room 324, Hartford, Conn. 06101.

No. MC 134370 (Sub-No. 11 TA), filed August 16, 1973. Applicant: OSBORNE TRUCKING CO., INC., 1008 Sierra Drive, Riverton, Wyo. 82501. Applicant's representative: Robert S. Stauffer, 3539 Boston Road, Cheyenne, Wyo. 82001. Authority sought to operate as a *common carrier*, by motor vehicle, over irregular routes, transporting: *Roofing and building materials* (except in bulk, in tank vehicles), from Denver, Colo., to points in Wyoming and that part of Nebraska located on and west of U.S. Highway 83, for 180 days. SUPPORTING SHIPPERS: GAF Corporation, 32 Main Street, South Bound Brook, N.J. 08880; Gittings Lumber Co., Inc., 4501 Wynkoop Street, Denver, Colo. 80216; BLC Supply, Inc., 60 East Floyd Ave., Englewood, Colo. 80110; and The Denver Reserve Supply Company, 555 West 48th Avenue, Denver, Colo. 80216. SEND PROTESTS TO: District Supervisor Paul A. Naughton, Interstate Commerce Commission, Bureau of Operations, Rm. 1006 Federal Bldg. & Post Office, 100 East B Street, Casper, Wyo. 82601.

No. MC 134631 (Sub-No. 17 TA), filed August 15, 1973. Applicant: SCHULTZ TRANSIT, INC., 323 East Bridge Street, P.O. Box 406, Winona, Minn. 55987. Applicant's representative: Eugene A. Schultz (same address as above). Authority sought to operate as a *contract carrier*, by motor vehicle, over irregular routes, transporting: *Radio, phonograph,*

television, and stereo cabinets, record changer bases, and speaker boxes, with or without mechanisms, from Red Wing and Minona, Minn., to Seattle, Wash.; points in Massachusetts, Jessup, Md.; and their commercial zones, for 180 days. SUPPORTING SHIPPER: Winona Industrial Sales Corporation, 602 East Front Street, Winona, Minn. 55987. SEND PROTESTS TO: District Supervisor A. N. Spath, Interstate Commerce Commission, Bureau of Operations, 448 Federal Building & U.S. Court House, 110 S. 4th St., Minneapolis, Minn. 55401.

No. MC 135364 (Sub-No. 7 TA), filed August 13, 1973. Applicant: MORWALL TRUCKING, INC., R.D. 3—Box 76-C, Moscow, Pa. 18444. Applicant's representative: Kenneth R. Davis, 999 Union Street, Taylor, Pa. 18517. Authority sought to operate as a *contract carrier*, by motor vehicle, over irregular routes, transporting: (1) *Materials and supplies* used in the manufacture and shipping of artificial Christmas trees, (a) from Nicholasville, Ky., to Blakely, Pa. and Coxsackie, N.Y., and (b) from Middlebury, Vt., and Piscataway, N.J., to Lexington, Ky.; (2) *artificial Christmas trees*, from piers located in the Norfolk, Va., harbor area and the port facilities in New York and in New Jersey within the New York, N.Y., harbor area as defined by the Commission in Ex Parte No. 140, Determination of the Limits of New York and New Jersey Harbors contiguous thereto, to Coxsackie, N.Y., and Lexington, Ky.; (3) *artificial Christmas trees and materials and supplies* used in the manufacture and shipping of the above-named commodities, between the facilities of American Technical Industries, Inc., at Lexington, Ky., and Blakely, Pa., and from Blakely, Pa., to Coxsackie, N.Y.; and (4) *artificial Christmas trees*, from Lexington, Ky., to Harrisburg and Pittsburgh, Pa.; the District of Columbia, Wilmington, Del.; New York and Mount Vernon, N.Y.; and Baltimore, Md., for 150 days. RESTRICTION: Transportation to be performed under a continuing contract with American Technical Industries, Inc., or its subsidiaries. SUPPORTING SHIPPER: American Technical Industries, Inc., 1454 Jingle Bell Lane, Lexington, Ky. 40505. SEND PROTESTS TO: Paul J. Kenworthy, District Supervisor, Bureau of Operations, Interstate Commerce Commission, 309 U.S. Post Office Building, Scranton, Pa. 18503.

No. MC 138018 (Sub-No. 2 TA), filed August 14, 1973. Applicant: REFRIGERATED FOODS, INC., P.O. Box 1018, 3200 Blake Street, Denver, Colo. 80205. Applicant's representative: Truman A. Stockton, The 1650 Grant Street Bldg., Denver, Colo. 80203. Authority sought to operate as a *common carrier*, by motor vehicle, over irregular routes, transporting: (1) *meats, meat products, meat by-products, dairy products and articles distributed by meat packinghouses* as described in Sections A, B, and C of Appendix I to the report in *Descriptions in Motor Carrier Certificates*, 61 M.C.C. 209 and 766 (except hides and commodities in bulk), from Wagner, S. Dak., to points in Arizona, California, Colorado, Idaho,

Illinois, Iowa, Kansas, Minnesota, Missouri, Montana, Nebraska, Nevada, New Mexico, Oregon, Utah, Washington, Wisconsin, and Wyoming and (2) meats, meat products and meat by-products as described in (1) (except hides and commodities in bulk), and materials, supplies, and equipment used by meat-packers in the conduct of their business, from points in Arizona, California, Colorado, Idaho, Illinois, Iowa, Kansas, Minnesota, Missouri, Montana, Nebraska, Nevada, New Mexico, Oregon, Utah, Washington, Wisconsin, and Wyoming, to Wagner, S. Dak., for 180 days. SUPPORTING SHIPPER: Yankton Slough Industries, 301 North Fifth Street, Minneapolis, Minn. 55403. SEND PROTESTS TO: District Supervisor Roger L. Buchanan, Interstate Commerce Commission, Bureau of Operations, 2022 Federal Building, Denver, Colo. 80202.

No. MC 138551 (Sub-No. 1 TA), filed August 15, 1973. Applicant: PARCEL DISPATCH, INC., 305 North Senate Avenue, Indianapolis, Ind. 46204. Applicant's representative: Warren C. Moberly, 777 Chamber of Commerce Bldg., Indianapolis, Ind. 46204. Authority sought to operate as a contract carrier, by motor vehicle, over irregular routes, transporting: Merchandise, equipment, and supplies, sold, used or distributed by a manufacturer of cosmetics, except (a) glass containers, (b) enclosures for glass containers, (c) fiberboard boxes, and (d) commodities in bulk, between Cincinnati, Ohio, on the one hand, and on the other, points in Indiana, for 180 days. SUPPORTING SHIPPER: Avon Products, Inc., 175 Progress Place, Cincinnati, Ohio 45246. SEND PROTESTS TO: James W. Habermehl, District Supervisor, Interstate Commerce Commission, Bureau of Operations, 802 Century Bldg., 36 S. Penn. St., Indianapolis, Ind. 46204.

No. MC 138571 (Sub-No. 3 TA), filed August 16, 1973. Applicant: PAUL W. MUMFORD, JR., doing business as MUMFORD HORSE TRANSPORTATION, Turf Trailer Park, Charles Town, W. Va. 25414. Applicant's representative: Bernard J. Hasson, Jr., 927 Fifteenth Street NW., Suite 306, Washington, D.C. 20005. Authority sought to operate as a common carrier, by motor vehicle, over irregular routes, transporting: Livestock, other than ordinary, for breeding, racking, show, and other special purposes, and in the same vehicle with such livestock, personal effects of attendants, trainers, and exhibitors, and supplies and equipment used in the care and exhibition of such animals, between Charles Town, W. Va., on the one hand, and, on the other, points in Pennsylvania and return, for 180 days. SUPPORTING SHIPPERS: There are approximately 37 statements of support attached to the application, which may be examined here at the Interstate Commerce Commission in Washington, D.C., or copies thereof which may be examined at the field office named below. SEND PROTESTS TO: Robert D. Caldwell, District Supervisor, Bureau of Operations, Interstate

Commerce Commission, 12th Street & Constitution Avenue NW., Washington, D.C. 20423.

No. MC 138752 (Sub-No. 1 TA), filed August 21, 1973. Applicant: BEAUFERD SCHMIDT, Rte 2, Box 26, Canton, Kans. 67428. Applicant's representative: Eugene W. Hiatt, 308 Casson Bldg., Topeka, Kans. 66603. Authority sought to operate as a contract carrier, by motor vehicle, over irregular routes, transporting: Polyurethane foam, from Newton, Kans., to Springfield, Mo.; Kansas City, Mo.; Monette, Mo.; Chillicothe, Mo.; St. Louis, Mo.; Oklahoma City, Okla. McGregor, Tex.; Dallas, Tex.; Fort Worth, Tex.; Mr. Vernon, Tex.; and Denver, Colo., for 180 days. SUPPORTING SHIPPER: Future Foam, Inc., P.O. Box 1017, Downtown Station, Omaha, Nebr. 68101. SEND PROTESTS TO: M. E. Taylor, District Supervisor, Interstate Commerce Commission, Bureau of Operations, 501 Petroleum Building, Wichita, Kans. 67202.

No. MC 138993 TA, filed August 14, 1973. Applicant: EVERGREEN LUMBER SALES, INC., 100 River Avenue, Eugene, Ore. 97402, and Mail: P.O. Box 2351, Eugene, Ore. 97402. Applicant's representative: R. B. Taylor (same address as above). Authority sought to operate as a contract carrier, by motor vehicle, over irregular routes, transporting: Lumber, plywood, particle board, sheet rock wallboard, between points in Oregon, on the one hand, and, on the other, points in California, Nevada, Arizona, and Utah, for 180 days. SUPPORTING SHIPPERS: A & R Lumber Sales, Inc., P.O. Box 2803, Eugene, Ore. 97402, and Hobin Lumber Co., P.O. Box 709, Philomath, Ore. 97370. SEND PROTESTS TO: District Supervisor A. E. Odoms, Interstate Commerce Commission, Bureau of Operations, 450 Multnomah Bldg., 319 SW. Pine Street, Portland, Ore. 97204.

No. MC 138994 TA, filed August 16, 1973. Applicant: MELVIN'S WRECKER SERVICE, Route 5, Box 81, Mooresville, N.C. 28115. Applicant's representative: John McLain Massey, 114 Court Street, P.O. Box 1227, Statesville, N.C. 28677. Authority sought to operate as a common carrier, by motor vehicle, over irregular routes, transporting: Wrecked or disabled trucks, tractors, and semitrailers, and replacement vehicles, for the above-named vehicles, (1) from points in Alabama, Louisiana, Mississippi, Florida, Georgia, Tennessee, South Carolina, Virginia, West Virginia, Maryland, Delaware, New York, Pennsylvania, New Jersey, Connecticut, Massachusetts, Rhode Island, Ohio, Kentucky, and the District of Columbia, to points in Mecklenburg County, N.C., and (2) from points in Mecklenburg County, N.C., to points in said states; and (3) from points in South Carolina, Georgia, Virginia and Tennessee, to Iredell County, N.C.; and (4) from points in Iredell County, N.C., to points in said states, for 180 days. SUPPORTING SHIPPERS: Bay State Milling Company, 448 N. Main Street, P.O. Box 358, Mooresville, N.C. 28115, and Johnson Motor Lines, Inc., P.O. Box 10877, Char-

lotte, N.C. 28201. SEND PROTESTS TO: District Supervisor Terrell Price, Interstate Commerce Commission, Bureau of Operations, 800 Briar Creek Road, Room CC516, Charlotte, N.C. 28205.

No. MC 138997 TA, filed August 15, 1973. Applicant: WILLIAMS MACHINERY MOVERS, INC., 248-47 Jamaica Avenue, Bellerose, N.Y. 11426. Applicant's representative: Arthur J. Piken, One Lefrak City Plaza, Flushing, N.Y. 11368. Authority sought to operate as a contract carrier, by motor vehicle, over irregular routes, transporting: Printing, bindery and box making machinery, equipment, and parts, (a) between points in the New York, N.Y., commercial zone as defined in the fifth supplemental report in Commercial Zones and Terminal Areas, 53 MCC 451, within which local operations may be conducted pursuant to the partial exemption of section 203(b) (8) of the Interstate Commerce Act (the "exempt" zone) points in Hudson and Essex Counties, N.J., on the one hand, and, on the other, points in New York, New Jersey, Pennsylvania, Delaware, Maryland, Rhode Island, Virginia, Connecticut, Massachusetts, Ohio, and the District of Columbia, and (b) between points in New York, New Jersey, Pennsylvania, Delaware, Maryland, Virginia, Connecticut, Rhode Island, Massachusetts, Ohio, and the District of Columbia, under continuing contract with Heidelberg Eastern, Inc., for 180 days. SUPPORTING SHIPPER: Heidelberg Eastern, Inc., 73-45 Woodhaven Boulevard, Glendale, N.Y. 11227. SEND PROTESTS TO: Paul W. Assenza, District Supervisor, Interstate Commerce Commission, Bureau of Operations, 26 Federal Plaza, New York, N.Y. 10007.

No. MC 139002 TA, filed August 20, 1973. Applicant: JOSEPH GEORGIANA, 26 Lafayette Street, Somerset, N.J. 08873. Applicant's representative: George A. Olsen, 69 Tonnele Avenue, Jersey City, N.J. 07306. Authority sought to operate as a common carrier, by motor vehicle, over irregular routes, transporting: Record album and book slip cases, from New Brunswick, N.J., to New Berlin, Wis., for 180 days. SUPPORTING SHIPPER: Alexander Ungar, Inc., 15 Industrial Drive, New Brunswick, N.J. 08903. SEND PROTESTS TO: District Supervisor Robert S. H. Vance, Bureau of Operations, Interstate Commerce Commission, 9 Clinton St., Newark, N.J. 07102.

By the Commission.

[SEAL] ROBERT L. OSWALD,
Secretary.

[FR Doc. 73-18757 Filed 9-4-73; 8:45 am]

[Ex Parte No. 299 (Sub-No. 1)]

LONG ISLAND RAIL ROAD CO.
Freight Rates and Charges—1973

August 29, 1973.

By petition filed on August 24, 1973, The Long Island Rail Road Company, in accordance with the amendments to the Interstate Commerce Act effected by the Railroad Rate Adjustment Act of 1973, and the requirements and procedures

promulgated thereunder in Ex Parte No. 298 (49 CFR 1107), requests the Commission to permit the filing of a proposed tariff and the establishment of interim increases in freight rates and charges to offset increases in taxes under the Railroad Retirement Act, as amended. The increases in taxes become effective on October 1, 1973, and on January 1, 1974. The increases in rates and charges sought to offset those tax increases are 3.5 and 5.5 percent, respectively, to become effective on the same dates, the latter to be applied in lieu of the former beginning January 1, 1974. The petition is accompanied by a verified statement, containing statistical data, which is intended to constitute the data and information required pursuant to Ex Parte No. 298. Also, in accordance with the requirements of Ex Parte No. 298, petitioner points out that it foresees that it will be able to absorb and offset \$1,770,000 of increased costs from new traffic revenues and on account of reduced expenses from improved operating procedures.

Furthermore, the petition indicates that petitioner intends to recover the balance of the increased costs by publication of a proposed tariff which sets forth the sought rate increases in the form of a terminal surcharge. Petitioner represents that this method of recovering its increased costs is necessary because it receives only about 14 percent of the through freight charges assessed on traffic moving to and from points on its lines. In order to recover 5.5 percent of total freight revenues for retirement tax purposes solely from petitioner's divisional share of line-haul rates and charges, all rates to and from points on petitioner's lines would allegedly have to be increased by 37.5 percent. Finally, application of the indicated surcharges would still allegedly leave petitioner's rates on a lower level than those of other eastern railroads, specifically, 1.5 percent lower as of October 1, 1973 and 0.2 percent lower on January 1, 1974.

In accordance with the provisions of section 15a(4) (a) and (b) of the Interstate Commerce Act, recent amendments, the order required to be issued in this proceeding within 30 days will be based solely on the Commission's analysis and verification of the data and information submitted by the railroad in accordance with Ex Parte No. 298. However, that order will be published in the FEDERAL

REGISTER and will provide for notification to the Commission by all persons who are interested in participating in the subsequent hearings to be held under the provisions of section 15a(4) (c).

ROBERT L. OSWALD,
Secretary.

[FR Doc.73-18759 Filed 9-4-73;8:45 am]

**COST OF LIVING COUNCIL
FOOD INDUSTRY ADVISORY COMMITTEE
Notice of Closed Meeting**

Pursuant to the provisions of the Federal Advisory Committee Act (Public Law 92-463, 86 Stat. 770), notice is hereby given that the meeting of the Food Industry Advisory Committee, created by section 7(b) of Executive Order 11695, will be held on September 10, 1973, at 9 a.m., at 2000 M Street, NW., Room 7206, Washington, D.C.

Since the meeting will consider sensitive policy issues and possible governmental actions in connection therewith, I have determined that the meetings would fall within exemption (5) of 5 U.S.C. 552(b) and that it is essential to close the meeting to protect the free exchange of internal views and to avoid interference with the operation of the Committee.

Issued in Washington, D.C., September 4, 1973.

HENRY H. PERRITT, Jr.,
Executive Secretary,
Cost of Living Council.

[FR Doc.73-19019 Filed 9-4-73;12:40 pm]

**POSTAL SERVICE
SCHEDULED INCREASES IN CERTAIN
POSTAGE RATES**

Notice of Effective Date

Notice is hereby given that the second step of phased postage rate increases, scheduled to become effective July 6, 1973 (38 FR 13697-98, May 24, 1973), and suspended until further notice (38 FR 17886, July 5, 1973), will be placed in effect on September 9, 1973, at 12:01 a.m. As announced in the FEDERAL REGISTER of May 24, 1973, this action represents the next step of scheduled rate increases for the following classes of mail: second-class; controlled circulation; third-class bulk for qualified nonprofit organizations; special fourth-class and library fourth-class. Rate increases for these

classes are being phased in over periods of 5 years for some and 10 years for others, as specified in 39 U.S.C. 3626. The phased increases, the period of phasing, the rates which are not affected by the September 9, 1973, increase, as well as a summary of the applicable authority and procedures, were set forth in a notice in part II of the FEDERAL REGISTER of July 1, 1972 (37 FR 13148-50). The rates which will be placed in effect on September 9, 1973, are shown under Year "2" in schedules 1 through 7, except that the rates for regular rate third-class mail shall remain as provided in schedule "D" of said notice, pending congressional action on appropriations for fiscal year 1974.

Concurrently, surface postage rates and fees on international mail, consisting of books and sheet music, will be put in effect as follows:

(a) Argentina, Bolivia, Brazil, Canada, Chile, Colombia, Costa Rica, Cuba, Dominican Republic, Ecuador, El Salvador, Guatemala, Haiti, Republic of Honduras, Mexico, Nicaragua, Panama, Paraguay, Peru, Uruguay, and Venezuela

Pounds	Rate
1	\$0.17
2	.24
4	.36
6	.54
8	.72
10	.90
11	1.08
12	1.08
Each additional 2 pounds or fraction ²	\$0.18

(b) All other countries

Pounds	Rate
1	\$0.17
2	.28
4	.48
6	.72
8	.96
10	1.20
11	1.44

¹ Eleven pounds is maximum weight limit to Canada.

² Weight limits in section 223.2, Publication 42, apply.

³ Charge 24 cents for each additional 2 pounds or fraction on packages weighing over 10 and up to 22 pounds, destined for Spain and Spanish possession.

(39 U.S.C. 101(d), 401, 403, 404, 3621, 3626, 3627.)

ROGER P. CRAIG,
Deputy General Counsel.

AUGUST 31, 1973.

[FR Doc.73-18934 Filed 9-4-73;10:35 am]

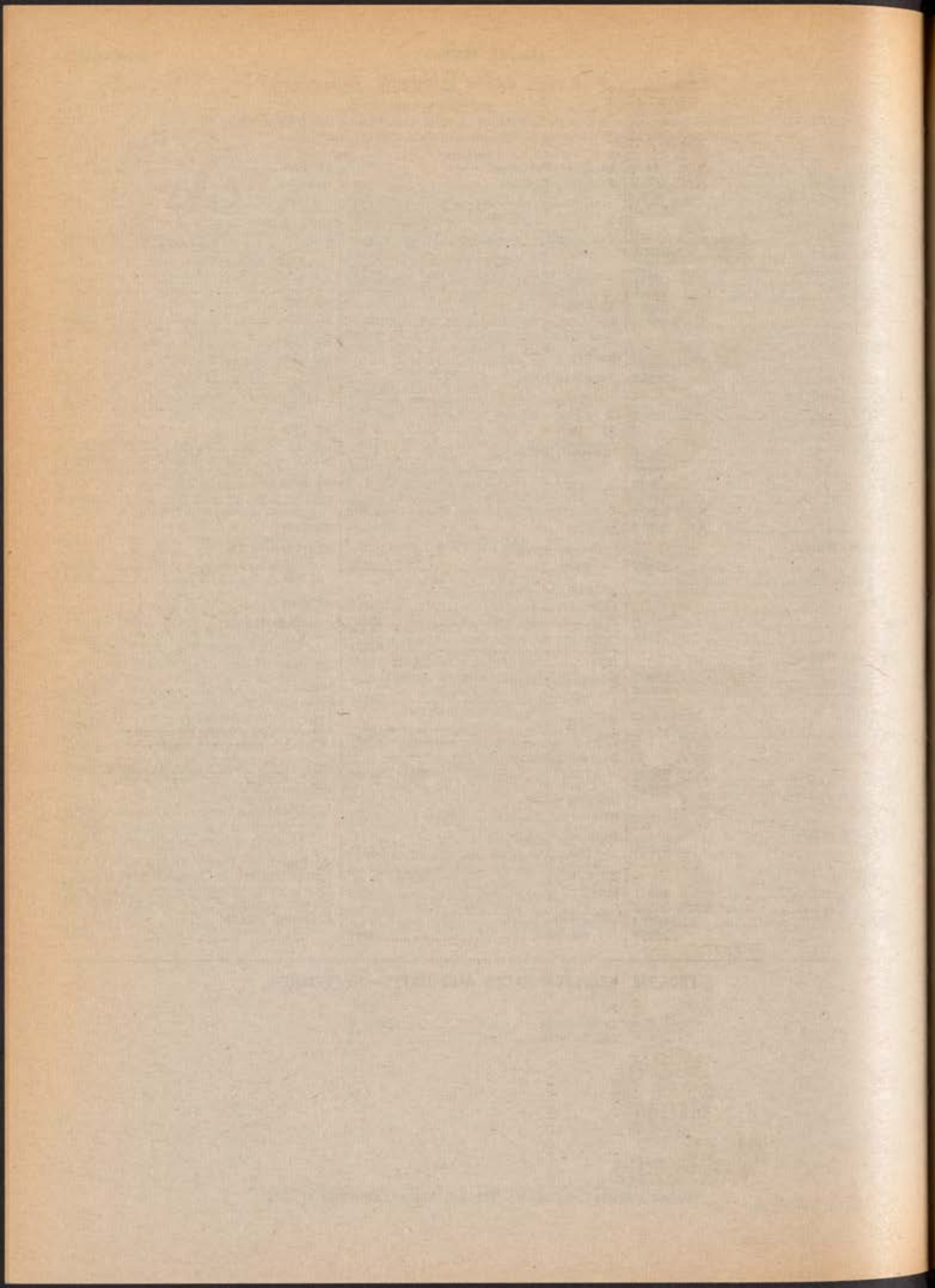
CUMULATIVE LISTS OF PARTS AFFECTED—SEPTEMBER

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WEDNESDAY, SEPTEMBER 5, 1973

WASHINGTON, D.C.

Volume 38 ■ Number 171

PART II



INTERIM COMPLIANCE PANEL (COAL MINE HEALTH AND SAFETY)

■

ELECTRIC FACE EQUIPMENT
STANDARD NONCOMPLIANCE
PERMITS

Nongassy Underground Coal Mines
Above Watertable

**INTERIM COMPLIANCE PANEL
(COAL MINE HEALTH AND SAFETY)**

[30 CFR Part 504]

**ELECTRIC FACE EQUIPMENT STANDARD
NONCOMPLIANCE PERMITS**

**Nongassy Underground Coal Mines Above
the Watertable**

Notice is hereby given that the Interim Compliance Panel, established by section 5 of the Federal Coal Mine Health and Safety Act of 1969 (30 U.S.C. 804), proposes to issue regulations as a part of Chapter V in Title 30, Code of Federal Regulations. Such proposed regulations are identified as Part 504, and they set forth the procedure for obtaining permits for noncompliance with the electric face equipment standard as prescribed in the Act.

The Federal Coal Mine Health and Safety Act of 1969, at 30 U.S.C. 865(a) (2), provides that, commencing March 30, 1974, the electric face equipment standard shall apply to those underground coal mines which: (1) are operated entirely in coal seams located above the watertable; (2) were not classified as a gassy mine prior to March 30, 1970; and (3) were opened prior to December 30, 1969.

The Act also provides that the Interim Compliance Panel, on application filed no later than December 30, 1973, which application meets the requirements set forth in the Act, at 30 U.S.C. 865(a) (10), and in this Part 504 may issue a permit for noncompliance which will allow a coal mine operator to use nonpermissible electric face equipment in by the last open crosscut of a nongassy mine located above the watertable.

Procedures for requesting hearings on applications for noncompliance with the electric face equipment standard are specified in 30 CFR Part 505, as amended.

Interested persons may submit written comments, suggestions, or objections regarding the proposed regulations to the Interim Compliance Panel, Room 800, 1730 K Street NW., Washington, D.C. 20006, on or before Oct. 5, 1973.

Title 30 CFR Part 504 would read as follows:

PART 504—PERMITS FOR NONCOMPLIANCE WITH THE ELECTRIC FACE EQUIPMENT STANDARD—NONGASSY UNDERGROUND COAL MINES ABOVE THE WATERTABLE

Sec.	
504.1	Application of this Part 504
504.2	Definitions
504.3	Submitting Applications for Permits
504.4	Information Required
504.5	Processing of Applications
504.6	Issuance of Initial Permits
504.7	Applications for Renewal of Permits
504.8	Renewal of Permits
504.9	Additional Evidence
504.10	Public Hearings

AUTHORITY: Sec. 508, Public Law 91-173, 83 Stat. 803, 30 U.S.C. 957.

§ 504.1 Application of this Part 504.

This part applies to applications for permits for noncompliance submitted

in accordance with the provisions of section 305 of the Federal Coal Mine Health and Safety Act of 1969 (30 U.S.C. 865(a) (2) and (10)) and to requests for public hearings with respect to such applications. A permit for noncompliance may be issued to an operator only for electric face equipment used in an underground coal mine which: (1) is operated entirely in coal seams located above the watertable; (2) was not classified as a gassy mine prior to March 30, 1970; and (3) was opened prior to December 30, 1969. However, no permit for noncompliance will be issued for any nonpermissible electric face equipment unless such equipment was being used by an operator in connection with the mining operations in the coal mine on March 30, 1970.

§ 504.2 Definitions.

As used in this part:

(a) "Act" means the Federal Coal Mine Health and Safety Act of 1969 (Public Law 91-173, 30 U.S.C. 801 through 960);

(b) "Panel" means the Interim Compliance Panel, an independent agency established by section 5 of the Act (30 U.S.C. 804);

(c) "Application" means a request for a permit for noncompliance filed with the Panel in accordance with this Part 504;

(d) "Operator" means any owner, lessee, or other person who operates, controls, or supervises a coal mine and who files an application with the Panel for a permit for noncompliance with the electrical equipment standard as set forth in section 305(a) (2) of the Act;

(e) "M.E.S.A." means the Mining Enforcement and Safety Administration, U.S. Department of the Interior;

(f) "Permissible" equipment means equipment which has been approved as permissible by the M.E.S.A.;

(g) "Electric face equipment" means: (1) Electrical equipment with an electrical rating exceeding 2,250 watts (3 horsepower) which is taken into or used in by the last open crosscut, and

(2) All electrical rock dusting equipment which is taken into or used in by the last open crosscut;

(h) "Above the watertable," as it applies to a coal mine means that all of the coal seams of such a mine are located above the elevation of the surface of a river or a tributary of a river into which a local surface water system naturally drains; and

(i) "Permit" means an initial permit for noncompliance, or a renewal thereof, issued by the Panel to an operator to use an item of nonpermissible electric face equipment in by the last open crosscut in connection with mining operations in the designated mine located above the watertable for the period of time specified in the permit.

§ 504.3 Submitting applications for permits.

(a) Application forms may be obtained upon request to the Interim Compliance Panel, Room 800, 1730 K Street NW., Washington, D.C. 20006.

(b) Each application shall contain the information specified herein and should be submitted on the form provided by the Panel. The original and one copy of each application shall be filed by mail or by personal delivery to the Interim Compliance Panel, Room 800, 1730 K Street NW., Washington, D.C. 20006. In order to meet the filing deadline established by the Act, applications must be received by the Panel no later than December 30, 1973, or bear a postmark date no later than December 30, 1973. Postage meter dates will not be accepted as verification of date of mailing.

(c) The accuracy of the information set forth in each application submitted shall be attested by the operator as evidenced by his signature.

(d) Prior to the time an application is mailed or delivered to the Panel, the operator or his agent shall post on the mine bulletin board a notice that an application is being filed and that a copy of the application is available at the mine office for inspection by any interested person during regular working hours. The notice shall remain posted until the operator is informed of the Panel's action on the application.

(e) A copy of each application received by the Panel will be available at the office of the Panel in Washington, D.C., for inspection by any person during official working hours.

§ 504.4 Information required.

The operator shall include in his application each of the following items of information:

(a) The name, address, telephone number, and M.E.S.A. identification number of the mine in which the electric face equipment for which a permit is requested is being used;

(b) The name, address, and telephone number of the operator;

(c) The name and address of a representative of the miners of such mine;

(d) A statement that notice of the application has been posted on the bulletin board of such mine;

(e) A statement that the mine has never been classified as gassy under any provision of Federal or State law;

(f) A statement that the mine is above the watertable;

(g) A statement that the mine was opened prior to December 30, 1969;

(h) A statement that the operator is unable to comply with the electric face equipment standard required by paragraph (2) of section 305(a) of the Act (30 U.S.C. 865(a) (2));

(i) A list of the nonpermissible electric face equipment for which a permit is requested, identified by type and manufacturer's serial number or other permanently marked identification number;

(j) A statement as to whether the item of equipment had ever been rated as permissible;

(k) A statement that the item of equipment was nonpermissible and was being used in connection with mining operations in the mine on March 30, 1970;

(l) A statement that this item of equipment is being used in connection with

mining operations in the mine on the date of this application;

(m) A statement that the electric rating of the equipment exceeds 2,250 watts (3 horsepower) or a statement that it is rock dusting equipment;

(n) A statement of the specific actions taken to achieve compliance with the electrical equipment requirement of the Act since March 30, 1970; and

(o) A plan setting forth a schedule for achieving compliance for the item of equipment for which the permit is sought and describing the means and measures to be employed. This plan must contain information regarding one of the following:

(1) If the operator plans to replace the item of equipment for which a permit is requested with permissible equipment, he must furnish the name of the firm from which the replacement equipment will be obtained and the scheduled date of delivery. A copy of the contract or order must be submitted to satisfy this requirement;

(2) If the operator plans to have the item of equipment for which a permit is requested converted to permissible condition, he must furnish the name of the firm which will perform the conversion and the scheduled completion date. A copy of the contract order must be submitted to satisfy this requirement; or

(3) If the operator plans to use his own employees to convert this item of equipment to permissible status, he must furnish a copy of each contract or order for component parts and materials, the scheduled dates when these materials will be delivered, and an estimated date when the conversion to permissible status will be completed.

§ 504.5 Processing of applications.

(a) All applications timely filed in accordance with the provisions of this part will be processed by the Panel in the order in which completed applications are received.

(b) When an application for a permit for noncompliance is received, the Panel shall cause to be published in the FEDERAL REGISTER a notice giving any interested person an opportunity to file with the Panel a request for a public hearing.

(c) On or before the 15th day after publication of notice in the FEDERAL REGISTER that an application has been accepted for consideration, any interested person may file pursuant to provisions of 30 CFR Part 505, as amended, a request for a public hearing.

(d) After public hearing, or after the expiration of the aforementioned 15-day period if no hearing has been requested, the Panel shall make its determination on the merits of the application and such additional evidence as the Panel deems

necessary to its determination, including, but not limited to, evidence in support of representations made in the application.

§ 504.6 Issuance of initial permits.

(a) If the Panel determines, after notice to all interested persons and an opportunity for a public hearing, that an application satisfies the provisions of §§ 504.3 and 504.4 of this part and that the applicant-operator, despite his diligent efforts, will be unable to comply with the electric face equipment standards of the Act, the Panel may issue to such an operator an initial permit for noncompliance.

(b) Each initial permit will be issued for the period specified by the Panel. Each permit will specify the individual item of equipment which the operator will be entitled to use in nonpermissible status.

(c) The initial permit and one copy will be mailed to the operator at the address specified in the application. A copy of the permit shall immediately be posted on the bulletin board of the affected mine by the operator or his agent.

(d) The Panel shall immediately mail a copy of any initial permit granted under this section to a representative of the miners of the mine to which it pertains, and to the public official or agency of the State charged with administering State laws relating to coal mine health and safety in such mine.

§ 504.7 Applications for renewal of permits.

(a) To be considered by the Panel, every application for renewal of a permit must:

(1) Be filed with the Panel not more than 90 days nor less than 30 days prior to the expiration date of the permit in effect;

(2) Be submitted on the form and in the manner prescribed in §§ 504.3 and 504.4;

(3) Specifically set forth the actions which have been taken to achieve compliance since the date of filing the previous application; and

(4) Include a detailed schedule for achieving compliance by replacement of such nonpermissible equipment with permissible equipment or by conversion of such nonpermissible equipment to permissible status.

(b) When an application for renewal of a permit for noncompliance is received, the Panel shall cause to be published in the FEDERAL REGISTER a notice giving any interested person an opportunity to file with the Panel a request for a public hearing.

(c) On or before the 15th day after publication of notice in the FEDERAL REGISTER that an application for renewal has been accepted for consideration, any interested person may file a request for a public hearing.

(d) After public hearing, or after the expiration of the 15-day period if no hearing has been requested, the Panel shall make its determination on the merits of the application for a renewal.

§ 504.8 Renewal of permits.

(a) If the Panel determines after notice to all interested persons and an opportunity for a public hearing that the renewal application satisfies the provisions of § 504.7 of this part and that the applicant-operator, despite his diligent efforts, will be unable to comply with the electric face equipment standard of the Act, the Panel may issue to such an operator a renewal permit for noncompliance.

(b) Each renewal permit will be issued for the period specified by the Panel. The period of noncompliance authorized by the permit shall not extend beyond March 30, 1976. Each permit will specify the individual item of equipment which the operator will be entitled to use in a nonpermissible status.

(c) The renewal permit and one copy will be mailed to the operator at the address specified in the application. A copy of the permit shall immediately be posted on the bulletin board of the affected mine by the operator or his agent.

(d) The Panel shall immediately mail a copy of any renewal permit granted under this section to a representative of the miners of the mine to which it pertains, and to the public official or agency of the State charged with administering State laws relating to coal mine health and safety in such mine.

§ 504.9 Additional evidence.

Each operator shall, upon request by the Panel, submit such additional information as the Panel considers necessary to make its determination, including, but not limited to, evidence in support of representations made in connection with the application.

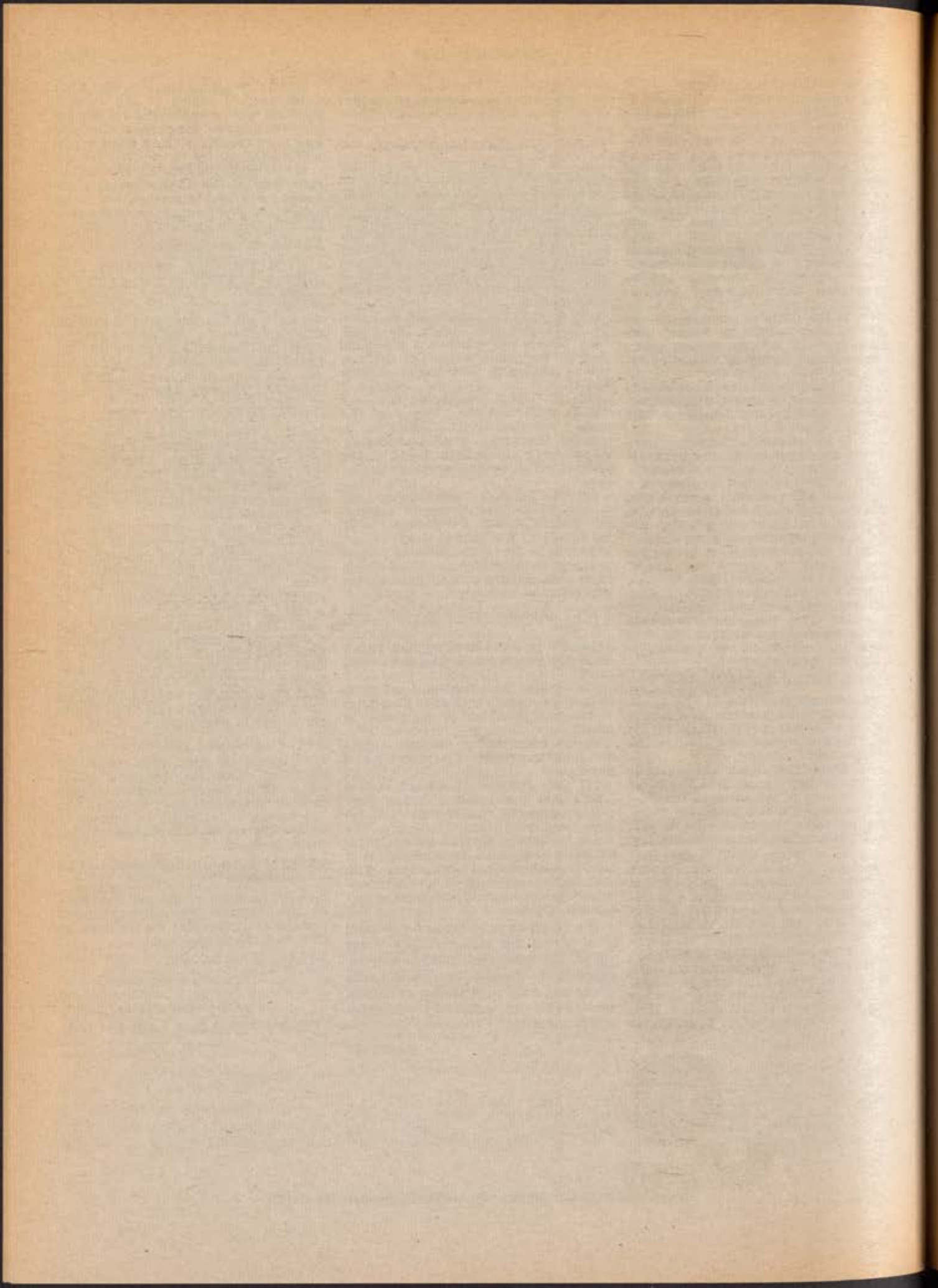
§ 504.10 Public hearings—practice and procedure.

Public hearings will be conducted pursuant to the Panel's regulation governing practice and procedure for hearings, 30 CFR Part 505, as amended.

Dated August 28, 1973.

GEORGE A. HORNBECK,
Chairman,
Interim Compliance Panel.

[FR Doc.73-18539 Filed 9-4-73;8:45 am]



federal register

WEDNESDAY, SEPTEMBER 5, 1973
WASHINGTON, D.C.

Volume 38 ■ Number 171

PART III



SMALL BUSINESS ADMINISTRATION

■

SMALL BUSINESS INVESTMENT COMPANIES

Proposed Rulemaking

SMALL BUSINESS ADMINISTRATION

[13 CFR Part 107]

SMALL BUSINESS INVESTMENT COMPANIES

Notice of Proposed Rulemaking

Notice is hereby given that pursuant to authority contained in section 308 of the Small Business Investment Act of 1958 (SBI Act), Public Law 85-699, 72 Stat. 694, as amended, it is proposed to revise, as set forth below, Part 107 of Chapter 1, Title 13, of the Code of Federal Regulations (revised as of January 1, 1973).

Prior to final adoption of such revision, consideration will be given to any comments, with certain exceptions outlined below under the caption "1972 Amendments." Such comments should be submitted in writing, in triplicate, to the Investment Division, Small Business Administration (SBA), Washington, D.C. 20416, on or before October 5, 1973.

Information.—In addition to restating the subject matter of Revision 4, Part 107, of Chapter 1, Title 13, of the Code of Federal Regulations, revised as of January 1, 1973, and amended in 38 FR 17827 (July 5, 1973), the proposed Revision 5 would (1) relax or repeal certain provisions no longer found necessary and (2) abridge and extensively revise the remaining provisions.

1972 amendments.—Regulations to implement the Small Business Investment Act Amendments of 1972 (Public Law 92-595, approved October 27, 1972, 86 Stat. 1314), hereafter called the "1972 Amendments" insofar as they deal with investments in Disadvantaged Concerns, were promulgated on July 5, 1973, as Amendment 12 to Revision 4 presently in force, 38 FR 17827. These regulations added to or amended § 107.3 [Definitions of the terms "Debtor Licensee", "Leverage", "Minority Enterprise Small Business Investment Company (MESBIC)" and "Section 301(d) Licensee"]; § 107.101(d) (2) [Nonprivate Funds for section 301(d) Licensees]; § 107.202(a) and (c) [Leverage in Excess of 200 Percent]; § 107.203(a) [SBA Purchase, Sale, or Guaranty of Securities Evidencing Leverage; Events of Default]; § 107.204 [Collection or Compromise of SBA Claims]; § 107.205 [Leverage for Section 301(d) Licensees]; § 107.702 [Common Control]; § 107.805 [Consideration for Issuance of License Securities]; § 107.813 [Section 301(d) Licensee Wholly or Partly Owned by Licensee Companies]; and § 107.1001(b) [Financing Licensees]. An explanation of these regulations was contained in the notice of proposed rulemaking preceding promulgation, published on February 15, 1973, 38 FR 4518, and in the information part of the promulgation itself, 38 FR 17827. In the proposed revision, these same regulations (except for the definition of "MESBIC") appear in modified form, but it is not intended to change their substance. Accordingly, and since these regulations were recently adopted after an extended comment period, 38 FR 7577, no comments are invited con-

cerning such substance, but comments on possible inadvertent changes of substance from the text recently promulgated are invited, as are comments on all regulations not specified above.

General summary of proposed amendments.—Proposed Revision 5 is entirely rewritten, except that the numbering system of Revision 4 has been substantially retained. Changes in captions and text, unless otherwise noted, are not intended to affect the thrust of the regulations, but have been made for clarity and brevity. It would be impractical to list all changes; however, the following changes of substance are noted.

(1) **The Audit and Examination Guide for Small Business Investment Companies.** Instructions for Preparation of the Financial Report (SBA Form 468), and SBA's System of Account Classifications, heretofore published as Appendices 1 and 2 of Part 107 and as Part 111 of SBA Rules and Regulations, respectively, would hereafter be separately printed and distributed by SBA to all Licensees. Copies may also be obtained from SBA. Sections 107.1 (Scope of Part 107); 107.2 (Information, Forms, and Instructions); 107.1102(a) (Records); 107.1102(d) (Documents Filed With SEC); and 107.1102(e) (Financial Reports to SBA); and 107.1104 (Fidelity Insurance), which refer to SBA's Audit Guide, etc., would be amended to conform to this procedural change.

(2) **Liberalizing changes.**—Section 107.101(c) would be amended to eliminate the "one-third rule," which requires no more than one-third of a Licensee's Portfolio to consist of investments in concerns classified under any single Major Group of the SIC Manual except for Real Estate Investments.

Section 107.102 would be amended so that the required \$500 Licensee fee need not accompany the license application.

The proposed amendment to § 107.103 deletes the requirement that public notice of a license application include "Agent for Correspondence." Section 107.1002, which made "capital impairment" a regulatory violation, would be repealed. Instead, the description of capital impairment would be shifted to new § 107.203(d), and failure to notify SBA promptly and to cure such impairment within ninety days would become an event of default under debentures held or guaranteed by SBA. Under § 107.1008(a), "nonperformance of any of the requirements of any debenture . . . or of any written agreement with SBA . . ." will still constitute a violation of Part 107.

Under a new proviso to § 107.301(e), purchases from an underwriter in a public offering would be exempted from the requirement that Licensee keep on file a completed Size Status Declaration and a nondiscrimination certificate of the portfolio concern. Instead, a prospectus showing its size status may be retained on file.

Section 107.301(f) would be repealed, thereby eliminating the requirement that Licensees furnish Portfolio Con-

cerns with a closing statement and retain a copy for SBA examination.

Section 107.303 would permit the acquisition of options in a Small Concern.

Under proposed § 107.501, guaranties may be issued to any creditor of a Small Concern, instead of only to banks and other lending institutions, as now. This broadened authority would be subject to certain conditions, which include a limitation of such guaranties to one hundred percent of Private Capital and a ten percent funded reserve. With the broadening of the SBICs' guaranty authority to encompass all lenders, the definition of "institutional lender" in § 107.3 would be deleted.

Proposed § 107.504 would govern all investments for less than five years, except for investments in Disadvantaged Concerns pursuant to § 107.301(a) which will continue to be permitted for a minimum period of thirty months, not to exceed half of the Portfolio. Such short-term Financing would be permitted up to twenty percent of Private Capital (instead of "total adjusted assets") as a reasonable part of overall Financing, to protect an existing investment or to finance an ownership change, and the same percentage limitation would also include purchases from a seller other than the issuer, including the underwriter of a primary public offering.

Section 107.601 Management Service provides for operating services to be performed by SBICs.

Section 107.703, which requires any pledge of ten percent or more of a Licensee's capital stock to be reported to SBA within five days, would be amended to extend the filing period to thirty days.

Section 107.809, dealing with the Investment Adviser of a Licensee, would be amended to permit Investment Advisers to perform certain management functions of an SBIC. The definition of Investment Adviser, contained in § 107.3, would also be expanded so that a Licensee may employ technical experts, either on a regular or occasional basis, to render advice or assistance on technical problems not necessarily related to the management of portfolio securities, such as feasibility, marketing, and other technical studies.

Revised § 107.812 would liberalize SBIC authority to finance changes of ownership of Small Concerns. At present, Licensees are allowed to furnish Financing for that purpose only where necessary to the growth or preservation of a Small Concern, or when it would facilitate business ownership by Disadvantaged Persons. New § 107.812 would follow the pattern of § 120.2(c)(2) governing direct SBA loans to facilitate changes of ownership, broaden the Licensee's latitude so that it may henceforth finance ownership changes that inure generally to the benefit of the Small Concern, assist in the creation of a Small Concern through corporate divestiture, or facilitate business ownership by Disadvantaged Persons. Section 107.504(b)(1) makes clear that short-term Financing for ownership

change is also permitted within stated limits.

Section 107.901 has been amended to include an interpretation that options and warrants not as yet exercised will not be exclusively considered in determining presumption of Control.

Section 107.1001(a) would prohibit re-investment financing only where the primary business activity of the Small Concern involves reinvestment. At present such Financing—except for Venture Capital Financing of certain Disadvantaged Concerns—is barred where any part of the Small Concern's activities involves reinvestment.

Section 107.1001(c) would be amended to consolidate present § 107.1001 (c) and (h), and would prohibit Financing of real estate concerns classified under SIC Manual Major Group 65 (with three exceptions—the fourth, for operative builders, is no longer needed as the current issue of the SIC Manual has reclassified that industry under Major Group 15), but would permit, as exceptional transactions, real estate acquisitions to be held without prompt and substantial improvement where an unforeseen adverse change makes such improvement impractical. The burden would be on the SBIC to demonstrate such adverse change.

Section 107.1001(e) would be amended to permit foreign investment to facilitate domestic, or foreign branch, operations.

Section 107.1001(h) would replace present § 107.1001(i) and conform to § 120.2(d) (10), governing SEA's own financing of Agricultural enterprises.

Section 107.1004(c) would eliminate the prior approval requirement for joint Financing between a Licensee and its Associates. Instead, the SBIC would have to demonstrate that the terms of its investment are at least as favorable as those of the Associate's. Absent such equivalence, joint Financing would remain barred under § 107.1004(a) which prohibits self dealing in general.

The so-called "watch dog provision" of § 107.1004(f), permitting a Licensee to appoint a director or other representative to serve on the management of a Portfolio Concern in order to protect its investment, would be amended to change the introductory words "Nothing herein contained", to read, "Nothing contained in these regulations". A "watch dog" representative may be selected to protect an existing investment, notwithstanding the provisions of § 107.1004 (Conflicts of Interest) or other provisions of the SBIC regulations.

Existing § 107.1102(f), which requires Licensees to file Program Evaluation Reports, based on data obtained from Portfolio Concerns, is to be repealed.

Proposed § 107.1102(f) [Litigation Reports, formerly § 107.1102(g)] would exempt ordinary collection actions from the present reporting requirement of all litigation by or against Licensees.

Section 107.1102(g) [formerly § 107.1102(f)], as amended, would provide that Licensees may be required by SBA

in writing to file, in addition to annual Financial Reports, other special reports. For example, a written directive may be issued in the form of a Policy and Procedural Release calling upon Licensees to endeavor to submit to SBA, data similar to those formerly included in the Program Evaluation Reports.

Section 107.1103, as amended, would (1) delete the provisions with respect to Imprest checking accounts and (2) authorize one bonded officer to sign checks up to \$1,000 each.

Section 107.1104, as amended, would simplify existing fidelity insurance requirements so that surety bond coverage in an amount of \$25,000 would suffice.

Section 107.1105(a), amended, would (1) reduce the number of postlicensing reports (change of corporate name, address, telephone number, officers and directors, or a capital increase. Capital decreases require prior SBA approval under § 107.902) and (2) permit such report to be made within ninety days after the close of the fiscal year, instead of thirty days after the event, as now.

(3) *Other changes.*—Extensive textual changes have been made to clarify and simplify the regulations, and cross-references between related sections have been added.

The term "MESBICs" (Minority Enterprise Small Business Investment Companies) will no longer be used, and "section 301(d) Licensee" will be substituted to denote special-purpose Licensees with an investment policy limited to the Assistance of Disadvantaged Concerns. References to MESBICs throughout the SBIC Regulations would be changed to "section 301(d) Licensees." Sections of particular interest to section 301(d) Licensees include §§ 107.3, the definition of "Associate" paragraph (h); the definition of section 301(d) Licensee; 107.101(c) relating to diversification and real estate in subparagraphs (2) and (3); 107.101(d) (2) relating to nonprivate funds; 107.201(a) (2) relating to applications for Leverage; 107.202(a) relating to third-dollar Leverage; 107.203(c) relating to default on a debenture; 107.203(d) relating to capital impairment; 107.205 relating to leverage for section 301(d) Licensees; 107.301(d) relating to the investment limit, the proviso to 107.805(a) relating to consideration for section 301(d) stock; 107.813 relating to section 301(d) Licensee ownership by other SBICs; 107.1001(g) relating to an associated supplier; and 107.1101(a) relating to examination fees.

The term "Financing" has been defined to include guaranties and commitments pursuant to §§ 107.501 and 107.503, and thus subjects such deferred Financings to the same general rules as apply to immediate Financings, except for the rules governing options (§ 107.303).

With the expiration of the transitional period prescribed by the 1967 Amendments during which old section 302 debentures were treated as part of paid-in capital and paid-in surplus, paragraph (c) (2) of § 107.301 can be deleted as moot.

Section 107.1005, which prohibits the sale of Portfolio securities to Associate of a Licensee or competitors of the Small Concern, unless an SBA exemption is granted, would be extended to the disposal of other SBIC assets (including assets in liquidation), better to achieve the purpose of the present regulations.

Section 107.1102 would be amended to provide that SBIC books of account and other records are to be maintained in accordance with the guidelines set forth in SBA's System of Account Classifications. The System of Account Classifications has heretofore been published as Part 111 of SBA's Regulations, but henceforth would be separately printed and distributed by SBA to all Licensees. This would make it possible for textual changes to be made and distributed more expeditiously to all Licensees, without formal rule making procedures. Section 107.1102(b) (4), which authorizes the microfilming of SBIC records is being revised along the lines of Regulation 270.31a-2(f) recently adopted by the Securities and Exchange Commission (38 FR 7796, March 26, 1973), to permit microfilming without retention of the original hard cover record. Also, minor amendments are being made to paragraphs (d) and (e) of § 107.1102 to provide for annual financial reports to be filed on SBA Form 468, in accordance with the guidelines in SBA's Audit Guide for Small Business Investment Companies, and Instructions for Preparation of the Financial Report, SBA Form 468. The Audit Guide (heretofore called "Audit and Examination Guide") and the Instructions were published as Appendixes 1 and 2 of Part 107, Revision 4. They will henceforth be separately printed and distributed by SBA to all Licensees.

The savings clause in § 107.1302 would be restated, to provide that the legality of transactions executed in accordance with existing provisions shall be governed thereby, and shall not be adversely affected by subsequent regulatory changes or amendments.

Interpretations.—The interpretations set forth in §§ 107.1401 to 107.1411 are not being carried over into Revision 5. SBA will discontinue publishing interpretations as part of the SBIC Regulations but will henceforth publish from time to time interpretations and policy statements of general interest as notices in the FEDERAL REGISTER.

Dated August 29, 1973.

THOMAS S. KLEPPE,
Administrator.

PART 107—SMALL BUSINESS INVESTMENT COMPANIES

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§ 107.1 Scope of Part 107.

The regulations in this part implement the Small Business Investment Act of 1958, as amended. All Licensees, including section 301(d) Licensees, must comply with all applicable regulations, SBA's Audit Guide for Small Business Investment Companies, and System of Account Classifications, set forth guidelines to be followed by all Licensees.¹

§ 107.2 Information, forms, and instructions.

All references in this Part to SBA forms, and instructions for their preparation, are to the current issue of such forms. The forms have been filed with the Office of the Federal Register with the original document. Copies may be obtained from SBA.

DEFINITIONS

§ 107.3 Definition of terms.²

Act.—"Act" means the Small Business Investment Act of 1958, as amended.

Assistance.—"Assistance" or "Assisted" means financing of or management services rendered to a Small Concern by a Licensee pursuant to the Act and these regulations.

Associate of a Licensee.—"Associate of a Licensee" means:

(a) An officer, director, manager, agent, or Investment Adviser of such Licensee, or any person regularly serving such Licensee in the capacity of attorney at law; or

(b) Any person owning or controlling, directly or indirectly, ten or more percent of any class of stock of such Licensee; or

(c) Any officer, director, partner, manager, agent, employer, or employee of any person described in paragraphs (a) and (b) of this section; or

(d) Any person which directly or indirectly controls or is controlled by, or is under common control with, a Licensee or any person described in paragraphs (a) and (b) of this section; or

¹ SBA's Audit Guide, System of Account Classification, and Instructions for Preparation of the Financial Report, SBA Form 468, are separately printed, and distributed by SBA to all Licensees. Copies may be obtained from SBA.

² Defined terms are capitalized hereafter.

(e) Any close relative of any person described in paragraphs (a) and (b) of this section; or

(f) Any person in which (1) any person described in paragraphs (a) through (e) of this section is an officer or director or (2) any such person (or group of two or more such persons acting in concert) owns or Controls, directly or indirectly, a ten or more percent equity interest (exclusive of any interest attributable solely to ownership of equity interest in the Licensee).

(g) For the purposes of this definition, any person in any of the relationships described in paragraphs (a) through (f) of this section within six months before or after the date on which the Licensee provided Assistance, shall be deemed to have been in such relationship as of the date of the Licensee's Assistance.

(h) A section 301(d) Licensee and a participant Licensee owning stock thereof pursuant to § 107.813, as well as Associates of such section 301(d) Licensee and such participant Licensee, shall be deemed Associates of each other.

Close relative.—"Close relative" means ancestor, lineal descendant, brother or sister and lineal descendants of either, spouse, father-in-law, mother-in-law, son-in-law, brother-in-law, daughter-in-law, or sister-in-law.

Control.—"Control" means the possession, direct or indirect, of the power to direct or cause the direction of the management and policies of a Licensee or a Small Concern whether through the ownership of voting securities, by contract, or otherwise.

Debtor Licensee.—"Debtor Licensee" means a Licensee which has leverage from SBA.

Disadvantaged concern.—"Disadvantaged Concern" means a Small Concern owned by a person or persons whose participation in the free enterprise system is hampered because of social or economic disadvantages.

Financing.—"Financing" or "Financed" means outstanding financial assistance provided to a Small Concern by a Licensee, whether through loans, guaranties, equity investments or commitments.

Investment Adviser/Manager.—"Investment Adviser/Manager" of a Licensee means, non-licensee person who pursuant to written contract executed in accordance with the provisions of § 107.809, on a continuing basis furnishes advice and/or assistance with respect to the portfolio operations of a Licensee.

Leverage.—"Leverage" means financial assistance provided to a Licensee by SBA, either through the purchase or guaranty of debentures, or through the purchase of preferred securities (see §§ 107.201 to 107.205).

1940 Act Company.—"1940 Act Company" means a Licensee which is registered under the Investment Company Act of 1940.

Person.—"Person" means a natural person or legal entity.

Portfolio.—"Portfolio" means the securities representing a Licensee's total

outstanding financings of Small Concerns. It does not include idle funds or assets in liquidation.

Portfolio concern.—"Portfolio concern" means a Small Concern Assisted by a Licensee.

Private capital.—"Private Capital" means the combined private paid-in capital and paid-in surplus of a Licensee, and does not include preferred capital provided by SBA, or borrowed funds.

Real estate investment.—"Real Estate Investment" means a Licensee's financing of a Small Concern which is classified as a real estate concern under Industry numbers 6531, 6541 and 6552 of the SIC Manual. For restrictions governing Real Estate Investments, see §§ 107.101(c) and 107.1001(c).

SBA.—"SBA" means the Small Business Administration, 1441 L Street NW., Washington, D.C. 20416.

Section 301(d) Licensee.—"Section 301(d) Licensee" means a Licensee organized under a State business or nonprofit corporation statute, and licensed pursuant to section 301(d) of the Act, the investment policy of which is limited to making investments solely in Small Concerns which will contribute to a well-balanced national economy by facilitating ownership in such concerns by persons whose participation in the free enterprise system is hampered because of social or economic disadvantages.

Short-term financing.—"Short-term financing" means financing for a term of less than five years in accordance with the regulations.

SIC Manual.—"SIC Manual" means the latest issue of the Standard Industrial Classification Manual, prepared by the Office of Management and Budget, and available from the U.S. Government Printing Office.⁵

Small concern.—"Small Concern" means a small-business concern as defined in section 103(5) of the Act (including affiliates as defined in § 121.3-2 of this chapter), which for purposes of size eligibility, meets the applicable criteria set forth in § 121.3-11 of Part 121 of this chapter.

OPERATIONAL REQUIREMENTS

§ 107.101 Operational requirements.

All Licensees shall comply with the following requirements:

(a) **Management.**—Each Licensee shall have and maintain (including through contractual arrangements) qualified management in charge of its operations who will be available at its office to the public. A manager of a Licensee shall be deemed an officer.

(b) **Office.**—The Licensee shall maintain a reasonably accessible office, which will display the license and the name of the Licensee and be open to the public during regular business hours.

(c) **Diversified investment policy—real estate.**—Unless specifically authorized in writing by SBA:

(1) **General rules.**—No Licensee shall maintain more than one-third of its port-

folio, as of the close of any full fiscal year, in permitted Real Estate Investments. For further provisions governing Real Estate Investments, see § 107.1001(c).

(2) **Licensees other than real estate specialist.**—Where a Licensee does not operate as an approved real estate specialist subject to paragraph (c)(3) of this section, its investments in Small Concerns classified under Major Groups 15, 65 and/or 70 of the SIC Manual shall not exceed one-third of its Portfolio in any one such Major Group nor two-thirds for any combination of such Major Groups, as of the close of any full fiscal year: *Provided, however,* That subject to paragraph (c)(1) of this Section, the foregoing shall not apply to a section 301(d) Licensee.

(3) **Real estate specialists.**—Where a Licensee maintains more than one-third of its Portfolio in Real Estate Investments pursuant to an investment policy approved by SBA, the total of its investments in Small Concerns classified under Major Group 15 (Building Construction—General Contractors) and Major Group 70 (Hotels, Rooming Houses, Camps and Other Lodging Places) of the SIC Manual shall not exceed twenty percent of its Portfolio as of the close of any full fiscal year: *Provided, however,* That this limitation shall not apply to a section 301(d) Licensee.

(4) **Prepayments.**—Prepayments of outstanding financing or similar events occurring beyond the control of the Licensee, within the fiscal year, shall be disregarded in determining whether the Licensee meets the foregoing requirements as of the close of its fiscal year.

(d) **Minimum capital.**—(1) **General.**—Every Licensee shall have:

(i) Private Capital of at least \$150,000; and

(ii) Taking additional resources into account, adequate to assure a reasonable prospect that it will be operated soundly and profitably, and managed actively and prudently in accordance with the Act and regulations.

(2) **Nonprivate funds for section 301(d) Licensees.**—(i) A section 301(d) Licensee may include nonprivate funds (e.g. funds granted under Title VII of the Economic Opportunity Act of 1964, as amended) in its Private Capital for purposes of sections 302(a), 303(c) and 306 of the Act: *Provided, however,* That the minimum capital of \$150,000 specified by section 302(a)(1) of the Act may not include nonprivate funds, and that for leverage purposes nonprivate funds will be included in Private Capital only to the extent that private funds totaling at least ten percent of the nonprivate funds are also included. The limitation of the foregoing proviso shall not apply to nonprivate funds received by or irrevocably committed to a section 301(d) Licensee before July 5, 1973.

(ii) For purposes of this paragraph (d)(2), "nonprivate funds" shall mean funds obtained, directly or indirectly, from another agency or department of the Federal Government or from any State, or subdivision thereof, except as limited by P.L. 92-512 (commonly known

as the General Revenue Sharing Act) and regulations of the Treasury Department, 31 CFR Part 51, 38 FR 9132 (1973). As used herein, "State" shall mean the several states, the territories and possessions of the United States, the Commonwealth of Puerto Rico and the District of Columbia.

(e) **Borrowed funds.**—Shareholders owning ten or more percent of any class of Licensee's stock may not use borrowed funds in purchasing said stock, unless the net worth of such shareholders is at least twice the amount borrowed.

LICENSE

§ 107.102 License application.

The license application shall be submitted on SBA Form 415 in accordance with accompanying instructions. A license fee of \$500 shall be paid to SBA.

§ 107.103 Public notice.

SBA shall publish notice of the license application in the FEDERAL REGISTER. It shall include such appropriate information as the name and location of the proposed Licensee, its areas of operation, the names and addresses of its officers, directors, and owners of ten or more percent of its voting stock; and shall provide an opportunity for the submission of written comments. The proposed Licensee shall publish a similar notice in a newspaper of general circulation in the city or proposed areas of operation, and a certified copy shall be furnished to SBA within ten days.

§ 107.104 Transferability of license.

A license shall not be transferred in any manner without SBA's prior written approval.

§ 107.105 Surrender of license.

A Licensee shall not surrender its license without SBA's prior written approval. Request for approval shall be accompanied by an offer of immediate payment of all moneys owing to SBA, or by a plan satisfactory to SBA for the orderly liquidation thereof. Upon receipt of Licensee's request, SBA may remove Licensee's name from published lists of Licensees, and conduct an examination of its affairs.

BORROWING BY LICENSEE

§ 107.201 Funds to licensee.

(a) **Application procedure.**—(1) **Licensees other than section 301(d) licensees.**—A Licensee (other than a section 301(d) Licensee) may apply for Leverage pursuant to Section 303(b) of the Act on SBA Form 416 (for purchase) or SBA Form 1022 (for guaranty), in accordance with accompanying instructions.

(2) **Section 301(d) Licensees.**—A section 301(d) Licensee may apply for Leverage pursuant to section 303(c) of the Act* on SBA Form 1022A (for purchase

* Section 303(c) of the Act authorizes SBA to purchase nonvoting preferred securities, and to purchase or guarantee debentures issued by section 301(d) Licensees, which may be subordinated in accordance with section 303(b) of the Act.

⁵ As of the effective date of this Revision 5, the latest issue of the SBIC Manual was 1972.

of preferred securities and debentures), on SBA Form 1022B (for exchange of debentures for preferred securities), or on SBA Form 1022 (for guaranty of debentures) in accordance with accompanying instructions. Before providing Leverage in excess of one hundred percent of Private Capital, SBA may require the section 301(d) Licensee to demonstrate the need therefore to SBA's satisfaction.

(b) *SBA Guaranty.*—(1) SBA may in its discretion agree to guarantee a Licensee's debentures unconditionally, irrespective of the validity, regularity or enforceability of such debentures or any other circumstances which might constitute a legal or equitable discharge or defense of a guarantor and, pursuant to its guaranty, to make timely payments of principal and interest, irrespective of any default by the issuing Licensee or acceleration of the maturity thereof by SBA.

(2) Persons interested in providing funds to Licensees under such guaranty may notify SBA by letter, certifying whether such lender has direct or indirect beneficial interest of ten or more percent of the actual or potential voting rights in any Licensee, or in any person directly or indirectly controlling, controlled by or under common control with, any Licensee. Such certification will not be required from lenders whose borrowers will be selected or approved by SBA or its agents. SBA will endeavor to match such offers with applications pursuant to paragraph (a) of this section but cannot assure that such offers will be accepted. SBA in its discretion may also arrange for public or private financings under its guaranty authority.

(3) No SBA guaranty shall be extended to a lender:

(i) Having a direct or indirect beneficial interest of ten or more percent of the actual or potential voting rights in the Licensee to be guaranteed, or in any person directly or indirectly controlling, controlled by, or under common control with, such Licensee; or

(ii) Having such interest involving another Licensee which has received or is about to receive pursuant to any understanding, agreement cross-dealing, reciprocal or circular arrangement any direct or indirect financing (or a commitment for financing) from another lender with SBA's guaranty. SBA may void any guaranty obtained in violation of this paragraph (b)(3), but the foregoing shall not apply to lenders whose borrowers are selected or approved by SBA or its agents.

§ 107.202 Leverage in excess of two hundred percent.

(a) In order to qualify for Leverage exceeding two hundred percent of Private Capital, at least sixty-five percent of the Licensee's total funds available for investment must be invested (or committed) in venture capital financing of Small Concerns: *Provided, however, That section 301(d) Licensees shall have thirty percent so invested.*

(b) "Venture Capital Financing" shall mean:

(1) Common and preferred stock and equity securities as defined in § 107.302 (b) with no repurchase requirement for five years, except as may be specifically approved by SBA under § 107.901 for purposes of relinquishing Control over a Small Concern.

(2) Any right to purchase such stock or equity securities.

(3) Debentures on loans (whether or not convertible or having stock purchase rights) which are subordinated (together with security interests against the assets of the Small Concern) by their terms to all borrowings of the Small Concern, and having no part amortized during the first three years.

(c) The term "total funds available for investment" shall mean ninety percent of the sum of total short-term assets and total loans and investments of a Licensee to be set forth (in accordance with the Instructions for Preparation of the Financial Report, SBA Form 468) as Items 8 and 15, respectively, on page 1 of such Financial Report, submitted by such Licensee. Venture capital investments shall be valued on the same basis as Licensee's assets comprising its "total funds available for investment." Any financing carried as "Assets Acquired in Liquidation of Loans and Debt Securities" (Item 13) or "Amounts Due from Debtors on Sale of Assets Acquired in Liquidation of Loans and Debt Securities" (Item 14) which originally qualified as venture capital shall retain the venture capital qualification.

(d) The ratio prescribed by paragraph (a) of this section shall be maintained as of the end of each fiscal year: *Provided, however, That, subject to SBA approval, a Licensee may temporarily maintain a lesser ratio. Approval may be granted in appropriate cases, such as prepayment of venture capital investments, raising of additional Private Capital, and Leverage recently provided.*

§ 107.203 SBA purchase, sale, or guaranty of securities evidencing leverage; events of default.

(a) SBA may, upon such conditions and for such consideration as it deems reasonable, sell, assign, transfer, or otherwise dispose of any preferred security, debenture, or other security held in connection with Leverage. In such event and upon notice thereof by SBA, Licensee will make all payments of principal and of dividends or interest as shall be directed by SBA. Licensee shall hold SBA harmless from all damage or loss which SBA may sustain by reason of such disposal, limited, however, to the extent of Licensee's liability under such security, plus court costs and reasonable attorney's fees incurred by SBA.

(b) A Licensee issuing debentures pursuant to section 303(b) of the Act after the effective date of this regulation,*

* § 107.203(b) became effective as Amendment 9 to Revision 4 on May 2, 1972 (37 FR 8866).

shall be deemed to have agreed to the following terms and conditions, as in effect at the time of such issuance and as if fully set forth in such debentures:

(1) Upon written notice by SBA, the entire indebtedness of the Licensee issued to, held or guaranteed by SBA may be declared immediately due and payable to SBA upon the happening of any one or more of the following events:

(i) Default in the payment of the principal or interest under any debenture, note or obligation of the Licensee, issued to, held or guaranteed by SBA;

(ii) Nonperformance or violation by the Licensee, as determined by SBA, or any one or more of the terms and conditions of any loan or obligation of the Licensee, issued to, held or guaranteed by SBA, or of any agreement with or conditions imposed by SBA;

(iii) Failure of the Licensee, as determined by SBA, to comply with any one or more of the provisions of the Act or regulations promulgated thereunder, as they may be amended from time to time;

(iv) Failure of the Licensee to notify SBA within twenty days from the date of an event of default or nonperformance by the Licensee under any debenture, note or indebtedness of the Licensee issued to or held by anyone other than SBA.

(2) The entire indebtedness of the Licensee issued to, held or guaranteed by SBA shall immediately become due and payable to SBA without notice, presentation or demand, whenever:

(i) Licensee is insolvent; or

(ii) Not having sufficient property to pay all of its debts, Licensee makes a voluntary assignment thereof; or

(iii) Licensee commits an act of bankruptcy as defined in 11 U.S.C. Section 21; or

(iv) A petition is filed in commencement of any bankruptcy or reorganization proceeding, receivership, dissolution or other similar creditors' rights proceeding, by or against the Licensee, whichever event shall first occur.

(3) Except with the prior written consent of SBA, Licensee will not:

(i) Repurchase or retire any of its capital stock; or

(ii) Make any distribution to its shareholders other than dividends out of retained earnings; or

(iii) Increase the salaries or other compensation of any officer, director, or employee beyond the amounts approved by SBA. In applying this provision, compensation to an officer, director or employee of a wholly owned corporation shall be deemed paid by Licensee.

(4) Except with the prior written consent of SBA, Licensee will not employ or tender any officer of employment to, or retain for professional services, for a period of two years after the date of the latest debenture issued by Licensee pursuant to section 303(b) of the Act, any person who on or within one year prior to said date:

(i) Shall have served as an officer, attorney, agent, or employee of SBA; and

(ii) As such, shall have occupied a position or engaged in activities which

SBA shall have determined involved discretion with respect to the granting of Assistance under the Act.

(5) Any failure on the part of SBA at any time require the performance by Licensee of any one or more of the terms or provisions of any debt instrument of Licensee issued to, held, or guaranteed by SBA shall in no way affect SBA's right thereafter to enforce the same, nor shall the waiver by SBA of any term or provision of any debt instrument of Licensee issued to, held, or guaranteed by SBA be taken or held to be a waiver of any succeeding breach of any such term or provision.

(6) If the Licensee fails to maintain either the capital requirement or the investment ratio requirement under section 303(b) (2) of the Act, and the regulations promulgated thereunder from time to time, then the aggregate amount of the outstanding indebtedness evidenced by any debt instruments issued to, held, or guaranteed by SBA which exceeds the maximum amount permitted under section 303(b) (1) shall, upon written notice by SBA, be immediately due and payable to SBA. In the event of such acceleration of payment, SBA in its sole discretion shall determine which debenture instrument or instruments, or parts thereof, shall be subject thereto.

(7) The debentures hereafter issued by a Licensee pursuant to section 303(b) of the Act, and SBA's claims relating thereto, shall be subordinate to all other debts of the Licensee, but shall have priority over all classes of stock of the Licensee upon any dissolution, winding-up, liquidation or reorganization of the Licensee, unless such debentures provide otherwise.

(c) Paragraph (b) of this section shall be applicable to section 301(d) Licensees obtaining Leverage pursuant to section 303(c) of the Act: *Provided, however*, That the capital and investment ratio requirements referred to in paragraph (b) (6) of this section shall be those prescribed by section 303(c) of the Act and § 107.202(a) thereunder.

(d) In addition to the events of default set forth in paragraph (b) (6), capital impairment occurring after [the effective date of Revision 5], shall also constitute an event of default if Licensee fails to give SBA prompt written notice as soon as it knows or should reasonably have known thereof, and if thereafter Licensee fails to cure the impairment within ninety days. In such event, SBA may, in its discretion, by written notice declare the entire indebtedness of the Licensee, issued to, held or guaranteed by SBA, immediately due and payable. Capital impairment shall be presumed when the retained earnings deficit of a section 301(d) Licensee exceeds one hundred percent, or that of any other Licensee exceeds fifty percent of Private Capital. Treasury stock shall not be considered as part of such Private Capital. The presumption of impairment may be rebutted by evidence satisfactory to SBA.

§ 107.204 Collection or compromise of SBA claims.

SBA may, upon such conditions and for such consideration as it deems reasonable, collect or compromise all claims relating to preferred securities or obligations held or guaranteed by SBA, and all legal or equitable rights accruing to it.

§ 107.205 Leverage for section 301(d) Licensees.

(a) *Charter requirements.*—SBA may, subject to the conditions prescribed in this paragraph, provide Leverage to a section 301(d) Licensee pursuant to application filed under § 107.201(a) (2). The following matters shall be appropriately provided for in the charter:

(1) *Investment policy.*—Statement of investment policy in conformity with section 301(d) of the Act. A section 301(d) Licensee licensed before July 5, 1973, shall comply with this requirement no later than ninety days from such date.

(2) *SBA's rights.*—(i) *Payment of dividends to SBA.*—Subject to the sound discretion of the board of directors, SBA shall be paid from retained earnings an annual three percent dividend on the par value of its preferred securities. Such dividends shall be payable before any amount shall be set aside or paid to any other class of stock, and shall be preferred and cumulative so that, in the event that SBA has received less than three percent in any fiscal year, such dividends shall be payable on a preferred basis from subsequent retained earnings without interest thereon. Before a declaration of dividends or any other kind of distribution (other than to SBA), SBA in its discretion may also require the preferred payment of the difference (irrespective of retained earnings) between dividends paid on its preferred securities, and cumulative dividends payable at a rate equal to the interest rate determined at the time of SBA's purchase of such preferred securities pursuant to section 303(b) of the Act for debentures with a term of fifteen years, without interest on such difference, such rate to be inscribed on the certificates offered to SBA.

(ii) *Redemption rights.*—A section 301(d) Licensee shall be entitled at its option to redeem in whole or in part preferred securities purchased by SBA on any dividend rate (after giving at least thirty days written notice), by paying SBA the par value of such securities, but not less than \$50,000 par value in any one transaction, and giving SBA an undertaking to pay the additional amounts pursuant to paragraph (a) (2) (i) of this section.

(iii) *Redemption, liquidation, or distribution of assets.*—Before any redemption of stock not purchased by SBA, or liquidation in whole or in part, or any distribution of assets to other stockholders, SBA shall be paid any amounts due pursuant to paragraphs (a) (2) (i) and (iv) of this section, and the par value of its preferred stock: *Provided, however*, That such par value need not

be paid SBA before the distribution of ordinary dividends from retained earnings.

(iv) *Interest subsidy before dividends.*—Debentures of a section 301(d) Licensee shall be entitled to a reduced interest rate according to section 317 of the Act. Such debentures shall specify the interest rates prescribed by sections 317 and 303(b) of the Act, together with the dates between which each applies. The interest rate as reduced by section 317 of the Act applies only to debentures purchased by SBA and not to debentures guaranteed under section 303(c) of the Act. A Licensee which has received the benefit of the rate computed pursuant to section 317 shall not pay dividends or make any distribution to stockholders other than SBA, unless it has first paid SBA the difference between the two rates for the relevant period, without interest on such difference. With respect to payment of interest, SBA shall have the same priority as applies to debentures purchased or guaranteed under section 303(b) of the Act.

(3) *Prior SBA approval required to amend charter.*—The charter shall not be amended without SBA's prior written approval.

(i) *SBA approval required to increase salaries.*—Without prior written SBA approval, a Debtor section 301(d) Licensee may not increase the salaries or other compensation of any officer, director, or employee beyond amounts previously approved by SBA.

(ii) *Exchange of outstanding debentures for preferred stock.*—A section 301(d) Licensee meeting the requirements of paragraph (iii) of this section may, in SBA's discretion, retire debentures outstanding pursuant to section 303(b) of the Act simultaneously with the issuance to SBA of preferred securities, in order to remain within the Leverage limits of section 303(c) (2) (iii) of the Act, but not otherwise.

(iii) *Preferred securities other than stock.*—A section 301(d) Licensee may issue to SBA preferred securities other than stock only if applicable law precludes the issuance of preferred stock.

(iv) *State law.*—SBA does not intend that provisions of this section not mandated by the Act shall supersede existing State law. Whenever a party claims that a conflict exists, it shall submit an opinion of independent counsel, citing authorities, for SBA's resolution of the issues involved.

FINANCING OF SMALL CONCERNS (EQUITY CAPITAL FINANCING: LONG-TERM LOANS: GUARANTIES: AND COMMITMENTS)

§ 107.301 General.

(a) *Minimum period of financing.*—Except as otherwise provided for in these regulations, Financings of Disadvantaged Concerns may be made for a minimum period of thirty months, the aggregate of such Financings for less than five years not to exceed fifty percent of the Licensee's Portfolio at the end of any fiscal year, determined without regard

to prepayments (or similar events beyond the Licensee's control) which occur during that fiscal year,* but all other Financings shall be for a minimum period of five years. Voluntary prepayment without penalty shall be permitted, unless SBA's prior written approval is obtained.

(b) *Maximum amortization.*—Amortization during the first five years (or during the first thirty months of an authorized Financing for at least thirty months) shall not be required at a rate exceeding an accumulated average based on the straight-line method of amortization.⁷

(c) *Maximum annual cost of money.*—Subject to lower rates prescribed by local law, the maximum annual cost for Financing shall not exceed fifteen percent of the average amount outstanding. Cost shall include all interest, discount and all fees, commissions and similar charges imposed, directly or indirectly, by the Licensee on the Small Concern; only charges for Advisory or Management Services pursuant to §§ 107.601 and 107.602 and charges pursuant to § 107.1004(c) shall not be included.

(d) *Overline limitation.*—Without written SBA approval, the aggregate amount of funds disbursed for securities acquired (exclusive of write-down), and of commitments and guarantees issued for a Small Concern (including affiliated concerns as defined in § 121.3-2(a) of this chapter) shall not exceed twenty percent of Licensee's Private Capital: *Provided, however,* That for section 301 (d) Licensees the limitation shall be thirty percent.

(e) *Size status and nondiscrimination.*—No assistance shall be provided unless:

(1) The Licensee and the Small Concern have executed SBA Form 480, Size Status Declaration, including Licensee's determination that applicable size standards have been met, or SBA has determined at the request of the Licensee or such concern that the latter is a Small Concern; and

(2) The Small Concern has certified on SBA Form 652-D that it will not illegally discriminate in its operations, employment practices or facilities, as set forth in Part 113 of this chapter. Such forms shall be kept available for SBA's examination: *Provided, however,* That the foregoing shall not apply when the Licensee acquires the securities from an underwriter in a public offering pursuant to § 107.504(b)(3), in which event the Licensee shall keep the prospectus showing the small size status of the issuer, if available, as part of its records for SBA's examination.

EQUITY CAPITAL

§ 107.302 Equity capital.

(a) "Equity Capital" means funds supplied to a Small Concern as consideration for equity securities: *Provided, how-*

*For other short-term financing and amortization, see § 107.504(b)(1) and (2).

⁷ *Ibid.*

ever, That a Licensee shall not become a general partner in any partnership, or otherwise become jointly or severally liable for the general obligations of an unincorporated Portfolio Concern, except guaranties pursuant to § 107.501.

(b) "Equity Securities" means:

(1) Stock of any class, or any rights to purchase such stock in a Small Concern or its affiliate(s), as defined in § 121.3-2 of this chapter;

(2) Limited partnership interests, shares in a syndicate, business trust, joint stock company or association, mutual corporation, cooperative or other joint venture;

(3) Debt instruments which provide either or both of the following:

(i) A right to convert all or any portion of the debt into securities listed in paragraphs (b)(1) and (2) of this section, or

(ii) A right to acquire the securities listed in paragraphs (b)(1) and (2) of this section.

§ 107.303 Stock options and conversion rights.

The total cost of all shares of stock which may be acquired by a Licensee and a creditor guaranteed by it, through the exercise of options or conversion rights, may exceed the amount of funds supplied to the Small Concern, if agreed to by such concern. Subject thereto, a Licensee issuing a commitment pursuant to § 107.503, or guaranty pursuant to § 107.501, may also acquire options to purchase stock at cost agreed to by the Small Concern. Such options or conversion rights shall expire ten years from the date of such Financing, guaranty or commitment.

§ 107.304 Refinancing: First refusal on new indebtedness.

Whenever a Licensee provides Equity Capital to a Small Concern, it may require it to:

(a) Refinance its outstanding indebtedness so that the Licensee is the only holder of any evidence of indebtedness of such concern, and;

(b) Agree not to incur any new indebtedness without Licensee's approval and affording it an opportunity to finance such new indebtedness: *Provided, however,* That the Licensee shall allow appropriate exceptions for open account or other short-term credit.

LONG-TERM LOANS

§ 107.401 Provisions applicable to long-term loans.

See section 305 of the Act and § 107.301.

GUARANTY AND COMMITMENTS

§ 107.501 SBIC guaranty of loans.

Subject to § 107.301(a) (Minimum Period of Financing), a Licensee may guarantee to any non-associate creditor up to ninety percent of the monetary obligation of a Small Concern: *Provided, however,* That:

(a) No such guaranty shall be issued where Licensee would become subject to

State regulation as an insurance, guaranty or surety business;

(b) No such guaranty may be issued except at the request of the Small Concern or where necessary to protect Licensee's existing investment;

(c) Any direct Financing plus the amount of the guaranties does not exceed the overline limits under § 107.301(d);

(d) The total financing cost to the Small Concern may not exceed the limits set by § 107.301(c);

(e) The total guaranties issued and outstanding for all Small Concerns shall not exceed one hundred percent of Private Capital; and

(f) Licensee shall maintain a funded reserve of ten percent against all such guaranties. For options in connection with guaranties, see § 107.303.

§ 107.502 [Reserved]

§ 107.503 Commitments.

(a) *General.*—A Licensee is authorized to enter into a commitment to furnish Financing to a Small Concern. A reasonable commitment fee may be charged.

(b) *Repayment period as to funds advanced pursuant to Licensee's commitment.*—(1) Where a Licensee enters into a commitment to finance a Small Concern, disbursement to be made at the latter's request, it shall be lawful (notwithstanding the maturity provisions of § 107.301(a)) to provide for repayment as follows:

(i) Funds advanced during the first two years of the commitment period shall become payable not less than five years after date of the commitment; and

(ii) Funds subsequently advanced shall become payable not less than three years from the respective disbursement dates.

(2) Amortization of each disbursement shall not be required at an annual average rate in excess of the principal amount thereof divided by the number of years of the respective repayment period.

(c) *Options.*—For options in connection with commitments, see § 107.303.

§ 107.504 Other permissible financing.

(a) *Authorization.*—A Licensee may furnish Financing pursuant to paragraph (b) of this section, within the overline limits of § 107.301(d), but the aggregate of all such Financing to any one or all Small Concerns shall not at any time exceed twenty percent of the Licensee's Private Capital.

(b) *Investments permitted.*—Notwithstanding §§ 107.301(a) and (b) and 107.302, a Licensee may make the following investments in Small Concerns:

(1) *Short-term financing.*—Financing with a term of less than five years when it constitutes a reasonably necessary part of the overall sound Financing of a Small Concern pursuant to the Act, the protection of investments, or financing ownership change pursuant to § 107.812. Paragraph (b)(1) of this section supplements the authority to make short-term

investments in Disadvantaged Concerns under § 107.301(a).

(2) *Amortization rate of forty percent per annum.*—Financing with a minimum term of five years amortized at a rate not exceeding forty percent per annum of the declining principal balance outstanding, except for the final year of the term.

(3) *Securities purchased from non-issuer.*—Securities of a Small Concern purchased from a seller other than the issuer, when such acquisition constitutes a reasonably necessary part of the overall sound financing of such concern pursuant to the Act, and securities from or through an underwriter thereof within ninety days after a public offering is first lawfully made: *Provided, however,* That at least half the amount of such offering must be on behalf of the issuer. See also § 107.301(e) regarding size status and nondiscrimination certification.

MANAGEMENT SERVICES

§ 107.601 Management services.

(a) *General.*—Management services may be advisory or may include performance of any financial, management or operating, activity of the Small Concern. An agreement to perform operating services shall be approved annually by the principals of the Small Concern (including, if a corporation, a majority of the shareholders and the Board of Directors) and shall be subject to SBA's prior annual written approval. A Licensee shall maintain a record for examination by SBA of the time spent and charges made for such services, which shall not exceed comparable charges by established professional non-Licensee consultants.

(b) *Services through contractors.*—Management services may be performed through an associated or independent consultant under contract with the Licensee, whether or not such consultant has similar contracts with other Licensees. Such contracts must receive SBA's prior written approval before being consummated.

(c) *Management services subsidiary.*—A Licensee may organize a corporation solely to provide management services. All of its stock shall be owned and held by such Licensee, and the Licensee shall be responsible for compliance by its subsidiary with the Act and regulations. The remuneration paid to officers, directors and employees of the subsidiary of a Debtor Licensee, and any changes therein, shall be subject to SBA written approval. Reports submitted to SBA by the Licensee shall reflect consolidated figures for both corporations. The subsidiary shall maintain adequate records and make any separate reports required by SBA and it shall submit to SBA examination. Failure to do so shall be deemed non-compliance by the Licensee.

(d) *Associates.*—With prior SBA written approval, an Associate of a Licensee, or person under such Associate's control, their agent or employee may directly or indirectly perform management services for a Small Concern, with compensation, therefore, payable to or for the benefit of such person, whether or

not such services are a condition of the Licensee's Financing such concern.

CONTROL OF LICENSEE

§ 107.701 Changes in ownership or control of licensee.

(a) *General.*—Transfer of Control over a Licensee by any means whatsoever shall be subject to prior written approval of SBA.

(b) *Prior approval requirements.*—Prior written approval of SBA shall be acquired in case of:

(1) A proposed transfer of ten or more percent of any class of Licensee's stock; or

(2) A proposed transfer which would result in the beneficial ownership by any Person, or group of Persons acting in concert, of ten or more percent of any class of its stock; or

(3) Any proposed transfer which results in a change in Control over a Licensee.

(c) *Acts prohibited.*—Without prior written approval of SBA, no such transaction shall be consummated and no officer, director, employee or other Person acting on the Licensee's behalf shall:

(1) Register on its books any transfer of shares to the proposed new owner (or owners); or

(2) Permit the proposed new owner (or owners) to exercise voting rights with respect to said shares or participate in any manner in the conduct of Licensee's affairs.

(d) *Terms used.*—(1) "Transfer," "stock transfer," or "transfer of shares" refers to the aggregate amount of shares which any Person or group of Persons acting in concert transfers or undertakes to transfer during any six month period.

(2) "Exercise of voting rights" with respect to shares of Licensee's capital stock shall include directly or indirectly procuring or voting any proxy, consent or authorization as to such voting rights at any shareholders' meeting.

(3) "Participation in the conduct of Licensee's affairs" shall include access to, custody of, or control over Licensee's corporate books, records, funds, or other assets; participation directly or indirectly in any disposition thereof; or serving as an officer, director, employee or agent of such Licensee.

(e) *Transferors' liability.*—SBA may in its discretion, as a condition of a Licensee's Leverage, require the controlling shareholder(s) to assume in writing personal liability for such Licensee's Leverage, effective only in the event of their direct or indirect participation in any violation of the requirements of this section, and terminable if SBA subsequently approves the transfer of Control and so notifies the transferor(s) in writing.

(f) *Application for approval.*—Written application for prior SBA approval shall be promptly made by the Licensee and by other parties in interest, accompanied by a processing fee of \$100 for each officer, director, owner of ten or more percent of Licensee's stock, or other party involved in a proposed change of Control: *Provided, however,* That the proc-

essing fee shall not exceed \$400 for any one transaction.

(g) *Public notice.*—SBA shall publish notice in the FEDERAL REGISTER concerning the application for approval of a proposed transfer of Control, including such appropriate information as the name and location of the Licensee and of the proposed transferees who will own ten or more percent of any class of its stock. The notice shall provide an opportunity to submit written comments. A similar notice shall also be published in a newspaper of general circulation in the city or locality where the Licensee is or will be located (or conduct operations), and a certified copy shall be furnished to SBA within ten days.

(h) *Standards governing SBA approval.*—(1) SBA may, as a condition of approving a proposed transfer of Control, require an increase in Licensee's Private Capital.

(2) SBA may condition its approval on the assumption in writing by the new owners of contractual liability pursuant to paragraph (e) of this section, and on such other requirements as SBA deems necessary.

(3) SBA approval shall be contingent upon full disclosure of the real parties in interest, the source of funds used, and data requested by SBA.

(i) *Reporting transactions involving possible transfer of control.*—The Licensee shall, upon obtaining knowledge thereof, promptly report to SBA the facts pertaining to any transaction or event which affords reasonable grounds for belief that a transfer of Control over such Licensee is likely to occur. If there is any doubt as to whether a particular transaction or event will result in a change of Control, such doubt shall be resolved in favor of reporting the facts to SBA.

§ 107.702 Common control.

Without prior written SBA approval, a Licensee shall not have an officer, director, manager, or stockholder owning or controlling directly or indirectly ten or more percent of its stock who at the same time is:

(a) An officer, director, manager or such stockholder of another Licensee; or

(b) An officer or director of any Person which directly or indirectly controls, or is controlled by, or is under common Control with, another Licensee: *Provided, however,* That officerships or directorships in, and management, ownership or Control of stock of, a section 301(d) Licensee shall be excepted from the foregoing provisions.

§ 107.703 Pledge of Licensee's shares.

Whenever ten or more percent of a Licensee's stock is pledged by any Person (or group of Persons acting in concert) as collateral for indebtedness, and such pledge does not involve any transfer for which prior approval is required under § 107.701, written notice of the terms of such transaction shall be furnished to SBA by the pledgor within thirty calendar days from the date of the pledge.

LAWFUL OPERATIONS

§ 107.801 Amendments to act and regulations.

A Licensee shall be subject to all existing and future provisions of the Act and these regulations.

§ 107.802 Other laws.

Each Licensee shall comply with all applicable State or Federal laws.

§ 107.803 Operations under Act.

A Licensee shall engage only in the activities contemplated by the Act and in no other activities.

§ 107.804 [Reserved]

§ 107.805 Consideration for issuance of licensee securities.

(a) *General.*—A Licensee may issue its securities, including stock options to management and employees, for:

- (1) Cash;
- (2) Direct obligations of, or obligations guaranteed as to principal and interest by, the United States;
- (3) Securities of which it is the issuer, in connection with a reclassification approved by SBA;
- (4) Services previously rendered to the Licensee not to exceed the fair value thereof;
- (5) Services to be rendered, on the terms and within the limits set forth in paragraph (b) (1) of this section;
- (6) Physical assets to be currently employed in Licensee's operation at the fair market value thereof;
- (7) As a dividend; and
- (8) In connection with a merger, consolidation, or reorganization approved by SBA: *Provided, however,* That any stock issued as a part of Licensee's minimum capital pursuant to § 107.101(d) must be paid for in cash or securities permitted by the last sentence of section 308(b) of the Act: *And provided, further,* That a section 301(d) Licensee which has received Portfolio securities from a participant Licensee pursuant to § 107.813(d), may issue stock for such securities at their cost or fair market value, whichever is lower.

(b) *Stock options.*—(1) Authorized for 1940 Act companies; terms and conditions. A Licensee which is registered as an investment company under the Investment Company Act of 1940 may issue stock options, provided each such option is a "qualified stock option" as defined in section 422 of the Internal Revenue Code and is granted pursuant to a plan which provides that:

- (i) The option by its terms shall provide that it is exercisable by the individual to whom it is granted only if, at all times during the period beginning with the date of the granting of the option and ending three months before the date of such exercise, such individual was an employee or officer of either the Licensee which granted such option or a wholly owned subsidiary thereof, or a successor Licensee or a wholly owned subsidiary thereof;
- (ii) The aggregate number of shares

of any class of stock which may be issued under options pursuant to the terms of the plan shall not exceed seven and one-half percent of the total number of outstanding shares of such class (less shares reacquired and held in the treasury) at the time the plan is adopted;

(iii) The individuals who are officers or employees of the Licensee or of a wholly owned subsidiary thereof at the time the plan is adopted may not receive options to acquire more than an aggregate of sixty-six and two-thirds percent of the total number of shares of each class of stock which may be issued under options pursuant to the terms of the plan; and

(iv) No individual may receive an option or options to purchase more than thirty-five percent of the aggregate number of shares of each class which may be issued under options pursuant to the terms of the plan.

(2) *Stock options not deemed compensation.*—Stock options issued by any Licensee including a 1940 Act company, which comply with the requirements of foregoing paragraph (b) (1) of this section shall be deemed not to constitute "compensation" for purposes of any requirement of prior written consent of SBA with respect to increases of salaries or other compensation behind the amounts approved by SBA.

(3) Licensees other than 1940 Act companies remain authorized to issue stock options which do not meet the requirements of paragraph (b) (1) of this section.

§ 107.806 Retention of investments.

A Licensee may retain its investment in a concern which qualified as small at the time of initial Financing, but which subsequently became large. Securities received in connection with a Portfolio Concern's merger, consolidation, or affiliation with a large business may be retained until Licensee has recovered its original investment plus a reasonable return thereon, and thereafter, so long as continued ownership does not interfere with the Financing of Small Concerns. Additional Financing may be provided only to the extent necessary to honor a commitment made while the concern was small or to protect Licensee's original investment.

§ 107.807 Purchases of securities from another licensee.

A Licensee may exchange with or purchase for cash from another Licensee Portfolio securities (or any interest therein):

(a) Without recourse against the seller (except for liability resulting from false representations as to matters of fact); and

(b) In the case of evidences of indebtedness, with recourse against the seller not to exceed ninety percent of the debt outstanding at the time of default by the obligor: *Provided, however,* that:

(1) Licensee shall not have at any time more than one-third of its total assets invested in such securities; and

(2) The amount for which the selling Licensee may be contingently liable shall

be included in its twenty percent overline limit under § 107.301(d).

§ 107.808 Idle funds.

Funds of a Licensee not invested in Small Concerns or in accordance with the last sentence of section 308(b) of the Act shall be deposited without delay, or may be invested in Time Certificates of Deposit maturing within one year, issued by any bank which is a member of the Federal Deposit Insurance Corporation: *Provided, however,* That a Licensee may maintain a petty cash fund up to \$500.

§ 107.809 Investment adviser/manager.

(a) *General.*—A Licensee may employ an Investment Manager or Adviser, as defined in § 107.3, and shall furnish SBA with a copy of the contract before its effective date. Services performed may include the actual performance of certain of Licensee's management or operating activities. However, the responsibility for the Licensee's actions shall vest with its Board of Directors. Compensation paid by a Debtor Licensee is subject to prior written SBA approval.

(b) Two or more Licensees may, with prior SBA approval, employ the same Investment Adviser or Manager.

§ 107.810 Assets in liquidation.

A Licensee shall dispose of property acquired in total or partial liquidation of a Portfolio asset, within a reasonable period of time. It may incur reasonably necessary expenditures for maintenance and preservation: *Provided, however,* That except as specifically approved in writing by SBA, such expenditures plus Licensee's total investment attributable to such asset shall not exceed its overline limit under § 107.301(d). Application for SBA approval shall specify all expenses estimated to be necessary pending disposal of the property.

§ 107.811 Additional investment by bank.

A federally regulated bank which on January 9, 1968, held fifty percent or more of any class of equity securities of a Licensee, having actual or potential voting rights, may make further investments in such Licensee only if they would not increase its percentage holding of such securities. Capital increases shall be subject to SBA postapproval under § 107.1105.

§ 107.812 Financing changes of ownership.

A Licensee may finance a change of ownership in a Small Concern when it will promote the sound development or preserve the existence of a Small Concern; or will assist in the creation of a Small Concern as a result of a corporate divestiture; or will facilitate ownership in a Disadvantaged Concern. For restrictions governing purchases from non-issuer, see § 107.504(b) (3).

§ 107.813 Section 301(d) licensee wholly or partly owned by licensee companies.

(a) *General.*—A section 301(d) Licensee may be licensed to operate as the

subsidiary of one or more Licensee companies ("participant Licensee"), with or without non-Licensee participation, subject to the following conditions:

(1) *Application.*—In reviewing a license application, SBA will consider the effect on the participant Licensees of their capital contribution to the proposed section 301(d) Licensee.

(2) *Participant licensees.*—Each participant Licensee shall own at least twenty percent of the voting securities of the proposed section 301(d) Licensee, and such ownership shall constitute a presumption of active participation. Licensees proposing to own less than twenty percent of such voting securities may demonstrate to SBA's satisfaction that they will be active participants.

(3) *Capital contribution.*—The capital contribution of a participant Licensee which is no part of the statutory minimum capital of \$150,000 of the section 301(d) Licensee, may be represented by securities of Small Concerns eligible for investment by a section 301(d) Licensee, at cost or fair market value, whichever is lower. Assumption by the proposed section 301(d) Licensee of any part of such participant Licensee's indebtedness held or guaranteed by SBA will not be permitted. A capital contribution shall, for purposes of the participant Licensee's Leverage, be treated as a reduction of its capital, and shall not result in excess Leverage for such participant Licensee.

RESTRICTED ACTIVITIES

§ 107.901 Control of small concern.

(a) *General.*—The Act does not contemplate that Licensees shall operate business enterprises or function as holding companies exercising control over such enterprises. Accordingly, neither a Licensee, nor a Licensee and its Associates, nor two or more Licensees may, except as hereinafter set forth, assume Control over a Small Concern pursuant to management agreements, voting trusts, majority representation on the board of directors, or otherwise.

(b) *Presumption of control.*—Control over a Small Concern will be presumed to exist whenever a Licensee or Licensee and its Associates, or two or more Licensees, own or Control, directly or indirectly, voting securities equivalent to:

(1) Fifty percent or more of the outstanding voting securities, if held by less than fifty shareholders; or

(2) More than twenty-five percent or a block of twenty or more percent which is as large as or larger than the largest other outstanding block of such securities, if held by fifty or more shareholders. Potential ownership of voting securities through options, warrants and other conversion privileges shall not be considered in counting the amount of actual outstanding voting securities owned when determining whether a presumption of Control exists. This presumption may be rebutted by evidence satisfactory to SBA.

(c) *Temporary control permitted.*—A Licensee may acquire temporary Control only where reasonably necessary for the protection of its investment.

(d) *Plan to relinquish control.*—A Licensee may assume Control pursuant to paragraph (c) of this section only if it has entered into a written plan, enforceable by the Small Concern or its shareholders, providing for relinquishment of Control within a reasonable period not exceeding seven years. Such plan shall expressly state that it is subject to SBA approval, that the parties consider the plan fair, and shall be filed with SBA within thirty days after Control is acquired, subject to SBA's post approval as a condition for the continuance of the license and shall be deemed approved unless Licensee is otherwise notified within ninety days after its receipt by SBA. Where an approved plan later becomes inadequate, a revised plan shall be submitted for SBA's approval. SBA approval shall be contingent upon disclosure of all relevant facts and be subject to such conditions as SBA may prescribe.

(e) *Annual reporting.*—The Licensee shall furnish to SBA with its Financial Report, SBA Form 468, a statement (in triplicate) setting forth current prospects for the implementation of the divestiture plan, and additional factors, if any, affecting the status of Control.

(f) *Enforcement actions.*—A divestiture plan shall not interfere with Licensee's enforcement of its legal rights against a Portfolio Concern. If the Licensee retains or acquires Control through enforcement action, it shall immediately notify SBA and submit within thirty days a divestiture plan for SBA approval. Subject to § 107.1005, such plan may be negotiated with parties other than the Small Concern or its shareholders.

(g) *Additional financing.*—A Licensee which has assumed Control of a Small Concern may later provide additional Financing, without an exception under § 107.1004(b)(1), but shall within thirty days resubmit its divestiture plan with appropriate amendments for SBA's approval.

§ 107.902 Voluntary capital decrease.

Without prior written SBA approval, a Licensee shall neither voluntarily reduce its Private Capital, nor purchase and hold more than two percent of any class of its stock.

§ 107.903 Mergers, consolidations, and reorganizations.

Subject to the prior written SBA approval, a Licensee may participate in a merger, consolidation or reorganization where the resultant company will qualify as a Licensee.

PROHIBITIONS

§ 107.1001 Prohibited uses of funds.

No funds may be provided to a Small Concern:

(a) *Relending, reinvesting, etc.*—For relending or reinvesting or if its primary business activity involves, directly or indirectly, providing funds to others, the purchase of debt obligations, factoring, or long-term leasing of equipment with no provision for maintenance or repair:

Provided, however, That, except for commercial banks, savings banks, agricultural credit companies, and savings and loan associations not insured by the Federal Savings and Loan Insurance Corporation, the foregoing prohibition shall not apply to venture capital Financing (as defined in § 107.202(b)) of any Disadvantaged Concern, organized less than five years. Without SBA's prior written approval, all Financings pursuant to this proviso shall not exceed the Licensee's Private Capital as of the close of any full fiscal year.³

(b) *Financing licensees.*—Directly or indirectly, for purchasing stock in or otherwise providing capital for a Licensee, or to repay an indebtedness to accomplish such purpose.

(c) *Real estate.*—(1) If the Small Concern is classified under Major Group 65 (Real Estate) of the SIC Manual except for:

(i) Subdividers and developers (other than cemetery subdividers and developers);

(ii) Title abstract companies; and

(iii) Agents, brokers and managers, or

(2) If the Financing will be used to acquire, or discharge an obligation relating to the prior acquisition of, realty to be held without prompt and substantial improvement, for leasing by a Small Concern which is neither an eligible real estate concern (Industry Numbers 6531, 6541 and 6552 of the SIC Manual) nor an operative builder (Industry Number 1531), or for sale to others: *Provided, however,* That prompt improvement shall not be required where an adverse change of circumstances beyond the Small Concern's control makes leasing necessary, pending improvement or sale at the earliest feasible date. Realty acquired for sale which is promptly and substantially improved, may be leased pending sale at the earliest feasible date, where such adverse change makes immediate sale impracticable. Evidence of such adverse change shall be kept for SBA's examination. Improvement shall, for the purposes of this paragraph, be deemed prompt and substantial if:

(i) An amount equal to fifty or more percent of the Financing is used for improvements; and

(ii) Such improvements are undertaken within one year from date of acquisition or date of Financing, whichever is later.

(d) *Public interest.*—For purposes contrary to the public interest, including but not limited to gambling activities, or inconsistent with free competitive enterprise.

(e) *Foreign investment.*—For use outside the United States: *Provided, however,* that a Licensee may provide funds to a domestic Small Concern:

(1) To acquire abroad materials and industrial property rights for a domestic operation; or

³ 1940 Act companies are reminded that sections 12(d)(2) and (3) of that Act impose additional restrictions on certain investments otherwise permitted by this § 107.1001 (a).

(2) For foreign branch operations or for transfer to a controlled foreign subsidiary, so long as the major portion of the assets and activities of such concern will remain within the United States.

(f) *Passive businesses.* If that concern is not engaged in a regular and continuous business operation.

(g) *Associated supplier.*—If fifty or more percent of the funds (or funds of the Small Concern released by such Financing) are used to purchase goods or services from a supplier which is an Associate of the Licensee: *Provided, however,* That in the case of a Section 301(d) Licensee, such limit shall be seventy-five percent.*

(h) *Agriculture.*—For use primarily in agricultural activities, agricultural activities include, but are not limited to, the production of food and fiber. However, where the Small Concern is engaged in an agricultural activity, but financial assistance has been formally refused by an Agency of the Federal Government or an agricultural credit service supervised by the Farm Credit Administration, such concern shall be eligible for Licensee Assistance (and the Licensee shall retain in its files evidence of such refusal) unless it:

(1) Produces (or in the last growing season produced) one or more crops currently eligible for a U.S. Department of Agriculture support payment or production loan;

(2) Produces livestock otherwise than by operating a commercial feed yard for cattle or hogs which derives its income from housing and feeding animals owned by others or purchased from others solely for fattening and resale;

(3) Produces baby chicks for resale and purchases less than fifty percent of its eggs from others;

(4) Operates a poultry feed yard where any part of its income, except income from egg production, is derived from sources other than the housing and feeding of poultry owned by others; or

(5) Produces fish, and neither the production process nor the fish is novel, innovative or experimental.

§ 107.1002 [Reserved]

§ 107.1003 Inactive licensees.

(a) The Act contemplates that a Licensee shall conduct active operations to meet the needs of Small Concerns. Accordingly, inactivity constitutes a violation of these regulations.

(b) A Licensee which on the close of any full fiscal year has more than twenty-five percent of its assets in idle funds (§ 107.808) shall be presumed inactive if it has not, during the past year, provided Financing aggregating at least twenty-five percent of the average amount of its said idle funds during such fiscal year. It shall promptly file written reasons for its inactivity. The foregoing presumption may be rebutted by written evidence satisfactory to SBA.

* See § 107.1004(b) (5).

§ 107.1004 Conflicts of interest.

(a) *General.*—Self-dealing to the prejudice of Small Concern, or of a Licensee or its shareholders, or of SBA, is prohibited.

(b) *Prohibitions.*—Except where a written exemption may be granted by SBA in special instances in furtherance of the purposes of the Act:

(1) A Licensee shall not, directly or indirectly, provide Financing to any of its Associates.

(2) A Licensee shall not, directly or indirectly, provide Financing to an Associate of another Licensee if an Associate of the first Licensee receives, has received, or is about to receive (including receipt pursuant to any understanding, agreement, or cross-dealing, reciprocal or circular arrangement) any direct or indirect Financing or a commitment for Financing from such other Licensee or a third Licensee.

(3) No Licensee or any of its Associates shall directly or indirectly borrow money from:

(i) A concern Financed by such Licensee, or

(ii) An officer, director, or owner of ten or more percent equity interest in such concern; or

(iii) A close relative of such officer, director, or equity owner.

(4) No Licensee shall directly or indirectly provide Financing to discharge or to free other funds for use in discharging an obligation to an Associate of the Licensee: *Provided, however,* That the foregoing shall not apply to transactions by Associates in the normal course of business involving lines of credit.

(5) No Licensee shall directly or indirectly Finance, except as permitted by § 107.1001(g), the purchase of property from an Associate of the Licensee.

(c) A Licensee may provide Financing to a non-Associate also Financed by an Associate of such Licensee contemporaneously or within one year before or after the Licensee's Financing, but only on terms not less favorable to the Licensee than to the Associate. Licensee shall retain written evidence of the entire transaction. Where the Associate's Financing is of a different kind, the burden shall be on the Licensee to show that the terms of its Financing were at least as favorable as those of its Associate's Financing: *Provided, however,* That the foregoing shall not apply to transactions by Associates in the normal course of business involving lines of credit or short-term Financing.

(d) *Compensation to associates.*—Without the prior written approval of SBA, no Associate of a Licensee shall receive from a Small Concern, directly or indirectly, any compensation in connection with Assistance rendered by such Licensee or anything of value for procuring, attempting to procure, or influencing Licensee's action with respect thereto, except only reasonable sums for bona fide closing expenses and services performed by an Associate designated by the Licensee with the consent of such concern. "Closing Services" shall include,

for example, title examination, appraisal, credit report, survey, but shall not include postclosing services, such as management consulting services. Compensation for closing services must be approved as reasonable and collected by the Licensee on the Associate's behalf; written evidence of the transaction shall be retained for SBA's examination.

(e) *Public notice.*—Before SBA grants an exemption under this section, the Licensee shall publish in a newspaper of general circulation in the locality most directly affected by the transaction, a notice prescribed by SBA, and furnish a certified copy to SBA within ten days; SBA shall publish a similar notice in the Federal Register.

(f) *Protection of investment.*—Nothing contained in these regulations shall preclude a Licensee from designating an Associate to serve as an officer, director or in any other capacity in the management of a Portfolio Concern to protect its investment: *Provided, however,* That such Associate has not other direct or indirect financial interest in the Portfolio Concern and has not served as an officer or director or in any other capacity in the management of such concern for more than thirty days prior to such Financing.

(g) *1940 Act companies.*—A 1940 Act company which has been granted an exemption by the Securities and Exchange Commission with regard to a transaction described in this section shall be exempt therefrom: *Provided, however,* That the Licensee shall promptly notify SBA and publish notice thereof pursuant to paragraph (e) of this section.

§ 107.1005 Disposition of assets to licensee's associates or to competitors of portfolio concern.

(a) Except with a written exemption from SBA in special instances, a Licensee shall not dispose of assets (including assets in liquidation) to any Associate. As a prerequisite to such exemption, the Licensee must demonstrate that the proposed terms of disposal are no less favorable to it than are obtainable elsewhere.

(b) Except with written approval of the Portfolio Concern which is not controlled by the Licensee, or of SBA, a Licensee shall not dispose of Portfolio securities to a competitor of such concern. The particulars of any such disposal shall be promptly reported to SBA.

§ 107.1006 [Reserved]

§ 107.1007 No Government sponsorship.

No Licensee shall represent or imply in any manner that any stock issued or obligation incurred by it has been approved by the United States, or any agency or officer thereof, and a statement to such effect shall be included in any solicitations to investors.

§ 107.1008 Violations based on false filings and nonperformance of agreements with SBA.

The following shall constitute a violation of these regulations:

(a) Nonperformance of any of the requirements of any debenture, preferred

security, note issued to or guaranteed by SBA, or of any written agreement with SBA.

(b) Any false statement knowingly made, or misrepresentation or failure to state a material fact necessary in order to make a statement not misleading in the light of the circumstances under which the statement was made, in any document submitted to SBA.

EXAMINATIONS, ACCOUNTS, RECORDS AND REPORTS

§ 107.1101 Examinations fees.

(a) *General.*—Examination fees will be assessed for annual examinations made in accordance with the Act, except for the first examination of section 301

(d) Licensees. As a general rule, SBA will not assess examination fees for special examinations to obtain specific information.

(b) *Rates.*—The fee structure provides rates based on the Licensee's assets as of the date of the latest certified financial statement submitted to SBA before the examination. The rate table is as follows:

Total assets of licensee	Base rate	+	Percent of assets
\$500,000 or less	\$400	+	0
\$500,001-\$1,000,000	400	+	0.06 over \$500,000.
\$1,000,001-\$3,000,000	700	+	0.015 over \$1,000,000.
\$3,000,001-\$5,000,000	1,000	+	0.008 over \$3,000,000.
Over \$5,000,001	1,100	+	0.003 over \$5,000,000.

For example, a Licensee with total assets of \$2,000,000 would pay an examination fee of \$850 (\$700 + 0.015% of \$1,000,000).

(c) *Additional fee.*—SBA may assess an additional fee of \$100 per day if the examination is delayed or prolonged, in the judgment of SBA, by a Licensee's failure to act with reasonable business prudence in the conduct of its affairs. For example, if its records are not kept current, the resulting delay could be deemed cause for such assessment.

§ 107.1102 Records and reports.

(a) *Records.*—Current financial records including books of account are to be maintained in all material respects in accordance with SBA's System of Account Classifications. All financial records, and minutes of meetings of stockholders, directors, executive committees, or other officials, and all documents and supporting material relating to Licensee's transactions shall be kept at its principal office: *Provided, however,* That Portfolio items held by a custodian pursuant to written agreement shall be excepted from this requirement. All financial reports furnished to SBA shall make complete disclosure of all matters relevant to the Act and regulations.

(b) *Preservation of records.*—Each Licensee shall preserve, for the periods hereinafter specified and in a manner that permits the immediate location of any record, such documents which are the basis for financial statements required by paragraph (e) of this section, and of the accompanying independent public accountant's certificate. Each Licensee shall:

- (1) Preserve permanently:
 - (i) All general and subsidiary ledgers (or other records) reflecting assets and valuation, liability, capital stock and surplus, income, and expense accounts;
 - (ii) All general and special journals (or other records forming the basis for entries in such ledgers); and
 - (iii) The corporate charter, bylaws, license application, and all minute books, capital stock certificates or stubs, stock ledgers, and stock transfer registers, such documents to be kept readily accessible for the first two years.

(2) Preserve for a period of at least six years following final disposition of the related loan or investment, all applications for Financing; size status declarations; lending, participation, and escrow agreements; Financing instruments; capital stock certificates and warrants of Small Concerns not surrendered or exercised; and all other documents and supporting material relating to such loan or investment, including correspondence, such documents to be kept readily accessible for the first two years.

(3) Preserve for a period of at least six years all vouchers, checkbooks, bank statements, canceled checks, cash reconciliations, ledger trial balances, memoranda, correspondence, and other documents forming the initial accounting data for entry in, or underlying records in support of, the records enumerated in paragraph (b) (1) of this section.

(4) Notwithstanding the provisions of paragraphs (b) (1) through (3) of this section, a microfilm reproduction of any records may be substituted for the original and preserved for the required time in the required manner: *Provided, however,* That Licensee shall:

- (i) Cause a duplicate microfilm to be made on a current basis and stored separately from the original microfilm for the time required;
- (ii) At all times have available facilities for easily readable projection and the production of easily readable facsimile enlargements.

(c) *Reports to stockholders.*—At the time any report (including any prospectus, letter, or other publication concerning the financial operations of the Licensee or any of its Portfolio Concerns) is furnished to investors, the Licensee shall file three copies with the Investment Division, SBA.

(d) *Documents filed with SEC.*—Whenever a Licensee files any report, application or document with the Securities and Exchange Commission, it shall concurrently provide SBA with a copy thereof.

(e) *Financial reports to SBA.*—(1) Each Licensee shall submit to SBA, at the end of each fiscal year, a report containing financial statements for the fiscal year; and, when requested by SBA, interim financial reports, such reports to present fairly the financial position and the results of the Licensee's operations as of the close of the reporting period. The reports are to be prepared in accordance with SBA's Instructions therefor and shall be filed on SBA Form 468 in triplicate with the Investment Division,

SBA, on or before the last day of the month immediately following the end of the reporting period (in the case of an unaudited report), and on or before the last day of the third month following the end of the reporting period (in the case of an audited report). The 1940 Act companies should refer to the rules of the Securities and Exchange Commission for the reports to be filed with SEC.

(2) The report as of the end of each fiscal year shall be accompanied by the opinion of an SBA-approved independent certified public accountant or licensed public accountant, certified or licensed by the appropriate regulatory authority of a State or political subdivision thereof. Such opinion shall be based on an audit of the Licensee's accounts in accordance with generally accepted auditing standards. Guidelines to be followed are set forth in SBA's Audit Guide for Small Business Investment Companies. Copies may be obtained from SBA. Effective December 31, 1975, only certified public accountants and licensed public accountants who have received their licenses on or before December 31, 1971, will be considered qualified to render such opinions.

(f) *Litigation reports.*—When a Licensee becomes a party to litigation or other proceedings, including any action by the Licensee, or by a security holder thereof in an individual personal or derivative capacity, against an officer, director, Investment Adviser or other Associate of such Licensee for alleged breach of official duty, it shall within ten days file a report with SBA describing the proceedings, identity of and Licensee's relationship to other parties involved and, upon request, submit copies of the pleadings and other documents specified by SBA. Where such proceedings have been terminated by settlement or final judgment, the Licensee shall promptly advise SBA of the terms thereof. This paragraph shall not apply to collection actions or proceedings in enforcement of Licensee's ordinary creditors' rights.

(g) *Other reports.*—Each Licensee shall file with the Investment Division, SBA, such other reports as SBA shall require by written directive.

§ 107.1103 Internal control.

(a) *General.*—Each Licensee shall adopt a plan designed to safeguard its assets and monitor the reliability of its financial data, personnel, Portfolio, funds, and equipment.

(b) *Dual control.*—Licensees shall maintain dual control over disbursement of funds and withdrawal of securities. Disbursements shall be made only by means of checks requiring the signatures of two or more officers, covered by the Licensee's fidelity bond, except that checks in amounts of \$1,000 or less may be signed by one bonded officer. Two or more bonded officers, or one bonded officer and one bonded employee, shall be required to open safe deposit boxes or withdraw securities from safekeeping. Licensees shall furnish to each depository bank, custodian, and entity provid-

PROPOSED RULES

ing safe deposit boxes, a certified copy of its resolution implementing the foregoing control procedures.

§ 107.1104 Fidelity insurance.

Each Licensee shall maintain a Brokers Blanket Bond, Standard Form No. 14, or such other form of coverage as SBA may approve, in a minimum amount of \$25,000, executed by a surety holding a certificate of authority from the Secretary of the Treasury pursuant to 6 U.S.C. sections 6-13. For additional details, see SBA's Audit Guide for Small Business Investment Companies.

§ 107.1105 Reporting changes not subject to SBA approval.

(a) *Changes to be reported.*—Any change of Licensee's name, address, telephone number, officers or directors, charter, operating area, investment policy, or increase in capitalization not otherwise required to be reported (see, for example, § 107.701) shall be reported to SBA not later than thirty days after these events. All changes shall be subject to SBA postapproval as a condition for the continuance of the license.

(b) *SBA approval.*—Reports and requests filed pursuant hereto shall be deemed approved unless Licensee is notified to the contrary by SBA within

ninety days after receipt thereof. Approval shall be contingent upon full disclosure of all relevant facts, subject to any conditions SBA may prescribe.

COMPLIANCE

§ 107.1201 [Reserved]

§ 107.1202 [Reserved]

§ 107.1203 Exemption from civil penalty.

Where it is impracticable to submit any required report within the prescribed time, the Licensee may, before such time has expired, promptly file an application which:

- (a) Identifies such report;
- (b) Certifies to an extraordinary occurrence not within the Licensee's control which makes timely submission of such report impracticable; and
- (c) Is accompanied by written evidence.

SBA may thereupon exempt the Licensee, from the civil penalty provision of section 315(a) of the Act, in such manner and upon such conditions as SBA determines.

EXEMPTIONS

§ 107.1301 Exemptions.

A Licensee may file an application in writing with SBA to have a proposed

action, which is subject to any procedural or substantive requirements, restriction, or prohibition specified under this Part, exempted from applicable provisions thereof. SBA may approve such application and grant an exemption, conditionally or unconditionally, to the extent that such exemption, from the requirement, restriction, or prohibition would not be contrary to the intents and purposes of the Act. Such application must be accompanied by supporting evidence which demonstrates to SBA's satisfaction that:

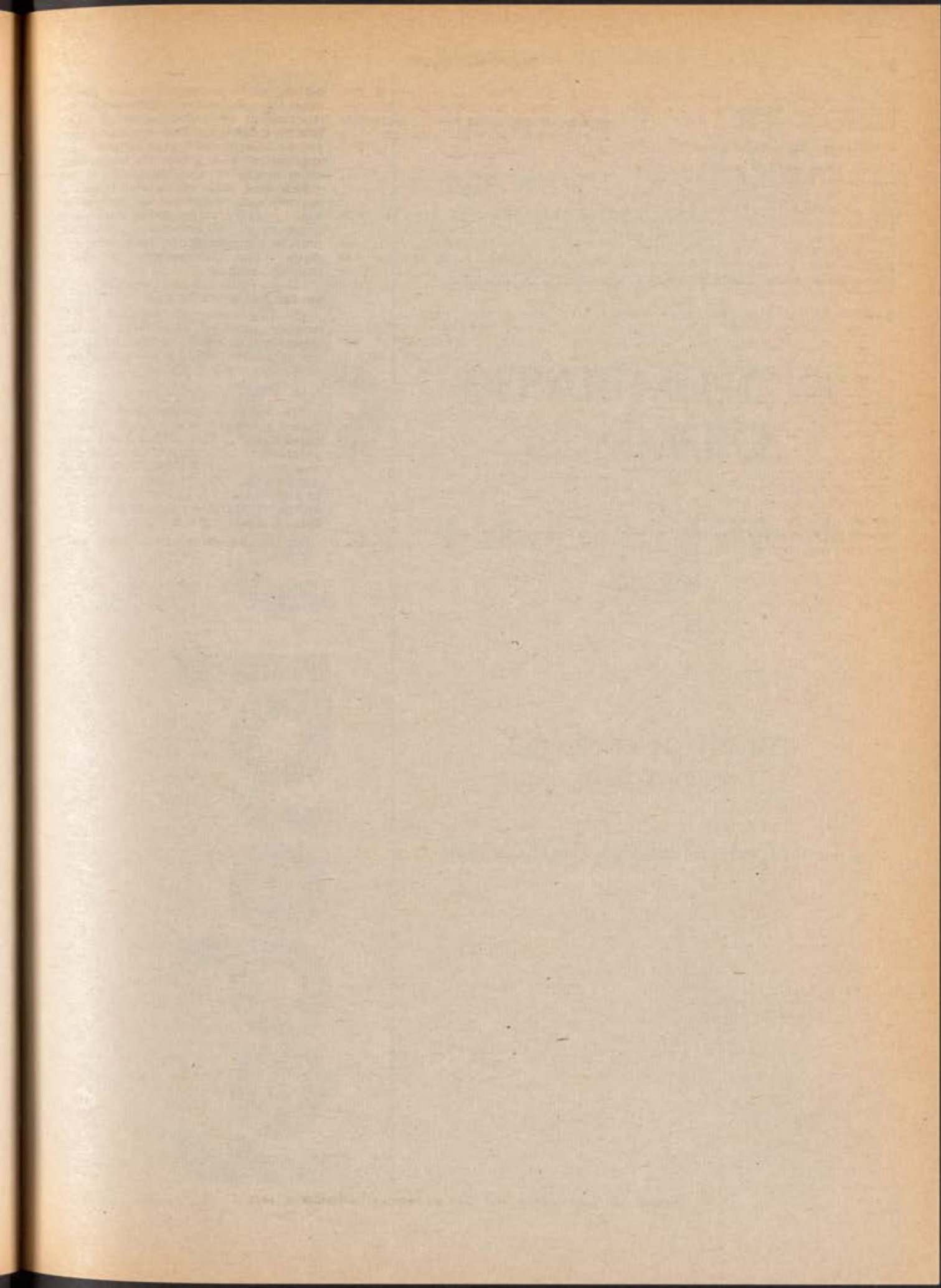
(a) The terms of the proposed action are fair and equitable; and

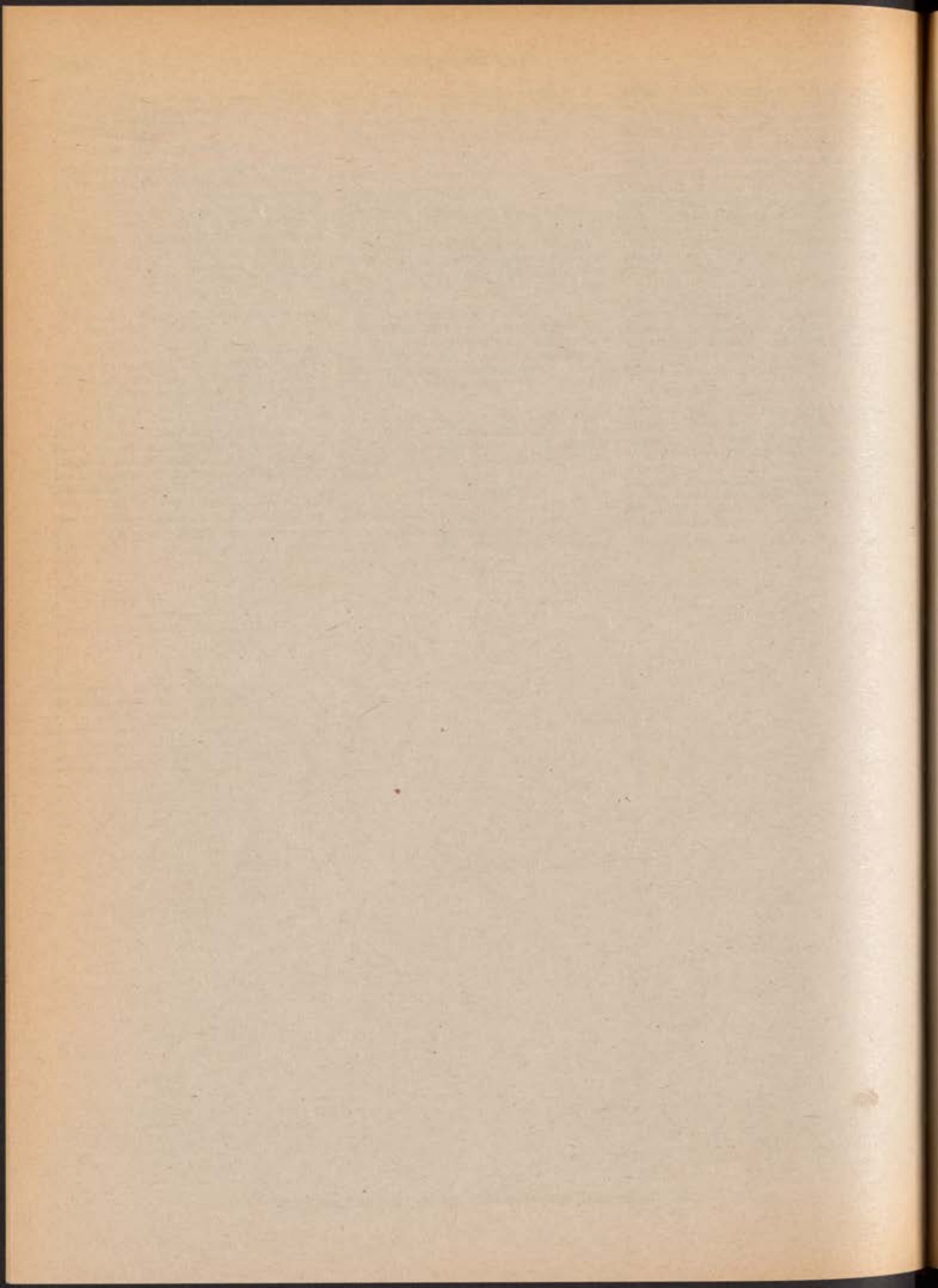
(b) The exemption requested is reasonably calculated to advance the best interests of the SBIC program in a manner consonant with the policy objectives of the Act and regulations.

§ 107.1302 Savings clause.

The legality of transactions consummated pursuant to provisions of these regulations in effect at that time shall be governed thereby, notwithstanding subsequent changes. Nothing herein shall bar SBA enforcement action with respect to any transaction consummated in violation of provisions applicable at the time, but no longer in effect.

[FR Doc.73-18639 Filed 9-4-73;8:45 am]





federal register

WEDNESDAY, SEPTEMBER 5, 1973
WASHINGTON, D.C.

Volume 38 ■ Number 171

PART IV



DEPARTMENT OF COMMERCE

National Technical Information
Service



GOVERNMENT OWNED
INVENTIONS

AEC Patents; Availability for Licensing

DEPARTMENT OF COMMERCE

National Technical Information Service

GOVERNMENT-OWNED INVENTIONS

Availability for Licensing

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DOUGLAS J. CAMPION,

Patent Program Coordinator,

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PATENT	TITLE	INVENTOR
2,737,779	Condensable Vapor Extraction Apparatus	E. O. Lawrence
2,738,253	Uranium Separation Process	A. Thomas, E. A. Brown, H. W. Smith, J. Brannen
2,738,306	Method for the Separation of Flavonoid Compounds	S. H. Wender, C. H. Ice
2,738,426	Liquid Monitoring Device	W. M. Hurst
2,739,111	Metal Production by Electrolysis	E. A. Holland, C. Marzano
2,739,237	Amplifier Circuit	J. J. Stone, Jr.
2,739,285	Current Measuring Device	A. A. Windsor
2,739,286	Alpha Survey Meter Circuit	R. W. Scheide
2,739,566	Apparatus for the Production of Coatings of Purified Metals	Z. M. Shapiro, J. McDonald
2,739,935	Electrolytic Cutting of Metals	G. L. Kohl, I. Koch
2,739,979	Preparation of Boric Acid Esters	R. F. Barnes, R. Diamond, P. E. Fields
2,741,541	Production of Uranium Sulfate	S. B. Smith
2,741,543	Process for the Production of Deuterium Oxide	H. C. Urey
2,741,592	Neutronic Reactor Measuring and Safety Rod Operating Apparatus	L. B. Borst, E. W. Newson
2,741,593	Fluid Cooled Neutronic Reactor	R. E. Metcalf, E. W. Johnson, R. S. Chisholm
2,741,627	Production of Curium 243	S. C. Thompson, E. B. Cunningham, A. Chiorio
2,741,628	Separation of Hafnium and Zirconium Salts	V. K. Pluchnett
2,742,085	Timing Apparatus	A. E. Bennett, J. U. H. Geisow
2,742,348	Fluid Contacter Apparatus	R. Spence, E. J. W. Streehon
2,742,576	Portable Scintillation Survey Meter	R. A. Dandl
2,742,577	Quartz Fiber Electroscopes	R. F. Henderson
2,742,587	Demountable Filament Assembly	W. J. Armstrong, F. I. Corbell, K. H. McPhee
2,742,788	Sever Sampler	P. V. Henton
2,743,154	Method of Recovery of Uranium by a Resin -In-pulp Process	D. Kaufman, G. W. Lower
2,743,155	Method of Preparing the Double Halide Salts of Thorium and Alkali Metals	S. Z. Cardon
2,743,156	Uranium Recovery Process	N. C. Metzger, A. Long, E. M. Stolts, Jr.
2,743,157	Re-extraction of Deuterium from Organic Solvents	F. T. Eagenman, L. I. Estala, E. N. Hellman

2,743,158	Process for Producing Uranium Pentachloride	A. D. Webb, H. P. Kyle	2,745,017	Ion Producing Mechanism	F. F. Oppenheimer
2,743,159	Recovery of Uranium from Aqueous Solutions	G. A. Lutz	2,745,018	Beam Current Regulator	W. E. Baker, R. DeLiban
2,743,161	Preparation of Anhydrous Vanadium Trifluoride	D. E. Carpenter, C. F. Johnston, H. F. House, K. O. Johnston	2,745,279	Pressure Testing Device and Method	P. E. Collins, G. M. Inman
2,743,168	Sublimation Apparatus	R. Krohn, R. J. Schmidt	2,745,552	Filter with Fractional Crystallization Means	V. H. Bruggeman, B. G. Voorhees
2,743,169	Horizontal Sublimation Apparatus	J. C. Becker	2,745,964	Arc Regulator for Calutron Ion Source	R. DeLiban
2,743,170	Solvent Extraction Equipment	L. L. Burger	2,745,965	Calutron Receivers	E. J. Lofgren
2,743,173	Method of Preparing Metal and Apparatus Therefor	G. Derge, G. F. Monst	2,745,985	Pulse Amplitude Analyzers	I. A. Derroch Lewis Vantage
2,743,174	Uranium-Titanium Alloys	J. E. Keeler, H. A. Sailer	2,746,473	Valve Means for Charging Containers with Fluid	L. A. Ohlinger
2,743,212	Electrolytic Process for Recovering Uranium Compounds from Carbonate Leach Liquors	L. T. McClinton, W. N. Garrison, H. Burton	2,746,861	Ternary Zirconium Base Alloy Containing Sn and Ti	W. Chubb, Jr., L. L. Marsh, Jr.
2,743,223	Organic Compound Bond Rupturing Process	L. A. Ohlinger	2,747,126	Power or Voltage Measuring Means	D. J. Higg
2,743,224	Submerged Reactor	L. A. Ohlinger	2,747,762	Pressure Chamber Closure Apparatus	R. B. Mouser
2,743,225	Reactor	L. A. Ohlinger, E. P. Wigner, G. J. Young, A. M. Weinberg	2,747,972	Charge Boat for Volatilization	R. Krohn
2,743,226	Apparatus for the Bombardment of Samples with Fast Neutrons	E. W. Newton	2,748,710	Heat-Exchanger Pump	L. B. Vandenberg
2,743,228	Electrolytic Cells	R. Q. Boyer	2,749,520	Directional Coupling Means for Transmission Lines	B. J. Bittner
2,743,342	Magnetic Arc-Welder	E. S. Bettis, E. R. Mann	2,750,254	Process of Recovering Uranium from its Ores	R. A. Blake
2,743,371	Electronic Analyzer	Q. A. Kerns	2,750,500	Linear Pulse Integrator	W. E. Aiken
2,743,372	Low Weight Container for Radioactive Materials	H. J. Brown, N. B. Garden	2,750,520	Electrostatic Measuring Device	A. S. Langsdorf, Jr.
2,743,416	Magnetic Field Measuring Device	J. M. Kelly, Jr.	2,751,229	Adjustable Gripper for Holding an Article Suspended	A. B. Schultz
2,744,064	Re-entrant Cooling Reactor	T. V. Moore	2,751,273	Particle Trajectory Plotter	B. V. Bankin
2,744,893	Separation of Flavonoid Compounds	S. E. Wender, T. B. Richmond, C. E. Ice, Q. L. Norris	2,751,344	Electropolymer	C. A. Klenberger, R. E. Greene, A. E. Flynn
2,745,006	Binary Counter	J. C. Chu, D. E. Jacobsohn	2,751,505	Neutronic Reactor Device	H. L. Anderson
			2,751,662	Method of Making an Electronic Grid	W. E. Glenn, W. E. Hostetter
			2,751,780	Leakage Testing Apparatus	R. F. Plett
			2,752,309	Process for Water Decontamination	A. H. Emons, R. A. Lunderdale

2,752,508	Counting-Rate Meter	G. V. Zito	2,758,023	Method of Purifying Liquid Fuels of Nuclear Reactors	D. W. Barrels
2,753,250	Solvent Extraction of Zirconium Values	H. A. Wilhelm, K. A. Walsh, J. V. Kerrigan	2,758,024	Method of Dissolving Binary Alloys	H. M. Feder, R. F. Larson, E. B. Evans
2,753,462	Neutron Flux Measuring Device	J. W. Moyer, H. Burwitz, Jr.	2,758,213	Calutron Receiver	E. Peters
2,753,476	Current Transfer Systems	D. A. Watt	2,758,214	Time-of-Flight Mass Spectrometer	W. E. Glenn, Jr.
2,754,179	Mixer-Settler	M. E. Whitley	2,758,706	Inspection Conveying Apparatus	F. B. Quineam
2,754,422	Source of Highly Stripped Ions	E. J. Lofgren, W. W. Eukel	2,758,950	Process for Producing Steel by Electroforming and Carburation	J. F. Lehner
2,754,423	Calutrons of the Multiple Ion Beam Type	E. O. Lawrence	2,758,963	Electrodeposition of Plutonium Fluoride	M. Ehm
2,755,253	Neutron Scintillation Detector	C. O. Mehlhause, G. E. Thomas	2,759,175	Leak Detector for Pipe Joint	I. B. Spalding
2,755,387	Ground Indicator for Calutrons	C. C. Waugh	2,759,788	Purification of Materials Containing Chlorides	L. Spiegler
2,755,391	Ionization Chamber	J. J. Keyes, Jr.	2,759,789	Uranium Products and Methods of Using	L. Spiegler
2,755,441	Counting Rate Meter	B. D. Colasac	2,759,790	Purification of Materials Containing Fluorides	L. Spiegler
2,755,853	Denitration Apparatus	R. S. Edgett, A. O. Olson	2,759,791	Purification of Materials Containing Chlorides	L. Spiegler
2,756,122	Process for Recovering Uranium and Vanadium from Oras	D. Chalmers McLean	2,759,792	Separating Hafnium from Zirconium	B. A. J. Lister, J. F. Duncan
2,756,124	Uranium-Vanadium Recovery of Purification Process	B. H. Bailey, R. S. Long	2,759,793	Separating Hafnium from Zirconium	B. A. J. Lister, J. F. Duncan
2,756,124	Uranium Chlorination Process	J. L. Patterson, A. Bell	2,759,801	Solvent Extraction Apparatus Using Jet Mixers	J. H. Yeager, K. S. Eckberg
2,756,138	Process of Vacuum Refining Uranium	C. Meister	2,759,886	Process of Treating Steel	H. F. Priest
2,756,489	Metal Alloy	E. E. Morris	2,760,064	Pulse Analyzer	F. R. Bell
2,756,857	Positioning Device	W. E. McCorkle	2,760,076	Arrangement for Minimizing Negative Signals	J. T. Dalton, R. H. Stevens
2,756,858	Fuel Charging Machine	K. Kaschau	2,760,158	Method and Apparatus for Measuring Electrical Current	Q. A. Kerns
2,756,925	Centrifuge Systems	B. E. Selkirk	2,760,655	Remote Handling Apparatus	H. E. Foshahl
2,756,930	Computing Device	G. T. Pelser, E. S. Sack	2,761,063	Electrostatic Memory System	J. E. Bigelow
2,757,072	Recovery of Free and Combined Nitric Acid from Metal Nitrate Liquors	M. M. Kapp, W. W. Weinarich	2,761,071	Fast Neutron Dosimeter	C. S. Hurst
2,757,799	Automatic Filtration Equipment	C. F. Ritchie	2,761,756	Process for Production of Uranium Hexafluoride	H. F. Priest
2,758,006	Isotope Enrichment Process	J. M. Carter, M. D. Kaman			
2,758,007	Ether Extraction of Uranium Salt from Solutions	A. E. Ballard			

2,761,757	Processes of Recovering Uranium	M. D. Emsen, A. DeGaan, Jr.	2,760,872	Manufacture of Uranium Tetrafluoride	D. X. Klein, H. B. Gage
2,761,758	Process for Recovery of Uranium	R. S. Long, R. H. Bailes, E. S. DeGaan	2,760,873	Method of Purifying Uranium	N. C. Seese
2,762,961	Positive Ion Electrostatic Accelerator	C. M. Turner	2,769,094	Time-of-Flight Neutron Spectrometer	W. I. Linler, B. Bagant
2,763,570	Wetting of Heat Transfer Surfaces with Liquefied Metal Heat Transfer Media	O. C. Shepard, E. F. French	2,769,776	Method of Making a Product Containing Uranium 237	A. F. Reid
2,763,611	Method of Preventing Corrosion of Iron Metals	C. R. Breden	2,769,780	Precipitation Process	W. E. Clifford, R. E. Burns
2,763,816	Spark Gap	W. E. Baker	2,769,903	Pulse Forming Network	G. D. Pauson
2,764,301	Remote Control Manipulator	P. C. Goerts, R. G. Schmitt, R. A. Olsen	2,770,128	Electronic Pressure Differential Wind Direction Indicator	E. Moses
2,764,470	Purification of Uranium Oxide	G. L. Richardson, S. B. Smith, G. B. Robbins	2,770,196	Electromagnetic Interaction Pump	D. A. Wat
2,764,471	Recovery of Uranium from Dilute Solutions by a Precipitation Method	G. W. Kinser, R. D. Merin	2,770,520	Recovery of Uranium from Phosphoric Acid and Phosphate Solutions by Ion Exchange	R. S. Long, R. H. Bailes
2,764,689	Pulsed Oscillator	W. C. Struven	2,770,521	Separation of Uranium from Mixtures	L. Spiegler
2,764,707	Ion Source	R. B. Crawford, J. D. Gow, W. G. Fox, L. Ruby	2,770,522	Method of Purifying and Recovering Vanadium from Phosphate Containing Solutions	R. H. Bailes, R. E. Grinstead
2,766,032	Impregnated Crucible	G. Meister	2,770,590	Reactor Circulating System	J. T. Serduke
2,766,110	Method of Refining Uranium	G. Meister	2,770,591	Heavy Water Moderated Neutronic Reactor	E. P. Wigner, I. A. Ohlinger, A. M. Weinberg, G. J. Young
2,766,204	Method for Decontamination of Radioactively Contaminated Aqueous Solution	C. S. Lowe	2,770,684	Limited Amplifier	R. E. Thomas
2,766,442	Leak Detection Apparatus	W. E. Meyer, Jr., W. Miffilin	2,770,775	Linear Accelerator	M. L. Good
2,767,044	Plutonium Recovery Process	C. F. Hill, S. G. Thompson	2,770,796	Automatic Beam Stabilization	R. J. Klein
2,767,047	Process of Separating Tantalum and Niobium Values from each Other	H. A. Wilhoim, J. V. Kerrigan	2,770,781	Wave Delaying Structure for Rectangular Wave Guides	R. E. Robertson-Sherby-Barvie, J. Dain
2,768,059	Process for Recovery of Uranium and the Upgrading of Alkali-Uranium Fluoride Precipitates	R. E. Bailes, R. O. Lindblom, R. E. Grinstead	2,770,856	Crucible and Stopper Therefor	A. W. Becker, A. W. Woker
2,768,134	Testing Material in a Neutronic Reactor	Z. Femi (Deceased), H. L. Anderson	2,771,159	Remote Control Manipulator	D. G. Jelatis
2,768,433	Metallic Bond and Method	T. J. O'Donnell	2,771,338	Manufacture of Uranium Peroxide	L. Spiegler
2,768,813	Heat Exchangers	R. Q. Boyer	2,771,339	Processes for the Purification and Recovery of Uranium	R. Q. Boyer
2,768,871	Process Using Carbonate Precipitation	E. S. Brown, O. F. Hill, A. H. Jaffey	2,771,340	Improved Uranium Recovery and Purification Processes	M. D. Emsen, A. DeGaan, Jr.
			2,771,357	Method of Melting Metal Powder in Vacuo	D. Wroughton

2,771,532	Phase Meter	C. N. Wittingstad, Q. A. Kerns	2,776,263	Corrosion Inhibitors for Deuterium Exchange Process	C. F. Hickey, D. T. Vier
2,771,999	Filtering Apparatus	R. Q. Boyer	2,776,368	Coaxial Tube Coupling	H. M. Oren, V. L. Smith, D. E. Bramm
2,772,142	Process of Reclaiming Uranium from Solutions	R. Cummings	2,776,377	In Vivo Radiation Scanner	H. O. Anger
2,773,195	Beam Regulator	E. O. Lawrence, O. A. Kerns	2,777,809	Preparation of Uranium	M. Kolodney
2,773,386	Liquid Level Indicator	E. O. Swickard, Jr.	2,777,812	Leak Detection System	R. W. Powell, P. H. Lee
2,773,820	Electrolytic Process of Salvaging Uranium	R. Q. Boyer, S. B. Kilner	2,778,730	Plutonium Alloy and Method of Separating It from Plutonium	F. H. Spedding, T. A. Butler
2,773,823	Safety Device for a Neutronic Reactor	J. J. Coett (Deceased)	2,778,792	Method for Unloading Reactors	L. Szilard
2,773,824	Electrolytic Cells	R. Q. Boyer, S. B. Kilner	2,778,843	Uranium Chelates of Di (Salicylal) Alkylendiamine and Process for Their Preparation	H. D. Brown, F. J. Welter
2,773,825	Electrolysis Apparatus	F. A. Seecombe	2,778,937	Cyclotron Square Wave RF System	G. B. Rossi
2,773,826	Electrolytic Apparatus for the Recovery of Rare Refractory Metals	H. C. Beese, J. W. Marden, E. Orange	2,778,949	Electrostatic Pulse Analyzer System	C. J. Borkovski, F. M. Porter
2,774,479	Filtering Apparatus	R. Cummings	2,779,657	Recovery of Uranium from Wash Liquids	A. E. Ballard
2,774,488	Remote-Control Manipulator	R. C. Coertz, R. A. Olsam, R. S. Wehrle, E. G. Schmitt, Jr.	2,779,728	Control Device for a Neutronic Reactor	V. H. Zimm, T. Brill
2,774,730	Neutronic Reactor Having a Flattened Activity Curve	G. J. Young	2,779,875	Galvanometer Pulse Analyzer System	C. J. Borkovski, F. M. Porter
2,774,937	Method of Measuring Q	H. E. Dusey	2,779,876	Radioactivity-Distribution Detector	C. A. Tobias, H. O. Anger
2,775,399	Mercury Bellows Pump	E. S. Robinson, A. C. Brismister, B. B. McInteer	2,780,099	Vacuum Gauge	G. A. Knipers
2,775,552	Continuous Electrolytic Process for Reducing Uranium in Solution	R. Q. Boyer	2,780,112	Two Roller Anti-Friction Latch	J. N. Young
2,775,696	Millivolt Gating Circuit	R. E. Thomas	2,780,455	Combination of Acceleration Sensing and Integrating Means	H. F. Devaney
2,775,697	Crystal Diode Coincidence Circuit	R. Maday	2,780,514	Method of Recovering Uranium from Aqueous Solutions	G. A. Lutz
2,775,698	Multichannel Pulse Analyzer	F. R. Bell, G. G. Enley, C. G. Goss	2,780,515	Method for Improved Precipitation of Uranium Peroxide	A. J. Miller, B. M. Pitt, F. F. Grieger
2,775,741	Phase Shifting Device	F. I. Corbell	2,780,516	Chemical Purification of Uranium Compounds	J. C. Nevenzel
2,776,184	Processes for Recovering and Purifying Uranium	M. D. Eaman	2,780,517	Separation of Uranium from Foreign Substances	B. J. Fontana
2,776,185	Method of Concentrating Fissionable Material	L. B. Warner, B. A. Fries, C. T. Sotborg	2,780,518	Process for Recovery of Uranium from Aqueous Solutions	J. W. Gates, Jr., L. J. Andrews
2,776,189	Nitric Acid Recovery and Purification	F. W. Wlan			

2,780,519	Recovery of Uranium from Ores	D. Kaufman, S. E. Bailey	2,784,054	Separation of Uranium from Other Metals by Hydriding and Extracting with Oxidizing	J. E. Carter, T. A. Butler
2,780,523	Uranium Separation Process	R. M. Haines, E. C. Evers	2,784,064	Zirconium Ternary Alloys	L. L. Marsh, Jr., W. Chubb
2,780,589	Still Column with Concentric Condenser	A. K. Brewer, T. Ivan Taylor	2,784,799	Gas Recovery System	J. Isa, Jr., G. P. Millburn
2,780,595	Test Exponential Pile	E. Fermi (Deceased)	2,784,910	Pulse Height Analyzer	A. Chiorso, A. E. Lersch, Jr.
2,780,596	Neutronic Reactor	G. A. Anderson	2,785,046	Separation of Uranium from Other Metals by Hydriding	T. A. Butler
2,781,303	Process of Recovering Uranium from Solution	R. Q. Boyer, S. B. Kilner	2,785,067	Method of Separating Plutonium from Contaminants	H. S. Brown, O. F. Hill
2,781,304	Electrodeposition of Uranium	H. A. Wilhelm, D. H. Ahmann	2,785,064	Method of Forming Crucibles and Reaction Chambers for Production of Uranium of High Purity	H. A. Wilhelm
2,781,307	Apparatus for the Measurement of Neutron Absorption	K. F. Wigner	2,785,065	Method of Producing Metals from Their Halides	F. H. Spedding, H. A. Wilhelm, W. H. Keller
2,781,308	Neutronic Reactor Control	E. C. Creutz, W. H. Zinn	2,785,311	Low Voltage Ion Source	E. O. Lawrence
2,781,309	Radiation System	J. S. Levinger, M. B. Sampson, A. H. Soell, R. G. Wilkinson	2,785,951	Bismuth Phosphate Process for the Separation of Plutonium from Aqueous Solutions	S. G. Thompson, G. T. Seaborg
2,781,448	Gating Circuit	W. C. Struven	2,785,972	Preparation of Uranium Metal	C. E. Prescott, Jr., (Deceased), J. A. Holmes
2,781,452	Ion Beam Receiver	Z. J. Lofgren, F. Fairbrother, Jr.	2,786,143	Source Unit for Producing Ionized Gas	L. Ruby, R. B. Crawford, W. G. Fox
2,782,081	Pump Cylinder Assembly	J. Entwistle	2,786,832	Preparation of Flavonoid Glucosides	S. E. Vender, D. W. Fox
2,782,091	Uranium Recovery Process	J. J. Brunner	2,787,526	Method of Isotope Concentration	J. S. Spevack
2,782,092	Recovery of Metal Salts from Mixtures	D. X. Klein, W. V. Wirth	2,787,527	Method for Recovering Boron Values	M. Kilpatrick
2,782,116	Method of Preparing Metals	F. H. Spedding, H. A. Wilhelm, W. H. Keller	2,787,529	Method for Determining Boron Fluoride Ether Complex in a Composition	W. A. Winsten, I. Kirshbaum
2,782,117	Method of Reclaiming Uranium	E. A. Wilhelm, C. F. Gray	2,787,556	Process for Melting and Refining Uranium	F. H. Spedding, H. A. Wilhelm
2,782,158	Neutronic Reactor	J. A. Wheeler	2,787,537	Method of Producing Metal	E. A. Wilhelm
2,782,475	Apparatus for Vacuum Follow-Up Mechanism	E. A. Wilhelm, C. F. Gray	2,787,538	Production of Uranium	F. H. Spedding, H. A. Wilhelm, W. H. Keller
2,782,941	Follow-Up Mechanism	H. V. Lichtenberger, L. J. Koch	2,787,587	Isotope Exchange Process	E. W. Woodward
2,782,993	Automatic Control System with Remote Adjustment	W. E. Appleton, G. M. Farly	2,787,593	Method and Means of Producing Steams in Neutronic Reactors	H. E. Metcalf
2,783,320	Pressure Switch	A. F. Fish	2,787,737	Electromagnet Regulator	E. G. Macleish
2,783,376	High Speed Positive Pulse Generator	W. A. Ems			
2,783,433	Regulated Power Supply	W. P. Baker			

2,788,656	Means for Investigating Gases	H. H. Smider	2,792,634	Tolerance Inspection Gage	J. T. Howe, F. Erzse, Jr.
2,789,072	Heat Treated Uranium Alloy and Method of Preparing Same	D. W. White, Jr.	2,793,309	Neutron Proportional Counter	J. A. Simpson, Jr.
2,789,211	Method and Apparatus for Nuclear Particle Acceleration	C. W. Tobias	2,793,753	Removal of Material from Processing Tanks	D. S. Webster
2,789,222	Frequency Modulation System	M. D. Martin, K. R. MacKenzie, W. W. Palisades, V. V. Salsig	2,794,562	Fuel Element Loading Apparatus for Neutronic Reactors	G. A. Anderson
2,789,273	Ion Producing Mechanism	E. O. Lawrence	2,794,670	Releasable Holder for Rod	R. L. Menegus, R. L. Akers
2,789,683	Sample Holder	W. J. Stinson	2,794,923	Electromagnetic Apparatus	S. W. Barnes
2,789,878	Protactinium Extraction Process	D. F. Peppard	2,795,479	Method for Converting Uranium Ammonium Phosphate to Uranyl Fluoride	S. Bernstein, H. A. Bernhardt
2,789,879	Recovery of Uranium from Phosphoric Acid	D. Kaufman	2,795,480	Recovery of Uranium from Aqueous Phosphate Containing Solutions	E. F. Stephan, G. A. Lutz
2,789,884	Method of Preparing Pure Boric Oxide	C. J. Padden, A. R. Eberle	2,795,481	Solvent Extraction Process for the Separation of Tantalum and Niobium Values	H. G. Hicks, W. E. Nervik, P. C. Stevenson
2,789,897	Magnesium Reduction Process for Production of Uranium	C. B. Sawyer, B. R. F. Kjellgren	2,795,482	Absorption of Iodine Vapor	R. McNaboy
2,790,065	Radiation Detecting and Measuring System	H. G. Beyer, W. J. Stinson	2,795,499	Production of Metals	D. Peterson
2,790,149	Dielectric-Loaded Wave Guides	R. B. Robertson-Sheraby-Barville, L. E. Mallett	2,795,654	High Impedance Electronic Circuit	J. R. Macdonald
2,790,701	Process of Recovering Uranium	M. B. Egan	2,795,703	Apparatus for Counting Fast Neutrons in the Presence of Gamma Rays	I. B. Barlman, L. D. Marinelli
2,790,760	Neutronic Reactor	R. W. Powell	2,795,704	Neutron Ion Chamber	H. B. Bryant, G. F. Erickson, S. G. Kaufman
2,790,761	Neutronic Reactor	L. A. Ohlinger	2,796,320	Solvent Extraction Process for Purification of Thorium	F. H. Spedding, A. Eant
2,790,902	Ion Accelerator Beam Extractor	E. T. Wright	2,796,323	Conversion of Dimethyl Ether Boron Trifluoride Complex to Potassium Fluoborate	A. R. Eberle
2,790,919	Ionization Chamber for Fission Counting	J. E. Lykins, M. J. Bartkus, H. A. Kornicic	2,796,330	Method of Separating and Concentrating Isotopes of Boron and Oxygen	R. H. Crist, I. Eirehbaum
2,790,931	Electrostatic Memory System	R. W. Schumann	2,796,392	Process and Electrolyte for the Electrodeposition of Zirconium	M. H. Listzke
2,790,949	Thermionic Ionization Vacuum Gauge	O. H. Ottinger, R. R. Beesell	2,796,393	Process of Recovering Uranium from Calcium Wash Solutions	R. Q. Boyer
2,791,119	Liquid Level Indicator	W. H. Zinn, J. M. Barrer	2,796,396	Method of Intermittently Operating a Neutronic Reactor	L. Sailer
2,791,371	Radio Frequency Ion Pump	J. S. Foster, Jr., F. Psiritrother, Jr.	2,796,398	Means for Sustaining a Nuclear Fission Chain Reaction	E. C. Crouter, L. A. Ohlinger, E. F. Wagner, C. J. Young
2,791,372	Pump	A. A. Abbatisio			
2,792,412	Recovery of Roshanium from Aqueous Solutions	H. R. Schmidt, E. L. Moore			
2,792,535	Timing Circuit	W. C. Stroven			

2,796,411	Radiation Shield	R. E. Zirkle, E. J. Curtis	2,799,554	Method of Separating Plutonium	F. Morgan
2,796,424	Separation Process by Absorption	W. W. Schulz, R. A. Jatta, Jr. E. L. Moore	2,799,555	Method of Separating Plutonium	F. Morgan
2,796,529	Radiation Shield	P. Morrison	2,799,642	Neutronic Reactor Fuel Element	E. Burwitz, Jr., H. Brooks, C. Mansal, J. H. Payne, E. A. Lucbka
2,797,050	Remote Adjustment of Automatic Control System	E. G. Mcleish	2,799,836	Yuliss Transformer	R. E. Saller, H. H. Overen, D. A. Mack
2,797,061	Carbon Burner	F. J. Sullivan, E. J. Bair, J. H. Allum	2,800,387	Uranium Recovery from Ores with Hydrochloric Acid and Acetone	R. B. Kimball, E. A. Ewing
2,797,142	Method of Reducing Heavy Metal Tetrahalides	J. J. Katz	2,800,588	Marking Fluoroscope Head	T. B. Carrey, M. H. Taylor
2,797,143	Uranium-Titanium Recovery and Separation by Phosphate Precipitation	W. F. Arendale, C. F. Coleman	2,800,589	Crystal Dosimeter	F. W. Levy
2,797,160	Production of Zirconium	F. H. Spedding, M. A. Wilbels, W. H. Miller	2,800,797	Proportional Waste Line Sampler	J. F. Boustead
2,797,163	Filter Media and Method of Making	W. J. Smith, R. W. James	2,801,302	Compound Action Gain Control	T. H. Oelms
2,797,319	Trigger Circuit	H. F. Moody	2,801,960	Cold Piping Process	E. Seegmiller
2,797,328	Transistor Oscillator	E. G. Miller, Jr.	2,802,070	Stabilized Feedback Amplifier	H. L. Fishbine, C. Sewell, Jr.
2,797,983	Method of Determining Small Quantities of Uranium Compounds in a Gas Stream	J. Greenman, A. S. Carlson	2,802,108	Method and Apparatus for Collecting Isotopes	W. E. Laysbom
2,798,084	Recovery of Uranium from Aqueous Solutions	R. H. Poirier	2,803,405	Automatic Counting Apparatus	V. D. Howell
2,798,164	Portable X-Ray or Gamma Source	S. Untermeyer	2,803,601	Reactor Unloading Means	C. M. Cooper
2,798,165	Stable Photomultiplier Amplifier	L. K. Neher	2,803,748	One Shake Gate Former	R. Kalishjian, V. Ferras-Mendez
2,798,178	Accelerator Target Positioner	H. G. Heard, W. W. Salzig, Jr.	2,803,761	Electromagnetic Apparatus for Moving a Rod	J. M. Young
2,798,181	Pumping Ion Source	J. S. Foster, Jr.	2,803,885	Counting Apparatus	C. A. Ruggles
2,798,359	Steam Power Plant with Means for Heavy Water Concentration	J. S. Foster, G. E. Haddeland	2,804,165	Arrangement for Replacing Filters	R. A. Slongran, H. J. G. Bobbitt
2,798,789	Method of Separating Rare Earths	F. H. Spedding, E. J. Wheelwright, J. E. Powell	2,804,369	Production of Uranium Hexafluoride	R. D. Fowler
2,798,847	Method of Operating a Neutronic Reactor	E. Fermi, L. Sillard	2,804,550	Automatic Light Control	M. Artzt
2,798,848	Neutronic Reactor Fuel Element	K. H. Kingston	2,804,573	Gas Discharge Devices	V. J. Arrol, S. Jefferson
2,799,553	Phosphate Method for Separation of Radioactive Elements	S. G. Thompson, G. T. Seaborg	2,805,473	Uranium-Oxide-Containing Fuel Element Composition and Method of Making Same	J. E. Bendwerk, E. A. Boland, D. E. Walker
			2,805,916	Conversion of Plutonium Trifluoride to Plutonium Tetrafluoride	S. Fried, H. R. Davidson

2,805,985	Electrodeposition of Plutonium	F. J. Walter	2,809,531	Neutronic Reactor System	F. Daniels
2,806,161	Coating Arc Ion Source	J. S. Foster, Jr.	2,810,626	Process for Producing Uranium Hexafluoride	R. D. Fowler
2,806,610	Anti-Swing Crane	R. C. Goerts	2,810,639	Fluid Moderated Reactor	E. P. Wigner, L. A. Ohlinger, G. J. Young, A. M. Weinberg
2,806,764	Uranium Recovery and Purification Process and Production of High Purity Uranium Tetrafluoride	R. H. Bailes, R. S. Long, E. R. Grinstead	2,810,828	Pulse Amplitude Analyzer	G. W. Gray, A. S. Jensen
2,806,819	Light Water Moderated Neutronic Reactor	R. F. Christy, A. M. Weinberg	2,811,411	Method of Processing Mosaicite Sand	G. D. Calkins
2,806,820	Neutronic Reactor	E. P. Wigner	2,811,412	Method of Recovering Uranium Compounds	R. H. Poirier
2,806,810	Quartz Fibre Electroscopes	R. P. Henderson	2,811,413	Fluorination Process	T. S. McKillen
2,807,082	Welding Process	J. Zambrow, H. H. Eausner	2,811,414	Process for Producing Uranium Halides	E. V. Murphree
2,807,518	Process for Recovery of Uranium and Vanadium from Carbonate Solutions by Reduction-Precipitation	D. A. Ellis, R. O. Lindblom	2,811,415	Extraction Method of Separating Uranium, Plutonium, and Fission Products from Compositions Containing Same	G. T. Seaborg
2,807,519	Process for the Production of an Activated Form of ^{102}Pu	M. J. Polissar	2,811,416	Process of Removing Plutonium Values from Solution with Group IVS Metal Phospho-Silicate Compositions	E. R. Russell, A. W. Adamson, J. Schubert, G. E. Boyd
2,807,580	Thermal Nuclear Reactor	F. W. Fenning, R. F. Jackson	2,811,423	Redistributor for Liquid-Liquid Extraction Columns	J. C. Bradley
2,807,581	Neutronic Reactor	E. Fermi (Deceased), L. Stiller	2,811,487	Neutron Reactor Having a MgSO_4 Shield	H. E. Stanton
2,807,722	Pulse Generator	C. W. Roeschke	2,811,923	Direct Current Electromagnetic Pump	A. H. Barnes
2,807,723	High Power Pulsed Oscillator	S. Singer, L. K. Mohr	2,812,232	Prevention of Scale Formation in Uranium Solvent Extractor	J. W. Deleplaine
2,807,727	Neutronic Reactor Shield	E. Fermi (Deceased), W. H. Zinn	2,812,233	Metal Extraction Process	G. V. Lewis, Jr., D. E. Rhodes
2,807,785	Line-Above-Ground Attenuator	B. S. Wilds, J. R. Ames	2,812,303	Atomic Power Plant	F. Daniels
2,807,857	Production of Thoris Ware	P. Murray, I. E. Denton, D. Wilkinson	2,812,304	Means for Cooling Reactors	J. A. Wheeler
2,808,312	Process for Treating Volatile Metal Fluorides	A. J. Rudge, A. J. Love	2,813,001	Uranium Purification Process	J. R. Ruboff, C. E. Winters
2,808,986	Electronic Digital Computer	J. J. Stone, Jr., E. R. Nunn, E. S. Bettis	2,813,002	Uranium Purification Process	C. E. Winters
2,809,091	Solvent Extraction Process	A. A. Jooks	2,813,003	Alkaline Carbonate Leaching Process for Uranium Extraction	A. Thomas, E. A. Brown, A. T. Babbitts
2,809,137	Neutronic Reactor	H. E. Metcalf	2,813,004	Process for Separating Plutonium from Impurities	A. C. Wahl
2,809,887	Method of Alloying Reactive Metals with Aluminum or Beryllium	O. J. C. Rummals	2,813,018	Production of Uranium	A. E. Boehle, J. W. Stevenson
			2,813,022	Method of Conducting a Person Between a Safe Region and a Dangerous Region	E. A. Moulthrop

2,813,064	Isotopic Fractionation Process of Uranium A. Clark	2,816,005	Extraction of Uranyl Nitrate from Aqueous Solutions	M. E. Furness, E. J. Mundy
2,813,070	Method of Sustaining a Neutronic Chain Reacting System	2,816,042	Refractory Article and Process of Manufacturing Same	N. E. Hamilton
2,813,073	Neutron Reactor Fuel Element Utilizing Zirconium-Base Alloys	2,816,068	Reactor Control	W. J. Emano
2,813,508	Method for Removal of Light Isotope Product from Liquid Thermal Diffusion Units	2,816,122	Method of Recovering Thorium	R. W. Fisher
2,813,978	Electron Emission Regulating Means	2,816,476	High-Speed Camera	B. T. Rogers, Jr., W. C. Davis
2,813,979	Apparatus for Producing Ions of Vaporizable Materials	2,816,704	Seal for High Speed Centrifuge	C. W. Skarstrom
2,814,477	Retort Assembly	2,816,813	Fractional Distillation Separation of Plutonium Values from Light Element Values	B. B. Cunningham
2,814,728	Ion Beam Collimator	2,816,860	Means for Controlling a Nuclear Reactor	V. C. Wilson, L. Slotin, W. P. Overbeck, D. K. Froman
2,814,772	Electrical Circuits Using Cold-Cathode Triode Valves	2,817,019	Shock-Excited Oscillator	R. Creveling
2,814,849	Process of Producing Refractory Uranium Oxide Articles	2,817,036	Spark Gap Switch	R. E. Keal
2,814,857	Ceramic Fuel Element Material for a Neutronic Reactor and Method of Fabricating Same	2,817,060	Non-Destructive Flow Detection Apparatus	M. J. Stateman, E. E. Holloway
2,815,261	Uranium Precipitation Process	2,817,350	Device for Control of Oxygen Partial Pressure	E. Brédar, H. S. Gordon
2,815,262	Separation Process for Thorium Salts	2,817,605	Method for Sealing the Pores in a Carbon Body	M. C. Sans, C. R. Malstrom, J. M. Suding, H. P. Yockey
2,815,264	Processing of Monazite Sand	2,817,763	Ion Source for a Calutron	J. G. Backus
2,815,265	Metal Recovery Process	2,818,208	Gas Metering Pump	C. M. George
2,815,266	Method of Preparing PuO_2	2,818,324	Liquid-Liquid Extraction Columns	J. D. Thornton
2,815,277	Method for Removing Sodium Oxide from Liquid Sodium	2,818,504	Logarithmic Amplifier	J. A. DeShong, Jr.
2,815,319	Fast Neutronic Reactor	2,818,507	Velocity Selector Method for the Separation of Isotopes	E. J. Britten
2,815,321	Isotope Conversion Device	2,818,605	Method of Making a Refractory Material	H. I. Miller
2,815,968	Seal for Rotating Shaft	2,818,726	Automatic Calibrating System for Pressure Transducers	E. L. Amosette, G. W. Rodgers
		2,819,033	Acceleration Integrator	K. E. Pope
		2,819,143	Plutonium Separation Method	J. L. Dreher, S. G. Thompson

2,819,164	Separation of Plutonium from Uranium and Fission Products by Adsorption	G. T. Seaborg, J. E. Millard	2,826,624	Vapor Shield for Induction Furnace	S. L. Bessé, S. O. Smoriga
2,819,280	Plutonium Compounds and Process for Their Preparation	F. J. Wolter, E. C. Diehl, Jr.	2,826,708	Plasma Generator	J. S. Foster, Jr.
2,819,296	Electronic Trigger Circuit	J. A. C. Russell	2,827,429	Cooled Neutronic Reactor	C. E. Binner, C. B. Wilkie
2,819,401	Apparatus for Controlling the Position of an Ion Beam in a Calutron	E. O. Lawrence	2,827,569	Stabilized Oscillator	P. L. Jessen, H. J. Price
2,819,944	Purification Process	H. L. Wibbles, E. I. Miller	2,828,425	Pulse Amplitude Analyzer	M. E. Greenblatt
2,820,182	Photosensitive Relay Control Circuit	C. F. Martin	2,828,875	Remote Handling Arrangements	D. W. Cimas
2,820,192	Tube Tester	H. T. Gittings, Jr., J. F. Kolbach	2,829,293	Lead Severing Contrivance	W. Widmaier
2,820,367	Device for Conveying and Rotating Objects	C. E. Franz, J. Roslund	2,829,316	Control and Fault Detector Circuit	C. N. Winningsstad
2,820,692	Process of Dissolving Zirconium Alloys	R. S. Shor, S. Vogler	2,829,408	Centrifugal Casting Machine	A. B. Shuck
2,820,751	Process for Producing Jacketed Rods	H. A. Saller (Deceased)	2,830,066	Separation Process for Transuranic Element and Compounds Thereof	L. B. Magnusson
2,820,753	Nuclear Reactor	H. I. Miller, R. C. Smith	2,830,871	Uranium Recovery Process	D. Kaufman, C. S. Abrams
2,820,759	Method of Separating Froths from Liquid	G. P. Most	2,830,873	Fluoride Volatility Process for the Recovery of Uranium	J. J. Edtz, H. H. Ryan, I. Shaft
2,820,895	Pulse Height Analyzer	C. W. Johnstone	2,830,874	Ion Exchange Process for the Recovery and Purification of Materials	R. S. Long, R. H. Bailes
2,820,896	Multichannel Pulse-Height Analyzer	J. T. Russell, H. W. Leferte	2,830,894	Production of Uranium	F. H. Spadding, H. A. Wilhelm, W. H. Kaller
2,821,505	Process of Coating Metals with Bismuth or Bismuth-Base Alloys	J. G. Besch	2,830,896	Uranium Alloys	A. U. Seybolt
2,821,632	Apparatus for Producing Ions of Vaporizable Materials	B. T. Wright	2,830,921	Production of Uranium Tubing	E. C. Creutz
2,821,636	Co-Devils	S. Jefferson	2,830,939	Process of Separating Plutonium Values by Electrodeposition	A. C. Wahl
2,821,662	Ion Source	W. A. Bell, Jr., L. O. Love, W. K. Preter	2,830,944	Neutronic Reactor	E. F. Wigner, A. M. Weinberg, G. J. Young
2,822,239	Method of Separating Plutonium	H. S. Brown, O. F. Hill	2,831,122	Radiation Sources	M. H. Broczek
2,822,260	Decontamination of Uranium	H. M. Feder, H. B. Challow	2,831,162	Time-Interval Measuring Device	J. E. Cross
2,822,472	Negative Gate Generator	C. S. Jones, T. E. Eaton	2,831,750	Separating Protactinium with Manganese Dioxide	G. T. Seaborg, J. W. Coffman, R. H. Stoughton
2,822,473	Pulse Duration Lengthener	W. R. Alken	2,831,806	Neutronic Reactor	E. F. Wigner
2,822,479	Radiation Counter	W. W. Goldworthy	2,831,807	Neutronic Reactor	R. J. McGarry
2,822,578	Injection-Molding Apparatus	G. M. Lobell	2,831,990	Electromagnetic Apparatus for Moving a Rod	J. H. Young

2,823,116	Method of Preparing Sintered Zirconium Metal from its Hydrides	B. P. Angier	2,831,996	Ion Source	E. F. Martin
2,823,179	Detection of Coating Failures in a Neutronic Reactor	A. H. Snell, S. K. Allison	2,832,002	Time Calibrated Oscilloscope Sweep	R. M. Orms, V. L. Smith, S. M. Johnson
2,823,350	Method of Locating Grounds	K. Macleish	2,832,113	Ingot Mold	A. J. Mangold, Jr., J. W. Mahaffey, S. L. Reese
2,823,976	Recovery of Thorium and Uranium Values from Aqueous Solutions	G. D. Calkins	2,832,732	Fuel Assembly for a Neutronic Reactor	E. P. Wigner
2,823,977	Method of Dissolving Uranium Metal	L. A. Slatin	2,832,733	Heavy Water Moderated Reactor	L. Sellard
2,823,978	Precipitation Method of Separating Plutonium from Contaminating Elements	J. B. Sutton	2,832,793	Process for Separation of Heavy Metals	R. B. Duffield
2,824,056	Reactor Unloading	M. C. Leverett	2,833,616	Separation of Uranium from Zirconium and Niobium by Solvent Extraction	E. E. Woiland
2,824,234	Method and Means for Radiation Dosimetry	J. W. Schulke, J. F. Suttle	2,833,617	Fluorine Process for Separation of Materials	G. T. Seaborg, H. S. Brown
2,824,252	Ionization Chamber	W. C. Beckman, P. B. Shonka	2,833,618	Separating Uranium Containing Solids Suspended in a Liquid	E. C. Creutz, S. P. Wigner
2,824,365	Soldering of Aluminum Base Metals	G. F. Erickson	2,833,799	Recovery of Tetravalent Cations from Aqueous Solutions	R. L. Moore
2,824,732	Apparatus for Melting and Pouring Metal	F. A. Harris	2,833,800	Process for Purifying Plutonium	D. F. Mastick, A. C. Wahl
2,824,783	Separation of Scandium from Aqueous Solutions	D. F. Peppard, E. S. Wachman	2,833,927	Method of Separating Isotopes of Uranium in a Calutron	F. A. Jenkins
2,824,784	Method for the Preparation of Stable Actinide Metal Oxide-Containing Slurries and of the Oxides Thereof	B. S. Hansen, R. E. Minturn	2,833,965	Electrical Protective Device	V. R. Baker
2,824,841	Scintillator Composition for Counters and Method of Making	V. L. Duck, R. K. Swank	2,834,672	Method of Producing Uranium	L. S. Foster, I. T. Migel
2,824,967	Calutron	M. D. Exman	2,834,722	Electrochemical Decontamination and Recovery of Uranium Values	J. A. McLaren, J. E. Goods
2,824,973	Radiation Detector System	J. C. Gomblich, G. G. Kelley	2,835,555	Reduction of Acidity of Nitric Acid Solutions by Use of Formamide	T. V. Hoaly
2,825,105	Metal Production and Casting	T. T. Migel	2,835,573	Hot Pressing with a Temperature Gradient	H. H. Bauser
2,825,599	Grab Mechanisms	K. H. Dent	2,835,608	Process of Preparing Uranium-Impregnated Graphite Body	M. A. Kanter
2,825,688	Power Generating Neutronic Reactor System	H. C. Vernon	2,835,630	Treatment of Metals Prior to Electroplating	R. A. U. Huddle, O. Flint
2,825,689	Neutronic Reactor and Fuel Element Therefor	L. Sillard, G. J. Young	2,835,687	Isotope Fractionation Process	G. E. Cleveland, Delwayne A. Lee, W. B. Schaap
2,825,818	Gas Phototube Circuit	J. E. Richardson	2,835,848	Multi-Electrode Tube Pulse Memory Circuit	J. C. Gomblich, J. B. Baerens
2,826,495	Alloy for Use in Nuclear Fission	P. H. Spedding, E. A. Wilhelm			

2,835,890	Directional Antenna	B. J. Bitzner	2,838,661	Binary Storage Element	J. C. Cline
2,836,548	Surface Treatment of Metallic Uranium	A. G. Grady, E. W. Schwalbher	2,839,357	Solvent Extraction Process for Uranium Recovery	E. M. Clark, D. Duffey
2,836,554	Air Cooled Neutronic Reactor	E. Fermi (Deceased), L. Szilard	2,839,358	Process of Recovering Uranium	T. D. Price, M. M. Jeung
2,836,759	Linear Accelerator	S. A. Colgate	2,839,614	Magnetic Recording Head	L. C. Merrill
2,837,401	Separation of Plutonium from Aqueous Solutions by Ion-Exchange	J. Schubert	2,839,619	Pulse Amplifier	C. W. Johnstone
2,837,402	Method of Reducing Plutonium Compounds	L. B. Johns	2,839,706	Pulsed Ion Source	C. E. Anderson, E. W. Ehlers
2,837,474	Corrosion Inhibition	G. H. Cartledge	2,840,136	Tube Flanging Apparatus Having Spiral Cam Actuated Flanging Rollers	H. J. Bellarts
2,837,475	Neutronic Reactor Having Localized Areas of High Thermal Neutron Densities	H. W. Newson	2,840,451	Separation of Inorganic Salts from Organic Solutions	L. I. Estain, J. C. Sullivan
2,837,476	Steam Stirred Homogeneous Nuclear Reactor	H. M. Eussy	2,840,452	Recovery of Uranium from Pitchblende	A. E. Ruchle
2,837,477	Chain Reaction System	E. Fermi (Deceased), M. C. Leverett	2,840,464	Method of Separating Fission Products from Pused Bimath-Containing Uranium	R. H. Wiswall
2,837,548	Separation Process Using Complexing and Adsorption	F. H. Spedding, J. A. Ayres	2,840,467	Inhibition of Corrosion	J. E. Atherton, Jr., D. H. Gurinsky
2,837,639	Pulse Amplitude Analyzers	G. W. Gray, A. S. Jensen	2,840,471	Photographic Film Developer	F. G. Berry
2,837,640	Pulse Height Analyzer	W. W. Goldsworthy	2,840,480	Refractory Coating for Graphite Molds	S. D. Stoddard
2,837,818	Method of Solid State Welding	S. Storchheim	2,840,522	Reactor and Novel Method	G. J. Young, L. A. Ohlinger
2,838,366	Oxidative Method of Separating Plutonium from Neptunium	L. J. Souffait, Jr.	2,840,768	Loaded Waveguides	L. B. Millett, B. G. Loech, G. L. Adams
2,838,367	U-Extraction-Improvements in Elimination of Nd by Use of Ferric Ion	H. M. Clark, D. Duffey	2,841,018	Quick Releaseable Drive	J. J. Dickson
2,838,368	Treatment of Ammonium Nitrate Solutions	T. W. Boyer, J. G. MacBetchin, L. Yaffe	2,841,026	Nut Screw Mechanisms	J. A. F. Glass
2,838,369	Process for the Concentration of Ores Containing Gold and Uranium	A. M. Goulin, J. Desbar	2,841,464	Precipitation Method of Separation of Neptunium	L. S. Magnusson
2,838,370	Recovery of Uranium and Thorium from Aqueous Solutions	G. D. Celkins	2,841,466	Uranium Extraction	C. D. Harrington, J. V. Opie
2,838,371	Method of Separating Plutonium from Lanthanum Fluoride Carrier	G. W. Watt, R. H. Goeckermann	2,841,468	Recovery of Uranium from Carbonate Leach Liquors	H. F. Wilson
2,838,451	Gas Cooled Nuclear Reactors	E. Long, V. Rodwell	2,841,469	Plutonium Carrier Metathesis with Organic Reagent	S. G. Thompson
2,838,452	Plates with Oxide Inserts	J. M. West, J. F. Schumar	2,841,539	Heat Treatment of Electroplated Uranium	P. F. Hoglund
			2,841,545	Power Reactor	W. E. Zinn,

2,841,727	Quantizing Tube	G. W. Gray, A. S. Janssen	2,847,268	Pulse Amplitude Distribution Recorder	C. Cowyer
2,842,224	De-Entrapment Column	A. J. Mooradian	2,847,270	Calutron Oscillograph System	Q. A. Kerna
2,842,436	Selective Rejection of Iron and Aluminum in Hydrometallurgical Recovery of Metals	A. J. Beyer, J. Orndorf	2,847,273	Manganese Dioxide Method for Preparation of Protactinium	L. I. Estrin
2,842,735	Polarograph	J. W. Boyd, P. E. Ohmert	2,847,274	Sulfide Method Plutonium Separation	R. B. Duffield
2,843,451	Processes of Recovering Uranium from a Calutron	D. O. Estré, L. E. Zumwalt	2,847,275	Uranium Recovery Process	J. H. Yeager
2,843,452	Precipitation of Protactinium	R. L. Moore	2,847,276	Solvent Extraction of Neptunium	J. F. Butler
2,843,453	Separation of Fluoronyl Ions	R. E. Connick, W. A. McVey	2,847,277	Precipitation of Uranium Peroxide of Low Fluoride Content from Solutions Containing Fluorides	Low E. J. King, H. M. Clark
2,843,478	High Temperature Brazing Alloy for Joining Fe Cr Al Materials and Austenitic and Ferritic Stainless Steels	R. R. Coats	2,847,278	Precipitation of Iridium, Niobium, and Ruthenium from Aqueous Solutions	A. S. Wilson
2,843,500	Coated Alloys	C. G. Harmon, L. S. O'Bannon	2,847,283	Pulsed Mixer-Settler Solvent Extraction Contactors	V. S. Figg
2,843,543	Neutronic Reactor	R. F. Christy	2,847,284	Apparatus for Catalytically Combining Gases	H. M. Busey
2,843,815	Transistor High Voltage Power	G. Z. Driver	2,847,321	Metal Surface Treatment	L. D. Eubank
2,844,639	Thermo-Electric Generator	K. C. Jordan	2,847,331	Hydrogen Isotope Targets	R. W. Ashley
2,844,735	Method of Testing for Leaks	K. C. Creutz, Wm. A. McAdams, M. H. Foss	2,847,575	Calutrons	E. D. Kana
2,844,740	Multiple Spark Gap Switch	A. E. Schofield	2,847,576	Calutron System	E. O. Lawrence
2,845,530	Pulse Sorter	E. J. Wade	2,847,577	Calutron	F. E. Schmidt
2,845,544	Neutron Measuring Method and Apparatus	G. T. Soaborg, J. W. Coifman, G. Friedlander	2,847,635	Electrical Regulating Apparatus Including an Ionic Current Regulator	H. W. Brackney
2,845,560	Neutron Counter	C. D. Curtis, C. L. Carlson, M. P. Tobinias	2,847,644	High Sensitivity Electroscope	F. R. Shonka, A. J. Okleshen
2,845,596	Peak Reading Voltmeter	A. L. Dyer	2,848,266	Remote Retrieving Tool	L. W. Fromm, Jr.
2,845,716	Aligning Jig	J. S. Culver, W. C. Tunnell	2,848,300	Process of Separating Uranium from Aqueous Solution by Solvent Extraction	J. C. Warf
2,845,762	Can Bonding Fixtures	L. R. Ealsen, F. L. Taggee	2,848,301	Separation of Plutonium Hydroxide from Bismuth Hydroxide	G. W. Watt
2,846,084	Electronic Master Slave Manipulator	R. C. Goertz, W. M. Thompson, E. A. Olsen	2,848,323	Fuel Elements for Nuclear Reactors and Process of Making	V. E. Roake
2,846,523	Square Wave Amplifier	M. A. Leavitt, I. C. Lutz	2,848,351	Nitric Acid Pickling Process	E. R. Moller, L. D. Eubank, J. W. Robinson
2,846,762	Metal Plating Process	D. E. Walker, R. A. Boland			
2,846,872	Leakage Testing Method	W. A. McAdams, N. H. Puss			

2,848,352	Fuel Elements and Method of Making	E. A. Holland, C. Marzano	2,849,307	Method of Flux Treatment for Treating Uranium	F. Foote
2,848,404	Neutronic Reactor	M. Treshow	2,849,308	Flux Composition and Method for Treating Uranium-Containing Metal	F. Foote
2,848,619	Ion Source Unit for a Calutron	W. M. Brobeck	2,849,313	Preparation of Metal Powder Compacts Prior to Pressing	H. Mansfield
2,848,620	Ion Producing Mechanism	J. G. Backus	2,849,317	Metal Coating Baths	J. W. Robinson
2,848,621	Calutron Ion Source	F. Oppenheimer	2,849,340	Filter Treatment	J. B. Setton, J. V. F. Torrey
2,848,622	Calutron Ion Source	F. Oppenheimer	2,849,348	Electrodeposition of Nickel on Uranium	A. G. Gray
2,848,625	Gamma and X-ray Dosimeter and Dosimetric Method	G. V. Taplin, C. H. Douglas, S. C. Sigoloff	2,849,387	Corrosion Resistant Jacketed Metal Body	E. W. Bruggmann
2,848,796	Alloy Coatings and Method of Applying	L. D. Eubank, E. E. Roller	2,849,388	Corrosion Resistant Jacketed Metal Body	E. W. Bruggmann
2,848,797	Metal-Coated Articles and Method of Making	L. D. Eubank	2,849,389	Corrosion Resistant Jacketed Metal Body	E. W. Bruggmann
2,848,800	Method of Jacketing Uranium Bodies	J. O. Maloney, J. B. Teps, E. E. Eubank	2,849,390	Welded Jacketed Uranium Body	D. H. Gorinsky
2,848,804	Method and Means for Closing Tubes by Spinning	E. E. Graves, R. E. Coonfare	2,849,467	Separation of Radioactive Columbium Tracer	L. E. Glendenin, H. Gest
2,848,817	Means for Determining Centrifuge Alignment	W. Q. Smith	2,849,616	Isotope Separators	C. G. Becon
2,848,881	Thermally Shielded Moisture Removal Device	O. E. Miller	2,850,447	Neutronic Reactor	L. A. Ohlinger, E. P. Wigner, G. J. Young, A. M. Weinberg
2,849,246	Closure Device	S. M. Linnell, D. J. Dorcy	2,850,634	Calutron Structure	D. Price
2,849,277	Process of Securing Plutonium in Nitric Acid Solutions in Its Trivalent Oxidation State	J. B. Thomas	2,850,635	Regulator for Calutron Ion Source	B. F. Miller
2,849,279	Catalytic Promotion of the Adsorption of Vanadium on an Anionic Exchange Resin	R. H. Bailes, D. A. Ellis	2,850,636	Ion Producing Mechanism	J. G. Backus
2,849,282	Method of Separation	G. E. Boyd	2,850,638	Ion Producing Mechanism	K. R. MacKenzie
2,849,283	Separation of Uranyl Nitrate by Extraction	R. W. Stoughton, F. L. Steably	2,850,639	Calutron Receivers	F. H. Schmidt, K. F. Stone
2,849,284	Method of Separating Uranium Suspensions	E. P. Wigner, W. A. McAdams	2,851,332	Preparation of Halides of Plutonium	C. S. Garner, I. B. Johns
2,849,285	Method of Purifying Uranium	J. W. Kennedy (Deceased), E. G. Segre	2,851,333	Process of Separating Plutonium from Uranium	E. S. Brown, O. F. Hill
2,849,286	Method of Processing Monazite Sand	M. A. Welt, M. Smutz	2,851,338	Method of Testing Coatings	I. B. Johns, A. S. Newton
			2,851,409	Neutronic Reactor Fuel Element and Core System	W. T. Moore
			2,851,410	Neutronic Reactor Construction	H. C. Vernon, J. J. Goett (Deceased)
			2,851,427	Method of Purifying Catalysts	G. G. Joris

2,851,607	Calutron Receivers	E. J. Lojgren	2,852,689	Ion Producing Mechanism	E. O. Lawrence (Deceased)
2,851,609	Ion Producing Mechanism (Arc External to Block)	W. M. Brobeck	2,852,690	Calutrons	E. O. Lawrence (Deceased)
2,851,766	Fluxal Metallic Coatings on Uranium and Method of Applying Same	A. G. Gray	2,852,746	Voltage-Controlled Transistor Oscillator	F. F. Scheele
2,852,041	Fluid Selecting Apparatus	W. J. Stinson	2,852,823	Casting Apparatus	C. F. Gray, R. E. Thompson
2,852,301	Slug Handling Devices	J. R. Contry	2,853,228	Oscillatory Pump	M. Underwood
2,852,319	Thrust Bearing	F. E. Heller	2,853,237	Scanner for Exposing and Analyzing Multi-Channel Film	D. J. Zaffarano, J. Weber, Jr., W. A. Rhinobart
2,852,336	Peroxide Process for Separation of Radioactive Materials	G. T. Seaborg, I. Perlman	2,853,441	Surface Treatment of Uranium	O. Flint
2,852,337	Processes of Chlorination of Uranium Oxides	S. Rosenfeld (Deceased)	2,853,446	Fuel-Breeder Element for a Nuclear Reactor	W. E. Abbott, R. Balent
2,852,338	Separation of Plutonium from Elements Having an Atomic Number not Less than 92	F. T. Fitch, D. S. Russell	2,853,616	Calutron Structure	J. L. Boush
2,852,349	Apparatus for Liquid Phase Extraction	T. E. Hicks, H. E. Lehman, B. Rubin	2,853,623	X-Ray Pulse Generator	Q. A. Kerns
2,852,364	Melting and Purification of Uranium	F. E. Spedding, C. F. Gray	2,853,624	Radiation Shielding Device	E. P. Wigner, G. J. Young
2,852,419	Process of Decontaminating Material Contaminated with Radioactivity	D. C. Overholc, M. D. Peterson, M. F. Acken	2,853,625	Discharge Device for Radioactive Material	L. A. Ohlinger
2,852,455	Neutronic Reactor	E. J. Wade	2,853,657	Magnets	H. E. Bofacker
2,852,457	Nuclear Reactors	E. Long, J. W. Ashley	2,853,695	Electrostatic Memory System	J. C. Chu
2,852,458	Apparatus for Controlling Neutronic Reactors	J. R. Dietrich, J. M. Herr	2,853,859	Cold Traps	W. I. Thompson
2,852,459	Apparatus for Detecting and Locating Presence of Fluids	R. R. Williamson	2,854,315	Electrolytic Reduction of Nitric Acid Solutions Containing Radioactive Waste	H. W. Alter, D. L. Barney
2,852,460	Fuel-Breeder Fuel Element for Nuclear Reactor	W. E. Abbott, R. Balent	2,854,713	Casting Method and Apparatus	C. F. Gray, R. H. Thompson
2,852,461	Neutronic Reactor	E. Fermi (Deceased), W. H. Zinn, H. L. Anderson	2,854,737	Copper Coated Uranium Article	A. G. Gray
2,852,685	Ion Source for Calutrons	J. E. Tolmie	2,854,738	Nickel Coated Uranium Article	A. G. Gray
2,852,686	Calutron Receiver	K. R. MacEwan	2,855,114	Loading Device	L. A. Ohlinger
2,852,687	Isotope Separating Apparatus	M. K. Endreyetz, H. B. Greene	2,855,269	The Separation of Plutonium from Uranium and Fission Products	G. E. Boyd, A. W. Adamson, J. Schubert, E. E. Russell
2,852,688	Calutrons	W. M. Pierson	2,855,270	Process of Recovering Uranium	J. M. Carter, C. E. Larson
			2,855,271	Separation of Uranium Hexafluoride from Organic Fluoro Compounds	W. F. Libby
			2,855,281	Apparatus for Condensation and Sublimation	R. J. Schmidt, F. Peis, Jr.

2,855,354	Neutronic Reactors	H. L. Anderson	2,857,745	Separation of Fluid Mixtures	R. Lipscomb, A. Craig S. Labrow, J. F. Dunn
2,855,355	Jacketed Uranium Slug	L. A. Ohlinger, C. M. Cooper	2,858,187	Uranium Recovery	F. T. Fitch, A. J. Crucikbank
2,855,519	Tamperproof Film Badge	L. F. Kocher	2,858,196	Extraction Apparatus	A. E. Ballard, E. R. Brigham
2,855,899	Device for Controlling Insertion of Rod	B. J. Beatty	2,858,262	Protectively Covered Article and Method of Manufacture	R. F. Flott
2,856,237	Metal Sprayer for Use in Vacuum or Inert Atmosphere	R. E. Monroe	2,858,447	Radiation Dosimeter and Dosimetric Methods	G. V. Tepin
2,856,261	Iodate Method for Purifying Plutonium	R. W. Stoughton, R. B. Duffield	2,858,452	Radiation Wave Detector	L. P. Wouters
2,856,262	Adsorption Procedure in Preparing U ²³³	R. W. Stoughton	2,858,596	Crucible Lining Method	W. H. Boose, W. W. Schmidt
2,856,263	Process for the Recovery and Purification of Uranium	J. M. Carter, M. D. Kaman	2,859,092	Solvent Extraction Process for the Recovery of Metals from Phosphoric Acid	R. H. Bailles, R. S. Long
2,856,336	Neutronic Reactor Control	H. E. Metcalf	2,859,093	Zirconium Phosphate Adsorption Method	E. E. Russell, A. W. Adamson, J. Schubert, G. E. Boyd
2,856,337	Method of Operating Nuclear Reactors	S. Usterneyer	2,859,094	Uranium Extraction Process Using Synergistic Reagents	J. M. Schmitt, C. A. Blake, Jr., E. B. Brown, C. F. Coleman
2,856,339	Neutronic Reactors	E. P. Wigner, G. J. Young	2,859,095	Process of Producing Cm ²⁴⁴ and Cm ²⁴⁵	W. M. Manning, M. H. Studier, E. Diamond, P. E. Fields
2,856,340	Shaped Fissionable Metal Bodies	E. P. Wigner, G. J. Young	2,859,096	Process for Production of Uranium Hexafluoride	R. D. Fowler
2,856,341	Nuclear Reactor Slug Provided with Thermocouple	V. R. Kanne	2,859,097	Preparation of Plutonium Halides	N. E. Davidson, J. J. Katz
2,856,418	Separation Process for Transuranic Element and Compounds Thereof	M. Calvin	2,859,138	Composition and Method for Coating a Ceramic Body	N. E. Blanchard
2,856,510	Inert Gas Shield for Welding	S. O. Jones, F. V. Daly	2,859,156	Electrolytic Preparation of U ⁷⁴	A. L. Allen, R. W. Anderson, E. W. Powell
2,856,526	Gating Circuits	L. C. Merrill	2,859,163	Cadmium-Barium Earth Borate Glass as Reactor Control Material	G. L. Floetz, W. E. Ray
2,856,532	Pulsed Ion Source	E. F. Martins	2,859,164	Sampling Device for pH Measurement in Process Streams	C. E. Michelson, V. H. Carson, Jr.
2,857,241	Process Using Potassium Lanthanum Sulfate for Forming a Carrier Precipitate for Plutonium Values	A. H. Angerman	2,859,353	Circuits for Current Measurements	R. J. Cox
2,857,268	Superconducting Vanadium Base Alloy	H. J. Cleary	2,859,431	Visual Alarm System	J. M. Morris
2,857,285	High Temperature Refractory Coating for Graphite Nozzle	S. D. Stoddard	2,860,031	Process for Utilizing Organic Orthophosphate Extractants	R. E. Grinstead
2,857,304	Engineering Test Reactor	D. R. deBoisblanc, M. E. Thomas, R. M. Jones, G. H. Hunsco, J. W. Webster, C. F. Lays			
2,857,483	Distributed Amplifier Incorporating Feedback	F. E. Bell, Jr.			

2,860,032	Wet Method of Preparing Plutonium Tribromide	H. R. Davidson, E. K. Ryda	2,863,716	Sulphur Dioxide Leaching of Uranium Containing Material	A. Thomas, F. T. Rabbitts, K. D. Heater, H. W. Smith
2,860,093	Isotope Conversion Device and Method	E. P. Wigner, L. A. Ohlinger	2,863,718	Plutonium Concentration and Decontamination Method	D. C. Overholt, F. W. Tober
2,860,241	Ratio Computer	R. F. Post	2,863,719	Method of Improving the Carrier precipitation of Plutonium	H. J. Kneack, J. H. Balthis
2,860,242	Differential Pulse Height Discriminator	L. D. Test	2,863,729	Combination of Hydrogen and Oxygen	H. F. McDuffie, C. E. Secoy
2,860,269	Gas Discharge Devices	S. Jefferson	2,863,735	System for Conversion of UF_4 to UF_6	D. C. Erater, J. W. Pike
2,860,270	Pulsed Ion Source	F. C. Ford, S. G. Zizzo, B. Cook, J. V. Buff	2,863,814	Neutronic Reactor Fuel Element	K. A. Kosselring, A. U. Seybolt
2,860,948	Separation of Neptunium from Plutonium by Chlorination and Sublimation	S. H. Fried	2,863,815	Nuclear Reactor	E. V. Moore, J. H. Bowen, K. H. Dent
2,860,949	Plutonium Separation Method	L. J. Beaufait, Jr., F. R. Stevenson, G. K. Hollifield	2,863,816	Neutronic Reactor Fuel Element	J. T. Stacy
2,860,950	Method of Preparing Metal Halides	A. V. Henriksen	2,863,817	Reactor Coolant Tube Seal	W. J. Morris
2,860,956	Production of Metals and their Compounds	T. V. Arden, F. H. Burstall, G. B. Davies, R. P. Linstead, R. A. Wells	2,863,818	Jacketed Reactor Fuel Element	K. F. Smith, R. J. Van Thyna
2,861,013	Horizontal Boiling Reactor System	M. Treshow	2,863,830	Process for Decontaminating Liquid Fluorocarbons of Oil Suspended Therein	H. Schneider, B. J. Massey
2,861,034	Neutronic Reactor Shield and Spacer Construction	E. P. Wigner, L. A. Ohlinger	2,863,892	Separation of Plutonium from Lanthanum by Chelation-Extraction	E. A. James, S. G. Thompson
2,861,035	Control Rod	W. H. Zinn, H. V. Ross	2,864,042	Servoomotor Control System	S. M. MacNeillie
2,861,201	Electronic Pulse Scaling Circuits	E. H. Cooke-Yarborough	2,864,664	Separation of Uranium, Plutonium, and Fission Products	R. Spence, M. W. Lister
2,861,242	Magnetometer	M. A. Lovvitt	2,864,665	Reduction of Plutonium to PU^0 by Sodium Dithionite in Potassium Carbonate	D. R. Miller, H. R. Hockstra
2,861,789	Accelerometer	K. H. Pope	2,864,666	Production of Uranium Tetrachloride	V. F. Calkins
2,861,866	Wet Fluoride Separation Method	G. T. Seaborg, J. W. Gofman	2,864,667	Anionic Exchange Process for the Recovery of Uranium and Neptunium from Carbonate Solutions	R. H. Estles, D. A. Ellis, R. S. Long
2,862,105	Multi-Channel Pulse Height Analyzer	K. Boyer, C. V. Johnston	2,864,668	Uranium Extraction Process	W. H. Baldwin, C. E. Higgins
2,862,113	Regenerative Transistor Amplifier	L. J. Kabeil	2,864,731	Forming Protective Films on Metal	D. H. Gurinsky, O. P. Kammerer, J. Sidorofsky, J. R. Weeks
2,862,862	Formation by Irradiation of an Expanded Cellular, Polymeric Body	A. Charlesby, M. Ross	2,864,758	Neutronic Reactor Fuel Element	M. E. Shakelford
2,862,826	Method of Separating Hydrogen Isotope	O. N. Selmon	2,864,759	Nuclear Reactors	E. Long, J. W. Ashley
2,863,062	Method of Measuring the Integrated Energy Output of a Neutronic Chain Reactor	W. J. Sturm	2,864,841	Process for the Recovery of Plutonium	H. A. Potrats

2,865,291	Pumps for Liquid Current-Conducting Material	D. A. Wett	2,868,636	Process of Preparing Uranium Metal	C. H. Prescott, Jr. F. L. Reynolds
2,865,703	Process of Purifying Uranium	G. T. Sasberg	2,868,706	Device for Charging or Discharging	S. Untermeyer, E. Hetter
2,865,704	Method of Separating Uranium, Plutonium, and Fission Products by Bromination and Distillation	A. E. Jaffey, G. T. Sasberg	2,868,707	Process of Making a Neutronic Reactor Fuel Element Composition	H. W. Alter, J. K. Davidson, E. S. Miller, J. L. Meubertner
2,865,705	Improvement upon the Carrier Precipitation of Plutonium Ions from Nitric Acid Solutions	R. A. James, S. G. Thompson	2,868,708	Neutronic Reactor	H. C. Wernum
2,865,737	Method of Purifying Uranium Metal	R. E. Bianco, B. H. Morrison	2,868,817	Plutonium-Cupferron Complex and Method of Removing Plutonium from Solution	H. A. Potratz
2,865,826	Neutronic Reactor	H. B. Stewart	2,868,887	Liquid Target	W. R. Baker, J. Meidel W. W. Salsig, Jr., M. D. Martin
2,865,827	Power Generation from Liquid Metal Nuclear Fuel	O. E. Dwyer	2,868,990	Neutron Source	W. A. Reardon, D. H. Lemmon, E. G. Hobbes
2,865,829	Slug Ejector	H. W. Bellas, R. H. Lyon	2,868,991	High Energy Gaseous Fission Containment Device	V. Josephson, J. E. Hummel
2,865,832	Electrolytic Dissolution of Stainless Steel	E. C. Pitzer	2,869,992	Reactor Viewing Apparatus	G. S. Monk
2,866,680	Alkyl Pyrophosphate Metal Solvents Extractants and Process	R. S. Long	2,869,784	Multiplier Circuit	E. E. Thomas
2,866,741	Control Rod for a Nuclear Reactor and Method of Preparation	H. H. Emsner	2,869,786	Adder Circuit	D. H. Jacobsohn, L. C. Merrill
2,866,939	Zero Suppression for Recorders	V. G. S. Fort	2,869,979	Slurry Solvent Extraction Process for the Recovery of Metals from Solid Materials	E. R. Grinstead
2,867,500	Method for Removing Contamination from Precipitates	G. W. Stahl	2,869,980	Process for the Recovery of Metals from High-Lime Carnotite Ores	E. R. Grinstead
2,867,501	Volatile Chloride Process for the Recovery of Metal Values	W. R. Benley	2,869,981	Process of the Purification of Uranium	S. Rosenfeld (Deceased)
2,867,530	Plutonium-Cerium Alloy	A. S. Coffinberry	2,869,982	Recovery of Potassium by Fluorination and Fractionation	H. S. Brown, D. S. Webster
2,867,640	Oxalate Process for Separating Element 94	J. W. Coifman	2,869,983	Separation of Metal Salts by Adsorption	D. M. Gruen
2,867,729	Secondary Electron Multipliers	G. A. Morton, M. W. Green	2,870,001	Graphite Extrusions	T. M. Messinger
2,867,748	Heavy Ion Linear Accelerator	C. M. Van Atta, L. Smith, E. E. Berlinger	2,870,075	Nuclear Reactor Unloading	M. C. Leverett, J. P. Howe
2,867,803	Circular Cavity Slot Antenna	F. L. Karley	2,870,076	Method and Apparatus for Improving Performance of a Fast Reactor	L. J. Koch
2,868,619	Process for the Recovery of Plutonium	D. M. Bitter	2,870,339	Fabrication of Neutron Sources	J. E. Birden
2,868,620	Method of Making Plutonium Dioxide	C. S. Garner	2,870,407	Method of Peak Current Measurement	G. E. Baker
			2,870,484	Spherical Die	J. P. Livingston

2,870,907	Forming Tubes and Rods of Uranium Metal by Extrusion	E. C. Creutz	2,872,343	Method of Protectively Coating Uranium	L. D. Eubank, S. Eoclid, E. R. Bolter
2,871,042	Supporting and Heat Insulation Means	R. V. Birmingham, E. H. Brown, R. B. Scott, F. C. Windsor Arund	2,872,348	Fused Salt Method for Coating Uranium with a Metal	L. D. Eubank
2,871,092	Niobium-Tantalum Separation	H. A. Wilhelm, E. A. Foss	2,872,351	Stripping Metal Coatings	E. T. Siefen, J. M. Campbell
2,871,176	(See bottom of page 50)		2,872,353	Method of Working Beryllium	R. E. Machurey
2,871,251	Process for the Separation of Heavy Metals	J. W. Gofman, R. E. Connick, A. C. Wahl	2,872,387	Anodic Treatment of Uranium	M. Kolodney
2,871,361	Calutron Assembling and Disassembling Apparatus	R. E. Andrews	2,872,389	Treatment of Uranium Surfaces	C. J. Sluander
2,871,362	Calutron Assembling and Disassembling Means	R. E. Andrews, J. Thornton	2,872,394	Recovery of Uranium from Tungsten	K. C. Newman
2,871,363	Calutron Assembling and Disassembling Apparatus	R. E. Andrews	2,872,398	Neutron-Irradiated Structures	E. L. Ashley, J. W. Ashley, E. W. Bowker, R. H. Hall, J. W. Kendall
2,871,364	Calutrons	E. O. Lawrence (Deceased)	2,872,399	Self-Activating Neutron Source for a Neutronic Reactor	E. W. Newson
2,871,555	Method of Jacketing Fissionable Materials	L. M. Foster	2,872,400	Reactor Monitoring	S. J. Bugbee, V. Hanson, D. P. Babcock
2,871,558	Sheathing Uranium	E. W. Colbeck	2,872,401	Jacketed Fuel Element	E. P. Vigner, L. Scillard
2,872,105	Rotor End Cap	F. C. Rushing	2,872,402	Method of Preparation of Material for Neutron Bombardment	C. L. Urs, O. Simman, R. B. Briggs
2,872,284	Recovery of Protactinium	K. A. Kraus, G. E. Moore	2,872,467	Preparation of Oxalates of Metals of Atomic Number Greater Than 88	R. B. Duffield
2,872,285	Solvent Extraction of Uranium Values	H. M. Feder, M. Ader, L. E. Ross	2,872,545	Remote Controlled Switching Device	J. C. Hobbs
2,872,286	Bismuth Phosphate Carrier Process for Pu Recovery	T. G. Finzel	2,872,574	Cloverleaf Cyclotron	E. M. McMillan, D. L. Judd
2,872,287	Method of Separating Tetravalent Plutonium Values from Cerium Sub-group Rare Earth Values	R. B. Duffield, R. W. Stoughton	2,872,719	Method of Fabricating Small Spherical Pellets	H. C. Brassfield, C. T. Durham, Jr.
2,872,288	Carbonate Method of Separation of Tetravalent Plutonium from Fission Product Values	R. B. Duffield, E. W. Stoughton	2,873,065	Differential Analyzer	E. G. Sorensen, C. M. Gordon
2,872,296	Continuous Dissolver Extractor for Processing Metal	R. B. Lemon, J. A. Buchham	2,873,108	Apparatus for High Purity Metal Recovery	T. T. Nagel
2,872,307	Thorium-Carbon Alloys	E. A. Wilhelm, R. E. Rundle	2,873,165	Uranium Recovery Process	E. H. Bailas, R. S. Long, E. S. Olson, E. O. Kerlinger
2,872,308	Metal Compositions	A. U. Seybolt	2,873,167	Processes of Reclaiming Uranium from Solutions	L. R. Zimmelt
2,872,310	Zirconium Alloy	E. A. Wilhelm, D. Peterson, R. F. Russi, Jr.	2,873,168	Recovery of Pu from Cerium Trifluoride by Fluorination	H. S. Brown, E. G. Nohlmann

2,873,169	Basic Peroxide Precipitation Method of Separating Plutonium from Contaminants	G. T. Seaborg, I. Periman	2,874,235	Ultra-Stabilized D. C. Amplifier	E. C. Hartwig, B. W. Eumming, E. C. Acker
2,873,170	Anion Exchange Method for Separation of Metal Values	E. K. Nyda, B. A. Baby	2,874,295	Mass Separators	F. Oppenheimer, J. W. Bell
2,873,174	Reactor Nozzle Assembly	F. C. Caspader, J. R. Dearwater	2,874,296	Calutron Ion Source	E. J. Lofgren
2,873,184	Thermal Decomposition of Uranium Compounds	T. T. Magel, L. Brewer	2,874,305	Radiation Integrator	H. N. Wilson, F. H. Glass
2,873,185	Deposition of Metal on Nonmetal Filaments	T. T. Magel	2,874,306	Measuring Apparatus	T. F. Kobasa, B. B. Weissbord
2,873,186	Thorium-Silicon-Beryllium Alloys	F. G. Foote	2,874,307	Reactor Shield	E. P. Wigner, L. A. Ohlinger, G. J. Young, A. M. Weinberg
2,873,209	Leveling Metal Coatings	H. A. Gage	2,874,326	Linear Accelerator	K. C. Christofilos, I. J. Polk
2,873,238	Method of Making Jacketed Fuel Slug	L. A. Ohlinger, G. J. Young	2,874,459	Method and Apparatus for Fabricating Tubular Units	G. W. Baldman
2,873,242	Neutronic Reactor System	M. Treshow	2,874,852	Elevating Mechanism	E. S. Frederick, M. A. Kinsella
2,873,243	Means for Shielding and Cooling Reactors	E. P. Wigner, L. A. Ohlinger, G. J. Young, A. M. Weinberg	2,874,860	Band Truck for Handling Equipment	D. W. King
2,873,375	Thermally Operated Vapor Valve	J. G. Dorsward, Jr.	2,875,021	Method of Separating Uranium Values, Plutonium Values and Fission Products by Chlorination	H. S. Brown, G. T. Seaborg
2,873,376	Ion Producing Mechanisms	W. M. Brobeck	2,875,022	Method of Forming Plutonium-Bearing Carrier Precipitates and Washing Same	B. F. Faris
2,873,388	Pulse Counter	D. E. Trumbo	2,875,023	Process of Recovering Uranium from Its Ores	F. Calvaneck, Jr.
2,873,400	Ion Switch	B. Cook	2,875,024	Separation of Barium Values from Uranium Nitrate Solutions	E. R. Tompkins
2,873,603	Method of Testing Hermetic Containers	L. B. Borst	2,875,025	Process of Forming Plutonium Salts from Plutonium Oxalates	C. S. Garner
2,873,853	Canned Slug	M. Burton	2,875,026	Precipitation Method of Separating Plutonium from Contaminating Elements	H. B. Buffield
2,874,025	Oxidation of Transuramic Elements	E. L. Moore	2,875,041	Method of Making Alloys of Beryllium with Plutonium and the Like	O. J. C. Eumms
2,874,026	Process of Preparing a Fluoride of Tetravalent Uranium	E. J. Wheelerwright	2,875,143	Push-Pull Power Reactor	D. K. Froman
2,874,106	Homogeneous Nuclear Reactor	R. P. Hammond, E. M. Bussey	2,875,285	Detector for Telephone Surreptitious Listening Techniques	E. D. Eghtower
2,874,107	Device for Treating Materials	L. A. Ohlinger, G. J. Young, F. Seitz	2,875,339	Calutron Ion Source	W. M. Brobeck
2,874,108	Test-Bolt Construction for a Neutronic Reactor	L. A. Ohlinger, G. J. Young, F. Seitz			
2,874,109	Means for Terminating Nuclear Reactions	C. K. Cooper			
2,874,176	Nuclear Reactor Component Cladding Material	J. E. Dealey, W. E. Ruther			

2,875,343	Personal Dosimeter	R. D. Birckhoff, H. H. Hobbell, Jr., E. H. Johnson, Jr.	2,877,406	Non-Destructive Method and Means for Flaw Detection	R. Hochschield
2,875,345	Method and Apparatus for Handling Radioactive Products	D. Bicoeli	2,877,408	Inspection Means for Induction Motors	A. W. Williams
2,875,346	Overall Optical Viewer	G. S. Monk	2,877,447	Binary Excess-3 Converter	C. N. Kemrich, B. L. Crow
2,876,867	Brake Device	T. J. O'Donnell	2,878,100	Formation of Uranium Precipitates	J. H. Googin, Jr.
2,876,949	Centrifugal Separators	C. Skarstrom	2,878,382	Precision Time-Delay Circuit	R. Creveiling
2,877,087	Uranium Separation Process	W. E. McVey, W. H. Ross	2,878,387	Beam Control Probe	A. W. Chasterman
2,877,088	Method and Apparatus for Making Uranium-Hydride Compacts	W. W. Wallborn, J. B. Armstrong	2,878,401	High Voltage Generator	A. J. Schemin
2,877,089	Elution of Uranium from Resin	D. C. McLean	2,879,130	Process for Recovering Uranium	G. E. MacWood, C. W. Wilder, D. Altman
2,877,090	Process Using Bismuth Phosphate as a Carrier Precipitate for Fission Products and Plutonium Values	T. G. Finzel	2,879,144	Pumps	J. D. Thornton
2,877,091	Dehydration of Deuterium Oxide Slurries	C. F. Kiskey	2,879,216	Neutronic Reactor	H. Burwitz, Jr., C. Munnal, E. A. Luebke, J. E. Payne, H. Brooks
2,877,092	Coordination Compound-Solvent Extraction Process for Uranium Recovery	W. T. Ross	2,879,228	Process for Purifying Crude Perfluorocarbons	R. E. Siletton
2,877,093	Adsorption Method for Separating Metal Cations	E. R. Tompkins, G. W. Parker	2,879,247	Molded Sealing Element	B. W. Bradford, W. J. Skinner
2,877,094	Adsorption Method for Separating Metal Cations	J. X. Elym	2,879,664	Annular Impactor Sampling Device	G. W. C. Tsit
2,877,109	Process for Separating Uranium Fission Products	F. E. Spedding, T. A. Butler, I. B. Johns	2,880,059	Production of Uranium-Calcium Fluoride	W. B. Tolley
2,877,131	Method and Coating Composition for Protecting and Decontaminating Surfaces	D. C. Overhold, M. D. Peterson	2,880,155	Control for Neutronic Reactor	H. V. Lichtenberger, E. A. Cameron
2,877,149	Method of Hot Rolling Uranium Metal	A. R. Kraumann	2,880,262	Structure for Sub-assemblies of Electronic Equipment	F. R. Seil, C. C. Sarris
2,877,170	Support Device for Use in a Nuclear Reactor	F. C. Greenhalgh, E. Long	2,880,318	Peak Limiting Amplifier	W. W. Goldsworthy, J. B. Robison
2,877,171	Means for Shielding Reactors	M. Burton, L. T. McClinton, W. M. Garrison	2,880,635	Cutting and Wedging Jacket Remover	M. Freedman, S. Baynor
2,877,250	Recovery of Uranium Values	E. B. Brown, D. J. Crouse, Jr. J. G. Moore	2,881,094	Process of Coating with Nickel by the Decomposition of Nickel Carbonyl	T. B. Hoover
2,877,314	Electric Contact Means	J. V. Greear, Jr.	2,881,391	Velocity Indicator for Extrusion Press	F. J. Digney, Jr., N. Augusta, F. Bevilacqua
2,877,348	Logarithmic Amplifier	E. J. Wade, R. S. Stone	2,881,619	Coaxial Control Rod Drive Mechanism for Neutronic Reactors	R. J. Fox, L. C. Oakes

2,881,123	Process for the Recovery of Uranium from Phosphatic Ore	E. S. Loog	2,884,305	Plutonium Purification Process Employing Thorium Pyrophosphate Carrier	E. L. King
2,882,124	Solvent Extraction Process for Plutonium	G. T. Seaborg	2,884,364	Method of Electroplating on Uranium	E. V. Rebel, E. F. Wehrmann
2,882,125	Volatile Fluoride Process for Separating Plutonium from Other Materials	F. H. Spedding, A. S. Newton	2,884,529	Gaseous Scintillation Counter	C. Egler, C. M. Huddleston
2,882,129	Nitric Acid Recovery from Waste Solutions	A. S. Wilson	2,885,260	Method for Decontamination of Reactor Solutions	W. J. Marzani, E. B. Bauman, E. D. Baker
2,882,248	Ion Exchange Substances by Saponification of Alkyl Phosphate Polymers	J. Kennedy	2,885,283	Plutonium-Aluminum Alloys	F. W. Schonfeld, C. R. Tipton, Jr.
2,882,396	High Energy Particle Accelerator	E. D. Courant, H. S. Snyder, M. S. Livingston	2,885,329	Method for Electro-Nichel Plating Wolfram Carbide	H. L. Slatin
2,882,406	Ion Source Unit for Calutron	D. E. Sloan, H. P. Yockey, F. E. Schmidt	2,885,335	Nuclear Reactor Fuel Element	R. V. Moore, G. Packman
2,882,407	Calutron	E. O. Lawrence (Deceased) W. M. Brobeck	2,885,496	Low-Level Direct Current Modulator	Q. A. Kerns
2,882,408	Ion Source for a Calutron	E. J. Lofgren	2,885,497	Drift Compensated Direct Coupled Amplifier	A. A. Windsor
2,882,409	Dual Heated Ion Source Structure Having Arc Shifting Means	E. O. Lawrence (Deceased)	2,885,552	Particle Beam Tracking Circuit	O. A. Anderson
2,882,410	Ion Source	W. M. Brobeck	2,885,893	Reactor Control Mechanism	J. A. Lenz, E. E. Engberg J. M. Welch
2,882,411	Ion Producing Mechanism	F. F. Oppenheimer	2,886,406	Recovery of Plutonium and Neptunium from Aqueous Solutions	G. T. Seaborg, R. C. Thompson, F. W. Alibough
2,882,442	Method for Stabilizing Klystrons	D. W. Magnuson, F. P. Smith	2,886,407	Treatment of Plutonium Solution with No or NO ₂ Prior to Removal of Tetravalent Plutonium from said Solutions by Carrier Precipitation	G. E. Moore
2,883,264	Solvent Extraction of Thorium Values from Aqueous Solutions	J. C. Warf	2,886,408	Enhancing Precipitations by Applying Soluble Complex Fluorine - Containing Reagents	G. W. Stahl
2,883,330	Liquid Metal Compositions Containing Uranium	E. J. Teitel	2,886,409	Improved Processes for Recovering and Purifying Uranium	T. D. Price, A. V. Henrickson
2,883,535	Thyatron Switch	E. Creveling, W. A. Bourgeois, Jr.	2,886,410	Non-aqueous Dissolution of Massive Plutonium	J. G. Kassis, J. A. Leary E. A. Walsh
2,883,536	Electronic Phase Control Circuit	J. D. Salisbury, W. W. Kiehl, C. F. Bauson	2,886,429	Method for the Reduction of Uranium Compounds	W. H. Cooke (Deceased) J. W. C. Crawford
2,883,541	Ion Producing Mechanism (Charge Cups)	W. M. Brobeck	2,886,430	Uranium Compositions	H. P. Allen, J. D. Grogan
2,883,551	High Voltage Generator	G. V. Zito	2,886,431	Vanadium Alloys	E. F. Smith, E. J. Van Thyns
2,883,553	Fabrication of Neutron Sources	J. E. Birden	2,886,433	Production of Sheet from Particulate Material	A. Blainey
2,883,580	Pulsed Ion Source	W. D. Kilpatrick			

2,886,468	Nickel Plating Process	T. B. Hoover, T. E. Zave	2,890,339	Ion Producing Mechanism	F. F. Oppenheimer
2,886,503	Jacketed Fuel Elements for Graphite Moderated Reactors	L. Saffard, E. P. Wigner, E. C. Creutz	2,890,340	Calutron	W. M. Brobeck, E. J. Lofgren, R. L. Thornton
2,886,504	Plutonium-Cerium-Copper Alloys	A. S. Coffinberry	2,890,348	Particle Accelerator	T. Okkava
2,886,775	Variable Time-Interval Generator	J. E. Gross	2,890,932	Separation by Adsorption	C. S. Lowe
2,887,355	Method of Preparing Protactinium Values	L. I. Kattin, R. G. Larson, R. C. Thompson, Q. Van Winkle	2,890,933	Recovery of Uranium Values from Uranium Bearing Raw Materials	E. J. Michel, R. R. Porter
2,887,357	Dry Fluorine Separation Method	G. T. Seaborg, J. W. Coffman, R. H. Stoughton	2,890,954	Plutonium Alloys	W. Chynoweth
2,887,358	Large Scale Method for the Production and Purification of Curium	G. H. Higgins, W. W. T. Crane	2,891,155	Precision Time Delay Generator	E. J. Carr, V. D. Feckham
2,887,373	Method of Cleaning Metal Surfaces	H. W. Winkler, J. W. Morfitt, T. H. Little	2,891,161	Calutron	W. S. Parkins
2,887,876	Apparatus for Testing Expansion of Movable Members	M. Frankel, W. B. Shank	2,891,162	Calutron Receiver	S. W. Barnes
2,888,563	Calutron Cathode Interlock Circuit	L. W. Baldwin	2,891,163	Calutron	A. F. Clark
2,888,564	Calutron Protective Circuit	F. H. Schmidt	2,891,168	Portable Source of Radioactivity	R. C. Goertz, K. R. Ferguson, E. W. Kysieder, L. M. Saffranski
2,888,565	Calutron	W. M. Brobeck	2,891,839	Production of Curium 245	E. K. Bulet, S. G. Thompson
2,888,566	Ion Source Silt Cleaner for Calutron	E. O. Lawrence (Deceased)	2,891,840	Method of Processing Neutronic Reactor Fuel Elements	M. H. Curtis
2,888,878	Neutronic Reactor Fuel Pump	W. G. Cobb	2,891,841	Recovery of Plutonium Values from Dilute Solution by Partial Precipitation of Carrier Compounds	D. M. Ritter
2,889,462	Calutron Ion Source	F. F. Oppenheimer	2,892,044	Linear Amplifier	E. Fairstein
2,890,098	Reduction of Plutonium Values in an Acidic Aqueous Solution with Formaldehyde	C. M. Olson	2,892,091	Continuous Alpha Air Monitor	D. R. Sawie
2,890,099	Recovery of Uranium from Low Grade Uranium Bearing Ores	H. B. Rhodes, W. F. Pasold, J. M. Sirebon	2,892,114	Continuous Plasma Generator	W. K. Kilpatrick
2,890,110	Production of Plutonium from Plutonium Fluoride	E. D. Baker	2,892,387	Internal Cutting Device	W. H. Russell, Jr.
2,890,138	Neutronic Reactor	L. A. Chilingar, E. P. Wigner, A. M. Weinberg, G. J. Young	2,892,676	Improved Process of Plutonium Carrier Precipitation	E. J. Farris
2,890,221	Method for Preparing Normorphine	H. Rapoport, M. Look	2,892,677	Separation of Uranium from Thorium and Protactinium	W. K. R. Masgrave
2,890,317	Ion Beam Focusing Means for Calutron	J. G. Zachus	2,892,678	Method of Maintaining Plutonium in a Higher State of Oxidation During Processing	S. G. Thompson, D. R. Miller
2,890,338	High Voltage Regulator	B. T. Wright	2,892,679	Ion-Exchange Method for Separating Radium from Radium-Barium Mixtures	M. E. Fuentevilla
			2,892,680	Recovery of Cesium from Waste Solutions	V. E. Burgus
			2,892,681	Separation Process for Zirconium and Compounds Thereof	H. W. Crenshaw, J. R. Thomas

2,892,701	Pyrochemical Decontamination Method for Reactor Fuel	A. G. Byers			
2,892,765	Neutron Density Control in a Neutronic Reactor	G. J. Young			J. C. Sullivan
2,892,855	Recovery of Uranium by Cycloalkylidene Thiocarbamate Complexing	O. E. Neville			L. E. Cooch
2,893,575	Loading Machine for Reactors	S. L. Simon			R. H. Boston
2,893,822	Separation of Uranium from Other Metals	H. H. Hyman			R. Rosen
2,893,823	Separation of Uranium from Thorium	H. H. Hyman			R. E. Duffield
2,893,874	Uranium Recovery Process	H. H. Hyman, J. H. Dreher			H. H. Hyman, C. E. Leader
2,893,825	Separation of Protactinium from Contaminants	J. G. Malm, S. Fried			D. G. Ehrleker
2,893,826	Platinum Hexafluoride and Method of Fluorinating Plutonium Containing Mixtures Thereof	J. G. Malm, B. Weinstein, H. H. Claassen			M. Rasmussen, S. Vogler, H. H. Hyman
2,893,827	Separation of Americium from Promethium	E. S. Presely			E. K. Hyde, L. I. Entzlin, M. J. Wolf
2,893,853	Process for Removing Aluminum Coatings	J. Flox			T. T. Megee
2,893,928	Preparation of Plutonium	M. Kolodney			E. I. Oustott
2,893,936	Process for Continuously Separating Irradiation Products of Thorium	L. F. Hatch, F. T. Miles, T. V. Sheehan, R. H. Wiswall, R. J. Hess			M. L. Picklesimer
2,894,135	Charge Bottle for a Mass Separator	F. H. Davidson			D. E. Walker, E. A. Holand
2,894,137	Calutron Receiver	H. F. York			A. C. Gray
2,894,138	Slit Adjustment Clamp	K. E. McKenzie			A. G. Gray
2,894,320	Coating Uranium from Carbonyls	D. H. Gurinsky, S. Steingiser			S. H. Payne, Jr.
2,894,647	Positioning Device	W. E. McCortle			E. A. Sailer (Deceased)
2,894,668	Electronic Analog Computer for Determining Radioactive Disintegration	H. F. Robinson			J. R. Kesler
2,894,804	Process of Extracting Uranium and Radium from Ores	C. W. Sawyer, E. V. Handley (Deceased)			J. J. Grabe
2,894,805	Separation Process for Actinide Elements and Compounds Thereof	L. B. Werner, I. Perlman, M. Calvin			W. H. Eism
2,894,806	Recovery of Protactinium from Aqueous Solutions	R. E. Eison			E. G. Carney, Jr.
2,894,807	Cation Exchange Method for the Recovery of Protactinium				J. W. Boyd
2,894,808	Method for Recovering Uranium from Oils				
2,894,810	Columbic Oxide Adsorption Process for Separating Uranium and Plutonium Ions				
2,894,811	Process for Making Uranium Hexafluoride				
2,894,812	Dissolution of Plutonium Containing Carrier Precipitate by Carbonate Metathesis and Separation of Sulfide Impurities Therefrom by Sulfide Precipitation				
2,894,816	Solvent Extraction of Ruthenium				
2,894,817	Polonium Separation Process				
2,894,818	Separation of Ruthenium from Aqueous Solutions				
2,894,827	Uranium Separation Process				
2,894,832	Process of Producing Actinide Metals				
2,894,837	Method for Producing Cemented Carbide Articles				
2,894,866	Method for Annealing and Rolling Iron-colum Base Alloys				
2,894,883	Method of Electropolishing				
2,894,884	Method of Applying Nickel Coatings on Uranium				
2,894,885	Method of Applying Copper Coatings to Uranium				
2,894,889	Jacketed Uranium Slugs and Method				
2,894,890	Jacketing Uranium				
2,894,891	Nuclear Reactor				
2,894,892	Neutronic Reactor Charging and Discharging				
2,894,893	Fuel Element for Nuclear Reactor				
2,895,047	Timing Circuit				

2,895,051	Apparatus for Measuring Neutron Cross Sections	L. Granberg	2,898,277	Method of Fixing Nitrogen for Producing Oxides of Nitrogen	F. Bertoch, S. Dundas
2,895,053	Measuring Projector	J. V. Frank, P. S. Broadhead, E. W. Skiff	2,898,380	Fuel Rod Clusters	A. B. Schultz
2,895,791	Separation Process for Protactinium and Compounds Thereof	Q. Van Winkle	2,898,281	Neutronic Reactor Control	S. Unterkmyer, E. Buttr
2,895,798	Barium Recovery Process	H. E. Blanco	2,898,444	Apparatus and Method for Welding End Closure to Container	E. C. Frenitz, T. B. Correy
2,895,806	Method for Determining the Stability of Fluorocarbon Oils	I. D. Sheldon, H. M. Bessler	2,898,473	Method of Preparing Polonium-Boron Sources	J. H. Birds
2,895,849	Method of Preparing Coated Refractory Ware	M. L. Feriman, D. Lipkin, S. I. Weisman	2,898,497	Airborne Radiation Detector	T. R. Cartmell
2,897,045	Extraction of Uranium	R. D. Kessler, D. D. Babb	2,898,555	Resonant Cavity Excitation System	W. R. Baker
2,897,046	Separation of Yttrium from Uranium by Extraction	E. G. Bohlmann	2,899,054	Refractory Die for Extruding Uranium	E. C. Creutz
2,897,047	Method of Dissolving Metallic Uranium	W. W. Schulz	2,899,268	Recovery of Uranium from Aqueous Phosphate-Containing Solutions	I. Igelarod, E. F. Stephan
2,897,048	Uranium Recovery Process	J. W. Stevenson, E. G. Warkona	2,899,269	Method of Preparing Metal Fluorides	J. J. Kats, I. Sheft
2,897,049	Treatment of Fission Product Waste	J. B. Bluff	2,899,270	Production of Thorium Fluoride	W. H. Zachariasen
2,897,077	Plutonium-Uranium-Titanium Alloys	A. S. Coffinberry	2,899,295	Separation of Tin from Alloys	W. T. Eattner
2,897,124	Pretreating Thorium for Electroplating	J. G. Beach, G. E. Schaefer	2,899,297	Method of Producing Dense Consolidated Metallic Regulus	T. T. Magal
2,897,605	Method and Apparatus for Determining Charged Particle Motion	Q. A. Kerns	2,899,298	Process of Producing Shaped Plutonium	R. J. Anicetti
2,897,697	Method of Rolling Uranium	C. S. Smith	2,899,451	Recovery of Uranium by Aromatic Dithiocarbamate Complexing	O. E. Neville
2,897,718	Dimension Measuring Optical Sighting Device	G. E. Kerr	2,899,452	Thorium Oxalate-Uranyl Acetate Coupled Procedure for the Separation of Radioactive Materials	J. W. Gofman
2,898,185	Absorption Method for Separating Thorium Values from Uranium Values	G. E. Boyd, E. R. Russell, J. Schubert	2,899,557	Apparatus for Producing Shadowgraphs	R. E. Wilson
2,898,186	Solubilization of Actinide Metal-Containing Slag	H. E. Hopkins, Jr.	2,900,228	Recovery of Uranium Values from Residues	W. B. Schapp
2,898,187	Production of Uranium Tetrafluoride	W. E. Shaw, R. M. Spenceley, F. M. Teetzel	2,900,228	Selective Separation of Uranium from Thorium, Protactinium and Fission Products by Peroxide Dissolution Method	G. T. Seaberg, J. V. Gofman,
2,898,203	Removal of Chloride from Aqueous Solutions	W. W. Schulz	2,900,219	Uranium Leaching and Recovery Process	L. A. McLaine
2,898,252	Method of Heat-Treating Uranium-Silicon Alloys	S. T. Ziegler	2,900,230	Method of Disintegrating Refractory Bodies	R. P. Larsen, R. C. Vogel

2,900,237	Apparatus for Charging a Receptacle with a Dense Sublimable Form of Uranium Chloride	P. H. Davidson	2,901,617	Calutron Receiver	S. W. Barnes
2,900,263	Method of Preparing a Fuel Element for a Nuclear Reactor	J. H. Handwerk, R. A. Bach	2,901,619	Calutron Ion Source Silt Cleanser	A. M. Starr
2,900,315	Shielded Tube and Apparatus and Method of Production Thereof	L. A. Ohlinger	2,901,620	Isotope Separating Apparatus Control	S. W. Barnes
2,900,316	Reactor Control Device	H. B. Kaufman, Jr., A. Weiss	2,901,621	Calutron Face Plate	W. M. Brobeck
2,900,434	Method for Producing Isotopic Methanes and Partially Halogenated Derivatives Thereof	J. W. Frazer	2,901,622	Calutron Control Device	L. W. Baldwin
2,900,516	Fast Neutron Spectrometer	F. J. Davis, F. W. Reinhardt, G. S. Hurst	2,901,623	Vapor Valve	L. F. Wouters
2,900,518	Continuously Sensitive Bubble Chamber	R. H. Good	2,901,624	Mass Spectrometry	A. O. C. Nier
2,900,548	Plasma Generator	W. E. Bostick, V. G. McIntosh	2,901,714	Transformer	W. R. Baker
2,901,007	Apparatus for Handling Mixtures of Solid Materials	J. P. Bubbell	2,902,338	Separation of Thorium from Uranium	R. W. Bone
2,901,172	Electronic Multiplier Circuit	R. E. Thomas	2,902,339	Recovery of Plutonium from Aqueous Solutions	E. J. Reber
2,901,313	Separation of Plutonium from Water Insoluble Fluorides Derived from Nitrate Solutions of Plutonium Uranium and Fission Products	A. G. Medlock, F. Smith	2,902,340	Chemical Method of Treating Fissionable Material	C. M. Olson
2,901,314	Removal of Uranium from Organic Liquids	S. P. Navalides	2,902,361	Uranium-Tantalum Alloy	R. L. Reed
2,901,315	Process of Oxidizing Plutonium	C. D. Coryell	2,902,362	Plutonium-Uranium Alloy	F. W. Schoenfeld, A. S. Coffinberry
2,901,343	Dissolution of Aluminum Jackets from Uranium Cores by Nitric Acid Containing Mercuric Nitrate	J. H. Peterson	2,902,380	Slip Casting Method	A. G. Allison
2,901,345	Plutonium-Cerium-Cobalt and Plutonium-Cerium-Nickel Alloys	A. S. Coffinberry	2,902,415	Purification of Uranium Fuels	L. W. Skidmore, A. C. Ciama
2,901,347	Nickel-Chromium-Germanium Alloys for Stainless Steel Brazing	J. A. McCarty, E. S. Penston	2,902,422	Nuclear Reactor Fuel Rod Assembly	E. Bitter
2,901,408	Coating Method	R. G. Townsend	2,902,423	Neutronic Reactor Producing Thermo-electric Power	E. A. Lushko, L. E. Vandenberg
2,901,496	Salicylate Process for Thorium Separation from Bare Earths	C. A. Cowan	2,902,424	Homogeneous Nuclear Power Reactor	L. D. P. King
2,901,613	Detector for Modulated and Unmodulated Signals	H. E. Patterson, G. E. Webber	2,902,454	Solvent Composition for Recovery of Metal Values from Aqueous Solutions by Solvent Extraction	R. L. Moore
			2,902,503	Recovery of Uranium by Secondary Xenonate Complexing	O. K. Neville
			2,902,590	Method of Making Composite Fuel Elements	B. A. Noland, C. C. Stone
			2,902,614	Accelerated Plasma Source	W. E. Baker
			2,903,331	Uranium Solvent Extraction Process	C. D. Harrington
			2,903,332	Separation of Ruthenium from Aqueous Solutions	C. F. Collins, R. L. Moore

2,903,333	Bare Zirconium Oxide Separation by Adsorption	C. S. Lowe, W. E. McVey	2,905,612	Central Control System	L. B. Dorst
2,903,334	Preparation of Uranium Trioxide	J. S. Buckingham	2,906,597	Reduction in Fe Recovery Processes	D. M. Ritter, R. F. S. Black
2,903,335	Separation of Fission Products from Plutonium by Precipitation	G. T. Seaborg, S. G. Thompson, H. E. Davidson	2,906,598	Preparation of High Density UO_2	J. M. Googin
2,903,351	Thorium-Beryllium Alloys and Method of Producing Same	F. E. Spedding, H. A. Wilhelm, W. H. Koller	2,906,618	Process for Production of Uranium	J. W. C. Crawford
2,903,383	Radioactive Object and Method of Making	L. M. Dorfman, F. J. Shipko	2,906,683	Reactor Cooling	C. F. Quackenbush
2,903,402	Recovery of Valuable Material from Graphite Bodies	L. W. Fromm, Jr.	2,906,852	Welding Method	A. A. Cornell, J. V. Dunbar, J. H. Ruffner
2,903,531	Phase Detector	D. O. Kippenhan	2,906,872	Rise Time Delay Discriminator	C. W. Johnstone
2,903,536	Tapered Defining Slot	F. W. Pressey	2,906,876	Calutron Receiver	W. O. Brunk
2,903,537	Calutron Receiver Structure	J. L. Boush	2,906,877	Calutron	F. F. Oppenheimer
2,904,160	Positioning Device	R. E. Hall, D. L. Peterson	2,906,903	Low Voltage 14 Mev. Neutron Source	S. R. Graves, R. M. Little, Jr.
2,904,429	Plutonium-Thorium Alloys	F. W. Schonfeld	2,907,017	Impedance Alarm System	R. G. Goven
2,904,487	Control Device	J. J. Dickson	2,907,023	Ground Clearance Indicator	L. V. Skinner
2,904,488	Nuclear Reactor Fuel Systems	B. J. Thamer, R. M. Bidwell, R. F. Hammond	2,907,623	Neptunium Solvent Extraction Process	L. R. Dawson, F. R. Fields
2,904,665	Vacuum Trap	R. S. Gordon	2,907,629	Continuous Process for the Conversion of UF_6 to UF_4	S. H. Saffley, D. C. Brater, R. H. Nimmo
2,904,720	Ion Accelerator	J. S. Bell	2,907,650	Preparation of Uranium Hexafluoride	S. Lacroski, A. A. Jenke, R. K. Steinhilber
2,905,338	Indexing Mechanism	L. J. Koch	2,907,651	Method of Reducing Plutonium with Ferrous Ions	J. L. Dreher, D. E. Dushland, S. G. Thompson, J. E. Willard
2,905,325	Method of Separation of Plutonium from Carrier Precipitates	L. R. Dawson	2,907,659	Method of Controlling Corrosion in a Neutronic Reactor	C. P. Kiddle, C. K. Sloan
2,905,327	Method and Apparatus for Withdrawing Light Isotope Product from a Liquid Thermal Diffusion Plant	M. Delle	2,907,700	Stripping Process for Plutonium	M. Kolodny
2,905,528	Method for Preparation of UO_2 Particles	J. R. Johnson, A. J. Taylor	2,907,705	Thermal Fission Reactor Compositions and Method of Fabricating Same	A. Blainey
2,905,552	Production of Uranium Metal by Carbon Reduction	R. E. Holden, R. M. Fowers, O. J. Blaber (Deceased)	2,907,706	Neutronic Reactor Fuel Element	W. A. Boring, D. D. Lanning, D. J. Donahue
2,905,599	Electrolytic Cladding of Zirconium on Uranium	J. J. Wick	2,907,897	Pressure Transducer	H. E. Sander
2,905,611	Fuel Element for a Neutronic Reactor	L. Tonks	2,908,547	Separation of Uranium, Plutonium, and Fission Products	C. M. Nicholls, I. Wells, R. Spence
			2,908,548	Manufacture of UF_4	W. S. Calcott

2,908,563	Process for Production of Plutonium from Its Oxides	S. I. Weisman, M. L. Perlman, D. Light	2,911,133	Process for Recovery of Uranium Values from Impure Solutions Thereof	S. E. Kilner
2,908,621	Producing Energy and Radioactive Fission Products	E. Segre, J. V. Kennedy (Deceased), G. T. Seaborg	2,911,290	Meltstage Fluidized Bed Reactor	A. A. Jones, J. E. A. Crease, S. M. Levitt
2,908,822	Apparatus for Measuring Total Neutron Cross Sections	L. Cremberg	2,911,344	Nuclear Reactor Control System	E. F. Epler, S. H. Brauser, L. C. Oakes
2,909,405	Method for the Recovery and Purification of Birkelium	E. K. Halet	2,911,533	Electron Irradiation of Solids	A. C. Damsak
2,909,406	Process for Decontaminating Thorium and Uranium with Respect to Rutherfordium	A. B. Meservey, R. H. Rainey	2,911,587	Proton Resonance Monitor	J. H. Bayly
2,909,486	Inhibiting the Polymerization of Nuclear Coolants	E. T. Colichman	2,911,598	Variable Time Delay Means	E. E. Clemenson
2,909,487	Nuclear Reactor Coolant	E. T. Colichman	2,912,302	Processes for Separating and Recovering Constituents of Neutron-Irradiated Uranium	E. E. Connick, G. C. Pimentel, J. W. Goffman
2,909,488	Nuclear Reactor Coolant	E. T. Colichman	2,912,303	Dissolution of Lanthanum Fluoride Precipitates	B. A. Fris
2,909,731	Cavity Excitation Circuit	J. V. Franck	2,912,577	Multichannel Analyser	G. G. Kelley
2,910,177	Reactor Component	E. C. Creutz	2,913,307	Method of Preparing Plutonium Tetrafluoride	B. L. Seede, H. B. Hopkins, Jr.
2,910,344	Method of Preparing UF ₆	N. R. Davidson, S. Fried	2,913,510	Radioactive Battery	J. H. Birdee, E. C. Jordan
2,910,345	Preparation of Polonium, Protactinium or Mixtures Thereof in Aqueous Solution from Bismuth, Lead, Zirconium and/or Columbium Values	Q. Van Winkle, K. A. Krebs	2,913,670	Wide Band Regenerative Frequency Divider and Multiplier	E. F. Laine
2,910,379	Method of Coating Oxephite with Stable Metal Carbides and Nitrides	D. H. Gurinsky	2,914,378	Elution of Uranium Values from Ion Exchange Resins	E. E. Kennedy
2,910,416	Neutronic Reactor	F. Daniels	2,914,399	Removal of Certain Fission Product Metals from Liquid Bismuth Compositions	O. E. Dwyer, E. E. Howe, E. B. Avrutik
2,910,417	Uranium Bismuthide Dispersion in Molten Metal	R. J. Teitel, E. Patchogue	2,914,425	Method for Soldering Normally Non-Solderable Articles	J. C. McGuire
2,910,418	Neutronic Reactor	E. C. Creutz, L. A. Ohlinger, A. M. Weinberg, G. J. Young	2,914,433	Heat-Treated U- β Alloys	E. E. McGeary, W. M. Justusson
2,910,442	Solvent for Extracting Actinide Salts	L. Kaplan	2,914,454	Neutronic Reactor Fuel Element	D. H. Gurinsky, R. W. Powell, M. Fox
2,910,519	Method for Producing Isotopic Methanes from Lithium Carbonate and Lithium Hydride	J. W. Frazer	2,914,594	Thermal Couple for Measuring Temperature in a Reactor	W. R. Kenna
2,911,282	Method of Recovering Plutonium Values from Aqueous Solutions by Carrier Precipitate	R. A. James, S. G. Thompson	2,914,697	Time Calibrated Oscilloscope Sweep Circuit	V. L. Smith, E. E. Carstensen
			2,914,847	Solid State Bonding of Thorium with Aluminum	S. Storchheim

2,915,016	Volume Compensating Means for Pulsating Pumps	D. L. Weaver, R. S. McCormack, Jr.	2,917,647	Geiger-Muller Type Counter Tube	I. L. Fowler, L. A. E. Matt
2,915,362	Plutonium-Hydrogen Reaction Product, Method of Preparing Same and Plutonium Powder Therefrom	S. Fried, H. L. Bumbach	2,918,349	Extraction of Plutonium Values from Organic Solutions	G. T. Seaborg
2,915,387	Plutonium Cleansing Process	M. Kolodny	2,918,350	Uranium Decontamination	J. S. Buckingham, J. L. Carroll
2,915,445	Formation of Intermetallic Compound Dispersions	J. S. Bryner	2,918,366	Decontamination of Neutron-Irradiated Reactor Fuel	A. G. Meyers, E. E. Notta, F. D. Rosen
2,915,815	Method of Making Fuel Elements	C. H. Bean, R. E. McCherry	2,918,700	Radioactive Concentrator and Radiation Source	L. F. Hatch
2,916,349	Continuous Chelation-Extraction Process for the Separation and Purification of Metals	H. W. Crandall, T. E. Hicks, B. Rubin, J. R. Thomas	2,918,717	Self-Sintering of Radioactive Wastes	E. C. Strumess, K. Z. Morgan, J. R. Johnson, T. H. McVey
2,916,710	Loaded Wave-Guides for Linear Accelerator	V. Valkinshav, L. B. Mallett	2,919,175	Process of Recovering Uranium	S. B. Kliner
2,916,809	Tungsten Base Alloys	D. H. Schell, E. Shainberg	2,919,186	Uranium Alloys	E. V. Colbeck
2,917,358	Uranous Iodate as a Carrier for Plutonium	D. B. Miller, G. T. Seaborg, S. G. Thompson	2,919,236	Nuclear Reactor Including a Package Safety Device	W. H. Zim
2,917,359	Separation of Fission Product Values from Hexavalent Plutonium by Carrier Precipitation	T. H. Davis	2,919,710	Two-Way Freeze Valve	K. D. Lantz, F. M. Clark
2,917,360	Method of Producing Tetrafluoride	W. B. Tolley, E. C. Smith	2,919,972	Removal of Chloride from Aqueous Solutions	M. L. Eymann, J. E. Savolainen
2,917,361	Method of Recovering Transuronic Elements for an Atomic Number Below 95	G. T. Seaborg, R. A. James	2,920,004	Molten Fluoride Nuclear Reactor Fuel	C. J. Barton, W. B. Grimes
2,917,362	Method of Oxidizing Plutonium Ion with Bismuthate Ion	C. S. Garner	2,920,025	Neutronic Reactor	J. B. Anderson
2,917,382	Separation of Plutonium	H. M. Feder, R. L. Nuttall	2,920,200	Ion Source	W. T. Leland
2,917,383	Fabrication of Uranium-Aluminum Alloys	H. A. Sailer, (Deceased)	2,920,234	Device and Method for Producing a High Intensity Arc Discharge (See bottom of last page)	J. S. Luce
2,917,406	Method of Increasing the Dispersibility of Slurry Particles	J. F. McBride	*2,920,235		
2,917,443	Nuclear Reactor	J. J. Grabe	2,920,236	Apparatus for Heating Ions	E. S. Chambers, A. A. Carren, D. G. Kippenhan, W. A. S. Lamb, E. J. Riddell, Jr.
2,917,444	Neutronic Reactor Control	R. S. Dreffin	2,921,007	Thermal Neutronic Reactor	B. I. Spined
2,917,445	Neutronic Reactor Control Rod Drive Apparatus	L. C. Oakes, C. S. Walker	2,921,199	Method of Operating a Calutron	F. H. Davidson
2,917,597	Pressure Sensing Device	K. E. Pope	2,921,850	Nickel - Base Alloy	E. Inouye, W. D. Manly, T. K. Kocha
2,917,633	Radiation Detection and Telemetry System	H. K. Richards	2,922,036	Paralyser for Pulse Height Distribution Analyzer	E. Feirstein
			2,922,044	Calutron	E. J. Lofgren

2,922,048	High Coaxial Photomultiplier Tube	M. W. Glass	2,925,512	High Energy Gaseous Discharge Device	V. Josephson
2,922,061	Particle Accelerator	L. C. Teng	2,926,067	Concentration of Pu Using an Iodate Precipitate	B. A. Frier
2,922,711	Production of Purified Uranium	L. Burris, Jr., J. B. Enighton, H. M. Feder	2,926,068	Method for the Preparation of Plutonium Salts and Oxylalides	W. E. Davidson, J. J. Katz
2,922,882	Control System for Isotope Separating Apparatus	S. W. Barnes	2,926,083	Ternary Alloy-Containing Plutonium	J. T. Haber
2,922,886	Method and Apparatus for Testing the Presence of Specific Atomic Elements in a Substance	J. L. Putman	2,926,111	Method of Forming a Protective Coating on Ferrous Metal Surfaces	D. G. Schweitzer, J. R. Weeks, O. F. Kammerer, D. E. Gorlinsky
2,922,890	Magnetic Method for Producing High Velocity Shock Waves in Gases	V. Josephson	2,926,113	Heat Treated U-Mo Alloy	R. K. McQuary, W. H. Justusson
2,923,588	Random Pulse Generator	W. G. Nielson	2,926,127	Neutronic Reactor with Accessible Thimble and Emergency Cooling Features	W. H. McCorkle
2,923,601	Method of Isotope Concentration	T. I. Taylor, W. Spindal	2,926,251	Ion Acceleration System	J. S. Lucas, J. A. Martin
2,923,607	Process of Separating Zirconium Values from Uranium Values by Solvent Extraction with an Alkyl Phosphate	D. F. Peppard	2,926,261	Ultrasonic Neutron Dosimeter	R. Truwell, J. de Klerk, P. W. Levy
2,923,670	Method and Means for Electrolytic Purification of Plutonium	C. W. Bjorklund, R. Benz, W. J. Marzann, J. A. Leary, E. A. Walsh	2,927,070	Control Limiter Device	J. A. De Shong, Jr.
2,923,822	Electromagnetic Separation of Isotopes	S. W. Barnes, C. M. Cantrell	2,927,071	Jacketed Uranium Nuclear Reactor Fuel Element	W. E. Huey
2,923,852	Apparatus for Producing High Velocity Shock Waves & Gases	F. B. Scott, V. Josephson	2,927,165	Non-Blocking Stabilized Feed Back Amplifier	E. Fairstein
2,924,254	Apparatus for Cleaning Gases with Electrostatically Charged Particles	H. F. Johnston	2,927,232	Intense Energetic Gas Discharge	J. S. Lucas
2,924,483	Fuel Handling Mechanism	L. J. Koch, E. Butler	2,928,168	Iron Coated Uranium and Its Production	A. G. Gray
2,924,506	Solvent Extraction Process for Plutonium	E. E. Anderson, L. B. Asprey	2,928,721	Method for Producing Thorium Tetra-chloride	E. A. Mason, C. H. Cobb
2,924,877	Method of Jacketing a Fissionable Body	E. C. Creutz	2,928,779	Neutronic Reactor Construction and Operation	J. T. Weillis, J. M. West
2,925,322	Method of Separating Plutonium	H. G. Esel	2,928,780	Source of Products of Nuclear Fission	F. Bartock, S. Dondos
2,925,323	Method for the Recovery of Cesium Values	S. J. Rimshaw	2,928,781	Cooled Neutronic Reactor	R. P. Wigner, E. C. Creutz
2,925,327	Continuous Gas Analyzer	S. Katz, C. W. Weber	2,928,910	Rotary Switch	J. P. E. Wetterberg,
2,925,431	Cationic Exchange Process for the Separation of Rare Earths	G. R. Choppin, S. G. Thompson, S. C. Harvey	2,928,966	Arc Discharge and Method of Producing the Same	R. V. Heidigh
2,925,509	Low Energy Counting Chambers	P. M. Hayes	2,929,706	Delta Phase Plutonium Alloys	E. M. Gramer, F. H. Ellinger, C. C. Lead
			2,929,707	Method of Fabricating a Uranium-Zirconium Hydride Reactor Core	I. F. Weeks, W. V. Goeddel

2,929,761	Method for Coating Graphite with Metallic M. A. Steinhilber				
2,929,767	Convection Reactor	R. F. Hammond, L. D. King	2,934,402	Precipitation Method for The Separation of Plutonium and Rare Earths	S. G. Thompson
2,929,768	Nuclear Reactor Core Design	J. E. Mahlesitzer, W. S. Peck, W. V. Baberer, A. C. Williams	2,934,403	Recovery of Americium	M. Adler, H. E. Hyman
2,929,932	Radiation Measuring Devices	G. M. B. Souricis, G. K. Busch	2,934,404	Scavenger and Process of Scavenging	C. M. Olson
2,929,951	Ion-Stabilized Electron	D. Finkelstein	2,934,425	Method for Purifying Uranium	J. B. Knights, M. M. Feder
2,930,738	Regeneration of Reactor Fuel Elements	W. E. Roake, W. L. Lyon	2,934,478	Process of Electropolishing Metals with Aluminum	W. C. Schickner
2,931,570	N^2 Scaler	C. W. Johnstone	2,934,482	Nuclear Reactor Fuel Element and Method of Manufacture	E. Brooks
2,931,701	Process for Separating Plutonium by Repeated Precipitation with Amphoteric Hydroxide Carriers	B. F. Ferris	2,934,483	Process of Making Fuel Elements for Neutronic Reactors and Articles Produced Thereby	W. A. Bostrom, R. B. Roof, Jr.
2,931,702	Metathesis of Plutonium Carrier Lanthanum Fluoride Precipitates with an Alkali	B. B. Duffield	2,935,401	Control Rod Alloy Containing Noble Metal Additions	W. E. Anderson, W. E. Bay
2,931,706	Preparation of Dibasic Aluminum Nitrate	A. T. Gresky, E. O. Rumi, D. L. Foster, R. P. Wischow, J. E. Savitsman	2,935,456	Variable Area Control Rod for Nuclear Reactor	H. E. Boston
2,931,721	Regeneration of Reactor Fuel Elements	W. L. Lyon	2,935,686	Frequency Stabilizing System	Q. A. Karns, O. A. Anderson
2,931,761	Neutronic Reactor Control	H. Burwitz, Jr.	2,936,110	Method of Centrifuge Operation	K. Coburn
2,931,762	Neutronic Reactor	E. Fermi (Deceased)	2,936,119	Simultaneous Differential	D. M. Collier, L. A. Mecke, J. P. Palmer
2,931,689	Apparatus for Arc Welding	J. W. Lingsfalter	2,936,213	Process of Reducing Plutonium to Tetravalent State	D. F. Mastick
2,931,939	Electron Gun	H. C. Christoffles, K. W. Ehlers	2,936,231	Separation of Rare Earth Metal Fission Products from Liquid U-235	R. E. Wiewall
2,932,887	Method and Alloy for Bonding to Zirconium	F. E. McCusig, R. D. Misch	2,936,273	Steam Forming Neutronic Reactor and Method of Operating It	S. Dotszmyer
2,933,369	Concentration of Pu Using Oxalate Type Carrier	D. M. Bitter, R. P. S. Black	2,936,274	Determination of Specific Neutronic Reactivity	G. Dessauer
2,933,421	Dissolution Method of Removing Bonding Agents	H. E. Hyman	2,936,277	Reactor Control System	J. E. MacNeill, J. Y. Estabrook
2,933,442	Electronuclear Reactor	E. O. Laverne, E. M. McMillen, L. W. Alvarez	2,936,318	Fission Product Removal From Organic Solutions	R. M. Moore
2,933,611	Neutron Source	J. S. Foster, Jr.	2,936,363	Apparatus and Method for Arc Welding	R. A. Holland, C. C. Stone
2,933,630	High Voltage Ion Source	J. S. Loos	2,936,372	Radiation Dosimeter	W. E. Ballwell, Jr., G. D. Adams

2,936,401	Radiation Detector	E. H. Wilson, F. M. Class	2,940,915	High Temperature, High Power Heterogeneous Nuclear Reactor	E. P. Hammond, H. M. Easley,
2,937,438	Method for Joining Aluminum to Stainless Steel	L. C. Lemon	2,941,933	Fuel Element for Nuclear Reactor	W. E. Boake, E. A. Evans, D. W. Britz
2,937,654	Tube Shearing Valve	L. B. Wilmer	2,942,109	Scintillation Spectrometer	F. E. Bell, J. E. Francis
2,937,924	Separation of Plutonium From Fission Products by a Colloid Removal Process	J. Schubert	2,942,116	Neutron Absorption and Shielding Device	I. E. Anstaird
2,937,925	Solvent Extraction Process for Uranium from Chloride Solutions	C. A. Blake, Jr., E. B. Brown, D. E. Horner	2,942,736	Crane Positioning Apparatus	W. Landsiedel, H. Wolff
2,937,939	Method of Producing Niobium Metal	H. A. Wilhelm, E. R. Stevens	2,942,937	Adsorption-Bismuth Phosphate Method for Separating Phosphate	E. S. Russell, A. W. Adkinson, G. E. Boyd
2,937,981	Suppression of Water Decomposition	A. O. Allen, C. J. Hochensadel	2,942,938	Method of Dissolving Massive Plutonium	J. F. Pacer, W. L. Lyon
2,937,982	Method of Making UO_2 -Si Slurries	H. T. Bahn	2,942,939	Separation of Plutonium Values from other Metal Values in Aqueous Solutions by Selective Complexing and Adsorption	E. H. Boston
2,937,984	Control Rod Drive	E. A. Chappellier	2,942,943	Process for Separating Iodine-132 from Fission Products	M. W. Green, G. Samos, W. D. Tucker
2,938,121	Personnel Neutron Dosimeter	J. J. Fitzgerald, C. G. Detweiler, Jr.	2,942,944	Process of Preparing Zirconium Oxychloride	E. A. Wilhelm, M. L. Andrews
2,938,768	Method of Separating Pu From Methanethiolating $BiPO_4$ Carrier	V. J. Know, S. G. Thompson	2,942,968	Method of Separating Uranium from Alloys	F. C. Lott, H. E. Shoumsier
2,938,769	Separation of Bismuth from Zirconium	L. G. Overholser, C. J. Barton, Sr., J. W. Ramsey	2,943,195	Heating and Cooling System for Calutron	A. M. Starr
2,938,784	Nuclear Fuel Composition	F. H. Spedding, H. A. Wilhelm	2,943,275	Transformer for Joining Unbalanced to Balanced Transmission Means	B. J. Bittner, R. H. Opperman
2,938,791	Method of Producing Shaped Bodies from Powdered Metals	A. Blainey	2,943,921	Catalytic Recombiner for a Nuclear Reactor	L. D. P. King
2,938,807	Method of Making Refractory Bodies	J. C. Anderson	2,944,258	Dual-Ridge Antenna	D. L. Yearout, H. L. Jergins
2,938,843	Superheating in a Boiling Water Reactor	H. Trebow	2,944,873	Single-Step Conversion UO_3 to UO_4	J. E. Moore
2,938,844	Neutronic Reactor Counter Method and System	C. B. Graham, I. Spievak	2,945,233	Process for Jacketing a Core	G. A. Last
2,938,846	Fuel Element Fabrication Method	J. M. Elz, J. E. Cunningham	2,945,740	Ruthenium Decontamination Method	A. T. Gresky
2,938,896	High Pressure Dies	W. B. Wilson	2,945,793	Process for Coloring Diamonds	R. A. Dugdale
2,939,633	Automatic Counter	H. P. Robinson	2,945,794	Neutronic Reactor Operational Method and Core System	C. E. Winters, C. S. Graham, J. S. Culver, R. H. Wilson
2,939,803	Method of Impregnating a Porous Material	G. M. Steels	2,945,972	Ion Source	C. W. Bliss, J. S. Luce
2,940,819	Concentration Process for Plutonium Ions in an Oxidation State not Greater than +4, in Aqueous Acid Solution	G. T. Seaborg, S. G. Thompson	2,946,914	Apparatus for Producing and Manipulating Plasmas	S. A. Colgate, J. F. Ferguson, H. P. Firth, R. E. Wright

2,946,699	Process of Impregnating Graphite with a Uranium Compound	M. C. Sears, R. E. Bandoiph, C. Starr	2,950,168	Concentration and Decontamination of Solutions Containing Plutonium Values by Bismuth Phosphate Carrier Precipitation Methods	G. T. Seaborg, S. G. Thompson
2,947,080	Method of Making Fuel Elements	L. W. Kates, E. V. Campbell, R. E. W. Boardel	2,950,188	Method of Suppressing UAl_4 Formation in U-Al Alloys	M. L. Picklesimer, W. C. Turber
2,947,455	Means and Method for Producing a Vacuum	M. A. Otavina	2,950,358	Mass Spectrometer	F. A. White
2,947,471	Centrifuge End Cap	J. W. Beams, L. E. Scoddy (Deceased)	2,950,604	Heat Transfer Method	W. E. Gambill, N. D. Grems
2,947,472	Centrifuge Apparatus	C. Starstrom, K. Cohen, H. C. Urey	2,950,962	Reduction of Fluoride to Metal	O. H. Carlson, F. A. Schmidt, F. E. Spedding
2,947,601	Complex Fluorides of Plutonium and an Alkali metal	G. T. Seaborg	2,950,967	Plutonium-Zirconium Alloys	F. W. Schonfeld, J. T. Weber
2,947,621	Ternary Alloys of Uranium, Columbium, and Zirconium	F. C. Foots	2,951,018	Electrodeposition of Neptunium	G. T. Seaborg, A. C. Wahl
2,947,676	Method of Making Wire Fuel Elements	J. L. Zambrov	2,951,020	Method for Electrodepositing Polonium	R. F. Wehrmann
2,947,774	Preparation of Alkyl Pyrophosphate Extractants	C. A. Levins, W. E. Skiena, G. R. Moore	2,951,023	Method of Producing D^{233}	G. T. Seaborg, R. W. Stougalton
2,947,867	Control for Isotope Separating Apparatus	E. V. Borchany	2,951,158	Radiation Wave Detection	L. F. Wouters
2,947,902	Magnetic Grid	R. F. Post	2,951,181	Sampling Oscilloscope	R. M. Sugerman, E. Fetcbogus
2,948,572	Centrifuges	J. W. Beams, L. E. Scoddy (Deceased)	2,951,201	Zero-Time Indicator	E. E. Sander
2,948,586	Fused Salt Process for Recovery of Values from Used Nuclear Reactor Fuels	E. H. Moore	2,951,448	Centrifugal Pump and Shaft Sealing Means	F. C. Bushing
2,949,045	Housings and Mountings for Centrifuges	F. C. Bushing	2,951,729	Gas Bearing	C. V. Starstrom
2,949,202	Loading and Unloading Devices	M. Trashov	2,951,750	Cushioned Bearing	F. C. Bushing
2,949,390	Method of Protecting Tantalum Crucibles against Reaction with Molten Uranium	H. M. Feder, H. R. Challow	2,951,731	Centrifuges	F. C. Bushing
2,949,414	Self-Regulating Boiling-Water Nuclear Reactors	J. A. Ensohoff, J. D. Flawshan	2,951,740	Processing of Neutron-Irradiated Uranium	H. H. Hopkins, Jr.
2,949,416	Concentric Tubular Fuel Element	C. V. Whallock	2,951,793	Electrolysis of Thorium and Uranium	W. E. Hansen
2,950,166	Method for Separation of Plutonium from Uranium and Fission Products by Solvent Extraction	G. T. Seaborg, W. J. Blandai, M. T. Walling, Jr.	2,952,012	Analog-to-Digital Data Converter	C. W. Rodgers, D. P. Anderson, G. E. Bussey, L. H. Nimsaar, J. E. Althouse
2,950,167	Method of Inhibiting Corrosion in Uranyl Sulfate Solutions	E. G. Robinson, J. C. Criesst, Jr.	2,952,056	Apparatus and Method for Injection Casting	A. B. Shack
			2,952,139	Refrigeration System Especially for Very Low Temperature	F. B. Kennedy, E. E. Smith, Jr.
			2,952,511	Separation of Plutonium Values from Uranium and Fission Product Values	A. G. Medlock, A. E. Booth

2,952,535	Sintering Metal Oxides	W. E. Hoyle	2,957,094	Neutron Source	H. K. Bernander, R. J. Jones
2,952,600	Neutronic Reactor Control Element	R. W. Newson	2,957,210	Cave Window	M. Levenson
2,952,601	Nuclear Conversion Apparatus	G. T. Seaborg	2,957,709	Sealing Means for Relatively Rotatable Members	C. W. Skarstrom
2,952,603	Jacketed Fissionable Member	E. R. Boller, J. W. Robinson	2,958,779	Scintillation Exposure Rate Detector	W. G. Spear
2,952,640	Cesium Recovery from Aqueous Solutions	C. A. Goodall	2,959,326	Fluid Controlling Means	H. N. Foullet
2,952,641	Strontium Precipitation	T. R. McKenzie	2,960,398	Direct Ingot Process for Producing Uranium	W. M. Leiders, W. S. Kuecht
2,952,802	Electromagnetic Release Mechanism	C. Michelson	2,960,653	Pulsed Indicator Circuit	W. I. Linlor, Q. A. Kerns
2,953,510	Neutronic Reactor	H. L. Anderson	2,960,687	Coincidence Occurrence Indicator	G. H. Robison, H. Merrick, J. F. Dickson
2,953,918	Range Increaser for Pneumatic Gauges	A. H. Fowler, G. B. Seaborn, Jr.	2,961,159	Multi-Channel Electric Pulse Height Analyzer with Binary Coded Decimal Display	J. D. Callagher, J. L. McKibben
2,953,993	Pump Construction	G. Strickland, F. L. Horn, E. T. White	2,961,390	Method of Preparing Uranium, Thorium, or Plutonium Oxides in Liquid Bimonth	J. K. Davidson, W. L. Robb
2,954,157	Molecular Vacuum Pump	E. E. Eckberg	2,961,391	Water Boiler Reactor	L. D. P. King
2,954,273	Process of Eliminating Hydrogen Peroxide in Solutions Containing Plutonium Values	J. G. Barrick, B. A. Fries	2,961,392	Neutronic Reactors	E. F. Wigner
2,954,335	Neutronic Reactor	E. P. Wigner	2,961,393	Power Breeder Reactor	H. O. Monson
2,954,421	Low-Loss Cable and Method of Fabrication	B. L. McCarthy, J. M. Stone	2,961,415	Settable Neutron Radiation Shielding Material	I. B. Axelrud
2,955,913	Separation of Rare Earths by Solvent Extraction	D. F. Peppard, G. W. Mason	2,961,558	Co-Axial Discharges	J. S. Luce, L. P. Smith
2,955,937	Oxidation Resistant Chromium Alloy	J. A. McCarty, J. F. Collins, V. P. Callins	2,961,559	Methods and Means for Obtaining Hydro-magnetically accelerated Plasma Jet	J. L. Marshall, Jr.
2,955,997	Irradiation Method of Converting Organic Compounds	A. O. Allen, J. M. Caffrey, Jr.	2,961,652	Radio Altimeters	E. W. Bogle
2,956,169	Ion Pulse Generation	R. F. King, C. D. Hoak, V. E. Parker	2,961,653	Radio Ranging Devices	E. W. Bogle
2,956,195	Hollow Carbon Arc Discharge	J. S. Luce	2,962,351	Treatment for Improving the Operation of Strong Base Anion Exchange Resins	P. C. Stevenson
2,956,201	Particle Accelerator and Method of Controlling the Temperature Thereof	R. B. Hoel, W. J. Callagher	2,963,223	Multiple Input Binary Adder Employing Magnetic Drum Digital Computing Apparatus	E. H. Cooke
2,956,771	Mass Spectrometer Leak	W. B. Shields	2,964,124	Separation of Gases by Diffusion	R. E. Feieris, F. E. Simon, E. S. Arms
2,956,858	Method of Separating Rare Earths by Ion Exchange	F. H. Spedding, J. E. Fowell	2,964,130	Separation of Ruthenium Compounds from Gaseous Mixtures	R. J. Hawby, D. A. Hanson, C. E. May
2,957,080	Method and Means for Radiation Dosimetry	J. V. Schulte, J. F. Settler			

2,964,710	Accelerator Target Positioner and Control Circuit Therefor	K. F. Stone, R. J. Force, W. W. Olson, D. S. Cagle	2,969,310	Neutronic Reactor System	J. J. Goett (Deceased)
2,965,781	Neutron-Counter	S. B. Conant, R. T. Mayard	2,969,311	Means for Producing Plutonium Chain Reactions	E. F. Wigner, A. M. Weinberg
2,965,840	Metal Resistivity Measuring Device	R. G. Meyers, G. J. Benkin, Jr.	2,969,312	Type Fuel Element	H. O. Nouse
2,966,709	Casting Furnaces	R. H. Ruppel, C. E. Winters	2,969,313	Nuclear Reactor	J. J. Grebe
2,966,794	Deflection Pressure Tester	C. M. Cooper	2,969,507	Locking Oscillator Double Pulse Generator Circuit	J. A. Baase
2,966,799	Sensitive Pressure Gauge	W. F. Bell	2,969,712	High Temperature Microscope and Furnace	D. M. Olson
2,967,141	Neutronic Reactor Fuel Element	M. L. Picklesimer, V. C. Thurber	2,969,915	Electronic Multiplier	D. M. Collier, L. A. Meeks, J. P. Falser
2,967,209	Recovery of Ruthenium Values	W. E. Crummitt, W. E. Bardwick	2,970,035	Separation of Plutonium Ions from Solution by Adsorption on Zirconium Pyrophosphate	R. W. Steughton
2,967,257	Ion Pump	M. Milleron	2,970,050	Process for Removing Noble Metals from Uranium	J. B. Knighton
2,967,809	Method and Apparatus for Controlling Direct-Cycle Neutronic Reactors	G. A. Reed	2,970,885	Corrosion Reduction	S. Greenberg, R. D. Misch, W. E. Ruther
2,967,811	Fuel Elements for Thermal-Fission Nuclear Reactors	O. Flint	2,971,153	Microwave Horns and Circuitry for Plasma Measurements	C. D. Wharton, A. L. Gardner
2,967,812	Neutronic Reactor Fuel Composition	W. C. Thurber	2,971,907	Filter Media and Method of Making	V. J. Smith
2,967,943	Caseous Discharge Device	J. D. Cow	2,973,492	Pulse Inverting Transformer	D. A. Mack
2,968,007	Automatic Frequency Control System	C. F. Emson, J. D. Salisbury	2,974,006	Direct Conversion of Uranium Turnings to Uranium Tetrafluoride	O. E. Fry
2,968,183	Sampling System	B. A. Emmsford, C. L. Segasser, C. L. Terry, E. R. Rosenberg	2,974,012	Preparation of Beryllium Oxide of High Purity	R. Cooperstein, G. E. Anderson
2,968,547	Production of Plutonium Metal	V. L. Lyon, R. H. Moore	2,974,096	Fuel Slug Erupture Detector	R. E. Paul
2,968,601	Fuel Element for Neutronic Reactors	I. C. Evans, E. G. Rossley, Jr.	2,974,248	Neutron-Insensitive Beta-Gamma Dosimeter	J. A. Aurier, R. E. Zedler, G. S. Buret
2,968,602	Reactor-Flash Boiler-Flywheel Power Plant	E. Loeb	2,974,251	Method and Means for Increasing Electron Emission	A. J. Bureau
2,968,715	Fusion Welding Method and Apparatus	V. L. Wymand, V. I. Steinbamp	2,975,113	Method of an Irradiation Transmutation Capsule	C. M. Gordon
2,968,731	Beta-Gamma Personnel Dosimeter	D. M. Davis, E. D. Opton, J. C. Bart, A. P. Hill	2,975,114	Reactor	S. E. Allison
2,969,307	Method of Testing Thermal Neutron Fissionable Material for Purity	E. L. Anderson	2,975,115	Ballows Seal on Reactor Coolant Tube	E. F. Wigner, L. A. Obilinger, C. J. Young
2,969,308	Method of Producing Energetic Plasma for Neutron Production	E. Fermi (Deceased)			
2,969,309	Neutronic Reactor Fuel Element and Method of Manufacture	F. E. Bell, R. J. Meckin, Jr., A. Simon			
		E. H. Flinniston, G. S. Flisell			

2,975,116	Neutronic Reactor	F. Daniels	2,981,591	Method for Recovering Plutonium Values from Solution using a Bismuth Hydronide Carrier Precipitate	S. F. Ferris
2,975,117	Fast Neutron Reaction System	W. H. Zim	2,981,592	Method and Apparatus for Calcining Salt Solutions	S. Lawroski, A. A. Jonks E. G. Trecker
2,975,119	Vertical Rod Drive Mechanism	C. D. Emmons	2,981,643	Process for Descaling and Decontaminating Metals	E. D. Baybars
2,975,414	Radio Ranging Device	R. W. Eagle	2,981,672	Nuclear Reactor Fuel Element	W. E. Kingston
2,975,770	Steam Generator	H. O. Monson	2,982,599	Production of Plutonium Fluoride from Bismuth Phosphate Precipitates Containing Plutonium Values	H. S. Brown, E. G. Robinson
2,975,912	Charging Device	S. L. Handforth	2,982,600	Uranium Decontamination with Respect to Zirconium	S. Vogler, M. Beeserman
2,976,121	Processing of Cesium Metal Cyanides	O. H. Koski	2,982,601	Separation of Uranyl and Neobutium Values by the Tributyl Phosphate Extraction Process	A. S. Wilson
2,976,227	Neutronic Reactor	J. A. Wheeler	2,982,603	Preparation of Anhydrous Cerium Chloride, Uranium Bromide, or Plutonium Fluoride	K. M. Harmon, E. Withers
2,977,154	Method of Reducing Aqueous Radioactive Nuclear Wastes to Solid Form	J. W. Loring, A. A. Jonks	2,982,604	Preparation of Neptunium Hexafluoride	G. T. Seaborg, E. W. Brown
2,977,204	Method of Improving Corrosion Resistance of Zirconium	D. W. Shannon	2,982,702	Pretreating Uranium for Metal Plating	R. F. Wehrmann
2,977,220	Process of Producing Uranium	T. K. Wood, (Deceased)	2,982,708	Fuel for Neutronic Reactors and Process of Making	B. M. Abraham, H. E. Flotow
2,977,297	Reactor Fuel Assembly	E. A. Evans, R. J. Anicotti, W. E. Roake	2,982,709	Neutronic Reactor Design to Reduce Neutron Loss	F. T. Miles
2,977,814	Two-Speed Device	G. S. Brunson, Jr.	2,982,710	Food Irradiation Reactor	C. F. Leysa, G. E. Petnam
2,978,118	Manipulator For Slave Robot	R. C. Coerts, J. H. Grinson, F. A. Kobut	2,982,711	System for Unloading Reactors	A. C. Sand, Jr.
2,978,394	Solvent Extraction Process for Protactinium	E. K. Hyde, L. I. Katsin, M. J. Wolf	2,982,713	Merchant Marine Ship Reactor	M. F. Sanckovich, J. F. Munn, D. G. North, Jr., H. R. Rock, D. L. Geston
2,978,255	Recovery of Plutonium by Carrier Precipitation	R. H. Goeckermann	2,982,785	Cesium Recovery	T. McKenzie, W. V. Schulz
2,978,358	Method of Obtaining Uniform Coatings on Graphite	I. E. Campbell	2,982,917	Method and Apparatus for Pulsing a Charged Particle Beam	K. Asland, R. W. Eusemning, K. K. Barrow
2,978,398	Neutronic Reactor	E. E. Metcalf, E. W. Johnson	2,983,042	Tube Splitting Apparatus	C. E. Frenks, V. E. Covley
2,979,379	Extraction of Uranium	E. G. Schmieding, A. E. Buehle	2,983,144	Electronic Bivane Wind Direction Indicator	H. Moses
2,979,399	Preparation of Compacts made from Uranium and Beryllium by Sintering	R. P. Angier			
2,979,620	Air Radioactivity Monitor	R. L. Bradshaw, J. V. Thomas			
2,979,635	Clashing Beam Particle Accelerator	R. J. Burleigh			
2,980,905	Radio Ranging Device	J. W. Gostian, A. Gostian, E. T. Nisset, M. E. Bourns, E. R. Crane			

2,983,145	Specific Heat Indicator	F. L. Horn, J. E. Bians	2,988,429	Spiral Contractor for Solvent Extraction Column	C. E. Cooley
2,983,658	Heterogeneous Nuclear Reactor Employing Small Unclad Bodies of Fissionable Material as Fuel	H. H. Ryan, J. J. Katz	2,988,697	Linear Solym or Sycro-transmitter	A. Hirsch
2,983,659	Neutronic Reactor Burial Assembly	M. Trebow	2,988,812	Method of Fabricating Tubular Units	L. A. Chifogor
2,983,660	Fabrication of Tube Type Fuel Element for Nuclear Reactors	E. Loeb, J. H. Nicklas	2,988,938	Control for Rolling Mill	A. B. Shuck, V. C. Shaw
2,983,663	Fuel Element for Nuclear Reactors	C. H. Bassett	2,989,367	Arsenate Carrier Precipitation Method of Separating Plutonium from Neutron Irradiated Uranium and Radioactive Fission Products	S. G. Thompson, D. B. Miller, R. A. James
2,983,989	Borehousing and Tube-Installing Apparatus for Nuclear Reactors	C. E. Frenits, W. E. Cowley	2,989,368	Cesium Recovery from Aqueous Solutions	R. A. Schneider
2,984,613	Fuel Element for Nuclear Reactors	C. H. Bassett	2,989,453	Pressure System Control	V. E. Eselmann, G. M. Kaplan
2,984,744	Means for Visualizing Fluid Flow Patterns	F. E. Lynch, L. D. Palmer, E. P. Poppendiek, G. M. Winn	2,989,454	Nuclear Reactor	G. R. Bredem, J. R. Dietrich
2,984,833	Super-Regenerative Radio Ranging Device	R. T. Bassett, H. R. Crane, A. C. Gratian, J. W. Gratian	2,989,556	Method of Preparing Complexes of Plutonium with Diketones	J. S. Dixon, J. J. Katz, E. F. Orlemann
2,984,995	Modified Ball and Socket Coupling	D. D. Kalen	2,990,240	Process for Segregating Uranium from Plutonium and Fission-Product Contamination	C. V. Ellison, T. C. Emmon
2,985,505	Salt Conversion Process	H. H. Van Tuyl	2,990,241	Improvement in Decontamination of Aqueous Acidic Solutions Containing Plutonium and Fission Product Values by Providing Carous and/or Mercuric Ions Therein Prior to a Bismuth Phosphate Carrier Precipitation	B. F. Paris, H. K. Strassel
2,985,574	Overall Control System for High Flux Pile	E. W. Hewson, E. P. Wignar, E. P. Epler, T. E. Cole	2,990,242	Extraction of Hexavalent Plutonium from Aqueous Acidic Solutions with Ethyl Sulfide	G. T. Seaborg
2,985,824	Nondestructive Eddy Current Testing	C. J. Ranken, Jr.	2,990,243	Absorption of Plutonium and/or Fission Products from Aqueous Solution	R. H. Beaton
2,986,508	Neutronic Reactor Structure	A. M. Weinberg, H. C. Vernon	2,990,244	Extraction of Thorium and Uranium Values from Acid Leach Liquors	K. B. Brown, D. J. Crouse, Jr.
2,986,509	Fuel Element for Nuclear Reactor	J. G. Duffy, Jr.	2,990,245	Metathesis of Bismuth Phosphate Plutonium Carrier Precipitate with an Alkali	I. Perlman, S. G. Thompson, B. B. Cunningham
2,986,510	Massive Leakage Irradiator	E. P. Wignar, L. Seiler, R. F. Christy, F. L. Friedman	2,990,273	Uranium Recovery from Metallic Masses	P. Chiotti
2,986,772	Eccentric Boiling of Powder and Bonding Agent Into Spherical Pellets	G. Fulton, Jr.	2,990,274	Uranium-Titanium-Niobium Alloys	S. Greenberg
2,987,375	Purification of Fluoride Salts	W. R. Grimes	2,990,348	Method and Apparatus for Producing Reactor	E. O. Hollan
2,987,454	Electrolytic Process for Producing Metals	B. Edelman, R. B. Holden	2,990,349	Reactor	W. G. Roman
2,987,455	Method and Apparatus for Reactor Safety Control	H. E. Huston, R. G. Hoff, C. W. Wheelock			
2,987,458	Twisted Ribbon Fuel Element	C. R. Bredem, A. B. Schultz			
2,987,816	Bonding Aluminum Mixture	R. A. Woland, D. E. Walker			

2,990,351	Nuclear Reactor Element	M. C. Sans, C. N. Scully	2,992,172	Fuel Elements for Nuclear Reactors	A. Blainey, E. Lloyd
2,990,352	Metal Sheathed Bodies	H. M. Finniston, L. M. Wyatt, O. S. Flail	2,992,175	Neutronic Reactor Shielding	L. B. Borst
2,990,353	Nuclear Reactor Control System	D. F. Howard, E. E. Motz	2,992,176	High Strength Control Rods for Neutronic Reactors	B. Lusman, E. F. Losco, I. Cobun
2,990,354	Nuclear Fission Chain Reacting System	H. L. Anderson, H. S. Brown	2,992,179	Fuel Element for Nuclear Reactors	C. H. Bassett
2,990,355	Means for Controlling Reactions	L. W. Nordhelm, E. F. Wigner	2,992,249	Ion Exchange Adsorption Process for Plutonium Separation	G. E. Boyd, E. R. Russell, M. D. Taylor
2,990,356	Control Rod Drive	R. A. Chappellier, I. Rogers	2,992,700	Electrostatic Air Cleaning Device and Method	L. Silverman, D. M. Anderson
2,990,357	Method and Apparatus for Controlling Neutron Density	E. P. Wigner, G. J. Young	2,992,686	Method for Dissolving Zirconium-Uranium Compositions	T. A. Gens
2,990,358	Control Means for Reactor	J. H. Manley	2,992,687	Leaching of Uranium Ores Using Alkaline Carbonates and Bicarbonates at Atmospheric Pressure	A. Thomas, E. A. Brown, A. T. Rabbitts, R. Starad, H. J. Barbat
2,990,359	Fuel Element Support	W. L. Wynn	2,992,688	Process of Treating or Forming an Insoluble Plutonium Precipitate in the Presence of an Organic Surface Active Agent	J. H. Malthis
2,990,360	Neutronic Reactor Control Rod and Method of Fabrication	S. W. Porombka, Jr.	2,992,689	Method for Separating Plutonium and Fission Products Employing an Oxide as a Carrier for Fission Products	T. H. Davies
2,990,476	Radiation Source	J. D. Gow	2,992,915	Pyrometallurgical Method	P. A. Nelson
2,991,112	Self-Centering Positive Locking Crapsol	C. G. Bopper	2,992,981	Neutronic Reactor Core	W. E. Thomson, A. Corbin, Jr.
2,991,150	Purification of Plutonium Using a Cerium Precipitate as a Carrier for Fission Products	B. F. Faris, C. M. Olson	2,992,982	Coupled Fast-Thermal Power Breeder Reactor	R. Avery
2,991,182	Process of Coating Graphite with Niobium-Titanium Carbide	F. A. Balden, W. D. Smiley, F. N. Erus	2,993,786	Hot Pressing to Form Canned Uranium Slugs	S. E. Boboff, W. E. Kingston
2,991,236	Separating Liquid Moderator from a Slurry Type Reactor	E. C. Vernon	2,993,850	Fast Neutron Reactor	H. Soodak, E. F. Wigner
2,991,237	Thorium Dispersion in Bismuth	J. S. Bryner	2,993,851	High Temperature and Neutron Producing System	G. P. Thomson, M. Blackman
2,991,238	Pinched Plasma Reactor	J. A. Phillips, B. R. Soydan, J. L. Tuck	2,993,852	Neutronic Reactor	R. F. Christy
2,991,601	Process of Forming Powdered Material	J. Glatzer, E. E. Schaner, T. J. Burke	2,994,019	Integral Positioning and Indicating Device	C. E. Frenck, W. E. Cavley, R. F. Wernick
2,991,905	Gas Seal	H. Monson, E. Butler	2,994,038	Electrical Load anticipator and Recorder	J. B. Russell, E. J. Thomas
2,991,980	Heat Transfer Means	A. P. Fress, G. F. Wislicenus	2,994,072	Photoelectric Control for Tape Positioning	J. W. Woody, Jr.
2,992,048	Tool Assembly with Bi-Directional Bearing	G. E. Longhurst			
2,992,066	Preparation of Plutonium Trifluoride	L. L. Burger, W. E. Koske			
2,992,067	Dissolution of Zirconium Alloys Thereof	J. L. Swanson			

2,994,423	Apparatus for Sheathing Rods	G. W. E. Ford, L. M. Wyatt, O. S. Flail	2,997,431	Method of Initiating and Sustaining an Energetic Plasma for Neutron Production	F. R. Bell, R. J. Mackin, Jr., A. Simon
2,994,377	Method of Removing Iodine from Gases and Filter Medium Therefor	L. Silverman	2,997,436	Gas Ionizing and Compressing Device	E. M. Little, D. B. Thomson, V. Josephson, F. R. Scott
2,994,379	Dissolution of a Cerium-Type Plutonium- Containing Fluoride Carrier	A. C. Wahl	2,997,587	Neutronic Reactor Core Instrument	L. S. Xima
2,994,650	Preparation of Pure Metals from their Compounds	H. L. Sletis	2,997,641	Plasma Generator Device	W. R. Esler, O. A. Anderson, H. P. Furth
2,994,652	Method for Producing Diboron Tetra- chloride	J. W. Frazer, R. T. Bollmann	2,997,744	Method of Graphite Preparation	S. D. Stoddard, W. T. Harper
2,994,656	Fuel Element Construction	L. E. Zimmelt	2,997,883	Acceleration Integrating Means	D. F. Wilkes
2,994,657	Chimney for Boiling Water Reactor	M. Petrick	2,998,917	Electrical Load Anticipator and Recorder	J. V. Verma
2,994,837	Adjustable Double Pulse Generator	J. W. Gratian, A. C. Gratian	2,999,058	Nuclear Reactor Fuel Element	C. W. Wheelock, R. D. Baumelster
2,994,951	Method of Applying Metallic Coatings	J. W. Gratian, A. C. Gratian	2,999,059	Nuclear Reactor	M. Trebow
2,995,419	Method for Dissolving Lanthanum Fluoride Carrier for Plutonium	J. W. Robinson, L. D. Rubink D. E. Koblend, Jr., J. E. Willard	2,999,060	Control Means for a Nuclear Reactor	R. J. Teitel
2,995,471	Method for Treating Graphite Product	D. H. Gorfinsky	2,999,168	Linear Count-Rate Meter	J. J. Henry
2,995,588	Extraction of Tetravalent Plutonium Values with Methyl Ethyl Ketone, Methyl Isobutyl Ketone Acetophenone or Methone	G. T. Seaborg	2,999,187	Differential Pulse Sensing Circuit	J. H. Roberts
2,995,925	Ultrasonic Flow Detection Method	D. C. Worlton	3,000,377	Method and Apparatus for Metabolic Assay	R. M. Tolbert, M. R. Kirk, E. M. Baker
2,996,330	Remotely Operated Manipulator	E. L. Butto	3,000,695	Compounds and Composition Containing Plutonium	G. T. Seaborg
2,996,352	Precipitation of Plutonium Peroxide	J. C. Barrick, J. P. Manion	3,000,697	Transuranic Element, Composition Thereof, and Methods for Producing, Separating and Purifying Same	A. C. Wahl
2,996,375	Process of Recovering Alkali Metals	J. Volkoff	3,000,726	Production of Metals	F. E. Spedding, E. A. Wilhelm, W. E. Keller
2,996,443	Fissile Material and Fuel Elements for Neutronic Reactors	R. E. Schaner	3,001,144	Direct Coupled Amplifier for Small Currents	R. A. Dandi
2,996,444	Fuel Element Construction	M. T. Simmad	3,001,238	Method of Making Metal Bonded Carbon Roddes	V. V. Goeddel, M. T. Simmad
2,996,526	Extraction of Tetravalent Plutonium Values from Aqueous Acid Solutions by 2-(3-Ethylbutoxy) Ethanol	G. T. Seaborg	3,001,847	Optical Transcribing Oscilloscope	Q. A. Kerns
2,996,662	Magnetic Densitymeter	J. A. McCann, R. E. Jones	3,002,095	Single-Crystal Neutron Spectrometer	D. L. Bolcomb
2,997,289	Apparatus for the Production of Lithium Metal	P. S. Baker, H. B. Greene	3,002,852	Method of Forming Tantalum Silicides on Tantalum Surfaces	M. G. Bowman, H. Krikorian
			3,002,910	Catalytic Conversion of Organic Compounds Using Penetrating Radiation	J. M. Caffrey, Jr.

3,002,911	Radioysis of Organic Compounds	J. W. Sutherland, A. O. Alles	3,005,931	Ion Gun	R. A. Dondi
3,002,912	Reactors	L. Spitzer, Jr.	3,005,950	Precision Integrator for Minute Electric Currents	A. Hamsendinger, P. J. Holmer
3,003,002	Purification of Ether	R. H. Feinstein	3,005,954	Apparatus for Control of High Energy Accelerators	H. G. Hazard
3,003,050	Welding Torch	T. B. Correy	3,006,835	Neutron Source Using Magnetic Compression of Plasma	W. E. Quinn, E. M. Little, K. Boyer, J. L. Tuck, W. C. Elmore
3,003,080	Apparatus for Minimizing Energy Losses from Magnetically Confined Volumes of Hot Plasma	R. F. Post	3,006,859	Processing of Radioactive Waste	B. T. Allmann, B. M. Johnson, Jr.
3,004,628	Rectified Absorption Method for the Separation of Hydrogen Isotopes	C. d'A Bunt, D. M. Emsom	3,008,884	Process for Making Neutron Absorbing Bodies	G. H. Schipperett, R. H. Lang
3,005,079	Method and Apparatus for Effecting Thermal Bonds	H. O. Monson, R. A. Jaross	3,008,904	Processing of Radioactive Waste	B. H. Johnson, Jr., C. B. Barton
3,005,158	Core Saturation Blocking Oscillator	R. J. Spilrad	3,009,062	Absorption Analyzer	W. A. Brooksbank, Jr., J. E. Strain, H. N. Reardon, Jr.
3,005,334	Apparatus for Non-Destructive Inspection of Centrifugal Members	R. E. Taylor, C. H. Mahoney, C. E. Lay	3,009,242	Zirconium-Cladding of Thorium	R. J. Beaver
3,005,680	Method of Separating Neptunium from Plutonium in Aqueous Inorganic Solution	G. T. Seaborg	3,009,767	Separation of Transuranic Elements from Rare Earth Compounds	T. P. Kobman
3,005,681	Process for Separating Plutonium (IV) Values from Uranium and Fission Product Values, e.g. Zirconium and Columbium, Utilizing a Lanthanum Oxalate Carrier Precipitate	R. W. Stoughton	3,009,768	Continuous Process for Preparing Uranium Hexafluoride from Uranium Tetrafluoride and Oxygen	J. B. Adams, J. C. Brasas, L. E. Ferris, C. D. Scott
3,005,682	Method of Dissolving Plutonium Dioxide in Nitric Acid Using Cerium Ions	A. S. Wilson	3,009,807	Tritium Decontamination	D. H. Dennison
3,005,683	Separation of Technetium from Aqueous Solutions by Coprecipitation with Magnetite	S. J. Eimshaw	3,009,866	Neutronic Reactor	A. P. Frass, C. H. Mills
3,005,760	Method of Opposing Irradiation-Induced Viscosity Increase in Employment of Organic Fluids	R. O. Bolt	3,009,869	Fuel Element for Nuclear Reactors	C. H. Bassett
3,005,764	Neutronic Reactor Structure	F. Daniels	3,009,881	Method of Stabilizing Polyphenyl Coolants	J. G. Burr, J. D. Strong
3,005,765	Density Control in a Reactor	J. Marshall, Jr.	3,010,021	Method for Measuring Radiation	W. C. Roesch, R. C. McCall
3,005,767	Rotating Plasma Device	K. Boyer, J. E. Hammel, C. L. Longmire, D. E. Hagle, P. L. Ribb, J. L. Tuck	3,010,889	Fuel Element	F. Fortescue, L. E. Zummelt
3,005,794	Method of Using and Manufacturing Plastic Equivalent to Organic Materials	F. R. Shooka, J. E. Rose, G. Failla	3,011,054	Method and Apparatus for the Detection of Leaks in Pipe Lines	S. Jefferson, J. P. Cameron
			3,011,865	Separation of Uranium and Plutonium Oxides	G. E. Benedict, W. L. Lyon
			3,011,923	Surface Treatment of Molybdenum Metal	C. O. Coffey
			3,011,962	Nuclear Reactors	L. J. Koch, R. E. Rice, Jr., M. Boywick, A. A. Denat, A. J. Biggers

3,012,139	Automatic Mass Spectrometer	M. L. Hanson, C. D. Tabor, Jr.	3,018,159	Method of Removing Radioactive Iodine from Glass	L. Silverman
3,012,210	Directional Copiers	D. J. Bies	3,018,169	Method of Making Delta Zirconium Hydride Monolithic Moderator Plates	J. B. Vetrano
3,012,811	Gripping Tool	E. J. Sandrock	3,018,238	Method of Forming a Fuel Element for a Nuclear Reactor	E. H. Leyer, Jr., C. S. Peet
3,012,848	Method for Sensing Degress of Fluidized Bed in Fluidized Bed	E. F. Levey, Jr., A. H. Fowler	3,018,239	Experimental Liquid Metal Fuel Reactor	J. J. Happeil, G. H. Thomas, E. F. Demiss, J. L. Everts, Jr.
3,012,849	Dissolution of Zirconium-Containing Fuel Elements	F. L. Horn	3,018,240	Spring Driven Actuating Mechanism for Nuclear Reactor Control	F. Revillacqua, D. F. Uecker, E. F. Grob
3,012,955	High Temperature Reactor	E. M. Kulsrud, L. Spitzer, Jr.	3,018,253	Process for Producing Alkyl Arthophosphoric Acid Extractants	E. R. Grinstead
3,012,956	Radiation Facility for Nuclear Reactors	E. L. Currier, Jr., J. H. Nicklas	3,018,386	Amplitude Discriminator Having Separate Triggering and Recovery Controls Utilizing Automatic Triggering Control Disabling Clamp	E. L. Chase
3,013,859	Separation of Sodium Values from Iron Values by Solvent Extraction	C. W. Kuhlman, Jr. G. Lang	3,018,460	Connector	D. J. Stevens
3,013,909	Method of Chemical Decontamination of Stainless Steel Nuclear Facilities	G. P. Panzer, J. L. Zegger	3,018,980	Vehicle for Slave Robot	E. C. Goertz, J. F. Lindberg
3,013,953	Process for Separating Aseotropic Mixtures by Extractive and Convective Distillation	J. W. Fraser	3,020,161	Process for Removal of Radionuclides from Milk	G. E. Murthy, J. E. Campbell, Jr., E. B. Masurovsky, L. F. Edmondson
3,013,978	Removal of Fission Products from Water	J. Rosinski	3,020,632	Method of Joining Carbides to Base Metals	E. H. Erikorian, J. D. Farr, V. G. Whitterman
3,014,154	Ion Rocket Engine	E. W. Ehlers, P. Voelker	3,020,647	Glove Box Attachment	E. L. Butts
3,014,857	Plasma Device	J. D. Cow, J. M. Wilcox	3,020,736	Flexible Coupling	E. F. Jabelay
3,015,031	Personal Radiation Monitor	D. H. Dilworth, C. J. Borkowski	3,020,750	Digital Q Meter	W. L. Briscoe
3,015,618	Apparatus for Heating a Plasma	T. H. Stix	3,021,272	Plasma Sealing and Confining Device	W. B. Baker, A. Bretemahl, A. E. Embel
3,015,748	Pyrotron with Translational Closure Fields	E. C. Hartwig, D. B. Cummings, E. F. Post	3,021,708	Flowmeter	G. S. November, F. Schute
3,016,341	Reactor	L. Spitzer, Jr.	3,022,134	Separation of Curium and Americium	F. B. Fields, H. M. Isaac
3,016,342	Controlled Nuclear Fusion Reactor	S. A. Colgate, M. Kruskal M. Rosenbluth, J. L. Tuck	3,022,160	Reconditioning Fuel Elements	E. L. Bredt
3,016,458	Resonator Particle Separator	J. P. Blavett	3,022,162	Brazing Alloys	E. G. Donnelly, R. G. Cullinan, G. M. Slaughter
3,016,459	Mass Spectrometry	L. Friedman	3,022,236	Radio Frequency Plasma Containing Device	A. J. Ulrich, J. V. Butler, A. J. Satch
3,016,475	Phase Differential Indicating Circuit	F. A. Kirsten			
3,017,242	Removal of Cesium by Sorption from Aqueous Solutions	L. L. Ames			
3,017,286	Method for Coating Graphite with Niobium Carbide	J. S. Knox, J. H. Carpenter, O. H. Erikorian			

3,022,240	Nuclear Reactor Fuel Element	C. H. Bassett	3,029,130	Plutonium Recovery from Neutron-Scattered Uranium Fuel	R. E. Moore
3,022,933	Multiple Electron Beam Ion Pump and Source	R. S. Ellis	3,029,142	Reactor Fuel Scavenging Means	A. S. Coffinberry
3,023,040	Coupler for Tool and Cable	W. S. Cawley, C. E. Frantz	3,029,184	Process for Controlling Axial Growth Rate	W. J. Visek
3,023,078	Production of Uranium Tetrafluoride	R. J. Allen, H. G. Petrov	3,029,197	Boiling Reactors	S. Dutemeyer
3,023,085	Method of Combining Hydrogen and Oxygen	J. P. McBride	3,029,198	Nuclear Reactor Fuel Element	W. F. Anderson, T. T. Shimazaki, D. R. Tolleson, A. M. Stelle
3,023,097	Reprocessing Uranium Dioxide Fuels	L. Burris, Jr., A. Schneider	3,029,199	Plasma Device	W. E. Baker, A. Erstenahl, E. P. Furth
3,023,119	Coated Mold for Casting Plutonium	J. W. Anderson, F. Miley, V. C. Fritchard	3,029,200	Removal of Radioactive Ions from Waters	W. B. Silber
3,024,009	Condensation Can	E. T. Booth, E. A. Jacobsohn, R. B. Postius, C. B. Slada	3,027,796	Sodium-Water Heat Exchange Valve	W. E. Simmons, L. J. Koch
3,024,172	Electrolytic Separation Process and Apparatus	M. E. McLean, M. W. Roberts	3,029,842	Preparation of High Purity UF ₄	A. M. Arkelyan, C. L. Rickard
3,024,181	Fuel Element	R. C. Howard, J. E. Bohros	3,030,175	Uranium Separation Process	J. E. Hagner, R. S. Long, D. A. Ellis, R. B. Grinstead
3,024,182	Plasma Energization	H. P. Furth, E. S. Chambers	3,030,176	Neutronic Reactor Control Element	W. L. Lyon
3,024,945	Apparatus for Vacuum Deposition of Metals	H. Milleran	3,030,294	Method and Apparatus for Measuring Radiation	R. J. Beaver, C. F. Leitman, Jr.
3,025,143	Separation Apparatus	J. B. Buff	3,030,310	Method and Apparatus for Trepping Ions in a Magnetic Field	S. D. Beeder
3,025,162	Dimension Stabilized Fixed Photographic Type Emulsion and a Method for Producing Same	F. C. Gilbert	3,030,343	High Voltage, High Current Spark Gap Switch	J. S. Luce
3,025,371	Shockproof Magnetic Reed Switch	E. Medel	3,030,547	Fluid Purifier and Sealing Valve	R. S. Dike, D. W. Lier, A. E. Schofield, J. L. Tuck
3,025,429	Ion Magnetron	J. D. Gow, R. W. Layman	3,031,174	Uranium Recovery from Nuclear Fuel	W. F. Swanson
3,025,442	Switching Transmitter Positioning of Synchrotron	E. Wolff	3,031,261	Aluminum Production Method	R. C. Vogel, W. A. Bodger
3,027,143	Apparatus for Improving Hydrodynamic Conditions Within a Conduit	W. T. Ferguson, G. Samuels, Jr.	3,031,294	Fine Grain Nuclear Emulsion	A. W. Searcy, D. J. Maschl
3,027,391	Metal Phthalocyanines	H. A. Frigerio	3,031,304	Graphite Impregnation Method	A. J. Oliver
3,028,256	Method for Forming a Coating of Molybdenum Carbide on a Carbon Body	M. T. Simmad	3,031,342	Method and Apparatus for Determining Amalgam Decomposition Rate	F. Kertess, H. J. Bettman
3,028,329	Nuclear Reactor Fuel Element with Improved Heat Transfer Characteristics	J. E. Wahlmeister	3,031,385	Method of Making Fuel Rods	R. V. Johnson, C. C. Wright
3,028,517	Neutron Detector	T. M. Ryan	3,031,389		W. V. Gosdell, M. T. Simmad

3,031,393	Coupled Diaphragm Nuclear Reactor Safety Device	A. J. Saur, W. E. McCarty, Jr. L. E. Johnson	3,034,868	Continuous Treatment Apparatus	E. E. Erickson
3,031,394	Biological Irradiation Facility	W. H. McCorkle, E. S. Cern	3,034,869	Decontamination of Uranium	F. H. Spedding, T. A. Butler
3,031,396	Stabilized Pinch Machine	O. A. Anderson	3,034,977	Nuclear Superheater for Boiling Water Reactor	R. J. Holl, R. W. Klecker, C. B. Graham
3,031,397	Reactor Control	F. Fortescue, D. Nicoll	3,034,978	Reactor Having Back-DO Slurry Radically Positioned in a Graphite Moderator	M. B. Modin, J. C. Carter
3,031,398	High Energy Gaseous Plasma Containment Device	J. L. Tuck	3,035,894	Method of Preparing Uranium Pentafluoride	W. E. Hobbs
3,031,608	Voltage Regulator	R. L. Von Eschen, P. F. Scheele	3,035,895	Preparation of High-Density, Compact-Thorium Oxide Particles	K. H. McCorkle, A. I. Kleinsteuber, C. E. Schulling, O. C. Dean
3,031,846	Hydraulic Servo	D. E. Wiegand	3,035,993	Reflector Control of a Boiling Water Reactor	M. Treshow
3,032,356	Explosive Means to Separate Casing Numbers	H. B. Botford	3,035,996	Tripping Circuit	G. W. Lees, E. D. McCormick
3,032,490	Destruction of Neutral Particles in a Device for Producing a High Density Plasma	A. Simon	3,036,172	Fast Acting Current Switch	T. F. Betzer, J. F. Ryan, D. B. Cummings
3,032,492	Fuel Element for Neutronic Reactors	J. T. Stacy, H. A. Saller (Deceased), S. W. Parombka, Jr.	3,036,811	Ultra High Vacuum Valve	V. A. Fry
3,032,497	Method of Removing Strontium Ions	D. V. Rhodes, J. R. McHenry, L. L. Ames, Jr.	3,036,881	Catalyzed Oxidation of Uranium in Carbonate Solutions	W. E. Clifford
3,033,229	High Pressure Regulator	E. W. Bannage	3,036,963	Method and Apparatus for Injecting and Trapping Electrons in a Magnetic Field	W. C. Christofilos
3,033,549	Water Cooled Retort Cover	W. J. Ash, J. F. Pizzi	3,037,685	Method for Pumping Gases at Low Vacuum Pressures	M. Milleron
3,033,645	Precipitation of Plutonium Peroxide	B. F. Paris	3,037,796	Threaded Adaptor for Lugged Pipe Ends	J. E. Bobb
3,033,753	Erythropoietic Factor	W. F. White, R. J. Schloster	3,037,839	Preparation of OD_2 for Nuclear Reactor Fuel Pellets	J. M. Googin
3,033,771	Method for the Preparation of Binary Nitrogen-Fluorine Compounds	J. W. Fraser	3,037,840	Method for Preparation of Spherical UO_2	J. F. Gregory, Jr. E. F. Levey, Jr.
3,033,773	Solid Gas Suspension Nuclear Fuel Assembly	D. C. Schlunderberg, J. W. Ryan	3,037,921	Method and Apparatus for Producing Neutrons and Other Radiations	J. L. Tuck
3,033,774	Control System for Neutronic Reactors	F. E. Crever	3,037,922	Fast Transfer and Tritium Producing System	E. F. Johnson
3,034,088	Cable Connector	J. M. Celler	3,037,924	Isolated Body	E. C. Crovitz
3,034,689	Discharge Valve for Granular Material	L. D. Stoughton, S. T. Robinson	3,038,099	Cusp-Pinch Device	W. E. Baker, J. P. E. Vatteau
3,034,814	Coupling	E. Friesch, C. G. Johnson	3,038,249	Zirconium-Titanium-Beryllium Brassing Alloy	E. C. Gilliland, P. Petrardoc, G. M. Slaughter, L. C. Williams
3,034,854	Separation of Californium from Curium Solvent Extraction	D. F. Feyppard, G. W. Meach			

3,038,711	Vacuum Sealing Means for Low Vacuum Pressures	E. Millerson	3,044,847	Self-Moderating Fertile Compounds	D. T. Peterson, J. Exner
3,038,844	Separations by Electrolysis	W. H. Webb, J. D. Via	3,044,944	Methods of Preparation of Element 95	G. T. Seaborg, R. A. James
3,038,997	Area Radiation Monitor	F. W. Manning, S. E. Groothuis, J. H. Lykins, J. R. Mahoney & D. M. Pyle	3,044,945	Sheet Plasma Device	O. A. Anderson
3,039,014	Superfast Thermalization of Plasmas	C. C. Chang	3,044,946	High Density Nuclear Fuel Composition	F. B. Litton
3,039,032	Error Compensator for a Position Transducer	A. E. Fowler	3,044,947	Apparatus for Loading and Unloading a Machine	J. H. Payne
3,039,846	Method for the Recovery and Purification of Gaseous UF ₆ from Gaseous Mixtures and UF ₆ and UF ₄ Products Produced Thereby	P. R. Ogle, Jr.	3,045,108	Fuel Container Closure	C. C. Stone, R. A. Noland
3,039,847	Separation of Metal Valves from Nuclear Reactor Poisons	D. O. Campbell G. I. Cathers	3,045,528	Dark-Field Illumination System	D. V. Morgan
3,039,944	Fuel Element	L. R. Zumbait	3,046,087	Solvent Extraction Process for Separating Uranium and Plutonium from Aqueous Acidic Solutions of Neutron Irradiated Uranium	F. R. Bruce
3,039,948	Nuclear Reactor with Powdered Fuel	D. Krucoff	3,046,088	Protactinium Extraction	F. L. Horn
3,040,660	Electric Initiator with Exploding Bridge Wire	L. H. Johnston	3,046,089	Process of Treating Uranium Hexafluoride and Plutonium Hexafluoride Mixtures with Sulfur Tetrafluoride to Separate Same	M. J. Steindler
3,041,136	Flame Demitration and Reduction of Uranium Nitrate to Uranium Dioxide	W. H. Hedley, R. J. Boehrs & C. M. Henderson	3,046,090	Production of Uranium Monocarbide	R. M. Fowers
3,041,260	Nuclear Fuel Material	W. E. Goeddel	3,046,212	Nuclear Reactor	C. R. Anderson
3,041,263	Molten Plutonium Fueled Fast Breeder Reactor	R. M. Klein, R. E. Peterson, L. D. P. King, E. O. Swickard, Jr.	3,046,402	Multiple Thickness Times Density Gamma Gauge	N. H. Cherry
3,041,266	Fluorine Cell Anode Assembly	R. E. Cable, W. B. Goode, Jr., W. K. Henderson, G. H. Montillon	3,046,650	Brass Bonding of Columbium	R. L. Heestrand, M. L. Picklesimer
3,041,287	Heavy Metal Loaded Plastic Scintillating Compositions	M. Hyman, Jr.	3,047,360	Process for Extracting Septimium and Plutonium from Nitric Acid Solutions of Same Containing Uranyl Nitrate with a Tertiary Amine	J. C. Sheppard
3,042,594	Vibration Compaction	J. J. Bauth	3,047,480	Plasma Device Utilizing Self-Trapping of Plasma Current and Magnetic Field	R. H. Lovberg L. C. Burkhardt
3,043,653	Recovery of Uranium from Zirconium-Uranium Nuclear Fuels	T. A. Gans	3,047,484	Iron Base Alloys and Articles Made Therefrom	J. T. Stacy E. A. Sailer (deceased)
3,043,727	Plutonium Alloys Containing Controlled Amounts of Plutonium Allotropes Obtained by Application of High Pressures	R. O. Elliott K. A. Gschneidner, Jr.	3,047,601	Separation of Thorium from Rare Earth Values in Aqueous Acidic Solution by Solvent Extraction with an Alkyl Phosphate-Oxygen Condensing Organic Diluent	O. Johnson
			*2,920,235	Method and Apparatus for Producing Intense Energetic Gas Discharge	F. R. Bell, J. S. Luce

PATENTS WHICH HAVE ISSUED TO THE COMMISSION AND WHICH ARE AVAILABLE TO THE PUBLIC FOR LICENSING IN ACCORDANCE WITH THE LICENSING POLICY OF THE COMMISSION

3,036,674	COMPRESSION SEAL AND SEALING MATERIAL THEREFOR	T. G. Brannin, Lancaster, Pa.	3,049,483	NEUTRONIC REACTORS AND CONTROL MEANS THEREFOR	E. A. Kessnering Schenectady, N.Y.
3,043,323	BARBLE ULTRA-HIGH VACUUM VALVE	J. T. Mark and I. B. Geats, Lancaster, Pa.	3,049,485	SUPPORT STRUCTURE	J. Tatlock, Colchett near Warrington, England J. A. F. Glass Woolton, Liverpool, Eng.
3,048,474	CATALYTIC RECOMBINATION OF RADIO-LYTIC GASES IN THORIUM OXIDE SUBSTRATES	L. E. Norris, Oak Ridge, Tenn.	3,049,486	NUCLEAR REACTOR FUEL-BREEDER FUEL ELEMENT	E. L. Currier, Silver Spring, Md. J. E. Nicklas, Riverdale, Md.
3,048,532	CIRCULAR CONTROL ROD JOINT	A. G. Thorp, II Pittsburgh, Pa.	3,049,487	DIRECT-CYCLE-BOILING-WATER NUCLEAR REACTOR	J. M. Barrer, Elmhurst Ill. L. W. Fromm, Glen Elly, Ill. V. M. Kolbe Plainfield, Ill.
3,048,533	NEUTRONIC REACTOR MANIPULATING DEVICE	L. A. Orlinger, Los Angeles, Calif.	3,049,528	DIRECT COUPLED PROGRESSIVE STAGE PULSE COUNTER APPARATUS	H. M. Kaufman, Norreville, Pa.
3,048,534	CONTROL MEANS FOR NEUTRONIC REACTOR	L. Tomka, Schenectady, N.Y.	3,049,590	QUICK DISCONNECT ELECTRICAL CONNECTOR	F. J. Sparber, Belen, N. Mex.
3,049,400	SOLVENT EXTRACTION PROCESS FOR THE SEPARATION OF URANIUM AND THORIUM FROM FULVACTION AND FISSION PRODUCTS	R. E. Bainsay, Knoxville, Tenn. and J. G. Moore, Clinton, Tenn.	3,050,236	RESEALABLE LIQUID CATCHING PUMP	T. E. Betzer, Livermore, Calif.
3,049,401	PROCESS FOR DISSOLVING BINARY URANIUM-THORIUM OR ZIRCONIUM-MASE ALLOYS	A. A. Josko, Elmhurst, Ill., J. J. Bergmann, Joliet, Ill. and H. M. Levitz, Bellwood, Ill.	3,051,142	APPARATUS FOR SHEARING TUBULAR JACKETS	J. F. Simon, Glen Elly, Ill.
3,049,402	SOLVENT EXTRACTION FOR SEPARATING ACTINIDE AND LANTHANIDE METAL VALUES	R. A. Hildebrandt, Bellwood, Ill., H. H. Ryman, Chicago, Ill. and S. Voglar, Chicago, Ill.	3,052,361	LIQUID CYCLONE CONTRACTOR	M. E. Whitley, Oak Ridge, Tenn. and W. H. Woods, Oak Ridge, Tenn.
3,049,423	METHOD FOR OBTAINING FLUORINE METAL FROM ITS TRICHLORIDE	J. G. Beavis, J. A. Leary and W. J. Korman, Los Alamos, N. Mex.	3,052,513	STRIPPING OF URANIUM FROM ORGANIC EXTRACTANTS	D. J. Crouse, Oak Ridge, Tenn.
3,049,480	METHOD OF OPERATING A HEAVY WATER MODERATED REACTOR	H. C. Vernon, Oak Ridge, Tenn.	3,052,514	PROCESS FOR RECOVERING URANIUM FROM AQUEOUS PROSOBIC ACID LIQUORS	J. M. Schmitt, Oak Ridge, Tenn.
3,049,481	WNS-CORROSIIVE REACTOR FUEL SYSTEM	C. C. Berrick, Los Alamos, N. Mex.	3,052,532	CASTING SLIPS FOR FABRICATION OF REFRACTORY METAL WARE	S. D. Stoddard, Los Alamos, N. Mex., D. E. Buckholls, Los Alamos, N. Mex., and E. E. Cowan, Los Alamos, N. Mex.
			3,052,536	PREPARATION OF ACTINIDE-ALUMINUM ALLOYS	R. E. Moore Kennewick, Wash.
			3,052,537	PREPARATION OF URANIUM-ALUMINUM ALLOYS	R. E. Moore Kennewick, Wash.

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| 3,052,611 | METHOD OF PRODUCING URANIUM METAL BY ELECTROLYSIS | E. D. Piper, Des Peres, Mo. | 3,056,023 | MASS SEPARATION OF HIGH ENERGY PARTICLES | L. Marshall, Ballport, N.Y. |
| 3,052,613 | METHOD AND APPARATUS FOR CONDUCTING A NUCLEAR CHAIN REACTION | E. P. Wigner, Chicago, Ill., L. A. Chilingar, Chicago, Ill., and Galo J. Young, Chicago Ill. | 3,056,028 | NEUTRON SHIELDING STRUCTURE | J. T. Mattingly, Danville, Calif. |
| 3,052,614 | FREQUENCY CONTROL OF RF HEATING OF GASEOUS PLASMA | E. W. Herold, Alhambra, Calif. | 3,056,071 | ELECTRICAL OIL STRUCTURE | W. B. Baker, Orinda, Calif. and A. Bartwig, Richmond, Calif. |
| 3,052,615 | NUCLEAR FLAME STEAM GENERATOR | F. L. Johns, F. C. Grossmeyer, and M. R. Dushabek, Los Angeles, Calif. | 3,057,717 | PROCESS OF URANIUM METAL CONTAINING FUEL ELEMENTS | E. H. Moore, Emmenwich, Wash. |
| 3,052,616 | REACTOR CONTROL DEVICE | R. H. Graham, Los Altos, Calif. | 3,059,303 | GRIPPER DEVICE FOR TUBES | R. J. Bellerts, Richland, Wash. |
| 3,052,617 | STELLARATOR INDUCTOR | R. F. Post, Walnut Creek, Calif. | 3,059,688 | MULTIPLE SHAFT TOOL HEAD | H. P. Colbert, Paducah, Ky. |
| 3,052,637 | GLASS COMPOSITION AND PROCESS OF MAKING | A. N. Bisbay, Chicago, Ill. | 3,059,908 | HEAT EXCHANGER | T. H. Fox, T. Eichey, and G. E. Widders, Lynchburg, Va. |
| 3,052,801 | ELECTRICAL PULSE COUNTER APPARATUS | W. M. Kaufman Monroeville, Pa. T. A. Jeeves, Penn Hills Township, Pa. | 3,060,108 | NON-CORROSIVE FLUORINE FUEL SYSTEMS | A. S. Coffinberry and J. T. Weber, Los Alamos, N. Mex. |
| 3,054,147 | METHOD FOR SOLVENT-ISOSTATIC PRESSING | F. B. Archibald Pleasanton, Calif. | 3,060,111 | NUCLEAR REACTOR | J. Sherman, Pittsburgh, Pa., J. E. Scarborough, West Mifflin, Pa., W. L. Feuch, Canonsburg, Pa., H. J. Palladino, Centre County, Pa., and F. G. De Buff, Bethel Park, Pa. |
| 3,054,201 | IDENTIFICATION BADGE DETACHABLE CLIP | M. T. Burns, Chicago, Ill. | 3,061,533 | CONTROL MEANS FOR A BOILING WATER NUCLEAR REACTOR POWER SYSTEM | R. H. Shannon, V. Chester, Pa. and H. E. Williamson, San Jose, Calif. |
| 3,054,896 | APPARATUS FOR ELECTRON BEAM HEATING CONTROL | W. H. Jones, West Chester, Ohio and J. B. Reese, Glendale, Ohio | 3,063,005 | TRANSFORMER APPARATUS | J. Nicol, Westford, Mass. W. Franzen, Wayland, Mass. |
| 3,054,926 | ELECTRON DISCHARGE DEVICE | H. E. Graham, Houston, Texas | 3,063,290 | SYSTEM FOR ULTRASONIC INSPECTION OF TUBULAR OBJECTS | J. A. Esserman, Knoxville, Tenn. and R. B. Oliver, Kingston, Tenn. |
| 3,054,989 | DIODE STEERED MAGNETIC-CORE MEMORY | A. S. Melamed, Flushing, N.Y., R. Laupheimer, Westbury, N.Y., and R. T. Shvritin, Flushing, N.Y. | 3,063,792 | CONTINUOUS PRECIPITATION METHOD FOR CONVERSION OF URANIL NITRATE TO URANIUM TETRAFLUORIDE | G. M. Reichart, Hamilton, Ohio, and T. J. Colloff, Cincinnati, Ohio |
| 3,055,631 | ELECTROSTRICTION VALVE | D. O. Kippenhan, Castro Valley, Calif. | 3,063,794 | PREPARATION OF REFRACTORY OXIDE CRYSTALS | W. R. Grimes, Kingston, Tenn., J. E. Shaffer and G. M. Watson, Oak Ridge Tenn. |

- 3,063,829 METHOD FOR OBTAINING PLUTONIUM METAL AND ALLOYS OF PLUTONIUM FROM PLUTONIUM TRICHLORIDE
J. G. Esparis, J. A. Leary and W. J. Harman, Los Alamos, N. Mex.
- 3,063,830 SEPARATION OF URANIUM FLUORIDE AND FISSION PRODUCTS FROM NEUTRON-BOMBARDED URANIUM
A. E. Martin, Drovers Grove, Ill.; I. Johnson, Clarendon Hills, Ill.; L. Burris, Naperville, Ill.; I. O. Wansch, Drovers Grove, Ill.; and H. M. Feder, Park Forest, Ill.
- 3,063,923 FUSED REACTOR FUELS
S. W. Mayer, Canoga Park, Calif.
- 3,065,044 RECOVERY OF ALUMINUM FROM FISSION PRODUCTS
R. E. Bianco and I. E. Higgins, Oak Ridge, Tenn.
- 3,065,537 METHOD OF SEALING
P. Parraras, Knoxville, Tenn.; and C. M. Slaughter, Oak Ridge, Tenn.
- 3,065,864 REMOTE CONTROL MANIPULATOR
R. T. Coffman, Richland, Wash.
- 3,066,763 INVERTED CONTROL ROD LOCK-IN DEVICE
W. G. Brussalis and G. E. Bost, Pittsburgh, Pa.
- 3,067,116 PROTECTED NUCLEAR FUEL ELEMENT
J. Kittel, Naperville, Ill. and J. F. Schumar, San Diego, Calif.
- 3,067,117 METHOD OF PREPARING A FUEL ELEMENT FOR A NUCLEAR REACTOR
J. J. Booth and R. J. Amicatti, Richland, Wash.
- 3,067,133 WATER TREATMENT
R. W. Pizman and W. R. Conley, Richland, Wash.
- 3,067,339 FLOW GATING
W. J. Poppelbaum
Champaign, Ill.
- 3,067,344 PULSE STRETCHER EMPLOYING CAPACITOR CHARGED THROUGH INVERTED CIRCUIT AND DISCHARGED BY DELAYED TRANSISTOR CLAMP
D. E. Branan and W. F. Cummins, Livermore, Calif.
- 3,067,365 GUIDE FOR POLARIZED NEUTRONS
V. L. Sailor, East Patchogue, N.Y. and R. W. Alchroth, Islip, N.Y.
- 3,068,093 METHOD OF PURIFYING IODINE
A. J. Darnell, Altadena, Calif.; W. A. McCollum, N. Hollywood, Calif. and C. J. Meehan, Bakers, Calif.
- 3,068,159 PROCESS FOR COOLING A NUCLEAR REACTOR
L. B. Borst, Oak Ridge, Tenn.
- 3,068,160 MECHANICALLY-POISED FLAT-TYPE ALUMINUM-CLAD FUEL ELEMENT
J. H. Erwin, Concord, Tenn.
- 3,068,161 METHOD AND APPARATUS FOR CONTROL OF A NUCLEAR REACTOR
W. E. Cawley, Richland, Wash.
- 3,068,163 METHOD AND MEANS FOR SCORING REACTOR FUEL CONTAINERS IN AN ASSEMBLY
E. L. Curries, Silver Spring, Md.; J. E. Hickies, Syttsville, Md.; and C. A. Coombs, Wash. D. C.
- 3,068,352 METHOD OF OBTAINING AN IMPROVED WELD IN INERT ARC WELDING
T. E. Correy, Richland, Wash.
- 3,069,228 METHOD OF DETERMINING URANIUM TETRAFLUORIDE
J. O. Davis, C. C. Fogel and W. E. Palmer, Harrison, Ohio
- 3,069,337 IRRADIATION METHOD AND APPARATUS
C. F. Cabell, Richland, Wash.
- 3,069,338 FUEL ELEMENT FOR NEUTRONIC REACTORS
B. E. Schaner, Bethel, Pa. and E. A. Wolfe, West Mifflin, Pa.
- 3,069,341 NEUTRONIC REACTORS
F. Daniels, Madison, Wis.
- 3,069,344 APPARATUS FOR THE DESSICATION AND EXCITATION OF CHARGED PARTICLES
R. F. Post, Walnut Creek, Calif. and F. E. Coenagen, Pleasanton, Calif.
- 3,069,628 PULSE RATE DIVIDER
H. C. McDonald, Livermore, Calif.
- 3,069,654 METHOD AND MEANS FOR RECOGNIZING COMPLEX PATTERNS
P. V. C. Hough, Ann Arbor, Mich.
- 3,069,854 METHOD OF MAKING TUNGSTEN FILAMENTS
J. W. Fraser, Livermore, Calif.
- 3,070,420 METHOD OF MAKING SPHERICAL ACTIVE CARBIDE
G. D. White, Joliet, Ill. and D. C. O'Rourke, Worth, Ill.
- 3,070,527 COMPOSITE FUEL ELEMENT
V. J. Hurford, Mt. Lebanon, Pa.; E. B. Gordon, Los Angeles, Calif. and W. A. Johnson, Pepper Pike Village, Ohio
- 3,070,529 NEUTRONIC REACTOR
E. P. Wigner, Princeton N. J.

3, 070, 530	NEUTRONIC REACTOR POWER PLANT	E. E. Metcalfe, Los Angeles County, Calif.	3, 073, 941	SHIPPING CONTAINERS FOR RADIOACTIVE MATERIAL	H. D. Macbber, Forest Hills, N.Y.; B. E. Biggs, F. J. Taricchio, and E. O. George, Schenectady, N.Y.
3, 070, 537	FUEL SUBASSEMBLY CONSTRUCTION FOR RADIAL FLOW IN A NUCLEAR REACTOR	M. Treshow, Del Mar, Calif.	3, 074, 153	FOXTILE CERAMIC	S. J. Paprocki and G. W. Cunningham, Columbus, Ohio
3, 070, 538	FUEL ASSAY REACTOR	B. I. Spurred, Naperville, Ill.; E. A. Stomsier, Chicago, Ill.; and F. E. Martens, Plainfield, Ill.	3, 074, 315	EXPERIMENTAL ATOMAL MAINTENANCE	M. P. Finkel, Chicago, Ill.
3, 071, 459	PRODUCTION OF BAPHIUM METAL	G. V. Elger, Albany, Oreg., and E. W. Doebel, Cincinnati, Ohio	3, 074, 776	GASBOOS DISPOSAL PROCESS	R. F. Ryan, Lynchburg, Va.; F. R. Thomason, Madison Heights, Bedford, Va.; J. E. Hicks, Bedford, Va.
3, 071, 527	NUCLEAR REACTOR	G. Young, Havorthorn, N.Y.	3, 074, 868	METHOD OF OPERATING A NEUTRONIC REACTOR	A. Turkevich, Chicago, Ill.
3, 071, 628	REFRIGERATING FLUORINATED COMPOUNDS	A. L. Lynch, Wilmington, Del.	3, 074, 871	ALLOY COMPOSITION FOR NEUTRONIC REACTOR CONTROL RODS	B. Lestman, Pittsburgh, Pa.; E. F. Lotco, Whitehall Borough, Pa.; H. J. Snyder, Bethel Park, Pa.; R. E. Eggleston, Whitehall Borough, Pa.
3, 071, 734	COAXIAL FILAMENT TRANSFORMERS FOR PULSE CIRCUITS	D. O. Kippichan, Castro Valley, Calif.	3, 075, 115	ION SOURCE WITH SPACE CHARGE NEUTRALIZATION	J. W. Flowers, Calmesville, Pa.; J. S. Luce, Danville, Calif.; and W. E. Stirling, Oak Ridge, Tenn.
3, 072, 475	METHOD OF MAKING ALLOYS OF SECOND BASE BATH SERIES METALS	R. D. Baker, Los Alamos, N. Mex. and S. R. Hayward, Whittier, Calif.	3, 075, 385	HYDROMETER	C. M. Stover, Albuquerque, N. Mex.
3, 072, 550	REACTOR SYSTEM AND CONTROL VALVE	P. Fortescue, LaJolla, Calif.; C. Rickard, Solana Beach, Calif. and D. Rose, San Diego, Calif.	3, 075, 583	SMALL-ANGLE DRILL-HOLE WHIPSTOCK	D. E. Nielsen, Livermore, Calif.; J. L. Olsen and W. F. Bennett, Las Vegas, Nev.
3, 072, 552	FUEL ELEMENT INTERLOCKING ARRANGEMENT	P. Fortescue and B. Nicoll LaJolla, Calif.	3, 075, 637	REFRACTORY METAL TUBE DRAWING	C. E. Dean, La Grange, Ill.; F. J. Keresak, Naperville, Ill.
3, 072, 553	NUCLEAR REACTOR	C. Sterr, Pacific Palisades, Calif.	3, 075, 694	PARTICLE SEPARATION METHOD	H. C. Anderson, Oak Ridge, Tenn.
3, 072, 786	BEAM SPLITTER	W. B. Jones, Berkeley, Calif. and P. F. Schlichters, Oakland, Calif.	3, 075, 825	LOW TEMPERATURE PROCESS FOR THE REMOVAL AND RECOVERY OF CESARIUM AND STRONTIUM FROM AQUEOUS NITRATE SOLUTIONS	J. E. Savolainen, Oak Ridge, Tenn.
3, 072, 851	PULSE AMPLIFIER FOR ALTERING THE SHAPE OF UNDERSHOTS	E. Fairstein and R. A. Dondl Oak Ridge, Tenn.	3, 075, 925	RADIATION SHIELDING COMPOSITION	H. L. Demagan, Livermore, Calif.
3, 073, 698	DISPERSION HARDENING OF BAPHIUM METAL	W. Arbiter, Yonkers, N.Y.			
3, 073, 717	COATED CARBON ELEMENT FOR USE IN NUCLEAR REACTORS AND THE PROCESS OF MAKING THE ELEMENT	P. J. Pyle, San Diego, Calif. and G. L. Allen, Pacific Beach, Calif.			
3, 073, 767	REACTOR FUEL ELEMENTS TESTING CONTAINER	G. E. Whigham and E. R. Smith Toledo Falls, Idaho			
3, 073, 768	NEUTRON SOURCE	J. L. Richmond, Mansburg, Ohio and C. E. Wells, Farmersville, Ohio			

3, 076, 078	THERMAL RELAY DEVICE	R. O. Murdoch (title in Murdoch interest to D.S.) Albuquerque, N. Mex., and F. A. Record, Danvers, Mass.	3, 079, 323	COUPLING-CONTROL ROD DRIVE COUPLING MECHANISM	R. C. Brooks, San Diego, Calif.
3, 076, 091	MEASURING CIRCUIT	J. R. Mahoney, Oak Ridge, Tenn.	3, 080, 308	SIMPLIFIED SODIUM GRAPHITE REACTOR SYSTEM	R. W. Dickinson, Van Nuys, Calif.
3, 076, 894	GAMMA RAY THICKNESS GAUGES	J. L. Pumas, S. Jefferson and R. S. Owen, Abingdon, England	3, 081, 068	COLD TRAP	H. Milleron, Berkeley, Calif.
3, 077, 113	ROCKET PORT CLOSURE	J. T. Mattingly, Danville, Calif.	3, 081, 226	PROCESS FOR REDUCING KIDNEYWOOD CHLORINE LEVELS IN ATOMAL ORGANISMS	H. E. DiLorio, Memphis, Tenn.
3, 077, 378	SEPARATION OF EXTRACT FROM OTHER LANTHANIDE BASE EXTRACTS BY SOLVENT EXTRACTION	D. F. Peppard, Oak Ridge, Tenn., E. P. Sorvitz, Park Forest, Ill., and G. W. Mason, Claremont Hills, Ill.	3, 081, 237	DOUBLE-BAKED, SELF-CLEANING ELECTRODE	R. D. Piper, Des Peres, Mo. and R. F. Leiffeld, St. Louis, Mo.
3, 077, 505	HIGH TEMPERATURE THERMO-COUPLE	A. M. Esbays, Bellport, N.Y.	3, 081, 247	MODERATOR ELEMENTS FOR UNIFORM POWER NUCLEAR REACTOR	R. Balent, Tarzana, Calif.
3, 077, 712	VACUUM TRAP AND VALVE COMBINATION	H. Milleron, Berkeley, Calif. and L. L. Levenson, Livermore, Calif.	3, 081, 619	CONTINUOUS ANALYZER UTILIZING BOLLING POINT DETERMINATION	V. S. Pappas, Oak Ridge, Tenn.
3, 078, 551	METHOD OF MAKING A TUBE AND PLATE CONNECTION	F. Patricia, Knoxville, Tenn., C. E. Eubert, Lenoir City, Tenn. and G. W. Slaughter, Oak Ridge, Tenn.	3, 082, 163	METHOD FOR PREPARING URANIUM NITROCARBIDE-FLUORIDE MIXED-CARBIDE SOLID SOLUTION	A. E. Ogard, J. A. Leary and H. J. Korman, Los Alamos, N. Mex.
3, 079, 136	REUSABLE REACTION VESSEL	T. S. Soias, Richland, Wash.	3, 084, 041	PROCESS OF PRODUCING A NITROGEN-TIN COMPOUND	S. T. Ziegler, Park Forest, Ill., and J. B. Darby, Wheaton, Ill.
3, 079, 179	COAXIAL TUBE COUPLING	H. E. Wisnath, Elmhurst, Ill.	3, 084, 055	CADMIUM PHOSPHATE GLASS	E. W. Carpenter, Northridge, Calif., and P. D. Johnson, Chatsworth, Calif.
3, 079, 225	PROCESS FOR SEPARATING AMERICIUM AND CURIUM FROM BASE EARLY ELEMENTS	R. D. Raybarr, Powell, Tenn. and M. E. Lloyd, Oak Ridge, Tenn.	3, 084, 273	HIGH CURRENT RADIO FREQUENCY ION SOURCE	M. E. Abdolasis, Naperville, Ill.
3, 079, 251	EMALTING ALLOTS	R. G. Donnelly, G. M. Slaughter, Oak Ridge, Tenn., and E. C. Gilliland, Knoxville, Tenn.	3, 084, 281	ION SOURCE (R.F. INDUCTION TYPE)	C. B. Mills, Packamak Labs, N.J.
3, 079, 317	PRODUCTION OF TRITIUM	G. H. Jenks, Oak Ridge, Tenn., E. M. Shapiro, Springfield Township, Delaware County, Pa., H. Elliott, Bluepoint N.Y.	3, 085, 173	APPARATUS FOR TRAPPING ENERGETIC CHARGED PARTICLES AND COUNTING THE RESULTING PLASMA	G. Gibara, Hayward, Calif., V. C. Jordan, Livermore, Calif. and E. J. Leuser, Alamo, Calif.
3, 079, 321	SODIUM DEUTERIUM REACTOR	E. D. Oppenheimer, Monacauch, N.Y. and E. A. Weisberg, Yonkers, N.Y.	3, 085, 189	ENERGY-TRANSFER SYSTEMS	F. C. Thomsen, V. T. Covey and P. A. Davenport, Oxford, England
			3, 086, 864	METHOD OF SUPPRESSING GASTROINTESTINAL UREASE ACTIVITY	W. J. Visek, Chicago, Ill.

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| 3,086,926 | METHOD OF DISSOLVING REFRACTORARY ALLOYS | D. H. Britton, Clinton, Tenn. and J. E. Savolainen, Oak Ridge, Tenn. |
| 3,086,930 | ALLOY FOR FUEL OF NEUTRONIC REACTORS | C. E. Bloomster and Y. B. Katayama, Richmond, Wash. |
| 3,086,935 | AN ASSEMBLY OF PARALLEL PLATES | E. F. Grob, Naperville, Ill. and D. H. Lemmon, Elmhurst, Ill. |
| 3,087,045 | WELDING APPARATUS | T. B. Correy, D. E. Doherty and I. V. Holson, Richmond, Wash. |
| 3,087,056 | HIGH VOLTAGE ELECTRODES | J. J. Marrey, Oakland, Calif. |
| 3,087,781 | PREPARATION OF SPHERICAL URANIUM DIOXIDE PARTICLES | R. P. Levey, Oak Ridge, Tenn. and A. E. Smith, South Clinton, Tenn. |
| 3,087,876 | METHOD OF SINTERING URANIUM DIOXIDE | J. A. Stoverovich, Veneta, Ohio and C. H. Henderson, Pittsburgh, Pa. |
| 3,087,877 | METHOD OF MAKING FUEL BODIES | V. V. Goodall, San Diego, Calif. and H. T. Simms, LaJolla, Calif. |
| 3,087,879 | CONTROL ROD | D. E. Walker, Park Forest, Ill. and S. Norris, Chicago, Ill. |
| 3,087,881 | BOILING WATER REACTOR WITH FEED WATER INJECTION NOZZLES | M. Treabow, Hinsdale, Ill. |
| 3,088,100 | MAGNETIC SEPARATION PROCESS | D. H. Birdsall, Livermore, Calif. and E. E. Hiley, Hayward, Calif. |
| 3,088,671 | MULTIPLIER CIRCUIT | E. L. Chase, Blue Point, N.Y. |
| 3,088,800 | DISSOLUTION OF URANIUM FUELS BY MISO- OR DIFLUOROPHOSPHORIC | R. Johnson, Shoreham, N.Y. F. L. Horn, Seyville, N.Y. and G. Strickland, Blue Point, N.Y. |
| 3,088,823 | SEPARATION OF URANIUM METAL FROM OXIDE AND SLAG IN THE REDUCTION OF URANIUM TETRAFLUORIDE | O. R. Magesanz, Cincinnati, Ohio |
| 3,088,890 | METHOD OF FABRICATING A GRAPHITIZED MODERATED REACTOR | E. E. Eratz, Chicago, Ill. |
| 3,088,891 | FUEL ELEMENTS FOR NEUTRONIC REACTORS | F. C. Fouts, Chicago, Ill. and E. E. Jette (deceased), Los Alamos, N. Mex. |
| 3,088,892 | DISPERSION ELEMENT CONSISTING OF CERAMIC COATED UO ₂ PARTICLES UNIFORMLY DISTRIBUTED IN A ZINCALLOY MATRIX | F. H. Cain and J. E. Eck Apollo, Pa. |
| 3,088,894 | COMPONENT OF HIGH TEMPERATURE FLASKS | E. E. Koenig, Rotterdam, N.Y. |
| 3,088,895 | BOILING SLURRY REACTOR AND METHOD OF CONTROL | M. Petrick, Joliet, Ill. and J. F. Macchietto, Naperville, Ill. |
| 3,088,904 | NUCLEAR REACTOR | E. C. Post, Richardson, Texas |
| 3,089,092 | SUPERHETERODYNE RADIO FREQUENCY PHASE CONTROL SYSTEM | M. Plotkin, Hesperoque Park, N.Y., S. C. Dake, E. Patchogue, N.Y. and E. S. Snyder, Ballport, N.Y. |
| 3,089,098 | STABILIZED TRANSISTOR AMPLIFIER | J. B. Hoe, Albuquerque, N. Mex. |
| 3,089,751 | SELECTIVE SEPARATION OF URANIUM FROM FERROUS STAINLESS STEELS | R. J. Beaser, Knoxville, Tenn. and J. H. Charubial, Oak Ridge, Tenn. |
| 3,089,768 | NON-DIRECTIONALLY STABLE CORROSION RESISTANT NUCLEAR FUEL | J. H. Mittel, Naperville, Ill. |
| 3,089,830 | METHOD OF MAKING A COMPACTORIZED FUEL ELEMENT FOR A NUCLEAR REACTOR | E. L. McGeary and E. Friesch, Pittsburgh, Pa. |
| 3,089,836 | SAFETY SYSTEM FOR CONTROL ROD | J. A. Paget, Fowey, Calif. |
| 3,089,839 | CONTROL ROD DRIVE MECHANISM FOR A NUCLEAR REACTOR | B. C. Evans, W. Lomas, San Diego, Calif. and F. J. Liederbach, Philadelphia, Pa. |
| 3,089,840 | NUCLEAR POWER PLANT | J. C. Carter, Elmhurst, Ill. E. E. Armstrong, Park Forest, Ill. and M. J. Janicka, Downers Grove, Ill. |

3,089,857	GAMMA RADIATION DOSE-RATE-MEASURING CLASSES AND METHODS OF USING	A. H. Sashay, Chicago, Ill.	3,096,411	ACCELERATION RESPONSIVE SWITCH	A. F. Chabrok and R. L. Noonall Albuquerque, N. Mex.
3,090,117	METHOD OF SEALING MERTILLION	G. S. Sunda and R. V. Esail, Los Alamos, N. Mex.	3,096,438	APPARATUS FOR THE MASS ANALYSIS OF PLASMA ON A CONTINUOUS BASIS	R. V. Seidigh, Knoxville, Tenn.
3,090,480	SAMPLE CAN HANDLING MECHANISM	W. D. Egan, Schenectady, N.Y. and G. L. Romine, Scotia, N.Y.	3,097,543	VARIABLE-THROW CAN	E. C. Goddall, E. Y. Robinson, Livermore, Calif.
3,090,894	CEPHOGENIC MAGNETS	R. F. Post, Walnut Creek, Calif. and C. E. Taylor, Livermore, Calif.	3,097,630	STEAM GENERATOR	R. V. Kinyon and G. D. Whitman, Oak Ridge, Tenn.
3,091,847	METHOD OF MANUFACTURE OF METAL ENCLOSED COILS	R. J. Peters, Santa Susana, Calif.	3,097,920	REMOVAL OF CESIUM FROM AQUEOUS SOLUTIONS BY ADSORPTION	K. C. Knoll, Richland, Wash.
3,093,452	PRECIPITATION OF ZINCION AND FLOURIDE IONS FROM SOLUTIONS	B. J. Newby, Idaho Falls, Idaho	3,098,022	COVERING A COSE BY EXTRUSION	A. J. Kernis, Richland, Wash.
3,093,562	FLOW SYSTEM FOR REACTOR	W. H. Zinn, Hinsdale, Ill.	3,098,025	FOIL ELEMENT FOR NUCLEAR REACTOR	R. A. Boland, Chicago, Ill. D. E. Walker, Park Forest Ill. and B. I. Spitzer, Naperville, Ill.
3,093,563	COMPOSITE NEUTRONIC REACTOR	J. E. Hulse, Scarsdale, N.Y.	3,098,028	FLUORINATION ELECTROLYSIS CELL	L. J. Ballina, G. W. Ejlertson and H. J. Noraman, Los Alamos, N. Mex.
3,093,566	NUCLEAR REACTOR FUEL ELEMENT	R. L. Currier, Silver Spring, Md. and J. E. Rickless, Riverdale, Md.	3,098,709	FLUORINATION OF OXIDIC NUCLEAR FUEL	J. A. Leary, Los Alamos, N.M. V. J. Hochman, Hinsdale, Ill. and J. D. Guber, Cicero, Ill.
3,093,569	TRAVELING WAVE FUSION	R. F. Post, Walnut Creek, Calif.	3,098,807	HIGH ENERGY RATE EXTRUSION OF GRANULES	L. Lewis, Bridgeport, Conn.
3,093,733	RESONATOR PARTICLE SEPARATOR	J. P. Blawett, Bellport, N.Y. and J. D. Klesing, River Edge, N.J.	3,098,812	APPARATUS FOR CONTROL OF A BOILING REACTOR RESPONSIVE TO STEAM DEMAND	M. Treabow, Del Mar, Calif.
3,093,738	AUTOMATIC HAND COUNTER	J. E. Mann, Washville, Tenn. and A. E. Walmeright, Golden, Colo.	3,098,944	GAMMA PROPORTIONAL COUNTER COUNTING HIGH Z GAS AND LOW Z NEUTRONATOR	R. Fox, Oakland, Calif.
3,094,869	RESOLVING RECORDING ANGULAR VANE ASSEMBLY	C. Wehman, Idaho Falls, Idaho	3,100,183	FUEL COMPOSITION FOR NUCLEAR REACTORS	J. C. Anderson, Niagara Falls, N.Y.
3,096,220	CONDENSER PROTECTION OF ALUMINUM	R. S. Dairyple, Chesterfield Co., Va. and W. B. Holton, San Jose, Calif.	3,100,184	TRITIUM PRODUCTION BY NEUTRON-IRRADIATION OF ALUMINUM-LITHIUM ALLOY	B. M. Abraham, Chicago, Ill.
3,096,263	NUCLEAR REACTOR FUEL ELEMENTS AND METHOD OF PREPARATION	W. E. Kingston, Bayside, N.Y. S. Kopolman, Flushing, N.Y. and E. H. Bauman, New York, N.Y.	3,100,187	REFLECTOR FOR NEUTRONIC REACTORS	A. P. Press, Knoxville, Tenn.
3,096,269	COUNTER ROTATING PLASMA DEVICE	K. Balbach, D. Veron, Berkeley, Calif., and W. E. Barber, Orinda, Calif.			

3,100,188	REACTOR MODERATOR STRUCTURE	A. F. Frass, Knoxville, Tenn. and J. J. Todor, Oak Ridge, Tenn.
3,100,255	METHOD FOR AIR CARBON-ARC CUTTING OR GOOGING	J. Miller, Clinton, Tenn.
3,100,263	CONTINUOUS ROTATION SCATTERING CHAMBER	J. V. Verba and R. A. Haverlyak, Rochester, N.Y.
3,100,281	AN APPARATUS FOR MEASURING ANGULAR OFFSET BETWEEN A FIRST METAL TUBE AND A SECOND METAL TUBE SPATIALLY DISPOSED WITHIN THE FIRST TUBE	J. C. Spenser, Richland, Wash.
3,100,284	PULSE SYNTHESIZING GENERATOR	Q. A. Kerns, Orinda, Calif.
3,100,573	EXHIBIT STAND	G. R. Cox, Bellport, N.Y.
3,100,655	RAYONIT TYPE COUPLING WITH FINISHED SOLVENT RELEASE MEANS	R. O. Werk, Albuquerque, N. Mex.
3,100,663	ADJUSTMENT OF CERTAIN VALUES FROM AQUEOUS SOLUTIONS	F. P. Roberts, Richland, Wash.
3,100,686	METHOD FOR PREPARATION OF SINTERABLE ZEPHYRUM OXIDE	B. J. Strum, Oak Ridge, Tenn.
3,100,730	METHOD FOR REDUCING THE IMPURITY RESISTIVITY OF SODIUM	R. F. Post, Walnut Creek, Calif.
3,100,742	FUEL ELEMENT FOR A NEUTRONIC REACTOR	E. K. McGeary, F. R. Winslow Pittsburgh, Pa.
3,101,058	DIAPHRAGM PUMPING SYSTEM	V. H. Carr, Oak Ridge, Tenn. and E. R. Dobyns, Cocoa Beach, Fla.
3,101,246	RECOVERY AND SEPARATION OF LITHIUM VALUES FROM SALVAGE SOLUTIONS	D. L. Hansford, Houston, Texas and E. W. Babbe, Cincinnati, Ohio
3,101,259	SPRAY CALCINATION REACTOR	B. M. Johnson, Kennewick, Wash.
3,101,309	PASTIZER FOR AN ASSEMBLY OF PLATES	E. F. Grob, Mesperville, Ill.
3,101,310	MICROBIC END CLOSURES FOR FLASKS CONTAINING AND HEATING DEVICES	R. F. Post, Walnut Creek, Calif.
3,101,406	ELECTRONIC INTEGRATING CIRCUIT	R. H. Engelmann, Castro Valley, Calif.
3,101,409	DRIFT CONTROL IN AN ANALYTICAL GAMMA RAY SPECTROMETER	L. E. Fite, Bryan, Texas
3,102,678	DIFFUSION PUMP	L. Lovenson, Livermore, Calif.
3,102,649	A PROCESS OF DISSOLVING FUEL ELEMENTS OF NUCLEAR REACTORS	R. M. Vander Weil, H. T. Babin, Idaho Falls, Idaho and D. L. Bauer, Pocatello, Idaho
3,102,850	METHOD OF PREPARING A CERAMIC FUEL ELEMENT	V. T. Ross, C. E. Bloomster and R. E. Hardsley, Richland, Wash.
3,102,851	NEUTRONIC REACTION SYSTEM	E. P. Wigner, Oak Ridge, Tenn.
3,103,475	REACTOR	L. Saillor, Chicago, Ill.
3,103,853	HYDRAULIC SERVO CONTROL MECHANISM	R. B. Hussey, East Longmeadow, Mass. and M. J. Gottsche, Bangden, Mass.
3,104,134	NON-ROTATING DRILL GUIDE ASSEMBLY	D. E. Nielsen, Livermore, Calif., J. L. Olsen and V. P. Bennett, Las Vegas, Nev.
3,104,295	FAST OPENING SWITCH	M. Bender, F. E. Bennett and A. F. Suckes, Princeton, N.J.
3,104,345	FLASMA GENERATOR	J. M. Wilcox, Berkeley, Calif. and W. E. Baker, Orinda, Calif.
3,104,502	APPARATUS FOR BLENDING SPHERICAL MOLES	E. P. Burch, Richland, Wash.
3,104,542	REMOTELY CONTROLLED DUST SAMPLER	M. F. Scoggins, Richland, Wash.
3,105,026	FUEL ELEMENT FOR NUCLEAR REACTORS	J. J. Dickson, Silver Spring, Md.
3,105,030	FUEL ELEMENT FOR A NEUTRONIC REACTOR	R. K. McGeary and F. R. Winslow, Pittsburgh, Pa.

3,105,015	CONSTRUCTION OF NUCLEAR FUEL ELEMENTS	S. J. Veens, Harbor, Fla.	3,110,025	SYSTEM FOR MEASURING DISTANCE BY THE UTILIZATION OF PULSE ECARDS	M. M. Horrell, Detroit, Mich., and E. E. Sanders, Amherst, N.Y.
3,105,036	PRESSURIZED WATER REACTOR CORE WITH FLUORINE BUBBLER	E. H. Fuechl, Piquette, Pa.	3,110,555	SEPARATION OF PROTACTINUM FROM MELTED SALT REACTOR FUEL COMPOSITIONS	J. H. Shaffer, M. J. Kally, Oak Ridge, Tenn., J. E. Strain and D. R. Cunniff, Kligston, Tenn.
3,105,037	CONCENTRIC TUBE FUEL ELEMENT SPRING ALIGNMENT SPACER DEVICE	S. J. Veens, Harbor, Fla.	3,110,556	PROCESS FOR SEPARATING YTTRIUM FROM THE BARE EARTHS BY SOLVENT EXTRACTION	D. F. Peppard, Oak Park, Ill., and G. W. Mason, Clarendon Hills, Ill.
3,105,052	PREPARATION OF REFRACTORY OXIDE MICROSPHERES	G. C. Eaves, Knoxville, Tenn.	3,110,835	FLEXIBLE GEIGER COUNTER	H. G. Richter, Chapel Hill, N.C. and A. S. Gillispie, Durham County, N.C.
3,105,189	A POSITIONAL DATA SYSTEM	G. A. Forster, Westmont, Ill.	3,110,872	RADIO FREQUENCY ATTENUATOR	S. Giordano, Port Jefferson Station, N.Y.
3,105,215	AN ELECTRICAL THREE DIMENSIONAL FUNCTION PROGRAMMER	W. F. Siebold, Arnold, Md.	3,111,374	RECOVERY OF ACTINIDES FROM AQUEOUS NITRIC ACID SOLUTIONS	N. Ader, Park Forest, Ill.
3,105,995	WELDING APPARATUS	P. C. Fleming, Livermore, Calif.	3,111,458	ETHEROPOLEIC FACTOR PURIFICATION AND PRODUCT	W. F. White, Lombard, Ill., E. Goldwasser, G. F. Weber, Chicago, Ill., and E. Egan Round Brook, N.J.
3,107,976	BIURIUM-DANALUM SEPARATION	E. L. Eversner, Tonawanda, N.Y., M. Smitz and E. A. Wilhelm, Ames, Iowa	3,111,475	FUEL ELEMENT FOR A NUCLEAR REACTOR	J. K. Davidson, Wheaton, Md.
3,108,466	BIAST YIELD METER	H. H. Sander, M. Cousin, Albuquerque, N. Mex. and S. C. Eight, South Orange, N.J.	3,111,477	FUEL ELEMENT	R. V. Bean, San Diego, Calif.
3,108,859	PULSED EXTRACTION COLUMN	O. H. Esaki, Richmond, Wash.	3,111,963	NOVEL FLOW DEVICE	R. E. Brockwell, Oak Ridge, Tenn.
3,109,677	SELF-RELEASING GRAPPLING DEVICE	D. A. Hoover, Richmond, Wash.	3,112,095	FLUID PRESSURE AND CAM OPERATED VALVE	T. H. Betzer, Livermore, Calif.
3,109,724	FILTER FOR HIGH VELOCITY GAS STREAMS	R. A. Beckman, H. F. Warner, Livermore, Calif.	3,112,115	COLD PRESSURE VESSEL SEAL	A. E. Smith, Clinton, Tenn.
3,109,730	INERTILE GRANULE FUEL FOR NUCLEAR REACTORS AND METHOD OF MAKING	S. T. Ziegler, Forest Park, Ill.	3,112,196	METAL ALLOY SUITABLE FOR CONTROLLING THERMAL NEUTRON REACTORS	R. J. Schier, Richmond, Wash., and T. R. McNameis, Pasco, Wash.
3,109,731	PRODUCTION OF ACTINIDE METAL	J. B. Knighton, Joliet, Ill.	3,112,275	REGENERATION OF HYDROCARBON SOLUTIONS OF TETRAALKYL FERROUSATE USED IN PROCESSING OF NUCLEAR FUEL	J. Kosinski, Cicero, Ill., and D. E. Werle, Franklin Park, Ill.
3,109,735	SINTERING METHOD	J. M. Coogis, Oak Ridge, Tenn.	3,113,007	SCAVENGING OF RADIOACTIVE AEROSOLS	
3,109,752	OXIDATION-RESISTANT COATING ON ARTICLES OF YTTRIUM METAL	D. R. Wilder, and C. D. Wirtus, Ames, Iowa			
3,109,766	CELLULAR CORE FOR CURVED SURFACES	C. B. Morris, Madison, Wis.			
3,109,774	ETHEROPOLEIC FACTOR PREPARATION	W. F. White, Lombard, Ill., and G. W. Weber, Chicago, Ill.			

3,113,082	HEAT GENERATION	D. E. Imhoff, Walnut Creek, Calif. and W. E. Barker, Livermore, Calif.	3,115,462	METHOD OF INHIBITING IRRADIATION-INDUCED VISCOSITY INCREASE OF ORGANIC FLUIDS	G. H. Demings, R. O. Bolt, San Rafael, Calif., J. W. Kent, El Cerrito, Calif. and F. A. Christiansen, Manhattan Beach, Calif.
3,113,091	NUCLEAR REACTOR AND THERMIONIC FUEL ELEMENT THERMOPOR	H. S. Basor and R. L. Birsch, Northridge, Calif.	3,115,467	METHOD OF INHIBITING IRRADIATION-INDUCED VISCOSITY INCREASE OF ORGANIC FLUIDS	G. H. Demings, R. O. Bolt, San Rafael, Calif., J. W. Kent, El Cerrito, Calif. and F. A. Christiansen, Manhattan Beach, Calif., J. G. Carravelli Corrico, Calif.
3,113,220	GRAND RING SEMICONDUCTOR JUNCTION	F. S. Gooding, Lafayette, Calif. and W. L. Samsen, Berkeley, Calif.	3,115,575	IMPROVED ION-PRODUCING MECHANISM FOR CALUTERONS	W. A. Bell, Oak Ridge, Tenn. and H. K. Prater, Knoxville, Tenn.
3,113,517	BOMB STABILIZING STRUCTURE	J. L. Kallay, New Orleans, La. and C. E. Remyen, Albuquerque, N. Mex.	3,116,106	PREPARATION OF HIGH-DENSITY THORIUM OXIDE SPHERES	R. A. McInnes, and A. J. Taylor, Oak Ridge, Tenn.
3,113,755	VIBRATION DAMPING AND SHOCK MOUNT	D. J. Stevens, Overland Park, Kans. and G. W. Ferran, Lawrence, Kans.	3,116,155	MAGNESIUM OXIDE SLIP CASTING METHOD	S. D. Stoddard and D. E. Hockells, Los Alamos, N. Mex.
3,114,283	SUBCOOLING DETECTOR	J. A. McCann, Scotia, N.Y.	3,116,209	METHOD FOR EXCHANGING ENERGY WITH A PLASMA BY MAGNETIC FORMING	L. S. Hall, Livermore, Calif.
3,114,682	METHOD OF PREPARING CHROMIUM DIBIIDE	F. A. Scott and L. E. Hodge, Richland, Wash.	3,116,211	METHOD AND APPARATUS FOR EXAMINING FUEL ELEMENTS FOR LEAKAGE	R. E. Smith, M. W. Echo and C. B. Doe, Idaho Falls, Idaho
3,114,693	VERTED FUEL ELEMENT FOR GAS-COOLED NUCLEAR REACTORS	W. T. Ferguson, Del Mar, Calif.	3,116,214	REACTOR MODERATOR STRUCTURE	B. L. Greenstreet, Oak Ridge, Tenn.
3,114,716	METHOD OF PREPARING RADIOACTIVE CESIUM SOURCES	T. C. Quinby, Kingsport, Tenn.	3,116,350	PRODUCTION OF SLIP CAST CALCIA BULLOCKWARE	S. D. Stoddard, D. E. Hockells and R. E. Cross, Los Alamos, N. Mex.
3,115,194	NUCLEAR REACTOR APPARATUS FOR EARLY FERTILIZATION	W. M. Adams, Livermore, Calif.	3,116,660	HIGH SPEED KERR CELL FRAMING CAMERA	H. C. Coors and L. F. Gilley, Livermore, Calif.
3,115,446	FUEL ELEMENTS FOR NUCLEAR REACTORS	H. M. Flinniston, Abingdon, England	3,116,980	PULSE COLLIM	R. S. Grimst, Idaho Falls, Idaho
3,115,447	NUCLEAR REACTOR FUEL ELEMENT ASSEMBLY	F. G. Stengel, Bridgerville, Pa.	3,117,372	STABILIZED PURE EARTH OXIDES FOR A CONTROL ROD AND METHOD OF PREPARATION	R. A. McInnes, and R. A. Potter, Oak Ridge, Tenn.
3,115,451	LOGIC CIRCUIT	G. H. Strong, Richland, Wash. and M. L. Fought, Kennewick, Wash.	3,117,912	METHOD OF PRODUCING NEUTRONS	D. E. Imhoff, Walnut Creek, Calif. and W. E. Barker, Livermore, Calif.
3,115,452	COMPOSITE CONTROL ROD	H. E. Hook, Lynchburg, Va.	3,118,696	GRIPPING DEVICE FOR CYLINDRICAL OBJECTS	J. F. Filger, Richland, Wash.
3,115,453	EMERGENCY SHUTDOWN FOR NUCLEAR REACTORS	J. A. Paget, Povey, Calif., S. L. Everts, San Diego, Calif., E. S. Stone, Del Mar, Calif. and H. E. Stewart, Rancho Santa Fe, Calif.			

- 3, 118, 764 LIQUID PHASE SINTERING OF METALLIC CARBIDES
J. F. Hammond, J. D. Seese, Knoxville, Tenn.
- 3, 119, 036 RADIATION MONITOR CONSTANTING TWO COAXIAL IONIZATION CHAMBERS AND MEANS FOR INSULATING THE SEPARATE CHAMBERS
C. B. Brustrop, New York, N.Y. and R. T. Noonan, Bartdale, N.Y.
- 3, 119, 238 CRYOGENIC
W. H. Chamberlain, Walnut Creek, Calif. and H. E. Maseck, Oakland, Calif.
- 3, 119, 537 MULTIPLE DIFFERENTIAL ROTARY MECHANICAL DRIVE
R. C. Switz, Lafayette, Calif.
- 3, 119, 653 PREPARATION OF URANIUM MONOSULFIDE
I. Yoshioka, Westmont, Ill.
- 3, 119, 658 ALUMINUM CLADDING DISSOLUTION
W. W. Schulz, Richland, Wash.
- 3, 119, 723 APPARATUS FOR CONVERTING HEAT INTO ELECTRICITY
C. E. Crouthamel, Glenn Ellyn, Ill. and M. S. Foster, Lockport, Ill.
- 3, 120, 120 ULTRASONIC METHOD OF MEASURING THICKNESS USING LAMB WAVES
D. C. Worlton and C. L. Frederick, Richland, Wash.
- 3, 120, 435 REGENERATION OF FISSION-PRODUCTS-CONTAINING MAGNESIUM-TELLURIDE ALLOYS
F. Chiotti, Ames, Iowa
- 3, 120, 470 METHOD OF PRODUCING NEUTRONS
D. H. Imhoff, Walnut Creek, Calif. and W. H. Barker, Livermore, Calif.
- 3, 120, 476 FUSION PROCESS AND APPARATUS UTILIZING ENHANCEMENT PRINCIPLE
R. F. Post, Walnut Creek, Calif.
- 3, 120, 477 METHOD FOR CONVERTING A DENSE FLASHER
A. J. Hatch, Chicago, Ill.
- 3, 120, 480 CONTROL ROD FOR NUCLEAR REACTORS
E. Ledin, LaJolla, Calif.
- 3, 120, 481 MEANS FOR PRODUCING HIGH DENSITY FLAMES
R. F. Post, Walnut Creek, Calif.
- 3, 120, 493 SUPPRESSION OF HYDROGEN VOLATILIZATION IN EVAPORATION AND CALCINATION OF RADIOACTIVE WASTE SOLUTION
W. E. Clark and H. W. Godbee, Oak Ridge, Tenn.
- 3, 120, 627 METHOD OF FORMING METAL PLATES WITH EXPLOSIVES
M. T. Abegg, Albuquerque, N. Mex. and R. A. Norwood, San Diego, Calif.
- 3, 121, 034 IZONORION ALLOY TREATMENT PROCESS
E. Anderko, Frankfurt am Main, H. Richter, Frankfurt am Main, Biederrad Company and H. Schlaicher, Chivasso, Italy
- 3, 121, 045 CONTROL ROD FOR NUCLEAR REACTOR
A. M. Harris, San Diego, Calif. and E. Ledin, LaJolla, Calif.
- 3, 121, 046 PRESSURE VESSELS
K. A. Trickett, San Diego, Calif. and J. T. Evers, Peterborough, Ontario, Canada
- 3, 121, 047 CERAMIC COATED FUEL PARTICLES
L. D. Stoughton, Chatham, N.J., J. M. Blocher and H. D. Veigel, Columbus, Ohio
- 3, 121, 052 CALABRIA TYPE SODIUM GRAPHITE REACTOR
R. M. Peterson, Woodlands Hills, Calif., J. E. Mohlmeister, Granada Hills, Calif., N. E. Vuogha, Roseda, Calif., W. J. Sanders, Van Nuys, Calif. and A. C. Williams, Camoga Park, Calif.
- 3, 121, 128 PROCESS OF MAKING SEALED FUEL FOR NUCLEAR REACTORS
W. J. O'Leary, Claymont, Del. and E. A. Fisher, Postoris, Ohio
- 3, 121, 204 NON-REFLECTIVE LIQUID TERMINATION OF A COAXIAL CABLE
S. Giordano, Fort Jefferson Station, N.Y.
- 3, 121, 666 NUCLEAR REACTOR FUEL ASSEMBLY
C. W. Whelock, Emico, Calif.
- 3, 121, 825 ELECTRICALLY CONDUCTIVE FLOOR COVERING FOR USE IN EXPLOSIVE HAZARD AREAS
M. T. Abegg, Walnut Creek, Calif., O. D. Bottler, Alameda, Calif., J. D. Deligms, Livermore, Calif. and F. S. Nicholson, Hayward, Calif.
- 3, 121, 941 A FLUID OPERATED TOOL FOR COUPLING TUBES TOGETHER
E. J. Bellerte, Richland, Wash.
- 3, 122, 027 LINEAR MOTION DEVICE
E. Frisch, Pittsburg, Pa. and T. F. Glaser, Monroeville, Pa.

3,122,178	MAGNETIC CORE FLAME TREADING MACHINE AND METHOD	J. F. Marlon, New York, N.Y. and E. T. Shewlin, New Gardens, N.Y.	3,123,862	ULTRA-HIGH PRESSURE DEVICE	R. P. Levy, Oak Ridge, Tenn.
3,122,414	PROCESS FOR RECOVERY OF STRONTIUM VALUES FROM FISSION PRODUCT WASTE SOLUTIONS	D. E. Jerner, Clinton, Tenn. and E. P. Wiscow, Knoxville, Tenn.	3,124,172	FRACTIONATING COLUMN PRODUCT COLLECTOR CONTROL	C. D. Passon, El Cerrito, Calif.
3,122,424	GRAPHITE BONDING METHOD	L. D. P. King, Santa Fe, N. Mex.	3,124,513	CONTROL ROD DRIVE	B. C. Haska, San Diego, Calif. and I. C. Thompson, Ramona, Calif.
3,122,458	GRAIN REFINEMENT OF URANIUM BILLET	L. Lewis, Bridgeport, Conn.	3,124,514	CORE REFLECTOR FOR NUCLEAR REACTOR	S. L. Kootz, San Diego, Calif., W. A. Kalk, Foway, Calif. and F. B. Minitt, National City, Calif.
3,122,484	REACTOR BAVING FUEL ELEMENTS COATED WITH BURNABLE POISON	H. P. Iskenderian, Elmhurst, Ill.	3,124,538	METHOD FOR CONVERSION OF CESIUM ALUM TO RADIATION SOURCE MATERIAL	R. E. Lewis, Kingsston, Tenn.
3,122,509	COHERENT NUCLEAR REACTOR ELEMENTS	J. H. Handwerk and E. D. Lynch, Joliet, Ill.	3,124,525	GRAPHITE PRODUCTION UTILIZING URANYL NITRATE HEXAHYDRATE	J. E. Armstrong, H. Sheinberg and D. H. Scholl, Los Alamos, N. Mex.
3,122,595	CONTROLLED NUCLEAR REACTOR DISPERSIONS AND METHOD OF MAKING	J. H. McCreary, Columbus, Ohio	3,125,409	THE RECOVERY OF URANIUM FROM GAS MIXTURE	S. H. Jerry, Knoxville, Tenn.
3,122,648	VENNER CIRCULATOR UTILIZING AT LEAST TWO SORTED DELAY LINES	R. P. Sufer, Castro Valley, Calif.	3,125,492	FLASH HEATING AND CONFINEING SYSTEM	W. R. Baker, Orinda, Calif.
3,122,165	FRICTION-FREE BALANCE	H. J. Carson, Lockport, Ill., B. V. Ostroff, Westmont, Ill. and C. N. Nantzer, Sarvey, Ill.	3,125,497	PURIFICATION PROCESS FOR URANIUM CARBIDE	W. N. Hanson, Canoga Park, Calif.
3,123,328	SUPPORT STRUCTURE	E. A. Trickett, San Diego, Calif. and H. R. Grossmann, Solana Beach, Calif.	3,125,678	FAST NEUTRON DOSIMETER FOR HIGH TEMPERATURE OPERATION BY MEASURE- MENT OF THE AMOUNT OF CESIUM 137 FORGED FROM A THERMION WIRE	D. A. McCune, Scotia, N.Y.
3,123,435	IMPROVED PROCESS OF PREPARING URANIUM CARBIDE	H. E. Miller, H. L. Stethers, Mesperville, Ill. and T. R. Johnson, Glen Ellyn, Ill.	3,125,760	FUEL LOCATING AND SUSPENDING SYSTEM FOR NEUTRONIC REACTOR CORE	J. Foster, A. M. Perry, Oak Ridge, Tenn. and A. P. Fraas, Knoxville, Tenn.
3,123,436	PREPARATION OF Pu ²³³	R. Benz, Los Alamos, N. Mex.	3,126,251	PLUTONIUM RECOVERY FROM NEUTRON- BORATED URANIUM FUEL	R. H. Moore, Kenneswick, Wash.
3,123,532	CONTROL ROD POSITIONED BY FLUID FLOW THROUGH THE ROD CHANNEL	J. W. Michel, Oak Ridge, Tenn.	3,127,763	COMPACT CASCADE IMPACTS	M. Lippmann, Mount Vernon, N.Y.
3,123,533	PRESSURE RELIEF DEVICE FOR NEUTRONIC REACTORS	A. E. Gelson, De Witt, N.Y.	3,127,872	EXPERIMENTAL ANIMAL WATERING DEVICE	M. P. Finkel, Chicago, Ill.
3,123,535	DEVICE FOR PRODUCTION OF NUCLEAR ENERGY FROM U ²³³	G. T. Seaborg, Chicago, Ill., J. V. Goffman, Berkeley, Calif. and R. W. Stoughton, Oak Ridge, Tenn.	3,128,234	NUCLEAR CORE UNITS FOR A NEUTRONIC REACTOR	J. F. Cagle, Saratoga, Calif. and D. B. Sherer, Gilroy, Calif.

3,129,405	EXTRACTOR FOR HIGH ENERGY CHARGED PARTICLES	G. E. Lamberts, Oakland, Calif.	3,135,599	PRODUCTION OF URANIUM METAL POWDER IN A FLUIDIZED BED AND POWDER RESULTING THEREFROM	H. M. Heidt, Poyall, Tenn.
3,129,329	FAST NEUTRON SPECTROMETER USING SPACED SEMICONDUCTORS FOR MEASURING TOTAL ENERGY OF NEUTRONS CAPTURED	T. A. Love and R. B. Murray, Oak Ridge, Tenn.	3,135,665	FUEL ELEMENT FOR A NEUTRONIC REACTOR	S. L. Koutz, R. F. Turner, San Diego, Calif. and P. Fortescue, Rancho Santa Fe, Calif.
3,130,304	DEEP WATER ISOTOPIC CURRENT ANALYZER	W. H. Johnston, Baltimore, Md.	3,135,856	METHOD AND APPARATUS FOR SEALING TUBES	C. C. Stone, Dowens Grove, Ill.
3,130,306	NUCLEAR RADIATION DOSIMETER USING COMPOSITE FILTER AND A SINGLE ELEMENT FILTER	E. Storm and S. Shleier, Los Alamos, N. Mex.	3,136,051	CLADDING OF NUCLEAR FUEL ELEMENTS	F. Quinlan and R. G. Wheeler, Richmond, Wash.
3,130,307	NEUTRON FLUX INTENSITY DETECTION	J. T. Russell, Richland, Wash.	3,136,432	TRANSFER MECHANISM	D. Nicoll, LaJolla, Calif. and N. E. Timin, San Diego, Cal.
3,130,315	METHOD AND APPARATUS FOR PRODUCING AND ANALYZING POLARIZED GAMMA RADIATION	M. Hammersh, Villa Park, Ill., S. S. Hanna, Western Springs, Ill. and G. J. Perlov, Downers Grove, Ill.	3,136,593	ELECTRICAL CONNECTOR CORDING APPARATUS	E. F. Ehrman, Cedar Crest, N. Mex. and F. J. Sparber, Belen, N. Mex.
3,130,491	BONDING METHOD	E. V. Padgett, Richland, Wash. and D. E. Warf, Pasco, Wash.	3,136,599	PLUTONIUM RECOVERY FROM NUCLEAR FUEL	E. H. Moore, Kenneswick, Wash.
3,130,841	ARTICLE HANDLING DEVICE	K. A. Trickett, San Diego, Calif.	3,136,600	SEPARATION OF ACTINIDES FROM EACH OTHER	S. A. Adar, Beerseba, Israel, and P. E. Fields, Chicago, Ill.
3,131,139	RADIATION INDUCED VULCANIZATION OF RUBBER LATEX	R. B. Macrobias, Hinesdale, Ill., D. S. Salientine, Blue Point, N.Y. and B. J. Metz, Stony Brook, N.Y.	3,136,697	HYDRAULIC SAMPLE CHANGER FOR TANK-TYPE WATER-COOLED NUCLEAR REACTORS	G. P. Arnold, F. D. Newcorn, W. D. Schaefer, Los Alamos, N. Mex. and P. D. O'Brien, Albuquerque, N. Mex.
3,132,076	NUCLEAR REACTOR	J. H. West and R. W. Deutsch, Clearwater, Fla.	3,136,698	SERVO-CONTROLLED REGULATOR FOR NEUTRONIC REACTORS	E. E. Mann, Oak Ridge, Tenn.
3,132,996	CONTRA-ROTATING PLASMA SYSTEM	W. R. Baker, Orinda, Calif. and K. Halbach, Berkeley, Calif.	3,136,699	NEUTRONIC REACTOR SYSTEM	W. H. Zimm, Chicago, Ill.
3,132,997	HOMOGENEOUS REACTOR FUELED WITH SUSPENDED PARTICULATE IN THE COOLANT	H. M. Bussey, Los Alamos, N. Mex.	3,136,700	FUEL CHANNEL ELEMENTS FOR CIRCULATING FUEL NEUTRONIC REACTORS	H. F. Fossendick and M. D. Greene, LaJolla, Calif.
3,133,248	ELECTROMETER UTILIZING A-C AND D-C VOLTAGE BALANCING	F. R. Shooka, Riverside, Ill.	3,136,715	PROCESS OF REMOVING RUTHENIUM FROM AQUEOUS SOLUTIONS	L. L. Ames, R. Pullerton, D. W. Pearce, Richland, Wash.
3,133,867	NEUTRONIC REACTOR FUEL ELEMENT	E. Friesch, Pittsburgh, Pa.	3,136,902	TUNNEL DIODE DISCRIMINATOR CIRCUIT	Q. A. Karns, Orinda, Calif.
3,134,019	RADIATION DETECTING WITH SHEET GLASS	A. H. Bishop, Argonne, Ill.	3,136,948	D. C. INSTRUMENT TRANSDUCER SYSTEM	A. A. Windsor, Berkeley, Calif.

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| 3,137,174 | FLUID METERING DEVICE | L. R. Hawk, Hayward, Calif.
and V. E. Scribner, Pleasanton,
Calif. | 3,140,234 | FAST REACTOR CORE | W. B. Lowenstein, Elmhurst,
Ill. |
| 3,137,397 | NUCLEAR REACTOR FUEL HANDLING
SYSTEM | D. Nicoll, LaJolla, Calif. and
J. L. Hedgecock, Escondido, Calif. | 3,140,235 | DOWNFLOW PACKED BED NUCLEAR
FISSION REACTOR | L. F. Hatch, Brookhaven, N.Y.
and T. V. Sheehan, Hampton
Boys, N.Y. |
| 3,137,551 | ULTRA HIGH VACUUM DEVICE | J. T. Mark, Lancaster, Pa. | 3,140,236 | NUCLEAR REACTOR WITH IMPROVED
BEAM TUBE | C. S.reiber, Wheaton, Ill. |
| 3,137,634 | NUCLEAR REACTOR OPERATION | H. B. Sliker, Kenneswick,
Wash. | 3,140,237 | LARGE FAST NUCLEAR REACTOR | R. E. Peterson, Kenneswick,
Wash. and S. L. Stewart,
Richland, Wash. |
| 3,137,636 | REACTOR FUEL ELEMENT CONTAINING
ABSORBER | R. F. Wikner, Rancho Santa Fe,
Calif. | 3,140,238 | CHANGING AND SERVICE MACHINE
FOR GAS-COOLED REACTORS | A. F. Frass, Knoxville,
Tenn. and J. J. Tubor,
Oak Ridge, Tenn. |
| 3,137,657 | CERAMIC PRODUCT COMPRISING
SINTERED BERYLLIA AND BENTONITE
AND METHOD | J. F. Quirk, Cardiff, Calif.
and F. H. Loffman, Del Mar,
Calif. | 3,140,394 | MEANS FOR DETERMINING THE
DIRECTION AND VELOCITY OF
NUCLEAR PARTICLES | A. Roberts, Chicago, Ill. |
| 3,138,453 | TUNGSTEN ELECTRODES | E. L. Foster and R. B.
Walker, Columbus, Ohio | 3,140,397 | NEUTRON DETECTOR UNIT UTILIZING
MEDIUM | R. F. Henry, Greenacastle,
Ind. |
| 3,138,535 | NUCLEAR REACTOR HAVING TRANSFER
MECHANISM | P. Fortescue, LaJolla, Calif.
and D. Nicoli, Del Mar, Calif. | 3,140,398 | NEUTRON POSITIVE UTILIZING A
FISSION FOIL | F. W. Reinhardt and F. J.
Pavia, Oak Ridge, Tenn. |
| 3,138,652 | CAPACITOR WITH AN INTERNAL GAS
BARRIER | E. L. Ford and R. E. Hampp,
Albuquerque, N. Mex. | 3,140,479 | TRANSISTORIZED ANALOG-TO-DIGITAL
CONVERTER | R. L. Chase, Blue Point,
N.Y. |
| 3,139,360 | INSPECTABLE SOLDERING FLUX
COMPOSITION | G. Volda, Albuquerque, N.
Mex. | 3,140,820 | METHOD FOR MAINTAINING VENT
HIGH VACUUM IN A SYSTEM | R. E. Clausung, Oak Ridge,
Tenn. |
| 3,139,591 | AMPLIFIER APPARATUS FOR HIGH
ENERGY PARTICLE ACCELERATORS | R. E. Rhames, Centerville,
N.Y., E. E. Sider and F. A.
Janik, Bedford, N.Y. | 3,141,004 | WEIGHTLESSNESS SWITCH | R. P. Stromberg, Albuquerque,
N. Mex. |
| 3,139,927 | HEAT EXCHANGER | C. R. Binner, Highland
Park, Ill. and C. V.
Hammond, East Orange, N.J. | 3,141,092 | SELECTOR FOR FAST AND INTERMEDIATE
ENERGY NEUTRONS POSITIONED | L. E. Weinberg, Schenectady,
N.Y. |
| 3,140,151 | METHOD OF REPROCESSING UO ₂
REACTOR FUEL | J. R. Folts, Canoga Park,
Calif. and V. J. Gardner,
Woodland Hills, Calif. | 3,141,235 | POWDERED TANTALUM ARTICLES | W. E. Lenz, Los Alamos,
N. Mex. |
| 3,140,171 | PROCESS FOR PREPARATION OF
URANIUM METAL | J. E. Trapp, Cincinnati,
Ohio | 3,141,360 | DRIVE MECHANISM | A. M. Harris, San Diego,
Calif. and E. Ledin,
LaJolla, Calif. |
| 3,140,173 | TITANIUM PRIMER FOR AN EVAPOR-
ION PUMP | E. C. Hurst, Stoughton,
Wis. | 3,141,413 | NEUTRON ELECTROMAGNETIC
FLUID FLOW | H. Reymann, Santa Fe, N.
Mex. |
| 3,140,193 | PROCESS FOR PRODUCING OXIDATION
RESISTANT REFRACTORY COATING ON
DENSE GRAPHITE | J. S. Kame, Livermore, Calif. | 3,141,826 | APPARATUS AND METHOD FOR CON-
FINING A PLASMA | K. O. Friedrichs and E.
Grad, New Rochelle, N.Y. |

3,141,827	RESEVER REACTOR CORE WITH ALTERNATE ZONES OF INFLATED AND ENRICHED FUEL	H. F. Ishamarian, Elmhurst, Ill.	3,146,231	PRODUCTION OF BOUND PARTICLES OF CERAMIC MATERIAL	C. W. Krystyniak, A. T. MacGrossen, Schenectady, N.Y. and G. L. Floetz, Scotia, N.Y.
3,141,829	FUEL ELEMENT	F. Fortescue, San Diego, Calif. L. E. Zimmelt, Rancho Santa Fe, N. Mex. and D. C. Morse, San Diego, Calif.	3,146,349	DETECTING HIDDEN EXPLOSIVES USING NEUTRON BEAMS	E. D. Jordan, Kensington, Md.
3,141,911	PROCESS FOR THE FABRICATION OF NUCLEAR FUEL ELEMENTS	J. J. Beuth, Richland, Wash.	3,146,622	ATMOSPHERIC Eddy DISTURBANCE DETECTOR	H. Moss, Park Forest, Ill.
3,143,478	RIDGE FUEL BEAM REACTOR	J. Chernick, J. M. Hastings, Patchogue, N.Y., K. W. Downes, Setonkat, N.Y., J. M. Emdin, Bellport, N.Y. and H. J. C. Koets, Brookhaven, N.Y.	3,147,088	URANIUM-TIN-LITHIUM COMBOSION RESISTANT ALLOY	H. S. Klish, Jackson Heights, N.Y. and H. E. Hauser, New York, N.Y.
3,144,200	PROCESS AND DEVICE FOR CRYOGENIC ABSORPTION PUMPING	C. E. Taylor, Livermore, Calif., A. I. Dumt, Alamo, Calif. and J. E. Ombandro, San Jose, Calif.	3,147,109	SEPARATION OF PLUTONIUM, URANIUM, AMERICIUM AND FISSION PRODUCTS FROM EACH OTHER	J. B. Knighton, Joliet, Ill. and E. E. Stromberg, Naperville, Ill.
3,144,393	SUBCOOLED LIQUID INLET FOG COOLED NUCLEAR REACTORS	M. Baber, Yonkers, N.Y. and G. A. Sofer, White Plains, N.Y.	3,147,396	METHOD AND APPARATUS FOR FEASING A LINEAR ACCELERATOR	D. J. Coertz, E. B. Neal, Menlo Park, Calif. and K. B. Mallory, Palo Alto, Calif.
3,145,078	METHOD OF REPROCESSING NUCLEAR FUEL ELEMENTS	G. Strickland, Blue Point, N.Y., E. Johnson, Shoreham N.Y., P. L. Horn, Sayville, N.Y. and C. B. Bartlett, West Islip, N.Y.	3,148,941	DISSOLUTION OF URANIUM-METALS IN REACTOR FUEL ELEMENTS	T. A. Gens, Oak Ridge, Tenn.
3,145,151	FUEL ASSEMBLY FOR LOW POWER REACTORS	E. F. Crob, Naperville, Ill.	3,148,989	DECONTAMINATION OF MILK FROM RADIOACTIVE ANIONIC INGREDIENTS	G. E. Marty, J. E. Gilchrist, and J. E. Campbell, Cincinnati, Ohio
3,145,182	METHOD FOR IMPROVING ETIOLOGICAL RESISTANCE OF URANIUM CARBIDE CONTAINING COMPOSITIONS	J. P. Hammond and J. D. Sease, Knoxville, Tenn.	3,149,043	NUCLEAR REACTOR	L. Goldstein, Monsey, N.Y., L. Joseph, Greenburgh, N.Y., M. S. Silberstein, Eriecliff Manor, N.Y. and A. A. Weinstein, Bronx, N.Y.
3,145,284	SUPERCONDUCTIVE ELECTRIC SWITCH	E. L. Lequer, Espanola, N. Mex.	3,149,044	ADVANCED TEST REACTOR	D. E. de Boisblanc, Idaho Falls, Idaho and S. E. Leonard, University City, Mo.
3,145,333	FORCE LIMITING DEVICE FOR MOTOR CONTROL	J. A. Ferdini, Brookfield, Ill. and V. Butler, Chicago, Ill.	3,149,047	RESILIENT MODERATOR STRUCTURE FOR NEUTRONIC REACTORS	A. P. Frass, Knoxville, Tenn.
3,145,956	PARAMETER DETECTION CONTROL ASSEMBLY	E. E. Widdows, Albuquerque, N. Mex.	3,149,611	ANIMAL WATERING NIPPLE AND NUTRIENT CAP COMBINATION	J. W. Harrison, Markham, Ill.
3,146,064	DECONTAMINATION OF URANIUM	E. L. Moore, Richland, Wash.	3,149,908	CYCLOTRONES OF FORTHVALENT NEUTRON	T. J. La Chapelle, Ingleswood, Calif.
3,146,173	FUEL ELEMENT	F. Fortescue, D. C. Morse, San Diego, Calif. and L. E. Zimmelt, LaJolla, Calif.	3,149,909	FLUIDIZED SOLIDS PROCESS FOR RECOVERY OF URANIUM FROM LITHIUM-TYPE FUEL ELEMENTS	L. P. Batch, Brookhaven, N.Y., J. J. Bailly, Bellport, N.Y. and W. H. Rogan, Rockville, Md.

3,149,966	OXIDATION RESISTANT CERIUM ALLOTS	K. A. Gschneidner, Los Alamos, N. Mex.	3,152,868	PREPARATION OF SCANDIUM ETHERIDES	C. P. Kemper, and J. C. McGuire, Los Alamos, N. Mex.
3,149,968	APPARATUS FOR CORRECTING SENSITIVITY VARIATIONS IN PHOTO-MULTIPLIER TUBES	L. D. Stephens, Walnut Creek, Calif.	3,152,887	AMERICIUM-CURIUM SEPARATION	S. Lacroski, R. K. Steunenberg, Naperville, Ill. and J. B. Knighton, Joliet, Ill.
3,150,051	PACKAGED NUCLEAR PLANT WITH INTEGRAL SUPERHEATER AND PRESSURIZER	J. E. Ammon, Akron, Ohio	3,152,959	EXTRACTION METHOD AND APPARATUS FOR CONTROLLED FUSION SERVICES	C. C. Damm, Alamo, Calif.
3,150,053	STEAM-WATER MIXING DEVICE FOR STEAM-COOLED REACTOR	A. J. Goldman, G. Breidenbach, New York, N.Y.	3,152,984	METHOD OF DEHYDRATING AND INSOLUBILIZING AN AQUEOUS NUCLEAR REACTOR WASTE SOLUTION	W. E. Winsche and M. W. Davis, Aliken, S. C.
3,150,054	HIGH FLUID FLOW RATE NUCLEAR REACTOR	B. H. Fox, Livermore, Calif.	3,153,482	LIQUIDATION OF WAREHOUSES FOR TUBE EXTRUSION	B. J. Bantz, Cushing, Okla. and L. A. Donnerstall, Washington, Mo.
3,150,055	REACTOR	H. E. Metcalf, Chicago, Ill.	3,153,850	METHOD AND DEVICE FOR CONTROLLING ULTRASONIC WELDING APPARATUS	D. C. Worlton, Richland, Wash. and E. A. Walker, Pasco, Wash.
3,150,057	FUEL SUBASSEMBLY FOR NUCLEAR REACTOR	H. O. Noonan, Elmhurst, Ill. and E. Better, Chicago, Ill.	3,154,375	POTASSIUM PLUTONIUM SULFATE SEPARATION PROCESS	M. Cefola, Yonkers, N.Y.
3,150,101	ION EXCHANGE RESIN WITH SCINTILLATING PROPERTIES	A. H. Heimbach, El Cerrito, Calif.	3,154,376	EXELSION CONTROL IN LIQUID-SUSPENSION EXTRACTION	B. E. Faige, E. L. Bobbe and B. J. Newby, Idaho Falls, Idaho
3,150,159	REMOVAL OF PYROCARBON DEGRADATION PRODUCTS FROM ORGANIC SOLUTIONS	J. M. Schmitt, Oak Ridge, Tenn.	3,154,378	PROCESS FOR PREPARING URANIUM MONOCARBIDE	A. Schneider, L. Berris and S. Lavroski, Naperville, Ill.
3,150,281	GLASS OF HIGH ULTRAVIOLET TRANSMITTANCE, METHOD AND ARTICLES MANUFACTURED THEREFROM	A. M. Biebay, Chicago, Ill.	3,154,379	PLUTONIUM SEPARATION FROM URANIUM AND LANTHANIDES BY PRECIPITATION FROM MOLYBDENE CHLORIDE SOLUTIONS	G. E. Benedict and J. L. Swanson, Richland, Wash.
3,150,291	INCREMENTAL ELECTRICAL METHOD AND APPARATUS FOR ENERGIZING HIGH CURRENT SUPERCONDUCTING ELECTRO-MAGNETS	E. L. Laquer, Espanola, N. Mex.	3,154,408	URANIUM RECOVERY FROM ONE CONCENTRATE	J. B. Knighton, Joliet, Ill., R. K. Steunenberg, Naperville, Ill. and J. P. La Plante, Palos Park, Ill.
3,150,924	TREATMENT OF URANIUM DIOXIDE TO PROMOTE ITS CONVERSION TO URANIUM TETRAFLUORIDE	S. H. Scilley, D. C. Erster, Oak Ridge, Tenn. and C. C. Littlefield, Kingston, Tenn.	3,154,471	NUCLEAR REACTOR	A. Radtowsky, Silver Spring, Md.
3,150,926	TUNGSTEN TUBING EXTENSION RILLET	J. G. Hunt, Framingham, Mass.	3,154,500	STEAMWATER RECOVERY PROCESS	G. Jansen, Kennelick, Wash., G. L. Richardson, A. N. Platt, Richland, Wash. and L. A. Bray, Pasco, Wash.
3,150,964	PURIFICATION OF YTTRIUM METAL	O. H. Carlson, P. A. Schmidt and J. A. Haeffling, Ames, Iowa	3,154,501	POLYMER COMPOUND HEAT SOURCES	M. E. Hertz, Kettering, Ohio
3,151,029	CORE ASSEMBLY FOR A NUCLEAR REACTOR	F. Schweerer, Mount Lebanon, Pa.			
3,151,034	CONSOLIDATED NUCLEAR STEAM GENERATOR ARRANGEMENT	R. M. Douglass, Akron, Ohio, R. V. Earle, E. Bond, and D. C. North, Lynchburg, Va.			

3,156,011	SELF-CONTAINED VARIABLE-ENVIRONMENT PRESSING DIE	D. M. Olson, Los Alamos, N. Mex.	3,156,457	ULTRA-CLEAN ROOM	W. J. Whitfield, Albuquerque, N. Mex.
3,156,523	ELEMENT 95 AND METHOD OF PRODUCING SAID ELEMENT	G. T. Seaborg, Chicago, Ill.	3,158,468	SEPARATION OF AN ACTINIDE METAL FROM AN ALLOY	R. Fearlman, Teresana, Calif. and L. A. Hanson, Canoga Park, Calif.
3,156,526	STAINLESS STEEL DECLASSIFYING	L. P. Hatch, Brookhaven, N.Y.; J. J. Easley, Ballport, N.Y.; C. B. Bartlett, West Islip, N.Y. and B. Johnson, Shoreham, N.Y.	3,158,543	FUEL ASSEMBLY SUPPORT SYSTEM FOR NUCLEAR REACTOR	J. Sherman, Pittsburgh, Pa.; J. E. Shriboagh, West Mifflin, Pa.; W. L. Feitch, Canonsburg, Pa.; N. J. Falladio, Centre County, Pa. and P. G. De Buff, Bethel Park, Pa.
3,156,532	YTTRIUM-90 GENERATOR	R. F. Doving, Smithtown, N.Y. and W. D. Tucker, Sayville, N.Y.	3,159,549	FUEL ASSEMBLY FOR NEUTRONIC REACTOR	W. D. Fowler, Poway, Calif.
3,156,534	APPARATUS FOR TREATMENT OF MELTIN MATERIAL	F. R. Josephson, Rochester, N.Y. and L. E. Borkhart, Ames, Iowa	3,159,577	METHOD OF TREATING RADIOACTIVE WASTE	L. A. Berry and E. C. Martin, Richland, Wash.
3,156,622	APPARATUS FOR HEATING IONS IN A FLASH	M. M. Hill, Livermore, Calif. and D. F. Martin, Alamo, Calif.	3,159,614	PROCESS OF PRECIPITATING FLUORIDES AND COMPOUNDS FORMED THEREBY	G. Seaborg, J. E. Willard and S. G. Thompson, Chicago, Ill.
3,156,623	PLASMA SWITCHING FINCE TUBE	W. E. Baker, Orinda, Calif.	3,159,815	BARBERAUSEN OSCILLATION ELIMINATION MEANS	J. P. Boice, Albuquerque, N. Mex and G. L. Anderson, Boulder, Colo.
3,156,625	CODE FOR A SUPERCRITICAL PRESSURE POWER REACTOR	H. Barty, J. J. Baginbal, R. D. Vildig, Richland, Wash. and K. G. Toyoda, Pasco, Wash.	3,160,470	DISSOLUTION OF URANIUM OXIDE	M. C. Lambert, Richland, Wash.
3,156,747	METHOD OF MAKING FUEL COMPACTS FOR NEUTRONIC SYSTEMS	J. E. Burke, Ballston Lake, N.Y.	3,160,471	PREPARATION OF SENSITIVE URANIUM DIOXIDE PARTICLES	I. E. Knudsen, Downers Grove, Ill. A. A. Jonke, Elmhurst, Ill. and H. M. Levitz, Bellwood, Ill.
3,156,851	TIGGING MECHANISM	W. C. Monday, Albuquerque, N. Mex.	3,160,566	PLASMA GENERATOR	R. A. Dandl and W. B. Ard, Oak Ridge, Tenn.
3,156,869	ELECTRODETERMINING FLEXIBLE ELECTRODES AND FLEXIBLE FIBER	F. R. Shamba, Riverside, Ill.	3,160,568	NUCLEAR REACTOR	D. B. MacFarlane, Downers Grove, Ill.
3,157,463	EXTRACTION OF FLUORIDE AND URANIUM VALUES FROM AQUEOUS SOLUTIONS	L. L. Berger, Richland, Wash.	3,160,817	SEQUENTIAL TIME REVERSAL DEVICE	H. L. Libby and J. T. Russell, Richland, Wash.
3,157,637	METHOD OF SEPARATING NUCLEOTIDES	J. X. Klym, Oak Ridge, Tenn.	3,160,818	INTEGRATOR UTILIZING A BLOCK-ING OSCILLATOR CIRCUIT	J. L. Engle, New Lisbon, N.J.
3,157,718	METHOD OF SINTERING CERAMIC SHAPES	W. J. O'Leary, Claymont, Del. and E. A. Fisher, Postoria, Ohio	3,161,462	ELEMENT 96 AND COMPOSITIONS THEREOF	G. T. Seaborg, Berkeley, Calif.
3,157,802	TRONIC ENERGY CONVERTER	R. Fox, Oakland, Calif.	3,161,463	METHOD FOR PURIFICATION OF PROMETHIUM-147	P. B. Orr, Knoxville, Tenn.
3,158,098	LOW VOLTAGE DETONATOR SYSTEM	R. J. Reichel, Los Alamos, N. Mex.			

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| 3,161,570 | HOMOGENEOUS-LIQUID METAL-FAST REACTOR | R. P. Hammond, H. M. Buscy and J. R. Humphreys, Los Alamos, N. Mex. | 3,164,462 | PREPARATION OF THORIUM METAL FROM THE OXIDE | J. B. Knighton, Joliet, Ill. and A. V. Barbarn, Westmont, Ill., E. K. Steenbergh, Naperville, Ill. and W. H. Bauschmidt, Hinsdale, Ill. |
| 3,161,571 | BOILING-WATER NUCLEAR REACTOR | J. M. Barrer, Elmhurst, Ill., C. F. Bollinger, Palo Alto, Calif. and V. M. Eibis, Plainfield, Ill. | 3,164,718 | ION PULSE GENERATOR COMPRISING REFLECTOR MEANS TO STOP AN ION BEAM ACROSS AN APPROXIMATE NUMBER | E. F. King, Knoxville, Tenn. |
| 3,161,600 | RADIOACTIVE STRONTIUM CONTAINMENT | G. B. Barton, Kennewick, Wash. | 3,164,897 | METHOD OF BEAZING | F. Patraroa, Knoxville, Tenn. and G. H. Slaughter, Oak Ridge, Tenn. |
| 3,161,601 | RADIOACTIVE CESIUM CONTAINMENT | G. B. Barton, Kennewick, Wash. | 3,165,376 | PROCESS FOR SEPARATION AND RECOVERY OF VOLATILE FLUORIDES EMPLOYING FLOW EMANATION EXTRACTION OBTAINING THE SAME | W. R. Collier, Paducah, Ky. |
| 3,161,701 | METHOD OF MAKING NUCLEAR FUEL CONTACT | D. E. Johnson, Cardiff, Calif. and F. E. Lofftus, Del Mar, Calif. | 3,165,377 | SEPARATION OF STAINLESS STEEL FROM A NUCLEAR FUEL | H. M. Katz, Fort Jefferson, N.Y. |
| 3,161,736 | CONSIDIRECTIONAL SWITCH | R. A. Randall and D. F. Wilkes, Albuquerque, N. Mex. | 3,165,417 | HIGH STRENGTH BERYLLIA ARTICLES | P. P. Turner, Cincinnati, Ohio |
| 3,161,896 | BAN AIR INFLATED FLotation BAG | I. T. Holt and H. E. Widdows, Albuquerque, N. Mex. | 3,165,422 | CERAMIC COATED FUEL PARTICLES | L. D. Stoughton, Chatham, N.J., P. N. Blocher and W. D. Veigel, Columbus, Ohio |
| 3,162,509 | PROCESS FOR PREPARATION OF SULFUR-CONTAINING COMPOUNDS OF FLUORINE | H. E. Davidson, Sierra Madre, Calif. | 3,165,427 | METHOD OF HEAT TREATING TUNGSTEN WIRE OR BILSON | E. C. Burt, Stoughton, Wis. |
| 3,162,527 | FLUORINE ALLOYS CONTAINING CONTROLLED AMOUNTS OF PLUTONIUM ALLOTROPES OBTAINED BY APPLICATION OF HIGH PRESSURES | R. O. Elliott and K. A. Gschneidner, Los Alamos, N. Mex. | 3,165,448 | NUCLEAR REACTOR CORE AND FUEL ASSEMBLY | W. H. McCordle, Hinsdale, Ill. and H. S. Carr, Chicago, Ill. |
| 3,162,577 | REACTOR CONTROL WITH THORIUM CONTROL GRID | V. C. Rodman, Hinsdale, Ill. | 3,165,475 | STEP-WISE COMPOSITION AND PROCESS OF MAKING IT | L. C. Amos, Longview, Wash. |
| 3,162,578 | REACTOR AND APPARATUS FOR CONTROLLING THERMOPHILIC | A. Allen, Medford, Mass. | 3,165,835 | APPARATUS FOR CHECKING THE ALIGNMENT OF VERTICAL CHANNELS | E. D. Deacon, Richland, Wash. |
| 3,163,759 | NEUTRON FLUX DETECTOR | R. H. Conroy, Sherman Oaks, Calif. and J. W. Flors, Denver, Colo. | 3,165,922 | METHOD OF APPLYING LAMB WAVES IN ULTRASONIC TESTING | D. C. Woriton, Richland, Wash. |
| 3,163,915 | METHOD OF FABRICATING SURFACE BARRIER DETECTORS | R. J. Fox, Oak Ridge, Tenn. | 3,166,133 | SEALING MEANS | D. W. Hall and B. D. Troyer, Boulder, Colo. |
| 3,164,019 | MASS FLOW MEASURING DEVICE | G. M. Rurwald, Belmont, Calif., L. Beiffel, Chicago, Ill., W. K. Gentsch, Menomonee Falls, Wis. C. Fyfe, Fox Point, Wis. | 3,166,136 | APPARATUS FOR WEIGHING MATERIAL IN A SEALED ENCLOSURE | E. T. Coffman, Richland, Wash. |
| 3,164,440 | GAS-SOLIDS CONTACTING METHOD | R. P. Levey, Oak Ridge, Tenn. | 3,166,595 | H. N-DIFFUSION ANALYZERS | J. W. Fraser, Livermore, Calif. |

3,167,070	RESPIRATOR WITH POSITIVE AIR SEAL	L. Silverman, Dover, Mass.
3,167,447	CARBON BODY TREATMENT	G. E. Tully, Pooey, Calif., R. F. Disselhorst, Solana Beach, Calif. and D. E. Davis, Escocido, Calif.
3,167,462	FUEL ELEMENT	K. Katz, Pittsburgh, Pa.
3,167,654	DOUBLE PULSE RECOGNITION CIRCUIT	L. Scott, Paris, France
3,167,655	TARGET FOR A FUSION GENERATOR CONSISTING OF A COATING OF ONE OF THE LANTHANUM ELEMENTS ON A BASE METAL	R. Redstone, Baldoak, England, and H. C. Rowland, Hitchin, England
3,167,695	LIQUID LEVEL CAPACITANCE FROME	J. C. Brinson, Los Alamos, N. Mex.
3,169,057	SEPARATION OF PLUTONIUM, URANIUM AND FISSION PRODUCTS FROM EACH OTHER	J. B. Knighton, Joliet, Ill. and R. K. Stuenkel, Naperville, Ill.
3,169,117	NUCLEAR REACTOR FUEL PASTE COMPOSITION	R. V. Dickinson, Northridge, Calif. and D. T. LSCM, Santa Susana, Calif.
3,169,187	LOW ENERGY X-RAY RADIATION SYSTEM FOR FLUENT MATERIALS WITH PERMANENT SCINTILLATION FIBERS IN HEXAGONAL ARRAY	C. A. Stone, South Holland, Ill., L. Reiffel, Chicago, Ill. and I. Filiosefo, Padova, Italy
3,169,200	TELEPHONE CONVEYER	F. H. Buffum, Baltimore, Md.
3,170,234	JOINING OF REFRACTORY METALS BY SOLID-STATE DIFFUSION BONDING	C. O. Tarr, Cincinnati, Ohio
3,170,759	METHOD OF MAKING PLUTONIUM MONOCARBIDE	R. M. Mayfield, Glen Ellyn, Ill. and W. G. Trapp, Naperville, Ill.
3,170,788	URANIUM BASE ALLOY	M. H. Binstock, Canoga Park, Calif. and H. E. Kliss, Chatsworth, Calif.
3,170,812	METHOD OF VITRIFYING CERAMIC COATINGS	M. A. Schwartz, Dayton, Ohio
3,170,824	IRON ALLOY	
3,170,841	FIBROUS THERMONUCLEAR REACTOR AND PROCESS	
3,170,843	PASTE REACTOR	
3,170,844	CONTROL ROD DRIVE MECHANISM	
3,170,846	STEAM GENERATOR	
3,170,847	SELF-MODERATING FUEL ELEMENT	
3,170,884	ELECTROLYSIS DERIVATIVE SCINTILLATORS	
3,171,025	LONG STRAIGHT SECTIONS FOR ALTERNATING GRADIENT SYNCHROTRONS	
3,171,037	SEMICONDUCTOR INSTABLE CURRENT WITH INTERNAL GATE	
		D. S. Busch, D. A. Roberts and A. M. Hall, Columbus, Ohio
		R. F. Post, Walnut Creek, Calif.
		R. P. Hammond, Los Alamos, N. Mex.
		D. Nicoll, San Diego, Calif.
		R. Blumberg, Wyoming, Ohio
		J. A. Dodak and E. L. Reed, Woodland Hills, Calif.
		E. L. Mecklin, Oak Ridge, Tenn.
		T. L. Collins, Watertown, Mass.
		V. J. Poppelbaum, Champaign, Ill. and H. E. Wiseman, Hertz, England

PATENTS WHICH HAVE ISSUED TO THE COMMISSION AND WHICH ARE AVAILABLE TO THE PUBLIC FOR LICENSING IN ACCORDANCE WITH THE LICENSING POLICY OF THE COMMISSION

3,160,567	SOLID STATE POWER MAPPING	R. Steinberg, Fairview Park, Ohio and W. B. Schwab, Cleveland, Ohio	3,174,921	POLYMERIZATION OF ISOBUTYLENE	M. S. Matheson, Elmhurst, Ill.
3,171,714	METHOD OF MAKING FLUORINUM OXIDE SPHERES	L. V. Jones, Miamiburg, Ohio, D. Otto, Lettering, Ohio, F. A. Tucker and L. J. Wittenberg, Dayton, Ohio	3,175,104	HIGH VOLTAGE ELECTRIC GENERATOR	C. D. Curtis, Madison, Wis.
3,171,715	METHOD FOR PREPARATION OF SPHERICAL THORIUM DICARBIDE AND THORIUM-URANIUM DICARBIDE PARTICLES	A. T. Kleinsteuber, Oak Ridge, Tenn.	3,175,131	MAGNET CONSTRUCTION FOR A VARIABLE ENERGY CYCLOTRON	E. L. Kelly, R. J. Burleigh, J. H. Dorst and C. G. Doll, Berkeley, Calif.
3,171,788	ROTATING PLASMA DEVICE	J. G. Gorman, Trenton, N.J. and L. H. Bletjens, Rijswijkse, Jetphases, Netherlands	3,175,922	METHOD FOR COATING ACTIVE PARTICLES	J. M. Blocher and M. F. Browning, Columbus, Ohio
3,171,815	METHOD FOR PREPARATION OF THORIUM DICARBIDE AND THORIUM-URANIUM DICARBIDE PARTICLES	J. L. Kelly, O. C. Dean, Oak Ridge, Tenn. and D. E. Ferguson, Knoxville, Tenn.	3,175,931	TREATMENT OF ALUMINUM SURFACES	C. A. Burgess, Kennonick, Wash. and J. D. Schaffer, Richland, Wash.
3,173,764	DRAWING APPARATUS	C. E. Eason, Meperville, Ill.	3,176,955	GRADIENT FUEL PLATES	E. D. Cheverton, Knoxville, Tenn.
3,173,797	PURIFICATION OF STRONTIUM SOLUTIONS BY ION EXCHANGE	E. J. Wheelerwright, L. A. Gray, R. L. Moore and R. P. Roberts, Richland, Wash.	3,176,154	THREE STATE MEMORY DEVICE	F. O. Salter, Glen Ellyn, Ill.
3,173,880	MOISTURE INDICATOR AND METHOD OF MAKING THE SAME	V. S. Pappas and C. W. Weber, Oak Ridge, Tenn.	3,176,195	SUPERCONDUCTING SOLENOID	R. W. Boon and L. D. Roberts, Oak Ridge, Tenn.
3,173,973	GRAPHITE DISPERSION	M. C. Brockway, Columbus, Ohio	3,177,373	TRANSISTORIZED LOADING CIRCUIT	R. H. Graham, Walnut Creek, Calif.
3,173,983	ARC POSITIONING SERVO	J. L. Engle, New Lisbon, N.J.	3,177,408	SUPERCONDUCTOR SOLENOID WITH OVERSTAY PROTECTIVE STRUCTURE AND CIRCUITS	R. G. Mills and K. E. Wakefield, Princeton, N.J.
3,174,153	SLEEPING IMAGE MIRROR CAMERA	T. Anderson, Castro Valley, Calif.	3,177,482	SERVO-STABILIZED ANALOG-TO-DIGITAL CONVERTER FOR HIGH RESOLUTION PULSE ANALYSIS	R. L. Chase, Blue Point, N.Y.
3,174,818	REDUCING CORROSION OF STAINLESS STEEL IN HOT NITRIC ACID SOLUTIONS BY ADDING CARBON BLACK OR ELEMENTAL SULFUR TO THE SOLUTION	F. G. East, Evans, Ga.	3,177,553	APPARATUS FOR SOLVENT-ISOSTATIC PRESSING	F. E. Archibald, Pleasanton, Calif.
3,174,834	FLUIDIZED BED REACTOR	R. M. Edwards, Tucson, Ariz., S. H. Robinson, Brentwood, Mo. and E. F. Sanders, St. Louis, Mo.	3,178,256	METHOD FOR SEPARATING TRANSFLUORINUM ELEMENTS FROM BARE BAKED FISSION PRODUCTS	F. L. Moore, Knoxville, Tenn.
			3,178,258	SEPARATION OF FLUORINUM HEXAFLUORIDE FROM URANIUM HEXAFLUORIDE BY SELECTIVE ADSORPTION	G. I. Cathers, Knoxville, Tenn. and R. L. Jolley, Oak Ridge, Tenn.
			3,178,259	NITRIDED ELECTRODE PROCESS OF PREPARING URANIUM MONOSULFIDE	E. L. Foster, Fowell, Ohio and R. W. Endebrock, Columbus, Ohio
			3,178,356	NUCLEAR REACTOR	C. V. Wheelock, Canoga Park, Calif.
			3,178,501	COUNTERCURRENT NUCLEAR-FUEL LIQUID-LIQUID EXTRACTION APPARATUS	J. P. Duckworth, Richland, Wash.

- 3,179,503 EXTRACTION OF CESIUM FROM AQUEOUS SOLUTION USING PERMOLE
D. E. Horner, Clanton, Tenn., D. J. Cooney and E. B. Brown, Oak Ridge, Tenn.
- 3,179,581 ELECTROCHEMICAL DODIMETER
S. E. Lewis, Bayside, N.Y. and E. H. Kosiow, New York, N.Y.
- 3,179,722 METHOD OF PREPARING SPHERICAL NUCLEAR FUEL PARTICLES
E. E. Showmaker, San Diego, Calif.
- 3,179,723 METHOD OF FORMING METAL CARBIDE SPHEROIDS WITH CARBON COAT
V. V. Gosdell, Foway, Calif.
- 3,180,704 PROCESS OF MAKING ACTIVE SULFIDE AND SIMILAR COMPOUNDS
Y. Kashin, Chicago, Ill.
- 3,180,756 COPPER METALLIZING OF ALUMINA CERAMICS
E. E. Cowen, Los Alamos, N. Mex.
- 3,180,800 NEUTRONIC REACTOR INCLUDING MEANS FOR UNLOADING AND REBURNING ENCLUSTING SPENT FUEL ELEMENTS
F. Fortasque, LaJolla, Calif. and D. Howell, Del Mar, Calif.
- 3,180,801 HEAVY WATER MODERATED ORGANIC COOLED NUCLEAR FISSION REACTOR
E. J. Rickett, W. S. Pflanz, Bloomfield, Conn. J. F. Roblin, Mipping, Conn. and J. J. Roth, Granby, Conn.
- 3,181,004 STEADY MEMORY DEVICE EMPLOYING FLIP-FLOP THAT IS CONTROLLED BY IN-PHASE DRIVERS
E. Cocksal, Urbana, Ill.
- 3,181,653 CRASH ENERGY ABSORBER FOR HEAVY APPARATUS
J. A. Moshailey, Concord, Calif.
- 3,181,700 IMMISCIBLE LIQUIDS SEPARATOR
J. C. Sesson, Riverdale, Ill.
- 3,182,102 METHOD AND APPARATUS FOR MAKING THESE BODIES OF REFRACTORY MATERIALS
M. T. Stumas, Wellesley, Mass.
- 3,182,208 LINEAR GATE WITH GATING PULSES APPLIED TO COLLECTOR THROUGH THE PRIMARY OF A TRANSFORMER
J. Fischer, Patuxent, N.Y., V. A. Elginbotham, Bellport, N.Y. and E. L. Chase, Blue Point, N.Y.
- 3,182,280 PROTECTION OF ELECTRICAL CONTACTOR CONTACT PINS
F. X. Duet and R. O. Worth, Albuquerque, N. Mex.
- 3,182,499 METHOD OF MEASURING WIND VELOCITY
E. Mossa, Park Forest, Ill.
- 3,183,059 PLUTONIUM ADSORPTION AND DESORPTION
A. E. Bateman and L. L. Ames, Richland, Wash.
- 3,183,061 XENON TETRAFLUORIDE AND PROCESS OF MAKING SAME
E. H. Classen, Wheaton, Ill., E. Sells, Chicago, Ill. and J. C. Mula, Naperville, Ill.
- 3,183,166 LOW TEMPERATURE GRAPHITE RADIATION DAMAGE REMOVAL
D. C. Schweitzer, E. M. Singer, East Islip, N.Y. and D. E. Curinsky, Center Moriches, N.Y.
- 3,183,390 PHOTOMULTIPLIER
E. J. Grader, Pleasanton, Calif. and M. P. Nakoda, Silver Spring, Md.
- 3,183,499 HIGH DIRECTIONALITY SOLID CURTAIN PERIMETER INTRUSION SYSTEM
E. G. Cowen, Frederick, Md.
- 3,183,936 EXPANSION JOINT
E. Michel, Ryattville, Md.
- 3,184,604 HIGH-DUTY-CYCLE MULTI-VIBRATOR
D. O. Hale, Walnut Creek, Calif.
- 3,184,849 MINI-OAM TRACER PLATE
E. J. Saas, Los Alamos, N. Mex.
- 3,184,915 ELECTROSTATIC PROPELLION SYSTEM WITH A DIRECT NUCLEAR ELECTRO GENERATOR
C. A. Low, Cleveland, Ohio and V. E. Kitchelson, Beres, Ohio
- 3,185,063 MAGNETICALLY ACTUATED SHUTTER
F. C. Ford, Pleasanton, Calif., E. B. Nelson, Albuquerque, N. Mex. and V. H. Trimble and S. Eitso, Livermore, Calif.
- 3,185,548 PROCESS OF MAKING BARIUM FLUORIDE AND OF SEPARATING BARIUM GASES FROM BARIUM OTHER
F. R. Fields and M. N. Zirin, Chicago, Ill. and L. Stein, Downs Grove, Ill.
- 3,186,169 SEPARATION OF METAL VALUES BY CATION EXCHANGE FROM CONCENTRATED PERCHLORIC ACID SOLUTION
E. A. Kreis and F. Nelson, Oak Ridge, Tenn.
- 3,186,231 PROCESS OF MAKING CIRCIBLES
Z. D. Jastrzebski, Easton, Pa.
- 3,186,278 FUEL ELEMENT FOR A SUPERCRITICAL PRESSURE POWER REACTOR
E. Marty, J. J. Regimbal, R. D. Wilford, Richland, Wash. and E. C. Toyoda, Pasco, Wash.
- 3,186,470 METHOD OF DETERMINING THE NEGATIVE REACTIVITY OF NEUTRONIC MULTIPLYING SYSTEMS
C. W. Ricker, A. L. Colcomb and E. R. Mann, Oak Ridge, Tenn.

3,189,023	BLOOD PRESSURE INDICATING DEVICE	P. Sals, N. J. Yami, Berkeley, Calif. and M. S. Becamer, Minneapolis, Minn.
3,189,619	ZONE-MELTING CRYSTALLIZATION TECHNIQUE	V. R. Wilcox, Torrance, Calif.
3,189,645	BINARY NICKEL BASE ALLOYS	V. F. Calkins, J. A. McGurty, Cincinnati, Ohio and E. S. Funston, Hamilton, Ohio
3,189,646	TERRARY NICKEL BASE ALLOYS	V. F. Calkins, J. A. McGurty, Cincinnati, Ohio and E. S. Funston, Hamilton, Ohio
3,189,676	METALLIZING PROCESS FOR CERAMICS	R. E. Cowan, Los Alamos, N. Mex.
3,189,666	METHOD OF PREPARING URANIUM DIOXIDE FUEL COMPONENTS	R. P. Levey, Oak Ridge, and P. S. Trent, Morris, Tenn.
3,189,817	DEVICE FOR TESTING METAL SHEETS BY MEASURING THE TIME REQUIRED FOR ELECTROMAGNETIC PULSES TO PASS THERE THROUGH	C. J. Ranken, Orland Park, Ill.
3,189,833	VARIABLE TIME CONSTANT PULSE INTEGRATOR	G. V. Rodgers, Albuquerque, N. Mex.
3,189,861	ROTARY CONTACT	V. M. Cooper and J. A. Masters, Livermore, Calif.
3,190,806	METHOD FOR PRODUCING, SEPARATING AND PURIFYING PLUTONIUM	G. T. Seaborg, Chicago, Ill., J. V. Kennedy, Santa Fe, N. Mex. and A. C. Wahl, Berkeley, Calif.
3,191,028	SCANNING ELECTRON MICROSCOPE	A. V. Crews, Palos Park, Calif.
3,191,048	LIGHT SENSITIVE ALARM SYSTEM	R. G. Cowen, Frederick, Md.
3,191,092	PLASMA PROPULSION DEVICE HAVING SPECIAL MAGNETIC FIELD	V. E. Baker, R. W. Layman and K. Raibach, Berkeley, Calif.
3,191,662	CONTINUOUS SOLUTION CONCENTRATOR	K. J. Schneider, Richland, Wash.
3,191,752	MERGEANCE DOUBLE WALL INTERCONNECTED PRESSURE VESSEL	D. A. Bunt, Hawthorne, Calif.
3,192,016	XENON HEXAFLUORIDE AND METHOD OF MAKING	J. C. Malm, Hopedale, Ill., I. Sheft, Oak Park, Ill., M. E. Classen, Wheaton, Ill. and C. L. Chernick, River Forest, Ill.
3,192,054	FOOD IRRADIATOR AND METHOD	O. A. Kuhl, Northport, N.Y. and A. B. Oltmann, Bayport, N.Y.
3,192,069	RADIOACTIVE ISOTOPE POWERED THERMOELECTRIC GENERATOR SYSTEM	J. H. Vogt, Manchester, Conn., C. R. Young and W. C. Reed, Baltimore, Md.
3,192,122	FUEL ELEMENT FOR A NUCLEAR REACTOR HAVING STACK OF THIN FUEL WAFERS SUBMERGED IN LIQUID METAL	L. E. Kelsan, Hopedale, Ill. and O. L. Kruger, Westmont, Ill.
3,192,858	ARMING DEVICE FOR AERIAL BOMBS	C. B. Crumb, Cincinnati, Ohio
3,193,380	URANIUM GALLIUM ALLOYS AND METHOD OF PREPARATION	V. D. Wilkinson, Maywood, Ill. and L. S. Kelsan, Chicago, Ill.
3,193,466	NEUTRONIC REACTOR OPERATION	U. M. Staebler, Silver Spring, Md.
3,193,467	REACTOR CONTROL	L. A. Evans, Schenectady, N.Y.
3,193,712	HIGH VOLTAGE CABLE	C. A. Harris, Berkeley, Calif.
3,194,293	SHOCK ABSORBING CASTER WHEEL	R. J. Kinclay, Albuquerque, N. Mex.
3,194,701	METHOD FOR FORMING P-N JUNCTIONS ON SEMICONDUCTORS	R. P. Lothrop, San Mateo, Calif.
3,194,745	URANIUM MONOSULFIDE-MONOCARBIDE NUCLEAR FUEL ELEMENT	J. H. Handwerk, G. D. White, Joliet, Ill. and P. D. Shalek, Champaign, Ill.
3,194,937	PORTABLE ELECTRIC WELDER	C. D. Erons, Richland, Wash., and W. W. Gaither and L. J. Rousseau, Kennesaw, Wash.
3,195,061	RADIO FREQUENCY AMPLIFICATION BY STIMULATED EMISSION OF RADIATION	C. D. Jeffries, O. Chamberlain, C. R. Schultz and C. Shapiro, Berkeley, Calif.
3,195,123	ANALOGUE TO DIGITAL CONVERTER	H. I. West, Livermore, Calif.
3,195,930	DEVICE FOR COUPLING A CHANGING APPARATUS TO A REACTOR NOZZLE	R. J. Ascheri, Latina, Italy, R. T. Hubbard, Livermore, Calif., D. E. Besser, Kennesaw, Wash. and C. R. Oak, Richland, Wash.
3,195,963	STIFFED GAS BEARING	T. Anderson, Castro Valley, Calif.

3,195,977	RECOVERY OF PLUTONIUM AND/OR URANIUM VALUES FROM AQUEOUS SOLUTIONS	A. E. Nathanson, Ballieton Lake, N.Y.	3,202,473	METHOD FOR COLLECTING IZONITRON TETRACARBOLIDE	T. A. Gans, Oak Ridge, Tenn.
3,195,984	COLLOID DISSOLVER	A. E. Sands, Oak Ridge, Tenn.	3,202,476	USE OF NICKEL ARSENIDES AND NICKEL TO PROMOTE PHASE SEPARATION IN LIQUID-LIQUID EXTRACTION	T. J. Collopy, W. S. Miller, Cincinnati, Ohio and J. H. Mueller, Fort Thomas, Ky.
3,197,377	REACTOR MONITORING MEANS	L. A. Philinger, Chicago, Ill.	3,202,479	SEPARATION OF BUTTERFLY FROM AQUEOUS SOLUTIONS	J. J. Katz, Chicago, Ill.
3,197,389	METHOD FOR FABRICATING SELF-MODERATING NUCLEAR REACTOR FUEL ELEMENT	J. A. Dudek and E. L. Reed, Woodland Hills, Calif.	3,202,506	HIGH-TEMPERATURE OXIDATION-RESISTANT COBALT BASE ALLOYS	D. E. Deutseh, Walnut Creek, Calif.
3,197,693	NON-DESTRUCTIVE BODY CURRENT SUBSURFACE TESTING DEVICE PROVIDING COMPENSATION FOR VARIATION IN PROBE-TO-SPECIMEN SPACING AND SURFACE IRREGULARITIES	H. L. Libby, Richland, Wash.	3,202,582	GASOUS NUCLEAR ROCKET	F. E. Rom, Avon Lake, Ohio
3,198,709	NUCLEAR CONTROL ROD ASSEMBLY WITH IMPROVED DRIVING MECHANISM	J. W. Macomber, Bay Village, Ohio	3,202,585	HIGH TEMPERATURE NITROGEN- NO_2 NUCLEAR FUEL SHEET	H. P. Kling, Baltimore, Md., L. Sams, S. Priceman, Seaford, N.Y., B. Brodwin, Brooklyn, N.Y. and A. Kiss, New Rochelle, N.Y.
3,198,711	TRISNOBLELECTRIC NUCLEAR FUEL ELEMENT	J. O. McPartland, Kennenwick, Wash., L. A. Pember, Pasco, Wash., J. A. Christensen, Pittsburgh, Pa.	3,202,586	METHOD FOR CONTROLLING THE COMPOSITION OF URANIUM CARBIDE AND NUCLEAR FUEL ELEMENT THEORY	S. A. Webb, Granada Hills, Calif. and W. R. Koenig, Citrus Heights, Calif.
3,199,856	METHOD OF FABRICATING A CORROSION RESISTANT FUEL CORE ELEMENT	J. F. Hammond, Knoxville, Tenn. and T. D. Watts, Oak Ridge, Tenn.	3,202,617	POLYMERIZING PARTICLE DE-FACATING SYSTEM	R. L. Beibeech, Ferris, France
3,200,046	NEUTRONIC REACTOR STRUCTURE	J. T. Carleton, Richland, Wash.	3,202,621	FILM BAND SYSTEM AND METHOD OF USING	L. F. Koerber, Richland, Wash.
3,200,491	CLADDING PROCESS	D. E. Walker, Park Forest, Ill. and R. A. Heland, Chicago, Ill.	3,202,901	TRANSISTORIZED REGULATED HIGH VOLTAGE SUPPLY	F. M. Glass, Morris, Tenn.
3,201,082	CORROSION RESISTANT SEALING STRUCTURE	E. Rosen, Elizabeth, N.J.	3,202,951	ALLOYS AND ELECTRICAL TRANSFORMERS	A. Krinsky, Bethesda, Md.
3,201,191	SEPARATION AND RECOVERY OF URANIUM FROM URANIUM-ALUMINUM ALLOYS	H. S. Gills, Richland, Wash.	3,205,139	HIGH TEMPERATURE REACTOR WITH SPECIFIC DISTRICTION OF NON-1/4 ABSORBER AND FERTILE MATERIAL	H. S. Stewart, Rancho Santa, Fe. Calif. and E. J. Lashan, San Diego, Calif.
3,201,385	MAGNETIC MONITORING ANALYZING SALT WITH CURRENT CONDUCTING STRIPS SECURED TO THE MAGNETIC POLES	J. Ballian and En-Lung Chn, Palo Alto, Calif.	3,205,141	MODULATED FUEL ASSEMBLY	J. M. Savino, Beras, Ohio and C. D. Lanzo, Rocky River, Ohio
3,201,586	METHOD AND APPARATUS FOR RADIOACTIVE GAS ANALYSIS USING REGIONS OF TWO ENERGY LEVELS	E. T. Booth, New York, N.Y.	3,205,149	FUSE DEVICE FOR A NUCLEAR REACTOR	G. V. Brynsvold, San Jose, Calif. and K. Hilde, Campbell, Calif.
3,202,465	THRUST BEARINGS	B. C. Bushing, Pittsburgh, Pa.	3,205,357	SOLID STATE RADIATION DETECTOR	V. F. Lindsay, Santa Barbara, Calif.

- 3,206,624 HYPERSONIC PLASMA THERMO-COUPLE
T. F. Cotter, Los Alamos, N. Mex.
- 3,207,796 PREPARATION OF NITROALKYL CHLORIDES
T. M. Benziger and R. K. Bohrer, Los Alamos, N. Mex.
- 3,208,197 DIFFUSION SEPARATION OF FLUIDS
F. E. Simon, Oxford, England, K. Fuchs and E. E. Peierls, Santa Fe, N. Mex.
- 3,208,289 ROTARY SHAFT CONSTRUCTION WITH DIAPHRAGM TYPE OF SEAL
E. Butter, Chicago, Ill., and P. Elias, Bensenville, Ill.
- 3,208,692 TUG-TOW ARRANGEMENT FOR NUCLEAR AIRCRAFT
S. Bernstein, Oak Ridge, Tenn.
- 3,208,773 INSULATED TUBE COUPLING
W. E. Bowdrie, Fairport, N.Y.
- 3,208,817 METHOD OF DISSOLVING FLU-TONIUM WITH SULFAMIC ACID
W. J. Jenkins, N. Augusta, S.C.
- 3,208,818 METHOD FOR STABILIZING URANIUM MONOCARBIDE
R. F. Stoops and J. V. Eames, Raleigh, N.C.
- 3,208,819 METHOD FOR DECONTAMINATING NUCLEAR FUELS CONTAINING NITRITUM COMPLEXES
R. M. Wallace, Aiken, S.C.
- 3,208,848 ALUMINA-COBALT-COOLD COM-POSITION
R. P. Levey, Oak Ridge, Tenn.
- 3,208,870 CARBIDE COATINGS FOR GRAPHITE
F. F. Criss, Los Alamos, N. Mex.
- 3,208,872 CARBIDE COATINGS AND GRAPHITE
C. Wobbers, and F. F. Criss, Los Alamos, N. Mex.
- 3,208,883 HYDROGEN-FLUORIDE CELL
C. E. Crootham, Glen Ellyn, Ill., and E. R. Heinrich, Downers Grove, Ill.
- 3,208,912 NUCLEAR REACTOR FUEL MANAGE-MENT METHOD
S. Jays, Solana Beach, Calif., and D. R. Lee, Jr. Del Mar, Calif.
- 3,208,916 FUEL ELEMENT FOR A NUCLEAR REACTOR
E. J. Hennig and D. T. Aase, Richland, Wash.
- 3,209,281 METHOD AND APPARATUS FOR DYNAMIC PULSE PULSE WAVE FORMING
S. A. Colgate, Livermore, Calif., and A. W. Trivelpiece, Lafayette, Calif.
- 3,210,852 UNILINEAR DISPLACEMENT MEASURING APPARATUS
H. V. Harnden, Richland, Wash.
- 3,211,478 ALUMINUM FOIL ULTRA-RICH VACUUM CASKET SEAL
T. H. Betzer, Livermore, Calif.
- 3,211,526 RECOVERY OF SULFURIC ACID FROM AN AQUEOUS SOLUTION CONTAINING METAL VALUES BY EXTRACTION WITH TERTIARY AMINES
P. J. Crouse, Oak Ridge, Tenn.
- 3,211,602 POLYTRIFLUOROMETHANE ADHESIVE CONTAINING AN ALPHI-CARBOXY-METHACRYLATE COPOLYMER RE-ACTED WITH AN EPOXY AND A POLY-AMINE-POLYAMIDE RESIN
R. R. Horstman, Los Alamos, N. Mex.
- 3,211,628 COATED METALLIC-URANIUM ARTICLE AND METHOD OF MAKING
L. D. Ebbenk, South Euclid, Ohio
- 3,211,664 URANIUM MONOCHLORIDE FUEL AND METHOD OF MAKING
R. W. Endebrook, Columbus, Ohio
- 3,211,812 METHOD OF MAKING NUCLEAR FUEL COMPACT
D. E. Johnson, Cardiff, Calif., and F. H. Lofftus, Del Mar, Calif.
- 3,211,884 CANNING MACHINE
E. R. Bolter, Marion, Ind.
- 3,211,937 CARBON-COATED ELECTRO-TRANS-MISSION WINDOW
R. E. Rester, San Lorenzo, Calif., W. A. Sherwood, Livermore, Calif.
- 3,212,035 MICROWAVE WAVEGUIDE COUPLING SEAL
K. Skarpass, Palo Alto, Calif.
- 3,212,036 ALL-METAL WAVEGUIDE VACUUM GATE VALVE
K. Skarpass, Palo Alto, Calif.
- 3,212,940 METHOD FOR PRODUCING P-I-N SEMICONDUCTORS
J. L. Blankenship, Knoxville, Tenn.
- 3,212,975 METHOD OF CONTROLLING A NUCLEAR REACTOR
J. F. Fletcher, Kennewick, Wash., and K. G. Toyoda, Pasco, Wash.
- 3,212,982 FAST FUEL TEST REACTOR
E. R. Astley, E. J. Hennig, Richland, Wash., and L. H. Finch, Pasco, Wash.
- 3,212,986 THREE TANK SEPARATE SUPER-HEAT REACTOR
R. T. Pennington, San Jose, Calif.
- 3,212,987 NEUTRONIC REACTOR WITH INTER-LOCKING DIFFUSER END GRID
A. Mason, Birmingham, Mich.

- 3,212,991
CONTINUOUS SUPPORT FUEL ROD SPACER SYSTEM
G. V. Brynsvold and W. A. Sangster, San Jose, Calif.
- 3,213,002
ELECTROLYTIC SEPARATION OF PLUTONIUM VALUES FROM URANIUM VALUES
G. E. Benedict, Richland, Wash.
- 3,213,032
PROCESS FOR SINTERING URANIUM TRIFLUORIDE WITH A SINTERING AID PREPARATION
J. P. Hammond, Knoxville, Tenn.
- 3,213,141
PROCESS FOR FORMING A URANIUM NITRIDE-URANIUM DIOXIDE NUCLEAR FUEL
R. A. Craig, W. Hartford, Conn.
- 3,213,162
METHOD OF MAKING NUCLEAR FUEL CONTACT
D. E. Johnson, Cardiff, Calif. and P. H. Loftus, Del Mar, Calif.
- 3,213,163
FABRICATION OF SHAFTS BY PNEUMATIC IMPACTION
D. W. Brice and K. R. Sump, Richland, Wash.
- 3,213,379
ABSORPTION OF ENERGY BY ROTATING DISCS IN PARTICLE BEAM DEFLECTOR
R. J. Burleigh, Berkeley, Calif. and R. Peters, Lafayette, Calif.
- 3,214,633
CERAMIC TO METAL BONDING PROCESS
G. F. Erickson, Los Alamos, N. Mex.
- 3,215,569
METHOD FOR INCREASING THE CRITICAL CURRENT OF SUPERCONDUCTING ALLOYS
G. D. Kowip, J. O. Betterton, Oak Ridge, Tenn., J. O. Scarborough and D. S. Easton, Lenoir City, Tenn.
- 3,215,606
NUCLEAR REACTOR WITH ENERGY COOLANT CROSS FLOW ELEMENT
A. G. Silvester, Los Catos, Calif.
- 3,215,607
MULTI-REGION NEUTRONIC FUEL ELEMENT
M. Leskey, Oak Ridge, Tenn.
- 3,215,608
NUCLEAR REACTOR CORE CLAMPING SYSTEM
R. V. Gumbert, San Jose, Calif.
- 3,216,101
RANGE INDICATING SYSTEM
C. V. Rosschke, Albuquerque, N. Mex.
- 3,216,174
APPARATUS FOR CHARGING NUCLEAR REACTOR FUEL ELEMENTS
D. Micoli, La Jolla, Calif., and J. L. Hedgecock, Encinitas, Calif.
- 3,216,806
OXIDATION RESISTANT COATINGS ON NIOBIUM
R. Bender, Albertson, N.Y., L. Sama, Seaford, N.Y. and H. P. Kling, Baltimore, Md.
- 3,216,831
COATING FOR COLLISION
S. Marano, Euclid, Ohio and R. C. Lever, Anchorage, Ky.
- 3,216,903
MODIFIED OF FUEL TUBE IN REACTOR SINTERING
W. L. Booth, Richland, Wash.
- 3,217,199
MONOPOLAR GENERATOR
E. S. Musset, Chicago, Ill.
- 3,217,322
F. M. RADAR SYSTEM
L. J. Kibell, Albuquerque, N. Mex. and C. W. Roschke, Palo Alto, Calif.
- 3,217,471
DIFFUSION BOARD FOR FILTERING HIGH PRESSURE GASES
L. Silverman, Dover, Mass.
- 3,217,991
ANGLED PLATE SLANTING INTERFEROMETER
W. L. Barr and A. L. Gardner, Livermore, Calif.
- 3,218,123
RECOVERY OF STRONTIUM VALUES FROM SULFATE-CONTAINING WASTE SOLUTIONS
W. Davis and V. C. Yee, Oak Ridge, Tenn.
- 3,218,160
REGENERATION OF NUCLEAR FUEL
J. B. Knighton, Joliet, Ill., R. M. Feder, Park Forest, Ill. and R. K. Stenness, Naperville, Ill.
- 3,218,235
METHOD AND APPARATUS FOR PRODUCING A FUNCTIONALLY COMBINED HOT DENSE FLAME
A. W. Esler, Los Angeles, Calif.
- 3,218,781
ELECTROSTATIC APPARATUS FOR REMOVAL OF DUST PARTICLES FROM A GAS STREAM
R. T. Allmann, R. L. Moore and G. L. Upson, Richland, Wash.
- 3,219,843
ULTRASONIC INSPECTION METHOD FOR INACCESSIBLE PIPE AND TUBING
D. Worlton, Richland, Wash.
- 3,219,408
CHEMICAL DISINTEGRATION AND RECOVERY OF URANIUM FROM SINTERED CARBIDE URANIUM COMPOUNDS
M. J. Bradley, Oak Ridge, Tenn. and L. M. Ferris, Knoxville, Tenn.
- 3,219,441
PROCESS OF PREPARING THORIUM METAL FROM THE OXIDE
J. B. Knighton, Joliet, Ill., and A. V. Haribaran, Bombay, India
- 3,219,474
PROTECTIVE COATINGS FOR COLLISION AND ITS ALLOYS
S. Priceman and L. Sama, Seaford, N.Y.
- 3,219,477
OXIDATION RESISTANT COATINGS FOR COLLISION AND COLLISION ALLOYS
J. Grubessich, Astoria, N.Y. and L. Sama, Seaford, N.Y.

- 3,219,534 PLASMA CONFINEMENT APPARATUS EMPLOYING A HELICAL MAGNETIC FIELD CONFIGURATION
H. F. Furth, Berkeley, Calif.
- 3,219,535 NUCLEAR REACTOR CONTROL MEANS
T. R. Robbins, Beltsville, Md.
- 3,219,541 METHOD OF PREVENTING CARBURIZATION OF FUEL ELEMENT CLADDING METALS BY OXYGEN CLADDING FUELS
B. A. Webb, Granada Hills, Calif.
- 3,219,736 METHOD FOR PRODUCING HYDROSTATIC PRESSURE
E. A. Stisser, Pleasanton, Calif.
- 3,219,776 SWITCH ACTUATOR MECHANISM
S. Yehrovich, Los Angeles, Calif.
- 3,219,825 SOLID STATE DETECTION SYSTEM WITH LOW NOISE AMPLIFICATION
R. H. Osham, Clatsopburg, Conn.
- 3,219,840 FUSION ELECTRIC GENERATOR
W. F. Brieve, Altadena, Calif.
- 3,221,987 TURBOREGULATOR
J. S. Yampolsky, San Diego, Calif.
- 3,222,026 LEAK VALVE
J. T. Green, Orlando, Fla.
- 3,222,125 DISSOLUTION OF NUCLEAR ALUMINUM-BASE FUEL
W. S. Schulz, Richland, Wash.
- 3,222,144 POLYCELLULAR TUBULAR GRID STRUCTURES AND METHOD OF MANUFACTURE
D. E. Davenport, Palo Alto, Calif.
- 3,222,289 DISSOLUTION OF ZIRCONIUM IN TITANIUM EQUIPMENT
W. E. Clark and T. A. Geas, Oak Ridge, Tenn.
- 3,222,526 PROSENSITIVE LIGHT BEAM LOCATION INFORMATION DEVICE
J. V. Franck and P. S. Brodhead, Lafayette, Calif.
- 3,222,559 PRODUCTION OF COMPLETELY IONIZED PLASMA
I. Alexoff, Oak Ridge, Tenn. and E. V. Weidigh, Knoxville, Tenn.
- 3,222,670 DATA PROCESSING
A. Barel, Framingham, Mass.
- 3,223,598 METHOD OF DETERMINING THE ADHESION OF METAL FLATING
G. F. Jacky, R. Sorenson, D. W. Shannon, Richland, Wash. and W. E. Tragert, Scotts, N.Y.
- 3,224,615 CRANE DEVICE WITH AN EXTENSIBLE GRIPPER MECHANISM
J. Henry (Deceased)
- 3,224,665 DIFFUSION PUMP
M. Milleron, Berkeley, Calif. and L. L. Lervenson, Livermore, Calif.
- 3,229,996 DISCONNECTABLE TUBE COUPLING
J. J. Cadwell, San Diego, Calif.
- 3,230,036 METHOD FOR SEPARATING AMERICIUM AND CURIUM FROM THE LANTHANIDE RARE EARTHS AND YTTRIUM
F. A. Kappalaann and B. S. Weaver, Oak Ridge, Tenn.
- 3,230,145 APPARATUS FOR MAGNETICALLY CONFINING A PLASMA
H. P. Furth, Berkeley, Calif. and M. M. Rosenbluth, San Diego, Calif.
- 3,230,146 NUCLEAR REACTOR CORE HAVING MEANS FOR VARYING INCLINATION OF FUEL ASSEMBLIES
E. R. Astley, Richland, Wash. and L. M. Finch, Pasco, Wash.
- 3,230,147 METHOD AND APPARATUS FOR CONTROLLING REACTIVITY OF NUCLEAR REACTOR
A. J. M. Hitchcock, Dorchester, Dorset, England
- 3,230,150 METAL-CLAD FUEL ELEMENT WITH COPPER FOIL INTERLAYER
W. R. Martin, and J. R. Welf, Oak Ridge, Tenn.
- 3,230,151 FUEL ELEMENT FOR A NUCLEAR REACTOR
L. E. Mills, Normal, Ill., J. J. Heath, C. H. Bloomster and D. F. Carroll, Richland, Wash.
- 3,230,152 COMPARTMENTED NUCLEAR REACTOR FUEL ROD AND METHOD OF MAKING
F. Kerze, Bethesda, Md.
- 3,230,364 SURFACE AREA MEASUREMENTS
J. T. Clarke, Stony Brook, N.Y.
- 3,230,369 RADIATION DOSIMETER SYSTEM USING CADMIUM-BACKED COPPER FOIL
L. J. Carr, R. D. Hiebert, E. R. Ballinger, Los Alamos, N. Mex., P. S. Harris and J. R. Larkins, Santa Fe, N. Mex.
- 3,230,372 NUCLEAR RADIATION DETECTOR WITH CONTROL GRID
H. P. Spracklen, Castro Valley, Calif.
- 3,230,374 RADIOACTIVE RADIATION EMITTING SOURCES
L. V. Jones, Miamisburg, Ohio, P. A. Tucker and L. J. Wittmberg, Dayton, Ohio
- 3,230,418 DEVICE HAVING HIGH-GRADIENT MAGNETIC COSY GEOMETRY
E. A. Dandl, Oak Ridge, Tenn. and R. J. Kerr, Knoxville, Tenn.
- 3,234,780 TEMPERATURE COMPENSATED CONDENSATION PRESSURE ANALYZER
W. S. Pappas, Oak Ridge, Tenn.
- 3,237,821 GLOVE CHANGING APPARATUS AND METHOD
R. E. Hayne and J. B. Owen, Boulder, Colo.

3, 238, 014	RECOVERY OF URANIUM AND PLUTONIUM VALUES FROM AQUEOUS SOLUTIONS OF AMMONIUM FLUORIDE	T. A. Gema, Oak Ridge, Tenn.	3, 239, 751	HIGH VOLTAGE RESISTOR HAVING IMPROVED CORONA SHIELDING	T. W. Sibery, Orinda, Calif.
3, 239, 105	FUEL ELEMENT ASSEMBLY FOR A NUCLEAR REACTOR	M. J. McBelly, San Jose, Calif.	3, 241, 168	PRESSURE INTENSIFIER	P. P. Febbo, E. F. Levey, and H. A. Pabco, Oak Ridge, Tenn.
3, 238, 288	HIGH TEMPERATURE FURNACE	J. C. McGuire, White Rock, N. Mex. and D. D. Bovefish, Espanola, N. Mex.	3, 241, 230	DIFFUSION BONDING OF TUNGSTEN TO TUNGSTEN	E. I. Batista, C. S. Hanks, Los Alamos, N. Mex. and D. J. Murphy, Tucson, Ariz.
3, 238, 321	EXPLOSIVE ACTUATED SWITCH IN WHICH CONTACT PIECES NON-CONDUCTOR	R. C. Lawcill and H. L. Anderson, Albuquerque, N. Mex.	3, 241, 955	HIGHLY DENSIFIED AND NICHTEL-18 LE TUNGSTEN-TUNG-NICKEL ALLOY	A. C. Mealey, Oak Ridge, Tenn.
3, 238, 370	AUTOMATIC CORRECTION OF PENKATE FOR NEUTRON ATTENUATION	J. V. Leeds, Pittsburgh, Pa.	3, 242, 863	EXPLOSIVE LINE WAVE GENERATOR	D. H. Gipson, Pleasant Hill, Calif.
3, 238, 406	ROCESSIZED PENTOXIDE TUBE WITH SEMICYLINDRICAL CATHODE AND ANODE OF ELONGATED CROSS-SECTION	A. L. Grellich, Livermore, Calif. and M. R. McCraven, Palo Alto, Calif.	3, 243, 105	SYSTEM FOR SEPARATING PARTICULATE SUBSTANCES BY RESIDENT-ING GRADIENTS	H. G. Anderson, Oak Ridge, Tenn.
3, 238, 414	HIGH OUTPUT DOPPLASMATRON-TYPE ION SOURCE	G. G. Kelley, Kingston, Tenn. and O. B. Morgan, Oak Ridge, Tenn.	3, 243, 254	METHOD FOR EXTRACTING LANTHANIDES AND ACTINIDES	T. H. Siddall, Aiken, S. C.
3, 238, 487	REGENERATION OF EMP CELLS HAVING MOLYBDEUM CATHODES AND A FUSED SALT ELECTROLYTE	M. S. Foster, Naperville, Ill. and C. E. Crouthamel, Glen Ellyn, Ill.	3, 243, 257	RECOVERY OF URANIUM AND IIR-CORIUM FROM AQUEOUS FLUORIDE SOLUTIONS	C. F. Coleman, Oak Ridge, Tenn.
3, 238, 453	APPARATUS FOR MEASURING THE DIELECTRIC CONSTANT OF OIL UTILIZING AN ACTIVE FILTER COUPLED TO A TUNED OSCILLATOR	J. J. Henry, E. V. Johnson and J. B. Mankin, Oak Ridge, Tenn.	3, 243, 280	METHOD OF REMOVING HYDROGEN FROM LIQUID ALKALI METALS	E. G. Bollmann, Concord, Tenn. and E. L. Compere, Knoxville, Tenn.
3, 238, 574	SEAL	T. H. Fields, Evanston, Ill., K. B. Martin, Joliet, Ill., E. G. Hewitt, Elmhurst, Ill. and J. G. Pethovich, Oelmont, Pa.	3, 243, 349	CARBON-COATED METAL CARBIDE PARTICLES FOR NUCLEAR REACTOR USE	W. V. Goeddel, Poway, Calif.
3, 238, 797	SLIP CAN ARRANGEMENT	E. D. Coughren, Richland, Wash.	3, 243, 350	CLAD ALLOY FUEL ELEMENTS	E. Lustman and E. K. McGeary, Pittsburgh, Pa.
3, 239, 334	COLUMBIUM BRAZING ALLOY	C. A. Javorsky, Los Alamos, N. Mex. and J. S. Howe, Albany, Ore.	3, 243, 351	STEAM PRODUCING REACTOR AND FUEL THEREFOR	E. W. Campbell, D. H. Imhoff, E. T. Pennington and J. M. Roberts, San Jose, Calif.
3, 239, 335	DUCTILE BINARY CHROMIUM ALLOY	O. W. Carlson, F. A. Schmidt and L. L. Sharwood, Ames, Iowa	3, 243, 493	METHOD AND APPARATUS FOR INDUCTION MELTING	E. F. Bonshah, Livermore, Calif. and R. S. Jantz, Hayward, Calif.
3, 239, 667	METHOD FOR DETERMINING THE NEUTRON FLUX ABOVE THE 0-238 THRESHOLD ENERGY LEVEL	E. Roberts, Rockwood, Tenn. and J. W. Wechter, Oak Ridge, Tenn.	3, 243, 590	THERMOLUMINESCENT RADIATION DOSIMETER AND INTEGRAL HEATER	A. H. Foreman, Danville, Calif., J. R. Gaskill, Livermore, Calif., W. A. Phillips and R. D. Taylor, Walnut Creek, Calif.
			3, 243, 613	F-100 REACTOR	G. M. Crover, Los Alamos, N. Mex.

3,243,715	TWO-GAS WATER OF DEPOSITED EFFICIENCY AND POWER LEVEL	T. A. Melton, Oak Ridge, Tenn.	3,251,645	METHOD FOR PROCESSING ALUMINUM-CONTAINING NUCLEAR FUELS	C. E. Guthrie, Oak Ridge, Tenn.
3,245,114	POWDER ROLLING OF TUNGSTEN AND ITS ALLOYS	T. J. Ready, H. D. Lewis, Los Alamos, N.Mex. and J. E. Rochette, Espanos, New Mex.	3,252,048	MAWSEOND PULSE LIGHT SOURCE	Q. A. Karns, Orinda, Calif., G. C. Cook, Walnut Creek, Calif., T. G. Innes, Pullerton, Calif. and W. S. Flood, Pleasant Hill, Calif.
3,245,118	ELECTRICAL LEAD-THROUGH FOR PRESSURE INTENSIFIER	A. E. Smith, Clinton, Tenn.	3,252,271	PARTICLE FILTER	L. P. Hartz, Brookhaven, N.Y., J. J. Malloy, Selloport, N.Y. and S. J. Nuchtel, Rocky Point, N.Y.
3,245,119	ELECTRICAL LEAD-THROUGH FOR PRESSURE INTENSIFIER	R. L. Huddleston, Knoxville, Tenn.	3,252,867	LONG LIFETIME NUCLEAR REACTOR	G. H. Conley, Pittsburgh, Pa.
3,245,120	ELECTRICAL LEAD-THROUGH FOR PRESSURE INTENSIFIER	R. F. Levey, Oak Ridge, Tenn.	3,253,086	NUCLEAR REACTOR CONTROL SYSTEM	A. J. M. Hitchcock, Lynn, England
3,245,268	WATER SAMPLER	F. B. Archibald, Pleasanton, Calif.	3,257,284	METHOD OF CONTROLLING PLASMA STABILITY	R. F. Post, Walnut Creek, Calif.
3,246,153	CALORIMETER CAPABLE OF SEPARATELY DETERMINING NEUTRON ENERGY ABSORPTION AND GAMMA ENERGY ABSORPTION	W. B. Lewis, Idaho Falls, Idaho	3,257,560	NEUTRON COLLIMATOR WITH SURFACE COATINGS TO SUPPRESS NEUTRON REFLECTOR	I. B. Jones, Livermore, Calif.
3,246,196	METHOD AND MEANS FOR IMPROVING THE ELECTRON EMISSION FROM A REFRACTORY CONDUCTING MATERIAL	R. L. Amodei, Santa Fe, N.Mex., E. J. Brown and B. D. Nichols, Los Alamos, N.Mex.	3,257,571	POWER GENERATOR	C. B. Jones, Canoga Park, Calif.
3,246,272	POTTED ELECTRICAL COIL AND BAIN-LIKE LEAD WIRE ASSEMBLY	T. A. Willey, Overland Park, Kan.	3,257,577	FRASING OF MULTISECTION LINEAR ACCELERATORS BY ALTERNATELY TURNING ON AND OFF APPROPRIATE ELECTROMAGNETIC DRIVERS	G. A. Loew, Palo Alto, Calif.
3,249,395	GAS-SOLIDS REACTION SYSTEM	R. F. Levey, Oak Ridge, Tenn.	3,257,688	METAL SHAPES HAVING INCREASED COMPRESSIVE STRENGTHS	R. F. Levey, Oak Ridge, Tenn.
3,249,429	TANTALUM BRASSING ALLOY	C. E. Armstrong, Corvallis, Ore., J. S. Howe, Albany, Ore. and C. A. Jevortsky, Los Alamos, N.Mex.	3,258,315	MONOALKYL FOSPHORIC ACID EXTRACTION OF CESIUM AND STRONTIUM VALUES	J. M. Schmitt, Oak Ridge, Tenn.
3,249,509	NUCLEAR FUEL PARTICLES COATED WITH MIXTURE OF PYROLANTIC CARBON AND SILICON CARBIDE	J. M. Blecher, Columbus, Ohio	3,258,429	DECONTAMINATION SOLUTION AND METHOD	R. D. Weed, Richland, Wash.
3,249,800	FAST ACTING SWITCH UTILIZING A VAPORIZABLE WIRE	R. J. Ruber, Washburn, N.J.	3,258,467	EXTRACTION AND PURIFICATION OF CILOROFRITIL	A. F. H. Anderson, and M. Calvia, Berkeley, Calif.
3,250,590	PREPARATION OF ACTIVE NONG-CARBIDE	E. J. Petkus, Chicago, Ill. and A. D. Tevrough, Hinsdale, Ill.	3,258,728	ELECTRICAL COIL AND LEAD WIRE ASSEMBLY	J. A. Peters, T. A. Willey, Overland Park, Mo. and J. H. Lynch, Garden City, Mo.
3,250,842	ELECTRON BEAM SOURCE REFLECTING	T. Bihida, Sunnyvale, Calif.	3,259,470	APPARATUS FOR MANUFACTURING SHAPES OF URANIUM CARBIDE	F. Hofmann, Upper Bavaria, Germany and L. Schafer, Klna Ahsala, Germany
3,251,337	SPIRAL FLUIDIZED BED SERVICE AND METHOD FOR COATING PARTICLES	R. E. Latta, Wainerville, Ohio and E. S. Poston, Fairfield, Ohio			

3,259,473	DISSOLUTION OF PLUTONIUM	M. H. Hopkins, R. S. Kingsley, Richland, Wash., and E. L. Comner, Tekona, Wash.	3,261,378	METHOD AND APPARATUS FOR VIBRATORY COMPACTION	J. E. Ayer, Joliet, Ill., and F. E. Soppet, Calumet Park, Ill.
3,259,745	BORON-12 BETA DECAY NEUTRON DETECTOR	G. F. Gerlick, Kennedick, Wash. and W. L. Busch, Richland, Wash.	3,261,483	ADAPTER VALVE	F. T. Calabretta, Fort Chester, N.Y.
3,259,766	THERMIONIC NUCLEAR REACTOR	E. S. Beckjord, Pittsburgh, Pa. F. J. Fellous and R. B. Hobson, San Jose, Calif.	3,261,747	STABILIZED IODINE LABELED 2'-DEOXY-5-THIOURIDINE	S. L. Commerford, Shirley, N.Y.
3,260,381	APPARATUS AND METHOD FOR TRANSFERRING OBJECTS INTO A CONDITIONED ATMOSPHERE	R. W. Wagner and C. K. Ford, Knoxville, Tenn.	3,261,756	EMBOSSD CLADDING FUEL ELEMENT AND MANUFACTURING PROCESS THEREFOR	C. C. Ripley, San Jose, Calif.
3,260,466	FISSILE FUEL RECOVERY PROCESS	J. I. Wager, Huntington, N.Y., R. H. Singer, D. G. Schweitzer, East Islip, N.Y. and N. H. Katz, Fort Jefferson, N.Y.	3,261,757	NUCLEAR FUEL ELEMENT	M. Steinberg, Huntington Station, N.Y., C. Farbet, Elmont, N.Y. and D. E. Curinsky, Center Moriches, N.Y.
3,260,574	PYROLYTIC CARBON DECLADDING	L. F. Hatch, Brookhaven, N.Y., J. J. Reilly, Bellport, N.Y. and E. Wirsing, Mattituck, N.Y.	3,261,760	QUICK OPENING LATCH AND ANTI-VIBRATION LOCK FOR NUCLEAR REACTOR SAFETY ROD	R. E. Masoll, Idaho Falls, Idaho
3,260,575	SINGLE STEP PROCESS FOR PREPARATION OF URANIUM HEXAFLUORIDE FROM URANIUM HEXAFLUORIDE	R. L. Heestand and C. F. Leittem, Oak Ridge, Tenn.	3,262,280	LEVEL CONTROL FOR CRYTOGENIC LIQUID	R. L. Chansay, San Leandro, Calif.
3,260,649	NUCLEAR REACTORS	J. B. Nims, Royal Oak, Mich., R. S. Miller, Brookfield, Wis., E. C. Palmer, Idaho Falls, Idaho, W. E. Jens, Grosse Point, Mich., M. C. Edlund, Lynchburg, Va., S. Barringer, Rustburg, Va., J. K. Davidson and C. E. Kloetz, Silver Spring, Md.	3,262,756	METHOD FOR ANALYZING ENERGY GAS FOR PRESENCE OF OXYGEN OR WATER VAPOR	G. W. Keilbolts, Knoxville, Tenn. and C. C. Webster, Oak Ridge, Tenn.
3,260,650	REFLECTOR AND COOLANT SEALING STRUCTURE FOR GAS COOLED NUCLEAR REACTOR	W. A. Kalk, Poway, Calif. and J. F. Petersen, San Diego, Calif.	3,262,760	METHOD OF PREPARING HIGH DENSITY, COMPACTIBLE URANIUM DIOXIDE PARTICLES	L. E. Morse, Oak Ridge, Tenn., K. H. McCortie, Powell, Tenn. and C. E. Schilling, Knoxville, Tenn.
3,260,844	CALUTRON WITH MEANS FOR REDUCING LOW FREQUENCY RAPID FREQUENCY SIGNALS IN AN ION BEAM	E. D. Shipley, Knoxville, Tenn., O. C. Yeats and A. M. Veatch, Oak Ridge, Tenn.	3,262,856	FUSED-SALT-FUELED, MELTEN METAL-COOLED POWER REEORDER REACTOR SYSTEM	E. S. Bettis, Knoxville, Tenn.
3,260,869	METHOD FOR REVERSIBLY EXTRACTING ENERGY FROM A PLASMA BY MAGNETIC PUMPING	L. S. Ball, Livermore, Calif.	3,262,859	ORDERED BED NUCLEAR FUEL ASSEMBLIES	W. E. Vinscha, Bellport, N.Y.
3,261,199	ISOKINETIC SAMPLING APPARATUS	G. S. Raynor, Manorsville, N.Y.	3,262,885	FISSION-PRODUCTS-CONTAINING COMPOSITION AND PROCESS OF MAKING	F. R. Bushbrook, Richland, Wash.
			3,263,004	PROCESS OF MAKING A SINTERED, HOMOGENEOUS DISPERSION OF NUCLEAR FUEL AND BURNABLE POISON	C. H. Bean, Naperville, Ill.
			3,263,136	HIGH ENERGY ACCELERATOR MGMT STRUCTURE	H. S. Gordon, Orinda, Calif.
			3,263,145	HIGH CURRENT REVERSING SWITCH	W. L. Dexter, Orinda, Calif.

3,264,070	REMOVAL OF ACTINIDE HALIDES FROM ALUMINA	D. Ramaswami, Westmont, Ill., R. N. Levitz, Bellwood, Ill., and A. A. Joske, Elmhurst, Ill.	3,265,998	COMPACT HIGH VOLTAGE TRANSFORMER HAVING MORE UNIFORM EQUIPOTENTIAL LINE SPACING	C. W. Park, Oakland, Calif.
3,264,073	NOVEL METAL MICROSPHERES AND THEIR MANUFACTURE	G. R. Schmitt, Oak Ridge, Tenn.	3,265,093	PRESSURE VESSEL SEAL	R. L. Huddleston, Knoxville, Tenn. and R. F. Levey, Oak Ridge, Tenn.
3,264,189	POOL-TYPE NUCLEAR REACTOR WITH IMPROVED LIQUID SHIELD ARRANGEMENT	J. J. Regisbaki, Richland, Wash.	3,265,750	CUSHIONING MEDIA	R. G. Braden, Castro Valley, Calif.
3,264,192	MULTI-SECTION CONTROL ROD WITH THERMAL EXPANSION JOINT	R. A. Wilmom, Downers Grove, Ill.	3,266,928	OXIDATION-RESISTANT COATING ON ARTICLES OF YTTRIUM METAL	D. R. Wilder, and C. D. Winkus, Ames, Iowa
3,264,223	TRACIUM MONOSULFIDE-URANIUM-MONOSULFIDE SOLID SOLUTIONS	Y. Bastin, Chicago, Ill. and P. D. Shalik, Champaign, Ill.	3,266,948	CARRIER DEPOSITION ON TANTALUM	J. C. McQuire, White Rock, N. Mex.
3,264,379	METHOD OF ROUNDING ACTINIDE OXIDE GEL PARTICLES	R. L. Hamner, Oak Ridge, Tenn. and W. H. Smith, Knoxville, Tenn.	3,266,998	DOPLER COEFFICIENT CONTROL FOR NUCLEAR REACTORS OPERATING IN THE FAST OR INTERMEDIATE NEUTRON ENERGY SPECTRUM	F. Greebler, San Jose, Calif.
3,264,568	ELECTRON LINEAR ACCELERATOR FEASIBILITY STUDY INVOLVING ALTERNATELY TURNING ON AND TURNING OFF THE ELECTROSTATIC DRIVER OF THE SECTION BEING PHASED	D. J. Goertz, Belmont, Calif. R. B. Koal, Menlo Park, Calif. E. S. Mallory, Palo Alto, Calif.	3,266,999	GAS-COOLED, WATER MODERATED NEUTRONIC REACTOR	R. E. Wood, Idaho Falls, Idaho and W. E. Blomuch, Loveland, Ohio
3,264,871	MAGNETIC RECORDING HEADSOT FOR FLIGHTS	J. C. Boyson, North Hollywood, Calif.	3,267,001	MODERATOR REFLECTOR FAST NEUTRON REACTOR CORE	F. Greebler, San Jose, Calif.
3,264,912	PRECISION LATHE	V. M. Davis, Kingston, Tenn. and R. E. Palmer, Knoxville, Tenn.	3,267,002	METHOD FOR CONTROLLING A NUCLEAR REACTOR	L. W. Fromm, Glen Ellyn, Ill. and C. M. Kober, Wheaton, Ill.
3,265,132	UNDERWATER BEACON	I. E. Kass, Baltimore, Md.	3,267,134	GLYCOL ESTERS OF DIFLUORO-NITROACETIC ACID	E. R. Bissell, Alamo, Calif.
3,265,583	APPARATUS FOR PRODUCING AND FUELING PLASMA	V. E. Baker, Orinda, Calif. and K. Balbach, Berkeley, Calif.	3,267,307	MAGNETICALLY CHANNELLED PLASMA DIODE HEAT CONVERTER	R. Fox, Rehovot, Israel
3,265,602	METHOD OF PRODUCING HYDROGEN	M. Steinberg, Huntington Station, N.Y.; J. Prognansky, East Islip, N.Y.; and E. Kramer, Bayside, N.Y.	3,267,406	NON-INDUCTIVE ELECTRIC RESISTOR	R. L. Davis, Albuquerque, N. Mex.
3,265,627	ADDITION OF LITHIUM VALUES IN CONVERSION OF FISSION-PRODUCT WASTES TO A GLASS-LIKE SOLID FOR DISPOSAL	V. E. Clark, Oak Ridge, Tenn. C. L. Fitzgerald and G. D. Davis, Kingston, Tenn.	3,267,672	GAS GENERATING DEVICE WITH EXHAUSTOR INSULATING MEANS	J. R. Craig and D. J. Sasser, Albuquerque, N. Mex.
3,265,967	MICROWAVE PLASMA DENSITY MEASUREMENT SYSTEM	M. A. Rheid, Switzmore, Pa.	3,268,303	REMOVAL OF STAINLESS-STEEL CLADDINGS FROM NUCLEAR FUEL ELEMENTS	D. Ramaswami, Westmont, Ill. and R. N. Levitz, Bellwood, Ill.
			3,268,410	RADIATION REACTOR	L. D. F. King, Santa Fe, N. Mex.
			3,268,758	HOLLOW GAS ARC DISCHARGE DEVICE UTILIZING AN OFF-CENTER CATHODE	J. W. Flowers, Gainesville, Fla.

3,266,976	BROACH FOR CURVED GRAPHITE PASSAGES	E. Hollister (deceased)		FROM A SOLUTION OF NITRALINE AND STYRENE DIMINUTETRAACETIC ACID	De Witt, N.Y.
3,269,458	METHOD AND APPARATUS FOR ACCURATE AND CONTROLLED COOLING	G. C. Rogers, Los Altos, Calif.	3,272,756	RADIOACTIVE WASTE DEWASAL USING COLDMANITE	J. D. Kaser, Richland, Wash.
3,269,232	SYSTEM FOR COORDINATING THE OPERATIONS OF A TOOL WITH A PATTERN	V. M. Bovis, Kingstons, Tenn.	3,273,983	ION-PRODUCING MECHANISMS FOR CALUTRON	A. M. Yeach and O. C. Yonts, Oak Ridge, Tenn.
3,269,536	MOVING WALL ELUTRIATOR	A. K. Postma, Corvallis, Ore.	3,273,323	LIMITAR FLOW AIR HOOD APPARATUS	W. J. Whitfield, Albuquerque, N. Mex.
3,270,098	METHOD OF MAKING HOLLOW, SPHERICAL UO ₂ PARTICLES	H. H. Barr and L. A. Sundquist, Baltimore, Md.	3,273,557	VACUUM FURNACE WINDOW	M. E. Borch, Livermore, Calif. and R. S. Jants, Hayward, Calif.
3,270,287	TIDE-SPACED MULTIPLE PULSE GENERATOR	L. V. Decote, Castro Valley, Calif.	3,273,973	METHOD FOR PROCESSING ALUMINUM-CONTAINING NUCLEAR FUELS	R. E. Thomas, M. R. Bennett and J. W. Ullmann, Oak Ridge, Tenn.
3,270,828	HYDRAULICALLY ACTIVATED LOAD CARRYING APPARATUS	R. J. McCracken, Port Jefferson, N.Y.	3,273,974	FLUIDIZATION OF SINTERABLE FINES	J. D. Gabor, Western Springs, Ill. and M. C. Baerns, Hannover, Germany
3,271,133	PURIFICATION OF MELTEN SALTS	J. S. Knighton, Joliet, Ill. and R. K. Stuenkel, Naperville, Ill.	3,274,030	PHOTOCELL WITH COOLING MEANS AND METHOD OF USING SAME	M. E. Selmons, North Hills, Pa.
3,271,142	METHOD FOR FORMULATING MASTER ALLOY COMPOSITIONS FOR USE IN DISPERSION HARDENED CONTACTS	J. P. Hammond, Knoxville, Tenn. and K. K. Simha, Bombay, India.	3,274,066	UNPURGED FUEL ELEMENT	L. R. Zimmolt, San Diego, Calif.
3,271,260	LIQUID METAL PAST SREEDER REACTOR	L. C. Moderer, Windsor, Conn.	3,274,067	FUEL ROD DESIGN	F. Creebler, K. M. Horst, E. E. Olich and B. Wolfe, San Jose, Calif.
3,271,264	NEUTRONIC REACTOR WITH IMPROVED RELEASE MECHANISM BETWEEN CONTROL ROD AND ASSOCIATED DRIVE	P. Fortescue, La Jolla, Calif. and D. Nicoli, Del Mar, Calif.	3,274,068	FUEL ELEMENT	S. L. Koetz and R. F. Turner, San Diego, Calif.
3,271,320	POLONIUM RECOVERY	R. H. Moore, Kennewick, Wash.	3,274,770	METHOD AND SYSTEM FOR SUPPLYING THRUST TO A SPACE VEHICLE	J. C. Carter, Elmhurst, Ill. and M. B. Rodin, Park Forest, Ill.
3,271,966	CRYOSTATS	P. J. Webb, Bertsuire, England	3,275,421	RECOVERY OF ACTINIDE FROM SULLITE DEBRIS	D. G. Karraker, V. C. Perkins, Alhambra, S.C.
3,272,601	PREPARATION OF BINARY COMPOUNDS OF URANIUM AND MOLYBDENUM	W. H. Hansen, Thousand Oaks, Calif.	3,275,422	CONTINUOUS-GAS-PHASE VOLATILITY PROCESS	C. I. Catbers, Knoxville, Tenn. and J. C. Nailen, Oak Ridge, Tenn.
3,272,658	RADIOISOTOPE HEATED THERMO-ELECTRIC GENERATOR POWER FLATTENING SYSTEM	R. E. Bush, Livingston, N.J.	3,275,480	METHOD FOR INCREASING THE CRITICAL CURRENT DENSITY OF HARD SUPERCONDUCTING ALLOYS AND THE IMPROVED PRODUCTS THEREOF	J. O. Betterton, Oak Ridge, Tenn., C. D. Knisp, Concord, Mass., D. S. Easton and J. O. Scarborough, Lenoir City, Tenn.
3,272,668	SEMICONDUCTOR DETECTOR METHOD	G. L. Miller, Babylon, N.Y. and S. E. Wagner, Brookhaven, N.Y.	3,275,525	NUCLEAR FUEL ELEMENT INCOMPARING HELICAL FISSIONABLE WIRE	C. H. Bloomster and J. J. Haeth, Richland, Wash.
3,272,738	PROCESS FOR THE REMOVAL OF METAL CORROSION PRODUCTS	E. C. Pitzer, C. R. Fountain, Scotia, N.Y. and J. R. Ciaramello,			

3,275,534	METHOD OF PREPARING URANIUM FOR NICKEL PLATING	J. R. Lundquist and R. W. Stromatt, Richland, Wash.
3,275,737	COAXIAL CABLE TERMINATING MEANS	J. M. Callier, Albuquerque, N.Mex.
3,275,916	HIGH Q POWER CAPACITOR	J. A. Phillips and A. E. Schofield, Los Alamos, N.Mex.
3,276,849	METHOD FOR SEPARATING MEMBERS OF ACTINIDE AND LANTHANIDE GROUPS	F. L. Moore, Knoxville, Tenn.
3,276,850	METHOD OF SELECTIVELY REDUCING PLUTONIUM VALUES	R. H. Rainey, Knoxville, Tenn.
3,276,861	CALIFORNIUM AND EINSTEINIUM SEPARATION	J. S. Knighton, Joliet, Ill. and K. K. Steunenberg, Naperville, Ill.
3,276,867	CASTNET MATERIALS AND PROCESS OF MAKING	D. M. Britte and K. R. Sump, Richland, Wash.
3,276,969	DEVICE FOR MONITORING SHUT-DOWN NUCLEAR REACTORS	E. F. Antai, S. J. Ostrom, Kenneswick, Wash., C. D. Brona, and F. B. Quinlan, Richland, Wash.
3,277,304	RADIOACTIVITY SIGMAR SAMPLING METHOD AND APPARATUS USING DATA PROCESSING CARDS	J. S. Hurst, Knoxville, Tenn., W. A. Pfeiler, Norris, Tenn., M. Sanders and E. F. Cannon, Knoxville, Tenn.
3,277,326	ELECTRON GUN AND SOCKET STRUCTURE	C. Criss and F. G. Hummerston, E. Petersburg, Pa.
3,277,565	METHOD OF CLAMPING YTTRIUM HYDRIDE AND YTTRIUM BASE ALLOY HYDRIDES	K. M. Bohlander, West Chester, Ohio, E. S. Funston, Hamilton, Ohio and J. A. McCarty, Cincinnati, Ohio
3,277,607	FIXATION OF RADIOACTIVE CONTAMINATION IN SOIL	R. Overstreet, Berkeley, Calif.
3,277,766	EXPLOSIVELY RELEASABLE BOLT	F. B. Buckdoll, Sunnyvale, Calif.
3,278,278	PYROLYSIS OF CARBIDE-TYPE NUCLEAR FUEL	J. R. Flannery, Knoxville, Tenn., J. H. Goode, Sweetwater, Tenn. and G. C. Wall, Sydney, Australia
3,278,364	NEGATIVE "V" STELLABATOR	A. Leonard, Trenton, N.J., R. M. Kilsrud, J. L. Johnson and I. B. Bernstein, Princeton, N.J.
3,278,386	DELAY BED SYSTEM FOR PURIFICATION OF NUCLEAR FUEL ELEMENT FURGE STREAM	J. E. French, Escondido, Calif., K. C. Steyer and G. L. Weisman, San Diego, Calif.
3,278,387	FUEL RECYCLE SYSTEM IN A MOLTEN SALT REACTOR	L. E. McCrete and C. D. Scott, Oak Ridge, Tenn.
3,278,454	IMBIBITION OF GASES GROWN IN SINTERED NITRYLIUM OXIDE BOOLES	F. P. Turner and H. C. Brassfield, Cincinnati, Ohio
3,278,765	RADIO-FREQUENCY PARTICLE SEPARATOR	G. A. Loew, Palo Alto, Calif.
3,278,752	WIDE ANGLE OPTICAL SYSTEM HAVING A TELECENTRIC STOP AND AN INTERFERENCE FILTER	B. B. Brimer, Los Alamos, N.Mex.
3,278,769	METHOD OF TEMPERATURE CYCLING FERROELECTRIC CERAMICS THROUGH A TEMPERATURE RANGE BELOW THE CURIE POINT THEREOF	H. M. Graham and P. L. Phelps, Livermore, Calif.
3,278,892	ACOUSTIC SPARK CHANGER	F. A. Kiresten, Lafayette, Calif. and B. C. Maglic, Geneva, Switzerland
3,279,898	METHOD OF PREPARING PLUTONIUM MONONITRIDE	J. A. Leary and R. L. Mance, Los Alamos, N.Mex.
3,279,917	HIGH TEMPERATURE ISOSTATIC PRESSING	A. H. Ballard and B. Hendricks, Oak Ridge, Tenn.
3,280,002	SEAL FOR A CONTROL ROD APPARATUS	E. Rutter, Chicago, Ill. and T. E. Sullivan, Evergreen Park, Ill.
3,281,324	THERMAL EXPANSION IMPULSE ACTUATOR IN PLASMA JET APPARATUS	I. Henkin and J. Marshall, Los Alamos, New Mex.
3,281,325	MINIMIZING THE EFFECTS OF FLUX GRADIENT IN A REACTOR	R. J. Homig, Richland, Wash.
3,281,328	NUCLEAR FUEL ROD ASSEMBLY	V. E. Hazel, San Jose, Calif. and J. J. Zeller, Los Angeles, Calif.
3,281,338	METHOD FOR PRODUCING ULTRA-HIGH PURITY PLUTONIUM METAL	J. A. Leary and L. J. Mullins, Los Alamos, N.Mex.
3,281,661	NUCLEAR SPIN COOLING METHOD	C. D. Jeffries, Berkeley, Calif.
3,282,276	HIGH VACUUM VALVES	J. T. Mark, Lancaster, Pa.
3,282,655	PRODUCTION OF ¹³¹ I	F. M. Case and E. H. Acree, Oak Ridge, Tenn.

3,282,656	PREPARATION OF PLUTONIUM MONOSULFIDE AND PLUTONIUM MONOFLUORIDE	O. L. Kruger, Westmont, Ill. J. B. Moser, Evanston, Ill., and B. J. Wrona, Joliet, Ill.	3,285,826	FUEL ELEMENT CONTAINING A MECHANICALLY COMPRESSIBLE MONOBILL	J. E. Lang, L. G. Wisnoff, Schmiedstad, N.Y. and R. A. Proebstle, Scotia, N.Y.
3,282,681	SEPARATION OF URANIUM AND PLUTONIUM VALUES	J. B. Knighton, Joliet, Ill. and R. K. Stenmenberg, Naperville, Ill.	3,286,152	MULTIPLE BATTERY CHARGING AND DISCHARGING CIRCUIT MEANS	J. B. Nee, Albuquerque, N.Mex.
3,282,793	APPARATUS FOR CONTROLLING THE ATMOSPHERE OVER A NUCLEAR REACTOR	A. B. Janrog, Chicago, Ill.	3,286,820	TITANIUM PRIMER FOR A VACUUM PUMP	E. C. Hurst, Stoughton, Wis.
3,282,806	ELECTROREFINING OF PLUTONIUM	J. L. Long, and R. D. Schweikhardt, Arvada, Colo.	3,287,084	PROCESS FOR SEPARATING STRONTIUM VALUES FROM BARE EARTH METAL VALUES	H. H. VanTuyll, Richland, Wash.
3,283,479	COMBINATION TRAP PUMP	T. E. Batten and R. H. McFarland, Livermore, Calif.	3,287,093	NUCLEAR REACTOR FUEL MATERIAL AND A METHOD OF PREPARING THE SAME	P. A. Nelson, Wheaton, Ill. and M. C. Chasnov, Homewood, Ill.
3,284,173	PREPARATION OF PLUTONIUM HEXAFLUORIDE	J. Fischer, Lisle, Ill.	3,287,111	ZIRCONIUM BASE NUCLEAR REACTOR ALLOY	H. H. Klepfer, Pleasanton, Calif.
3,284,190	SEPARATION OF URANIUM FROM NOBLE AND REFRACTORY METALS	J. B. Knighton, Joliet, Ill. and R. K. Stenmenberg, Naperville, Ill.	3,287,224	LARGE FAST NUCLEAR REACTOR	W. B. Loevenstein, Elmhurst, Ill.
3,284,195	METHOD OF FABRICATING ARTICLES FROM POWDERS	J. M. Googin and L. M. McLaughlin, Oak Ridge, Tenn.	3,287,228	BOILING WATER NEUTRONIC REACTOR	G. E. Corker, Cincinnati, Ohio
3,284,305	PROCESSES OF PRODUCING ENERGY BY NUCLEAR FISSION	H. C. Urey, Chicago, Ill. (Rights to AEC), K. Coban, New York, N.Y. and F. T. Barr, Summit, N.J. (Rights to Esso Research Eng. Co.)	3,287,278	FAST REACTOR FUEL	R. E. Thomas, Oak Ridge, Tenn.
3,284,309	NO EAR POWER GENERATING APARATUS	R. V. Murphree, Summit, N.J.	3,287,279	PREPARATION OF A FILTERABLE CO-PRECIPITATE OF PLUTONIUM AND URANIUM	W. L. Lyon, Fremont, Calif.
3,284,550	ULTRAHIGH PURITY CARBIDE FORMATION	R. E. Riley and E. V. Davidson, Los Alamos, N.Mex.	3,287,518	SENSOR FOR DETECTING TRANSIENT SHOCK PHENOMENA	D. R. Henley, Newark, Calif.
3,284,642	PULSE TIME DELAY CIRCUIT EMPLOYING TUNNEL DIODE AND SWITCH COMBINATION GATED IN RESPONSE TO RAMP INPUT	Q. A. Kerns, Orinda, Calif., M. Birk, Rehovoth, Israel, and T. A. Kumaker, San Pablo, Calif.	3,287,672	DISC-LOADED WAVEGUIDE TUNING MACHINE WHICH AUTOMATICALLY TUNES EXCESSIVE CAVITIES BY INDENTING WAVEGUIDE WALL	M. L. Helms, Mountain View, Calif.
3,284,686	METHOD OF DISCHARGING A CLOUD	E. Moses, Park Forest, Ill. and R. L. Martin, LaGrange, Ill.	3,287,673	ATTENUATOR FOR SUPPRESSING HIGH-ORDER CAVITY RESONANCES HAVING A TRANSVERSE ELECTRIC COMPONENT	F. C. Hammersand, E. Pittsburgh, Pa.
3,284,744	QUADRUPOLE MAGNET WITH REDUCED LATERAL DIMENSION	C. T. Danby, Wading River, N.Y. and J. W. Jackson, Medford, N.Y.	3,287,947	EXPLOSION APPARATUS FOR FLAMING A TUBE	C. E. Frantz, F. F. Vlacil, E. R. Astley, Richland, Wash. and W. E. Cavley, Phoenix, Ariz.
3,285,821	NUCLEAR FUEL MODULE	J. E. Brubaker, Pittsburgh, Pa.	3,288,360	LIQUID CENTRIFUGE CORE	E. F. Sabelay, Knoxville, Tenn. and R. P. Barringer, Oak Ridge, Tenn.

- 3,288,571 PREPARATION OF URANIUM ALUMINIDES UAl₃ AND UAl₄.
W. J. Vermer, Clinton, Tenn. N.
C. McIlwain, Montville, Ala.
and J. P. Hammond, Knoxville, Tenn.
- 3,288,662 HYDRO-PNEUMATIC APPARATUS FOR CHANGING CRITICAL CONFIGURATION OF NUCLEAR FUEL MASS
K. Blak, Havertown, Pa.
- 3,288,717 METHOD FOR PREPARATION OF URANIA SOLS
L. E. Morse, Oak Ridge, Tenn.
- 3,288,979 CRAFTITE WELDING
L. E. Mills, Kennewick, Wash.
and R. F. Doolen, Richland, Wash.
- 3,288,993 FLASH PARTICLE SEPARATION AND ANALYZER HAVING A GRID STRUCTURE CONSISTING OF LINEAR TUBULAR PORTIONS
J. F. Steinhaus, Livermore, Calif.
and T. O. Fassell, Palo Alto, Calif.
- 3,288,999 HUMIDITY INSENSITIVE PORTIONAL COUNTER HAVING A HEATING SOURCE CONNECTED TO A WIRE ANODE
C. J. Berkowski, R. J. Fox, Oak Ridge, Tenn., and A. M. R. Ferrari, San Carlos, Argentina
- 3,289,122 BOMBARDMENT FREE MICRO-WAVE WAVEGUIDE WINDOW
B. Vural, Princeton, N.J.
- 3,290,122 PROCESS FOR PREPARING OXIDE GEL MICROSPHERES FROM SOLS
S. D. Clinton, A. T. Kleinsteuber, Oak Ridge, Tenn., P. A. Haas, Knoxville, Tenn., and L. J. Hirth, Boulder, Colo.
- 3,290,179 METHOD AND APPARATUS FOR DETERMINING DRIFT DEPTH OF IMPURITIES IN SEMICONDUCTORS
F. S. Coulding, Lafayette, Calif.
- 3,290,221 BOILING WATER NUCLEAR REACTOR WITH MODRANT FUEL OR REFLECTOR CONTROL ASSEMBLY
G. E. Gerker, Cincinnati, Ohio
- 3,290,223 COATED NUCLEAR REACTOR FUEL PARTICLES OF UO₂ AND METHOD OF MAKING THE SAME
J. W. Blocher, M. P. Browning and R. N. Dayton, Columbus, Ohio
- 3,290,477 WELDING HEADS AND METHOD
J. A. Chopp, Denver, Colo.
- 3,290,500 FAST NEUTRON SPECTROMETER UTILIZING LITHIUM CONTAINING FILMS
M. S. Bokhari, Lahore, Pakistan,
V. V. Verbinski, T. A. Love and
E. E. Zedler, Oak Ridge, Tenn.
- 3,290,502 PORT APPARATUS FOR EXTRACTING MATERIALS FROM RADIOACTIVE ENCLOSURE
D. F. Skinner, T. V. Wolf and W. Z. Wade, Livermore, Calif.
- 3,290,615 MERCURY-NEUTED FIXED ELECTRODE ELECTRIC ARC GENERATOR
P. K. Ludwig, South Bend, Ind., and J. T. D'Alessio Buenos Aires, Argentina
- 3,290,773 PROCESS FOR WELDING NICKEL TO NIOBIUM
C. Wohlers and J. E. Markham, Los Alamos, N. Mex.
- 3,291,126 AIR COOLING UNIT FOR PROTECTIVE CLOTHING AND THE LIKE
R. E. Messick, Aiken, S.C.
- 3,291,698 FUEL ELEMENT
P. Fortescue, Sanca Fe, Calif.
- 3,291,699 FUEL ELEMENT
K. A. Trickett, M. T. Simnad, San Diego, Calif. and G. J. Malak, Poway, Calif.
- 3,291,870 METHOD OF FABRICATING A MULTICANAL NUCLEAR FUEL ELEMENT
G. S. Allison, Richland, Wash.
- 3,291,997 METHOD AND APPARATUS FOR TRACING FLUID FLOW THROUGH POROUS MEDIA
R. R. Hawkins, E. L. Albenesius, Aiken, S.C. and C. C. Sashell, R. Augusta, S.C.
- 3,292,255 BRAZING ALLOYS FOR TUBOSTES AND MOLYBDENUM
J. C. Marshall and H. G. Smith, Cincinnati, Ohio
- 3,292,426 VIBRATION DETECTION DEVICE
J. A. McCann, Glenville, N.Y.
- 3,292,537 MULTI-SIGNAL EXPLOSIVE DETONATOR
F. A. Coss, Jr. Albuquerque, N. Mex.
- 3,292,937 SHAFT SEAL FOR LIQUID CENTRIFUGES
C. E. Wansley, Kingsport, Tenn.
- 3,293,007 STEAM-COOLING-RESISTANT IRON-CHROMIUM-ALUMINUM-TITANIUM ALLOYS AND PROCESS FOR MAKING SAME
C. S. Wokusick, Cincinnati, Ohio
- 3,293,135 NUCLEAR REACTOR FUEL
S. Jaye, Solana Beach, Calif. and D. H. Lee, Jr. Del Mar, Calif.
- 3,293,168 APPARATUS FOR COATING SUBSTRATES BY CATHODE SPUTTERING
W. P. Schulz, San Bruno, Calif.
- 3,293,434 PROTECTOR MONITOR FOR DETECTING REACTOR FUEL ELEMENT FAILURES
A. H. Dexter, Aiken, S.C. and
A. C. Lepaley, Charlottesville, Va.

- 3,293,688 LOW INDUCTANCE CAPACITOR AND SWITCHING ASSEMBLY
R. S. Pike and E. L. Kemp, Los Alamos, N.Mex.
- 3,293,741 BRAZING ALLOYS FOR REFRACTORY METALS
R. C. Gilliland, Oak Ridge, Tenn.
- 3,294,209 FRICTION MECHANISM WITH SAPPHIRE FRICTION SURFACE
R. D. Kachman, Madison Heights, Mich. and V. R. Kee, Birmingham, Mich.
- 3,294,492 PROCESS FOR DEGLAZING AIR-COOLING FROM ZINCUM CLAD NUCLEAR FUEL ELEMENTS
C. B. Bartlett, West Islip, N.Y.
E. Wirping, Mattituck and L. P. Hatch, Brookhaven, N.Y.
- 3,294,493 METHOD OF SEPARATING URANIUM AND PLUTONIUM
M. J. Steindler, Park Forest, Ill., A. A. Jooke, Elmhurst, Ill., R. K. Stromberg, M. D. Adams, Naperville, Ill. and R. C. Vogel, Hinsdale, Ill.
- 3,294,494 METHOD FOR REMOVING LANTHANIDES AND TRIVALENT ACTINIDES FROM AQUEOUS NITRATE SOLUTIONS
F. L. Moore, Knoxville, Tenn.
- 3,294,645 CONTROLLED UNLOADING OF GEOMETRICALLY ORDERED PACKED BEDS
H. Sosskind, Huntington, N.Y., M. W. Becker, Shoreham, N.Y. and M. W. Marsica (deceased)
- 3,294,660 AMORPHOUS ZINC OXIDE SEMI-CONDUCTOR AND METHOD OF MAKING
V. D. Kingery, Lexington, Mass. and R. A. Mickelsen, Bellevue, Wash.
- 3,294,688 THERMOELECTRIC CONVERTER COMPOSITION
V. Precht, Towson, Md.
- 3,294,698 HOLLOW, SPHERICAL OXIDE NUCLEAR FUEL PARTICLES
H. N. Barr and L. A. Sundquist, Baltimore, Md.
- 3,294,877 VAPOR PHASE SINTERING PROCESS
J. P. Hammond, Knoxville, Tenn.
- 3,295,082 MAGNET COIL HAVING COOLING MEANS
R. L. Kustom, Oak Lawn, Ill. and G. E. Yurka, Berwyn, Ill.
- 3,295,844 SINTERING FURNACE
A. C. Hecley and W. J. Yaggi, Oak Ridge, Tenn.
- 3,296,032 POWER FLATTENING DEVICE FOR RADIOISOTOPE HEATED THERMOELECTRIC GENERATOR
H. Belofsky, Verona, N.J.
- 3,296,081 NUCLEAR REACTORS
R. Willgoose, Derby, England
- 3,296,083 CALADRIA CORE FOR GADOLIM GRAPHITE REACTOR
M. S. Feck, Pacoima, Calif. R. S. Dumas, Cedega Park, Calif. and A. C. Williams, Chatsworth, Calif.
- 3,296,123 REMOVAL OF CESIUM FROM AQUEOUS SOLUTIONS BY ION EXCHANGE
M. E. Froot, H. J. Groh, Aiken, S.C. and E. R. Russell, Columbia, S.C.
- 3,296,411 WELDING JIG
J. W. Woolsey and H. I. Bowers, Los Alamos, N.Mex.
- 3,296,434 METHOD OF OPERATING AN ION SOURCE FOR A TYPE OF FLIGHT MASS SPECTROMETER
M. H. Studier, Downers Grove, Ill.
- 3,296,440 SPECTROSCOPY ACTIVITY METER FOR MEASURING THE SPECTROSCOPICAL REACTIVITY IN A NUCLEAR REACTOR
M. A. Schultz, Pittsburgh, Pa., V. C. Shaw, Latrobe, Pa. and I. Bluestein, Pitscairn, Pa.
- 3,296,487 FLUXAL VOLTAGE REGULATOR DISCHARGE DEVICES IN A UNITARY STRUCTURE
M. Yarmovsky, Livingston, N.J.
- 3,296,844 COLD-WORKING LUBRICATION
F. B. Quinlan, Richland, Wash.
- 3,297,580 NEUTRAL METAL CLEANING COMPOSITIONS CONTAINING HYDRAZINE AND A POLYCARBONYLAMINE ACID
E. C. Pittzer, Scotia, N.Y.
- 3,297,872 METHOD AND APPARATUS FOR MONITORING DIFFUSION PUMP BACK STREAMING IN THE THROAT OF SAID PUMP
P. E. Kennedy, El Cerrito, Calif.
- 3,298,452 WEIGHT RESPONSIVE DISPENSER
H. C. Francke, Oak Ridge, Tenn. and R. C. Luggis, Knoxville, Tenn.
- 3,298,564 MACHINE FOR DISPENSING THIN ELONGATED OBJECTS
S. J. Wheatley, Clinton, Tenn. and R. K. McCallab, Huntsville, Ala.
- 3,298,826 EMERITMENT-RESISTANT INCON-CERMIUM-ALUMINUM-ITRIDIUM ALLOYS
C. S. Wakusick, Cincinnati, Ohio
- 3,298,921 PYROLYTIC CARBON COATED PARTICLES FOR NUCLEAR APPLICATIONS
J. C. Bokros, J. Chin, R. J. Price, San Diego, Calif. and W. V. Goeddel, Poway, Calif.
- 3,298,957 METHOD FOR DISSOLVING ZIRCONIUM AND FORMING STABILIZED ALKALINE SOLUTIONS THEREOF
T. A. Gens, Oak Ridge, Tenn.

3,298,960	METHOD FOR THE DISPOSAL OF WASTE SOLUTIONS USING RIGID GELS	E. C. Pitzer, Scotia, N.Y.	3,302,097	ELECTRICAL APPARATUS	P. O. Bobo, Pittsburgh, Pa. and F. W. Emay, Irwin, Pa.
3,298,961	CONCENTRATION AND CONTAINMENT OF RADIOACTIVITY FROM RADIOACTIVE WASTE SOLUTIONS IN ASPHALT	G. D. Davis, Kingston, Tenn., E. J. Frederick, J. M. Holmes, Knoxville, Tenn. and R. V. Goodbee, Oak Ridge, Tenn.	3,302,105	EDDY CURRENT NONDESTRUCTIVE TESTING DEVICE USING AN OSCILLOSCOPE TO IDENTIFY AND LOCATE IRREGULARITIES IN A TEST PIECE	H. L. Libby, Richland, Wash. and C. E. Vandling, Komoovick, Wash.
3,299,811	MINIMAL GAS PRODUCING LOW DETONATION RATE EXPLOSIVE AND DETONATION SOURCES	R. W. Gates, Menlo Park, Calif.	3,302,701	TURBULENCE PROMOTER FOR INCREASED HEAT AND MASS TRANSFER	D. C. Thomas, Oak Ridge, Tenn.
3,300,264	PREPARATION OF ACTIVE METAL CARBIDE MICROSPHERES	R. L. Pilloton and R. L. Hamner, Oak Ridge, Tenn.	3,302,993	PROCESS OF RECOVERING STRONTIUM, CESIUM, GERMONIUM AND BARIUM VALUES FROM RADIOACTIVE SOLUTIONS	L. A. Bray, Richland, Wash.
3,300,388	IN CORE SAMPLING AND STRAY-DEVICE FOR NUCLEAR REACTORS	R. B. Jerman, Milwaukee, Wis., P. F. Santoro, Hartford, Conn. and H. F. vanKessel, Wheaton, Md.	3,303,004	METHOD FOR DISSOLVING STAINLESS STEEL MEMBERS	M. R. Norsett, Oak Ridge, Tenn. and G. I. Cathers, Knoxville, Tenn.
3,300,640	MEANS FOR MEASURING PLASMA DENSITY BY RESONANT CHARGE TRANSFER WITH A BEAM OF NEUTRAL PARTICLES	R. P. Zubark, Princeton, N.J.	3,303,098	NUCLEAR-POWER SEA-WATER CONVERSION PLANT	J. P. Lagowski, Plainfield, Ill.
3,300,719	WIDE-RANGE COUNT RATE METER UTILIZING PLURAL COUNT RATE CIRCUITS AND A RANGE IDENTIFICATION	S. W. Thomas, Livermore, Calif.	3,303,343	NEUTRON MONITOR AND BURST DETECTOR	F. M. Glass, Oak Ridge, Tenn.
3,300,848	METHOD OF PREPARING OXIDES FOR NEUTRONIC REACTOR CONTROL	C. F. Leitman, R. A. Fetter, Oak Ridge, Tenn. and R. E. McDonald, Clinton, Tenn.	3,303,781	VOLTAGE REGULATOR TUBE WITH INTEGRAL PLURAL SERIES DISCHARGE DEVICE	M. Yarmovsky, Livingston, N.J.
3,300,852	METHOD FOR BONDING BERYLLIUM OXIDE TO GRAPHITE	R. J. deBruin, New South Wales, Australia	3,303,826	STRONG FOCUSING OF HIGH ENERGY PARTICLES IN A STEADY STATE STORAGE RING	R. A. Beth, Bonn, Germany
3,301,041	PRESTRESSED CONCRETE CONTAINMENT VESSEL	D. V. Mueller, Los Alamos, N.Mex.	3,303,650	ION PROPELLSION	O. C. Youns, Oak Ridge, Tenn.
3,301,667	PREPARATION OF URANIUM-NIOBIUM ALLOYS BY CO-REDUCTION	V. R. Golliber and R. A. Johnston, Paducah, Ky.	3,304,206	THERMOELECTRIC CONVERTER MODULE	R. E. Berdick, Chatsworth, Calif. and S. E. Bocklin, Pacific Palisades, Calif.
3,301,763	METHOD FOR PREPARING ACTINIDE OXIDE FUEL PARTICLES AND ARTICLE THEREOF	R. L. Beatty, Clinton, Tenn. and H. Beutler, Oak Ridge, Tenn.	3,304,249	METHOD OF STABILIZING A FLUIDIZED BED USING A GLOW DISCHARGE	H. Katz, Port Jefferson, N.Y.
3,301,789	ZIRCONIUM REMOVAL FROM STRONTIUM-90	L. A. Bray, Richland, Wash.	3,305,005	CAPILLARY INSERT FOR HEAT TUBES AND PROCESS FOR MANUFACTURING SUCH INSERTS	G. M. Grover, Los Alamos, N.Mex., C. A. Busse, Livorno, Italy and R. J. Caron, Ispra, Italy
3,302,042	NUCLEAR REACTOR WITH THERMIONIC CONVERTER	G. M. Grover, Los Alamos, N.Mex., J. Bohdanský, Livorno, Italy and C. A. Busse, Torino, Italy	3,305,449	NUCLEAR REACTOR CORE ASSEMBLY	V. T. Ferguson, Del Mar, Calif.
			3,305,683	INDEXING MECHANISM FOR IRRADIATING PACKAGES	A. T. Volonakis, Emerson, N.J.

PATENT NO.	TITLE	INVENTOR	INVENTION	SER. NO.	PATENT NO.	DATE
3,305,785	TIME EXPANDER FOR MULTICHANNEL AMALTESE	E. E. Carroll, Bethel Park, Pa.				
3,306,008	CONTINUOUS HIGH EXPANSION PUMP GENERATOR WITH CONTROLLED EXPANSION RATES	L. Silverman, Dover, Mass.				
3,306,681	DAMPED BEARING FOR CENTRIFUGES	E. P. Barringer, Oak Ridge, Tenn.				
3,306,972	SUPERCONDUCTING CABLE	C. Laverick, Downers Grove, Ill., M. H. Foss, Pittsburgh, Pa. and G. N. Lobell, Oak Forest, Ill.				
3,307,005	CAN OPERATED MAGNETIC SWITCH	L. Russell, Concord, Mass., R. E. Crier, Newton Center, Mass. (All rights to ABC), J. W. Babb, Belmont, Mass. and M. P. Nims, (deceased) (Sole licensee to Raytheon)				
3,307,016	COLLET FOR WORKPIECE IN ELECTRIC WELDING	L. E. Vancott, San Jose, Calif.				
3,307,052	PIEZOELECTRIC STRESS GAGE	F. W. Neilson, B. A. Graham and W. B. Benedict, Albuquerque, N. Mex.				
3,307,496	GASEOUS VORTEX REACTOR FOR A ROCKET MOTOR	F. E. Bon Avon Lake, Ohio		353,635	3,270,496	9-6-66
3,307,357	VORTEX ROCKET REACTOR	S. A. Colgate Livermore, Calif.		345,814	3,307,357	3-7-67
3,307,700	APPARATUS FOR CONTROLLING THE FLOW OF SOLIDS	N. H. DeBever Salt Lake City, Utah		546,488	3,307,700	3-7-67
3,307,884	CONTROL SYSTEM FOR MAGNETIC SUSPENSION OF CENTRIFUGE ROTORS	H. F. Dunlap Concord, Tenn. E. C. Evans W. C. S. Fort H. A. Kermie Oak Ridge, Tenn. W. W. Smith Rockwood, Tenn.		402,665	3,307,884	3-7-67
3,308,796	HIDDEN EXPLOSIVES DETECTOR UTILIZING LONG-LIVED RADIOACTIVE TRACER MATERIAL	E. D. Jordan Emmington, Md. C. L. Cowan Rockville, Md.		353,643	3,308,796	3-7-67
3,308,373	LINE VOLTAGE LIMITER	E. L. Shum Albuquerque, N. Mex.		345,816	3,308,373	3-7-67
3,309,180	BRAZING ALLOYS FOR TANTALUM	E. E. Mueller J. C. Marshall Cincinnati, Ohio		348,921	3,309,180	3-14-67
3,309,233	SOLID ELECTROLYTE ELECTROCHEMICAL CELL	C. C. McPheters R. Tercovich Los Alamos, N. Mex. J. C. McGuire White Rock, N. Mex.		422,472	3,309,233	3-14-67
3,309,277	NUCLEAR REACTOR AND METHOD OF FUEL HANDLING THEREFOR	S. Joly D. H. Lee, Jr. Solana Beach, Calif. J. R. Triplett Rancho Santa Fe, Calif.		456,583	3,309,277	3-14-67
3,309,280	PRESSURE-TYPE NUCLEAR REACTOR INCLUDING FUEL ASSEMBLY WITH INTERNAL BAFFLE	L. J. Balog Irwin, Pa.		421,133	3,309,280	3-14-67
3,309,323	THORIUM OXIDE ON THORIUM-URANIUM OXIDE WITH NUCLEAR FUEL GUIDE	F. R. Kussell Columbia, S.C. W. E. Proyt H. J. Groh Aiken, S.C. G. V. Watt Austin, Texas		498,172	3,309,323	3-14-67

3,309,767	2,554	3,309,767	3-21-67	3,312,843	548,805	4-4-67	ISOTOPE RECEIVER FOR A CALIFORNIA SAVING AN OIL RESERVOIR IN ITS COLLISION POSITION	W. A. Bell, Jr. A. M. Veach Oak Ridge, Tenn.
3,310,227	447,588	3,312,908	3-21-67	3,312,908	367,905	4-4-67	DEVICE FOR SUPERREGULATION OF AN AMPLIFIER-DISCRIMINATION CIRCUIT	E. C. Forgas J. A. Bjorkland Evanston, Ill.
3,310,386	486,572	3,313,156	3-21-67	3,313,156	379,413	4-11-67	MONITORING OF PEAK HEAT FLUX	B. P. Ereen South Pasadena, Calif. C. Burnett, Jr. Ames, Iowa
3,310,473	522,333	3,313,935	3-21-67	3,313,935	398,137	4-11-67	VAPOR FEED SYSTEM FOR EASY WAPORIZABLE WYERIALS TO THE ARC CHAMBER OF CALUTRON	W. A. Bell, Jr. E. M. Ennis, Jr. Oak Ridge, Tenn.
3,310,477	414,481	3,314,143	3-21-67	3,314,143	408,708	4-18-67	METHOD FOR PRODUCING TUNGSTEN SHELLS	E. E. McDonald C. F. Leitten, Jr. Oak Ridge, Tenn.
3,310,500	510,477	3,314,865	3-21-67	3,314,865	326,303	4-18-67	ELECTROLYTIC DEPOSITION OF ACTINIDE OXIDES	J. E. Kleinspeter Elchland, Wash. G. Jensen, Jr. Kennewick, Wash.
3,310,684	276,670	3,314,867	3-21-67	3,314,867	320,967	4-19-67	METHOD OF ETCHING TANTALUM AND NIOBIUM FOR ELECTROPLATING	J. E. Coore E. Seegmiller Los Alamos, N. Mex.
3,310,764	471,774	3,315,076	3-21-67	3,315,076	402,369	4-18-67	DETERMINING THE THERMAL STABILITY OF A FUSIBLE LIQUID BY MEANS OF NEUTRON ACTIVATION	E. D. Jordan Kensington, Md.
3,312,526	230,766	3,315,181	4-4-67	3,315,181	375,893	4-18-67	PULSE MODULATOR CIRCUIT	J. A. Rosenthal Lafayette, Calif.
3,312,539	395,967	3,315,479	4-4-67	3,315,479	550,220	4-25-67	STORING HYDROGEN	E. E. Wiewall Brookhaven, N.Y. J. J. Reilly, Jr. Bellport, N.Y.
3,312,599	544,324	3,315,732	4-4-67	3,315,732	443,725	4-25-67	HIGH ENERGY PARTICLE BEAM DUMP AND HEAT SINK	E. L. Garwin Lo. Altos Hills, Calif. D. E. Huls J. Jurcov Palo Alto, Calif.
3,312,702	404,991	3,316,069	4-4-67	3,316,069	346,361	4-25-67	REFRACTORY METAL BRAZING PRODUCT AND PROCESS	J. C. Marshall J. A. McGarty G. Horton Cincinnati, Ohio
3,309,767	2,554	3,309,767	3-21-67	3,312,843	548,805	4-4-67	BRADING ALLOY AND METHOD OF BRAZING WITH SAME	L. Sams Seafood, N.Y. G. T. Pepino, Jr. Westburg, N.Y.
3,310,227	447,588	3,312,908	3-21-67	3,312,908	367,905	4-4-67	SURGE AND BACKSTREAMING POROUS DIAPHRAGM FILTER FOR VACUUM SYSTEM	H. Milleron Berkeley, Calif.
3,310,386	486,572	3,313,156	3-21-67	3,313,156	379,413	4-4-67	PREPARATION OF PLUTONIUM OXIDE SOL AND CALCINED MICROSPHERES	M. H. Lloyd Oak Ridge, Tenn.
3,310,473	522,333	3,313,935	3-21-67	3,313,935	398,137	4-4-67	SPECTRAL SHIFT REACTOR CONTROL	W. E. Winsche Bellport, N.Y.
3,310,477	414,481	3,314,143	3-21-67	3,314,143	408,708	4-4-67	METHOD OF ISOLATING A DESULFURIZED FOR USE IN REMOVING SULFATES FROM BRINE	C. E. Wilke El Cerrito, Calif.
3,310,500	510,477	3,314,865	3-21-67	3,314,865	326,303	4-4-67	DISTILLATION METHOD FOR REPROCESSING HELIUM SALT REACTOR FUELS	M. J. Kelly Oak Ridge, Tenn.
3,310,684	276,670	3,314,867	3-21-67	3,314,867	320,967	4-4-67	LOAD LEVELER FOR PULSE MODULATOR	R. H. Miller Mountain View, Calif.
3,310,764	471,774	3,315,076	3-21-67	3,315,076	402,369	4-4-67	CONNECTOR SYSTEM FOR MAGNET EXCITATION COILS	R. A. Kilpatrick Orinda, Calif.
3,312,526	230,766	3,315,181	4-4-67	3,315,181	375,893	4-4-67	METHOD AND CATALYST FOR COMBINING HYDROGEN AND OXYGEN IN THORIUM OXIDE SLURRIES	C. E. Hanson M. E. Wadsworth Salt Lake City, Utah R. M. Horton Pullman, Wash.
3,312,539	395,967	3,315,479	4-4-67	3,315,479	550,220	4-4-67	BRADING ALLOYS FOR TUNGSTEN AND RHELYDENIUM	J. C. Marshall E. G. Smith Cincinnati, Ohio
3,312,599	544,324	3,315,732	4-4-67	3,315,732	443,725	4-4-67	METHOD OF INTRODUCING A COLORED GROUP SENSITIVE TO pH CHANGES INTO ENZYMES BY THE REACTION WITH 2-HYDROXY-5-NITRO-BENZYL BROMIDE	D. E. Washland, Jr. Bellport, N.Y. G. Latham E. Patchogue, N.Y. Y. D. Karhanis Philadelphia, Pa.
3,312,702	404,991	3,316,069	4-4-67	3,316,069	346,361	4-4-67	6-MERCAPTOURINE 3-N-OXIDE	G. B. Brown Hamamoch, N.Y. G. Levin London, England

3, 316, 412	373, 895	4-25-67	J. G. Hirschberg Princeton, N.J.	SINGLE FIELD POLARIZING SPECTROPHOTOMETER FOR MEASURING MASS MOTION IN A PLASMA	3, 319, 066	407, 602	5-9-67	W. Gemart Pittsburgh, Pa.	ADJUSTABLE WIDE RANGE RADIATION LEVEL ALARM
3, 317, 186	536, 592	5-2-67	J. Brandt Menlo Park, Calif.	ALIGNMENT AND SUPPORT HYDRA- LIC JACK	3, 319, 083	384, 270	5-9-67	M. G. Strauss Park Forest, Ill.	UNIVERSATOR CIRCUIT FOR DETECTING THE TIME OCCUR- RENCE OF INPUT PULSES THEREIN
3, 317, 288	351, 873	5-2-67	J. C. Marshall E. H. Meiler Cincinnati, Ohio	NICKELUM SILICON BRADING ALLOY FOR REFRACTORY METALS	3, 319, 118	383, 264	5-9-67	C. C. Dunn Alamo, Calif.	PROCESS AND APPARATUS FOR PRODUCING PURIFIED FAST PARTICLE BEAMS
3, 317, 355	432, 435	5-2-67	R. D. Nelson Grandview, Wash.	HEAT TREATMENT OF PLUTONIUM	3, 319, 351	438, 138	5-16-67	B. Sprissler Joppe, Md. E. P. Pease Baltimore, Md.	TUBULAR EXTRUSION DRYER
3, 317, 398	293, 919	5-2-67	E. Butter Chicago, Ill.	FUEL ELEMENT ASSEMBLY	3, 319, 497	440, 964	5-16-67	E. D. Sredham F. A. Skasik Albuquerque, N. Mex.	WIRE-PIECE STABILIZING MEANS
3, 317, 716	296, 877	5-2-67	L. L. Ducote Castro Valley, Calif.	HIGH SPEED REVERSING COUNTER	3, 320, 034	409, 305	5-16-67	S. Strauszberg Woodland Hills, Calif.	CONVERSION OF U ₂ O TO UC
3, 317, 823	271, 530	5-2-67	R. S. Brodsky Amandale, Va.	SELF-CHECKING IONIZA- TION CHAMBER TYPE RADIA- TION DETECTOR	3, 320, 056	456, 009	5-16-67	R. F. Stoops Raleigh, N.C.	LIQUID PHASE EXTRUSION FOR FORMING REFRACTORY MATERIALS
3, 318, 144	388, 335	5-9-67	R. E. Duff Livermore, Calif.	SUPERSONIC TEST FACILITY	3, 320, 098	435, 102	5-16-67	W. C. Kuhlman Cincinnati, Ohio	TUNGSTEN-OXIDUM THERMO- COUPLE AND ELEMENT THERE- OF
3, 318, 246	442, 218	5-9-67	H. A. Wilhelm Jesse, Iowa J. E. Witte Cincinnati, Ohio	FROSTFIDE COATING ON REFRACTORY METALS	3, 320, 179	582, 200	5-16-67	T. A. Gens Tonawanda, N.Y.	OPENLY PORES REFRACTORY NUCLEAR FUEL MICROSPHERES AND METHOD OF PREPARATION
3, 318, 512	536, 948	5-9-67	W. I. Linlor Mountain View, Calif.	METHOD FOR DEGASSING A VACUUM SYSTEM	3, 320, 381	455, 354	5-16-67	F. K. Crosby Moraga, Calif. W. E. Eaton Mennington, Calif.	FLUID FLOW INTERLOCK AND INDICATOR
3, 318, 670	572, 156	5-9-67	E. S. Grimsatt Idaho Falls, Idaho	PRODUCTION OF ACTINIDE ALUMINIDE IN A FLUID- IZED BED	3, 320, 478	452, 950	5-16-67	J. L. Harrison Princeton, N.J.	HIGH COOLING SPARK GAP SWITCH WITH SERIES NUC- LEONIC COILS FOR ROTATING THE ARC
3, 318, 695	283, 126	5-9-67	D. E. Coates White Marsh, Md. L. Frank Baltimore, Md.	METHOD OF PRODUCING NUCLEAR FUEL ELEMENTS OF STAINLESS STEEL COATED UO ₂ PARTICLES	3, 320, 495	292, 290	5-16-67	R. J. Fox C. J. Borowski Oak Ridge, Tenn.	SPRINKLE-BARRIER DIODE FOR DETECTING RUC ENERGY PARTICLES AND METHOD FOR PREPARING SAME
3, 318, 724	316, 782	5-9-67	R. L. Seestand C. F. Leitten, Jr. Oak Ridge, Tenn.	METHOD FOR MAKING TUNGSTEN METAL ARTICLES	3, 320, 786	381, 602	5-23-67	L. E. Vancott San Jose, Calif.	APPARATUS FOR WELDING A SPINAL RIB TO A BODY
3, 318, 779	462, 767	5-9-67	R. F. Turner D. A. Mehlig San Diego, Calif. R. I. Leon Del Mar, Calif.	FUEL ELEMENT					

5-30-67

E. A. Armer
R. E. Secoman
Berkeley, Calif.3,323,133 485,644 OPERATIONS TIMING
DEVICE

3,323,133

5-23-67

W. B. Thomson
Northridge, Calif.FUEL ELEMENT FOR A
NUCLEAR REACTOR

596,341

3,321,378

5-23-67

G. M. Crover
E. W. Salim
Los Alamos, N. Mex.
E. W. Pidd
La Jolla, Calif.THERMOELECTRIC CELL
AND REACTOR

337,967

3,321,646

5-23-67

J. A. Phillips
J. M. Suther
Los Alamos, N. Mex.PLASMA ACCELERATOR
HAVING RAPIDLY PULSED
COIL FOR EXPELLING PLASMA

389,735

3,321,664

5-23-67

C. E. Miner
Walnut Creek, Calif.
E. M. Reimers
Berkeley, Calif.

POLAR PASSAGE COLD TRAP

429,261

3,322,330

5-30-67

H. Bloom
Bobart, Australia
W. L. Jolly
El Cerrito, Calif.SILICON PRODUCTION
PROCESS

369,025

3,322,503

5-30-67

S. D. Stoddard
D. E. Buckolls
Los Alamos, N. Mex.TUNGSTEN SLIP CASTING
METHOD

288,568

3,322,536

5-30-67

E. H. Moore
Kennewick, Wash.PROCESS OF PREPARING
AN ADSORBENT

305,899

3,322,563

5-30-67

V. H. Johnston
Baltimore, Md.
F. W. Lemp
State College, Pa.

PRODUCTION OF HYDRAZINE

259,468

3,322,660

5-30-67

P. M. Yavorsky
Monongahela, Pa.EFFICIENT X-RAY
EMISSION SOURCE FOR
THERMAL-ION APPLICATIONS

392,975

3,322,951

5-30-67

P. B. Bell
C. C. Harris
Oak Ridge, Tenn.AVERAGING LIGHT SENSOR
AND RECORDING SYSTEM
USING DOUBLE PHOTOCELL
STRUCTURE

448,897

3,322,954

5-30-67

V. I. Smith
Palmyra, N.J.NON-LINEAR END-OF-LINE
CLIFFER CIRCUIT FOR
PULSENS

373,892

3,322,975

5-30-67

L. Moncebo
Livermore, Calif.ELECTROSTATIC REFLECTION
SYSTEM

336,081

3,323,000

5-30-67

G. B. Lamberton
Oakland, Calif.CHARGED PARTICLE EXTRACT-
ING MAGNET FOR AN A
ACCELERATOR

471,775

3,323,068

PATENT NO.	SER. NO.	INVENTION	INVENTORS	DATE	NO. 3	3,326,769	566,716	6/20/67	ENERGETIC ELECTRON FLASHER BLANKET	R. V. Neidigh Knoxville, Tenn. W. L. Stirling Oak Ridge, Tenn.
3,323,338	330,212	METHOD FOR HANDLING SMALL ELEMENTS	C. H. Allen Pasco, Wash.	6/6/67		3,327,127	340,838	6/20/67	CURRENT CONTROL CIRCUIT	R. E. Pecharak Berkeley, Calif.
3,323,846	442,836	DRY BOX GLOVE RETAINING MEANS	L. O. Boddy Westminster, Colo.	6/6/67		3,327,152	420,837	6/20/67	NON-PHOTOSENSITIVE GRID FOR A FOTOTUBE AND PROCESS FOR MAKING SAME	A. L. Grallich Livermore, Calif.
3,324,005	419,272	PROCESS OF PRODUCING RESINUM FOR TUNGSTEN-RESINUM ALLOYS BY THE IRRADIATION OF TUNGSTEN	R. F. Miller Bockville, Md.	6/6/67		3,328,132	594,635	6/27/67	METHOD OF SEPARATING UF ₆ FROM BORONINE FLUORIDES	M. B. Bennett Oak Ridge, Tenn. G. I. Cathers Knoxville, Tenn.
3,324,325	486,577	DIELECTRIC WALL STABILIZATION OF INTENSE CHARGED PARTICLE BEAMS	R. J. Briggs Danville, Calif.	6/6/67		3,328,139	435,549	6/27/67	POROUS TUNGSTEN METAL SHAPES	R. S. Hodge J. E. Peterson Columbus, Ohio
3,324,540	288,574	METHOD FOR MAKING POROUS TABLET PELLETS FOR A NUCLEAR REACTOR	A. L. Lotts Knoxville, Tenn. E. E. Barton Oak Ridge, Tenn.	6/13/67		3,328,017	458,800	6/27/67	REACTION VESSEL FOR PRODUCTION OF PLUTONIUM	W. V. Conner Boulder, Colo.
3,324,543	443,116	PRESSURE BONDED CERAMIC-TO-METAL GRADIENT SEALS	C. I. McVey Cincinnati, Ohio R. McConaughy Lynchburg, Ohio	6/13/67		3,328,512	457,539	6/27/67	ELECTRICAL CABLE ASSEMBLIES	J. E. Lambka Overland Park, Kan. T. V. Hinzinger J. J. Shas Kansas City, Mo.
3,324,848	337,113	CAPACITANCE RESPIRO-METER	R. Domier A. J. Vorwald Detroit, Mich.	6/13/67		3,328,708	437,332	6/27/67	METHOD AND APPARATUS FOR ACCELERATING IONS OF ANY MASS	R. H. Smith A. Chioro Berkeley, Calif. R. M. Mein Oakland, Calif.
3,325,656	522,326	HIGH SPEED DISCRIMINATOR WITH A WIDE DYNAMIC RANGE HAVING A WIDE AMBIENT TEMPERATURE RANGE	F. H. Savada Scotts, N.Y.	6/13/67		3,328,960	480,214	7/4/67	ION PROPULSION SYSTEM EMPLOYING LIFE-CYCLE WASTES AS A SOURCE OF IONIZABLE GAS	T. V. Martin Nashville, Tenn.
3,326,042	422,471	ULTRASONIC LIQUID LEVEL INDICATOR	J. D. Boss Clearwater, Fla. L. E. Goodwin Wilmington, Del. T. B. Herold Aiken, S.C.	6/20/67		3,329,401	589,142	7/4/67	APPARATUS FOR COATING A CATHODICALLY ELATED SUBSTRATE FROM FLASHER OF ELATED COATING MATERIAL	R. M. Mattson Albuquerque, N. Mex.
3,326,048	456,014	MANOMETER	G. C. Jensen Ann Arbor, Mich. J. E. Allen Tpsilanti, Mich.	6/20/67		3,329,745	493,277	7/4/67	PROCESS FOR MAKING GELLED SPHERICAL PARTICLES OF OTHERS SAN DIEGO, CALIF.	L. D. LeGrange San Diego, Calif.
3,326,673	582,210	PROCESS FOR SEPARATING PLUTONIUM FROM URANIUM FROM FISSION PRODUCTS	J. B. Knighton Joliet, Ill. W. Knoch Willow Springs, Ill. R. L. Stenzenberg Naperville, Ill.	6/20/67		3,329,814	434,725	7/4/67	STEREO POSITION CAMERA FOR DETERMINING THE SPATIAL DISTRIBUTION OF RADIOACTIVE MATERIAL IN A TEST BODY	R. O. Anger Oakland, Calif.

3,329,822	377,143	7/4/67	3,333,120	410,335	7/25/67	H. T. Tomlin Mountains View, Calif.	PULSE FORMING NETWORK VOLTAGE REGULATOR
3,330,742	586,610	7/11/67	3,333,180	373,891	7/25/67	F. D. Hess Richmond, Calif.	NON-INDUCTIVE RESISTANCE CIRCUIT FOR TRIPPLING IN- PUT SIGNAL FREQUENCY
3,330,889	374,859	7/11/67	3,333,203	402,042	7/25/67	V. E. Baker Orinda, Calif.	PULSE GENERATOR WITH STANDING WAVE ENERGY STORAGE
3,331,526	384,013	7/18/67	3,333,473	452,033	8/1/67	T. E. Crowder Concord, Tenn.	METHOD OF DETERMINING THE PARTICLE SIZE DIS- TRIBUTION OF A POWDER
3,331,666	591,042	7/18/67	3,333,721	445,808	8/1/67	L. J. Harek Villa Park, Ill.	PROTECTIVE CONTAINER
3,331,683	547,033	7/18/67	3,333,919	431,481	8/1/67	J. S. Buckingham Kennesaw, Wash.	STONITION RECOVERY PROCESS
3,331,744	807,959	7/18/67	3,334,306	399,940	8/1/67	E. J. Jensen Livermore, Calif.	WELDING TRANSIT SAUF- LING CIRCUIT
3,331,838	804,267	7/18/67	3,335,027	383,533	8/8/67	S. E. Pitts Arvada, Colo. H. A. Thompson Boulder, Colo.	RECKEL PLATING
3,331,962	397,346	7/18/67	3,335,060	468,466	8/8/67	B. L. Dismar Pittsburgh, Pa.	SEMI-MARKET NEUTRONIC REACTOR
3,331,966	395,344	7/18/67	3,335,361	519,162	8/8/67	W. E. Wimscha Ballport, N.Y. M. M. Levins Port Jefferson, N.Y.	METHOD OF OPERATING A MESHOR REACTOR
3,332,614	407,945	7/25/67	3,335,695	613,048	8/8/67	J. G. Moore Clinton, Tenn.	PREPARATION OF ACTIVE SOLUBLE AMINE EXTRACTION
3,332,741	296,145	7/25/67	3,335,493	490,752	8/15/67	J. P. Gallagher Albuquerque, N.Mex.	LINE CUTTER
3,332,771	386,456	7/25/67	3,335,998	502,706	8/15/67	M. L. Esims Sunnyvale, Calif.	FAST-CLOSING VACUUM VALVE
			3,336,495	343,168	8/15/67	G. A. Loew Palo Alto, Calif.	CERAMIC LOADED BUSCHER FOR LINEAR ACCELERATORS
			3,337,257	493,939	8/22/67	G. V. Brynsvold San Jose, Calif.	CRACKLING SYSTEM
						E. J. Rogers Shoreham, N.Y.	MEANS FOR EQUALIZING TWO OUTPUT SIGNALS
						R. D. Piper Das Peres, Mo.	ELECTROLYTIC REDUCTION OF URANIUM HEXAFLUORIDE TO URANIUM METAL IN FUSED SALT
						G. Semos Timsonium, Md. J. L. Bloom Brockville, Md.	PREPARATION OF HEAT SOURCES FOR RADIOISOTOPE HEATED THERMOELECTRIC GENERATORS
						L. L. Leverton Gif-Sur-Yvette, France S. Killieron Berkeley, Calif.	ULTRATHIN VACUUM SEAL
						W. C. Roblacon Morville, Tenn. E. L. Eastland C. F. Leitner Oak Ridge, Tenn.	ONE-STEP METHOD OF CONVERTING URANIUM HEXAFLUORIDE TO URANIUM COMPOUNDS
						W. C. Pritchard Los Alamos, N.Mex.	METHOD OF STABILIZING PLUTONIUM DIOXIDE
						T. E. Taylor La Jolla, Calif.	PRODUCTION OF ISOTOPIES FROM THERMONUCLEAR EX- PLOSIONS
						P. A. Haas Knoxville, Tenn. S. D. Clinton Oak Ridge, Tenn.	METHOD FOR PREPARING METAL OXIDE MICROSTRUCTURES
						O. A. Dahl Northport, N.Y.	INTEGRALLY BORGED ESCAL- LATED GAMMA SOURCE
						R. E. Pecharok Berkeley, Calif.	ELECTRICAL CIRCUIT FOR RAPIDLY REVERSING THE DIRECTION OF CURRENT FLOW THROUGH A MAGNETIC CORE INDUCTOR
						D. S. Webster Alison, S. C. V. E. Wimscha Ballport, N.Y.	CENTRIFUGAL EXTRACTOR
						E. T. Teatun Berkeley, Calif.	CHEMICAL REACTOR AND METHOD
						H. M. Heldt Fowell, Tenn.	RECOVERY OF FLATIRON METALS

Patent No.	Inventor	Invention	Patent No.	Serial No.	Inventor	Patent No.	Serial No.	Date
3,337,372	321,903	PROCESS FOR IMPROVING PROPERTIES OF ZIRCONIUM METAL	3,339,631	33,330	J. A. McCarty W. C. Hacker Cincinnati, O.	3,340,019	33,633	9/5/67
3,337,728	402,980	MASS SPECTROGRAPH ION SOURCE WHEREIN A PULSED ARC IS PRODUCED BY VIBRATING ONE ELECTRODE	3,340,013	30,098	C. Pierini Mol., Belgium	3,340,053	35,362	9/5/67
3,338,665	268,840	FOAM ENCAPSULATION METHOD OF NUCLEAR REACTOR SAFETY	3,341,304	31,282	A. Francesconi Turnhout, Belgium	3,341,307	24,532	9/12/67
3,338,686	455,016	TEMPERATURE INSULATION	3,341,350	26,880	J. Schests Mol-Dook, Belgium	3,341,352	25,866	9/12/67
3,338,749	351,877	CATHODIC HYDROGEN CELL AND METHOD OF MAKING	3,341,352	25,866	W. J. Halsey Oak Ridge, Tenn.			9/12/67
3,338,840	557,859	URANIUM NONGRAVITIC-SCORUM PASTE NUCLEAR FUEL	3,341,352	25,866	E. S. Hodge J. E. Peterson Columbus, Ohio			9/12/67
					M. A. Tassin, Jr. Baton Rouge, La.			9/12/67
					J. V. Frazer Livermore, Calif.			9/12/67
					G. G. Kelley Kingsston, Tenn.			9/12/67
					E. J. Keeby Idaho Falls, Idaho			9/12/67
					C. O. Tarr C. S. Wolsnick Cincinnati, O.			9/12/67
					E. C. Lovet Asheboro, Ky.			9/12/67
					S. H. Sadley Oak Ridge, Tenn.			9/12/67
					F. D. Anderson F. E. Coronado Livermore, Calif.			9/12/67
					L. M. Berry Albuquerque, N. Mex.			9/12/67
					E. V. Ehlers Lafayette, Calif.			9/12/67

PATENTS FOR LICENSING

No. 4

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October 31, 1967

8/22/67

R. E. Reed-Hill
Gainesville, Fla.

PROCESS FOR IMPROVING PROPERTIES OF ZIRCONIUM METAL

3,337,372

321,903

8/22/67

L. Friedman
Patchogue, N.Y.
A. F. Ires
Plainview, N.Y.

MASS SPECTROGRAPH ION SOURCE WHEREIN A PULSED ARC IS PRODUCED BY VIBRATING ONE ELECTRODE

3,337,728

402,980

8/29/67

L. Silverman
Dover, Mass.

FOAM ENCAPSULATION METHOD OF NUCLEAR REACTOR SAFETY

3,338,665

268,840

8/29/67

C. D. Peers
Birmingham, Ala.

TEMPERATURE INSULATION

3,338,686

455,016

8/29/67

C. E. Johnson
Elk Grove, Ill.
E. R. Heinrich
Downers Grove, Ill.
C. E. Crootham
Glen Ellyn, Ill.

CATHODIC HYDROGEN CELL AND METHOD OF MAKING

3,338,749

351,877

8/29/67

P. A. Nelson
Evanston, Ill.
H. G. Chasnov
Evanston, Ill.

URANIUM NONGRAVITIC-SCORUM PASTE NUCLEAR FUEL

3,338,840

557,859

FEDERAL REGISTER, VOL. 38, NO. 171—WEDNESDAY, SEPTEMBER 5, 1973

3,341,720	31,314	9/12/67	3,344,034	35,386	9/26/67	E. A. Smith Litchworth, Eng.	CONTROL DEVICE FOR NUCLEAR REACTORS
3,342,540	23,781	9/19/67	3,344,209	33,896	9/26/67	J. E. Ragus Golden, Colo. D. W. Britz Richland, Wash.	FABRICATION OF MATERIALS BY HIGH ENERGY-RATE DEPLAC- TION
3,342,697	27,765	9/19/67	3,344,277	31,250	9/26/67	K. F. Smith J. B. Thompson Yakko Falls, Idaho	RADIATION MONITOR WITH BACKGROUND COMPENSATION
3,343,020	30,339	9/19/67	3,344,357	29,724	9/26/67	J. P. Blawett Ballport, N. Y.	STORAGE RING
3,343,096	30,914	9/19/67	3,344,853	31,749	10/3/67	R. M. Singer Naperville, Ill.	APPARATUS FOR CONDENSING AND CONTROLLING THE RATE OF CONDENSATION OF AN ELECTRICALLY CONDUCTING LIQUID
3,343,912	30,414	9/26/67	3,344,928	34,051	10/3/67	K. A. Erens J. S. Johnson A. J. Short Oak Ridge, Tenn.	PERGIC ACID AS AN ADDITIVE IN A PROCESS OF FORMING A SALT-SELECTING MEMBRANE
3,343,914	30,411	9/26/67	3,345,120	27,576	10/3/67	E. B. Palmer Storham, N. Y.	LIGHT SPOT APPARATUS
3,343,915	31,366	9/26/67	3,345,127	29,776	10/3/67	A. E. Eberle M. W. Lerner S. Plainfield, N.J. L. J. Pinto Sound Brook, N. J.	PROCESS FOR RECOVERING BOSON VALUES FROM SCRAP MATERIALS
3,343,924	33,953	9/26/67	3,345,436	27,010	10/3/67	E. A. Craig V. Hartford, Conn.	PROCESS OF MAKING URANIUM PEROXYDIDE NUCLEAR FUEL
3,343,926	32,999	9/26/67	3,345,440	30,682	10/3/67	J. M. Googin J. M. Espier Oak Ridge, Tenn. M. S. Scrivner Knoxville, Tenn.	METHOD FOR MANUFACTURING FOAM CALSON PRODUCTS
3,343,929	30,431	9/26/67	3,345,875	30,911	10/3/67	J. E. M. van der Lans E. Petchogus, N.Y.	PULSE NEUTRON DETECTOR
3,343,979	31,698	9/26/67	3,346,345	30,460	10/10/67	V. W. Scholz Richland, Wash.	EXTRACTION OF PLUTONIUM AND NEPTUNIUM FROM AQUEOUS SOLUTIONS

3,346,346	32,685	METHOD FOR MELTING URANIUM OXIDE AND PLUTONIUM OXIDE	I. Schikowski Bonnas an Main, Germany E. J. Telves Buckingen, Germany	10/10/67	3,349,407	31,438	ULTRASONIC FLAM DETECTION IN SMALL DIAMETER METAL TUBING	E. K. Klondt Knoxville, Tenn.	10/31/67
3,346,673	29,332	FORMATION OF SUBMICRON URANIUM CASSEIN PARTICLES IN METALLIC URANIUM	G. A. Last Bel Mar, Calif. R. S. Kemper, Jr. Richland, Wash.	10/10/67	3,350,564	30,973	VOID DETECTION UTILIZING NEUTRON ATTENUATION	C. P. Bouilla Tenasly, N. J. W. T. Sha Pittsburgh, Pa.	10/31/67
3,346,681	32,348	METHOD OF MAKING REFRACTORY PRODUCTS	J. L. White Bel Mar, Calif. J. H. Fontelsodolfo San Diego, Calif.	10/10/67					
3,346,914	29,008	DEVICE FOR CONSOLIDATING METAL POWDERS	H. J. Sandstrom C. L. Terrell Los Alamos, N. Mex.	10/17/67					
3,347,135	32,965	FAST-ACTING CASCADE VALVE	D. E. Ahlbeck Worthington, Ohio R. A. Cress Columbus, Ohio	10/17/67					
3,347,711	29,443	RADIO-ISOTOPE THERMO- ELECTRIC APPARATUS AND FUEL FORM	H. O. Banks, Jr. Redondo Beach, Calif. E. T. Testum L. E. Jones Livermore, Calif. Barkley, Calif. W. I. Clark D. D. Hays Kennewick, Wash. B. Griggs G. F. Jacky Elkhland, Wash.	10/17/67					
3,347,768	30,439	ANODIC PROTECTION FOR FLATING SYSTEM	M. Sanders Knoxville, Tenn.	10/17/67					
3,348,044	31,622	AIR SAMPLING METHOD AND APPARATUS	H. J. Jensen Davis, Calif. E. E. Smith Livermore, Calif.	10/17/67					
3,348,141	31,993	TIME INTERVAL MEASURE- MENT UTILIZING A TUNNEL DIODE SWITCHED BY REFLECTED PULSES FROM TRANSMISSION LINES	J. A. Coleb Beverlyville, Ill.	10/24/67					
3,348,447	31,321	DETERMINATION OF ISOTOPIC CONCENTRATIONS	B. D. Pollock Los Angeles, Calif.	10/24/67					
3,348,943	32,877	REFRACTORY METAL DISPERSION	V. J. Uebler Pittsburgh, Pa.	10/24/67					
3,349,304	30,151	LONGITUDINAL MOVEMENT MECHANISM	S. E. Fistedis Park Ridge, Ill.	10/31/67					
3,349,324	29,369	REACTOR CONTAINMENT VESSEL							

PATENT NO.	SER. NO.	INVENTION	INVENTORS	DATE	No. 5	3,352,646	429,183(60)	PROCESS FOR PRODUCING H_2O_2 - 11.5EP	R. S. Seigel Scrreale, N. Y.	11/14/67
3,336,749	429,249(60)	NUCLEAR ROCKET MOTOR	F. E. Ross Aven Lake, Ohio A. F. Lietzke R. E. Epland Westlake, Ohio	8/22/67		3,352,950	603,692(60)	ELECTRICAL POTENTIAL METHOD FOR DISPERSION OF METAL OXIDE MICROSPHERES	D. M. Heltod Clinton, Tenn. R. G. Byner Oak Ridge, Tenn.	11/14/67
3,341,420	492,771(60)	MODULAR FLUX TRAP REACTOR	R. E. Sevy Woodland Hills, California	9/12/67		3,352,991	438,435(60)	METHOD AND APPARATUS FOR MELTING METALS BY INDUCTION HEATING	P. G. Clitos Silverton, Oregon	11/14/67
3,350,848	546,144(60)	CONTINUOUS ADSORPTION-DESORPTION SYSTEM AND METHOD	D. C. Brater J. Dykstra, Jr. S. R. Savley Oak Ridge, Tenn. R. L. Kaufman Kingston, Tenn.	11/7/67		3,353,097	350,928(60)	METHOD AND APPARATUS FOR OPTICALLY DETERMINING THE ALIGNMENT OF MAGNETIC FIELDS WITHIN THE COTTON-MOUTON EFFECT	R. M. Johnson Berkeley, Calif.	11/14/67
3,350,907	409,620(60)	METHOD FOR EXTRUDING MELTYURETHAN AND TUNGSTEN	R. E. McDonald C. F. Leitner, Jr. Oak Ridge, Tenn.	11/7/67		3,353,444	323,184(60)	SIMULTANEOUS CHARGE AND READ QUANTOMETER	J. V. Theuring Pittsburgh, Pa.	11/21/67
3,350,966	554,911(60)	AUTOMATIC DIGITAL TOOL-SETTING SYSTEM	C. L. Icolton Borerville, Tenn.	11/7/67		3,353,566	619,135(60)	END CLOSURE FOR NUCLEAR REACTOR CHANNEL	M. D. Cepkankas Farmington, Conn. J. F. Eoblin Wapping, Conn.	11/21/67
3,351,424	361,629(60)	SEPARATION OF CERIUM FROM OTHER RARE EARTHS	L. A. Bray F. P. Roberts Richland, Wash.	11/7/67		3,353,742	496,202(60)	BACK-STEAMING CONTROL IN A DIFFUSION PUMP	T. E. Bowman Berkeley, Calif. P. B. Kennedy Cerrito, Calif.	11/21/67
3,351,532	468,487(60)	SEED-BLANKET CONVERTER-RECYCLE RESEWER REACTOR	E. F. Raeb, Jr. G. S. Cooley Pittsburgh, Pa. M. J. Calper McKeesport, Pa. D. E. Jones Pittsburgh, Pa. W. B. Eganam Los Alamos, N. Mex.	11/7/67		3,354,042	626,269(60)	STEAM SUPERHEATING NUCLEAR REACTOR HAVING STEAM FLOW EQUALIZER	T. B. Mardock San Jose, Calif.	11/21/67
3,351,758	448,548	WIDENESS HIGH-RESOLUTION SOLID STATE RADIATION DETECTOR	G. A. Armstrong D. C. Coop Livermore, Calif.	11/7/67		3,354,290	446,134(60)	FORMING PROJECTIONS ON TUBES	R. E. Moore J. J. Vagi Columbus, Ohio	11/21/67
3,351,852	392,348(60)	GRAFICAL MILLING DEVICE FOR INVESTIGATIVE EDDY CURRENT TESTING EQUIPMENT	E. L. Libby Richland, Wash.	11/7/67		3,354,538	510,153(60)	BERYLLIUM POIL FABRICATION	J. L. Cadden D. E. Frier Oak Ridge, Tenn.	11/28/67
						3,354,695	383,263(60)	UNIFORMLY TAPERED TRANSITION WANDREL	P. A. Scemte Sao Jose dos Campos, Sao Paulo, Brazil	11/28/67
						3,355,364	489,643(60)	FURIAL CONDENSIT PLASMA FILM EVAPORATOR FOR DISTILLING AND CONDENSING SEA WATER	R. F. Hammond Oak Ridge, Tenn.	11/28/67

3,355,386	420,835(60)	MODIFIED MAGNETIC MOMENTUM SLIT INCLUDING A PAIR OF C-TYPE MAGNETS	B. Hoelin Geneva, Switzerland Palo Alto, Calif.	11/28/67	3,357,854	407,940(60)	MICHEL PLATING PROCESS	D. D. Bays Kennenwick, Wash.	12/12/67
3,356,254	476,218(60)	GLOVE PORE FOR DRY BOX	S. Erecbas Shoreham, N. Y.	12/5/67	3,357,866	428,884(60)	THERMOELECTRIC GENERATOR	E. Bellofsky Verona, N. J.	12/12/67
3,356,495	623,196(60)	METHOD FOR PRODUCING HIGH DENSITY TUNGSTEN INCOITS	J. F. Leiner Livermore, Calif. G. E. Zinn Dunville, Calif.	12/5/67	3,357,890	596,016(60)	PRESSURE VESSEL THERMAL INSULATION	R. H. Friis J. E. French San Jose, Calif.	12/12/67
3,356,530	394,091(60)	RADIOGRAPHIC FILM	R. Withnell Knoxville, N. Y.	12/5/67	3,358,144	515,487	VARIABLE RADIATION LENGTH FUSIBLE CHAMBER	M. Goldhaber Bayport, N. Y.	12/12/67
3,356,580	577,777(60)	METHOD AND APPARATUS FOR CORRELATING RADIOACTIVE FLUID	F. R. Bell I. P. Arthur San Diego, Calif.	12/5/67	3,358,225	355,516(60)	LIFT-OFF COMPENSATION FOR KRYPT CURRANT TESTERS	R. S. Fergusson Oak Ridge, Tenn.	12/12/67
3,356,584	595,541(60)	FUEL PELLETS FOR NUCLEAR REACTOR	C. E. Ockert Broccoli, Pa.	12/5/67	3,358,245	399,413(60)	PHASE MODULATED SOLID STATE SERVICE	J. C. Pigg Oak Ridge, Tenn.	12/12/67
3,356,585	637,881	VENTED FUEL SYSTEM	E. L. Zebroski Los Altos, Calif.	12/5/67	3,358,519	504,275(60)	RATCHET DRIVE	C. A. Christianson Southold, N. Y.	12/19/67
3,356,586	631,105(60)	FUEL ELEMENT CONTAINING ACTIVATED CARBON	J. F. Watson San Diego, Calif. W. V. Gooddel Pomona, Calif.	12/5/67	3,358,605	639,139(35)	PRESSURE SENSITIVE SWITCH	A. H. Ayers Estancia, N. Mex.	12/19/67
3,356,776	584,065(60)	METHOD OF FABRICATING CERAMIC NUCLEAR FUEL PELLETS	A. B. Meservey E. B. Fitts Oak Ridge, Tenn. J. D. Sease Knoxville, Tenn.	12/5/67	3,358,694	455,019	METHOD OF REDUCING IRRADIANTS IN TOBACCO BY GAMBIA IRRADIATION	H. V. Boenig W. A. Lambertson W. J. Braun E. S. Myers Leasington, Ky.	12/19/67
3,356,961	402,969(60)	VOLTAGE STRETCH CIRCUIT	J. W. Sedlmayer Las Vegas, Nevada	12/5/67	3,358,750	571,655(60)	CONDENSER TUBE	D. G. Thomas Oak Ridge, Tenn.	12/19/67
3,356,976	507,256(60)	QUADRUPOLE MACHET	W. E. Sampson Bellport, N. Y. R. B. Britton Setauket, N. Y. P. G. Kruger Champaign, Ill.	12/5/67	3,358,857	547,313(60)	LIFTING AN OBJECT CONTAINED IN A BAG	G. J. Vogel Elmhurst, Ill. E. L. Carls Glen Ellyn, Ill. W. A. Murphy Palos Heights, Ill.	12/19/67
3,357,505	468,654(60)	HIGH TEMPERATURE ROCK SPLIT	D. E. Armstrong Santa Fe, N. Mex. J. S. Coleman B. B. McInteer R. M. Potter E. S. Robinson Los Alamos, N. Mex.	12/12/67	3,359,064	411,167(60)	PROCESS FOR SEPARATING HEMIUM VALUES FROM AQUEOUS SOLUTIONS	D. J. Crouse, Jr. F. G. Sealey Oak Ridge, Tenn.	12/19/67
					3,359,083	463,973(60)	COMPOSITE STRUCTURAL METAL MEMBERS WITH IMPROVED FRAC-TURE TOUGHNESS	H. L. Leichter Castro Valley, Calif.	12/19/67
					3,359,117	604,493(60)	REMOVAL OF STROPHIUM 90 FROM MILK WITHE CALCIUM PHOSPHATE, STRONTIUM PHOSPHATE, OR MILITRE THEORY	P. Van't Riet Richmond, Va.	12/19/67

3,359,173	628,789(60)	LIQUID EXCURSION PULSED REACTOR	L. D. P. King Santa Fe, N. Mex.	12/19/67	3,360,743	562,953(60)	DISTRIBUTED FEEDBACK STRIP TRANSMISSION LINE OSCILLATOR	M. D. Clark Albuquerque, N. Mex.	12/26/67
3,359,175	580,570(60)	NUCLEAR REACTOR	I. P. Arthur F. E. Bell San Diego, Calif.	12/19/67					
3,359,419	493,598(60)	RADIOGRAPHIC INVESTIGATIVE TESTING METHOD	J. Eastman Park Forest, Ill. E. Berger Naperville, Ill.	12/19/67					
3,359,421	499,118(60)	MAGNETOSTRICTIVE HEADSTOCK FOR WIRE SPARK CHAMBERS	V. Perez-Mendes Berkeley, Calif. J. M. Pfab Monrovia, Calif.	12/19/67					
3,359,452	496,197(60)	RESONATOR FOR SUPPORTING NON-SONIC PERIODIC WAVEMODES	O. A. Kerns Orinda, Calif.	12/19/67					
3,359,621	488,291	METHOD OF MAKING A DEVICE FOR MEASURING SHEAR-MODULUS NUCLEAR REACTORS	F. E. Odalan Richland, Wash.	12/26/67					
3,359,768	496,698(60)	ULTRASONIC MEASUREMENT OF SOLUTION CONCENTRATION	D. W. Colvin Clearwater, Fla.	12/26/67					
3,360,340	425,093(60)	DOUBLE PULSED MIXER-STILLER LIQUID-LIQUID EXTRACTION SYSTEM	E. E. McHenry Oak Ridge, Tenn. J. C. Poesy Knoxville, Tenn.	12/26/67					
3,360,477	435,761(60)	NEUTRON SOURCE	E. H. Acres Oak Ridge, Tenn. W. G. Tatum Lenoir City, Tenn.	12/26/67					
3,360,646	429,185(60)	DEUTERIUM CALOR IRRADIATION OF SOLID CRYSTAL MATERIAL	E. M. Betbeck New York, N. Y. O. A. Kuhl Northport, N. Y.	12/26/67					
3,360,663	456,013(60)	HIGH-VOLTAGE GENERATOR	A. V. Crewe A. Yokosawa D. J. DeCoster Argonne, Ill.	12/26/67					
3,360,678	459,484(60)	FAST PULSE GENERATOR UTILIZING AN ELECTRON BEAM TO CHARGE AN ABC BREAKDOWN ACROSS THE GAP REGION OF A COAXIAL LINE CENTER CONDUCTOR	Q. A. Kerns Orinda, Calif.	12/26/67					

NOTICES

PATENT NO.	SEE. NO.	INVENTION	INVENTORS	DATE	PATENTS FOR LICENSING	NO. 1	3,362,141	551,184(60)	SURFACE CONTAMINATION SAMPLER	G. W. Boyester, Jr. Oak Ridge, Tenn. B. E. Fish Knoxville, Tenn.	1/9/68
3,362,143	401,214(60)	PRODUCTION OF STYCHIONEMERUS URBANUS MONOCALCIDE	E. V. Marchach Thousand Oaks, Calif.	10/3/67			3,362,567	462,144(60)	CONSTANT FLAME VESSEL CLOSURE	E. E. Rudock Santa Cruz, Calif.	1/9/68
3,360,947	546,478(60)	CYCLOGENIC PHASE SEPARATOR	J. H. Fretwell H. E. Jennings Los Alamos, New Mex.	1/2/68			3,362,642	546,143(60)	APPARATUS FOR APPLYING LIQUID TO THE INTERIOR OF A VESSEL IN A SPIRAL SPRAY PATTERN	E. A. Freeman T. L. Murphy Idaho Falls, Idaho	1/9/68
3,361,029	326,310(60)	OPTICAL SCANNING BACKGROUND DENSITY NORMALIZER	J. A. C. Russell Dunville, Calif. F. D. Non Richmond, Calif.	1/2/68			3,362,791	391,811(60)	APPARATUS FOR SEPARATION OF INSOLUBLE LIQUID PAIRS INCLUDING RESOLVE INTERFACIAL CONTROL	A. D. Ryan Oak Ridge, Tenn.	1/9/68
3,361,064	183,586(48)	ELECTRIC DETONATING APPARATUS	L. E. Johnston Miamapolis, Minn. E. Allredge Denver, Colo.	1/2/68			3,362,914	646,158(60)	TRANSITION CARBIDE-PLUTONIUM FROSPHIDE AS A REACTOR FUEL	O. L. Kruger Westmont, Ill. J. P. Moser Evanston, Ill. J. V. Thompson Hinsdale, Ill. E. E. Melihlot Palos Hills, Ill.	1/9/68
3,361,149	500,453(60)	USE OF LIQUID HELIUM IN HYDRAULIC COMPUTERS	D. T. Meyer Durham, N. C.	1/2/68			3,363,037	469,009(60)	HIGH-TEMPERATURE ISOSTATIC PRESSING OF ARTICLES	R. P. Levey, Jr. Oak Ridge, Tenn. A. E. Smith S. Clifton, Tenn.	1/9/68
3,361,637	577,094(60)	SHUTTER DEVICE FOR NUCLEAR REACTOR CORE	L. Fortis B. C. Hooba San Diego, Calif.	1/2/68			3,363,130	504,276(60)	FREQUENCY TUNING OF AN ENERGETIC ARC DISCHARGE BY VARYING THE DIAMETER OF THE CYLINDRICAL HOLLOW ARC	J. V. Flowers Gainesville, Fla. W. A. Demmill Tullahoma, Tenn.	1/9/68
3,361,638	629,880(60)	PYRELYTIC GRAPHITE AND NUCLEAR FUEL PARTICLES COATED THEREWITH	J. C. Bokros San Diego, Calif. A. S. Schwartz Del Mar, Calif.	1/2/68			3,363,149	456,875(60)	TRIP CIRCUIT	L. A. DeLateur Sunnyvale, Calif.	1/9/68
3,361,676	616,427(60)	URANIA SOL FORMING METHOD IN THE PRESENCE OF FORGIC ACID AND A RALLADIUM-OR-TUNGSTIC CATALYST	J. P. McBride Oak Ridge, Tenn. V. L. Pattison Knoxville, Tenn.	1/2/68			3,363,164	282,182(60)	POWER SCAVENGING DEQU'ING CIRCUIT FOR A LINE-TYPE PULSER	W. I. Smith Palmyra, N. J.	1/9/68
3,361,960	381,600(60)	PULSED NONDESTRUCTIVE EDOT CURRENT TESTING DEVICE USING SHIELDED SPECIMEN ENCIRCLING COILS	C. J. Reshen, Jr. Orland Park, Ill. A. Sathar Pittsfield, Ill.	1/2/68			3,363,207	580,514(60)	COMBINED INSULATING AND CRYOGEN CIRCULATING MEANS FOR A SUPERCONDUCTIVE SOLENOID	H. Brechba Palo Alto, Calif.	1/9/68
3,361,963	388,734(60)	PRECISION ENDMILL POSITIONING	F. G. Watson Knoxington, Calif.	1/2/68			3,363,306	446,113(60)	METHOD OF FABRICATING ZINCORIN-REPELLING-PORETECTIC WIRE	F. B. Quinlan Richland, Wash.	1/16/68

3,364,355	473,568(60)	1/16/68	3,367,223	519,393(60)	2/6/68
L. Ruby J. B. Bachem Berkeley, Calif. T. Vuletich Piedmont, Calif. D. E. Wells Concord, Calif.	NEUTRON GENERATOR WITH OCCLUDED GAS ION SOURCE	G. F. Carasco V. P. Ritscher El Cerrito, Calif. R. E. Riley H. Steinberg Los Alamos, N. Mex. E. L. Heastand C. P. Leitner, Jr. Oak Ridge, Tenn.	SEMICONDUCTOR LEAD CUTTER	METHOD OF PREVENTING SEGREGATION DURING CASTING OF COMPOSITES	2/6/68
3,364,636	556,785(60)	1/23/68	3,367,856	364,342(60)	2/6/68
W. W. Salsig, Jr. Mennington, Calif.	SUPPORT FOR CHARGED PARTICLE ACCELERATOR MAGNET SECTIONS	E. L. Heastand C. P. Leitner, Jr. Oak Ridge, Tenn.	BORON CASSEIDE ARTICLE AND METHOD OF MAKING		
3,365,573	425,090(60)	1/23/68	3,367,849	353,646(60)	2/6/68
W. C. Davis C. W. Sheridan J. C. Tracy Oak Ridge, Tenn.	METHOD OF SEPARATING OF SILICON ISOTOPIES USING SILICON DISULFIDE AS THE FEED MATERIAL	W. J. Blaxdel Madison, Wis. C. L. Olson Columbus, Ohio	AMPEROMETRIC DETERMINATION OF GLUCOSE		
3,365,978	536,950(60)	1/30/68	3,367,881	643,329(60)	2/6/68
E. K. Kirby C. D. Wicker Knoxville, Tenn.	ADJUSTING DEVICE FOR REMOTE CONTROL NEUTRON TUBES	L. E. Norris Oak Ridge, Tenn.	EXTRACTION METHOD FOR FIRE- FARMING UO ₂ MICROSPHERES		
3,366,320	473,880(60)	1/30/68	3,368,066	345,055(60)	2/6/68
N. Cho Knoxville, Tenn.	CENTRIFUGE SAMPLE HOLDER	G. L. Miller Westfield, N. J. V. Dudeka E. Patchogun, N. Y.	FAST MULTIPLIER EMPLOYING FIELD-EFFECT TRANSISTORS		
3,366,544	471,772(60)	1/30/68	3,368,135	422,469(60)	2/6/68
V. L. Bunch Richland, Wash.	METHOD OF AND APPARATUS FOR CONTROLLING START-UP OF A NUCLEAR REACTOR	A. E. Schoffeld E. O. Bolm Los Alamos, N. Mex.	OVERVOLTAGE PROTECTION CIRCUIT FOR CONDENSER DIS- CHARGE SYSTEM		
3,366,549	562,949(60)	1/30/68	3,368,877	514,408(60)	2/13/68
K. A. Trichett Rockville, Md. M. T. Simard San Diego, Calif. G. J. Halek Foway, Calif.	GAS-COOLED NUCLEAR REACTOR	J. L. Coyton Amarillo, Tex. M. A. Thompson Boulder, Colo.	FLUOROSUM CARBORITRIDE		
3,366,576	588,679(60)	1/30/68	3,368,979	637,042(60)	2/13/68
E. A. Meyer San Diego, Calif. F. E. Lofftus Del Mar, Calif.	HIGH DENSITY CERAMIC BERTHLLIA-NUCLEAR FUEL CONTACT CONTAINING AN ADDITIVE FOR THE RETENTION OF FISSION PRODUCTS	M. A. Bobbin Castro Valley, Calif. C. R. Porter Livermore, Calif.	NUCLEAR FUEL COMPOSITION FOR MULTIPLICATION DETER- MINATION IN REACTORS AND DRIVING SUBCRITICAL LATTICES		
3,366,794	290,669(60)	1/30/68	3,369,140	313,134(60)	2/13/68
L. W. Alvarez Berkeley, Calif.	SCANNING APPARATUS FOR AID- ING IN THE DETERMINATION OF POINT CO-ORDINATES OF PAIRS OF CHARGED PARTICLES AS RE- CORDED ON PHOTOGRAPHIC FILM	H. P. Furch Berkeley, Calif.	ANGULAR CONDENSMENT OF HIGH TEMPERATURE FLASMS		
3,366,873	580,155(60)	1/30/68	3,369,401	574,274(60)	2/20/68
W. R. Miller Concord, Tenn. L. H. Thacker Knoxville, Tenn.	LINEAR RESPONSIVE MELTEN METAL LEVEL DETECTOR	H. H. Briggs Oak Ridge, Tenn. C. M. Burton C. W. Greens Knoxville, Tenn.	TEMPERATURE-GRADIENT-IN- SENSITIVE RESISTANCE-TYPE LIQUID METAL LEVEL DETECTOR		
			3,369,889	651,630(60)	2/20/68

3,369,890	619,130(60)	METHOD FOR MAKING NIOBIUM-URANIUM ALLOY WITH FERRITIZER- J. E. McClusky MIXED TOTAL VOID VOLUME AND VOID SIZE	H. A. Wilhelm J. E. McClusky Ames, Iowa	2/20/68	3,374,092	502,707(60)	HIGH TEMPERATURE BEARING ALLOYS FOR TENSILE AND TORSION AND ALLOYS THEREOF	J. C. Marshall Pottstown, Pa.	3/19/68
3,370,016	619,131(60)	PREPARATION OF DENSE THORIA AND SULFATE CONTAINING THORIA FROM AN AQUEOUS THORIUM NITRATE SOLUTION	G. G. Briggs Cincinnati, Ohio	2/20/68	3,374,149	641,425(60)	NUCLEAR REACTOR HEAT TRANSFER SYSTEM	H. C. Perris Los Angeles, Calif.	3/19/68
3,371,405	420,843(60)	METHOD OF PRODUCING POROUS NICKEL BODIES	A. L. Klisanoff Boston, Mass.	3/5/68	3,374,157	457,872(60)	ELECTROLYTE FOR THE ELECTRODEPOSITION OF TECHNETIUM	V. D. Roz Oak Ridge, Tenn.	3/19/68
3,371,558	529,179(60)	ROTARY DRILLING DEVICE	C. Amann Oak Ridge, Tenn.	3/5/68	3,374,355	649,413(35)	MAGNETIC FOCUSING OF X-RAY TUBES AND SYSTEM FOR OPERATING	L. C. Ferrott T. E. Cuykendall E. I. Grolsen L. T. Finlayson F. Beltes Santa Fe, N. Mex.	3/19/68
3,372,004	538,169(60)	PROCESS FOR MAKING POROUS SODIUM FLUORIDE FILMS	E. V. Richardson Peach, Ky. L. E. McFessie Oak Ridge, Tenn.	3/5/68	3,374,356	651,280(35)	MAGNETIC INDUCTION ACCELERATOR WITH MEANS TO REFLECT ACCELERATED ELECTRONS TO AN X-RAY TARGET	D. W. Kerst Urbana, Ill.	3/19/68
3,372,127	432,436(60)	BORON-LOADED LIQUID SCINTILLATOR	G. E. Thomas, Jr. Hemperville, Ill. E. S. Jackson, Jr. Elmhurst, Ill.	3/5/68	3,374,378	854,039(60)	ACCELERATION OF HEAVY PARTICLES	E. D. Courant Bayport, N. Y.	3/19/68
3,372,274	523,513(60)	INERT RADIOACTIVE FISSION GAS SAMPLES	R. E. Landolt V. Lafayette, Ind.	3/5/68	3,374,408	457,880(60)	TRANSISTOR HAVING CONSTANT GAIN OVER A BROAD TEMPERATURE RANGE	E. E. Sander Albuquerque, N. Mex.	3/19/68
3,372,275	554,292(60)	NEUTRON FILM DOSIMETER USING MULTIPLE FILMS	L. F. Kocher Richland, Wash.	3/5/68	3,374,409	491,062(60)	FAST VERTICAL STROKE MOVING COIL TRANSDUCER	A. J. Goris Hemperville, Ill.	3/19/68
3,372,276	457,881(60)	METHOD AND SYSTEM FOR THE NON-DESTRUCTIVE INSPECTION OF VARIABLE DENSITY PLATES	J. W. Reynolds Oak Ridge, Tenn. H. J. Scripling, Jr. Knoxville, Tenn.	3/5/68	3,375,149	23,865(48)	PLUTONIUM ETCHING PROCESS	H. Kolodney New York, N. Y.	3/26/68
3,372,290	455,020(60)	ELECTRICAL GENERATOR	E. S. Sova Westmont, Ill. C. J. Divona Lockport, Ill.	3/5/68	3,375,369	471,777(60)	PATRIE CORRECTED X-RAY FLUOROMETRIC ANALYSIS METHOD	M. Goldman R. F. Anderson Davis, Calif.	3/26/68
3,372,295	533,837(60)	AIR PROPORTIONAL ALPHA DETECTOR	J. E. Sparks Albuquerque, N. Mex.	3/5/68	3,375,372	538,917(60)	PHOTO-STIMULATED RADIATION DOSIMETRY	L. Myschke State College, Pa.	3/26/68
3,372,969	493,597(60)	VALVE FOR VACUUM SERVICE	M. J. Teitt Trafford, Pa.	3/19/68	3,375,432	609,730(60)	FERRITE ADJUSTABLE KICKER MAGNET FOR EXTRACTING BEAMS OF CHARGED PARTICLES	E. B. Forsyth Brookhaven, N. Y.	3/26/68
3,374,069	624,667(60)	PREPARATION OF METAL CARBORATES BY CO ₂ - PRESSURIZING AMORPHOUS METAL ACETATES	E. L. Reed Los Alamos, N. Mex.	3/19/68					

PATENT NO.	SER. NO.	INVENTION	INVENTORS	DATE	NO. 2	3,377,257	23,861(48)	ELECTROLYTIC PROCESS FOR CLEANING FLUORINUM METAL	M. Kolodny New York, N. Y.	4/9/68
3,355,145	422,100(60)	RADIATION DETECTOR READ- OUT SYSTEM	E. D. Cashion Friendswood, Tex. B. E. Baker Houston, Tex.	12/12/67		3,377,355	461,564(60)	METHOD OF CALIBRATING HIGH- VOLTAGE PRECISION RESISTANCE POTENTIAL DIVIDERS	R. H. Lewis Clarendon Hills, Ill.	4/9/68
3,376,148	658,954(60)	NUCLEAR REACTOR CORE FOR A ROCKET	F. E. Bon Aven, Lake, Ohio A. F. Listick E. E. Eydland Westlake, Ohio	3/19/68		3,377,694	495,359(60)	EXPLOSION WELDING OF INCOM- PATIBLE METALS	C. C. Simons Kennebeck, Wash. R. L. Bradford Columbus, Ohio	4/16/68
3,375,664	569,760(60)	CONVECTION CURRENT POWER GENERATOR	W. M. Wells, Jr. Livermore, Calif.	4/2/68		3,377,871	71,404(48)	PORTABLE TENSING MECHANISM	F. F. Bachberger Tombally, N. J. J. A. Bone Wood Lodge, N. J. H. Brown New York, N. Y.	4/16/68
3,375,676	642,289(60)	METHOD OF STORING HYDROGEN	J. J. Reilly, Jr. Baltimore, N. Y. E. H. Wiswall, Jr. Brookhaven, N. Y.	4/2/68		3,377,886	569,758(60)	SPEED REDUCER	C. E. Frantz F. F. Viscil Richland, Wash.	4/16/68
3,376,116	614,782(60)	FLUID BED DENSITATION OF THERMUM NITRATE	W. J. Robertson Overland, Mo. G. E. Kerr St. Louis, Mo.	4/2/68		3,378,416	324,169(60)	NOVEL HIGH EXPLOSIVE COM- POSITIONS	C. W. Schoenfelder Livermore, Calif. D. D. Perry Berristown, Calif. M. H. Fein Westfield, N. J.	4/16/68
3,376,414	461,568(60)	CALCIUM WITH MEANS TO DIRECT CALCIUM CENTERING VAPOR INTO THE ION BEAM TO REDUCE TANK PRESSURE	W. A. Bell, Jr. E. A. Spainhour A. M. Vesch Oak Ridge, Tenn.	4/2/68		3,378,449	656,996(60)	NUCLEAR REACTOR ADAPTED FOR USE IN SPACE	J. J. Roberts Chicago, Ill. E. J. Croke Elver Forest, Ill.	4/16/68
3,376,440	468,275(60)	LIQUID METAL PISTON MED GENERATOR	J. P. Falser Saratoga, N. Y.	4/2/68		3,378,453	565,011(60)	HIGH HEAT FLUX NEUTRONIC FUEL ELEMENT	C. E. Corlier Cincinnati, Ohio	4/16/68
3,376,470	479,355(60)	CAPACITOR DISCHARGE CIRCUIT FOR STARTING AND SUSTAINING A WELDING ARC	C. C. Stone B. H. Oip Downers Grove, Ill. G. J. Pokorsy Glen Ellyn, Ill.	4/2/68		3,378,478	260,085(60)	APPARATUS FOR COMBINING OUTGAS MONITORING OF LIQUID METALS	M. Kolodny River Edge, N. J. E. Steinfetz Monsey, N. Y.	4/16/68
3,376,544	571,155(60)	ELECTRICAL CONNECTOR	D. M. Locke White Rock, N. Mex.	4/2/68		3,378,685	457,538(60)	DEFORMED NONDESTRUCTIVE TESTING TECHNIQUE IMPROVE- MENT OF SAMPLE SURFACE SENSITIVITY	D. E. Green E. L. Libby Richland, Wash.	4/16/68
3,377,251	642,660(60)	NUCLEAR REACTOR FOR USE IN SPACE	H. E. Eastborn H. Barry Richland, Wash.	4/9/68		3,378,778	577,782(60)	APPARATUS FOR DAMPING AXIAL COREDREAM INSTABILITIES IN A STERCOTRON PARTICLE ACCELERATOR	J. E. Martin Lisle, Ill. E. A. Winje Naperville, Ill. E. E. Hilden Minneapolis, Minn. F. E. Mills Madison, Wis.	4/16/68

3,379,051	490,148(60)	4/23/68	MULTIPLE BEAM ULTRASONIC NON-DESTRUCTIVE TESTING DEVICE	M. F. Zentschel Kennebeck, Wash. R. E. Dixon Pasco, Wash.	4/30/68	E. Katz Port Jefferson, N. Y. R. Strubert Shortsum, N. Y.	4/30/68
3,379,460	534,977(60)	4/23/68	COUPLING AND SEAL FOR CONDUITS	E. J. Allyn Bellevue, Wash.	4/30/68	E. Zane Richmond, Calif.	4/30/68
3,379,585	205,834(68)	4/23/68	CAST EXPLOSIVES COMPRISING CYCLOTRIMETHYLENE TRINITRAMINE AND NITROTOLUENE	C. L. Miller Los Alamos, N. Mex. J. L. Stark St. Paul, Minn.	5/7/68	G. L. Miller Babylon, N. Y. S. E. Bogner Brookhaven, N. Y.	5/7/68
3,379,614	522,115(60)	4/23/68	NUCLEAR REACTOR FUEL CHANNEL ASSEMBLY	C. H. Drummond Chappaque, N. Y.	5/7/68	V. Eummann Port Jefferson Stations, N. Y. A. Ferretti Cambridge, Mass. R. J. Arnett Waltham, Mass. D. B. Rogers Forge Village, Mass.	5/7/68
3,379,648	599,977(60)	4/23/68	SEPARATION OF TRIVALENT BASE SALTS FROM MOLIN FLUORIDE COMPOSITIONS WITH UF_3	R. F. McDuffie Oak Ridge, Tenn.	5/7/68	V. H. Webb H. C. Herraby E. D. Mitchell Bella, Mo.	5/7/68
3,379,760	477,623(60)	4/23/68	2-BROMOACETAMIDO-4-NITROPHENYL N. BARR	N. Barr New York, N. Y. D. E. Koshland, Jr. Bellport, N. Y.	5/7/68	V. H. Webb H. C. Herraby E. D. Mitchell Bella, Mo.	5/7/68
3,379,880	435,101(60)	4/23/68	DEVICE FOR FORMING REFLECTED IMAGES OF PARTICLE DISTRIBUTION IN A FLASH STEAM	F. H. Coenagen Pittsanton, Calif. V. F. Cummins W. E. Nissen, Jr. Livermore, Calif.	5/7/68	J. V. Lee Oak Ridge, Tenn.	5/7/68
3,379,885	416,170(60)	4/23/68	COMPLEMENTARY PAIR FEEDBACK AMPLIFIER	R. H. Graham (deceased) Glastonbury, Conn.	5/7/68	A. Moyer New Gardens, N. Y.	5/7/68
3,380,584	461,566(60)	4/30/68	PARTICLE SEPARATOR	M. J. Faloyler Los Alamos, N. Mex.	5/14/68	H. Milleron Berkeley, Calif.	5/14/68
3,380,761	475,208(60)	4/30/68	QUICK DISCONNECT-COUPLED DEVICE	R. E. Vandevander, Jr. China Lake, Calif.	5/14/68	J. A. Paget Peway, Calif.	5/14/68
3,380,805	506,913(60)	4/30/68	BASE HALFT SUBOXIDES	A. E. Miller Ames, Iowa	5/14/68	G. B. Tully, Jr. L. Seilley Peway, Calif. A. S. Schwartz Del Mar, Calif.	5/14/68
3,380,865	23,862(48)	4/30/68	FLUORIDE ETCHING	M. Bolobay New York, N. Y.	5/14/68	G. B. Tully, Jr. L. Seilley Peway, Calif. A. S. Schwartz Del Mar, Calif.	5/14/68
3,380,893	481,991(60)	4/30/68	METHOD OF INTRODUCING A COLORED GROUP SENSITIVE TO PH CHARGES INTO ENTRIES BY REACTING WITH 2-ETHOXY-5-NITRO-BENZYL BROMIDE	D. E. Enshland, Jr. H. C. Latham E. Patchogue, N. Y. H. E. Horton Raleigh, N. C.	5/14/68	R. F. Koonitz FOR MEASURING THE BUNCH LENGTH MEMLO PARK, CALIF. OF A BEAM OF CHARGED PARTICLES R. H. MILLER IN A PARTICLE ACCELERATOR MOUNTAIN VIEW, CALIF.	5/14/68

PATENT NO.	ISS. NO.	INVENTION	INVENTORS	DATE
3,389,606	422,998(60)	TIDE RESOLVING MECHANICAL ACCELEROMETER	E. C. Watson Cambridge, Mass.	6/25/68
3,390,078	425,664(60)	SEPARATING SALTS HAVING INVERTED SOLUBILITY CURVES	L. P. Hatch Brookhaven, N. Y.	6/25/68
3,390,270	502,698(60)	DEVICE FOR SENSING THERMAL HEATINGS AND UTILIZING SUCH HEATINGS FOR PRODUCING AN ELECTRICAL SIGNAL	E. L. Treloar Forest Park, Ohio E. H. Straits Mt. Healthy, Ohio	6/25/68
3,378,455	610,725(60)	REACTOR FUEL ELEMENT FOR A NUCLEAR SOCKET MOTOR	F. E. Row Avon Lake, O. A. P. Liszka E. S. Byland Westlake, O.	4/16/68
3,390,449	566,091(60)	METHOD FOR PREPARATION AND IMPREGNATION OF GRANULAR GELMA RAY DETECTORS	E. J. Fox Oak Ridge, Tenn.	7/2/68
3,390,559	665,204(60)	PIEZOMECHANICAL LOCKING MECHANISM	O. H. Steutrer Albuquerque, N. Mex.	7/2/68
3,391,238	433,326(60)	PREPARATION FOR SEALING OF METALS AND COMPOUNDS WITH HIGH HEATING POINTS	P. Himmelsstein Frankfurt am Main, Germany Ernst Kuhn Kann am Main, Germany W. Wille Wolfring, near Innsbr., Germany	7/2/68
3,391,804	558,216(60)	COUNTERBALANCED MANIPULATOR	C. E. Flatau Shoreham, N. Y.	7/9/68
3,391,857	577,118(60)	PREHEATER FOR DIFFUSION PUMP	L. E. Lucas Falo Alto, Calif. R. M. Reimers Oakland, Calif.	7/9/68
3,392,005	645,570(60)	PREPARATION OF HIGH QUALITY URANIUM CARBIDE	L. A. Hanson Cereso, Park, Calif.	7/9/68
3,392,280	616,425(60)	MASS SPECTROMETER UTILIZING AN ION BEAM FOR IONIZING THE GAS TO BE ANALYZED	L. Friedman Peachtree, N. Y. T. F. Moran Decatur, Ga. J. J. Leventhal Mt. Sinai, N. Y.	7/9/68

3,392,494	511,289(60)	CEILING DEVICES	7/16/68	3,394,996	668,239(60)	FLUORIDE ADSORPTION BY THORIUM DIOXIDE IN AQUEOUS THORIUM NITRATE SOLUTIONS	7/30/68
3,392,573	577,768(60)	AEROSOL FILTER TEST DEVICE	7/16/68	3,395,075	688,673(60)	COILING SYSTEM IN A NUCLEAR REACTOR UTILIZING CONCRETE PRESSURE VESSEL	7/30/68
3,392,910	304,031(60)	SEAL	7/16/68	3,395,294	442,837(60)	HIGH SPEED AMPLIFIER-DISCHARGE INHIBITOR WITH VIBROSTATIC RANGE	7/30/68
3,393,256	660,882(60)	PROCESS FOR MAINTAINING FRESHNESS IN EXTENDED CERAMIC SECTIONS	7/16/68	3,395,339	522,327(60)	TORSIONAL EDDY CURRENT NONDESTRUCTIVE TESTING PROBE	7/30/68
3,393,315	493,594(60)	HIGH-SPEED, HIGH SENSITIVITY, IONIZING RADIATION DETECTOR	7/16/68	3,395,647	596,014(60)	JET PUMP	8/6/68
3,393,318	531,327(60)	IDENTIFICATION BADGE DOSIMETER	7/16/68	3,395,991	644,466(60)	RECOVERY OF FRODOXINUM FROM MELTEN FLUORIDE SALTS	8/6/68
3,393,385	574,818(60)	QUANTUMPLE MAGNET WITH REFOCUS FIELD DISTORTION	7/16/68	3,395,992	609,732(60)	CONCENTRATION OF TRANSPICUOUS ACTINIDES FROM DIET SAMPLES	8/6/68
3,393,386	593,601(60)	SEMICONDUCTING SHUNTS FOR STABILIZING SUPERCONDUCTING MAGNET COILS	7/16/68	3,396,080	656,965(60)	TUNGSTEN-NIENHUIS COATED CERAMIC REACTOR FUEL PARTICLES	8/6/68
3,393,568	534,976(60)	SPERMALGAM COMPENSATING SYSTEM	7/23/68	3,396,187	372,420(60)	B-DI AND TRIMETHYL CARBOXYLATES AND METHOD FOR THEIR PREPARATION	8/6/68
3,393,600	486,575(60)	OPTICAL RANGING APPARATUS	7/23/68	3,396,200	644,442(60)	PREPARATION OF 2, 4, 6-TRICHLOROBENZENE	8/6/68
3,394,049	671,500(60)	NUCLEAR REACTOR CORE CONFIGURATION	7/23/68	3,396,259	483,893(60)	METHOD FOR ELECTRO-DISCHARGE MACHINING	8/6/68
3,394,050	626,376(60)	METHOD OF OPERATING A NUCLEAR REACTOR FOR REPORTING GAS MIXTURES AND PRODUCING HEAT FOR MULTI-PURPOSES	7/23/68	3,396,272	406,311(60)	ISOTOPE-POOLED I-RAY INSTRUMENT FOR DETECTING THE ABSENCE OF AN INTERFERENCE IN A PIPELINE	8/6/68
3,394,304	490,146(60)	ULTRASTABLE EDDY CURRENT NON-DESTRUCTIVE TESTING APPARATUS	7/23/68	3,396,375	457,335(60)	FAIL-SAFE ALARM SYSTEM	8/6/68
				3,396,893	591,349(60)	FRICTION WELDER	8/13/68

3,407,088	391,810(60)	10/22/68	A. M. Petrich R. P. Kistner Westfield, N. J.	3,412,616	509,899(60)	ACCELEROMETER	B. C. Watson Cambridge, Mass.	11/26/68
3,408,793	610,215(60)	11/5/68	J. W. Frezer Pleasanton, Calif.	3,413,166	496,799(60)	FINE GRAINED STEEL AND PROCESS FOR PREPARATION THEREOF	V. F. Zackay Berkeley, Calif. E. S. Furter Orinda, Calif. K. V. Bavi Berkeley, Calif.	11/26/68
3,409,413	660,569(60)	11/5/68	R. E. Burns J. F. Phillips W. W. Schulz	3,413,196	485,811(60)	FUEL ELEMENT	P. Fortasco Sancho Santa Fe, Calif. F. R. Bell S. S. Duffield San Diego, Calif.	11/26/68
3,409,414	674,067(60)	11/5/68	F. L. Moore Knoxville, Tenn.	3,413,200	502,708(60)	A.C. EXCITING OF FLUORUMIN	K. A. Johnson Nauvoo-ville, Pa.	11/26/68
3,409,415	643,315(60)	11/5/68	F. L. Moore Knoxville, Tenn.	3,413,259	548,422(60)	COLLAGEN FIBROUS FILMS SUPERFILTRATION MEMBRANE	K. A. Erms J. S. Johnson Oak Ridge, Tenn.	11/26/68
3,410,619	635,983(60)	11/12/68	R. L. Delany Arvada, Colo. L. F. Crill J. L. Hilst Boulder, Colo.	3,413,235	496,012(60)	THERMOFLUORESCENT RADIATION DOSIMETRIC MATERIAL	D. E. Jones J. E. Gaskill Livermore, Calif.	11/26/68
3,410,668	685,177(60)	11/12/68	W. W. Conner Henderson, Colo.	3,413,467	512,831(60)	ATMOSPHERIC NITROGEN FLUO- RESCENCE IDENTIFICATION APPARATUS	D. E. Westervelt Los Alamos, N. Mex.	11/26/68
3,411,146	581,420(60)	11/12/68	R. E. Knutson Albuquerque, N. Mex.	3,413,528	533,321(60)	LITHIUM IRRITATED SEMICONDUCTOR RADIATION DETECTOR	J. Llacer Stanford, Calif.	11/26/68
3,411,884	630,486(60)	11/19/68	V. R. Thayer Newark, Del.	3,413,529	534,974(60)	SEMICONDUCTOR DETECTOR HAVING A LITHIUM COMPENSATED SEMI REGION BETWEEN OPPOSITE CONDUCTIVITY TYPE REGIONS	F. S. Goulding Lafayette, Calif. R. P. Lothrop Berkeley, Calif.	11/26/68
3,411,987	668,481(60)	11/19/68	V. F. Fitzpatrick Richland, Wash.	3,414,403	541,402(60)	SILVER SEPARATION FROM AN ACID SOLUTION	L. A. Bray R. L. Moore Richland, Wash.	12/3/68
3,412,248	508,871(60)	11/19/68	J. Kastner Park Forest, Ill. D. H. Eggenberger Bomars Grove, Ill. L. Boywood Kinross, Ill.	3,414,570	596,822(60)	H^2 , H^3 , H^4 -MULTIPLIER- ANODE	M. D. Coburn White Rock, N. Mex.	12/3/68
3,412,337	574,819(60)	11/19/68	F. E. G. Lothrop Lafayette, Calif.	3,414,692	643,319(60)	CORUINAL LOOP SENSITIVE SWITCH	D. R. Benley Newark, Calif.	12/3/68
				3,415,754	511,565(60)	MAGNETOHYDRODYNAMIC GENERATOR	M. Petrick Joliet, Ill.	12/3/68

3,414,777	555,930(60)	AUTOMATIC SUPERCONDUCTING PUMP	E. L. Lequer Espools, E. Mex. K. J. Carroll E. F. Hummel Los Alamos, E. Mex.	12/3/68	3,419,419	445,865(60)	NICKEL-PLATING BATH FOR THORIUM	E. R. Wright Oak Ridge, Tenn.	12/3/68
3,415,170	581,422(60)	SEALING ARRANGEMENT FOR PISTON-CYLINDER PRESSURE VESSEL	A. E. Smith Clinton, Tenn.	12/10/68	3,419,432	518,742(60)	SEAL	J. C. Hesson Riverdale, Ill.	12/3/68
3,414,527	614,781(60)	CAGE FOR COMPRESSING PACKING MEMBERS	E. J. Ginther Creve Coeur, Mo.	12/10/68	3,419,485	555,931(60)	ELECTROPLATING PLATING IN A SOLUTION BATH OF POTASSIUM TETRACRYANATE AND POTASSIUM CYANIDE	R. R. Seegmiller J. K. Gore Los Alamos, E. Mex.	12/3/68
3,415,977	582,209(60)	RESISTANCE WELDING	S. A. Bush Lafayette, Colo.	12/10/68	3,419,656	639,595(60)	METHOD OF MAKING SOLID SOLUTION CARRIERS-GRAPHITE COMPOSITIONS	R. E. Riley K. V. Davidson J. H. Trub Los Alamos, E. Mex.	12/3/68
3,416,103	540,421(60)	ELECTRIC PULSE LINE FOR PROTECTING STRUCTURAL SQUARE-TIPPED PULSES	W. V. Goldaworthy Orinda, Calif.	12/10/68	3,419,797	522,325(60)	REGENERATIVE EDDY CURRENT TESTING DEVICE FOR TESTING METALS SUBJECTING THE CROSS SECTION OF SAID TESTING	E. L. Libby Richland, Wash.	12/3/68
3,416,365	491,063(60)	METHOD OF DETERMINING ELASTIC PROPERTIES OF A METAL SAMPLE	C. L. Frederick Richland, Wash.	12/17/68					
3,416,768	597,494(60)	LOW LEAKAGE CONTROLLED SEAL	K. M. Welch Stockton, Calif.	12/17/68					
3,417,002	464,250(60)	METHOD AND APPARATUS FOR IMPROVING ECONOMY OF FLUORINE-CALCIUM ALLOYS BY ELECTROREFINING	J. A. Leary L. J. Mullins, Jr. J. F. Buchen Los Alamos, E. Mex.	12/17/68					
3,417,167	702,538(60)	METHOD OF PREPARING SPHERICAL URANIUM NITRIDE PARTICLES HAVING A POROUS INTERIOR	D. E. Kiber D. E. Losier Columbus, Ohio	12/17/68					
3,418,027	565,494(60)	PURSANT TABLE	C. Ammons Oak Ridge, Tenn.	12/24/68					
3,418,475	481,147(60)	LEAF SPRING-WEARER SHUTTER DEVICE ACTIVATED BY THE INTERDISCUSSION OF ELECTRICAL POWER	C. H. Rodgers V. Carrollton, O.	12/24/68					
3,419,359	470,652(60)	FLAME IONIZATION DETECTOR	W. G. Anderson E. H. Stevens Oak Ridge, Tenn.	12/3/68					
3,419,387	656,986(60)	PROCESS OF MAKING HIGH LOADED UO ₂ -COLUMBIUM CERAMETS	E. Gordon New Haven, Conn. E. Fickman Stroh Oak, N. Y.	12/3/68					

PATENT NO.	SER. NO.	INVENTION	INVENTORS	DATE	No. 1	3,421,334	571,652(60)	APPARATUS AND METHOD FOR SEPARATION OF HELIUM ISOTOPIES	J. L. McKinney Dayton, Ohio W. L. Taylor Cincinnati, Ohio	1/14/69
3,419,935	603,066(60)	ROT-ISOSTATIC-PRESSING APPARATUS	W. A. Pfeiffer Korris, Tenn. C. E. Valentine Oak Ridge, Tenn.	1/7/69	3,421,543	616,431(60)	GAS, LOW PRESSURE, DIFFERENTIAL REGULATOR	M. Montas Plainville, N. Y.	1/14/69	
3,420,639	677,504(60)	MOLTEN SALT METHOD OF SEPARATION OF AMERICIUM FROM PLUTONIUM	L. J. Mullins J. A. Leary Los Alamos, N. Mex.	1/7/69	3,421,714	628,791(60)	RE-ENTRY VEHICLE FOR SMALL PACKAGES	W. G. Koerner Manhattan Beach, Calif.	1/14/69	
3,420,640	667,048(60)	PROCESS FOR DEPLETING ¹⁷⁰ AND ¹⁷⁰ IN ²³⁵ PuO ₂	J. A. Porter Williston, S. C.	1/7/69	3,421,819	383,534(60)	OPTICAL EXTENSOMETER	T. Anderson Castro Valley, Calif. E. H. Lorbeer Livermore, Calif.	1/14/69	
3,420,761	576,187(60)	LOW TEMPERATURE IRRADIATION OF MONOMER IMPREGNATED CELLULOSE BODIES	A. M. Feibush Westfield, N. J.	1/7/69	3,421,953	586,007(60)	CARBIDE DEPOSITION ON TANTALUM	J. C. McGuire Emmeswick, Wash. C. Wohlberg Los Alamos, N. Mex.	1/14/69	
3,420,810	589,468(60)	PROCESS FOR JOINING THE A AND B CHAINS OF INSULIN	P. Katsouyannis Peachogue, N. Y. A. M. Tomatko Rochester, N. Y.	1/7/69	3,422,167	701,872(60)	METHOD FOR PREPARING METAL OXIDE MICROSTRIPES	R. A. Bowman Oak Ridge, Tenn. E. L. Pilloton Berkeley Heights, N. J.	1/14/69	
3,420,999	550,089(60)	THERMOLUMINESCENT TISSUE EQUIVALENT DOSIMETER	C. E. Distenfeld Metituck, N. Y.	1/7/69	3,422,681	558,217(60)	VEHICLE ACTUATED ROADSIDE AIR SAMPLING DEVICE	M. Sanders Knoxville, Tenn.	1/21/69	
3,421,010	523,514(60)	SPINAL SCANNING SYSTEM EMPLOYING ROTARY AND RECIPROCATING MIRRORS FOR AUTOMATIC DATA MEASURING PROJECTORS	F. L. Toby Berkeley, Calif.	1/7/69	3,423,190	690,428(60)	PLUTONIUM TETRAFLUORIDE PREPARATION AND SEPARATION BY SOLUTION ON SODIUM FLUORIDE	M. J. Steindler Park Forest, Ill. A. A. Jocks Elmhurst, Ill.	1/21/69	
3,421,015	673,223(60)	ELECTRICAL LOAD CONTROLLER	E. M. Jones Evansville, Ind. R. J. Thomas Paducah, Ky.	1/7/69	3,423,500	523,803(60)	METHOD FOR INSPECTING INACCESSIBLE SURFACES	T. C. Gregory Los Alamos, N. Mex.	1/21/69	
3,421,071	538,918(60)	RECTIFIER FOR ACCELERATOR MAGNETS	E. L. Cassell Port Jefferson, N. Y.	1/7/69	3,423,706	591,056(60)	MULTIPOLE MAGNET HAVING A SEQUENTIALLY SKIM STEPPED COIL CONFIGURATION	W. B. Simpson E. A. Beth E. B. Britton Saratoga, N. Y. P. G. Kruger Champaign, Ill.	1/21/69	
3,421,115	623,182(60)	SOLENOID ACTUATED DEVICE	C. A. Sandoval Albuquerque, N. Mex.	1/7/69	3,423,710	593,254(60)	WIDE BAND INDUCTIVE COIL DEVICE	P. E. Allen Mesa, Nev.	1/21/69	

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3,429,669	673,528(60)	METHOD OF PROCESSING NUCLEAR FUEL BY SELECTIVE CIF FLUORINATION WITH SEPARATION OF UF ₆ AND PuF ₄	2/25/69	3,430,230	492,342(60)	ASSUMIATOR CIRCUIT	2/25/69
		G. Camozzo M. Goossens G. Pierini Mol, Belgium F. Coenen Antwerp, Belgium A. Francesconi Turnhout, Belgium J. J. Schmits Mol-Dook, Belgium A. Stynnen Eindhoven, Belgium					M. H. Jones Scotts, N. Y.
3,429,670	673,527(60)	METHOD OF FLUORINATING NUCLEAR FUEL WITH SELECTION OF FLUORINE TETRAFLUORIDE AND URANIUM HEXAFLUORIDE	2/25/69	3,431,104	570,731(60)	ZINCUM BASS ALLOY	3/4/69
		G. Camozzo C. Pierini Mol, Belgium F. Coenen Antwerp, Belgium A. Francesconi Turnhout, Belgium J. J. Schmits Mol-Dook, Belgium A. Stynnen Eindhoven, Belgium					E. F. Gibson D. A. Waters Oak Ridge, Tenn. C. E. Emley Kingsport, Tenn.
3,429,699	658,306(60)	HIGH LOADED NO ₂ -COLORUM CEMENTS	2/25/69	3,431,201	664,207(60)	HYPERFILTRATION PROCESS HAVING ION EXCHANGE PRE-TREATMENT	3/4/69
		K. Fuhrman Shrub Oak, N. Y. K. Gordon New Haven, Conn. R. B. Holden Flossantville, N. Y.					E. H. Klepfer Flossantton, Calif.
3,429,774	686,299(60)	PREVENTION OF SEIZING IN LIQUID METAL ENVIRONMENTS	2/25/69	3,431,329	701,858(60)	METHOD OF PREPARING A FUEL MATERIAL FOR USE IN A NUCLEAR REACTOR	3/4/69
		D. H. Garinsky Center Horiches, N. Y. R. H. Powers Storrsville, N. Y. H. Suskind Burlington, N. Y.					J. S. Johnson E. A. Krus Oak Ridge, Tenn.
3,429,798	641,427(60)	ELECTROCHEMICAL ETCHING OF SPIRAL LAMINAE	2/25/69	3,431,379	617,020(60)	METHOD FOR INDUCTION HEATING	3/4/69
		C. J. Beck M. R. Birnby Schenectady, N. Y. P. G. Lozier Malletts Lake, N. Y.					C. S. Yrme Albuquerque, N. Mex.
3,430,043	496,281(60)	MINIMUM IONIZATION PARTICLE DETECTOR PRODUCED BY GAMMA RAY IRRADIATION	2/25/69	3,431,413	594,320(60)	ROTATIONAL TECHNIQUE FOR ASSESSING QUANTITY AND DISTRIBUTION OF BODY RADIOACTIVITY	3/4/69
		H. A. Blumensfeld Princeton, N. J. F. P. Penoloff Boston, Mass. Chib-Bee Sun Rayside, N. Y.					J. I. Anderson D. G. Olson Idaho Falls, Idaho
				3,431,414	652,632(60)	RADIATION DETECTOR AND RECORDER	3/4/69
							L. C. Metz Clinton, Tenn. F. F. Dyer L. H. Thacker Knoxville, Tenn.
				3,431,502	720,265(60)	TARGET POSITIONER FOR ACCELERATOR EXTERNAL BEAM	3/4/69
							E. F. Stoms L. T. Jackson Berkeley, Calif.

3,431,840	654,038(60)	CENTRIFUGAL PUMP OF THE FREE SURFACE TYPE	R. W. Aitz Canoga Park, Calif.	3/11/69	3,432,709	504,274(60)	CALUTERON ION SOURCE WITH MAGNETIC FIELD INDUCING COIL WITHIN ARC CHAMBER	J. V. Lee L. O. Love Oak Ridge, Tenn.	3/11/69
3,432,240	538,916(60)	LASER OPTICAL ALIGNING METHOD AND APPARATUS	V. L. Jackson Hayward, Calif.	3/11/69	3,432,764	684,134(60)	SPECIALIZED ELECTROMETER CIRCUIT	H. A. Kermicle Oak Ridge, Tenn.	3/11/69
3,432,326	392,042(60)	DEFORMATION OF GRAPHITE WITH REFRACTORY CARBIDES	K. Langrod Sherman Oaks, Calif. E. L. Jones Canoga Park, Calif.	3/11/69	3,432,773	661,179(60)	EMITTER-FOLLOWER OSCILLATOR EMPLOYING FIELD-ELECTRIC CERAMIC FEEDBACK NETWORK	C. E. Land D. C. Schuler Albuquerque, N. Mex.	3/11/69
3,432,379	502,687(60)	THREE DIMENSIONAL FLEXIBLE GENERAL MONITORING	M. V. Anderson Hayward, Calif.	3/11/69	3,432,774	659,568(60)	VOLTAGE-TUNED WIDEN BRIDGE OSCILLATOR	O. A. Fick Livermore, Calif.	3/11/69
3,432,388	725,558(60)	NUCLEAR REACTOR SYSTEM WITH FISSION GAS REMOVAL	P. Fortescue La Jolla, Calif.	3/11/69	3,432,783	663,175(60)	SUPERCONDUCTOR KIBRON	R. B. Britton Sequoia, N. Y. E. S. Robbins Center Moriches, N. Y. W. B. Sampson Bellport, N. Y.	3/11/69
3,432,390	656,955(60)	FUEL ASSEMBLY FOR A NUCLEAR REACTOR	E. A. Dean Monroeville, Pa. E. A. McCabe, Jr. Pittsburgh, Pa.	3/11/69	3,433,051	532,541(60)	APPARATUS FOR DETERMINING MECHANICAL AND THERMAL PROPERTIES OF METALS	R. Parker Davisville, Calif.	3/18/69
3,432,656	597,150(60)	GAGE DEVICE FOR MEASUREMENT OF DENSITY PROFILES OF SNOWPACK	J. L. Smith Fleasant Hill, Calif. D. W. Willen Berkeley, Calif.	3/11/69	3,433,703	709,080(60)	STILLANATOR HAVING MULTI-POLE MAGNETS	C. D. Cornish Port Jefferson, N. Y.	3/18/69
3,432,660	720,174(60)	GAMMA-RAY CAMERA FOR LARGE RADIOISOTOPIC DISTRIBUTION IN A TRANSVERSE SECTION OF A ROTATING SUBJECT	E. O. Anger Berkeley, Calif.	3/11/69	3,433,954	580,371(60)	SEMICONDUCTOR X-RAY EMISSION SPECTROMETER	H. R. Bowman Walnut Creek, Calif. S. G. Thompson E. K. Hyde Berkeley, Calif. R. C. Jared Hayward, Calif.	3/18/69
3,432,662	591,378(60)	AUTOMATIC SEPARATION COLUMN PRODUCT ANALYZER	R. J. Walter Walnut Creek, Calif.	3/11/69	3,433,977	571,156(60)	PULSE LINE HAVING COMPONENTS COAXIALLY INTERCONNECTED AND COMPRISED WITH LARGE SURFACE AREA CONDUCTORS	V. L. Gagnon El Sobrante, Calif. D. T. Scallise B. H. Smith Berkeley, Calif.	3/18/69
3,432,664	410,328(60)	HIGH VOLTAGE FIELD-REVERSAL PULSE GENERATOR USING A LASER SWITCHING MEANS TO ACTIVATE A FIELD EMISSION X-RAY TUBE	J. B. Robinson Livermore, Calif.	3/11/69	3,434,053	384,268(60)	CIRCUITS FOR AN ELECTRICAL RMS MEASURING INSTRUMENT	D. A. McKee Grand Junction, Colo.	3/18/69
3,432,665	617,018(60)	IRRADIATION DEVICE FOR PRODUCING A CONSTANT DOSE RATE	E. K. Klabbe Knoxville, Tenn.	3/11/69	3,434,061	580,513(60)	COMPENSATION OF PHASE DRIFT ON LONG CABLES	H. Hahn E. Patchogue, N. Y. H. J. Halama Shoreham, N. Y.	3/18/69
3,432,682	437,331(60)	TRIGGERED VOLT-SECOND GENERATOR	E. G. Bass Albuquerque, N. Mex.	3/11/69					

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3,434,122	MULTI-PHASE FERMIONIC CERAMIC RESISTOR ELEMENT	C. E. Lead G. H. Hestling Albuquerque, N. Mex.	3/18/69
3,434,009	SEPARATION OF ACTINIUM AND THORIUM FROM URANIUM AND ITS DAUGHTERS	D. E. Swanson Miami, Fla.	3/25/69
3,435,219	NEUTRON SPECTROMETER FOR HIGH NEUTRON FLUX	A. Kevay Saratoga, N. Y.	3/25/69
3,436,153	OBJECT MEASURING BY INTERFEROMETRY	R. B. Baldwin Clinton, Tenn.	4/1/69
3,436,193	FLUORINE SUBSTITUTION	R. A. Chlenskas Chicago, Ill.	4/1/69
3,436,558	METHOD FOR MEASURING FISSIONABLE MATERIAL CONTENT OF FUELS	D. L. Sandakas San Antonio, Tex.	4/1/69
3,438,856	NUCLEAR REACTOR HYDRAULIC CO-TWIST DRIVE SYSTEM	C. C. Ripley San Jose, Calif.	4/15/69
3,439,187	ANTILOGARITHMIC FUNCTION GENERATOR	M. G. Strauss Bowlers Grove, Ill.	4/15/69
3,440,037	STAINLESS STEEL ALLOY EXHIBITING RESISTANCE TO ENRICHMENT BY NEUTRON IRRADIATION	V. B. Martin J. E. Weir Oak Ridge, Tenn.	4/22/69
3,440,731	MAGNETICALLY STABILIZED FLUIDIZED BED	E. J. Tushill Belle Terre, N. Y.	4/29/69
3,441,351	COLOR RECORDING AVERAGING LIGHT INTENSITY METER	P. R. Bell C. C. Harris Oak Ridge, Tenn.	4/29/69
3,441,451	HIGH TEMPERATURE STRESS FREE THERMOCOUPLE JUNCTIONS	F. C. Saigado White Rock, Los Alamos, N. Mex.	4/29/69
3,441,478	FUEL ELEMENT FOR NEUTRONIC REACTOR AND METHOD OF FABRICATING THEREOF	L. C. Williams Clinton, Tenn.	4/29/69
3,441,488	ELECTROLYTIC DESALINATION OF SALINE WATER BY A DIFFERENTIAL REDOX METHOD	E. I. Onstott Los Alamos, N. Mex.	4/29/69

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3,441,752	504,269(60)	THERMIONIC CONVERTER DEVICE	G. M. Grover Los Alamos, N. Mex. C. A. Bussa Lavena, Italy R. J. Caron Ispra, Italy	4/29/69	3,445,661	667,338(60)	PULSE-SHAFING TRANSMISSIOM-LINE A. C. Odean TRANSFORMER FOR A DOUBLE-GAP STORAGE CHAMBER	F. Belos Palo Alto, Calif. F. Villa Los Altos, Calif. D. E. Yount Menlo Park, Calif.	5/20/69
3,441,775	591,001(60)	DIPOLE CURRENT LEAD FOR A PLASMA CONTAINMENT DEVICE	J. Z. Hessel D. A. Baker L. C. Burchard J. H. DiMarco R. M. Henson E. J. Kerr J. Marshall Los Alamos, N. Mex.	4/29/69	3,446,067	816,435(60)	FORCE READOUT SYSTEM	C. E. Prantz F. F. Viacil Richland, Wash.	5/27/69
3,442,217	641,424(60)	ON-OFF SWITCH FOR ELECTRO- MAGNETIC FUSE	H. H. Haulin Canoga Park, Calif.	5/6/69	3,446,522	639,253(60)	INTERNAL RETAINING RING	C. T. Hoard Oakland, Calif.	5/27/69
3,442,642	728,369(60)	PREPARATION OF PLUTONIUM	W. J. Ramsey J. O. Jepson D. H. Wood Livermore, Calif.	5/6/69	3,446,574	711,527(60)	PREPARATION OF THE RARE EARTH SESQUIOXIDES	E. L. Head Los Alamos, N. Mex.	5/27/69
3,443,097	695,971(60)	POCKET RADIATION DOSIMETER UTILIZING CAPACITOR INTE- GRATOR	M. L. Smith Kennebeck, Wash.	5/6/69	3,446,703	683,374(60)	METHOD OF OPERATING A HE- LIUM REACTOR	M. F. Lyons S. Weidemann San Jose, Calif.	5/27/69
3,443,212	691,959(60)	PULSED ELECTROMAGNETIC TEST- ING DEVICE WITH SAMPLING BEAMS	C. J. Kemken Orland Park, Ill.	5/6/69	3,447,032	648,534(60)	HIGH-VOLTAGE PULSING ALPHA- RAYS FOR A SHAKE CHAMBER	T. A. Romanowski Elmhurst, Ill. C. J. Rush Downers Grove, Ill.	5/27/69
3,443,217	570,144(60)	VARIABLE FREQUENCY HIGH SEN- SITIVITY MICROWAVE SPECTROSCOPY	J. M. Brinkhoff Arlington, Mass.	5/6/69	3,447,144	556,333(60)	MECHANICALLY SETTABLE MAG- NETIC REGISTER	R. L. Snyder New Smyrna Beach, Fla.	5/27/69
3,443,912	724,357(60)	SEPARATION OF URANIUM AND THORIUM FROM PLUTONIUM	G. L. Silver Casterville, O.	5/13/69	3,448,054	597,145	COOLANT SALT FOR A MELTEN SALT BREEDER REACTOR	R. E. Thomas, Jr. Oak Ridge, Tenn. G. H. Hebert Knoxville, Tenn.	6/3/69
3,444,089	546,090(60)	KEMINER SCINTILLATORS	J. G. Carter E. G. Christopherou Oak Ridge, Tenn.	5/13/69	3,448,377	678,989(60)	METHOD UTILIZING AN ELECTRON BEAM FOR INDISTINCTIVELY MEASURING THE DIELECTRIC PRO- PERTIES OF A SAMPLE	H. Seiwatz Oak Park, Ill. C. M. Crook Chicago, Ill.	6/3/69
3,445,201	716,497(60)	ION EXCHANGE PROCESS FOR RE- COVERING AMERICIUM AND CURIUM	E. J. Wheelerlight Richland, Wash.	5/20/69	3,448,859	541,400(60)	RADIOACTIVE WASTE REMOVAL METHOD	W. C. Hall L. D. Bassell, Jr. Baltimore, Md. T. E. Barter II Pasadena, Md.	6/10/69

3,448,872	698,930(60)	FUEL ELEMENT POSITIONER	C. E. Oak San Jose, Calif.	6/10/69	3,431,667	658,289(60)	CENTRIFUGAL CASTING APPARATUS	J. L. Frankney Arvada, Colo. K. E. Toiles Denver, Colo.	6/24/69
3,449,143	310,305(60)	METHOD OF INCREASING THE CORROSION RESISTANCE OF COPALM-BASED ALLOYS TO MERCURY	E. J. Vergo Beachwood, Ohio	6/10/69	3,431,790	728,311(60)	METHOD OF SEPARATING REPTORIUM AND URANIUM VALUES	Sidney Katz Oak Ridge, Tenn. G. I. Catbers Knoxville, Tenn.	6/24/69
3,449,175	707,203(60)	ZIRCONIA-BASED THERMOELECTRIC COMPOSITIONS	C. I. McVey Shaker Heights, O. M. McConaughey Lynchburg, Ohio H. D. Gibson Cincinnati, Ohio J. V. Smith Springboro, Ohio	6/10/69	3,432,175	643,314(60)	ROLLER-BAND DEVICES	D. F. Wilkes Albuquerque, N. Mex.	6/24/69
3,449,177	562,954(60)	RADIATION DETECTOR	G. C. Ruth Rosemont, Pa. R. A. McKinney Philadelphia, Pa.	6/10/69	3,432,191	642,663(60)	MICROWAVE REFLECTION SYSTEM FOR SUPERCONDUCTING PARTICLE SEPARATOR	H. Hahn E. Patchogue, N. Y. H. J. Eilans Shoreham, N. Y.	6/24/69
3,449,245	506,277(60)	METHOD OF SEPARATING SALTS FROM AQUEOUS SOLUTIONS	J. S. Johnson K. A. Kreis A. E. Marciniowski H. O. Phillips A. J. Short Oak Ridge, Tenn.	6/10/69	3,432,309	683,376(60)	ROLLER-BAND DEVICES	D. F. Wilkes Albuquerque, N. Mex.	6/24/69
3,449,859	607,585(60)	TEMPERATURE CONTROL CIRCUIT	J. J. Henry Oak Ridge, Tenn.	6/10/69					
3,450,576	499,119(60)	INHIBITION OF URANIUM METAL CORROSION	T. P. Sprague Clinton, Tenn.	6/17/69					
3,450,857	612,294(60)	GAS SHIELDING DEVICE	W. S. Webb Albuquerque, N. Mex.	6/17/69					
3,450,879	710,551(60)	DIELECTRIC-TYPE CHARGED PARTICLE DETECTOR	E. J. Seppi Menlo Park, Calif.	6/17/69					
3,451,266	511,563(60)	VAPOR PRESSURE GAUGE AND CALORIMETER FOR HIGH TEMPERATURES	G. M. Grover Los Alamos, N. Mex. C. A. Busse Laveno, Varese, Italy J. Bobdanaky Taino, Varese, Italy	6/24/69					

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PATENT NO.	SER. NO.	INVENTOR	INVENTOR	DATE	
September 30, 1969					
3,438,749	589,467(60)	F. D. Lonsider Miami, O.	F. D. Lonsider Miami, O.	4/15/69	ION EXCHANGE METHOD FOR PREPARING METAL OXIDE MICROSPHERES
3,450,878	600,266(60)	V. L. Bell, Jr. Newport News, Va.	G. F. Fedirits Newport News, Va.	6/17/69	DOSEMETER FOR HIGH LEVELS OF ABSORBED RADIATION
3,453,050	894,985(60)	J. L. Arrowood W. A. Groppa W. W. Lee, Jr. Oak Ridge, Tenn.	J. L. Arrowood W. A. Groppa W. W. Lee, Jr. Oak Ridge, Tenn.	7/1/69	TRACE SCANNING
3,453,423	536,590(60)	P. Pe-Yuen Ma. Taipei, Taiwan, China	P. Pe-Yuen Ma. Taipei, Taiwan, China	7/1/69	FOUR QUADRANT LOGARITHMIC MULTIPLIER FOR TIME- DEPENDENT SIGNALS
3,453,430	695,867(60)	A. C. Miller Tupelo, N. Y.	A. C. Miller Tupelo, N. Y.	7/1/69	CONTROLLED DEFECT COLUM- TION DOSEMETER
3,453,558	485,643(60)	M. T. Abess D. M. Hall W. B. Leslie Albuquerque, N. Mex.	M. T. Abess D. M. Hall W. B. Leslie Albuquerque, N. Mex.	7/1/69	OPTICAL MASER SYSTEM
3,453,574	715,352(60)	T. de Parry Elmhurst, Ill.	T. de Parry Elmhurst, Ill.	7/1/69	HIGH-FREQUENCY, WIDE- BAND TRANSFORMER
3,454,214	678,116(60)	M. Milleron Berkeley, Calif.	M. Milleron Berkeley, Calif.	7/8/69	FIBER FOR ELIMINATING BACK- STREAMING IN A W-TOUR TUBE
3,454,466	694,538(60)	V. A. Pitt E. B. Lemos San Jose, Calif.	V. A. Pitt E. B. Lemos San Jose, Calif.	7/8/69	NUCLEAR REACTOR CONTAINMENT SYSTEM FOR METROPOLITAN SITES
3,454,468	717,215(60)	E. A. Franco- Ferreira Nashville, Tenn.	E. A. Franco- Ferreira Nashville, Tenn.	7/8/69	FUEL ELEMENT FOR NEUTRONIC REACTOR AND METHOD OF FABRICATION THEREOF
3,454,490	571,653(60)	R. M. Wallace Alhambra, S. C.	R. M. Wallace Alhambra, S. C.	7/8/69	CONCENTRATION OF IONS USING ION SELECTIVE MEMBRANES
3,454,814	568,983(60)	L. Mancebo Livermore, Calif.	L. Mancebo Livermore, Calif.	7/8/69	TUBULAR VAPOR SOURCE
3,455,506	522,328(60)	R. Medel Wash., D. C.	R. Medel Wash., D. C.	7/15/69	THERMOSTATIC VALVE
3,456,113	646,157(60)	G. E. Keeplin Los Alamos, N. Mex.	G. E. Keeplin Los Alamos, N. Mex.	7/15/69	DETECTION, IDENTIFICATION AND ANALYSIS OF FISSIONABLE ISOTOPIES
3,457,413	643,318(60)	J. V. Baum Patchogue, N. Y.	J. V. Baum Patchogue, N. Y.	7/22/69	DOSE EQUIVALENT RADIATION SYSTEM
3,457,418	694,328(60)	H. W. Miller Alhambra, Calif. Q. A. Ferris Orinda, Calif.	H. W. Miller Alhambra, Calif. Q. A. Ferris Orinda, Calif.	7/22/69	OPTICAL IMAGE AMPLIFIER UTILIZING ELECTRON MULTIPLIERS IN A GAS
3,457,516	535,657(60)	T. V. Blalock Knoxville, Tenn.	T. V. Blalock Knoxville, Tenn.	7/22/69	DOUBLE DELAY-LINE FILTERS FOR PULSE AMPLIFIERS
3,457,517	645,582(60)	E. V. Johnson Lockport, Ill. T. E. Klippert Lombard, Ill. V. J. Hamler Elmhurst, Ill.	E. V. Johnson Lockport, Ill. T. E. Klippert Lombard, Ill. V. J. Hamler Elmhurst, Ill.	7/22/69	ELECTRON PULSE GENERATOR OF THE COBURG GRID TYPE EMPLOYING A DELAY LINE STORAGE MEANS
3,457,646	576,196(60)	A. J. Schwemin Oakland, Calif.	A. J. Schwemin Oakland, Calif.	7/29/69	LASER BEAM OPERATED X-Y TABLE
3,458,291	738,837(60)	J. G. Riba H. Riversides, Ill. La Verne E. Trevorrow Glen Ellyn, Ill. M. J. Steindler Park Forest, Ill.	J. G. Riba H. Riversides, Ill. La Verne E. Trevorrow Glen Ellyn, Ill. M. J. Steindler Park Forest, Ill.	7/29/69	SEPARATION OF BUTADIENE AND FLUORINE BY A LITHIUM FLUORIDE ADSORPTION TECHNIQUE
3,458,706	565,495(60)	D. A. Ravenhall Quebec, N. Y. C. Schwemmer Storham, N. Y.	D. A. Ravenhall Quebec, N. Y. C. Schwemmer Storham, N. Y.	7/29/69	TAPE REEL IDENTIFYING ARRANGEMENT EMPLOYING LIGHT REFLECTIVE COATED LABEL WATER
3,458,972	750,931(60)	R. E. Sood Knoxville, Tenn.	R. E. Sood Knoxville, Tenn.	8/5/69	METHOD OF DEAERATING SEA WATER

3,459,636	747,321(60)	VENTED FUEL PIP	J. H. Germer San Jose, Calif.	8/5/69	3,461,292	394,325(60)	LOW LEVEL RADIATION MONITOR	V. F. Spilchal, Jr. H. Augusta, S. C.	8/12/69
3,459,925	500,452(60)	HIGH SPEED TEMPERATURE MONITOR	J. H. Wilson K. H. Cooney A. E. Dexter Albion, S. C. R. W. Leep Los Alamos, N. Mex. W. E. Hodder Glandora, Calif. L. C. Page Santa Ana, Calif. E. P. Brady Sierra Madre, Calif.	8/5/69	3,461,294	517,868(60)	METHOD FOR GENERATING A BEAM OF IONS WHEREIN THE IONS ARE COMPLETELY POLARIZED	D. von Ehrenstein Westmont, Ill. D. C. Bass Downers Grove, Ill.	8/12/69
3,459,960	635,985(60)	HIGH ENERGY PULSE GENERATOR UTILIZING A DECOUPLING TRANSFORMER	K. Aslund O. S. Zucker Livermore, Calif.	8/5/69	3,461,305	616,436(60)	SYSTEM FOR CONTROLLING THE RESPONSE OF A PHOTOELECTRIC TAPE READER BY UTILIZING AN "OR" GATE AND A DELAY TO SIMULATE SPROCKET HOLE SIGNALS	C. L. Noulton Knoxville, Tenn.	8/12/69
3,460,909	477,355(60)	CATALYTIC COMBUSTION DETECTOR FOR GAS CHROMATOGRAPHY	T. M. Gayle Oak Ridge, Tenn.	8/12/69	3,461,410	662,207(60)	2- α POLE ELECTROMAGNET FOR FOCUSING CHARGED PARTICLES	R. A. Beth Ballport, N. Y.	8/12/69
3,460,917	710,728(60)	RECOVERY OF AMERICIUM FROM FLUORINIUM METAL USING MELTEN ARSENIDE SALTS	J. L. Long Livermore, Calif.	8/12/69	3,462,797	593,598(60)	FABRICATION OF ELONGATED PRODUCTS	J. J. Asbury Knoxville, Tenn.	8/26/69
3,460,918	697,314(60)	METHOD OF CHELORINATING METALS WITH CARBON TETRACHLORIDE AND CARBON DIOXIDE	H. A. Wilhelm R. M. Bergman Ames, Iowa	8/12/69	3,463,004	639,596(60)	VOLUMETRIC FLOW MEASUREMENT	R. Withnell Madison River, N. Y.	8/26/69
3,461,005	665,688(60)	P-CONTACT FOR COMPENSATED P-GERMANIUM CRYSTAL	M. A. Jamini Brookhaven, N. Y.	8/12/69	3,463,619	744,353(60)	SOLVENT EXTRACTION PROCESS FOR PURIFYING AMERICIUM AND CURIUM	G. L. Ritter L. A. Bray Richland, Wash.	8/26/69
3,461,076	764,958(60)	PROCESS FOR PREPARING FLUORINE AQUASOLS	M. H. Lloyd Z. G. Haire Oak Ridge, Tenn.	8/12/69	3,463,634	751,339(60)	CARBON REDUCTION PROCESS	H. A. Wilhelm J. E. McClusky Ames, Iowa	8/26/69
3,461,237	618,294(60)	METHOD OF ENCODING BINARY DIGITAL DATA	F. O. Salter Glen Ellyn, Ill.	8/12/69	3,463,635	679,668(60)	RECOVERY OF MERCURY FROM NUCLEAR FUEL REPROCESSING WASTES	D. W. Rhodes M. V. Wilding Idaho Falls, Idaho	8/26/69
3,461,286	731,521(60)	METHOD AND APPARATUS FOR MEASURING THE VOID FRACTION OF HETEROGENEOUS FLUIDS	C. N. Jackson, Jr. V. C. Spear Richland, Wash.	8/12/69	3,463,703	747,320(60)	FUEL PIP SPACERS	G. J. Crandall Northport, Wash.	8/26/69
3,461,288	536,158(60)	CHEMICAL DOSIMETER	G. Oster New York, N. Y.	8/12/69	3,463,738	725,890(60)	CONVERSION AND CONTAINMENT OF RADIOACTIVE ORGANIC LIQUIDS INTO SOLID FORM	C. L. Fitzgerald H. V. Goodbee Oak Ridge, Tenn. K. E. McCorkle, Jr. Fossil, Tenn.	8/26/69

3,463,739	734,198(60)	METHOD FOR RECOVERING POLONIUM-210 FROM BISMUTH	W. W. Schulz C. F. Schiefelbein Richland, Wash. L. E. Evans Kennewick, Wash.	8/26/69	3,466,554	623,190(60)	ACCELERATOR APERTURES AND METHOD OF SHAPING CAVITY FIELDS	S. T. Giordano Port Jefferson, N. Y.	9/3/69
3,464,013	612,292(60)	PEAK CURRENT METER	J. A. Biggerstaff Oak Ridge, Tenn. E. Butt Knoxville, Tenn.	8/26/69	3,466,590	697,508(60)	CROWDING DEVICE IN AN ELECTRICAL CONNECTOR	R. T. Sylvester Albuquerque, N. Mex.	9/3/69
3,464,889	679,828(60)	HEAT ACTIVATED CONTROL ROD UTILIZING A CALCIUM- POTASSIUM MIXTURE	G. F. Erickson Los Alamos, N. Mex.	9/2/69	3,468,169	701,008(60)	QUICK RELEASE COUPLING	E. F. Welch Kansas City, Mo.	9/23/69
3,465,431	629,826(60)	METHOD FOR MAKING BASEBALL SEAM MAGNETIC COILS	C. D. Hemming Livermore, Calif.	9/9/69	3,468,757	721,738(60)	FUEL SUBASSEMBLY FOR A LIQUID-METAL-COOLED, FAST REFLEX NUCLEAR REACTOR	L. M. Finch A. J. Anthony Pasco, Wash.	9/23/69
3,465,587	686,002(60)	DIODE SENSORS FOR LIQUID LEVEL DETECTION	V. B. Pierce Los Alamos, Calif.	9/9/69	3,469,254	505,764(60)	ANALOG-TO-DIGITAL CONVERTER	H. E. Goosey Albion, S. C. E. R. Brady Sierra Madre, Calif.	9/23/69
3,465,972	638,701(60)	DEVICE FOR CONDUCTING CUSHING AND SCREENING OPERATION SIMULTANEOUSLY	Z. L. Ardary Oak Ridge, Tenn.	9/9/69	3,469,936	690,109(60)	BROMINE PENTAFLUORIDE DISPOSAL	A. A. Chilianakas J. E. Kincinas Chicago, Ill.	9/30/69
3,466,137	642,290(60)	METHOD OF REMOVING RADIO- ISOTOPES FROM A GASBOSS MEDIUM	W. T. Ward R. E. Adams Oak Ridge, Tenn.	9/9/69	3,470,372	523,002(60)	FOG DENSITY MEASUREMENT BY X-RAY SCATTERING	J. G. Bayly Deep River, Ontario, Canada	9/30/69
3,466,203	634,795(60)	METHOD OF PRODUCING PURIFIED REFRACTORY METAL AND ALLOY POWDERS	C. O. Tarr L. V. Owen Cincinnati, O.	9/9/69	3,470,460	625,920(60)	STITCHED REFERENCE WIRE MAGNETIC PICKUP ALIGNMENT SYSTEM	W. E. H. Famofsky Los Altos Hills, Calif. W. F. Merriball San Carlos, Calif.	9/30/69
3,466,227	669,957(60)	ELAST SHIELD FOR NUCLEAR REACTOR	L. M. Finch Pasco, Wash.	9/9/69	3,470,462	402,578(60)	LOW VOLT MEASUREMENT SYSTEM WITH SLIDING LOAD AND PROBE	B. O. Weinschel Bethesda, Md.	9/30/69
3,466,361	722,208(60)	TECHNETIUM-99m LABELED CHELATES	P. Richards Seyport, N. Y. J. Baronsky Stony Brook, N. Y.	9/9/69	3,470,503	705,630(60)	MULTI-CONTACT SELECTOR SWITCH FOR HIGH CURRENTS	W. L. Dexter Orinda, Calif.	9/30/69
3,466,445	674,068(60)	CONTAINER FOR RADIOACTIVE FUEL ELEMENT	A. P. Schlies Albuquerque, N. Mex.	9/9/69					
3,466,499	626,674(60)	CANCELLATION OF EXTERNAL MAGNETIC FIELDS BY INNER AND OUTER CYLINDRICAL CURRENT SHEETS	E. A. Beth Bellport, N. Y.	9/9/69					

PATENT NO.	SEE. NO.	INVENTION	INVENTORS	DATE	NO. 4	3,473,029	614,783(60)	RADIATION FLDG FOR A PARTICLE ACCELERATOR BEAM TUBE	G. W. Parker Downers Grove, Ill.	10/14/69
3,470,902	620,211(60)	LIQUID FLOW CONTROL DEVICE	J. R. Backman Mount Juliet, Tenn.	10/7/69	3,473,897	745,837(60)	METHOD FOR SEPARATING URANIUM AND PROTACTINIUM FROM SPENT NUCLEAR FUELS	J. H. Shaffer V. R. Ottens Oak Ridge, Tenn.	10/21/69	
3,471,238	591,655(60)	INTERFEROMETRIC METHOD AND APPARATUS	R. S. Evans Livermore, Calif.	10/7/69	3,474,007	594,318(60)	SALT MIXTURES CONTAINING BARIUM FLUORIDE	D. H. Hoolton Knoxville, Tenn.	10/21/69	
3,471,314	601,826(60)	ELECTROLYTIC CARBON COATING PROCESS	R. L. Beatty Oak Ridge, Tenn.	10/7/69	3,474,022	668,311(60)	METHYLSILICON OXIDE FILM RESISTOR AND THE METHOD OF MAKING SAME	J. C. Hogan Cincinnati, O.	10/21/69	
3,471,414	787,821(60)	ASTABLE NEUTRON SHIELD	D. V. Kiplinger Concord, Tenn.	10/7/69	3,474,671	712,974(60)	ALARM SYSTEM FOR USE IN AIR	H. D. Culpepper V. O. Conroy Oak Ridge, Tenn.	10/21/69	
3,471,668	683,375(60)	ROLLER-BAND DEVICES	K. T. Falar Pocahontas, Idaho	10/7/69	3,475,309	648,544(60)	DEVICE FOR MEASURING THE TEMPERATURE OF A BODY UTILIZING THE ENHANCED ENERGY RADIATION TECHNIQUE	W. J. Byron Idaho Falls, Idaho	10/28/69	
3,471,783	620,212(60)	REFLECTIVE ATTENUATION AND DISPLAY OF PULSE SIGNAL BY MEANS OF AN ALUMINUM LITHIUM TRANSMISSION IN A TRANSMISSION LINE	D. F. Wilkes Albuquerque, N. Mex.	10/7/69	3,475,620	694,545(60)	METHOD OF MAKING PARAMAGNETIC NICKEL FERRITE THIN FILMS	E. J. Brook Los Angeles, Calif.	10/28/69	
3,471,826	540,092(60)	ELECTRICAL CONNECTOR FOR USE IN LIQUID METAL	R. J. Thomas Oakland, Calif.	10/7/69	3,475,698	716,761(60)	HEAVY CURRENT ARCING SWITCH	J. G. Murray Cranbury, N. J.	10/28/69	
3,472,633	749,724(60)	LIQUID-LIQUID REMOVAL OF PROTACTINIUM FROM SPENT NUCLEAR FUELS	E. H. Hooker Hoyerville, Ill.	10/7/69	3,475,808	623,181(60)	TRANSISTOR OSCILLATOR HAVING INTERCHANGABLE REACTIVE NETWORKS	E. D. Simon G. Brommer Trenton, N. J.	11/4/69	
3,472,677	538,923(60)	METHOD FOR APPLYING LOW DENSITY CARBON COATINGS	L. E. McNeese M. E. Whitley Oak Ridge, Tenn.	10/14/69	3,475,825	776,301(60)	METHOD OF CHANGING GLOVES IN A CONTROLLED ENVIRONMENT	J. B. Nee Albuquerque, N. Mex.	11/4/69	
			J. S. Watson Knoxville, Tenn.	10/14/69			APPARATUS FOR CHECKING DISTORTION OF A REACTOR FUEL ELEMENT	J. W. Woolsey Los Alamos, N. Mex.	11/4/69	
			H. Beutler Oak Ridge, Tenn.					K. O. Creek Richland, Wash.		
			M. C. Payne Cincinnati, O.					D. W. Leiby Cincinnati, O.		

3,482,949	736,033(60)	NEPTUNIUM SEPARATION FROM URANIUM	LaVerne E. Trevorow Glen Ellyn, Ill. 12/9/69 T. J. Garding Downers Grove, Ill. M. J. Steindler Park Forest, Ill.	3,484,770	577,117(60)	MALFUNCTION ALARM ASSOCIATOR	P. R. Cheeseman Princeton, N. J.	12/16/69
3,483,081	282,181(60)	STABILITY IMPROVEMENT FOR NUCLEAR REACTOR AUTOMATIC CONTROL SYSTEM	D. W. Sparks LaGrange, Ill. J. H. Tessier Ingleside, Ill.	3,484,806	710,810(60)	HYDROSTATIC EXTENSION APPARATUS	E. L. Huddleston Knoxville, Tenn.	12/16/69
3,483,211	640,446(60)	3-FUNCTIONING-1,2,4-TRIADOLE AND ITS PREPARATION	H. D. Cobern Los Alamos, N. Mex.	3,484,867	726,006(60)	TEMPERALLY STABILIZED CLASS A OR CLASS B COMPLEMENTARY TRANSISTOR PUSH-PULL AMPLIFIER	G. L. Babcock Menlo Park, Calif.	12/16/69
3,483,377	680,428(60)	POSITION-SENSITIVE RADITION DETECTOR	C. J. Borowski H. K. Kopp Oak Ridge, Tenn.	3,485,159	644,465(60)	HIGH-SPEED FRAMING CAMERA SYSTEM	G. H. McCall Princeton, N. J.	12/23/69
3,483,913	625,919(60)	METHOD OF MOLTEN METAL SEPARATION	D. E. Crovesner Perr Ridge, Ill. W. E. Miller Naperville, Ill.	3,485,177	725,374(60)	CENTRIFUGAL PUMP HAVING A SHAFTLESS IMPELLER	H. S. Clay Palo Alto, Calif.	12/23/69
3,483,960	612,291(60)	COLD TRAP FILTER	J. T. Cochran San Jose, Calif. G. D. Collins Los Altos, Calif.	3,485,360	660,892(60)	PARTICLE SEPARATOR	H. P. Deinken Berkeley, Calif. R. L. Bell Los Alamos, N. Mex. J. Hill Espenolis, N. Mex.	12/23/69
3,484,391	542,697(60)	FRENOLIC FOAM COMPOSITION	S. J. Wheatley Clinton, Tenn. D. B. Raies Kingsport, Tenn.	3,485,716	679,826(60)	METHOD AND APPARATUS FOR INDUCING AND TRAPPING CHARGED PARTICLES IN A MAGNETIC FIELD	S. E. Bodnar Berkeley, Calif.	12/23/69
3,484,610	761,470(60)	STIMULATED ELECTRON EMISSION DOSIMETERS	E. H. Becker Oak Ridge, Tenn.	3,485,757	413,283(60)	THERMOELECTRIC COMPOSITION COMPRISING DOPED BISMUTH TELLURIDE SILICON AND BUBBLE	S. S. Shapiro Trenton, N. J.	12/23/69
3,484,689	597,809(60)	ANALYSIS OF NONREPETITIVE PULSE WAVEFORMS BY SELECTION AND STORAGE OF PULSE INCREMENTS	Q. A. Karns Orinda, Calif.	3,486,094	591,656(60)	CIRCUITRY FOR OBTAINING PRECISELY CONTROLLABLE MOTION IN A MOVING COIL ACTUATOR	E. Zene Richmond, Calif.	12/23/69
3,484,703	593,599(60)	PULSE HEIGHT COMPENSATION IN TIME TO AMPLITUDE CONVERSION	P. A. Thieberger Shirley, N. Y.	3,486,146	669,953(60)	SUPERCONDUCTOR MICROWAVE METHOD	J. E. C. Williams Cambridge, Mass.	12/23/69
				3,486,685	628,167(60)	STEELLESS STEEL ALLOY WITH LOW PHOSPHORUS CONTENT	J. S. Armiijo Sewark, Calif.	12/30/69
				3,486,975	694,537(60)	FLUIDIC ACTUATED CONTROL ROD DRIVE SYSTEM	C. C. Ripley San Jose, Calif.	12/30/69

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June 30, 1970			
PATENT NO.	SER. NO.	INVENTORS	
		DATE	
3,486,977	712,565(60)	J. J. Geist Schagen, N. Hol- land, Netherlands	12/30/69
		NEUTRONIC REACTOR WITH NATURAL CIRCULATION OF FLUID FUEL	
3,486,979	586,604(60)	C. Wohlbere Los Alamos, N. Mex.	12/30/69
		METHOD OF PREVENTING FLU- TUATION LEAKAGE	
3,487,205	656,997(60)	W. G. Downing, Jr. Livermore, Calif.	12/30/69
		CONTROLLED FIELD LIGHT- PROBE ELECTRONIC ANALOG COMPUTER AND FUNCTION GENERATOR	
3,487,265	690,290(60)	K. Aaland Livermore, Calif.	12/30/69
		PROTECTIVE CIRCUIT HAVING EXTENDED RANGE FUSE CHARACTER- ISTICS	
3,487,342	703,654(60)	N. J. Gibson Berkeley, Calif. H. M. Graham Livermore, Calif.	12/30/69
		MAGNETIC REPULSION ACTUATED SWITCH	
		J. S. Noon Mer. City, Mex. T. Vermaelen Berkeley, Calif.	1/6/70
		JET-PULSED LIQUID-LIQUID EXTRACTION COLUMN	
		H. Shimotaka Hinsdale, Ill. C. E. Johnson Elk Grove, Ill. M. S. Foster Naperville, Ill. E. J. Cairns Downers Grove, Ill.	1/6/70
		ELECTROOSCILLATIONAL CELL	
		V. F. Zackay Berkeley, Calif. E. R. Parker Oakland, Calif.	1/6/70
		TREATMENT OF STEEL	
		H. Beutler Oak Ridge, Tenn. J. M. Robbins Oak Ridge, Tenn.	1/6/70
		PROCESS FOR CONSOLIDAT- ING NUCLEAR FUEL PARTICLES	
		C. A. Tobias Walnut Creek, Calif.	1/6/70
		ION MICROSCOPE THE IMAGE OF WHICH REPRESENTS THE INTENSITY OF SECONDARY RAD- IATION AS A FUNCTION OF THE POSITION OF THE PRIMARY IONS CAUSING THE RADIATION	
		G. S. Raynor Manorville, N. Y.	1/13/70
		AMBIENT FLUID SAMPLER	
		K. E. Schmidt Downers Grove, Ill.	1/13/70
		CALORIMETRIC METHOD OF MEASURING RADIATION BY SOLUTION CONDUCTIVITY CHANGE	
		R. H. Kernohan Oak Ridge, Tenn. S. T. Sekula Oak Ridge, Tenn.	1/13/70
		DOSEMETER FOR PERMANENTLY RECORDING THE EFFECTS OF AN INTEGRATED FAST NEUTRON DOSE	

3,490,438	645,372(60)	1/20/70	3,491,513	765,658(60)	1/27/70
REFUSION CHAMBER AND CALIBRATION THEREFOR	A. A. Berrett Chicago, Ill. A. R. Lavender Chicago, Ill. J. J. Stupka Chicago, Ill.	TELLURIUM HEXAFLUORIDE REMOVAL METHOD	D. R. Vissers Naperville, Ill. M. J. Steindler Forest, Ill. J. T. Boloss Downers Grove, Ill.		
3,490,681	755,718(60)	1/20/70	3,491,540	730,853(60)	1/27/70
URANIUM OXIDE FLOCCULATION WITH FLUORINE AND FLUORINE INTERCALATIONS	J. T. Boloss Downers Grove, Ill. D. R. Vissers Naperville, Ill. J. D. Gaber Western Springs, Ill. I. E. Knudson Murrysville, Pa.	METHOD OF STORING LIQUIDS UNDERGROUND	V. L. Lemmman Rockville, Md.		
3,491,003	652,655(60)	1/20/70	3,491,822	715,406(60)	1/27/70
METHOD OF SEPARATING POLONIUM FROM IRRADIATED BISMUTH	R. J. Baltisbarger Dayton, O.	SEA WATER DESALINATION	D. Ramaswami Hinsdale, Ill. A. A. Jocke Elenhurst, Ill.		
3,491,253	595,539(60)	1/20/70	3,492,030	761,471(60)	1/27/70
CURRENT INTEGRATOR	F. M. Glass Oak Ridge, Tenn.	BELLOWS LINER	C. V. Harrison Essex, Wash. E. A. Lund Richland, Wash.		
3,491,289	784,342(60)	1/20/70	3,492,160	716,436(60)	1/27/70
NON-CONTACT EDDY CURRENT INSTRUMENT	R. R. Petrini Livermore, Calif.	SELF REGENERATING STORAGE BATTERY	C. L. Silver Centerville, O.		
3,491,293	726,007(60)	1/20/70	3,492,217	654,036(60)	1/27/70
WIDE-RANGE RECORDING INSTRUMENT AN F.E.T. RESPONSIVE TO RAPID CHANGES IN MEASURED RESISTANCE VALUES	G. E. Seaborn, Jr. Oak Ridge, Tenn.	ELECTROLYTIC DISSOLVER	D. F. Keeler Kartlesville, Okla. W. B. Kerr Idaho Falls, Idaho W. G. Rounds Idaho Falls, Idaho		
3,491,294	588,268(60)	1/20/70	3,492,238	599,675(60)	1/27/70
PULSE ENERGY QUANTIZER	R. I. Little Barrington, Ill. B. G. Nelson Idaho Falls, Idaho F. L. Fetree Hamden, Conn.	SODIUM PHOSPHATE-CITRIC ACID-EDTA CLEANING SOLUTIONS FOR SCALED FERROUS METALS	C. Wohlberg Hempfield, Township, Pa.		
3,491,296	624,670(60)	1/20/70	3,492,743	710,769(60)	2/3/70
PRECISE PEAK VOLTAGE DETECTION OF EQUAL REPETITIVE PULSES BY DIVIDING CHARGING OF A CAPACITOR	H. Fishman Saratoga, Calif.	METHOD OF MEASURING OXYGEN CONCENTRATION OF LIQUID SODIUM	L. Newman Smithtown, N. Y.		
3,491,318	753,189(60)	1/20/70	3,492,792	811,903(60)	2/3/70
BASEBALL SEAM MACHET WITH VARIABLE MAGNETIC FIELD	C. D. Henning Livermore, Calif. A. K. Chargin San Jose, Calif.	CONTROLLING CESTUM RESERVOIR TEMPERATURE FOR THERMOCOUPLERS	S. Untermeyer II Portola Valley, Calif.		

3,494,743	679,827(60)	2/10/70	J. Baughman Albuquerque, N. Mex. J. A. Corll Albuquerque, N. Mex.	VAPOR PHASE REACTOR FOR PRODUCING HALOGENOFORMS COMPOUNDS	3,500,003	593,600(60)	3/10/70	J. L. Arrowood Oak Ridge, Tenn.	STATUTE COUNTING CIRCUIT FOR A DIGITAL CONTROL SYS- TEM
3,494,805	625,908(60)	2/10/70	J. Y. H. Wang Lockport, Ill.	METHOD OF INHIBITING THE CORROSION OF TANTALUM BY LIQUID LITHIUM AT HIGH TEMPERATURES	3,500,077	691,861(60)	3/10/70	R. F. Post Walnut Creek, Calif.	METHOD AND APPARATUS FOR ACCELERATING LOSS OUT OF A HOT PLASMA REGION
3,495,125	710,542(60)	2/10/70	R. F. Kwoetz	QUARTER-WAVE TRANSMISSION LINE RADIO FREQUENCY VOLT- AGE STEP-UP TRANSFORMER	3,501,126	681,684(60)	3/17/70	J. Katich Boulder, Colo. B. J. Williams Arvada, Colo.	HIGH CONDUCTANCE HIGH PRESSURE VALVE
3,495,975	774,501(60)	2/17/70	V. R. Grimes Oakridge, Tenn. D. H. Holton Knoxville, Tenn. J. H. Shaffer Oak Ridge, Tenn.	EXTRACTION OF PROACTINIUM FROM MELTEN SALT MIXTURES INTO BISPHENYL-TIN SOLUTION	3,501,340	679,639(60)	3/17/70	M. Burton Mishawaka, Ind.	METHOD OF CLEANING GLASS AND QUARTZ SURFACES
3,496,017	546,489(60)	2/17/70	R. D. Need Richland, Wash.	METHOD AND COMPOSITION FOR DECONTAMINATION OF STAINLESS STEEL SURFACES	3,501,377	797,744(60)	3/17/70	J. H. Gerner San Jose, Calif.	PRESSURE BALANCED FUEL INJECTOR
3,496,030	601,823(60)	2/17/70	R. M. Powers Stonewille, N. Y.	ANTI-SEIZING SURFACES	3,501,634	710,813(60)	3/17/70	V. C. Boesch Richland, Wash.	WHOLE-BODY RADIATION COUNTER WITH MEANS FOR CONTROLLING THE SCANNING VELOCITY
3,496,463	709,625(60)	2/17/70	L. H. Johnston Moscow, Idaho W. B. Pierce Los Altos, Calif.	POSITION MONITORING SYSTEM FOR A PULSE-MODULATED CHARGED PARTICLE BEAM	3,501,643	766,416(60)	3/17/70	M. Kowaguti Upton, N. Y.	FLYING IMAGE DIGITIZER UTILIZING MEANS FOR SHEEP- ING THE FOCUSED IMAGE PAST A LINEAR ARRAY OF PHOTO-DE- TECTORS AND GRATING MEANS FOR LOCATING RECORDED DATA IN SPACE AND TIME
3,497,332	834,215(60)	2/24/70	F. G. Donnelly Oak Ridge, Tenn. J. M. Jones Oak Ridge, Tenn.	BRAZING ALLOY FOR JOINING GRAPHITE TO GRAPHITE AND TO REFRACTORY METALS	3,501,708	672,651(60)	3/17/70	R. L. Chase Blue Point, N. Y. L. R. Poulo Watertown, Mass.	HIGH COUNTING-RATE BASE LINE RESTORATION
3,498,852	805,864(60)	3/3/70	M. A. Jamini Keyfield Heights, O.	ACCELERATING LITHIUM DRIFT- IN GERMANIUM	3,501,734	666,564(60)	3/17/70	E. A. Knapp Los Alamos, N. Mex. J. H. Potter Los Alamos, N. Mex. D. A. Swenson Los Alamos, N. Mex.	METHOD AND DEVICE FOR STABILIZATION OF THE FIELD DISTRIBUTION IN DRIFT TUBE LDMC
3,499,704	668,307(60)	3/10/70	C. E. Lead Albuquerque, N. Mex. I. D. McKinney Albuquerque, N. Mex.	FERROELECTRIC CERAMIC ELEC- TRO-OPTICAL DEVICE	3,502,450	659,567(60)	3/24/70	H. E. McCoy Oak Ridge, Tenn. D. A. Cernusco Oak Ridge, Tenn.	COMPOSITE STRUCTURE WELDED WITH TUNGSTEN-CONTAINING NICKEL-BASE FILLER METAL

3,503,789	637,978(60)	3/31/70	3,506,225	667,638(60)	FUEL CASTING APPARATUS WITH COLLAPSIBLE CORE	4/14/70	H. E. Katz Berkeley, Calif. R. N. Egan Chatsworth, Calif.
3,503,893	609,719(60)	3/31/70	3,506,847	679,829(60)	LOGARITHMIC CONVERTER	4/14/70	O. E. Schow, III Oak Ridge, Tenn.
3,504,044	758,381(60)	3/31/70	3,506,885	656,956(60)	STABILIZATION OF CHARGED PARTICLE BEAMS	4/14/70	R. J. Briggs Lexington, Mass.
3,504,341	610,700(60)	3/31/70	3,508,414	710,663(60)	METHOD OF STORING HYDROGEN	4/28/70	R. H. Wiswall, Jr. Brookhaven, N. Y. J. J. Meilly, Jr. Bellport, N. Y.
3,504,494	771,218(60)	4/7/70	3,508,799	746,576(60)	GAS BEARINGS	4/28/70	C. M. Gordon Duanville, Calif.
3,505,064	500,529(60)	4/7/70	3,508,862	658,989(60)	PROCESS FOR SEPARATION OF NICKEL AND TANTALUM	4/28/70	F. D. Stevenson Ames, Iowa J. E. Conway Ames, Iowa
3,505,095	628,790(60)	4/7/70	3,509,758	760,050(60)	GAS LEAK RATE MONITOR	5/5/70	J. B. Newman Idaho Falls, Idaho
3,505,138	12,947(60)	4/7/70	3,510,102	751,103(60)	VALVE ASSEMBLY	5/5/70	E. F. Sundailla Chicago, Ill.
3,505,170	720,198(60)	4/7/70	3,510,270	661,167(60)	REGENERATION OF LITHIUM ALUMINATE TARGET ELEMENTS	5/5/70	R. Cooperstein Kennebec, Wash.
3,505,523	749,725(60)	4/7/70	3,510,434	735,141(60)	METHOD OF PREPARING A NITRIDE NUCLEAR REACTOR FUEL	5/5/70	E. T. Weber Kennebec, Wash. W. O. Greenhaigh Richland, Wash.
3,505,538	634,794(60)	4/7/70	3,512,852	805,161(60)	STABILIZED LEVITATION OF PROSTETIC ELEMENTS	5/19/70	R. N. Larsen Boughton, Mich. G. C. North Santa Ana, Calif.
					METHOD OF MAKING A DYNAMIC SOLUBLE-SELECTING MEMBRANE		J. S. Johnson Oak Ridge, Tenn. K. A. Kruus Oak Ridge, Tenn.
					PROCESS FOR PRODUCING CHEMILUMINESCENCE BY REDUCTION OF METAL OXALATES		D. M. Hercules Arlington, Mass. F. E. Lytle Cambridge, Mass.
					PROCESS FOR SYNTHESIZING TERPENE		V. L. Hargreaves Marburg, Tenn. W. E. Smith Oak Ridge, Tenn.
					JEFF REGULIER COMPARTOR		R. L. Snyder New Smyrna Beach, Fla.
					INTERMITTENT POWER SOURCE		W. E. Hinesha Bellport, N. Y.
					HALFUM ALLOY		J. W. Beck Export, Pa. J. F. Eigon New Kensington, Pa.
					PRE-HEATING TREATMENT FOR HARDENING STEELS		G. S. Pettit Oak Ridge, Tenn. R. R. Wright Oak Ridge, Tenn.
					METHOD OF JOINING BERYLLIA TO ANOTHER CERAMIC BODY		J. M. Heding Canoga Park, Calif.
					FUEL SUBASSEMBLY FOR A LIQUID-METAL-COOLED FAST REACTOR		M. T. Jakob Richland, Wash. C. D. Flowers Richland, Wash.
					PERSONNEL RADON DOSEMETER		L. H. Becker Oak Ridge, Tenn.
					SUPERCONDUCTOR GATING OR SWITCHING DEVICES		J. L. Artley Durham, N. C.

3, 512, 864	668, 306(60)	5/19/70	806, 648(60)	3, 514, 763	5/26/70	TOTALING MEMORY FOR MULTICHANNEL ANALYZERS WITH INCREASED CAPACITY	H. A. Betz Oak Ridge, Tenn. Walter R. Burrows Oak Ridge, Tenn. T. A. Lewis Knoxville, Tenn. J. W. Reynolds Oak Ridge, Tenn. C. G. Slaughter Oak Ridge, Tenn. J. G. Sullivan Knoxville, Tenn.
3, 512, 891	722, 446(60)	5/19/70	768, 629(60)	3, 515, 309	5/19/70	SENSITIVE NURST DIAPHRAGM FOR RELIEF OF OVERPRESSURES	K. M. Welch Palo Alto, Calif.
3, 513, 101	724, 261(60)	5/19/70	685, 178(60)	3, 515, 486	5/19/70	OPTICAL RANGING DEVICE	R. H. Vonderbrugg Downers Grove, Ill. J. H. Doedle Shorewood, Minn. C. W. Lindemeyer Aurora, Ill.
3, 513, 229	753, 049(60)	5/26/70	671, 883(60)	3, 515, 545	5/26/70	REFRACTORY AND CERAMIC BRAZING ALLOYS	D. A. Casonico Oak Ridge, Tenn. L. G. Bryson Fowell, Tenn. C. M. Slaughter Oak Ridge, Tenn.
3, 513, 351	740, 200(60)	5/26/70	637, 877(60)	3, 515, 674	5/26/70	PROCESS FOR PRODUCING CHEMILUMINESCENCE BY REDUCTION OF THE 1, 6 DIMETHYLPYRENE RADICAL CATION	D. M. Hercules Arlington, Mass. F. E. Lytle Cambridge, Mass.
3, 513, 699	681, 635(60)	5/26/70	810, 281(60)	3, 516, 263	5/26/70	METHOD OF STORING HYDROGEN	R. H. Viswall, Jr. Brookhaven, N. Y. J. J. Bailly, Jr. Bellport, N. Y.
3, 513, 704	827, 843(60)	5/26/70	609, 718(60)	3, 516, 878	5/26/70	ULTRA-HIGH STRENGTH PRESSURE VESSEL	D. J. Sandstrom Los Alamos, N. Mex. D. A. Law Los Alamos, N. Mex.
3, 514, 218	786, 559(60)	5/26/70			5/26/70		
3, 514, 344	672, 650(60)	5/26/70			5/26/70		
3, 514, 373	602, 133(60)	5/26/70			5/26/70		
3, 514, 613	784, 719(60)	5/26/70			5/26/70		
3, 514, 730	716, 496(60)	5/26/70			5/26/70		

3,517,092	721,144(60)	PROCESS FOR PREPARING HIGH DENSITY ISOTROPIC GRAPHITE STRUCTURES	G. E. Peterson Andersonville, Tenn.	6/23/70	3,518,427	734,688(60)	A UNIVERSAL PLANE X-RAY RESONATOR	R. M. J. Cotterill Downers Grove, Ill.	6/30/70
3,517,193	756,268(60)	PHASE-SENSITIVE PULSED TIME-OF-FLIGHT NEUTRON SPECTROMETER	H. A. Hook, Jr. Oak Ridge, Tenn. M. K. Wilkinson Oak Ridge, Tenn. G. W. Clark Oak Ridge, Tenn. D. D. Bates Oak Ridge, Tenn.	6/23/70	3,518,496	700,234(60)	SUPERCONDUCTOR MAGNETIC ENERGY STORAGE SYSTEM	D. G. Schweitzer Bayport, N. Y.	6/30/70
3,517,194	776,220(60)	POSITION-SENSITIVE RADIATION DETECTOR	C. J. Rorkowski Oak Ridge, Tenn. M. K. Kopp Oak Ridge, Tenn.	6/23/70					
3,517,195	742,090(60)	HIGH INTENSITY X-RAY TUBE	G. A. L. svitt Livermore, Calif.	6/23/70					
3,517,265	721,757(60)	DEBONDING AND FAULT PROTECTION CIRCUIT FOR A LIQUID-TYPE PULSER	R. W. Bradford Memlo Park, Calif.	6/23/70					
3,517,322	699,575(60)	PHASE DETECTOR	C. M. Lay Oak Ridge, Tenn.	6/23/70					
3,517,431	635,961(60)	METHOD OF MAKING COMBINATION FUEL RODS	J. E. Ayer Joliet, Ill.	6/30/70					
3,517,432	726,244(60)	DIFFUSION BONDING OF CERAMICS	D. J. Sandstrom Los Alamos, N. Mex.	6/30/70					
3,518,063	672,649(60)	PURIFICATION OF BENTHILUM BY LIQUID-LIQUID EXTRACTION	F. C. Sealey Oak Ridge, Tenn. D. J. Cross, Jr.	6/30/70					
3,518,163	718,685(60)	SODIUM-COOLED FAST-FLUX TEST REACTOR	D. R. deBoisblanc Idaho Falls, Idaho	6/30/70					
3,518,414	643,324(60)	DIGITAL FILTER FOR SUPPRESSING NONSTATISTICAL NOISE BURSTS IN DIGITAL AVERAGING	L. S. Goodman Downers Grove, Ill. F. O. Salter Glen Ellyn, Ill.	6/30/70					

VOL. IX		PATENTS FOR LICENSING		No. 2		ROTARY ENGINE COMPENSATING ECCENTRIC	
PATENT NO.	SER. NO.	INVENTION	INVENTORS	DATE			
September 29, 1970							
3,518,861	747,904(60)	METHOD OF MAKING AN OMEGA SHAPED ANNULUS	L. E. Genesa Mekens, Ill. E. Kleb Downers Grove, Ill.	7/7/70	3,520,644	740,616(60)	R. W. Kalkbrenner Irvin, Pa.
3,519,328	684,135(60)	SHORT DURATION OPTICAL SHUTTER	D. D. Grossman Cambridge, Mass.	7/7/70	3,520,679	799,911(60)	E. L. Christensen Wm. J. Marman J. C. Carmichael Los Alamos, N. Mex.
3,519,374	740,275(60)	PARTIAL ADMISSION VALVE MECHANISM FOR ROTARY ENGINE	F. O. Tauson Bradford Woods, Pa.	7/7/70	3,520,734	771,511(60)	M. E. Scheve HEATED THERMOELECTRIC GENERATOR PROVIDING FOR DIRECT RE-ENTRY OF THE HEAT SOURCE MEANS FROM SPACE
3,519,385	712,377(60)	METHOD FOR SEPARATING MOLYBDENUM FROM TECHNETIUM	E. C. Hurst Fowell, Tenn. H. B. Hupf Oak Ridge, Tenn.	7/7/70	3,520,919	711,529(60)	p-Nitrophenyl-p'-Cassidinobenzoate HCl T. Chase, Jr. Center Moriches, N. Y. E. H. Slav Shoreham, N. Y.
3,519,400	612,297(60)	METHOD OF CENTRIFUGAL SEPARATION AND RECOVERY OF CHEMICAL SPECIES UTILIZING A LIQUID MEDIUM	H. G. Anderson Oak Ridge, Tenn.	7/7/70	3,521,089	734,699(60)	PIEZOELECTRIC FREETHROUGH DEVICE O. M. Stoutzer Albuquerque, N. Mex.
3,519,490	685,059(60)	HIGH TEMPERATURE THERMAL CONTROL FOIL SHUTTER	A. R. Lieberman Baltimore, Md.	7/7/70	3,521,165	761,060(60)	METER FOR MEASURING RMS VALUES OF PULSED CURRENT SIGNALS A. T. Visser Downers Grove, Ill.
3,519,822	660,883(60)	TIME OF FLIGHT TO KINETIC ENERGY CONVERTER FOR A NUCLEAR PARTICLE SPECTROMETER	G. A. Giesege Ames, Iowa	7/7/70	3,521,207	763,160(60)	POWER SUPPLY FOR SUPER CONDUCTING MAGNET R. B. Britton W. B. Sampson Bellport, N. Y.
3,520,356	581,328(60)	VAPOUR GENERATOR FOR USE IN A NUCLEAR REACTOR	F. R. Bell R. H. Quade San Diego, Calif.	7/14/70	3,521,239	698,338(60)	TOTALIZING MEMORY FOR MULTICHANNEL ANALYZERS WITH INCREASED CAPACITY W. R. Burrus Oak Ridge, Tenn.
3,520,482	758,936(60)	PREPARATION AND FURIFICATION OF CRYSTALLINE BORON	M. J. Savitski Dayton, Ohio	7/14/70	3,521,959	664,225(60)	METHOD FOR DIRECT SPECTROGRAPHIC ANALYSIS OF MOLYBDENUM METALS V. A. Fassel G. W. Dickinson Ames, Iowa
3,520,621	639,598(60)	REMOTE LEVELLING MEASUREMENT	R. A. Biesch Lisle, Ill. C. G. Forter New York, N. Y. O. S. Reading Bellport, N. Y.	7/14/70	3,522,885	722,445(60)	PARALLEL FLOW HEMODIALYZER A. R. Lavender Chicago, Ill. F. W. Hartley Naperville, Ill.
3,520,640	577,316(60)	FLUID CIRCULATOR	J. S. Yampolsky F. R. Bell P. Fortescue San Diego, Calif.	7/14/70	3,523,677	786,558(60)	FAST ACTING ELECTROMAGNETIC GAS VALVE G. C. North Santa Ana, Calif.
					3,524,056	695,977(60)	DOUBLE FOCUSING SPECTROGRAPH EMPLOYING A ROTABLE QUADRUPOLE LENS TO MINIMIZE DOPLER BROADENING H. A. Engo Winchester, Mass. D. L. Smith Vero Beach, Fla.

3,524,097	722,753(60)	HIGH POWER NITROGEN TRY- BATION	I. Mancebo Livermore, Calif.	8/11/70	3,527,669	730,466(60)	MOLTEN-SALT-FUELED NUCLEAR REACTOR AND FUEL CELL FOR USE THEREIN	E. S. Bettis Knoxville, Tenn.	9/8/70
3,524,130	758,879(60)	NON-CONTACT SPARK-GAP CURRENT TOOL-SPLITTING DEVICE	C. Amman Oak Ridge, Tenn.	8/11/70	3,527,873	787,419(60)	COMPOSITE SUPERCONDUCTING CABLE HAVING A POROUS MAT- RIX	H. Brechna Palo Alto, Calif. E. L. Garvin Los Altos Hills, Calif.	9/8/70
3,524,924	745,262(60)	BACKUP CONTROL ROD SYSTEM	J. R. Germer San Jose, Calif.	8/18/70	3,527,944	766,433(60)	MULTIPLE SEMI-CONDUCTOR RADIATION DETECTORS WITH COMMON INTRINSIC REGION	H. W. Kramer Bellport, N. Y.	9/8/70
3,525,228	796,350(60)	NONBOLLING LIQUID TARGET FOR A HIGH-ENERGY PARTICLE BEAM	R. L. Anderson Palo Alto, Calif.	8/25/70	3,527,948	782,377(60)	COSMOT-HEMIUM ENERGY SOURCE	F. H. Rhines Gainesville, Fla. J. A. Donovan W. B. McDonell Aiken, S. C.	9/8/70
3,525,229	797,080(60)	ON-OFF INTERNAL SWITCH FOR A CRYOPUMP	B. S. Denby Brentwood, Calif.	8/25/70	3,527,977	733,846(60)	MOVING ELECTRONS AS AN ACID TO INITIATING REACTIONS IN THERMONUCLEAR DEVICES	A. E. Emark Kensington, Md.	9/8/70
3,525,286	793,042(60)	T-TRIAL CONTROL CHAMBER	G. M. Grover Los Alamos, N. Mex.	8/25/70	3,528,016	690,245(60)	CAPACITOR BLASTING FOR VARI- ABLE RESONANT CONTROL PULSE DELAYS	R. F. Koontz Menlo Park, Calif.	9/8/70
3,525,669	764,460(60)	INSULATED BOOTS FOR NUCLEAR REACTOR	J. H. Corner San Jose, Calif.	8/25/70	3,528,034	747,953(60)	ESTABLISHMENT OF RESONANT FREQUENCIES IN A PENNING- TYPE DISCHARGE	E. D. Shipley Knoxville, Tenn. O. C. Yonta Oak Ridge, Tenn.	9/8/70
3,525,670	784,343(60)	TWO-PHASE FLUID CONTROL SYSTEM	N. J. Brown Livermore, Calif.	8/25/70	3,529,046	738,418(60)	UTILIZING LITHIUM OXIDE AND FERRIC OXIDE AS SINTER- ING AID FOR HOT PRESSING BERYLLIUM OXIDE	R. Hendricks, Jr. Oak Ridge, Tenn.	9/15/70
3,525,953	681,199(60)	PLASMA TONING HEARS MERRIN THE RESONANT FREQUENCY OF A CAVITY RESONATOR TRACKS THE FREQUENCY OF AN INSTAB- LING CONTROL FREQUENCY	S. L. Halverson Chicago Hts., Ill.	8/25/70	3,529,234	690,252(60)	VAPOR QUALITY MEASURING DEVICE	E. D. Kern Casoga Park, Calif.	9/15/70
3,527,098	802,011(60)	GROOVED MELT WIRES	P. G. Salgado J. F. Torbert Los Alamos, N. Mex.	9/8/70	3,530,332	826,098(60)	MULTI-PERIODIC ACCELERAT- ING STRUCTURE	S. T. Giordano Port Jefferson, N. Y.	9/22/70
3,527,110	775,742(60)	MIRROR POSITIONER FOR A ED- TATING MIRROR CAMERA	B. T. Rogers, Jr. Embo, N. Mex.	9/8/70	3,531,182	758,958(60)	MULTISEGMENT FERROELECTRIC CERAMIC OPTICAL DEVICES	C. E. Land D. G. Schaefer Albuquerque, N. Mex.	9/29/70
3,527,243	816,238(60)	LIQUID LEVEL CONTROL	M. Montag Plainville, N. Y.	9/8/70	3,531,248	718,351(60)	FORMING GRAPHITE MATERIAL FROM FURFURYL ALCOHOL	H. Shenberg Los Alamos, N. Mex.	9/29/70
3,527,350	852,701(60)	APPARATUS FOR CONTINUOUS CHROMATOGRAPHY	E. J. Tuthill Belle Terre, N. Y. J. Fedalen Rios Point, N. Y.	9/8/70					
3,527,615	824,610(60)	THERMAL BATTERY HAVING PRO- TECTIVELY COATED CALCIUM ANODE ALLOY SHEETING	R. F. Clark E. A. Grothaus Albuquerque, N. Mex.	9/8/70					

3,535,494	679,782(60)	CURVE-FOLLOWING APPARATUS	J. D. Ceylor	10/20/70	3,538,434	645,580	METHOD FOR DETECTING ONE OF HEAVY WATER AND ORDINARY WATER IN THE PRESENCE OF THE OTHER OF HEAVY WATER AND ORDINARY WATER	D. P. Brown, G. F. Garlic and W. S. Porter	11/3/70
3,535,500	648,189(60)	BINARY RADIX CONVERTER	Michael J. C. Hu	10/20/70					
3,535,531	749,047(60)	HIGH-VOLUME AIRBORNE-PARTICLE LIGHT SCATTERLAGE DETECTOR SYSTEM HAVING RECTANGULARY SHAPED ELONGATED ZONE	William E. Neitzel	10/20/70	3,541,448	727,178(60)	DIGITAL TIME INTERVALOMETER WITH ANALOGUE VELOCITY TIMING	R. Nett	11/17/70
3,535,646	708,907(60)	LOW PASS FILTER CIRCUIT	Truman H. Quinn	10/20/70	3,541,762	808,120(60)	ANGULAR PACKED-BED FILTER	A. A. Jonke Devabakturni Ramaswami & N. M. Levitz	11/24/70
3,535,803	825,892(60)	DEPTH GAUGE PROBE ASSEMBLY	K. O. Creek and D. W. Leiby	10/27/70	3,541,855	781,438	ANEMOMETER FOR MEASURING HORIZONTAL WIND VELOCITIES	P. Freuren & R. L. Hart	11/24/70
3,536,106	756,265(60)	METHOD FOR MEASUREMENT AND TRANSFER OF SMALL FLUID VOLUMES	N. C. Anderson	10/27/70	3,542,525	801,390(60)	CYCLING ZONE ABSORPTION PROCESS	R. L. Pigford, B. Bal'ar III & D. E. Blum	11/24/70
3,536,420	811,904(60)	CONDENSATE PURIFIER FOR DIFFUSION PUMP	Claire E. Miner	10/27/70	3,542,995	829,955(60)	MEASUREMENT AND CONTROL OF FOCUS IN ELECTRON BEAM WELDING	R. A. Boone &	11/24/70
3,536,253	801,521(60)	ZONAL CENTRIFUGE	N. G. Anderson and C. E. Hunley	10/27/70	3,543,136	792,306(60)	HIGH VOLTAGE DIRECT CURRENT GENERATOR	H. A. Ege	11/24/70
3,536,544	392,073(48)	TRINITROTOLUENE EXPLOSIVE COMPOSITIONS CONTAINING A POLYCYCLIC AROMATIC HYDROCARBON	Otis K. Pennington, Harold J. Gyrting and Louis McDonald	10/27/70	3,543,147	717,262(60)	PHASE ANGLE MEASUREMENT SYSTEM FOR DETERMINING AND CONTROLLING THE RESONANCE OF THE RADIO FREQUENCY ACCELERATING CAVITIES FOR HIGH ENERGY CHARGED PARTICLE ACCELERATORS	V. J. Koverik	11/24/70
3,536,793	703,547(60)	METHOD OF MAKING POROUS METAL CARRIER AGGLOMERATES	R. E. Norman & R. H. Speas	10/27/70					
3,537,271	751,101(60)	LEVEL CONTROL FOR CRYOGENIC LIQUIDS	M. Montag	11/3/70					
3,537,424	703,596	RESIN IMPREGNATION OF CELLULAR MEMBERS	R. L. Sadler	11/3/70	3,543,171	803,904(60)	FERRITE BIAS REGULATOR FOR A SYNCHROTRON RESONATOR	B. H. Smith	11/24/70
3,537,966	680,351(60)	RADIATION TREATMENT OF MINE WASTE WATERS	M. Steinberg and J. Pruzansky	11/3/70	3,543,192	703,653(60)	CONSTANT-IMPEDANCE VARIABLE-DELAY TRANSMISSION LINE	E. M. Rowe & R. H. Hilden	11/24/70
3,537,988	703,521(60)	HYPERFILTRATION METHOD REMOVING ORGANIC SOLUTE FROM AQUEOUS SOLUTIONS	A. E. Marcinkovsky, J. S. Johnson, K. A. Kraus & J. R. Kuppert	11/3/70	3,543,286	819,290(60)	MULTI-GEOMETRIC PATTERN ELECTRIC GENERATOR	R. H. Stentz & A. W. Bauer	11/24/70

3,549,325	721,675(60)	DUAL TEMPERATURE ISOTOPE EXCHANGE PROCESS	D. F. Babcock	12/22/70	3,546,307	772,073(60)	PURIFICATION OF POLONIUM	E. E. Ellis & C. J. Kershner	12/1/70
3,549,489	769,655(60)	SYSTEM FOR DETECTING SODIUM ELEMENT BOLD-DOWN AND BOILING IN A REACTOR	F. R. Pluta	12/22/70	3,546,922	813,486(60)	IMPEDANCE MATCHING COUPLER SYSTEM FOR A VARIABLE RESISTIVE LOAD	E. A. McConnell	12/1/70
3,549,491	777,793(60)	NUCLEAR REACTOR FUEL ELEMENT BOLD-DOWN AND TIGHTING MECHANISM	M. L. Johnson	12/22/70	3,545,964	722,209(60)	COLD RECOVERY PROCESS	S. M. Hansen & D. F. Snooberger	12/8/70
3,549,492	823,888(60)	FLUID SUPPORTED CAPSULE HOLDER FOR HOMOGENEOUSLY IRRADIATING SAMPLES	E. Ricci T. H. Handley & M. G. Willey	12/22/70	3,546,012	716,592(60)	LITHIUM SULFATE ULTRASONIC TRANSDUCER	R. E. Dixon & W. J. Coleman	12/8/70
3,549,493	793,040(60)	FAST SODIUM-COOLED REACTOR CORE STRUCTURE	J. H. Germer	12/22/70	3,546,026	761,057(60)	FIBER STRENGTHENED THERMO-ELECTRIC MATERIAL	E. K. Boeschamp & J. E. Morenz	12/8/70
3,549,494	751,246(60)	FLOW MEASURING DEVICE FOR SODIUM-COOLED REACTORS	J. H. Germer	12/22/70	3,546,423	789,575(60)	WELD WIRE FEED CONTROL	J. A. Chopp, M. O'Brien, M. O. Roberts & H. Scholtz	12/8/70
3,549,877	629,877(60)	A SYSTEM FOR COMPETING AND CONTINUOUSLY DISPLAYING INCIDENTS OF MOVEMENT OF AN OBJECT IN USEABLE UNITS OF MEASURE	C. H. Lay	12/22/70	3,546,455	794,501(60)	NEUTRON FLUX PLOTTING DEVICE	K. G. Forges	12/8/70
3,550,064	847,870(60)	ELECTRICAL CONNECTOR PLUG AND CONNECTOR ASSEMBLY	J. M. Callier & P. J. Konalick	12/22/70	3,546,541	743,700(60)	BIDIRECTIONAL ANALOG GATE	T. J. Davis	12/8/70
3,551,119	692,727(35)	A PRECIPITATION METHOD OF RECOVERING ELEMENT 95 FROM CONTAMINANTS	Louis B. Vetter	12/29/70	3,546,575	771,795(60)	SUPERCONDUCTING CURRENT LOOP HAVING PREFERENTIAL CURRENT FLOW	D. G. Schweitzer & P. D. Adams	12/8/70
					3,546,577	740,207(60)	METHOD AND APPARATUS FOR ENHANCEMENT OF NUCLEAR POLARIZATION BY OPTICAL PUMPING IN SOLIDS AND LIQUIDS	C. D. Jeffries & E. F. Mollenauer	12/8/70
					3,546,583	758,561(60)	APPARATUS FOR NONDESTRUCTIVELY MEASURING THE POSITION AND PARTICLE-DENSITY PROFILE & W. H. DeLuca OF AN ACCELERATOR BEAM	F. Hornstra, Jr.	12/8/70
					3,546,996	814,967(60)	ELECTRODE ASSEMBLY FOR DETECTING PARTICLES IN FLUID SUSPENSION	J. D. Perrings	12/8/70
							RELEASE LATCH ACTUATED BY TEMPERATURE EXCURSION	R. J. Celjalva & G. F. Queener	12/15/70

3,547,385	826,102(60)	D. M. Kissenberg	12/15/70	3,549,325	721,675(60)	D. P. Babcock	12/22/70
		METHOD FOR PROMOTING DROPTWISE CONDENSATION ON COPPER AND COPPER ALLOY CONDENSING SURFACES				DUAL TEMPERATURE ISOTOPE EXCHANGE PROCESS	
3,547,547	806,920(60)	N. G. Anderson	12/15/70	3,549,489	769,655(60)	P. R. Pluta	12/22/70
		ANALYTICAL PHOTOMETER WITH MEANS FOR MEASURING, HOLDING AND TRANSFERRING DISCRETE LIQUID VOLUMES AND METHOD OF USE THEREOF				SYSTEM FOR DETECTING SODIUM BOILING IN A REACTOR	
3,547,676	529,181(60)	J. C. Bokros, J. Chin and R. J. Price	12/15/70	3,549,491	777,793(60)	M. L. Johnson	12/22/70
		PYROLYTIC CARBON STRUCTURES AND PROCESS FOR MAKING SAME				NUCLEAR REACTOR FUEL ELEMENT HOLD-DOWN AND TIGHTENING MECHANISM	
3,547,685	754,308(60)	J. Y. H. Wang and K. C. Figlik	12/15/70	3,549,492	823,888(60)	E. Ricci T. H. Handley & M. G. Willey	12/22/70
		METHOD OF INHIBITTING THE CORROSION OF TANTALUM BY LIQUID LITHIUM				FLUID SUPPORTED CAPSULE BOILER FOR HOMOGENEOUSLY IRRADIATING SAMPLES	
3,547,709	728,910(60)	G. S. Petit and R. R. Wright	12/15/70	3,549,493	793,040(60)	J. H. Garner	12/22/70
		CORROSION-RESISTANT URANIUM				FAST SODIUM-COOLED REACTOR CORE STRUCTURE	
3,547,796	786,711(60)	W. L. Randall	12/15/70	3,549,494	751,346(60)	J. H. Garner	12/22/70
		APPARATUS FOR ELECTRO- POLISHING SPHERICAL SURFACES				FLOW MEASURING DEVICE FOR SODIUM-COOLED REACTORS	
3,548,191	807,081(60)	W. W. Schultz S. L. Jones	12/15/70	3,549,877	629,877(60)	C. M. Lay	12/22/70
		PLASTIC TRACT-TYPE DETECTOR FOR SLOW NEUTRONS HAVING THE NEUTRONS COVERING SUBSTANCE UNIFORMLY DISPERSED THEREIN				A SYSTEM FOR COMPUTING AND CONTINUOUSLY DISPLAYING INCREMENTS OF MOVEMENT OF AN OBJECT IN USABLE UNITS OF MEASURE	
3,548,352	847,869(60)	C. A. Sandoval	12/15/70	3,550,064	847,870(60)	J. M. Caller & P. J. Koenick	12/22/70
		ACTUATING DEVICE				ELECTRICAL CONNECTOR PLUG AND CONNECTOR ASSEMBLY	
3,548,646	803,154(60)	W. B. Holman	12/22/70	3,551,119	692,727(35)	Louis B. Werner	12/29/70
		TENSILE TEST APPARATUS				A PRECIPITATION METHOD OF RECOVERING ELEMENT 95 FROM CONTAMINANTS	
3,548,931	771,796(60)	J. H. Garner & C. E. Boardman	12/22/70				
		VESSEL FOR A SODIUM- COOLED REACTOR					
3,549,257	787,525(60)	I. Murray	12/22/70				
		OPTICAL EXTENSOMETER					
3,549,323	721,676(60)	D. P. Babcock	12/22/70				
		DUAL TEMPERATURE ISOTOPE EXCHANGE PROCESS					
3,549,326	721,674(60)	D. P. Babcock	12/22/70				
		DUAL TEMPERATURE ISOTOPE EXCHANGE PROCESS					

PATENT NO.	SER. NO.	INVENTION	INVENTORS	DATE	3,555,434	733,843	E. M. Shoen	1/12/71
3,554,374	741,959	PLUGGING COMPOUND COLLECTOR	R. C. Blair	1/12/71	3,556,406	797,612	V. J. Butkuskas	1/19/71
3,554,630	758,940	ALIGNMENT TELESCOPE	B. T. Rogers, Jr.	1/12/71	3,556,963	743,309	W. B. Dietler J. Wiesner	1/19/71
3,554,693	789,619	SEPARATION OF SCANDIUM FROM RARE EARTH ELEMENTS	A. Orlandini J. Korkfiach	1/12/71	3,556,967	756,264	R. C. Anderson	1/19/71
3,554,709	737,356	SELECTIVE ION-EXCHANGE SEPARATION OF ALKALI METALS	A. Orlandini J. Korkfiach	1/12/71	3,558,122	827,842	A. Jeross	1/26/71
3,554,783	773,351	LOW TEMPERATURE METHOD FOR COATING NUCLEAR FUELS WITH MULTIPLE CAESION COATINGS	H. Bestler	1/12/71	3,558,344	722,537	G. R. Peterson C. E. Stooksbury	1/26/71
3,554,807	577,449	TRISULFURIC ELEMENTS COMPRISING BISMUTH-BISMITE OR BISMITE-BISMUTH CHLORIDE	J. D. Kellner	1/12/71	3,558,750	703,573	E. E. Davis D. W. Stevens G. E. Tally	1/26/71
3,554,867	682,729	METHOD OF OBTAINING AMERICIUM	G. Thompson	1/12/71	3,558,862	816,235(60)	D. E. McMillan	1/26/71
3,554,920	722,711	ENERGY INDEPENDENT RADIOFLUORESCENCE INDICATOR WITH GOOD FABRIC STABILITY	E. H. Becker	1/12/71	3,558,865	628,244	V. Berndt F. Rieseher, Jr. W. C. Dowling	1/26/71
3,555,276	784,720	POTENTIAL ALPHA RAY ACTIVITY METER	G. L. Schroeder	1/12/71	3,558,879	712,568	J. D. Larson J. A. Benjamin	1/26/71
3,555,284	784,739	MULTI-STATION, SINGLE CHANNEL ANALYTICAL PHOTOMETER AND METHOD OF USE	H. G. Anderson	1/12/71	3,558,880	751,099	H. Knisley V. Zank	1/26/71
3,555,411	799,166	COLD CATHODE MAGNETRON IONIZATION GAUGE WITH CATHODES FORMING POLE PIECES FOR CYLINDRICAL MACHET	R. O. Woods	1/12/71	3,559,919	741,762	L. E. Oik	1/26/71
					3,559,409	836,087	E. C. Critton B. Fiskel	1/26/71
							V. E. Johnson	2/2/71

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3,562,480	644,821	2/9/71	3,567,496	731,338	3/2/71	M. Steinberg P. Colombo L. E. Kuskacka B. Mmowitz	METHOD OF PRODUCING PLASTIC DEFLECTED CONCRETE
3,562,634	704,072	2/9/71	3,567,646	362,556	3/2/71	J. H. Gray, III	STABLE CESIUM COMPOUNDS
3,562,732	362,505	2/9/71	3,567,648	814,313	3/2/71	V. J. Walsh R. D. Pierce	DISSOLUTION OF STAINLESS STEEL CLAD NUCLEAR FUEL ELEMENTS
3,564,218	722,046	2/16/71	3,567,662	677,002	3/2/71	C. E. Schmitt	LOW TEMPERATURE METHOD FOR PREPARING FOAM PRODUCT
3,564,246	477,627	2/16/71	3,567,681	883,736	3/2/71	F. A. Duimstra D. O. Schuler	ROLLER-BAND INERTIAL SWITCH
3,565,258	603,221	2/23/71	3,567,896	860,879	3/2/71	J. Y. Chang	METHOD AND APPARATUS FOR HOT PRESSING
3,565,591	811,319	2/23/71	3,567,925	746,067	3/2/71	M. L. Muga E. E. Taylor	CHARGED PARTICLE DETECTOR
3,566,071	506,613	2/23/71	3,567,971	763,258	3/2/71	V. V. Goldsworthy	TIME-SAMPLING PULSE-AMPLI- FYER
3,566,185	806,649	2/23/71	3,568,002	776,658	3/2/71	K. Robbins R. B. Britton	MULTI-ACTION FLUX FOOD
3,566,406	325,032	2/23/71	3,568,397	837,071	3/9/71	V. C. Hammond	METHOD FOR ENCAPSULATING RING-SHAPED OBJECTS
3,566,677	836,729	3/2/71	3,568,449	863,167	3/9/71	M. A. Leiss	CONSTRUCTION OF LAND MASS BOUND BY WATER
3,566,695	831,476	3/2/71	3,568,640	842,851	3/9/71	E. Esstout	WIDE COATING TOOL
3,566,904	816,236	3/2/71	3,568,766	806,169	3/9/71	D. G. Thomas	CORROATED HEAT EXCHANGE RESEER FOR EVAPORATION AND CONDENSATION
3,567,192	736,723	3/2/71	3,568,946	811,026	3/9/71	J. I. Anderson D. Parker	APPARATUS FOR ELIMINATING LINE TWIST
			3,569,615	750,789	3/9/71	P. E. E. Oberbeck W. J. Poppelbaum	METHOD AND APPARATUS FOR TRANSMITTING VIDEO INFORMATION WITH AMPLITUDE REPRESENTATION OF POSITION INFORMATION

3,569,697	798,284	THERMOLUMINESCENT DOSIMETER FOR PROVIDING A TOTAL RADIATION MEASURE OF RADIOACTIVITY IN A FLUID MEDIUM TO WHICH THE DOSIMETER IS EXPOSED	D. E. McCurdy	3/9/71	3,570,530	875,885	PRESSURE REGULATOR FOR A CIRCULATING FLUID SYSTEM	F. P. Pels, Jr.	3/16/71
3,569,701	805,262	PREDEGRADATION OF HIGH VOLTAGE SUPPLY CIRCUIT FOR A MEDICAL NUCLEAR SPERMATOMETER	M. M. Satterfield G. E. Dyer	3/9/71	3,571,576	766,434	COMPRESSION OF STATISTICAL DATA FOR COMPUTER TAPE STORAGE	M. M. Satterfield	3/23/71
3,569,704	752,940	RADIATION DOSIMETER	J. P. Mitchell	3/9/71	3,571,595	816,237	VARIABLE RATE NEUTRON SOURCE	G. L. Silver	3/23/71
3,569,705	846,788	METHOD FOR PRODUCING POLARIZED ATOMS	M. S. Krasinsky	3/9/71	3,571,850	816,562	HOT-ISOSTATIC-PRESSING APPARATUS	H. A. Pobito C. D. St. Ouge	3/23/71
3,569,714	876,932	PROTECTED RADIOISOTOPIC HEAT SOURCE	C. C. Anderson V. L. Arons D. P. Kelly	3/9/71	3,571,922	743,701	METHOD OF FABRICATING A STRAINED SUPER-CONDUCTOR MAGNET	D. C. Schweitzer L. J. Nicolosi	3/23/71
3,569,715	757,657	ELECTRO-OPTICAL TELEMETRY SYSTEM RECEIVER UTILIZING NEGATIVE FEEDBACK TO ELIMINATE ATMOSPHERICALLY- INDUCED LOW FREQUENCY LIGHT BEAM INTENSITY VARIATIONS	E. R. Hornung	3/9/71	3,572,141	840,566	ROLLER-BAND DEVICES	D. F. Wilkes	3/23/71
3,569,764	777,759	SOLID STATE CIRCUIT	D. G. Carroll J. E. Masick	3/9/71	3,572,405	735,119	APPARATUS FOR BLENDING PARTICLES	P. T. Mattson, Jr. D. W. Stevens	3/23/71
3,569,791	868,441	REMANENT-FREE PULSING MAGNETS	V. Vogel	3/9/71	3,572,890	776,736	MICROSCOPE SLIDE AND SPINNER	E. R. Adamek	3/30/71
3,569,822	815,429	ANTIFERROELECTRIC VOLTAGE REGULATION	F. W. Neilson O. M. Stuetzer	3/9/71	3,572,937	773,113	A METHOD AND APPARATUS FOR INTERFEROMETRIC MEASUREMENT OF MACHINE SLIDE ROLL	E. R. Baldwin	3/30/71
3,569,995	755,194	LOW ENERGY RADIATION DOSIMETER IN THE RANGE OF 15 KeV AND BELOW	B. J. Mallon L. E. Lorenson	3/9/71	3,573,036	594,636	METHOD FOR PRODUCING STOICHIOMETRIC URANIUM DIOXIDE COMPOSITIONS	N. P. Fairbanks J. A. McCarty	3/30/71
3,570,106	812,435	METHOD FOR PRODUCING SEAMLESS REFRACTORY METAL TUBING	J. A. McCarty C. O. Tarr	3/16/71	3,573,086	782,714	FIBROUS CARBON OR GRAPHITE PRODUCTS AND METHOD OF MAKING SAME	F. Lambdin, Jr.	3/30/71
					3,573,109	819,527	PRODUCTION OF METAL RESISTANT TO NEUTRON IRRADIATION	I. S. Levy	3/30/71
					3,573,120	757,977	GRANITE ETCHANT AND METHOD	F. B. Veldrop M. J. Besik	3/30/71
					3,573,145	805,560	PRODUCTION OF HIGH PURITY NICKEL-66	J. J. Pinnajian	3/30/71

3,573,166	747,161	HYDRAULIC CONTROL ROD DRIVE SYSTEM	J. H. Gurnea	3/20/71	3,573,803	751,100	REACTOR FUELING METHOD	P. Greabler	4/20/71
3,573,167	734,961	KINETIC INTENSE NEUTRON GENERATOR REACTOR	L. D. Percival King	3/20/71	3,573,804	747,160	ELECTROMAGNETIC FLUID VALVE	C. C. Ripley	4/20/71
3,573,424	844,115	METHOD FOR REMOVAL OF THE POROUS PORTION OF A BUTT WELD	P. H. Mcherey	4/6/71	3,573,805	784,679	NUCLEAR REACTOR CONTROL ROD DRIVE ASSEMBLY	J. Dempsey	4/26/71
3,573,458	811,027	POSITION CAMERA WITH MULTIPLANE FOCUSING	H. Anger	4/6/71	3,573,808	809,324	FUEL SUBASSEMBLY FOR A LIQUID-METAL-COOLED, FAST BREEDER REACTOR	M. T. Jakob C. M. Haseen A. J. Anthony	4/20/71
3,573,462	796,352	SEALED CONTAINER WITH PRESSURE RELIEF FOR HAZARDOUS MATERIAL	C. A. Wilkins F. D. R. King	4/6/71	3,573,841	762,460	SYSTEM FOR REMOVING PARTICLES FROM A FLUID BY MEANS OF AN ELECTRIC FIELD	C. A. Harris	4/20/71
3,573,615	668,303	SYSTEM FOR MEASURING A PULSE CHARGE	D. I. Forst E. L. Anderson	4/6/71	3,573,874	820,195	NUCLEAR FUEL CONTAINING P.J. WITH BOROCARBIDES	D. B. Sollenberger	4/20/71
3,573,639	882,247	RATEGATE WITH AUTOMATIC DEAD-TIME CORRECTION	A. J. Metz R. H. Howard	4/6/71	3,573,875	821,098	METHOD FOR PREPARING URANIUM-CONTAINING AQUEOUS SOLUTIONS EMPLOYING A PLATINUM OXIDE CATALYST	V. L. Pettison J. P. McBride	4/20/71
3,574,103	757,978	LAMINATED CELLULAR MATERIAL FOAM	A. Letkin	4/6/71	3,576,050	761,472	APPARATUS FOR HAFTING PRESSED C. E. THOMAS POWDER SLEEVES	C. E. Thomas	4/27/71
3,574,531	825,073	STRONTIUM EXTRACTION PROCESS	V. W. Scholtz	4/13/71	3,576,210	884,852	HEAT PIPE	D. S. Trent	4/27/71
3,574,532	809,032	WASH TREATMENT TO RESTORE THE DEGRADED DIEHRA-TIP USED IN FISSION PRODUCT EXTRACTIONS	V. W. Scholtz S. J. Beard	4/13/71	3,576,441	20,288	ANALYTICAL PROTON-TO-DIGITAL COMPUTER INTERFACING SYSTEM FOR REAL TIME DATA REDUCTION	E. K. Adams J. T. Butten	4/27/71
3,574,533	824,207	METHOD OF PREPARING BERYLLIUM NITRATE SOLUTIONS	F. T. Goddard	4/13/71	3,576,622	732,962	NICKEL-BASE ALLOY	E. E. McCoy, Jr.	4/27/71
3,574,548	847,204	PROCESS FOR MANUFACTURING A CELLULAR CARBON BODY	A. E. Sands H. E. Scribner	4/13/71	3,576,925	726,243	METHOD OF PREPARING FUEL PLATES FOR NUCLEAR REACTOR	J. H. Bandwerk J. T. Dusek C. D. White	4/27/71
3,574,558	822,212	JET-MIXED LIQUID EXTRACTION COLUMN	T. Vermeulen D. E. Kahn	4/13/71	70-1 27,025	846,985	PROCESS OF CONDITIONING PARTICULATE MATERIALS WITH AN ORGANIC SILICON COATING FOR USE IN ORGANIC EXPLOSIVES	L. McDonald	1/12/71
3,574,580	774,224	PROCESS FOR PRODUCING SINTERED DIAMOND CONTACT AND PRODUCTS	R. D. Stromberg D. R. Stephens	4/13/71					
3,574,612	796,176	NICKEL-COBALT ALLOY	R. F. Meness	4/13/71					
3,574,654	744,319	METHOD OF PRODUCING SPHEROIDAL AGGLOMERATES	R. E. Conan E. P. Ehart	4/13/71					
3,575,049	1,482	SONIC FLOW METER	T. J. Boland	4/13/71					

PATENT NO.	SER. NO.	INVENTION	INVENTORS	DATE	No. 2	3,577,774	801,389	R. V. Steffens M. F. Zeutschel	5/4/71
3,566,661	748,444	METAL FORMING	G. P. McCafferty F. Rodolph, Jr. E. F. Shann	3/2/71		3,578,442	768,225	C. G. Anderson	5/11/71
3,576,594	841,573	NEUTRON RADIOGRAPHY OF DEUTERATED TISSUE	F. E. Parks M. Brown	5/4/71		3,580,705	764,494	C. P. Coleman B. S. Stever	5/25/71
3,577,026	836,088	METHOD FOR PRODUCING IONS UTILIZING A CHARGE-TRANSFER COLLISION	V. Baebert	5/4/71		3,580,802	818,374	J. L. Johnson N. K. Vinson J. M. Dawson R. H. Sinclair J. C. Rosen	5/25/71
3,577,199	852,360	MEASURING IRRADIATION-INDUCED DEGRADATIONS OF MATERIALS	W. W. Schultz	5/4/71		3,580,804	805,156	J. A. Jeger	5/25/71
3,577,225	824,944	METHOD FOR SEPARATING URANIUM, PROTACTINIUM, AND RARE EARTH FISSION PRODUCTS FROM SPENT NUCLEAR FUELS	J. H. Shaffer D. M. Moulton W. E. Grimes	5/4/71		3,580,822	839,510	R. W. Allison, Jr. R. V. Brockhoff J. R. Woodyard	5/25/71
3,577,283	805,384	METHOD OF CASE HARDENING VANADIUM AND VANADIUM ALLOYS	R. M. Mayfield J. A. Zic G. F. Hill	5/4/71		3,581,577	803,155	G. A. Ray, Jr. J. E. Von Dreese	6/1/71
3,577,317	820,750	CONTROLLED FUSION REACTOR	C. E. Woods	5/4/71		3,582,218	867,340	E. C. Anderson	6/1/71
3,577,339	7,387	FILTRATION METHOD OF SEPARATING LIQUIDS FROM EXTRANGOUS MATERIALS	J. M. Baird, Jr. J. S. Johnson K. A. Kreis J. J. Ferrona	5/4/71		3,582,652	2,346	R. C. McCall	6/1/71
3,577,344	794,980	FIBROUS THERMAL INSULATION AND METHOD OF MAKING SAME	E. L. Ardery A. W. Maxey C. D. Reynolds	5/4/71		3,582,817	823,887	V. A. Gibson	6/1/71
3,577,485	796,175	METHOD FOR PREPARATION OF CARBONITRILE NUCLEAR FUEL MATERIALS	B. L. Beatty J. M. Leitnaker K. J. Nottz, Jr.	5/4/71		3,582,849	881,787	R. F. Post E. V. Heir	6/1/71
						3,583,161	569,282	E. Simms	6/8/71
						3,583,361	886,168	A. Landel, Jr.	6/8/71

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No. 2

3,577,774

AN ELECTROSTATIC
ULTRASONIC NON-
DESTRUCTIVE TESTING DEVICE

5/4/71

R. V. Steffens
M. F. Zeutschel

INVENTION

INVENTORS

DATE

3,578,442

MEANS FOR VENTING HELIUM
FROM A RADIOISOTOPE
CONTAINER

5/11/71

C. G. Anderson

INVENTION

G. P. McCafferty
F. Rodolph, Jr.
E. F. Shann

3/2/71

3,580,705

SELECTIVE STRIPPING OF
FLUORINE FROM ORGANIC
EXTRACTS

5/25/71

C. P. Coleman
B. S. Stever

INVENTION

F. E. Parks
M. Brown

5/4/71

3,580,802

DEVICE FOR DETERMINING
THE SHAPE OF MAGNETIC
SURFACES IN TORSIONAL
CONFIGURATIONS

5/25/71

J. L. Johnson
N. K. Vinson
J. M. Dawson
R. H. Sinclair
J. C. Rosen

INVENTION

W. W. Schultz

5/4/71

3,580,804

LIFTING MECHANISM AND
REFUELING MACHINE

5/25/71

J. A. Jeger

INVENTION

J. H. Shaffer
D. M. Moulton
W. E. Grimes

5/4/71

3,580,822

METHOD FOR PRODUCING A
RADIATION RESISTANT
MANGANESE ACTIVATED
ALUMINUM OXIDE
SCINTILLATOR

5/25/71

R. W. Allison, Jr.
R. V. Brockhoff
J. R. Woodyard

INVENTION

R. M. Mayfield
J. A. Zic
G. F. Hill

5/4/71

3,581,577

ACCELERATION SENSITIVE
ACTUATOR

6/1/71

G. A. Ray, Jr.
J. E. Von Dreese

INVENTION

C. E. Woods

5/4/71

3,582,218

MULTIPOSITION PHOTOMETRIC
ANALYZER

6/1/71

E. C. Anderson

INVENTION

J. M. Baird, Jr.
J. S. Johnson
K. A. Kreis
J. J. Ferrona

5/4/71

3,582,652

METHOD FOR READING A
THERMOLUMINESCENT
DOSIMETER

6/1/71

R. C. McCall

INVENTION

E. L. Ardery
A. W. Maxey
C. D. Reynolds

5/4/71

3,582,817

LASER EXCITATION
APPARATUS

6/1/71

V. A. Gibson

INVENTION

B. L. Beatty
J. M. Leitnaker
K. J. Nottz, Jr.

5/4/71

3,582,849

ELECTROMAGNETIC
APPARATUS FOR PRODUCING
AND CONTAINING HIGH
TEMPERATURE PLASMAS

6/1/71

R. F. Post
E. V. Heir

INVENTION

B. L. Beatty
J. M. Leitnaker
K. J. Nottz, Jr.

5/4/71

3,583,161

RADIOISOTOPE/ELECTRO-
THERMAL TESTS

6/8/71

E. Simms

INVENTION

A. Landel, Jr.

6/8/71

3,583,361

ION BEAM DEPOSITION SYSTEM

6/8/71

A. Landel, Jr.

3,584,241	836,241	SCHMITT TRIGGER WITH CONTROLLED HYSTERESIS	M. Nakamura	6/8/71	3,588,692	799,167	CIRCUIT FOR DEVELOPING A PULSE HAVING AN AMPLITUDE DETERMINED BY THE CAPACITANCE FOR CAPACITOR COUPLED THERISTO	O. H. Koski	6/28/71
3,584,297	829,194	IMPEDANCE MEASURING DEVICE	O. H. Koski	6/8/71					
3,584,308	832,249	BIDIRECTIONAL LOGIC CIRCUITS EMPLOYING DUAL STABLE ARMS OF BISTABLE MULTIVIBRATORS	F. D. Neu	6/8/71					
3,586,484	827,185	MULTIPOSITION ANALYTICAL PHOTOMETER AND METHOD OF USE	M. G. Anderson	6/22/71	3,588,729	834,429	HOMOLocking FREANFLIFER	M. M. Satterfield	6/28/71
3,586,603	766,431	NUCLEAR FUEL ROD HAVING AN OFFSET FLEWM	D. P. Blases	6/22/71	3,590,250	830,970	VALVE AND PULSE WIDTH MODULATED DATA-LINK USING INFRARED LIGHT TO CONTROL AND MONITOR POWER SUPPLY FOR MODULATOR FOR HIGH ENERGY LINEAR ACCELERATOR	E. L. Wickover	6/29/71
3,586,641	843,224	TRANSFERMENT OF SUPERCONDUCTIVITY OF LANTHANUM AND YTTRIUM SESQUICARBIDE	M. C. Krupka A. L. Glorfi K. H. Eriksson E. C. Sklarz	6/22/71	3,590,286	784,988	THERMIONIC CONVERTER CELLS FOR NUCLEAR REACTOR	E. A. Becker P. R. Hill E. R. Hobson	6/29/71
3,586,757	850,151	FLEXIBLE STRAPLINE TRANSMISSION LINE	M. Baldwin, Jr.	6/22/71	3,591,474	841,347	SUPERCONDUCTING CYLINDERS FOR FLUX DETECTORS	J. M. Cookling D. L. Stolfe	7/6/71
3,587,301	785,173	HOLOGRAPHIC INTERFEROMETER FOR ISOCHROMATIC STRESS ANALYSIS	H. H. M. Chau	6/28/71	3,591,806	20,287	MULTI-CRYSTAL TOMOGRAPHIC SCANNER FOR MAPPING THIN CROSS-SECTION OF RADIOACTIVITY IN AN ORGAN OF THE HUMAN BODY	A. B. Brill J. A. Patton J. J. Erickson P. H. King	7/6/71
3,587,33	1,675	GLOVE BOX TWEETABLE CAM ROTATING MECHANISM	R. D. Doocey	6/28/71	3,591,807	577,441	PROTON DETECTOR UTILIZING A WELL-TYPE SCINTILLATION CRYSTAL	C. W. Mays E. D. Lloyd D. R. Atherton	7/6/71
3,587,613	843,110	ELECTRO-FLUID VALVE HAVING STRIP ELECTRODES	J. V. Mark E. E. Barney	6/28/71	3,592,050	837,459	METHOD OF DETECTING DIMENSIONS IN CERAMICS	A. W. Sutt, Jr. J. E. Handverk	7/13/71
3,587,632	863,759	OVERPRESSURE RELIEF VALVE HAVING A FAIL-SAFE RELEASABLE VALVE STEM GUIDE	E. S. Clay	6/28/71	3,593,110	858,828	DIRECT-CURRENT GENERATOR FOR SUPERCONDUCTING CIRCUITS	R. P. Buebenat	7/13/71
3,588,505	837,460	METHOD AND APPARATUS FOR MEASURING FAST NEUTRON FLUENCES WITH GADOLINIUM SULFIDE OR CALCIUM SELENIDE	R. T. Johnson, Jr.	6/28/71	3,593,058	20,289	CROSSED-FIELD ELECTRON INJECTOR FOR AN ELECTRON ACCELERATOR	H. A. Bogg	7/13/71
3,588,593	811,028	METHOD OF OPERATING AN ION-GETTER VACUUM PUMP WITH GUN AND GRID STRUCTURE ARRANGED FOR OPTIMUM IONIZATION AND SUBLIMATION	M. Rabinowitz E. L. Garwin	6/28/71	3,595,825	850,150	PLUTONIUM AND NEPTUNIUM EXTRACTION PROCESS	V. W. Schulz	7/27/71

3,596,506	810,282	TOOL FORCE MONITOR	A. R. Wilson, Jr.	8/3/71	3,599,319	715,124	METHOD AND APPARATUS FOR PRODUCING FINE GRAINED THERMOELECTRIC MATERIAL	M. Weinstein N. Hammet	8/17/71
3,596,853	851,152	SPACE HEAT SOURCE	C. G. Anderson	8/3/71	3,600,011	859,469	JOINT UTILIZING WEDGESHAPE RECTANGULAR LOCKING SHAFTS	E. L. Alvis	8/17/71
3,597,192	781,583	PREPARATION OF TANTALUM METAL	H. A. Weibel P. A. Schmidt R. H. Bergman	8/3/71	3,600,091	36,723	BRIGHT LINE EMISSION SOURCE FOR ABSORPTION SPECTROSCOPY	J. A. Golab J. P. Bobis F. E. George	8/17/71
3,597,344	728,333	TREATMENT OF TALL OIL	F. H. Case	8/3/71	3,600,155	858,338	SODIUM PURIFICATION PROCESS	P. F. DeVries J. M. Scarborough	8/17/71
3,597,596	797,509	RADIOCHEMICAL COUNTER FOR BULK MATERIALS	J. L. Lawless O. H. Willoughby	8/3/71	3,600,157	822,695	RARE EARTH ADDITIVES TO URANIUM AND URANIUM ALLOYS	G. E. Jaynes	8/17/71
3,597,612	793,964	POWER PULSE MONITORING	L. R. Boyd	8/3/71	3,600,277	764,477	REFUELING APPARATUS AND METHOD FOR FAST REACTORS	J. H. Germer	8/17/71
3,597,613	851,174	METHOD OF MEASURING BORE CONCENTRATION IN WATER BY NEUTRON ABSORPTION	V. Rajagopal	8/3/71	3,600,281	834,427	MICROSTABILIZED SUPERCONDUCTOR	V. H. Bergmann	8/17/71
3,597,659	860,526	MONITOR FOR ELECTRONIC CIRCUITS AND THE LIKE AND METHOD FOR MAKING SAME	C. K. Hoffman J. A. Lester G. R. Urish	8/3/71	3,600,291	794,761	METHOD OF PRODUCING DENSE CARBON FROM ANTHRACENE	R. H. Willey	8/17/71
3,597,695	827,255	SINGLE CAVITY REGENERATIVE LASER PULSE AMPLIFIER	J. R. Swain L. L. Stinson P. Baisner	8/3/71	3,600,323	864,154	METHOD FOR PREPARING STABLE URANIL-PLUTONIA SOLS	O. K. Tallent	8/17/71
3,597,849	849,420	PERIPHERAL SCANNING SYSTEM	A. E. Casal	8/10/71	3,600,578	864,443	REACTOR POWER LEVEL SENSING DEVICE USING CHERENKOV RADIATION	K. C. Forgas R. Gold	8/17/71
3,597,939	836,360	CONTROL ASSEMBLY FOR A NUCLEAR REACTOR INCLUDING AN OFFSET COUPLING	C. C. Ripley F. L. Sockow	8/10/71	3,600,580	859,783	CHARGED PARTICLE BEAM DENSITY MEASUREMENT DEVICE	U. Vogel	8/17/71
3,598,032	878,933	PRODUCING STEREOPHOTOGRAPHS WITH A CLASSED CIRCUIT TELEVISION SYSTEM	S. W. Bohn V. J. Diamond	8/10/71	3,600,585	616,422	PLUTONIUM HEAT SOURCE	D. P. Kelly J. A. Powers P. A. Tucker	8/17/71
3,598,968	795,808	ODDID ARRANGEMENT OF INDUCTIVELY DETECTABLE ELECTRICAL CONDUCTING SEGMENTS	R. A. Victor	8/10/71	3,600,934	887,695	EDDY CURRENT SYSTEM FOR VIBRATION TESTING OF CANTILEVERED NONFERROUS ARTICLES	D. E. Hendrix H. A. Kernfals	8/24/71
3,598,975	829,913	TIME PROPORTIONING PROCESS INTERFACE FOR DIRECT COMPUTER CONTROL	V. E. Miller C. A. Rosenman	8/10/71	3,601,612	852,273	WIRE SPACE CHAMBER WITH MAGNETOSTRICTIVE READOUT	V. Peres-Namdas	8/24/71
3,599,120	864,480	DOUBLE HELIX MICROWAVE STRUCTURE FOR COUPLING A MICROWAVE MAGNETIC FIELD FROM A FIRST TO A SECOND REGION	R. M. Thibault D. V. Schett	8/10/71					

3,605,486	4,664(70)	METHOD AND APPARATUS FOR MEASURING ADHESION OF MATERIAL BONDS	N. C. Anderholm 9/20/71 A. Goodman Albuquerque, N. Mex.	3,607,672	8,695(70)	METHOD FOR PRODUCING FIBROUS CARBON STRUCTURES	C. R. Schmitt 9/21/71 Oak Ridge, Tenn.
3,605,477	36,035(70)	CLOSURE MECHANISM	G. G. Curry 9/20/71 J. C. Dresser Albuquerque, N. Mex. J. A. Hoeller Phoenix, Ariz.	3,607,988	76,211(60)	STEREOSCOPIC WINDOWS OF POLYMER COMPLEX FOR IMPROVED RESISTANCE TO RADIATION DAMAGE	G. A. Henry 9/21/71 West Indies D. G. Gardner Livermore, Calif.
3,607,010	812,515(60)	CHEMICAL EXCHANGE METHOD OF CONCENTRATING CARBON ISOTOPES	L. L. Brown 9/21/71 Oak Ridge, Tenn.	3,608,023	855,230(60)	ENCAPSULATING METHOD	D. D. Scarborough 9/21/71 Redington Shores, Fla.
3,607,056	864,557(60)	PREPARATION OF A SUPERCONDUCTING SCANDIUM-CARBON PHASE	A. L. Giorgi 9/21/71 N. H. Eriksson E. G. Szklarz M. C. Krupka	3,609,093	758,959(60)	PHOTOCHEMICAL RADIATION DOSEMETER	L. A. Barreth 9/28/71 Albuquerque, N. Mex.
3,607,145	789,359(60)	ALUMINIUM SEPARATION FROM URANIUM	D. A. Vens 9/21/71 Downers Grove, Ill.	3,609,351	838,433(60)	TRAVELING WAVE PARTICLE SEPARATOR INCLUDING A RECTANGULAR WAVE GUIDE LINED WITH A DIELECTRIC MATERIAL	J. W. Devoon 9/28/71 Clarendon Hills, Ill. E. L. Euston Oak Lawn, Ill.
3,607,146	4,022(70)	PREPARATION OF CHEMICALLY REACTIVE URANIUM TRIOXIDE	R. K. Ballard 9/21/71 Salt Lake City, Utah	3,609,978	1,088(70)	METHOD OF REMOVELY CONSTRUCTING A ROOM	J. D. Michie 10/5/71 R. C. DeSart San Antonio, Tex.
3,607,249	4,375(70)	COBALT-IRON-TANTALUM HIGH-TEMPERATURE-STRENGTH ALLOY	F. C. Robertshaw 9/21/71 J. L. Bartos Ogde	3,610,752	3,152(70)	PREPARING FINISHED CIRCUIT BOARDS BY REFLECTED RAYS	F. C. Wilcox 10/5/71 Queens Village, N.Y.
3,607,254	768,638(60)	DISPERSION STRENGTHENING OF ALUMINUM ALLOYS BY REACTION OF UNSTABLE OXIDE DISPERSIONS	J. P. Diamond 9/21/71 Knoxville, Tenn.	3,610,923	885,790(60)	GRADED MAGNETIC FIELD FOR CALUTRON ION SOURCE	V. A. Bell, Jr. 10/5/71 A. M. Yeack Oak Ridge, Tenn.
3,607,627	766,432(70)	STEELERATOR CONFIGURATION UTILIZING INTERNAL SEPARATORS	R. P. Furth 9/21/71 G. V. Sheffield J. L. Johnson Princeton, N.J.	3,610,926	896,278(60)	COUNTER FORCE OF A RADIATION SENSITIVE THERMOLUMINESCENT MATERIAL AND METHOD OF READY THE SAME	F. Ebstner 10/5/71 Downers Grove, Ill. B. G. Oltusa Worth, Ill.
3,607,631	774,227(60)	MODERATED THERMIONIC REACTOR CORE	R. R. Robson 9/21/71 R. H. Scott P. E. Hill California	3,611,029	896,337(60)	SOURCE FOR HIGHLY STRIPPED IONS	T. E. Stix 10/5/71 Behovot, Israel
3,607,638	26,575(70)	FUEL ELEMENT VENTING SYSTEM	O. S. Seitz 9/21/71 Weston, Ill.	3,611,092	11,955(70)	ELECTRONICALLY SWITCHED DYNAMIC BRAKE FOR A D.C. MOTOR	A. R. Wilmsder 10/5/71 Falo, Alto, Calif.
3,607,643	813,450(60)	REACTOR CORE WITH REMOVABLE CORE ELEMENTS	J. A. Pecht 9/21/71 Imperial Beach, Calif.	3,611,173	873,221(60)	CHARGE SENSITIVE PHOTOAMPLIFIER USING OPTO-ELECTRONIC FEEDBACK	F. S. Goulding 10/5/71 Lafayette, Calif. W. L. Reasen Walnut Creek, Calif. J. T. Walton Orinda, Calif.
3,607,645	741,960(60)	REACTOR CORE RADIAL LOCKING DEVICE	R. S. Stenkevics 9/21/71 Killington, Conn.	3,611,233	849,984(60)	PULSE TRANSFORMER USING STRIPLINE WINDINGS	M. Baldeasa, Jr. 10/5/71 Downers Grove, Ill.

3,611,398	24,289(70)	BALANCED DIPOLE ANTENNA	G. H. Schottner 10/5/71 Albuquerque, N. Mex.	3,615,171	46,191(70)	PROCESS OF SEPARATING ITRIM FROM LANTHANIDE BASE EARTHES	G. V. Mason 10/26/71 Clarendon Hills, Ill. S. Lowrey A. F. Bollmeier Joliet, Ill. D. F. Peppard Oak Park, Ill.
3,612,804	788,269(60)	INDUCTION HEATING DEVICE FOR SUCCESSIVE BAG-LIKE MEMBERS	R. R. Balzer 10/12/71 Farm, Ohio	3,615,267	806,293(60)	SEPARATION OF NEPTUNIUM FROM URANIUM HEAVYMETALS CONTAINING THE SAME	W. B. Golliber 10/26/71 R. L. Barris R. A. Ledoux Paducah, Ky.
3,612,858	10,174(70)	DEVICE FOR MEASURING THE POSITION, SIZE AND DENSITY OF HIGH ENERGY PARTICLES	T. De Perry 10/12/71 Einhurst, Ill.	3,615,268	780,101(60)	ISPLATION AND PURIFICATION OF ANGIOTENSIN FROM OTHER 5f AND 4f ELEMENTS BY EXTRACTION CHEMOTOGRAPHY	F. L. Moore 10/26/71 Knoxville, Tenn.
3,612,868	50,270(70)	HIGH SENSITIVITY STIMULATED EXCITATION EMISSION RADIATION DOSIMETERS	K. H. Becker 10/12/71 Oak Ridge, Tenn. J. S. Chicks Knoxville, Tenn. E. B. Gammage Oak Ridge, Tenn. E. H. Robinson Knoxville, Tenn.	3,615,301	775,475(60)	PROCESS FOR PRODUCING DISPERS- ION-HARDENED SUPERALLOYS BY INTERNAL OXIDATION	J. P. Hammond 10/26/71 Knoxville, Tenn. J. Y. Chung Oak Ridge, Tenn.
3,612,869	14,987(70)	LARGE VOLUME FLAMMABLE Ge(Li) DETECTOR	J. J. Baum 10/12/71 Anaheim, Calif. E. W. Rothenberg Calumet City, Ill.	3,615,817	796,579(60)	METHOD OF DECOMBINATING RADIOACTIVE METAL SURFACES	W. T. Jordan 10/26/71 Pittsburgh, Pa. C. A. Zimmerman Isaaho Falls, Isaaho
3,612,875	82,380	MOSSBAUER SPECTROMETER	R. H. Ord 10/12/71 Richland, Wash.	3,615,828	17,404(70)	SECONDARY POWER-PRODUCING CELL	A. K. Fischer 10/26/71 Western Springs, Ill.
3,613,512	866,928(60)	PNEUMATIC CONTROL ROD DRIVE INCLUDING A SCRAM CUSHION	W. E. Tuft 10/19/71 Los Gatos, Calif.	3,615,920	29,261(70)	HIGH TEMPERATURE BRAZE HEAT TREATMENT FOR PRECIPITATION HARDENING MARTENSITIC STAINLESS STEELS	J. A. Talento 10/26/71 Pittsburgh, Pa.
3,614,465	773,835(60)	PROGRAMMABLE TIMER	E. W. Kenderline 10/19/71 Baudia Park, N. Mex.	3,616,280	809,508(60)	NONAQUEOUS ELECTROPLATING SOLUTIONS AND PROCESSING	Y. E. Arnold 10/26/71 Albuquerque, N. Mex.
3,614,606	813,449(60)	CAPACITIVE-COUPLED PROBE FOR MEASURING POTENTIALS IN A FLASH	J. A. Schmidt 10/19/71 Middleton, Wis. D. H. Kerret Madison, Wis.	3,616,326	868,440(60)	SEPARATION OF BASE EARTHES BY ELECTROLYSIS WITH POROUS CARBON ELECTRODES	E. I. Ostott 10/26/71 Los Alamos, N. Mex.
3,614,670	874,191(60)	SWITCHABLE MICROWAVE CIRCUIT LATCH WITHIN GROUND PLANE ARE COMPOSED OF FOILS HAVING ELECTRICALLY CONDUCTIVE PARTICLES	R. G. Wilson 10/19/71 San Jose, Calif.	3,616,369	687,410(60)	RADIATION-INDUCED IONIC POLYMERIZATION CONTROLLED BY THE PRESENCE OF LEWIS ACIDS OR LEWIS BASES	T. P. Williams 10/26/71 Knoxville, Tenn.
3,614,694	878,612(60)	COAXIAL CABLE HIGH-VOLTAGE PULSE ISOLATION TRANSFORMER	R. P. Koontz 10/19/71				
3,614,724	26,570(70)	DETECTION SYSTEM	W. L. Brown 10/19/71 J. M. Fortlock Albuquerque, N. Mex.				

3,615,378	856,46A(60)	10/26/71	3,620,808	697,281(60)	J. E. Moore, Jr.	11/16/71	METHOD OF FORMING A THERMAL SENSITIVITY COATING ON A METALLIC SUBSTRATE
3,617,585	860,281(60)	P. N. Case Oak Ridge, Tenn. D. E. Sailer Knoxville, Tenn. D. L. Kru Rockwood, Tenn.	3,620,852	15,237(70)	J. G. I. Chew Northport, N.Y. A. H. Fleitman Smithtown, N.Y. Kokomo, Ind.	11/16/71	PROCESS FOR PROTECTING COBALT ALLOYS
3,618,770	8,502(70)	P. A. Bass Knoxville, Tenn. S. D. Clinton Oak Ridge, Tenn. L. E. Foehl Los Gatos, Calif. F. Roy Saratoga, Calif.	3,620,899	49,188(70)	E. S. Isaacs Shoreham, N. Y. E. M. Singer East Islip, N.Y.	11/16/71	CHEMICAL POLISHING OF METALLIC SODIUM
3,618,923	852,565(60)	L. R. Michels San Jose, Calif.	3,620,916	817,955(60)	J. V. Hilborn Chalk River, Ontario C. G. Lemox Pinawa, Manitoba W. G. Mathers Pinawa, Manitoba	11/16/71	RED NUCLEAR REACTOR
3,619,178	887,039(60)	R. E. Felt Richland, Wash.	3,620,917	878,749(60)	E. Fisherty Pittsburgh, Pa.	11/16/71	METHOD OF OPERATING A RADIOISOTOPE RADIATION SOURCE
3,619,180	781,822(60)	E. W. Staehle Columbus, Ohio Juan Reynolds Madrid, Spain	3,621,223	861,381(60)	I. Alexeff Cambridge R. V. Heidigh Knoxville, Tenn. W. R. King Fella, Iowa	11/16/71	HIGH FREQUENCY SIGNAL CORRELATOR
3,619,366	822,211(60)	V. Chubb Worthington, Ohio D. L. Koller E. A. Wallerst V. V. Storchak Columbus, Ohio	3,621,238	71,042(70)	E. A. Jalbert Los Alamos, N. Mex. E. D. Reibert Los Alamos, N. Mex.	11/16/71	GAMMA INSENSITIVE AIR MONITOR FOR RADIOACTIVE GASES
3,620,078	49,483(70)	G. S. Baynor Memorville, N. Y.	3,621,254	30,715(70)	C. J. Zorkowski Oak Ridge, Tenn.	11/16/71	DIFFERENTIAL PRESSURE NUCLEAR RADIATION FILM DETECTOR
3,620,208	873,223(60)	V. E. Bigley E. L. Silcock J. A. Wiggover Livermore, Calif.	3,621,257	17,403(70)	V. L. Cellarusa King of Prussia, Pa. P. A. Johnston King of Prussia, Pa.	11/16/71	NEUTRON PARTICLE DETECTION IN THERM NUCLEAR DETECTORS
3,620,604	1,004(70)	T. E. Reckman Joliet, Ill.					
3,620,687	818,822(60)	A. S. Wilson Richland, Washington					

3,621,261	813,489(60)	BAHCOBUTONE FUEL CAPSULE	P. T. Princiotta 11/16/71 Baltimore, Md. E. N. Barr Baltimore, Md.	3,623,946	467,821(60)	NUCLEAR REACTOR	R. R. Hobson 11/30/71 T. E. Griffin San Jose, Calif.
3,621,306	885,578(60)	METHOD OF DETERMINING BONDING IN A COMPOSITE SUPERCONDUCTOR	J. R. Fureell 11/16/71 Downers Grove, Ill.	3,623,947	467,822(60)	NUCLEAR REACTOR AND THERMOCOUPLER CELLS THEREFOR	R. R. Hobson 11/30/71 T. E. Griffin San Jose, Calif.
3,621,639	888,040(60)	JUST FILTER APPARATUS UTILIZING GRANULAR SOLID FILTER MEDIA	E. F. Edwards 11/23/71 Whittier J. Fubusova Monterey Park R. L. Solnick Newport Beach, Calif.	3,624,239	10,516(70)	PULSED LASER-INDUCED THERMO-NUCLEAR REACTOR	A. P. Press 11/30/71
3,621,892	855,231(60)	ROBIN VACUUM DEWASSING AND DISPENSING SYSTEM AND METHOD	T. J. Gillespie 11/23/71 Seminole, Fla.	3,624,240	22,294	FEEDBACK STABILIZATION OF A MAGNETICALLY CONFINED PLASMA	C. C. Dunn 11/30/71 Alamo, Calif. R. F. Post Wheat Creek, Calif.
3,622,303	552,317(60)	METHOD FOR REMOVING HYDROGEN FROM ALKALI METALS AND THE LIKE	E. P. Hill 11/23/71 Southfield, Mich.	3,624,370	874,192	DUAL FLATTING DEVICE	J. Gray, Jr. 11/30/71 Wheaton, Ill.
3,622,312	844,202(60)	METHOD FOR REJUVENATING REFRACTORY ARTICLES	C. F. Holcombe, Jr. 11/23/71 Oak Ridge, Tenn.	3,624,443	68,579	TWO-PLASMA CEN MAGNETIC FIELD LOADING METHOD	J. E. Bunnell 11/30/71 Los Alamos, N. Mex.
3,622,480	874,030(60)	METHOD OF INCREASING THE CONCENTRATION OF OXYGEN-18 IN AN OXYGEN-CONTAINING COMPOUND	E. R. Johnson 11/23/71 Cherry Chase, Md. E. N. Ledy Maple Shade, N.J. E. W. Holtzschel College Park, Md.	3,624,527	72,397(70)	MAGNETICALLY SELF-SHAPING SEPTUM FOR BEAM DEFLECTION TEMPERATURE METER	E. D. Hudson 11/30/71 Knoxville, Tenn.
3,622,481	874,031(60)	METHOD OF PRODUCING COMPOUNDS ENRICHED IN OXYGEN-18	E. R. Johnson 11/23/71 Cherry Chase, Md. E. N. Ledy Maple Shade, N.J.	3,624,709	886,631(60)	CONTINUOUS-READING FLUORESCENT TEMPERATURE METER	J. P. Petrek 11/30/71 Kenosha, Wash.
3,622,830	10,515(70)	ORBIT POSITIONING LINKAGE HAVING A SINGLE-SHAFT PLURAL PISTON ACTUATOR	E. S. Clay 11/23/71 Los Altos Hills, Calif.	3,624,759	11,991(70)	CLOSED FLUID SYSTEM PRESSURIZATION	R. D. Carson 11/30/71 La Grange, Ill.
3,623,145	40,653(70)	HIGH ENERGY CHEMICAL LAYER SYSTEM	D. W. Grege 11/23/71 Lafayette R. X. Pearson Pleasanton, Calif.	3,624,772	874,734(60)	READING AND WRITING MACHINE USING PAISED PATTERNS	A. P. Grosswald 11/30/71 Chicago, Ill.
				3,625,661	849,200(60)	SEPARATION OF TITANIUM FLUORIDE AND NIOSIUM FLUORIDE FROM CASSEITE URANIUM HEXAFLUORIDE	L. V. Anderson 11/30/71 Oak Ridge, Tenn. M. J. Stephenson Oak Ridge, Tenn.
				3,625,675	812,360(70)	NOVEL IRON-CERMIUM-NIOBIUM ALLOY SYSTEM	P. C. Robertshaw 11/30/71 E. J. Perkins Cincinnati, Ohio
				3,625,680	771,633(60)	METHOD FOR PRODUCING POROUS URANIUM	J. J. Anbury 11/30/71 Knoxville, Tenn.

See page 11- for Pat. No. 3,625,767 and 3,625,818

3,626,183	54,951(70)	RADIOISOTOPES ANALYTICAL INSTRUMENT FOR CEMENT ANALYSIS OF CONCRETE	F. F. Berry J. D. Ball T. Purvis Austin, Tex.	12/7/71	3,629,070	813,689(60)	TEMPERATURE ACTIVATED REACTOR CORE CLAMP	R. S. Stankevicius Hillington, Conn.	12/21/71
3,626,184	16,802(70)	DETECTOR SYSTEM FOR A SCANNING ELECTRON MICROSCOPE	A. V. Crews Palos Park, Ill.	12/7/71	3,629,132	799,112(60)	PROCESS FOR SEPARATING SPECIFIC RADIONUCLIDES, SINGLE OR MULTIPLE, FROM A MEDIUM OF RADIOACTIVE ELEMENTS	C. J. Maletakis Cilwell, Mass. C. W. Tang Cambridge, Mass.	12/21/71
3,626,305	794,314(60)	HIGH ENERGY ION ACCELERATOR	H. P. Furth M. E. Rosenbluth Princeton, N.J.	12/7/71	3,629,133	814,311(60)	PRODUCTION OF FREEDOM-IONIC CRYSTALLINE SOLS OF URANIA	J. F. McBride Oak Ridge, Tenn. K. E. McCorkle Fossil, Tenn. W. L. Pettison Knoxville, Tenn.	12/21/71
3,626,404	797,765(60)	THREE DIMENSIONAL DISPLAY SYSTEM	D. Oshir East Patchogue, N.Y. B. J. Shepard San Jose, Calif. R. J. Spurred Santa Monica, Calif.	12/7/71	3,629,134	814,523(60)	METHOD OF MAINTAINING VARIABLE DENSITY DISSOLVER SOLUTIONS CRITICALLY SAFE	T. W. Rhoads Idaho Falls, Idaho	12/21/71
3,627,041	32,678(70)	GAS RECOVERY SYSTEM	R. A. Beckman Castro Valley, Calif.	12/14/71	3,629,135	766,653(60)	METHOD OF DISSOLVING RADIOACTIVE CONTAMINATED ORGANIC ION EXCHANGE RESINS	M. W. Wilding Idaho Falls, Idaho	12/21/71
3,627,479	766,438(60)	CHEMICAL-ELECTRO-CHEMICAL CYCLE FOR DESALINATION OF WATER	W. C. Yee Oak Ridge, Tenn.	12/14/71	3,629,138	867,095(60)	METHOD FOR EXCHANGING CATIONIC IONS IN ACTIVATED OXIDE SOLS	I. L. Thomas Oak Ridge, Tenn.	12/21/71
3,627,487	868,494(60)	PROCESS FOR ENRICHING CARBON-13	B. E. Jepson Dayton, Ohio	12/14/71	3,630,942	799,905(60)	REMOVAL OF ORGANIC IODINE FROM RADIO-IODINE-COULDAING ADSORPTIVES	R. A. Soliano W. T. Ward Oak Ridge, Tenn.	12/21/71
3,627,654	878,197(60)	ELECTROLYTIC PROCESS FOR CLEANING HIGH-CARBON STEELS	G. S. Pettit R. H. Wright Oak Ridge, Tenn.	12/14/71	3,625,767	895,751(60)	TERMINAL BATTERY	R. P. Clark K. E. Grothaus Albuquerque, N. Mex.	12/7/71
3,627,691	1,484(70)	METHOD OF PREPARING A CALIFORNIUM-252 NEUTRON SOURCE	A. E. Boulogne J. P. Parsel Albion, S.C.	12/14/71	3,625,818	730,202(60)	FLEXIBLE CORE REACTOR	R. C. Ross Armonk, N.Y. G. Breidenbach New York, N.Y.	12/7/71
3,629,061	824,926(60)	FUEL SUBASSEMBLY FOR NUCLEAR REACTOR	R. C. Hayes Hartford, Conn. M. C. Andrews Huntington, Conn.	12/21/71					
3,629,062	823,704(60)	TRANSFER MACHINE FOR NUCLEAR REACTOR	E. O. Mueschow Avon, Conn.	12/21/71					
3,629,065	844,041(60)	APPARATUS FOR IMPREGATING PAPER DENSITY IN A BOILING LIQUID NUCLEAR REACTOR	W. M. Knox Schenectady, N.Y.	12/21/71					

[FR Doc. 73-18204 Filed 9-4-73; 8:45 am]