

(d) The Board may, after notice and hearing, remove any point from the list of eligible small communities. In determining whether a community should be removed from the list, the Board shall consider, among other things, the level of traffic generated by the community and its future traffic generating potential, the cost to the Government of providing service, and the degree to which access by the community to the Nation's transportation system is otherwise available.

(e) No certificate of public convenience and necessity issued pursuant to section 401 of this title, shall be required as a condition to the provision of service and receipt of compensation pursuant to this section; and no air transportation compensated under this section shall be eligible for compensation pursuant to section 406(b)(3) of this title.

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PART V



**ENVIRONMENTAL
PROTECTION
AGENCY**

■
**POLYCHLORINATED
BIPHENYLS (PCBS)**

Toxic Substances Control

ENVIRONMENTAL PROTECTION AGENCY

[40 CFR Part 761]

[FRL 722-3; OTS-068005]

POLYCHLORINATED BIPHENYLS (PCBS)

Toxic Substances Control

AGENCY: Environmental Protection Agency.

ACTION: Proposed Rule pursuant to the authority of section 6(e)(1), The Toxic Substances Control Act (Pub. L. 94-469; 90 Stat. 2003; 15 U.S.C. 2601, et seq., hereinafter referred to as TSCA). Provide an opportunity for Informal Hearing pursuant to the Authority of section 6(c)(2) and 6(e)(4), TSCA.

SUMMARY: These proposed regulations prescribe disposal and marking requirements for polychlorinated biphenyls (PCBs) and articles and equipment which contain PCBs. Newly manufactured PCBs, PCB articles, and PCB equipment, as well as PCBs, PCB articles, and PCB equipment presently in use, are covered by these requirements. Section 6(e) of TSCA requires the promulgation of rules prescribing marking and disposal of PCBs by July 1, 1977. The intent of these regulations is to protect the environment from further contamination by PCBs resulting from improper handling and use and from release of PCBs to the environment following disposal.

HEARING PROCEDURE AND DATES: In order to promulgate this rule as close as possible to the deadline set by TSCA, the following compressed schedule for comments and informal hearing is necessary. To the extent specific changes are not set forth below, the proposed procedures for rulemaking under section 6 of TSCA, (40 CFR Part 750) 42 FR 20640 (April 21, 1977), will govern.

Comments on these proposed regulations must be received by EPA prior to the close of business on June 22, 1977. The informal hearing on these proposed regulations will begin at 10:00 a.m. on June 24, 1977, in room 3906, EPA Headquarters, 401 M Street, SW., Washington, D.C. 20460. Requests for participation in the informal hearing must be received by EPA prior to the close of business on June 14, 1977.

All requests for cross-examination must be received by the Hearing Clerk within two days after the completion of the legislative part of the informal hearing. Requests for cross-examination will be acted on by EPA as soon as possible and not later than the deadline in the proposed regulations of one week after receipt. The cross-examinations granted by EPA will begin as soon as possible thereafter. All reply comments must be received by EPA prior to the close of business on the fifth working day after the last day of cross-examination.

Rules on funding public participation in the hearings related to this rulemaking will be published in the FEDERAL REGISTER shortly. These rules will be based on section 6(a)(4) of TSCA.

INFORMATION CONTACT:

David E. Wagner, Office of Toxic Substances (WH-557), Environmental Protection Agency, 401 M Street, SW., Washington, D.C. 20460, 202-426-9000. Joni T. Repasch is the Record and Hearing Clerk for this rulemaking. The official record of rulemaking is located in Room 725 WSME, EPA Headquarters, 401 M Street, SW., Washington, D.C. 20460, 202-426-9000, available for viewing and copying from 9 a.m. to 4 p.m., Monday through Friday excluding holidays. Hearing transcripts and other hearing material shall be added to the record as soon as feasible after they become available.

SUPPLEMENTARY INFORMATION: A support document titled, "PCB Marking and Disposal Regulations—Support Document," is available. Mrs. Joni T. Repasch, Room 713 WSME, 401 M Street, S.W., Washington, D.C. 20460, Telephone 202-426-9000, can provide information on obtaining copies of the document. This document contains PCB background information, PCB effects information, economic analyses of regulatory action, regulatory support information, and the list of documents contained in the official record of rulemaking.

Comments on these proposed regulations must be received by EPA prior to the close of business on June 22, 1977, and should be sent to the Environmental Protection Agency, Office of Toxic Substances (WH-557), 401 M Street, SW., Washington, D.C. 20460, Attn: Joni T. Repasch.

LEGAL AUTHORITY

Section 6(e) of TSCA states, "Polychlorinated Biphenyls

"(1) Within six months after the effective date of this Act the Administrator shall promulgate rules to

(A) Prescribe methods for the disposal of polychlorinated biphenyls, and

(B) require polychlorinated biphenyls to be marked with clear and adequate warnings and instructions with respect to their processing, distribution in commerce, use, or disposal or with respect to any combination of such activities.

Requirements prescribed by rules under this paragraph shall be consistent with the requirements of paragraphs (2) and (3).

Paragraphs (2) and (3) apply to bans on manufacturing, processing, and distributing in commerce and will be addressed at a later date. The definitions of polychlorinated biphenyls contained herein are consistent with definitions that EPA intends to use for rulemaking under paragraphs (2) and (3).

The legal authority contained in the Resource Conservation and Recovery Act (RCRA), Pub. L. 94-580, has not been used in the regulation. However, RCRA requires that by April 21, 1978, EPA identify hazardous wastes; establish a permit system for treatment, storage, and disposal of hazardous waste; and establish a manifest system for the disposition of wastes, as well as monitoring and recordkeeping requirements for hazardous waste management

facilities. Thus, PCB-containing solid wastes that meet the criteria for "hazardous waste" may also be subject to broader regulations being developed under RCRA. If conflicts arise between the RCRA and TSCA approaches, the TSCA regulation could be amended or an exception to RCRA requirements could be granted.

DISCUSSION OF THE RULE:

BACKGROUND

Polychlorinated biphenyls (PCBs) are mixtures of the chemical compounds formed by the chemical bond of two benzene molecules into a biphenyl molecule with varying numbers of chlorine atoms attached to the biphenyl molecule. PCBs are among the most stable organic compounds known and exhibit other properties that render them useful as dielectric and heat transfer fluids. PCBs are currently used primarily in capacitors and transformers. They are also used in investment casting waxes and in the cooling systems of mining machinery.

Of the roughly 1.25 billion pounds of PCBs introduced into commerce in the United States since 1929, only 55 million pounds have been destroyed by incineration or by degradation in the environment. 290 million pounds are under varying degrees of control in landfills and dumps, and 150 million pounds are free in the environment. 758 million pounds are currently in service.

Of the approximately 758 million pounds currently in service, 750 million pounds are in electrical transformers and capacitors as follows:

Transformers—140,000 items totalling 300,000,000 pounds of PCBs
 Large high voltage capacitors—8,000,000 items totalling 200,000,000 pounds of PCBs
 Large low voltage capacitors—20,000,000 items totalling 200,000,000 pounds of PCBs
 Small capacitors for highway lighting—25,000,000 items totalling 50,000,000 pounds of PCBs
 Small capacitors in small appliances—50,000,000 items totalling 50,000,000 pounds of PCBs
 Small capacitors in fluorescent light ballasts—800,000,000 items totalling 80,000,000 pounds of PCBs.

The transformers have a 40-year average life, and the other items have a 15- to 20-year average life. The relatively long life of these items will result in an equally long time period during which disposal of PCBs will be required.

Although PCBs have long been known to be extremely toxic, only in recent years have they been acknowledged to be a general threat to the environment. They have been found in significant concentrations in waterways and sediments throughout the world. They are a widely spread contaminant of fish and wildlife resources. Recently, they have been identified in the milk of nursing mothers throughout the United States.

PUBLIC PARTICIPATION IN THE DEVELOPMENT OF THE REGULATIONS

On December 20, 1976, a public panel meeting was held and representatives of key public and private organizations

were invited to participate in a discussion on the primary issues involved in these regulations. A notice of this meeting was published in the FEDERAL REGISTER prior to the meeting. (See 41 FR 536921, December 8, 1976). On January 24, 1977, a public meeting was held on the development of these regulations and any interested person could request time to speak on any matter related to the regulations. A FEDERAL REGISTER notice (FR 3701 January 19, 1977) was published prior to the public meeting which contains a discussion of key issues and requested public comment on those issues.

GENERAL DEFINITION

The definitions of "Administrator", "Agency", "chemical substance", "distribute in commerce", "manufacture", and "process" are identical to the definitions of these terms in TSCA. The definitions of "mixture" and "person" are taken from the definitions in the proposed regulation 40 CFR Part 700, Toxic Substances Control, General Provisions.

CHEMICAL STRUCTURES INCLUDED IN DEFINITION OF PCBs

"PCB chemical substances" are defined as chemical substances which are limited to the biphenyl molecule that has been chlorinated to varying degrees. This definition is the basic building block for defining other forms of PCBs. Any modification other than chlorination to the molecule is sufficient to remove the resultant molecule from classification as a PCB.

One option considered was to broaden the definition of PCB chemical substances by altering the definition to read " * * * any chemical substance which includes the biphenyl molecule which has been chlorinated to varying degrees * * * ". Such a broadening would include substances that have been altered by chemical reactions such as bromination, ammoniation, or hydroxylation. This would include a number of chemicals widely used in industry such as dichlorobenzidine, chloroterphenyls, and chlorinated solvents. This option is not proposed at this time because additional investigation is needed to determine the complete scope of chemical substances that would be included. Additionally, a more complete understanding of health, environmental, and economic effects of an expanded definition is necessary.

PCB MIXTURES, WASTE MATERIALS, AND SLUDGES

"PCB mixture" are defined to mean mixtures, except sludges from municipal sewage treatment facilities, that contain 0.05 percent or greater of PCB chemical substances (on a dry weight basis). The definition for PCB mixtures covers mixtures that will be found in commercial applications and as waste materials. Transformer coolants and liquid dielectrics such as Askarels may be a blend of several PCB chemical substances and may contain solvents such as trichlorobenzene. The resulting mixture is then the chemical to which these

regulations apply. These commercial fluids always contain a concentration of PCB chemical substances well above the 0.05 percent level. Dielectric liquids in capacitors usually contain 99 percent PCB chemical substances, and the PCB coolant fluids in transformers range from 60 to 99 percent PCB chemical substances. Other commercial chemicals such as chlorinated solvents and polychlorinated terphenyls also contain PCB chemical substances as byproducts of the manufacture of these chemicals. Polychlorinated terphenyls are reported to contain from 0.5 to 5 percent PCB chemical substances,¹ and hexachlorobenzene may have a PCB chemical substance concentration of 0.4 percent or higher. As a consequence, the disposal of these chemicals would have to meet the conditions of this regulation. Another group of PCB mixtures are waste materials. This group includes chemical substances and mixtures that become contaminated with PCB chemical substances as a result of commercial uses of PCB chemical substances and PCB mixtures, incidental exposure to PCB chemical substances and PCB mixtures during commercial activities, and environmental exposure to PCB chemical substances and PCB mixtures as a result of accidents and spills. Examples of such waste material include contaminated solvents used in cleaning operations, contaminated dielectric liquids used as substitutes in PCB electrical articles previously containing PCB mixtures, contaminated machinery and equipment used in PCB activities, contaminated rags and clothing, and contaminated soils, gravel, or paving materials.

The level of 0.05 percent or 500 parts per million was selected because it draws a line between those commercial products which are generally called PCBs and used as such and other widely used commercial products which may contain PCBs produced as a side effect of the manufacturing process. Though these latter chemicals may eventually require regulation, their commercial uses and essentiality have not been adequately reviewed at this time. Accordingly they have been omitted from this regulation without prejudice to their possible regulation at some later date. Some parties believe that wastes with very low levels of PCBs may present risks and should be regulated as PCBs. However, present knowledge of the dimensions of the waste problem is fragmented. Many of the wastes of concern are not recognized primarily as PCB wastes, but rather as waste oils (contaminated with PCBs) or industrial sludges containing PCBs. Accordingly, at the present, wastes are being regulated on the same basis as commercial products. Comments on this approach are particularly invited.

Later this year, when additional regulations are proposed limiting the manufacturing, processing, and use of PCBs,

¹ USEP-OTS, "PCBs in the United States: Industrial Use and Environmental Distribution." Feb. 25, 1976, Versar, Inc.

it may be possible to distinguish more clearly when an item or material becomes a waste. Additionally, regulations being developed under the Resource Conservation and Recovery Act (RCRA), Pub. L. 94-580, will also refine waste materials. A possible consequence of these later regulations may be to lower the concentration of PCBs in the definition of waste materials. In the interim care must continue to be exercised in disposal of waste materials with lowered levels of PCB concentrations to avoid violating any water or air standards. Current water discharge standards for PCBs are very stringent ranging from zero discharge for capacitor and transformer manufacturing to one part per billion for other discharges.

Some mixtures that may contain more than 500 parts per million PCB chemical substances will not be affected by these regulations until their use is altered. For example, this regulation would not require that bottom sediments in rivers and harbors be removed from the watercourses. If they are removed for any reason such as dredging or excavation, the disposal of these sediments would have to meet the disposal provisions of this regulation. Similar considerations apply to contaminated soils.

In general, municipal sewage sludges seldom have contamination levels over 500 parts per million and, therefore, will not be affected by this regulation. Environmental management of these sludges is possible under a variety of Federal and State regulatory programs, and the effective integration of these programs is considered to be the most desirable approach to control this problem.

With regard to spills, more stringent requirements may be stipulated during a spill by spill-control personnel using other legislative and regulatory authority such as the Federal Water Pollution Control Act (Pub. L. 92-500) and the Safe Drinking Water Act (Pub. L. 93-523). Later regulations under TSCA or RCRA could also lower the concentrations limits that would be applicable to spills.

PERSONS AFFECTED BY THE REGULATION

The regulation applies to all persons who manufacture, process, distribute in commerce, use, or dispose of PCBs. Since persons include local, state, and Federal governments, the applicability is very broad.

Some of the most common commercial enterprises and activities that will be subject to the regulations are electric power utilities which operate PCB transformers and large capacitors, owners of buildings and industrial facilities that use PCB transformers and large capacitors, highway departments and industrial facilities that use special high intensity lighting systems, service shops that repair small appliances with PCB capacitors, service shops that repair and refill PCB transformers. Other categories of affected commercial enterprises include manufacturers that produce new electrical items containing PCBs and owners and

operators of facilities used to store or dispose of waste PCBs.

USING THE REGULATION

PCBs have been widely used, and, as a consequence, are present in a wide variety of commercial products and waste materials. This regulation has developed a set of definitions to carefully define and categorize the most significant forms of PCBs. Since PCBs are a complex chemical and many of the articles and equipment in which they are used are also complex, the resulting definitions and regulatory requirements should be carefully examined. In addition, the disposal methods for PCBs, notably incineration and chemical waste landfills, are sophisticated processes that must be designed and operated in accordance with precise specifications to insure adequate environmental protection. For these reasons, the language used is somewhat complex. However, suggestions for improvements would be especially welcome.

The regulation contains three primary parts: Definitions, requirements for disposal and marking, and annexes which provide detailed specifications concerning required actions. Later sections of the preamble discuss some of the key provisions of the regulation.

Since electrical items use the majority of PCBs, all owners or operators of buildings or industrial facilities should examine their electrical systems. If transformers are present, manufacturer's literature, old markings, or other information may be available to assist in determining whether they contain PCBs. PCB transformers are often used in indoor applications or other situations where fire is a concern. A sample of the contents might be analyzed to determine the presence of PCBs. If there is a question about the contents, it would seem prudent to assume PCBs are present and to handle the transformer accordingly. Large high voltage capacitors are used mostly by electric utilities which will probably be aware of the presence of PCBs. However, large low voltage capacitors are often used in buildings and industrial operations for power factor corrections to conserve energy by providing more efficient use of power. Many commercial building owners or operators may not be aware of the presence of these capacitors unless they consult their electricians or electric utilities.

Outdoor area lighting systems such as those maintained by highway departments, public utilities, and industrial complexes may contain PCB capacitors. Public transit systems using electrically powered rolling stock often have PCB transformers and capacitors in use at fixed facilities as well as on the rolling stock.

Electrical service operations such as appliance repair will encounter small PCB capacitors in electrical equipment such as microwave ovens, air conditioners, and certain brands of television sets. Other service operations such as transformer repair shops will have transformers and containers of liquid PCBs. Con-

tainers of liquid PCBs may also be present at public utility or public transit facilities. Waste oil handlers may have oils contaminated with PCBs, and only a competent analytical procedure will verify the concentration of PCBs present.

If PCBs are present, the definitions of PCBs in the regulation should be examined to determine the appropriate PCB category. If the PCBs are in transformers or capacitors, then they are PCB articles. If they are in containers of PCB liquids they are probably defined as PCB mixtures. Pure PCB chemical substances are rarely found in commercial applications. Therefore, PCB mixtures usually become the working definition. If the PCBs are present in air conditioners, microwave ovens, or television sets, then these items will be categorized as PCB equipment.

Having determined the appropriate categorization, the disposal and marking requirements in Subpart B and C should be consulted to determine appropriate disposal or marking action. For example, the contents of a container of liquid PCB mixture must be incinerated as stated in § 761.10(b) (1) of Disposal Requirements; the container must be marked with a warning mark as stated in § 761.20(a) (3) of Marking Requirements; and the empty container must be disposed of as stated in § 761.10(e) of Disposal Requirements. Since a PCB transformer or capacitor is defined as a "PCB article," a person disposing of them would refer to § 761.10(c) "PCB Articles" of Disposal Requirements for appropriate instructions. Likewise, if a spill of PCB's occurs, § 761.10(f) Spills would be examined for instructions. When incineration is required under the Disposal Requirements, the incinerator will have to meet the technical requirements of Annex II, § 761.40. The owner or operator of an incinerator must be familiar with Annex I in detail and obtain all of the necessary approvals. To meet the marking requirements, the person responsible for the container would have to review Annex V, § 761.44 to determine the form and size of the marking. When he obtained the proper markings, he would apply them as directed under § 761.20, Marking Requirements, and not have to refer to Annex V until he needed to procure more markings. If storage is required during the disposal phase or if chemical waste landfills are used for disposal, then Annex III, § 761.42, and Annex II, § 761.41, respectively, would have to be examined for specific information on performing those actions. Annex IV, § 761.43, must be consulted if decontamination procedures are to be performed.

Annex VI, § 761.45, Records and Monitoring, is quite broad in its application, as it affects some persons with PCBs in service and all persons who own or operate storage or disposal facilities.

SPECIAL PRECAUTIONS FOR WORKERS

This regulation requires many handling and processing steps in the marking and disposal of PCBs which may re-

sult in exposure of workers to PCBs, particularly when leaking containers, electrical articles, or spills are encountered. Special precautions should be taken to avoid skin contact and ingestion of the PCB chemicals. Proper protective clothing and protective breathing devices are essential. Personal decontamination by actions such as hand washing and removal of contaminated clothing is necessary before eating or smoking.

ARTICLES, CONTAINERS, AND EQUIPMENT

Because of the wide commercial distribution of PCBs, it is necessary to include within these regulations other articles which may have come into contact with PCB chemicals and been contaminated by them. It is also necessary to include other articles of commerce that may not be contaminated but are in integral part of commercial activity involving PCBs.

"PCB article" includes any manufactured item other than PCB containers whose surfaces have been in direct contact with PCB chemical substances or PCB mixtures. The definition includes commercial products such as electrical capacitors and transformers that have liquid PCB chemical substances and PCB mixtures contained within the internal mechanisms as a functioning part of the electrical device. Other examples of PCB articles are piping, pumps, radiators, and other components of heat transfer systems and electric motors that use PCB chemical substances and PCB mixtures as an internal coolant.

"PCB container" means any package, can, bottle, bag, barrel, drum, tank, box, or other device used to contain PCB chemical substances, PCB mixtures, or leaking PCB articles. The definition includes devices that have PCB chemical substances or PCB mixtures in direct contact with the internal or external surfaces of the device but where the PCB chemical substances or mixtures are not performing any function by being in the device. The device simply contains PCB chemical substances or mixtures. This differs from a PCB article where the PCB chemical substances or PCB mixtures are essential to the proper functioning of the article. A separate definition for containers is necessary to facilitate the incorporation of specifications for container integrity, decontamination, and marking.

"PCB article container" means any package, can, bottle, bag, barrel, drum, tank, box or other device used to contain PCB articles. This includes containers used to package or protect PCB articles that are intact and not releasing PCB chemical substances or mixtures from the internal enclosure of the article. Thus, PCB article containers do not have PCB chemical substances or PCB mixtures on the surfaces of the container and, when the PCB article is removed from the PCB article container, the container no longer requires special marking, handling, or disposal. Buildings are not considered to be article containers.

"PCB equipment" means manufactured items, other than a PCB container or a PCB article container, that contain PCB articles. PCB equipment would contain PCB articles only because the articles were performing a function in the equipment. Examples of PCB equipment are television sets, microwave ovens, high intensity lights, and fluorescent light fixtures that use a PCB article such as a capacitor containing PCBs. The distinction between PCB equipment and PCB articles is necessary to adjust the marking and disposal requirements for PCB equipment and PCB articles in a manner that provides adequate control in the least burdensome manner.

The phrases "PCB" and "PCBs" mean one or more of the following: "PCB chemical substance", "PCB mixture", "PCB article", "PCB container," and "PCB equipment." This definition is included only to provide an abbreviated reference to the different forms of PCBs.

ELECTRICAL ARTICLES AND EQUIPMENT

Several categories of electrical capacitors are defined to facilitate the application of different requirements for marking and disposal. Large capacitors contain three pounds or more of dielectric, and small capacitors contain less than three pounds. This breakpoint was selected because freestanding capacitors used in electrical distribution systems always contain three pounds or more, and capacitors with less than three pounds are usually found as a component within some other item of electrical equipment. The State of Michigan uses the same breakpoint in its definitions. The large capacitors are further broken down between low voltage (less than 2000 volts a.c.) and high voltage (2000 volts a.c. or greater). The high voltage capacitors are used almost exclusively within the electric utility industry as a power factor correcting device in electrical distribution systems. Therefore, any regulatory control for large high voltage capacitors involves principally the electric utility industry.

Large low voltage capacitors are used as power factor correcting capacitors within many large buildings and are often owned by the building owners. The only categorization of small capacitors is for HID capacitors, which are capacitors used in a high intensity discharge lighting fixture, such as along highways and in industrial lighting systems.

Fluorescent light ballasts which contain small capacitors are specialized items of electrical equipment used in fluorescent light fixtures. Almost all of these capacitors contain PCB chemical substances or PCB mixtures as a dielectric. Approximately ninety-five percent of the 800 million fluorescent light ballasts currently in service are used in commercial and industrial buildings including apartment buildings. The remaining five percent are in private residential units.

DEFINITION OF DISPOSAL

Disposal is defined very broadly to include any action that may be related to the ultimate disposition of a substance, article, or mixture. An accidental or intentional release of PCB chemical substances or mixtures to the environment, including spills, is considered to be an act of disposal. In almost all cases, this type of disposal action would not be in compliance with the methods proposed in the regulation. As noted above, a spill would be classified as improper disposal under this regulation. This does not preclude any actions that could be taken under the provisions of the Federal Water Pollution Control Act (Pub. L. 92-500) for spills.

DEFINITION OF TRANSPORT VEHICLE

Transport vehicles are considered to be motor vehicles or railcars used to transport cargo. If this cargo contains PCBs as defined in these regulations, then special marking requirements apply. However, the marking or labeling requirements apply only when PCBs are being carried on the transport vehicle as cargo. A PCB transformer used on an electric locomotive, for example, would not result in the locomotive being considered as a transport vehicle. The application of warning placards to trucks and railcars and the operation of self-powered vessels, barges, and aircraft carrying toxic materials is under the jurisdiction of the Department of Transportation (DOT). DOT is presently considering regulations covering the transport of various environmentally hazardous materials including PCBs. Therefore, the Agency does not believe that this regulation is the appropriate instrument to initiate a totally new kind of marking requirement within the transportation industry.

METHODS OF DISPOSAL

High temperature incineration is the primary disposal method for PCBs. This disposal method is the only technique that will result in the destruction of PCBs and prevent the eventual escape of the chemical to the environment. Properly operated chemical waste landfills may provide an element of security for the containment of PCBs for long periods of time, but the ultimate fate of PCBs using this disposal method is unknown.

EPA recognizes that in some cases accidental spills and other losses to the environment from incineration operations might release more PCBs than careful chemical waste landfill operations. The proposed approach also relies on improving the incineration of PCB articles, particularly capacitors. Nevertheless, EPA proposes to rely primarily on incineration for PCB disposal. The Agency especially invites comments on this issue.

Existing disposal practices are a combination of the two methods, with some liquid PCBs being destroyed by high temperature incineration and some PCB articles and PCB mixtures being disposed of in chemical waste landfills.³ In addition,

some liquid PCBs are also being sent to chemical waste landfills, particularly in California.² The remaining PCBs are either being sent to municipal solid waste disposal systems or are being disposed of in industry operated facilities that are analogous to municipal solid waste systems.²

All PCB chemical substances, PCB mixtures, PCB articles, and PCB containers are to be disposed of by high temperature incineration with the following exceptions:

(A) PCB transformers that have had the liquid PCB chemical substances and mixtures drained from them, in such a manner that no more than two percent of the original volume of dielectric liquid measured to the manufacturers recommended fill line remains in the transformer, may be disposed of in a chemical waste landfill. This exception is necessary because of the large size of electrical transformers that makes it impossible to fit the transformer into an incinerator unless a major demolition of the transformer is first undertaken. If the transformers are carefully drained, hazards related to this disposal method should be minimal. If the transformer is not drained sufficiently to meet the criterion, then the transformer must be either incinerated or stored under the provisions of the regulation until the transformer can be successfully drained.

(B) Until July 1, 1979, approved chemical waste landfills may be used for the disposal of non-liquid PCB mixtures in the form of contaminated soil, incineration residues, sludges, dredge spoil, rags, and other contaminated debris. Approved chemical waste landfills may also be used for the disposal of PCB articles such as PCB capacitors and other PCB articles (e.g., special electric motors and hydraulic systems). This period of use for chemical waste landfills should help provide an orderly transition of disposal practices as well as allowing time for the design and the construction of adequate incineration facilities. All of the chemical waste landfills used for PCB disposal will be required to meet the landfill requirements in this regulation and any applicable RCRA regulations when they are promulgated.

(C) Small PCB capacitors that are used in private housing units and are discarded by the occupants of these housing units are exempted from the regulation in view of the practical difficulties in attempting to channel these items to incineration facilities or chemical landfills. This means that the article can be placed into the normal trash collection system used by the occupants. Usually the refuse will then be deposited in either sanitary landfills or municipal incinerators. Minimal environmental risk should result from the small quantity of PCBs that would result from the random discarding of such items by private householders.

² USEPA-OTS, "Microeconomic Impacts of the Proposed Marking and Disposal Regulations for PCBs," April 1977, Versar, Inc.

SPECIAL DISPOSAL PROBLEMS FOR WIDELY DISTRIBUTED ARTICLES

An extremely difficult regulatory problem is created by the fact that one-third of the PCBs in service (250 million pounds) are distributed widely across the country in large low voltage capacitors in buildings and large electrical equipment, in small capacitors for highway lighting, in small capacitors in appliances, and in small capacitors in fluorescent light ballasts. These PCBs are in 895 million individual capacitor units, of which 800 million units alone are in the fluorescent light ballast category.

An additional 290 million pounds of PCBs are in landfills and dumps, including 110 million pounds in capacitor and transformer production wastes, 100 million pounds in miscellaneous waste papers and plastics, and 80 million pounds in discarded electrical articles.

The current problems associated with PCBs arise from the 150 million pounds now present in the environment. Some proportion of the 290 million pounds in landfills and dumps could eventually be released to the environment. Similarly, if no controls are placed on the future disposal of large low voltage and small capacitors, some amount up to an additional 250 million pounds of PCBs could be added. Thus, up to 540 million pounds of PCB could potentially be released to the environment. The rate of release of these PCBs is unknown.

With respect to 250 million pounds of PCBs in service in capacitors, EPA faces a dilemma. On the one hand, the Agency believes that there would be an environmental risk if no control is exercised on these sources, in particular the disposal of large low voltage and small capacitors. On the other hand, the control problems are extremely difficult given the wide distribution of these PCB-containing articles in our society. Additionally, controls applied through a regulatory program would be difficult to enforce. Imaginative approaches are needed to channel these capacitors, when their useful life is finished, toward proper disposal facilities. A variety of options seem possible, ranging across a spectrum of regulatory and nonregulatory approaches.

For those capacitors handled by repair shops and commercial building maintenance service firms, environmentally sound disposal might be induced by an effective education and information program. Backed by some incentive stimulus, the education and information program could be jointly developed by trade organizations and the Agency.

One innovative example of Federal stimulus could be the establishment of a "bounty" program whereby a payment could be provided for capacitors brought to special collection points. Such a program would probably require legislative authority as well as a careful study to determine potential effectiveness.

For capacitors within private homes, a strong education and information program is also a necessity. However, for these capacitors, as well as for the other small units, an effective system of collection and transfer points must be set

up to assure completion of the trip from the original location of the capacitor to an approved disposal site.

If strong regulation is required, several regulatory options can be considered. By way of example, four options applicable to fluorescent light ballasts were reviewed.

One option was to require high temperature incineration for ballasts from "large" buildings defined by the square footage of the building. The option was not selected because a clear breakpoint between large and small buildings was not apparent. A series of small buildings under the control of a single management organization could establish a collection and disposal program as readily as one could be established based on building size, but a clear rationale on the appropriate size of a management organization was not apparent.

Building demolition contractors are another source of ballasts, and a second option to place controls on these contractors was also considered. This option was not adopted because of the need to categorize large and small contractors and the expected difficulty in successfully removing fixtures prior to demolition.

A third option was to require all ballasts to go to high temperature incineration except for those used in private residences. This option would reduce any confusion on applicability and would account for a substantial quantity of PCBs. However, effective enforcement would be difficult since approximately 1,000,000 persons would be affected by the requirement.

A fourth option is to exempt ballasts from any special disposal requirements, but include in the regulation a note which encourages persons to collect and dispose of ballasts in chemical waste landfills or high temperature incinerators. This option was adopted for the proposed regulation.

In summary, the proposed regulation proposes to regulate most capacitors other than fluorescent light ballasts. However, the Agency has some reservations about the practicality and enforceability of its regulatory proposals for large low voltage and small capacitors. The Agency therefore especially solicits comments on these proposals and on alternatives that could help to deal effectively with the problem of wide distribution of PCB-containing capacitors and lead toward effective control of the risks associated with capacitor disposal.

STANDARDS FOR INCINERATION OF PCB'S

Proper incineration of PCBs involves a suitable balance among combustion temperatures in the incinerator, dwell time of the waste materials and combustion products in the firing chamber, and oxygen exposure. Investigations into incineration requirements by industry and government representatives under the auspices of the American National Standards Institute (ANSI)^{*} resulted in

^{*}ANSI. "American National Standard Guidelines for Handling and Disposal of Capacitor- and Transformer-Grade Askarels Containing Biphenyls," ANSI-C107.1-1974.

ANSI recommendations for the incineration of liquid PCB chemical substances and mixtures. These recommendations have been adopted in this regulation.

Since hydrochloric acid mist is formed in the combustion process, suitable measures must be taken to adequately remove the acid from the exhaust gases. If a water scrubber is used, its effluent may contain low levels of PCBs and can be treated using available carbon adsorption technology.

Since June 1971, the Monsanto Company has operated a liquid injection incinerator to dispose of liquid waste and contaminated PCBs. This experience tends to reinforce the soundness of the approach proposed in this regulation.

The incineration of solid forms of PCBs is currently being undertaken by EPA programs and includes the incineration of PCB capacitors and PCB equipment using both a crushing operation prior to incineration and incineration of intact articles. Early results clearly indicate the feasibility of the technique, including effective destruction. The technologies involved are well demonstrated, and the principal task is adapting them to a new use. In addition, the Agency believes that, in response to this regulation, industry will continue to push technical progress in the direction necessary for proper environmental protection. Solid residues from the incineration of PCB solids may contain residual quantities of PCBs that can range from very low levels up to several hundred parts per million. However, the EPA has not determined what disposal requirements (if any) for these residues should be established in order to provide adequate environmental protection. Public comment is especially invited on this matter.

To provide an approval process for liquid and solid waste PCB incinerators, the EPA Regional Administrator will be required to authorize an initial monitoring and review of a trial burn at the incinerator to include the sampling and analyses of at least eight basic air emission parameters. Other parameters may be required by the Regional Administrator if, in his judgment, they are needed to adequately evaluate any incinerator proposed for the incineration of PCBs.

Also, in the review and approval process for PCB incinerators, requirements may be issued by the Regional Administrator for the periodic monitoring of any parameters on a frequency that he believes appropriate. A waste feed system will have to be employed that is capable of automatically terminating the flow of waste into the combustion system in the event that the combustion temperature or excess oxygen levels are reduced below the minimum level specified in the requirements or in the EPA facility approval. Shut down will also be required whenever malfunctions occur in continuous monitoring equipment for measuring CO₂, CO and waste feed rate.

Guidance on sampling and analytical procedures will be available at the EPA Regional Offices and at EPA Headquarters in Washington, D.C. The avail-

ability and locations of guidance documents will be announced in the FEDERAL REGISTER. The technology for incinerator emission monitoring is highly complex and in a continuing state of development. However, since the number of facilities potentially eligible to qualify as incinerators for PCBs is small, the Agency will be able to render technical advice on sampling and analytical procedures to the owners or operators of these facilities on an individual basis.

STANDARDS FOR CHEMICAL WASTE LANDFILLS

The requirements proposed in this regulation for the design and operation of a chemical waste landfill are derived chiefly from the guidelines set forth by the Texas Water Quality Board (TWQB). Considering the successful performance and the degree of specificity in the TWQB guidelines, the guidelines were considered to be an acceptable basis on which to build the requirements in this regulation. The requirements will facilitate site approvals by EPA Regional Administrators and also provide a specific basis for insuring compliance.

The Agency considered the alternative of referencing the regulations that are to be developed under RCRA. However, the time period between the promulgation of this regulation and the later date when the promulgation of the RCRA regulations are expected would allow an unacceptable gap in adequate PCB disposal and lead to considerable uncertainty concerning action for which preparations must be initiated now.

In determining the integrity of chemical waste landfills from the history of those in operation, compliance with strict design criteria and the implementation of a comprehensive leachate monitoring program have been found to be the key items. In California, Illinois, New York, and Texas, facilities approved by the States are located in such secure geologic areas that they do not overlie any usable groundwater, thus guaranteeing maximum environmental protection of groundwater. The leachate collection systems which have been designed as part of these facilities provide a means for capturing any harmful constituents that may eventually migrate to the bottom of the chemical waste landfill. The leachate is pumped back to the surface for treatment in order to provide maximum environmental protection.

Testing of water samples collected from monitoring wells and leachate collection systems is necessary to determine any failures in landfills. The presence of PCBs and chlorinated organics is to be determined; such presence would represent the most acute type of failure that could occur. Specific conductance and pH are indicator parameters that can provide early warning about the migration of polluted or contaminated waters from the landfill site. These tests must be conducted by the owner or operator.

STORING PCBs PRIOR TO DISPOSAL

Most waste PCBs are expected to be stored prior to disposal. The storage may take place at the site where the waste PCBs are generated, a remote site operated by the waste PCB generator, a remote site operated by a transporter or a waste handler, or at a site operated by an incinerator or chemical waste landfill owner or operator. The storage facilities may be used as an accumulation or distribution point for transportation or as a longer term storage facility. Recognizing the need for adequate time to construct or approve new disposal facilities, an initial period of five years will be allowed for storage before disposal must be carried out. Thereafter, any item must be disposed of within one year from the time it is designated for disposal.

Long-term storage raises concerns about deterioration of PCB articles and PCB containers as a result of weather as well as age. Therefore, requirements for storing PCBs are designed to prevent rainwater from reaching the stored items. Container specifications incorporated appropriate Department of Transportation (DOT) specifications. In addition, containers and articles are to be checked at least monthly for leaks, and leaking containers or articles are to be transferred immediately to nonleaking containers meeting the required specifications. Incoming PCB articles and containers are to be dated when they arrive at the storage facility to help insure prompt disposal.

Continuous curbing is required to provide secondary containment of any spilled liquids. The secondary containment approach draws on experience with the Oil Spill Prevention regulations developed by EPA (40 CFR Part 112), but the requirement for PCBs is more rigorous because of the potential environmental impact of PCBs. Additional requirements are provided to insure that no drains, valves, or other devices exist that could circumvent the effectiveness of the containment curbing. The floor and curbing is to be constructed of smooth and impervious Portland cement to minimize the penetration of PCBs into the floor. Insufficient information is available on other floor surfaces that would provide comparable protection to concrete.

Some PCB waste generators will accumulate only small capacitors. If the volume of waste capacitors can be contained within two 55 gallon drums, then minimum storage requirements are considered to be adequate. These minimum requirements consist of using sound, non-leaking drums and storing the drums inside a building. There is little likelihood that the small capacitors will represent a spill threat, and the inside storage will minimize any deterioration from the weather.

If PCBs are spilled in the storage area, it may be possible to contaminate areas outside the storage area by tracking PCBs from the tires of movable equipment such as forklift trucks, unless the

surfaces contacted with PCBs are decontaminated. Cleanup methods are not specified in the regulation. However, in general, wiping the affected surfaces with rags or swabs containing a solvent such as kerosene and then disposing of the contaminated rags or swabs as PCB mixtures should be adequate.

DECONTAMINATION PROCEDURES

Decontamination of selected PCB articles and containers may be desirable in order to reuse valuable containers or to reclaim recoverable metals from scrapped articles. The containers specified in the storage requirements are high quality containers that may have a useful life either for containing additional PCB waste or other commodities. Another type of high value container would be railroad tank cars or highway tank trucks used for transporting liquid PCB chemical substances or mixtures. The decontamination procedures described in the regulation for these items are based on techniques successfully used for decontaminating pesticide containers.

PCB transformers appear to be the only PCB articles with a potential salvage value. The internal electrical windings of some transformers, being copper, might be reclaimed if the internal surfaces of the transformer are adequately decontaminated to prevent secondary pollution problems from the PCBs. However, due to limited information on successful decontamination techniques for transformers, no decontamination procedure is specified in the regulation.

REQUIRED MARKINGS

The required markings are designed to contain enough information to alert someone to the presence of PCBs, provide a reference concerning disposal of the PCBs, and provide a reporting point in the event of an accident or spill. Markings must be durable enough to remain easily readable throughout the life of the article or container to which they are affixed. This requirement will probably require that some markings be made of metal and be painted. If technology does not exist for a marking which will survive for thirty or forty years, which is the useful life of many transformers, then the responsible person will be required to replace the markings from time to time.

Items which are newly manufactured or in the manufacturer's inventory and not yet distributed in commerce are required to be marked within six months. PCB containers already in use must be marked within a six-month period in view of the special risks associated with liquid PCBs.

Electric motors using PCBs as a coolant (found primarily in electrically operated mining machinery), pump fittings and lines used in hydraulic systems using PCBs as hydraulic fluids, and pumps, fittings, pipes, and other appurtenances in heat transfer systems using PCBs as a coolant, discharge some PCBs through rotating shaft seals, pump seals, and pipe fittings. These items must also

be marked within six months to provide a timely warning of possible hazards.

Because of the large number of potential transporters and the need to adequately inform them of the regulation, a nine-month period is provided for placing the large markings on transport vehicles, such as trucks and railcars.

Marking of large low voltage capacitors and high intensity discharge capacitors containing PCBs must be initiated within nine months, but the marking is required only when a servicing operation is taking place which would enable the servicing person to have ready access to the capacitor. Ready access occurs during a servicing operation, independent of the placement of the marking, and as a consequence, the servicing person can perform the marking operation without removing other accessories or articles.

Because of the large number of transformers (140,000) and large high voltage capacitors (6 million) in existence, and their geographical dispersion, the Agency is providing a twelve-month time period for marking these items. The large, high voltage capacitors have special marking requirements because of their locations. When these capacitors are located in electric substations or power generating stations, large banks of capacitors are often used. Placing a marking directly on the capacitor would require shutting off the electrical service in order to avoid hazards to workers. In normal operation, these capacitors are not deenergized for several years unless some emergency occurs. Thus, a marking approach has been proposed which would provide for the placement of a marking on the structure holding the capacitors. For each structure, a record of the location of the capacitors with PCBs would be kept with that particular structure. The vast majority of these capacitors currently use PCBs as a dielectric, but the recordkeeping function will become more important as non-PCB high voltage capacitors are put into service in the future. In order to reduce this special recordkeeping requirement, the option of placing the markings on all of the capacitors on the structure is available. A similar choice is also applicable to power poles containing PCB capacitors so that servicing personnel could place the mark on the pole at eye level, rather than climb the pole to place it or determine which capacitors contain PCBs. Thus, the marking could be read without unnecessary hazard to servicing personnel.

The requirement for marking within six months all unmarked items as they are removed from service or having the item placed immediately into a proper container that is marked should have a minimum impact on industry. Each item will be handled individually during the servicing or removal operation and the placing of a marking on the item should require little additional effort.

REQUIRED RECORDKEEPING AND REPORTS

The regulation contains requirements for recordkeeping for selected PCBs that

are projected for eventual disposal. Recordkeeping is also required for owners and operators of facilities used for the disposal and storage of waste PCBs. These reporting and recordkeeping requirements will assist the Agency in determining compliance with the regulation and should also assist owners and operators in maintaining effective inventory control and insuring timely disposal. Public comment on both the impact and usefulness of these recordkeeping requirements are especially invited.

The owners or operators are required to prepare annually documents that summarize key operations in sufficient detail to indicate when specific containers were received, transferred, or disposed of. The weight of containers and transformer contents are required to be recorded in order to assist in performing a mass balance of facility operations.

Operating and monitoring data for incinerators are required to be maintained to facilitate a later review of the adequacy of the destruction process. Chemical waste landfills will retain operating data on burial coordinates and analytical results from test wells and leachate collection systems.

Documents are also to be retained on the various facility approval actions required by the regulation as well as any State or local approval actions. While the document retention requirements are fairly broad in order to insure adequate information is retained, it is not the intent of the regulation to require the retention of obviously trivial information.

Mandatory submission of the annual summaries or other reports is not considered appropriate at this time but it could be required in any approvals granted by Regional Administrators.

SUMMARY OF ECONOMIC CONSEQUENCES

The major economic impact of the proposed regulations will apply to the owners and users of currently operating PCB capacitors and transformers. These persons will be affected by increased costs due to the special marking, disposal, and recordkeeping that will be required. The capital costs associated with compliance are expected to total \$9.1 million (\$5 million for new incineration capacity, \$0.1 million for marking, and \$4 million for storage facilities). Annual operating costs are expected to total \$58.3 million in 1978 (\$5 million for chemical waste landfill charges, \$8 million for disposal transportation, \$8 million for recordkeeping, \$33.3 million for marking, and \$4 million for maintaining storage facilities). Total annual operating costs are likely to be approximately \$61 million. However, the mix of costs will change after 1978 to \$1 million for chemical waste landfill charges, \$39 million for incineration charges, \$8 million for disposal transportation, \$4 million for recordkeeping, \$5 million for marking, and \$4 million for storage.

The regulations should result in an increase in small business opportunities and employment due to the development

of collection and storage services to reduce storage and transportation charges from numerous small generators of PCB wastes.

This notice of proposed Rulemaking is issued under authority of section 6(e) of the Toxic Substances Control Act, 15 U.S.C. section 2605(e).

Dated: May 17, 1977.

DOUGLAS M. COSTLE,
Administrator.

It is proposed to establish a new 40 CFR Part 761 to read as follows:

PART 761—POLYCHLORINATED BIPHENYLS (PCBs)

Subpart A—General

- Sec. 761.1 Applicability.
761.2 Definitions.
- Subpart B—Disposal of PCBs
761.10 Disposal requirements.
- Subpart C—Marking of PCBs
761.20 Marking requirements.
- Subpart D—[Reserved]
- Subpart E—List of Annexes
ANNEX NO. I
761.40 Incineration.
ANNEX NO. II
761.41 Chemical waste landfills.
ANNEX NO. III
761.42 Storage for disposal.
ANNEX NO. IV
761.43 Decontamination.
ANNEX NO. V
761.45 Marking formats.
ANNEX NO. VI
761.45 Records and monitoring.

AUTHORITY: Sec. 6(e), Toxic Substances Control Act, 15 U.S.C. 2605(e).

Subpart A—General

§ 761.1 Applicability.

(a) This subpart establishes procedures, methods, and other requirements for the disposal, storage, and marking of polychlorinated biphenyls (PCBs).

(b) This subpart applies to all persons who manufacture, process, distribute in commerce, use, or dispose of PCBs, including mixtures and manufactured items which contain PCBs.

(c) The basic requirements of these regulations are set forth in Subpart B—Disposal of PCBs and Subpart C—Marking of PCBs. Subpart E elaborates the requirements which are referred to in the disposal and marking sections. Definitions of words used in all of these sections are found in Subpart A. In particular, § 761.2(p)-(v) of Subpart A define "PCBs" covered by these regulations.

(d) Section 15 of the Toxic Substances Control Act (TSCA) states that failure to comply with these regulations is unlawful. Section 16 imposes liability for civil penalties upon any person who violates these regulations. Section 16 also subjects a person to criminal prosecution for a violation which is knowing or willful.

§ 761.2 Definitions.

For the purpose of this part:

(a) "Administrator" means the Administrator of the Environmental Protection Agency, or any employee of the Agency to whom the Administrator may either herein or by order delegate his authority to carry out his functions, or any person who shall by operation of law be authorized to carry out such functions.

(b) "Agency" means the United States Environmental Protection Agency.

(c) "Capacitor" means a device for accumulating and holding a charge of electricity, consisting of conducting surfaces separated by a dielectric. Types of capacitors are as follows:

(1) "Small Capacitor" means a capacitor which contains less than 1.36 kg (3 lbs.) of dielectric, except for a capacitor which is defined as an "HID Capacitor."

(2) "HID Capacitor" means a capacitor which contains less than 1.36 kg (3 lbs.) of dielectric and which is used as part of the ballast of a high intensity discharge lighting fixture (e.g., sodium vapor and mercury vapor arc lights).

(3) "Large High Voltage Capacitor" means a capacitor which contains 1.36 kg (3 lbs.) or more of dielectric and which operates at 2000 volts a.c. or above.

(4) "Large Low Voltage Capacitor" means a capacitor which contains 1.36 kg (3 lbs.) or more of dielectric and which operates below 2000 volts a.c.

(d) (1) Except as provided in subparagraph (2) of this paragraph, the term "Chemical Substance" means any organic or inorganic substance of a particular molecular identity, including:

(i) Any combination of such substances occurring in whole or part as a result of a chemical reaction or occurring in nature, and

(ii) Any element or uncombined radical.

(2) Such term does not include:

(i) Any mixture,

(ii) Any pesticide (as defined in the Federal Insecticide, Fungicide, and Rodenticide Act) when manufactured, processed, or distributed in commerce for use as a pesticide,

(iii) Tobacco or any tobacco product,

(iv) Any source material, special nuclear material, or byproduct material (as such terms are defined in the Atomic Energy Act of 1954 and regulations issued under such Act),

(v) Any article the sale of which is subject to the tax imposed by section 4181 of the Internal Revenue Code of 1954 (determined without regard to any exemptions from such tax provided by section 4182 or 4221 or any other provisions of such Code), and

(vi) Any food, food additive, drug, cosmetic, or device (as such terms are defined in section 201 of the Federal Food, Drug, and Cosmetic Act) when manufactured, processed, or distributed in commerce for use as a food, food additive, drug, cosmetic, or device.

(e) "Chemical Waste Landfill" means a landfill at which protection is provided

from PCBs deposited therein against risk of injury to health or the environment by locating, engineering, and operating such landfill so as to prevent migration of PCBs to land, water, or the atmosphere.

(f) "Commerce" means trade, traffic, transportation, or other commerce

(1) Between a place in a State and any place outside of such State, or

(2) Which affects trade, traffic, transportation, or commerce described in subparagraph (1) of this paragraph.

(g) "Disposal" means to intentionally or accidentally discard, throw away, or otherwise complete or terminate the useful life of an object or substance. Disposal includes actions related to containing, transporting, destroying, degrading, decontaminating, or confining those substances, mixtures, or articles that are being disposed.

(h) "Distribute in Commerce" and "Distribution in Commerce" when used to describe an action taken with respect to a chemical substance or mixture or article containing a substance or mixture means to sell or to transfer the ownership of the substance, mixture, or article in commerce; to introduce or deliver for introduction into commerce, or the introduction or delivery for introduction into commerce of the substance, mixture, or article; or to hold, or the holding of, the substance, mixture, or article after its introduction into commerce.

(i) "Fluorescent Light Ballast" means a device which electrically controls fluorescent light fixtures and which includes a capacitor containing 0.1 kg or less of dielectric.

(j) "Incinerator" means any installation operated for the incineration of chemical substances, mixtures, or articles.

(k) "Manufacture" means to produce, manufacture, or import into the customs territory of the United States.

(l) "Mark" means the descriptive name, instructions, cautions, or other information applied to chemical substances, mixtures, articles, containers, equipment, or other objects or activities described in these regulations.

(m) "Marked" means the permanent application of a legible mark by painting, fixation of an adhesive label, or other method.

(n) "Mixture" means any combination of two or more chemical substances if the combination does not occur in nature and is not, in whole or in part, the result of a chemical reaction. Such term does include

(1) Any combination which occurs, in whole or in part, as a result of a chemical reaction if none of the chemical substances comprising the combination is a new chemical substance and if the combination could have been manufactured for commercial purposes without a chemical reaction at the time the chemical substances comprising the combination were combined.

(2) Any combination of chemical substances which is the result of solution or hydration; and

(3) Any combination which occurs as a consequence of a reaction which may take place if a chemical substance which functions as a stabilizer, colorant, antioxidant, filler, solvent, carrier, surfactant, or plasticizer is added to another chemical substance and performs as intended.

(o) "Municipal Solid Wastes" means garbage, refuse, sludges, wastes, and other discarded materials resulting from residential and non-industrial operations and activities.

(p) "PCB" and "PCBs" mean one or more of the following: "PCB Chemical Substance", "PCB Mixture", "PCB Article", "PCB Equipment", and "PCB Container."

(q) "PCB Article" means any manufactured item, other than a PCB container, whose surface(s) has been in direct contact with a PCB chemical substance or a PCB mixture, and includes capacitors, transformers, electric motors, pumps, and pipes.

(r) "PCB Article Container" means any package, can, bottle, bag, barrel, drum, tank or other device used to contain PCB articles or PCB equipment, and whose surface(s) has not been in direct contact with a PCB chemical substance or PCB mixture.

(s) "PCB Chemical Substance" means any chemical substance which is limited to the biphenyl molecule which has been chlorinated to varying degrees, and includes substances such as Arochlors.

(t) "PCB Container" means any package, can, bottle, bag, barrel, drum, tank, or other device used to contain a PCB chemical substance, PCB mixture, or PCB article, and whose surface(s) has been in direct contact with a PCB chemical substance or PCB mixture.

(u) "PCB Equipment" means any manufactured item, other than a PCB container or a PCB article container, which contains a PCB article or other PCB equipment, and includes microwave ovens, television sets, and fluorescent light ballasts and fixtures.

(v) "PCB Mixture" means any mixture, except municipal sewage treatment sludge, which contains 0.05 percent (on a dry weight basis) or greater of a PCB chemical substance, and includes dielectrics, contaminated solvents and oils, rags, soil, paints, and debris.

(w) "Person" means any natural or juridical person including any individual, corporation, partnership, or association, any State or political subdivision thereof, any interstate body and any department, agency, or instrumentality of the Federal government.

(x) "Process" means the preparation or use of a chemical substance or mixture, after its manufacture, for distribution in commerce:

(1) In the same form or physical state as, or in a different form or physical state from, that in which it was received by the person so preparing such substance or mixture, or

(2) As part of an article containing the chemical substance or mixture.

(y) "Municipal Sewage Treatment Sludge" means the solid residue result-

ing from the treatment of municipal sewage.

(z) "Storage for Disposal" means temporary storage of PCBs that have been designated for disposal.

(aa) "Transport Vehicle" means a motor vehicle or rail car used for the transportation of cargo by any mode. Each cargo-carrying body (e.g., trailer, railroad freight car) is a separate transport vehicle.

Subpart B—Disposal of PCBs

§ 761.10 Disposal requirements.

NOTE.—These regulations do not require removal of PCBs from service and disposal earlier than would normally be the case. However, when PCBs are removed from service and disposed of, disposal must be undertaken in accordance with these regulations. Future regulations will be directed to the manufacture, processing, distribution in commerce, and use of PCBs and may result in some cases in disposal at an earlier date than would otherwise occur.

(a) **PCB chemical substances.** (1) A PCB chemical substance shall be disposed of in an incinerator which complies with Annex I.

(2) When storage is desired prior to disposal, a PCB chemical substance shall be stored in a facility which complies with Annex III.

(b) **PCB mixtures.** (1) Except as provided in subparagraphs (2) and (3) of this paragraph, a PCB mixture shall be disposed of in an incinerator which complies with Annex I.

(2) A non-liquid PCB mixture in the form of contaminated soil, sludge, dredge spoil, rags, or other debris shall be disposed of

(i) In an incinerator which complies with Annex I, or

(ii) Until July 1, 1979, in a chemical waste landfill which complies with Annex II.

(3) When storage is desired prior to disposal, a PCB mixture shall be stored in a facility which complies with Annex III.

(c) **PCB Articles.**—(1) **PCB Transformers.** A PCB transformer shall be disposed of in accordance with either of the following:

(i) In an incinerator which complies with Annex I, or

(ii) In a chemical waste landfill which complies with Annex II: *Provided*, The transformer is first drained, and flushed internally if necessary, so that no more than two percent of the dielectric liquid volume measured to the fill line remains. PCB chemical substances and PCB mixtures which are removed shall be disposed of in accordance with paragraphs (a) and (b) of this section.

(2) **PCB Capacitors.** (i) The disposal of any capacitor normally used in alternating current circuits shall comply with all requirements of this subpart unless it is known from label information, manufacturer's literature, or chemical analysis that the capacitor does not contain PCB chemical substances of PCB mixtures.

(ii) Any occupant of a private housing unit may dispose of any small PCB

capacitors used in the housing unit as municipal solid waste.

(iii) Any other PCB capacitor which is separate from any PCB equipment shall be disposed of in accordance with either of the following:

(a) Disposal in an incinerator which complies with Annex I.

(b) Until July 1, 1979, disposal in a chemical waste landfill which complies with Annex II.

(3) **Other PCB Articles.** Any other PCB articles shall be disposed of in an incinerator which complies with Annex I.

(4) **Storage of PCB articles.**—except for a PCB article described in subparagraph (2)(i) of this paragraph, prior to disposal any PCB article shall be stored in a facility which complies with Annex III.

(d) **PCB Equipment.** (1) Except as provided in subparagraph (2) of this paragraph, PCB equipment shall be disposed of

(i) in an incinerator which complies with Annex I.

(ii) in a chemical waste landfill which complies with Annex II, or

(iii) as municipal solid waste.

(2) Whenever PCB equipment is serviced in a manner which provides direct access to a PCB article such as a capacitor and a decision is made to dispose of the PCB equipment, the PCB article shall be removed from the equipment and disposed of in accordance with paragraph (c) of this section.

NOTE.—Fluorescent light ballasts contain approximately ten (10) percent of all PCBs currently in use and are widely used in commercial and residential buildings. Building owners and operators are urged to establish collection systems for these PCB items and direct the items to incineration facilities or chemical waste landfills that meet the requirements of these regulations.

(e) **PCB Containers.** (1) Unless decontaminated in accordance with Annex IV, a PCB container shall be disposed of

(i) In an incinerator which complies with Annex I, or

(ii) In a chemical waste landfill which complies with Annex II: *Provided*, That the PCB container shall first be drained, and flushed internally if necessary, so that remaining PCB chemical substances and PCB mixtures constitute no more than 0.5 percent of the total volume of the container.

(2) Prior to disposal, a PCB container shall be stored in a facility which complies with Annex III.

(f) **Spills.** (1) Spills and other uncontrolled discharges of PCB chemical substances or PCB mixtures constitute the disposal of PCB chemical substances or PCB mixtures and must comply with this section.

(2) PCB chemical substances and PCB mixtures resulting from spill incidents shall be stored and disposed of in accordance with paragraphs (a) and (b), respectively of this section.

(3) This subsection does not exempt owners or operators responsible for a spill from any actions or liability under other statutory authorities, including

section 311 of the Federal Water Pollution Control Act (Pub. L. 92-500) and the Resource Conservation and Recovery Act (94-580).

(g) Municipal solid wastes containing PCBs shall be disposed of as provided in applicable Federal, State, or local laws, regulations, and policies.

(h) A municipal sewage treatment sludge which contains 0.05 percent (on a dry weight basis) or greater PCB chemical substances shall be disposed of:

(1) In an incinerator which complies with Annex I, or

(2) Until July 1, 1979, in a chemical waste landfill which complies with Annex II.

Subpart C—Marking of PCBs

§ 761.20 Marking requirements.

(a) The following marking requirements shall apply:

(1) Each PCB article manufactured after January 1, 1978, shall be marked at the time of manufacture with mark M₁ as described in Annex V—Sec. 761.44 (a).

(2) Each item of PCB equipment manufactured after January 1, 1978, shall be marked at the time of manufacture with mark M₁.

(3) Each PCB container, whether new or existing, shall be marked by January 1, 1978, with mark M₁.

(4) Each PCB article, except small PCB capacitors, contained in PCB equipment in inventory after January 1, 1978, shall be marked before it is distributed in commerce with mark M₁.

(5) Each PCB article container used to contain a PCB article that shall be marked under the provisions of (1) or (4) above shall be marked by January 1, 1978, with mark M₁.

(6) Each storage area used to store PCBs for disposal shall be marked by January 1, 1978, with mark M₁.

(7) Each PCB article when removed from use after January 1, 1978, shall at the time of removal either be marked with mark M₁ or be placed in a PCB container marked with mark M₁, except for PCBs disposed of as municipal solid waste as provided in Sections 761.10 (c) (2), 761.10(d) (1) (c), and 761.10(g).

8. Each of the following PCB articles using PCB chemical substances or PCB mixtures as internal fluids shall be marked by January 1, 1978, with mark M₁:

(A) Electric motors using PCB coolants.

(B) Hydraulic machinery using PCB hydraulic fluid.

(C) Heat transfer systems (other than transformers) using PCB fluids.

(b) In addition to the requirements of paragraph (a) of this section, the following marking requirements shall apply:

(1) Effective March 31, 1978, each transport vehicle loaded with PCB containers with more than 45 kg of PCB chemical substances or PCB mixtures in the liquid phase or with one or more PCB transformers shall be marked with mark M₁.

(2) Each PCB large low voltage capacitor and each PCB HID capacitor that is in use after March 31, 1978, shall be marked with mark M_L as soon after the date as the capacitor is available for marking because of other servicing of the equipment. A capacitor is available for marking when other servicing operations provide the servicing person direct access to the capacitor.

(c) In addition to the requirements of paragraphs (a) and (b) of this section, the following marketing requirements shall apply:

(1) Each PCB transformer shall be marketed by July 1, 1978, with mark M_L.

(2) Each PCB large high voltage capacitor shall be identified by July 1, 1978, by at least one of the following methods:

(A) Each individual capacitor is to be marked with mark M_L, or

(B) If one or more PCB large high voltage capacitors are installed in a protected location as on a power pole or structure or behind a fence, the pole, structure, or fence is to be marked with mark M_L and a record or procedure identifying the PCB capacitors is to be maintained by the owner or operator at the protected location.

(d) Where mark M_L is specified but the PCB article or PCB equipment is too small to accommodate the smallest permissible size of mark M_L, mark M_S, as described in Annex V—Sec. 761.44(b), may be used instead of Mark M_L.

Subpart D—[Reserved]

Subpart E—List of Annexes

ANNEX I

§ 761.40 Incineration.

(a) *Liquid PCBs.* An incinerator used for incinerating PCB chemical substances or liquid PCB mixtures shall be approved by the Agency Regional Administrator pursuant to paragraph (d) of this section. Such incinerator shall meet all of the requirements specified in subparagraph (1) through (9) of this paragraph, unless a waiver from these requirements is obtained pursuant to paragraph (d) (5) of this section. In addition, the incinerator shall meet any other requirements which may be prescribed pursuant to paragraph (d) (4) of this section.

(1) Combustion criteria shall be either of the following:

(i) Maintenance of the introduced liquids for a 2-second dwell time at 1200°C (±100°C) and 3 percent excess oxygen in the stack gas, or

(ii) Maintenance of the introduced liquids for a 1½ dwell time at 1600°C (±100°C) and 2 percent excess oxygen in the stack gas.

(2) Combustion efficiency shall be at least 99 percent computed as follows:

$$\text{Combustion efficiency} = \frac{C_{CO_2} - C_{CO}}{C_{CO_2}} \times 100.$$

where

C_{CO₂} = concentration of carbon dioxide.
C_{CO} = concentration of carbon monoxide.

(3) The rate and quantity of PCBs which are fed to the combustion system shall be measured and recorded at regular intervals of no longer than 15 minutes.

(4) The temperatures of the incineration process shall be continuously measured and recorded. The combustion temperature of the incineration process shall be based on either direct (pyrometer) or indirect (wall thermocouple-pyrometer correlation) temperature readings.

(5) The flow of PCBs to the incinerator shall stop automatically whenever the combustion temperature drops below the temperatures specified in subparagraph (1) of this paragraph.

(6) Monitoring of stack emission products shall be conducted:

(i) When an incinerator is first used for the disposal of PCBs under the provisions of this regulation, and

(ii) When an incinerator is first used for the disposal of PCBs after the incinerator has been modified in a manner which may affect the characteristics of the stack emission products.

(iii) At a minimum such monitoring shall be conducted for the following parameters: (a) O₂; (b) CO; (c) CO₂; (d) Oxides of Nitrogen (NO_x); (e) Hydrochloric Acid (HCl); (f) Total Chlorinated Organic Content (TCOC); (g) PCB Chemical Substances; (h) Total Particulate Matter.

(7) At a minimum, continuous monitoring and recording of combustion products and incineration operations shall be conducted for the following parameters whenever the incinerator is incinerating PCBs: (i) O₂; (ii) CO₂; (iii) CO₂.

(8) Incinerator operations shall be immediately suspended when any one or more of the following conditions occur:

(i) Failure of monitoring operations specified in subparagraph (7) of this paragraph.

(ii) Failure of the PCB rate and quantity measuring and recording equipment specified in subparagraph (3) of this paragraph, or

(iii) Combustion temperature, dwell time, or excess oxygen fall below those specified in subparagraph (1) of this paragraph.

(9) Water scrubbers shall be used for HCl control during PCB incineration and shall meet any performance requirements specified by the Regional Administrator. Scrubber effluent shall comply with applicable water quality standards, EPA Water Quality Criteria, and any other State and Federal laws and regulations. An alternate method of HCl control may be used if the alternate method has been approved by the Regional Administrator.

(b) *Non-liquid PCBs.* An incinerator used for incinerating non-liquid PCB mixtures, PCB articles, PCB equipment, or PCB containers shall be approved by the Agency Regional Administrator pursuant to paragraph (d) of this section. Such incinerator shall meet all of the re-

quirements specified in subparagraphs (1) through (3) of this paragraph, unless a waiver from these requirements is obtained pursuant to paragraph (d) (5) of this section. In addition, the incinerator shall meet any other requirements which may be prescribed pursuant to paragraph (d) (4) of this section.

(1) The mass air emissions from the incinerator shall be no greater than 0.001g PCB chemical substances/Kg of PCB chemical substance introduced into the incinerator.

(2) Such incinerator shall comply with the provisions of §§ 761.40(a) (2), (3), (4), (6), (7), (8) (i) and (ii) and (9).

(3) The flow of PCBs to the incinerator shall stop automatically whenever the combustion temperature falls below the temperatures specified in any approvals issued by the Regional Administrator pursuant to paragraph (d) of this section. Incinerator operations shall stop immediately whenever the excess oxygen measurements fall below those specified in any approvals issued by the Regional Administrator pursuant to paragraph (d) of this section.

(c) *Maintenance of data and records.* All data and records required by this section shall be maintained in accordance with Annex VI—§ 761.45, Records and Monitoring.

(d) *Approval of incinerators.* Prior to the incineration of PCBs, the owner or operator of an incinerator shall receive the written approval of the Agency Regional Administrator of the Region in which the incinerator is located. Such approval shall be obtained in the following manner:

(1) *Initial report.* The owner or operator shall submit to the Regional Administrator an initial report which contains:

(i) The location of the incinerator.

(ii) A detailed description of the incinerator including general site plans and design drawings of the incinerator.

(iii) Engineering reports or other information on the anticipated performance of the incinerator.

(iv) Sampling and monitoring equipment and facilities available.

(v) Waste volumes expected to be incinerated.

(vi) Any local, State, or Federal permits or approvals.

(vii) Schedules and plans for complying with the approved requirements of this regulation.

(2) *Trial burn.* (i) Following receipt of the report described in subparagraph (1) of this paragraph, the Regional Administrator shall notify the person who submitted the report whether a trial burn of PCBs must be conducted. The Regional Administrator may require the person who submitted the report described in subparagraph (1) of this paragraph to submit such other information as the Regional Administrator finds to be reasonably necessary to determine the need for a trial burn.

(ii) If the Regional Administrator determines that a trial burn must be held,

the person who submitted the report described in subparagraph (1) of this paragraph shall submit to the Regional Administrator a detailed plan for conducting and monitoring the trial burn. At a minimum, the plan must include:

(a) Date trial burn is to be conducted.
(b) Quantity and type of PCBs to be incinerated.

(c) Parameters to be monitored and location of sampling points.

(d) Sampling frequency and methods and schedules for sample analyses.

(e) Name, address, and qualifications of persons who will review analytical results and other pertinent data and who will perform a technical evaluation of the effectiveness of the trial burn.

(iii) Following receipt of the plan described in subdivision (ii) of this subparagraph, the Regional Administrator will approve the plan, require additions or modifications to the plan, or disapprove the plan. If the plan is disapproved, the Regional Administrator will notify the person who submitted the plan of such disapproval, together with the reasons why it was disapproved. That person may thereafter submit a new plan in accordance with subdivision (ii) of this subparagraph. If the plan is approved (with any additions or modifications which the Regional Administrator may prescribe), the Regional Administrator will notify the person who submitted the plan of such approval. Thereafter the trial burn shall take place at a date and time to be agreed upon between the Regional Administrator and the person who submitted the plan.

(3) *Other information.* In addition to the information contained in the report and plan described in subparagraphs (1) and (2) of this paragraph, the Regional Administrator may require the owner or operator to submit such other information as the Regional Administrator finds to be reasonably necessary to determine whether an incinerator shall be approved.

NOTE.—The Regional Administrator will have available for review and inspection an Agency manual containing information or sampling methods and analytical procedures for the parameters required in § 761.40(a) (3), (4), (6), and (7) plus any other parameters he may determine to be appropriate. Owners or operators are encouraged to review this manual prior to submitting any report required in this Annex.

(4) *Contents of Approval.* (i) Except as provided in subparagraph (5) of this paragraph, the Regional Administrator may not approve an incinerator for the disposal of PCBs unless he finds that the incinerator meets all of the requirements of paragraphs (a) and/or (b) of this section, whichever is applicable.

(ii) In addition to the requirements of paragraphs (a) and/or (b) of this section, the Regional Administrator may include in an approval such other requirements as the Regional Administrator finds are necessary to ensure that operation of the incinerator does not present an unreasonable risk of injury to health or the environment from PCBs. Such requirements may include a fixed period of time for which the approval is valid.

(5) *Waivers.* An owner or operator of the incinerator may submit evidence to the Regional Administrator that operation of the incinerator will not present an unreasonable risk of injury to health or the environment from PCBs, when one or more of the requirements of paragraphs (a) and/or (b) of this section are not met. On the basis of such evidence and any other available information, the Regional Administrator may in his discretion find that any such requirements are not necessary to protect against such risk and may waive such requirements in any approval for that incinerator. Any such finding and waiver must be stated in writing and included as part of the approval.

(6) *Persons Approved.* An approval will designate the persons who own and who are authorized to operate the incinerator, and will apply only to such persons.

(7) *Final Approval.* Approval of an incinerator will be in writing and signed by the Regional Administrator. The approval will state all requirements applicable to that incinerator.

ANNEX II

§ 761.41 Chemical waste landfills.

(a) *General.* A chemical waste landfill used for the disposal of PCBs shall be approved by the Agency Regional Administrator pursuant to paragraph (c) of this section. Such landfill shall meet all of the requirements specified in paragraph (b) of this section, unless a waiver from these requirements is obtained pursuant to paragraph (c) (4) of this section. In addition, the landfill shall meet any other requirements which may be prescribed pursuant to paragraph (c) (3) of this section.

(b) *Technical requirements.* Requirements for chemical waste landfills used for the disposal of PCBs are as follows:

(1) *Soils.* The landfill site shall be located in thick, relatively impermeable formations such as large-area clay pans. Where this is not possible, the soil shall have a high clay and silt content with the following parameters:

- (i) In-place soil thickness, 4', or compacted soil liner thickness, 3'.
- (ii) Permeability (cm/sec), $\leq 1 \times 10^{-7}$.
- (iii) Percent soil passing No. 200 Sieve, ≥ 30 .
- (iv) Liquid Limit, ≥ 30 .
- (v) Plasticity Index, ≥ 15 .
- (vi) Artificial Liner Thickness, ≥ 30 mil.

NOTE.—In the event that an artificial liner is used at a landfill site, special precautions shall be taken to insure that its integrity is maintained and that it is chemically compatible with PCBs. Soil underlining shall be provided as well as a soil cover.

(2) *Hydrology.* The bottom of the landfill shall be substantially above the historical high groundwater table. Floodplains, shorelands, and groundwater recharge areas shall be avoided. There shall be no hydraulic connection between the site and standing or flowing surface water. The site shall have monitoring wells and leachate collection and shall be at least fifty feet from the nearest groundwater.

(3) *Flood protection.* (i) If the landfill site is below the 100-year floodwater

elevation, the operator shall provide surface water diversion dikes around the perimeter of the landfill site with a minimum height equal to two feet above the 100-year floodwater elevation.

(ii) If the landfill site is above the 100-year floodwater elevation, the operators shall provide diversion structures capable of diverting all of the surface water runoff from a 24-hour, 25-year storm.

(4) *Topography.* The landfill site shall be located in an area of low to moderate relief to minimize erosion and to help prevent landslides or slumping.

(5) *Monitoring Systems.*—(i) *Water Sampling.* (a) The ground and surface water from the disposal site area shall be sampled for use as baseline operations.

(b) Defined water sources shall be sampled at least monthly when the landfill is being used for disposal operations.

(c) Defined water sources shall be sampled indefinitely on a frequency of no less than once every six months after final closure of the disposal area.

(ii) *Groundwater Monitor Wells.* (a) If underlying earth materials are homogeneous, impermeable, and uniformly sloping in one direction, only three sampling points shall be necessary. These three points shall be equally spaced on a line through the center of the disposal area and extending from the area of highest water table elevation to the area of the lowest water table elevation on the property.

(b) All monitor wells shall be cased and the annular space between the monitor zone (zone of saturation) and the surface shall be completely backfilled or plugged with Portland cement to effectively prevent percolation of surface water into the well bore. The well opening at the surface shall have a removable cap to provide access and to prevent entrance of rainfall or stormwater runoff. The well shall be pumped to remove the volume of liquid initially contained in the well before obtaining a sample for analysis. The discharge shall be treated to meet applicable State or Federal discharge standards or recycled to the chemical waste landfill.

(iii) *Water analysis.* As a minimum, all samples shall be analyzed for the following parameters, and all data and records of the sampling and analysis shall be maintained as required in Annex VI. Sampling methods and analytical procedures for these parameters shall be as specified in 40 CFR Part 136 as amended in 41 FR 52779 of December 1, 1976.

- (a) PCBs.
- (b) pH.
- (c) Specific Conductance.
- (d) Chlorinated Organics.

(6) *Leachate Collection.* A leachate collection monitoring system shall be installed beneath the chemical waste landfill. Leachate collection systems shall be monitored monthly for quantity and quality of leachate produced. The leachate should be either treated to acceptable limits for discharge in accordance with a State or Federal permit or disposed of by another State or Federal ap-

proved method. Water analysis shall be as provided in subparagraph (5) (iii) of this paragraph. Acceptable leachate collection monitoring/collection systems shall be one of the following designs unless a waiver is obtained pursuant to paragraph (c) (4) of this section.

(i) *Simple Leachate Collection.* This system consists of a gravity flow drainfield installed under the waste disposal facility liner. This design is recommended for use when semi-solid or leachable solid wastes are placed in a lined pit excavated into a relatively thick, unsaturated, homogeneous layer of low permeability soil.

(ii) *Compound Leachate Collection.* This system consists of a gravity flow drainfield installed under the waste disposal facility liner and above a secondary installed liner. This design is recommended for use when semiliquid or leachable solid wastes are placed in a lined pit excavated into relatively permeable soil.

(iii) *Suction Manometers.* This system consists of a network of porous "stones" connected by hoses/tubing to a vacuum pump. The porous "stones" or suction manometers are installed along the sides and under the bottom of the waste disposal facility liner. This type of system works best when installed in relatively permeable unsaturated soil immediately adjacent to the disposal facility's bottom and/or sides.

(7) *Chemical Waste Landfill Operations.* (i) PCBs shall be placed in the landfill in a manner that will prevent damage to containers or articles. Other wastes placed in the landfill that are not chemically compatible with PCBs or PCB containers shall be segregated from the PCBs throughout the waste handling and disposal process.

(ii) An operations plan shall be developed and submitted to the Regional Administrator for approval as required in paragraph (c) of this section. This plan shall include detailed explanations of the procedures to be used for record-keeping, excavation and backfilling, waste segregation burial coordinates, vehicle and equipment movement, use of roadways, leachate collection systems, sampling and monitoring procedures, monitoring wells, and security measures to protect against vandalism and unauthorized waste placements. EPA guidelines entitled "Thermal Processing and Land Disposal of Solid Waste" (39 FR 29337 of August 14, 1974) are a useful reference in preparation of this plan.

(iii) Records shall be maintained for all PCB disposal operations and shall include the three dimensional burial coordinates for PCBs. Additional records shall be developed and maintained as provided in Annex VI.

(8) *Supporting Facilities.* (i) A six foot woven mesh fence, wall, or similar device shall be provided around the site to prevent unauthorized persons and animals from entering.

(ii) Roads shall be maintained to and on the site which are adequate to operate and maintain the site without causing

safety or nuisance problems or hazardous conditions.

(iii) The site shall be operated and maintained in a manner to prevent safety problems or hazardous conditions resulting from spilled liquids and wind-blown materials.

(c) *Approval of chemical waste landfills.* Prior to the disposal of any PCBs in a chemical waste landfill, the owner or operator of the landfill shall receive written approval of the Agency Regional Administrator of the Region in which the landfill is located. Such approval shall be obtained in the following manner:

(1) *Initial Report.* The owner or operator shall submit to the Regional Administrator an initial report which contains:

(i) The location of the landfill.
(ii) A detailed description of the landfill including general site plans and design drawings.

(iii) An engineering report describing the manner in which the landfill complies with the requirements for chemical waste landfills in paragraph (b) of this section.

(iv) Sampling and monitoring equipment and facilities available.

(v) Expected waste volumes of PCBs.

(vi) General description of waste materials other than PCBs that are expected to be disposed of in the landfill.

(vii) Landfill operations plan as required in paragraph (b) of this section.

(viii) Any local, State, or Federal permits or approvals.

(ix) Any schedules or plans for complying with the approval requirements of these regulations.

(2) *Other Information.* In addition to the information contained in the report described in subparagraph (1) of this section, the Regional Administrator may require the owner or operator to submit such other information as the Regional Administrator finds to be reasonably necessary to determine whether a chemical waste landfill should be approved.

(3) *Contents of approval.* (i) Except as provided in subparagraph (4) of this paragraph, the Regional Administrator may not approve a chemical waste landfill for the disposal of PCBs unless he finds that the landfill meets all of the requirements of subparagraph (6) of this paragraph.

(ii) In addition to the requirements of paragraph (b) of this section, the Regional Administrator may include in an approval such other requirements as the Regional Administrator finds are necessary to ensure that operation of the chemical waste landfill does not present an unreasonable risk of injury to health or the environment from PCBs. Such requirements may include a fixed period of time for which the approval is valid.

(4) *Waivers.* An owner or operator of a chemical waste landfill may submit evidence to the Regional Administrator that operation of the landfill will not present an unreasonable risk of injury to health or the environment from PCBs, when one or more of the requirements of paragraph (b) of this section

are not met. On the basis of such evidence and any other available information, the Regional Administrator may in his discretion find that any such requirements are not necessary to protect against such risk and may waive such requirements in any approval for that landfill. Such finding and waiver will be stated in writing and included as part of the approval.

(5) *Persons Approved.* Any approval will designate the persons who own and who are authorized to operate the chemical waste landfill, and will apply only to such persons.

(6) *Final Approval.* Approval of a chemical waste landfill will be in writing and will be signed by the Regional Administrator. The approval will state all requirements applicable to that landfill.

ANNEX III

§ 761.42 Storage for disposal.

(a) Any PCB article or PCB container stored for disposal before July 1, 1981, shall be removed from storage and disposed of before July 1, 1982. Any PCB article or PCB container stored for disposal after July 1, 1981, shall be removed from storage and disposed of within one year from the date when it was first placed into storage.

(b) Except as provided in paragraph (c) of this section, after October 1, 1977, owners or operators of any facilities used for the storage of PCBs designated for disposal shall comply with the following requirements:

(1) Such facilities shall have:

(i) An adequate roof to prevent rainwater from reaching the stored PCBs.

(ii) An adequate floor which has continuous curbing with a minimum six inch high curb. Such floor and curbing must provide a containment volume equal to at least two times the internal volume of the largest PCB equipment or PCB container stored therein or twenty-five percent of the total internal volume of all PCB equipment or containers stored therein, whichever is greater.

(iii) No drain valves, floor drains, sewer lines, or other openings that would permit liquids to flow from the curbed area.

(iv) Continuous, smooth, and impervious construction for floors and curbing such as Portland cement concrete.

(c) (1) After October 1, 1977, if the only PCBs stored at a particular facility are small capacitors which have an aggregate storage volume of not greater than two 55-gallon drums, the only storage requirement is to store such capacitors in sound, non-leaking containers within a building.

(2) The storage area shall be marked as required in Subpart C—§761.20(a) (6).

(3) No items of movable equipment used for handling PCBs in the storage facilities shall be removed from the areas unless decontaminated.

(4) All PCB containers shall be checked for leaks at least once every 30 days. All leaking containers and their contents shall be transferred immediately to properly marked nonleaking containers. Any spilled or leaked mate-

rials shall be immediately cleaned up using sorbents or other adequate means, and the cleaned materials and residues shall be disposed of in accordance with Subpart B—§ 761.10(b).

(5) Any PCB container used for the storage of liquid PCB chemical substances or liquid PCB mixtures shall comply with the specifications of the Department of Transportation Materials Transportation Bureau Hazardous Materials Regulations, 49 CFR 173.346 (41 FR 42544, September 27, 1976). Any PCB container used for the storage of non-liquid PCB mixtures, PCB articles, or PCB equipment may vary from 49 CFR 173.346 by meeting DOT Spec. 5, Spec. 5B, or Spec. 17C with removable heads.

(6) PCB articles and PCB containers shall be dated when they are placed in storage. The storage shall be managed so that the PCB articles and PCB containers can be located by the date they entered storage.

(7) Owners or operators of storage facilities shall establish and maintain records as provided in Annex VI.

ANNEX IV

§ 761.43 Decontamination.

(a) Any PCB container to be decontaminated shall be decontaminated by flushing of the internal surfaces of the container three times with a solvent containing less than 0.05 percent PCB chemical substance in which the solubility of PCBs is five percent or more by weight. Each rinse shall use a volume of the normal diluent equal to approximately ten percent of the PCB container's capacity. The solvent may be reused for decontamination until it contains 0.5 percent PCB chemical substance. The solvent shall then be disposed of as a PCB mixture, in accordance with § 761.10(b).

(b) Movable equipment used in storage areas shall be decontaminated by swabbing surfaces that have contacted PCB chemical substances or PCB mixtures with a solvent meeting the criteria of paragraph (a) of this section.

ANNEX V

§ 761.44 Marking formats.

The following formats shall be used for marking:

(a) Large PCB Mark— M_L —Mark M_L shall be as shown in Figure 1, with black letters and striping on a white background and shall be sufficiently durable to equal or exceed the life (including storage for disposal) of the equipment or container. The size of the mark shall be at least 15.25 cm (6 inches) on each side. If the PCB equipment is too small to accommodate this size, the mark may be reduced in size proportionately down to a minimum of 5 cm (2 inches) on each side.

(b) Small PCB Mark— M_s —Mark M_s shall be as shown in Figure 2, with black letters and striping on a white background, and shall be sufficiently durable

to equal or exceed the life (including storage for disposal) of the equipment or container. The mark shall be a rectangle 2.5 by 5 cm (1 inch by 2 inches). If the

PCB equipment is too small to accommodate this size, the mark may be reduced in size proportionately down to a minimum of 1 by 2 cm (.4 by .8 inches).

CAUTION

CONTAINS

PCBs

(Polychlorinated Biphenyls)

A toxic environmental contaminant requiring special handling and disposal in accordance with U.S. Environmental Protection Agency Regulations 40 CFR 761 for Disposal. Information contact the nearest U.S. E.P.A. Office.

In case of accident or spill, call toll free the U.S. Coast Guard National Response Center:
800:424-8802

CAUTION—CONTAINS
PCBs
FOR PROPER DISPOSAL
INFORMATION CONTACT
U.S. ENVIRONMENTAL
PROTECTION AGENCY

ANNEX VI

§ 761.45 Records and monitoring.

(a) PCBs in service or projected for disposal. By January 1, 1978, each owner or operator of a facility containing forty-five kilograms of PCB chemical substances or PCB mixtures in the liquid phase or fifty or more PCB large high voltage capacitors shall develop and maintain records on the location and disposition of the PCBs. These records shall form the basis of an annual document prepared for each facility by March 1 covering the previous calendar year. Owners or operators with more than one facility which contain PCBs may main-

tain the records and documents at a single location, provided the identity of this location is available at each facility containing PCBs that is normally manned for eight hours a day. The records and documents shall be maintained for at least five years after the facility ceases containing PCBs at the prescribed quantities. The following information for each facility shall be included in the annual document:

(1) The dates when PCBs are removed from service, are placed into storage for disposal, and are placed into transport for disposal. The quantities of such PCBs shall be indicated using the following breakdown:

(i) Total weight in kilograms of any PCB chemical substances or PCB mixtures in PCB containers, including the identification of container contents, such as liquids, and capacitors.

(ii) Total number of PCB transformers and total weight in kilograms of any PCB chemical substances and PCB mixtures contained in the transformers.

(iii) Total number of PCB large high voltage capacitors.

(2) For PCBs removed from service, the location of the initial disposal or

storage facility and the name of the owner or operator of the facility.

(3) Total quantities of PCBs remaining in service at the end of the calendar year using the following breakdown:

(i) Total weight in kilograms of any PCB chemical substances and PCB mixtures in PCB containers, including the identification of container contents such as liquids and capacitors.

(ii) Total number of PCB transformers and total weight in kilograms of any PCB chemical substances and PCB mixtures contained in the transformers;

(iii) Total number of PCB large high voltage capacitors.

(b) *Disposal and storage facilities.* Beginning in 1979, each owner or operator of a facility used for the storage or disposal of PCBs shall by March 1 of each year prepare and maintain a document which specifies the manner in which PCBs were handled at the facility during the previous calendar year. Such document shall be retained at each facility for at least five years after the facility is no longer used for the storage or disposal of PCBs, except that in the case of chemical waste landfills such documents shall be maintained at least twenty years after the chemical waste landfill is no longer used for the disposal of PCBs. Such documents shall be available at the facility for inspection by authorized representatives of the Environmental Protection Agency. If the facility ceases to be used for PCB storage or disposal, the owner or operator of such facility shall promptly notify the Agency Regional Administrator of the region in which the facility is located that the facility has ceased storage or disposal operations and shall specify where the documents required to be maintained by this paragraph shall be located. The following information shall be included in each document:

(1) The date when any PCBs are received by the facility during the previous calendar year for storage or disposal, and the identification of the person and facility from whom such PCBs were received.

(2) The date when any PCBs are disposed of at the disposal facility or transferred to another disposal or storage facility, including the identification of the specific types of PCB chemical substances, PCB mixtures, or PCB articles in containers; PCB transformers; and PCB equipment or PCB articles not in

containers which were stored or disposed of.

(3) Total weight in kilograms of any PCB containers and the total weight in kilograms of any PCB chemical substances or PCB mixtures contained in any PCB transformers, received during the calendar year, transferred to other storage or disposal facilities during the calendar year, and remaining on the disposal or storage facility site at the end of the calendar year, respectively, including, where applicable, the identification of PCB container contents such as liquids, capacitors, etc. When PCB containers or PCB chemical substances or PCB mixtures contained in a transformer are transferred to other storage or disposal facilities, the identification of the facility to which such PCBs were transferred shall be included.

(4) Total number of any PCB articles or PCB equipment, not in PCB containers, received during the calendar year, transferred to other storage or disposal facilities during the calendar year, and remaining on the facility site at the end of the calendar year, respectively, including the identification of the specific types of PCB articles and PCB equipment received, transferred, or remaining on the facility site. When PCB articles and PCB equipment are transferred to other storage or disposal facilities, the identification of the facility to which such PCB articles and PCB equipment were transferred must be included.

Note: Any requirements for weights in kilograms of PCBs may be calculated values if the internal volume of containers and transformers is known and included in the reports, together with any assumptions on the density of the PCB chemical substances or PCB mixtures contained in the containers or transformers.

(c) *Incineration facilities.* For each owner or operator of a PCB incinerator facility, the following information is required in addition to the information required in paragraph (b) of this section:

(1) When PCBs are being incinerated, the following continuous and short-interval data shall be collected and maintained for a period of five years from the date of collection:

(A) Rate and quantity of PCBs fed to the combustion system, as provided in Annex I—§ 761.40(a)(3).

(B) Temperature of the combustion process, as provided in Annex I—§ 761.40(a)(4).

(C) Stack emission products to include O₂, CO, and CO₂, as provided in Annex I—§ 761.40(a)(7).

(2) When PCBs are being incinerated, data and records resulting from the monitoring of stack emissions as required in Annex I—§ 761.40(d)(2), shall be collected and maintained for five years.

(3) Total weight in kilograms of any solid residues generated by the incineration of PCBs during the calendar year, the total weight in kilograms of any solid residues disposed of by such facility in chemical waste landfills, and the total weight in kilograms of any solid residues remaining on the facility site shall be retained for five years.

(4) When PCBs are being incinerated, additional periodic data shall be collected and maintained as specified by the Regional Administrator pursuant to Annex I—§ 761.40(d)(4).

(5) A document shall be prepared on any suspension of the operation of any incinerator by the owner or operator thereof, as required in Annex I—§ 761.40(a)(8). The document shall, at a minimum, include the date and time of the suspension and an explanation of the circumstances causing the suspension of operation.

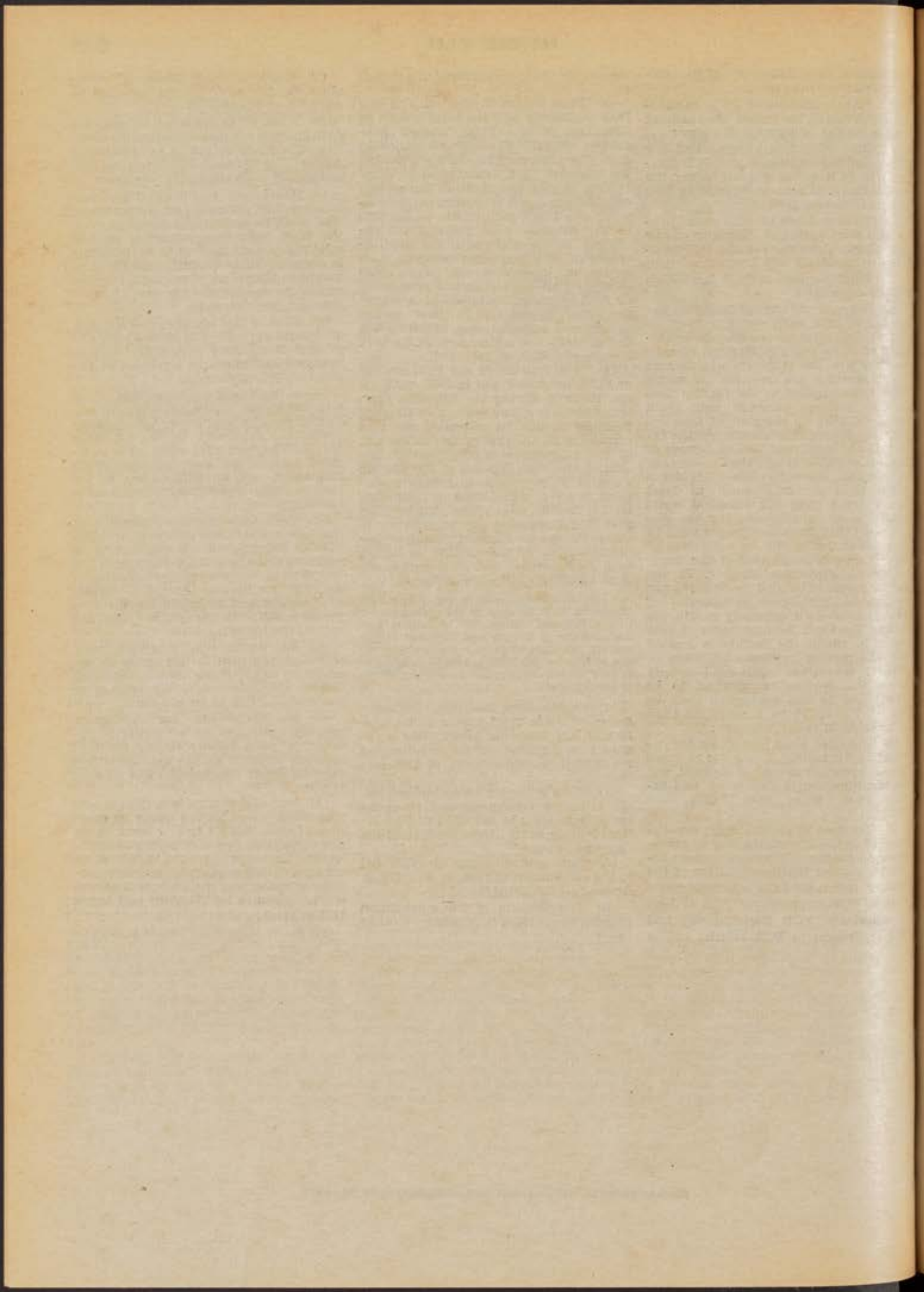
(d) *Retention of Special Records by Storage and Disposal Facilities.* In addition to the information required to be maintained by paragraphs (b) and (c) of this section, each owner or operator of a PCB storage or disposal facility shall collect and maintain for the time period required in paragraph (c) of this section the following data:

(1) All documents, correspondence, and data provided to the owner or operator by any State or local government agency that pertain to the storage or disposal of PCBs at such facility.

(2) All documents, correspondence, and data provided by the owner or operator of such facility to any State or local government agency that pertain to the storage or disposal of PCBs at such facility.

(3) Any applications and related correspondence sent by the owner or operator of such facility to any local, State, or Federal authorities in regard to wastewater discharge permits, solid waste permits, building permits, or other permits or authorizations, such as those required by Annex I—§ 761.40(d) and Annex II—§ 61.41(c).

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Register
Federal Register

TUESDAY, MAY 24, 1977

PART VI



DEPARTMENT OF
COMMERCE

National Oceanic and
Atmospheric Administration



COMMERCIAL AND
RECREATIONAL SALMON
FISHERIES OFF COASTS
OF WASHINGTON,
OREGON, AND
CALIFORNIA

Title 50—Wildlife and Fisheries

CHAPTER VI—FISHERY CONSERVATION AND MANAGEMENT, NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION, DEPARTMENT OF COMMERCE

PART 661—SALMON FISHERY

Commercial and Recreational Salmon Fisheries Off the Coasts of Washington, Oregon, and California

AGENCY: National Oceanic and Atmospheric Administration/Commerce.

ACTION: Amendments to emergency regulations.

SUMMARY: This document amends the current emergency regulations by providing for changes in the opening and closing dates in designated fishing areas, changes in minimum length of chinook salmon, and adds new sections concerning Treaty Indian Rights and Test Fisheries. These amendments will conform the emergency regulations to recent changes in the fishery management plan.

DATES: Effective dates: 0001 a.m., on May 25, 1977 and shall remain in effect for 45 days; comments on or before July 8, 1977.

ADDRESS: Send comments to: Director, National Marine Fisheries Service, Washington, D.C. 20235.

FOR FURTHER INFORMATION CONTACT:

Mr. Donald Johnson, Northwest Regional Director, National Marine Fisheries Service, Seattle, Wash. 98109, phone 206-442-7575.

SUPPLEMENTARY INFORMATION: On April 20, 1977, the Secretary of Commerce approved the fishery management plan prepared by the Pacific Fishery Management Council for the Commercial and Recreational Salmon Fisheries off the Coasts of Washington, Oregon, and California and determined that an emergency exists involving some of the salmon resources covered by the plan. The Secretary recognized that the plan met the basic needs to conserve and manage this important resource but also was concerned over the impact the plan and proposed emergency regulations had on certain segments of the industry and the treaty rights of the Makah Indian Tribe.

In response to the concerns and requests of the Secretary of Commerce, the Pacific Fishery Management Council at its meeting on May 3, 1977, reconsidered certain aspects of its plan and submitted amendments to the plan and proposed amendments to the existing emergency regulations. These amendments provide for changes in the opening and closing dates in Management Areas A through E, changes in minimum length of chinook salmon from 26 to 28 inches and to recognize the rights of the Makah Indian Tribe.

In view of the many changes in § 661.8 Commercial fishing, we feel that it would be most helpful to commercial fishermen to fully understand these changes if the section was republished in its entirety.

Therefore, under section 305(e) (2) of the Fishery Conservation and Management Act of 1976, the Secretary is authorized to amend the emergency regulations which implement the Commercial and Recreational Salmon Fisheries off the Coasts of Washington, Oregon, and California fishery management plan.

Dated: May 20, 1977 at Washington, D.C.

WINFRED H. MEIBOHM,
Associate Director,
National Marine Fisheries Service.

1. In the Table of Contents the § 661.2 should read "Relation to State Law", the term "[reserved]" is deleted in § 661.10, and a new § 661.11 is added as follows:

661.11 Test fisheries.

2. Section 661.8 is revised as follows:
§ 661.8 Commercial fishing.

(a) *Open seasons and areas.* All open seasons shall begin at 0001 hours and terminate at 2400 hours on the dates specified herein. Unless otherwise specified, Pacific Daylight Time will apply. The Pacific Council Management Area is closed to commercial salmon fishing except for the following open seasons and areas.

(1) In Management Area A, the open season for salmon fishing shall be as follows:

(i) The season for all salmon species, except coho, shall begin on May 1, 1977, and terminate on June 14, 1977.

(ii) The season for all salmon species, including coho, shall begin on July 1, 1977, and terminate on September 15, 1977.

(2) In Management Area B, the open season for salmon fishing shall be as follows:

(i) The season for all salmon species, except coho, shall begin on May 1, 1977, and terminate on June 14, 1977.

(ii) The season for all salmon species, including coho, shall begin on July 1, 1977 and terminate on October 31, 1977, at 2400 hours Pacific Standard Time.

(3) In Management Area C, the open season for salmon fishing shall be as follows:

(i) The season for all salmon species, except coho, shall begin on May 1, 1977, and terminate on June 14, 1977.

(ii) The season for all salmon species, including coho, shall begin on June 15, 1977, and terminate on October 31, 1977, at 2400 hours Pacific Standard Time.

(4) In Management Area D and E, the open season for salmon fishing shall be as follows:

(i) The season for all salmon species, except coho, shall begin on April 15, 1977, and terminate on May 14, 1977.

(ii) The season for all salmon species, including coho, shall begin on May 15, 1977, and terminate on September 30, 1977.

(b) *Gear restrictions.* (1) Only troll gear shall be used for commercial salmon fishing while in the Pacific Council

Management Area. However, in Management Areas D and E, troll gear need not be fixed to the vessel as specified in § 661.3(m).

(2) Only single/barbless hooks shall be used for commercial salmon fishing before July 1977, while in Management Areas A and B.

(c) *Size restrictions.* (1) No person shall take and retain any chinook salmon (*Oncorhynchus tshawytscha*) while aboard a vessel used for commercial fishing less than:

(i) Twenty-eight inches in length in Management Areas A and B; or

(ii) Twenty-six inches in length in Management Areas C, D and E.

(d) *Vessel inspection and certification.* (1) Any vessel subject to State hold inspection, fishing in Management Areas A and B between July 1 and July 10, 1977, must have on board documentation of such inspection as may be issued by the State adjacent to such Management Area.

(2) Any vessel 26 feet or longer with coho salmon on board in Management Areas D and E between May 15 and May 25, 1977, shall have on board documentation of hold inspection issued by the State adjacent to such Management Areas.

(e) No person shall take and retain any steelhead (*Salmo gairdneri*) within the Pacific Council Management Area.

3. Section 661.9(a) subparagraphs (2) and (4), and subparagraph (1) of paragraph (b) are amended as follows:

§ 661.9 Recreational fishing.

(a) * * *

(2) In Management Area C, the season shall open on April 30, 1977, and terminate on October 31, 1977, at 2400 hours Pacific Standard Time.

(b) * * *

(4) In Management Area E, the season shall open on February 12, 1977, at 0001 hours Pacific Standard Time and terminate on November 13, 1977, at 2400 hours Pacific Standard Time.

(b) * * *

(1) No gear other than angling gear may be used for recreational salmon fishing, except that in Management Areas D and E, during the commercial salmon season (§ 661.8(a) (4)), closely attended rods and/or lines may be used.

* * *

4. New § 661.10 is added as follows:

§ 661.10 Treaty Indian rights.

(a) Persons entitled to exercise rights under the Treaty with the Makah may fish for all salmon species in that portion of Management Area A north of 48° 07'36" north latitude from May 1, 1977, to October 31, 1977. Such persons are otherwise subject to the provisions of this Part 661, the Act and any other regulation issued under the Act.

(b) The Secretary will give due consideration in promulgating emergency regulations under § 661.7 to the treaty rights of Indian tribes with usual and

accustomed fishing grounds in the area affected by such regulations.

5. New § 661.11 is added as follows:

§ 661.11 Test fisheries.

The Secretary may, upon recommendation of the Pacific Council, allow in the Pacific Council Management Area such limited test fisheries for scientific purposes as may be proposed by the Pacific Council, the Federal Government, State Governments and Treaty Indian Tribes having usual and accustomed fishing grounds in the Pacific Council Management Area.

[FR Doc.77-14845 Filed 5-23-77;8:45 am]

DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric
AdministrationCOMMERCIAL AND RECREATIONAL
SALMON FISHERIES OFF THE COASTS
OF WASHINGTON, OREGON, AND
CALIFORNIAApproval of Amendment to the Fishery
Management Plan and Requests for
Comments

Pursuant to section 304 of the Fishery Conservation and Management Act of 1976, (Pub. L. 94-265, 16 U.S.C. 1801 et seq.) (the Act), the Secretary of Commerce (the Secretary) is authorized to receive, review and approve a fishery management plan (FMP) or amendment to such plan prepared by a Regional Fishery Management Council, concerning fisheries within the 200-mile fishery conservation zone (FCZ).

Pursuant to Title III of the Act, the Pacific Fishery Management Council, has prepared and submitted to the Secretary an amendment to a FMP for "Commercial and Recreational Salmon Fisheries Off the Coasts of Washington, Oregon, and California" (the "Plan"). In addition, it has been determined that this amendment is among the options considered in the Final Environmental Impact Statement prepared concerning the FMP.

The Secretary of Commerce, by authority of section 305 of the Act, wishes to advise the public of the approval of the above mentioned amendment to the salmon FMP and of the promulgation of amended regulations implementing the Plan as amended.

The amendment, published in its entirety below, as required by section 305(a) of the Act, is intended to improve the basis for the conservation and management of the offshore salmon fishery for the States of Washington, Oregon, and California in the FCZ created by section 101 of the Act. This amendment has the effect of promoting the conservation and management of the chinook salmon stocks by increasing of the minimum size from 26 inches to 28 inches

north of Tillamook Head, Oregon. Anticipated hardship in the original Plan upon commercial fishermen engaged in this fishery is reduced by amending the original 30-day closure in June to two weeks in June. Special fishery rights accruing to certain coastal treaty Indian tribes are specifically recognized in this amendment.

This amended FMP is being implemented by amended emergency regulations (also published today in the FEDERAL REGISTER), as authorized by section 305(e) of the Act. Emergency regulations as amended were promulgated after the Secretary found and determined that an emergency exists in the coastal commercial and recreational salmon fisheries of Washington, Oregon, and California.

Publication of this amendment also constitutes the notice of publication for the approved FMP as amended and its proposed permanent regulations as required by section 305(a) of the FCMA.

Written data, views and comments concerning the Plan may be submitted to: Director, National Marine Fisheries Service, Washington, D.C. 20235. The Secretary of Commerce will consider all such data, views, and comments submitted on or prior to July 8, 1977, before final action is taken with respect to the FMP and implementing regulations pursuant to section 305(c) of the FCMA.

I am publishing this document on behalf of and at the request of the Secretary.

Dated this May 20, 1977, at Washington, D.C.

WINFRED H. MEISOHM,
Associate Director,
National Marine Fisheries Service.

AN AMENDMENT TO THE FISHERY MANAGEMENT PLAN FOR "COMMERCIAL AND RECREATIONAL SALMON FISHERIES OFF THE COASTS OF WASHINGTON, OREGON, AND CALIFORNIA"

The Pacific Fishery Management Council, in response to a request from the Secretary of Commerce to reconsider certain aspects of its plan adopted dur-

ing public meetings on March 17-18, 1977, in Seattle, Washington, adopted certain amendments during public meetings on May 2-3, 1977, in Portland, Oregon.

The amendments pertain to the treaty rights of the Makah Indian Tribe and select Option 2 in place of the option which in the plan is referred to as Option CA (Council Adopted). In addition, changes in wording of regulations were adopted to conform as closely as possible to state regulations in adjacent waters.

The amendments to the plan are as follows:

I. Page 28: Amend Section 2.8.2, paragraph 1, last sentence, by adding after the word "plan," "provided, however, that in promulgating any emergency regulations, due consideration shall be given to the treaty rights of Indian tribes with usual and accustomed fishing grounds in the area affected by such regulations."

II. Page 28: Amend Section 2.8.2, paragraph 3, first sentence, by adding after the word "jurisdiction," "except for such limited test fishing by Indian treaty right tribes as may be authorized by the Council and the Secretary for purposes of scientific study of the advisability of allowing a limited ocean net fishery."

III. Pages 39-42: Section 2.9: An updated technical analysis of expected changes from the average situation prevailing during the 5-year period, 1971-1975, resulted in changes in the percentages for Options 2 and CA. Option CA is the option adopted by the Council on March 18 and Option 2 is the option adopted on May 3, 1977. The updated percentages are presented in Table 1. Accordingly, percentage figures in the text relating to Options 2 and CA are amended to reflect the updated figures.

In addition, an "Updated Technical Analysis of Predicted Effects of Option Two" is added to the bottom of page 41 to more fully describe the effects of Option 2, which the Council adopted on May 3, 1977.

TABLE 1

AN UPDATED SUMMARY OF EXPECTED CHANGES FROM THE AVERAGE SITUATION PREVAILING DURING THE 5-YEAR PERIOD, 1971-1975, REGULATORY OPTIONS 2 AND COUNCIL ADOPTED (CA)		Option	
Element		2	CA
<u>Chinook</u>			
<u>Returns to terminal areas</u>			
Harvestable numbers of fall chinook returning to the Columbia River system		+28%	+23%
Total fall chinook run size to the Columbia River system		+17%	+14%
<u>Commercial impact</u>			
Early season commercial troll fishing time north of Tillamook Head prior to July 1		-40%	-60%
Numbers of chinook for troll fishery north of Tillamook Head		-36%	-23%
Pounds of chinook for troll fishery north of Tillamook Head		-25%	-19%
Catch value of chinook for troll fishery north of Tillamook Head		-21%	-18%
Average size of individual chinook for troll fishery north of Tillamook Head		+22%	+ 5%
Chinook hooking mortality losses for troll fishery north of Tillamook Head		- 5%	-21%
<u>Sport impact</u>			
Number of chinook for sport fishery north of Tillamook Head		-24%	-25%
Chinook hooking mortality losses for sport fishery north of Tillamook Head		+13%	+13%
<u>Coho</u>			
<u>Returns to terminal areas</u>			
Harvestable numbers of coho returning to Puget Sound		+ 6%	+ 6%
Harvestable numbers of coho returning to Washington coastal streams		+15%	+15%
Harvestable numbers of coho returning to the Columbia River system		+ 4%	+ 4%
Harvestable numbers of coho returning to Oregon coastal streams		+ 2%	+ 2%
<u>Commercial impact</u>			
Numbers of coho for troll fishery north of Tillamook Head		-18%	-18%
Pounds of coho for troll fishery north of Tillamook Head		-15%	-15%
Catch value of coho troll fishery north of Tillamook Head		-12%	-12%
<u>Sport impact</u>			
Numbers of coho for sport fishery north of Tillamook Head		+ 9%	+ 9%

UPDATED TECHNICAL ANALYSIS OF PREDICTED EFFECTS—OPTION TWO

A detailed technical analysis of specific regulatory proposals for 1977 indicates the following expected changes from the average situation prevailing during the 5-year period, 1971-1975.

1. Harvestable numbers of adult fall chinook returning to the Columbia River system would increase by 28%. Total run size (catch plus escapement) would increase by 17%. This would permit fulfillment of treaty Indian fishing rights and also permit the Columbia River Compact to provide a viable August non-Indian gill net fishery below Bonneville Dam on upper river chinook stocks (see management objectives in Ap-

pendix B). In-river poundage yields from lower and upper river fall runs combined would be expected to increase from the past level of 4.9 million pounds annually to a new level of 6.3 million pounds per year.

2. Run size increases of similar magnitude would also be expected for Washington coastal fall chinook runs, with treaty Indian and non-treaty commercial catches in terminal areas increasing by over 200,000 pounds annually to a new average level of nearly 1.1 million pounds per year. The ban on April fishing would protect Columbia River spring chinook in their final year and the reduction in early season commercial fishing time prior to July 1 (when most Columbia River summer chinook have entered the river) would amount to 40% less

fishing time than the 2½ month troll season for 1975 and prior years (see management objectives for these runs in Appendix B). The significant reductions in early season fishing time, plus increased minimum size limits, would also benefit several currently depressed Washington coastal early-run chinook stocks. In some of the stocks noted above, the additional fish are needed to bolster spawning escapements, at least for a temporary period while they are rebuilding to harvestable levels.

3. Small reductions in ocean fishing rates on Canadian, Puget Sound, Oregon coastal and California chinook stocks would occur but these would have only a minimal effect on overall management of these resources. Any reduction in fishing rates off Washington for the latter two stocks would be counterbalanced to some extent by an expected increase in ocean fishing off Oregon and possibly California.

4. The commercial troll fishery off the Washington Coast and Columbia River mouth could sustain a reduction of up to one-quarter in the recent average for pounds of chinook landed if there is no increase in effort during remaining open fishing periods. An increase is expected but this factor is impossible to quantify in advance for a fishery lacking an "active" management history profile. In any case, the potential dollar loss would be substantially less than the poundage reduction. Progressively higher prices are traditionally paid for the larger grades of troll-caught chinook and prices within poundage grade normally increase during the season. The new regulations would largely eliminate the landing of immatures or "smalls" (less than 8 pounds dressed weight), which are the least valuable grade, and would shift the overall catch later in the season and to the larger, more valuable size categories of maturing chinook. For example, three 7-pound chinook totaling 21 pounds (dressed, heads off) would bring \$42.00 at the recent New York wholesale price of \$2.00 per pound. A single 14-pound chinook would bring \$46.90 at their wholesale price of \$3.25 per pound, or nearly \$5.00 more than three small fish totaling 50% more in poundage. The average size of individual fish landed would increase by 22% and hooking mortality losses would decline by 5%. The poundage reduction could be as high as 900,000 pounds annually for the Washington coastal troll fishery (a decline from 3.4 to 2.5 million pounds), but this would amount to only about a 5% decline for the combined U.S. commercial troll landings for the States of Washington, Oregon, California, and Alaska (a decline from 16.9 to 16.0 million pounds).

5. The sport fisheries north of Tillamook Head would sustain a 24% reduction in numbers of chinook caught, but the poundage loss (estimated at 300,000 pounds annually) would be less than that percentage due to a 1½-pound increase in average size of sport chinook landed. Hooking mortality losses would increase, however, by an estimated 13%.

NOTE: These and other projections are based on continuance of the 20-inch total length minimum size limit for chinook presently in effect for U.S. marine sport fisheries in Puget Sound and Juan de Fuca Strait. Prior to 1976, there was no minimum size limit and about 50% of the fish taken were less than 20 inches in length.

6. Major coho salmon stocks contributing to ocean fishery catches in the Washington coast-Columbia River mouth area would show varying results from the 1977 regulatory controls. Harvestable numbers of Puget Sound coho reaching U.S. "inside" waters would increase by 6% with an emphasis toward later, natural spawning stocks due to

the troll closure after mid-September off northern Washington. During low-run cycles, State management would be directed toward utilizing these additional fish for spawning escapement requirements. Southern British Columbia coho runs would increase in a similar manner with some of the ocean fishery "savings" being transferred to U.S. northern Puget Sound commercial net fisheries. Washington coastal coho runs would show the largest percentage increase in returning harvestable numbers, averaging 15%, but varying by area and run timing. Late-running native stocks from Grays Harbor tributaries and Olympic Peninsula rivers would receive the most protection. Again, some potential savings would be transferred to needed spawning escapements during low-run cycles. Harvestable coho runs to the Columbia River system and Oregon coastal streams would increase by 4% and 2%, respectively. Annually coho poundage yields for treaty and non-treaty "inside" fisheries are predicted to increase by 400,000 pounds (to a 6.5 million pound total) for Puget Sound, by 200,000 pounds (to a 1.2 million pound total) for Washington coastal areas, and by 100,000 pounds (to a 2.0 million pound total) in the Columbia River system.

7. The commercial troll fishery off the Washington coast and Columbia River mouth could sustain a reduction of up to 15% from the recent average for coho poundage if effort did not increase after July 1 over past years' levels. The potential economic loss would be significantly less since coho prices traditionally increase as the season progresses and larger, better quality fish approaching maturity are landed. For example, in 1975 a major fish buyer at LaPush on the Washington coast began paying trollers \$0.73 per pound for coho on June 15 and increased prices by incremental steps during the season to reach a high of \$1.05 per pound on September 30. In terms of Washington State troll landings, a reduction of up to 800,000 pounds per year could be anticipated by a decline from 5.5 to 4.7 million pounds annually. In the context of U.S. coastwide troll coho catches, as reflected in total landings for the States of Washington, Oregon, California, and Alaska, this decline would be 4% or less (a decline from 19.2 to 18.4 million pounds annually).

8. The sport fisheries catch of coho salmon north of Tillamook Head would increase by 9% with the new regulations. This change would result from the combination of larger chinook minimum size limits and the greater abundance of coho available due to a delay in the troll season opening date. The coho size limit reduction would be of secondary importance. For the combined ocean sport catch of chinook and coho, little or no change in numbers of fish would be expected since the loss of small chinook would be largely counterbalanced by increased coho catches. It is expected that the overall U.S. sport catch of coho would realize an additional 500,000 pounds under the new regulations.

9. For all U.S. and Canadian fisheries harvesting salmon stocks that are present at some time off the Washington coast, the proposed ocean fishing regulatory changes north of Tillamook Head would result in a total poundage yield increase of about 1.1 million pounds annually from existing levels of chinook and coho salmon resources. This occurs primarily because chinook and coho would be caught at a larger average size. Three types of catch shifts are involved: (a) From early to later in the ocean fishing season for maturing chinook and coho; (b) from immature chinook to mature fish taken one season later in the ocean; and (c)

from ocean fisheries to "inside" fisheries. Additional benefits would be derived by increasing spawning escapements to begin rebuilding currently depressed native salmon stocks. Minimum annual yield increases to U.S. fisheries would approximate net results for "gains" and "losses" predicted in No. 1 through 8 or about 400,000 pounds in the case of chinook and 400,000 pounds for coho.

10. The aggregate of Canadian salmon fisheries participating in the harvest of these stocks will also benefit from these increased yields to the extent of about 300,000 additional pounds annually (mainly chinook), even though one specific element, the troll fishery off the U.S. coast, will have to fish under somewhat more restrictive regulations than prevailed in the past.

IV. Page 44: A new Section, 2.11, is added to read:

2.11 *Pacific Fishery Management Council Action on Regulatory Option taken on May 3, 1977.* The Pacific Fishery Management Council reconsidered certain aspects of its plan and during public meeting on May 2-3, 1977, in Portland, Oregon, took action to amend certain portions of the plan. The major amendments adopted on May 3, 1977, decreases the mid-season closed season for commercial troll fishing north of Tillamook Head, from one month (all of June) to two weeks (June 15-30), increases the minimum size limit for chinook from 26 inches to 28 inches north of Tillamook Head, and provides for recognition of Makah Indian tribe treaty rights.

A summary of the regulatory provisions in the plan, including modifications made by the Council on May 3, 1977 is as follows:

REGULATIONS NORTH OF TILLAMOOK HEAD

COMMERCIAL TROLL

- (a) An all-species commercial troll season, from July 1 through September 15.
- (b) Required use of barbless, single hooks on all terminal troll gear during any early season salmon fishing prior to July 1.
- (c) A 28-inch total length minimum size limit for chinook salmon, 16-inch total

length minimum size limit for coho, and no minimum size limit for other salmon species.

(d) Require that any vessel subject to State hold inspection, fishing north of Tillamook Head, between July 1 and July 10 or fishing off California between May 15 and May 21, must have on board documentation of such inspection as may be issued by the State adjacent to the above stated areas.

(e) An early season for all salmon species other than coho from May 1 through June 14.

(f) A late season all-species troll fishery from September 16 through October 31, south of Point Grenville in Washington State.

(g) Unlawful to possess steelhead.

OCEAN SPORT

(a) A general all-species season from the Saturday closest to May 1 (April 30 in 1977) through October 31.

(b) A 24-inch total length minimum size limit for chinook salmon, a 16-inch total length minimum for coho, and no minimum size limit for other salmon species.

(c) A gear limitation of one rod per fisherman.

(d) Adoption of current possession limits, annual limits, and gear restrictions of the States of Oregon and Washington, respectively.

(e) A three-fish daily sport bag limit.

INDIAN TREATY FISHING

Specific troll regulations north of Sand Point, Washington, for 1977 for the Makah Indian tribe are necessary to fulfill treaty obligations to that tribe and to comply with applicable federal law involving Indian treaty fishing rights. Specific regulations should allow for an all-species Makah troll season from May 1 to October 31, 1977. All other regulations issued pursuant to this plan shall apply to Makah fishing.

The regulations promulgated for the Makahs in this plan do not constitute a waiver by either the Makah tribe or the council to determination of such treaty rights in the future.

REGULATIONS SOUTH OF TILLAMOOK HEAD

Commercial troll

	Waters off Oregon	Waters off California
Minimum size limits	26 in for chinook, 16 in for coho, none for other salmon.	26 in for chinook, 22 in for coho, none for other salmon.
All salmon except coho season	May 1 to Oct. 31	Apr. 15 to Sept. 30
Coho season	June 15 to Oct. 31	May 15 to Sept. 30
Vessel certification. NOTE.—See No. 6 of troll regulation proposals for north of Tillamook Head.	None south of Tillamook Head	Beginning May 13.
Steelhead	Unlawful to possess steelhead.	

OCEAN SPORT

Season

- Oregon: April 30 through October 31.
- California: North of Tomales Point—all year.
- South of Tomales Point—February 12, 1977 through November 13, 1977.

Size Limits (All Species)

- Oregon: No size limit.
- California: 22 inches (exception, see daily limit).

Gear

- Oregon: One rod.
- California: In accordance with existing State regulations (including no limit on number of rods or gear during the commercial fishing season).

Daily Limit

Oregon: Three fish.
California: Three fish (two must be greater than 22 inches; one may be between 20 and 22 inches).

V. Page 44: Section 2.11, *Data on Ocean Commercial and Recreational Salmon Fisheries to be Supplied to the Secretary* is renumbered to 2.12.

VI. Page 46: Section 5.0, *Unavoidable Adverse Effects*. The updated technical analysis, mentioned previously, has resulted in some changes in the percentage effects relating to Options 2 and CA. The corrected figures are contained in Table I.

[FR Doc. 77-14846 Filed 5-23-77; 8:45 am]

TUESDAY, MAY 24, 1977

PART VII



**FEDERAL
COMMUNICATIONS
COMMISSION**

■

CANADIAN TELEVISION

List of Stations and Allocations Within
250 Miles of Canada-U.S. Border

**FEDERAL COMMUNICATIONS
COMMISSION**

CANADIAN TELEVISION

**List of Stations and Allocations Within 250
Miles of the Canada-U.S.A. Border
Issued by FCC**

MAY 11, 1977.

The FCC has issued a list of Canadian television station assignments and channel allocations that is recapitulative and contains information supplied by the De-

partment of Communications of Canada. It reflects all the additions, changes and deletions notified to the Commission by the above date and supersedes previous lists issued by the Commission.

Further additions, changes and deletions, as coordinated between the Commission and the Canadian Department of Communications will be issued as reported to the Commission by the Canadian Department of Communications.

Copies of the list may be obtained from Downtown Copy Center, 1730 K

Street NW., Washington, D.C. 20006, telephone 202-452-1422.

WALLACE E. JOHNSON,
Chief, Broadcast Bureau, Federal Communications Commission.

CANADIAN-U.S.A. TELEVISION AGREEMENT

**LIST OF ASSIGNMENTS AND ALLOCATIONS FOR
VHF AND UHF TELEVISION**

(Listed by Province)

CANADA

OFFSET CARRIER DESIGNATORS

Z Zero offset frequency
+ Plus 10 kHz
- Minus 10 kHz
L- Limited allocation

PROVINCE ABBREVIATIONS

Alberta	AB	Ontario	ON
British Columbia	BC	Prince Edward Island	PE
Manitoba	MB	Quebec	QU
New Brunswick	NB	Saskatchewan	SA
Northwest Territories	NT	Yukon Territory	YU
Nova Scotia	NS		

PARAMETER ABBREVIATIONS

Directional Antenna	DA	Limited	LTD
Horizontal Polarization	HOR	License	LIC
Feet	FT	Commercial	CO
Kilowatt	KW		

Revised to April 12, 1977.

TV ENGINEERING DATA BASE LISTING - INDEX KEY STATE, CITY, CHAN							APR 12, 1977	PAGE 1
FEDERAL COMMUNICATIONS COMMISSION - BROADCAST BUREAU								
NOTICE UNOFFICIAL SECONDARY SOURCE. USE PRIMARY SOURCES FOR OFFICIAL INFORMATION ***NOTICE***								
CO	BANFF	AB	51-10-00.0	51 +			751217	
	ZONE 2	**USA BORDER**	115-34-00.0					
CO	BLAIRMORE	AB	49-26-00.0	57 +			751217	
	ZONE 2	**USA BORDER**	114-26-00.0					
CO	BROOKS	AB	50-25-00.0	66 -			760512	
	ZONE 2	**USA BORDER**	111-53-00.0					
CO	BROOKS	AB	50-25-00.0	72 Z			760512	
	ZONE 2	**USA BORDER**	111-53-00.0					
CJQCTV03	CO LIC	BURMIS	AB	49-31-54.0	03 Z	.409(KW) 0420(FT)	LETHBRIDGE TV LTD	
		ZONE 2	**USA BORDER**	114-11-37.0	DA	HOR		
CFCHTV04	CO LIC	BURMIS	AB	49-31-54.0	05 -	.23(KW) 0439(FT)	CFCH TV LTD	
		ZONE 2	**USA BORDER**	114-11-37.0		HOR		
CBRT08	CO LIC	BURMIS	AB	49-33-14.0	47 Z	1.7(KW) 543(FT)		
		ZONE 2	**USA BORDER**	114-10-37.0	DA	HOR	770302	
CFACTV	CO LIC	CALGARY	AB	51-04-24.0	02 +	100(KW) 0989(FT)	CALGARY TV LTD	
		ZONE 2	**USA BORDER**	114-15-34.0		HOR	730401	
CFCHTV	CO LIC	CALGARY	AB	51-03-37.0	04 Z	100(KW) 0660(FT)	CFCH TV LTD	
		ZONE 2	**USA BORDER**	114-10-13.0	DA	HOR	751217	
CO	CALGARY	AB	51-02-42.0	09 +			760115	
	ZONE 2	**USA BORDER**	114-03-35.0					
CO	CALGARY	AB	51-03-00.0	16 Z			751217	
	ZONE 2	**USA BORDER**	114-05-00.0					
CO	CALGARY	AB	51-03-00.0	22 Z			751217	
	ZONE 2	**USA BORDER**	114-05-00.0					
CO	CALGARY	AB	51-03-00.0	38 Z			751217	
	ZONE 2	**USA BORDER**	114-05-00.0					
CO	CALGARY	AB	51-03-00.0	44 Z			751217	
	ZONE 2	**USA BORDER**	114-05-00.0					
CO	CALGARY	AB	51-03-00.0	50 Z			751217	
	ZONE 2	**USA BORDER**	114-05-00.0					
CO	CALGARY	AB	51-03-00.0	73 +			751217	
	ZONE 2	**USA BORDER**	114-05-00.0					
CO	CALGARY	AB	51-03-00.0	79 Z			751217	
	ZONE 2	**USA BORDER**	114-05-00.0					
CO	CAMROSE	AB	53-01-30.0	07 Z			760527	
	ZONE 2		112-49-30.0					

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CO	CARDSTON	AB	49-12-00.0	19 +			751217	
	ZONE 2	**USA BORDER**	113-18-00.0					
CO	CHARLHOLM	AB	50-02-00.0	52 Z			760512	
	ZONE 2	**USA BORDER**	113-35-00.0					
CRDVT01	CO LIC	CORONATION	AB	52-09-15.0	10 Z	17.6(KW) 0687(FT)	CHCA TV LTD	
		ZONE 2	**USA BORDER**	111-09-30.0	DA	HOR	751217	
CFCHTV01	CO LIC	DRUMHELLER	AB	51-24-00.0	12 Z	28.2(KW) 0916(FT)	CFCH TV LTD	
		ZONE 2	**USA BORDER**	112-19-48.0	DA	HOR	751217	
CO	DRUMHELLER	AB	51-28-00.0	30 Z			751217	
	ZONE 2	**USA BORDER**	112-42-00.0					
CO	ETZIKOM	AB	49-33-59.0	12 +			770324	
	ZONE 2	**USA BORDER**	111-07-52.0					
CO	FORT MACLEOD	AB	49-43-00.0	74 -			751217	
	ZONE 2	**USA BORDER**	113-25-00.0					
CO	HANNA	AB	51-38-00.0	78 -			760512	
	ZONE 2	**USA BORDER**	111-54-00.0					
CO	HIGH RIVER	AB	50-35-00.0	56 Z			751217	
	ZONE 2	**USA BORDER**	113-52-00.0					
CO	INNISFAIL	AB	52-02-00.0	71 Z			760512	
	ZONE 2	**USA BORDER**	113-57-00.0					
CO	LACOMBE	AB	52-28-00.0	15 -			751217	
	ZONE 2	**USA BORDER**	113-44-00.0					
CJQCTV	CO LIC	LETHBRIDGE	AB	49-42-55.0	07 Z	171(KW) 0662(FT)	LETHBRIDGE TV LTD	
		ZONE 2	**USA BORDER**	112-47-56.0	DA	HOR	751217	
CBRT08	CO LIC	LETHBRIDGE	AB	49-44-26.0	10 -	322(KW) 676(FT)		
		ZONE 2	**USA BORDER**	112-48-06.0	DA	HOR	770310	
CFCHTV08	CO LIC	LETHBRIDGE	AB	49-42-55.0	13 +	97.5(KW) 0593(FT)	CFCH TV LTD	
		ZONE 2	**USA BORDER**	112-47-56.0	DA	HOR	751217	
CO	LETHBRIDGE	AB	49-42-00.0	23 +			751217	
	ZONE 2	**USA BORDER**	112-50-00.0					
CO	LETHBRIDGE	AB	49-42-00.0	58 -			751217	
	ZONE 2	**USA BORDER**	112-50-00.0					
CO	LETHBRIDGE	AB	49-42-00.0	64 +			751217	
	ZONE 2	**USA BORDER**	112-50-00.0					
CO	LETHBRIDGE	AB	49-42-00.0	80 Z			751217	
	ZONE 2	**USA BORDER**	112-50-00.0					

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CO	LLOYDMINSTER ZONE 2	AB	53-17-00.0 110-00-00.0	04 -						760722	
CO	LLOYDMINSTER ZONE 2	AB	53-17-00.0 110-00-00.0	08 Z						760722	
CHATTY	CO LIC	MEDICINE HAT ZONE 2 **USA BORDER**	AB 110-47-40.0	08 -	5.7(KW) HOR	0315(FT)	MONARCH BCTING CO			730401	
CO		MEDICINE HAT ZONE 2 **USA BORDER**	AB 110-40-30.0	08 Z						760115	
CO		MEDICINE HAT ZONE 2 **USA BORDER**	AB 110-40-00.0	49 Z						760512	
CO		MEDICINE HAT ZONE 2 **USA BORDER**	AB 110-40-00.0	65 +						760512	
CO		MEDICINE HAT ZONE 2 **USA BORDER**	AB 110-40-00.0	71 +						760512	
CO		GLOS ZONE 2 **USA BORDER**	AB 114-06-00.0	81 Z						760512	
CFONTV01	CO LIC	OVEN ZONE 2 **USA BORDER**	AB 110-24-30.0	02 -	.71(KW) HOR	0365(FT)	OVEN DISTRICT TV ASSOC			751217	
CO		PINCHER CREEK ZONE 2 **USA BORDER**	AB 113-57-00.0	70 Z						760512	
CHATTY01	CO LIC	Pivot ZONE 2 **USA BORDER**	AB 110-03-07.0	04 +	4.0(KW) HOR	0623(FT)	MONARCH BCTING CO LTD			751217	
CO		PROVOST ZONE 2 **USA BORDER**	AB 110-16-00.0	24 -						751217	
CO		RAYMOND ZONE 2 **USA BORDER**	AB 112-39-00.0	36 +						760512	
CR0TV	CO LIC	RED DEER ZONE 2 **USA BORDER**	AB 113-41-30.0	08 +	26(KW) HOR	0714(FT)	CMCA TV LTD			760525	
CFRNTV08	CO LIC	RED DEER ZONE 2 **USA BORDER**	AB 113-41-47.0	08 +	50(KW) HOR	0882(FT)				760525	
CO		RED DEER ZONE 2 **USA BORDER**	AB 113-48-00.0	31 -						760512	
CO		RED DEER ZONE 2 **USA BORDER**	AB 113-48-00.0	59 Z						760512	
CO		RED DEER ZONE 2 **USA BORDER**	AB 113-48-00.0	65 Z						760512	

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CO		ROCKY Mtn HOUSE ZONE 2 **USA BORDER**	AB 114-55-00.0	27 Z						760512	
CBRT05	CO LIC	ROSEMARY ZONE 2 **USA BORDER**	AB 112-27-09.0	11 Z	227(KW) HOR	619(FT)				770324	
CO		STETTNER ZONE 2 **USA BORDER**	AB 112-43-00.0	67 Z						760512	
CO		TABER ZONE 2 **USA BORDER**	AB 112-08-00.0	42 +						760512	
CO		VULCAN ZONE 2 **USA BORDER**	AB 113-15-00.0	25 Z						760512	
CBUDT00	CO LIC	BOHNINGTON ZONE 2 **USA BORDER**	BC 117-29-16.0	13 +	.159(KW) HOR	11287(FT)	CANADIAN BCTING CORP.			760624	
CO		BURNS LAKE ZONE 2 **USA BORDER**	BC 125-40-36.0	04 +						770324	
CO		CAMPBELL RIVER ZONE 2 **USA BORDER**	BC 125-14-40.0	07 -						751217	
CO		CAMPBELL RIVER ZONE 2 **USA BORDER**	BC 125-15-00.0	49 +						760512	
CBUT01	CO LIC	CANAL FLATS ZONE 2 **USA BORDER**	BC 115-49-25.0	12 Z	95.5(KW) HOR	1805(FT)	CANADIAN BCTING CORP			751217	
CO		CASSIAR ZONE 2 **USA BORDER**	BC 129-51-00.0	07 Z						751217	
CO		CASTLEGAR ZONE 2 **USA BORDER**	BC 117-40-00.0	81 +						760512	
CBUT02	CO LIC	CHILLIWACK ZONE 2 **USA BORDER**	BC 121-50-47.9	03 Z	1.51(KW) HOR	0702(FT)	CANADIAN BCTING CORP			751217	
CO		CHILLIWACK ZONE 2 **USA BORDER**	BC 121-57-00.0	14 +						761007	
CO		CHILLIWACK ZONE 2 **USA BORDER**	BC 121-57-00.0	36 +						751217	
CFJCTV04	CO LIC	CLINTON ZONE 2 **USA BORDER**	BC 121-40-30.0	09 +	.204(KW) HOR	1800(FT)	INLAND BCTRS LTD			730401	
CBUT01	CO LIC	COURTENAY ZONE 2 **USA BORDER**	BC 125-00-36.0	09 -	1.25(KW) HOR	0483(FT)	CANADIAN BCTING CORP			751217	
CHANTY04	CO LIC	COURTENAY ZONE 2 **USA BORDER**	BC 125-14-83.0	13 Z	1.86(KW) HOR	1321(FT)	BC TV BCTING SYS			751217	

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CO	COURTENAY ZONE 2	BC	49-41-00.0	79 Z						751217
CBUT07	CO LIC	CRANBROOK ZONE 2	BC	49-27-30.0	10 Z	2.20(KW)	3443(FT)			751217
CBUT	CO LIC	CRANBROOK ZONE 2	BC	49-32-45.0	59 +	.30(KW)	068(FT)		CANADIAN BCTING CORP	751217
CBUT01	CO LIC	CRANFORD BAY ZONE 2	BC	49-38-54.0	05 Z	.935(KW)	-440(FT)		CANADIAN BCTING CORP	751217
CBUT03	CO LIC	CRESTON ZONE 2	BC	49-09-58.0	03 Z	.790(KW)	2011(FT)			770310
CO	CRESTON ZONE 2	BC	49-06-00.0	42 Z						760512
CO	DUNCAN ZONE 2	BC	48-47-00.0	51 Z						751217
CHBTV08	CO LIC	ENDERBY ZONE 2	BC	50-33-48.0	72 Z	.070(KW)	-825(FT)		OKANAGAN VALLEY TV CO	751217
CO	ENDERBY ZONE 2	BC	50-33-00.0	78 Z						760512
CBUT09	CO LIC	FERNIE ZONE 2	BC	49-29-18.0	08 Z	1(KW)	-1804(FT)			760525
CBUT02	CO LIC	GOLDEN ZONE 2	BC	51-16-25.0	13 Z	.157(KW)	0-87(FT)		CANADIAN BCTING CORP	751217
CO	GOLDEN ZONE 2	BC	51-18-00.0	84 Z						760512
CO	GRAND FORKS ZONE 2	BC	49-02-00.0	57 Z						760512
CO	HOPE ZONE 2	BC	49-23-00.0	57 Z						760512
CO	HOPE ZONE 2	BC	49-23-00.0	65 Z						751217
CO	HOUSTON ZONE 2	BC	54-26-33.0	02 +						770324
CFJCTV	CO LIC	KAMLOOPS ZONE 2	BC	50-40-15.0	04 +	3.7(KW)	0501(FT)		INLAND BCTRS LTD	730401
CHRTV08	CO LIC	KAMLOOPS ZONE 2	BC	50-40-15.0	06 +	4(KW)	0501(FT)		BRITISH COLUMBIA TV	730401

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CO	KAMLOOPS ZONE 2	BC	50-40-00.0	90 +						760512
CO	KAMLOOPS ZONE 2	BC	50-40-00.0	74 +						760512
CO	KAMLOOPS ZONE 2	BC	50-40-00.0	80 Z						760512
CHBTV	CO LIC	KELOWNA ZONE 2	BC	49-58-00.0	02 Z	3.7(KW)	2704(FT)		OKANAGAN VALLEY TV CO	730401
CHLTV08	CO LIC	KELOWNA ZONE 2	BC	49-58-00.0	05 -	7(KW)	1672(FT)		BC TV BCTING SYS LTD	751217
CO	KELOWNA ZONE 2	BC	49-53-00.0	21 Z						760512
CO	KELOWNA ZONE 2	BC	49-53-00.0	43 +						760512
CO	KIMBERLEY ZONE 2	BC	49-41-00.0	71 +						751217
CO	KINNAIRD ZONE 2	BC	49-17-00.0	63 +						760512
CO	KITIMAT ZONE 2	BC	54-02-00.0	21 Z						760512
CO	LAGE COWICHAN ZONE 2	BC	48-50-00.0	29 Z						760512
CO	MERRITT ZONE 2	BC	50-07-00.0	20 +						751217
CO	MISSION CITY ZONE 2	BC	49-08-00.0	81 Z						760512
CBUT08	CO LIC	MORRISSEY RIDGE ZONE 2	BC	49-26-44.0	21 +	.32(KW)	1804(FT)		ALLOC TO FERNIE, BC	751217
CO	MT KOBAY ZONE 2	BC	49-08-15.0	03 +					ALLOCATION USED OLIVER-OSOYOOS, BC.	770302
CITVTV	CO LIC	MT TIMOTHY ZONE 2	BC	51-54-10.0	03 Z	1.3(KW)	1917(FT)		BC TV BCTING SYS LTD	751217
CFJCTV08	CO LIC	MT TIMOTHY ZONE 2	BC	51-54-00.0	05 -	.99(KW)	1871(FT)		INLAND BCTRS LTD	730401
CO	NANAIMO ZONE 2	BC	49-10-00.0	23 -						751217

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CO	NANAIMO ZONE 2	BC	49-10-00.0 123-56-00.0	63 Z				751217
CBUBT10	CO LIC	NATAL ZONE 2	BC	49-43-28.0 114-51-48.0	11 Z	1.11(KW) DA	-590(FT) HOR	751217
CKTNTV03	CO LIC	NELSON ZONE 2	BC	49-29-35.0 117-16-15.0	03 +	330(KW) DA	-1870(FT) HOR	770310
CBUCT00	CO LIC	NELSON ZONE 2	BC	49-31-50.0 117-17-50.0	09 Z	1.85(KW) DA	1377(FT) HOR	751217
	CO	NELSON ZONE 2	BC	49-29-00.0 117-17-00.0	14 Z			751217
	CO	NELSON ZONE 2	BC	49-29-00.0 117-17-00.0	23 Z			751217
CKKMTV	CO LIC	OLIVER-OSOYOOS ZONE 2	BC	49-08-15.0 119-40-10.0	03 +	930(KW) HOR	3164(FT) ALLOCATED TO MT. KOBAU, BC.	770302
CHBCTV03	CO LIC	OLIVER ZONE 2	BC	49-06-00.0 119-34-45.0	08 Z	.22(KW) DA	1246(FT) HOR	751217
	CO	OLIVER ZONE 2	BC	49-11-00.0 119-33-00.0	41 Z			751217
CHKLTV01	CO LIC	PENTICTON ZONE 2	BC	49-39-34.0 119-34-18.0	10 Z	1.08(KW) DA	1173(FT) HOR	751217
CHBCTV01	CO LIC	PENTICTON ZONE 2	BC	49-39-34.0 119-34-18.0	13 Z	.54(KW) DA	2717(FT) HOR	751217
	CO	PENTICTON ZONE 2	BC	49-30-00.0 119-35-00.0	73 Z			760512
	CO	PENTICTON ZONE 2	BC	49-30-00.0 119-35-00.0	79 +			760512
	CO	PORT ALBERNI ZONE 2	BC	49-14-15.0 124-48-15.0	03 +			751217
	CO	PORT ALBERNI ZONE 2	BC	49-14-00.0 124-48-00.0	27 +			751217
	CO	PORT ALBERNI ZONE 2	BC	49-14-00.0 124-48-00.0	71 +			751217
	CO	PORT HARDY ZONE 2	BC	50-43-30.0 127-29-30.0	06 Z			760809
	CO	PORT HARDY ZONE 2	BC	50-43-30.0 127-29-30.0	08 Z			751217

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CO	POWELL RIVER ZONE 2	BC	49-52-00.0 124-33-00.0	15 -				751217
CO	POWELL RIVER ZONE 2	BC	49-52-00.0 124-33-00.0	43 Z				751217
CFRTV01	CO LIC	PRINCE RUPERT ZONE 2	BC	54-17-05.0 120-18-48.0	06 +	.48(KW) HOR	1960(FT)	730401
	CO	PRINCE RUPERT ZONE 2	BC	54-18-48.0 120-19-30.0	07 Z			751217
	CO	PRINCE RUPERT ZONE 2	BC	54-19-00.0 120-19-00.0	14 Z			760512
	CO	PRINCE RUPERT ZONE 2	BC	54-19-00.0 120-19-00.0	20 Z			760512
	CO	PRINCETON ZONE 2	BC	49-27-00.0 120-30-00.0	71 Z			751217
CBUDT05	CO LIC	RADIUM ZONE 2	BC	50-37-08.0 116-04-47.0	77 Z	1.58(KW) DA	-1486(FT) HOR	760824
	CO	REVELSTOKE ZONE 2	BC	51-00-00.0 118-12-00.0	66 +			751217
	CO	ROSSLAND ZONE 2	BC	49-05-00.0 117-48-00.0	19 Z			751217
CHBCTV04	CO LIC	SALMON ARM ZONE 2	BC	50-45-20.0 119-18-45.0	09 -	.486(KW) DA	-1555(FT) HOR	751217
	CO	SALMON ARM ZONE 2	BC	50-42-00.0 119-16-00.0	56 +			760512
	CO	SALT SPRINGS ISLAND ZONE 2	BC	48-45-06.0 123-29-26.0	21 -		ALLOCATION USED VANCOUVER, BC.	761210
	CO	SMITHERS ZONE 2	BC	54-44-28.0 126-58-50.0	05 +			770324
	CO	SMITHERS ZONE 2	BC	54-47-00.0 127-10-00.0	28 Z			760512
	CO	SOOKE ZONE 2	BC	48-23-00.0 123-43-00.0	33 Z			760512
CBUBT06	CO LIC	SPELLIMACHEN ZONE 2	BC	50-53-59.0 116-20-35.0	69 Z	1.84(KW) DA	-1377(FT) HOR	760524
	CO	SQUAMISH ZONE 2	BC	49-42-00.0 123-09-00.0	35 +			760512

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CO	SUMMERLAND ZONE 2	BC	49-36-00.0 119-41-00.0	49 Z					760512
CFKT TV	CO LIC	TERRACE ZONE 2	BC **USA BORDER**	54-31-05.0 126-28-15.0	03 Z	4.1(KW) HOR	1783(FT)	SKEENA BCTRS LTD	730401
CO	TERRACE ZONE 2	BC	54-31-00.0 126-35-00.0	19 Z					760512
CKXTV	CO LIC	TRAIL ZONE 2	BC **USA BORDER**	49-05-30.0 117-49-10.0	06 +	10(KW) DA	1544(FT)		770210
CBMT	CO LIC	TRAIL ZONE 2	BC **USA BORDER**	49-05-27.0 117-47-55.0	11 Z	5.85(KW) HOR	0762(FT)	CANADIAN BCTING CORP	751217
CO	TRAIL ZONE 2	BC	49-06-00.0 117-42-00.0	36 Z					751217
CO	TRAIL ZONE 2	BC	49-06-00.0 117-42-00.0	52 +					760414
CBUT	CO LIC	VANCOUVER ZONE 2	BC **USA BORDER**	49-21-12.0 122-57-18.0	02 +	89.4(KW) HOR	2400(FT)	CANADIAN BCTING CORP	751217
CHNTV	CO LIC	VANCOUVER ZONE 2	BC **USA BORDER**	49-18-31.0 122-54-49.0	09 +	16.4(KW) HOR	1171(FT)	BC BCTING SYS LTD	770302
CKVTV	CO CP	VANCOUVER ZONE 2	BC **USA BORDER**	48-45-06.0 123-29-26.0	21 -	2440(KW) DA BT	2187(FT)	ALLOCATED TO SALT SPRINGS ISLAND, BC.	761210
CBFT	CO LIC	VANCOUVER-NEW W ZONE 2	BC **USA BORDER**	49-21-12.0 122-57-18.0	26 Z	257(KW) DA BT	2011(FT)		760921
CO	VANCOUVER-NEW W ZONE 2	BC	49-16-00.0 123-07-00.0	32 Z					760512
CO	VANCOUVER-NEW W ZONE 2	BC	49-16-00.0 123-07-00.0	45 Z					760512
CO	VANCOUVER-NEW W ZONE 2	BC	49-16-00.0 123-07-00.0	55 Z					760512
CO	VANCOUVER-NEW W ZONE 2	BC	49-16-00.0 123-07-00.0	61 Z					760512
CO	VANCOUVER-NEW W ZONE 2	BC	49-16-00.0 123-07-00.0	72 +					760512
CO	VANCOUVER-NEW W ZONE 2	BC	49-16-00.0 123-07-00.0	83 Z					760512
CHBCTV02	CO LIC	VERNON ZONE 2	BC **USA BORDER**	50-16-58.0 119-19-09.0	07 -	.62(KW) DA	0860(FT)	OKANAGAN VALLEY TV CO	751217

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CHKLTV02	CO LIC	VERNON ZONE 2	BC **USA BORDER**	50-16-58.0 119-19-09.0	12 Z	5.56(KW) HOR	0570(FT)	BC TV BCTING SYS LTD	760414
CO	VERNON ZONE 2	BC	50-16-00.0 119-16-00.0	18 Z					751217
CO	VERNON ZONE 2	BC	50-16-00.0 119-16-00.0	27 Z					751217
CHERTV	CO LIC	VICTORIA ZONE 2	BC **USA BORDER**	48-46-28.0 123-10-10.0	06 Z	100(KW) HOR	1555(FT)	CHEK TV LTD	730401
CO	VICTORIA ZONE 2	BC	48-26-05.0 123-21-00.0	10 +					751217
CO	VICTORIA ZONE 2	BC	48-25-00.0 123-22-00.0	42 Z					751217
CO	VICTORIA ZONE 2	BC	48-25-00.0 123-22-00.0	53 Z					760512
CO	VICTORIA ZONE 2	BC	48-25-00.0 123-22-00.0	74 Z					760512
CO	VICTORIA ZONE 2	BC	48-25-00.0 123-22-00.0	80 +					760512
CO	WARFIELD ZONE 2	BC	49-06-00.0 117-45-00.0	25 +					760512
CO	MOSS CAMP ZONE 2	BC	50-10-10.0 126-34-09.0	12 Z					760809
CO	WILLIAMS LAKE ZONE 2	BC	52-08-00.0 122-09-00.0	21 +					760723
CO	ALONSA ZONE 2	MB	50-48-00.0 98-58-00.0	11 -					760512
CO	ALONSA ZONE 2	MB	50-48-00.0 98-58-00.0	27 Z					760512
CO	ALONSA ZONE 2	MB	50-48-00.0 98-58-00.0	39 Z					760512
CO	ALONSA ZONE 2	MB	50-48-00.0 98-58-00.0	49 Z					760512
CO	ALONSA ZONE 2	MB	50-48-00.0 98-58-00.0	55 Z					760512
CO	ALTONA ZONE 2	MB	49-06-00.0 97-33-00.0	58 Z					760512

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CO		BALDY MOUNTAIN ZONE 2	MB **USA BORDER**	51-28-14.0 100-43-10.0	4T *			761111	
CO		BEAUSEJOUR ZONE 2	MB **USA BORDER**	50-04-00.0 96-33-00.0	44 Z			760512	
CO		BIRCH RIVER ZONE 2	MB **USA BORDER**	52-22-15.0 101-59-30.0	02 Z			751217	
CO		BIRCH RIVER ZONE 2	MB **USA BORDER**	52-22-15.0 101-59-30.0	04 -			751217	
CO		BOISSEVAIN ZONE 2	MB **USA BORDER**	49-14-00.0 100-03-00.0	53 -			751217	
CO		BRANDON ZONE 2	MB **USA BORDER**	49-53-00.0 99-59-00.0	02 -			751217	
CJAYTV	CO LIC	BRANDON ZONE 2	MB **USA BORDER**	49-40-05.0 100-00-40.0	04 + DA	100(KW) HOR	1200(FT)	RELAY COMM LTD	751217
CKXTV	CO LIC	BRANDON ZONE 2	MB **USA BORDER**	49-40-05.0 100-00-40.0	05 + DA	83(KW) HOR	1363(FT)	WESTERN MA BCTRS LTD	751217
CO		BRANDON ZONE 2	MB **USA BORDER**	49-50-00.0 99-57-00.0	21 *			760512	
CO		BRANDON ZONE 2	MB **USA BORDER**	49-50-00.0 99-57-00.0	27 *			760512	
CO		BRANDON ZONE 2	MB **USA BORDER**	49-50-00.0 99-57-00.0	63 Z			760512	
CO		CARBERRY ZONE 2	MB **USA BORDER**	49-52-00.0 99-20-00.0	61 Z			760512	
CO		CARMAN ZONE 2	MB **USA BORDER**	49-32-00.0 98-00-00.0	60 Z			760512	
CO		CHURCHILL ZONE 2	MB	58-46-49.0 94-11-16.0	04 Z			760722	
CO		CHURCHILL ZONE 2	MB	58-46-49.0 94-11-16.0	08 Z			760722	
CO		DAUPHIN ZONE 2	MB **USA BORDER**	51-28-15.0 100-43-00.0	06 -			751217	
CBNST	CO LIC	DAUPHIN ZONE 2	MB **USA BORDER**	51-28-14.0 100-43-10.0	08 Z DA	300(KW) HOR	1147(FT)	YORKTON TV CO LTD	751217
CO		DAUPHIN ZONE 2	MB **USA BORDER**	51-09-00.0 100-03-00.0	12 -			751217	

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CO		DAUPHIN ZONE 2	MB **USA BORDER**	51-09-00.0 100-03-00.0	18 -			751217	
CO		DAUPHIN ZONE 2	MB **USA BORDER**	51-09-00.0 100-03-00.0	57 Z			751217	
CO		DAWSON BAY ZONE 2	MB	52-54-00.0 101-01-00.0	39 Z			760722	
CO		DAWSON BAY ZONE 2	MB	52-54-00.0 101-01-00.0	41 +			751217	
CO		DAWSON BAY ZONE 2	MB	52-54-00.0 101-01-00.0	53 +			751217	
CO		DAWSON BAY ZONE 2	MB	52-54-00.0 101-01-00.0	62 +			751217	
CO		FAIRFORD ZONE 2	MB **USA BORDER**	51-36-00.0 98-41-00.0	07 -			760809	
CO		FISHER BRANCH ZONE 2	MB **USA BORDER**	51-05-00.0 97-39-00.0	08 -			760319	
CBWQT00	CO LIC	FISHER BRANCH ZONE 2	MB **USA BORDER**	51-04-50.0 97-38-55.0	10 + DA	50.6(KW) HOR	0689(FT)	CANADIAN BCTING CORP	751217
CO		FISHER BRANCH ZONE 2	MB **USA BORDER**	51-05-00.0 97-39-00.0	23 -			780527	
CO		FISHER BRANCH ZONE 2	MB **USA BORDER**	51-05-00.0 97-39-00.0	45 +			751217	
CO		FLIN FLON ZONE 2	MB	54-46-00.0 101-52-00.0	03 -			760722	
CO		FLIN FLON ZONE 2	MB	54-47-30.0 101-52-00.0	05 +			760722	
CO		FLIN FLON ZONE 2	MB	54-47-30.0 101-52-00.0	12 -			760722	
CO		FOXWARREN ZONE 2	MB **USA BORDER**	50-31-14.0 101-04-23.0	09 Z			751217	
CKXTV01	CO LIC	FOXWARREN ZONE 2	MB **USA BORDER**	50-31-14.0 101-04-23.0	11 Z DA	13.2(KW) HOR	0270(FT)	WESTERN MA BCTRS LTD	751217
CO		FOXWARREN ZONE 2	MB **USA BORDER**	50-31-14.0 101-04-23.0	28 +			751217	
CO		FOXWARREN ZONE 2	MB **USA BORDER**	50-31-14.0 101-04-23.0	34 -			761217	

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CO	FOXBAREN ZONE 2	**USA BORDER**	MB	50-31-14.0	58 +						751217
CO	GIMLI ZONE 2	**USA BORDER**	MB	50-38-00.0	60 Z						760512
CO	GODS LAKE ZONE 2		MB	54-40-00.0	12 Z						760722
CO	ISLAND LAKE ZONE 2		MB	53-52-00.0	07 Z						760722
CO	ISLAND LAKE ZONE 2		MB	53-52-00.0	09 Z						760722
CO	ISLAND LAKE ZONE 2		MB	53-52-00.0	11 +						760722
CO	ISLAND LAKE ZONE 2		MB	53-22-00.0	13 -						760722
CO	JACK HEAD ZONE 2	**USA BORDER**	MB	51-53-27.0	65 Z						760730
CO	KILLARNEY ZONE 2	**USA BORDER**	MB	49-12-00.0	43 Z						760512
CBNT02	CO LIC	LAC DU BONNET ZONE 2	**USA BORDER**	MB	50-15-30.0	04 Z	19.2(KW)	0442(FI)		CANADIAN BCTING CORP	751217
CO	LAC DU BONNET ZONE 2	**USA BORDER**	MB	50-18-00.0	15 +						760512
CO	LAC DU BONNET ZONE 2	**USA BORDER**	MB	50-18-00.0	24 -						760512
CO	LAC DU BONNET ZONE 2	**USA BORDER**	MB	50-18-00.0	48 Z						760512
CO	LAC DU BONNET ZONE 2	**USA BORDER**	MB	50-18-00.0	52 Z						760512
CO	LEAF RAPIDS ZONE 2		MB	56-30-00.0	03 Z						760722
CO	LEAF RAPIDS ZONE 2		MB	56-30-00.0	06 -						760722
CO	LEAF RAPIDS ZONE 2		MB	56-30-00.0	11 Z						760722
CO	MATHESON ISLAND ZONE 2	**USA BORDER**	MB	51-44-00.0	35 Z						760512

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CO	MATHESON ISLAND ZONE 2	**USA BORDER**	MB	51-44-00.0	41 Z						760512
CO	MATHESON ISLAND ZONE 2	**USA BORDER**	MB	51-44-00.0	53 Z						760512
CO	MATHESON ISLAND ZONE 2	**USA BORDER**	MB	51-44-00.0	62 -						760512
CO	MCCUSKER LAKE ZONE 2		MB	56-05-00.0	02 Z						760722
CO	MCCUSKER LAKE ZONE 2		MB	56-05-00.0	06 Z						760722
CO	MCCUSKER LAKE ZONE 2		MB	56-05-00.0	13 +						760722
CKXTV02	CO LIC	MELITA ZONE 2	**USA BORDER**	MB	49-16-50.0	09 +	1.8W(KW)	0212(FI)		W MANITOBA BCTBS LTD	730401
CO	MELITA ZONE 2	**USA BORDER**	MB	49-16-00.0	45 Z						751217
CO	MINNEBOSA ZONE 2	**USA BORDER**	MB	50-14-00.0	59 Z						760512
CO	MORDEN-WINKLER ZONE 2	**USA BORDER**	MB	49-11-00.0	25 Z						760609
CO	NEEPAWA ZONE 2	**USA BORDER**	MB	50-13-00.0	29 Z						760512
CO	OXFORD HOUSE ZONE 2		MB	54-56-00.0	08 Z						760722
CO	PEMBINA VALLEY ZONE 2	**USA BORDER**	MB	49-08-00.0	19 +						760512
CO	PEMBINA VALLEY ZONE 2	**USA BORDER**	MB	49-08-00.0	35 -						760512
CO	PEMBINA VALLEY ZONE 2	**USA BORDER**	MB	49-08-00.0	41 -						760512
CO	PEMBINA VALLEY ZONE 2	**USA BORDER**	MB	49-08-00.0	64 Z						760512
CO	PORTAGE PRAIRIE ZONE 2	**USA BORDER**	MB	49-57-00.0	17 Z						760512
CO	PORTAGE PRAIRIE ZONE 2	**USA BORDER**	MB	49-57-00.0	38 Z						760512

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CO	ROOLIN ZONE 2	**USA BORDER**	WB	51-17-00.0 101-20-00.0	52 +					760512
CO	RUSSEL ZONE 2	**USA BORDER**	WB	50-47-00.0 101-15-00.0	22 Z					760512
CO	SELKIRK ZONE 2	**USA BORDER**	WB	50-09-00.0 96-52-00.0	54 Z					751217
CO	SHERIDON ZONE 2		WB	55-08-00.0 101-05-00.0	07 -					760722
CO	SHERIDON ZONE 2		WB	56-08-00.0 101-05-00.0	21 Z					751217
CO	SHERIDON ZONE 2		WB	55-08-00.0 101-05-00.0	27 Z					751217
CO	SHERIDON ZONE 2		WB	55-08-00.0 101-05-00.0	33 Z					751217
CBNFT64	CO LIC		WB	51-04-15.0 99-31-16.0	03 +	.392(KW) DA	100(FT)			770310
CO	STEINBACH ZONE 2	**USA BORDER**	WB	49-32-00.0 98-41-00.0	18 Z					751217
CO	SMAR RIVER ZONE 2	**USA BORDER**	WB	52-06-00.0 101-18-00.0	14 Z					760512
CO	THE PASS ZONE 2		WB	53-50-00.0 101-15-20.0	02 -					760722
CO	THE PASS ZONE 2		WB	53-50-00.0 101-15-20.0	06 +					760722
CO	THE PASS ZONE 2		WB	53-50-00.0 101-15-20.0	12 Z					760722
CO	THOMPSON ZONE 2		WB	55-43-45.0 97-52-00.0	04 Z					760730
CO	THOMPSON ZONE 2		WB	55-43-45.0 97-52-00.0	05 Z					760722
CO	THOMPSON ZONE 2		WB	55-43-45.0 97-52-00.0	09 +					760722
CO	VASSAR ZONE 2	**USA BORDER**	WB	49-06-00.0 95-50-00.0	16 Z					760512
CO	VASSAR ZONE 2	**USA BORDER**	WB	49-06-00.0 95-50-00.0	28 Z					760512

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CO	VASSAR ZONE 2	**USA BORDER**	WB	49-06-00.0 95-50-00.0	37 Z					760512
CO	VASSAR ZONE 2	**USA BORDER**	WB	49-06-00.0 95-50-00.0	63 +					760512
CO	VASSAR ZONE 2	**USA BORDER**	WB	49-06-00.0 95-50-00.0	62 Z					760512
CO	VIRIDEN ZONE 2	**USA BORDER**	WB	49-51-00.0 100-55-00.0	32 Z					760512
CO	WEST HAWK ZONE 2	**USA BORDER**	WB	49-44-00.0 95-14-00.0	34 Z					751217
CO	WEST HAWK ZONE 2	**USA BORDER**	WB	49-44-00.0 95-14-00.0	40 +					751217
CO	WEST HAWK ZONE 2	**USA BORDER**	WB	49-44-00.0 95-14-00.0	50 Z					770324
CO	WEST HAWK ZONE 2	**USA BORDER**	WB	49-44-00.0 95-14-00.0	56 Z					770324
CBNFT	CO LIC		WB	49-46-15.0 97-30-35.0	03 -	59(KW) HQR	930(FT)	CANADIAN BCTING CORP		760624
CBWT	CO LIC		WB	49-46-15.0 97-30-35.0	06 -	100(KW) HQR	1010(FT)	CANADIAN BCTING CORP		751217
CKTV	CO LIC		WB	49-34-48.0 97-10-04.0	07 +	325(KW) HQR	0933(FT)	CHANNEL 7 TV LTD		740828
CO	WINNIPEG-ST BONIFACE ZONE 2	**USA BORDER**	WB	49-53-00.0 97-09-30.0	09 +					761111
CO	WINNIPEG-ST BONIFACE ZONE 2	**USA BORDER**	WB	49-53-00.0 97-09-30.0	13 +					761111
CO	WINNIPEG-ST BONIFACE ZONE 2	**USA BORDER**	WB	49-53-00.0 97-09-30.0	20 +					761111
CO	WINNIPEG-ST BONIFACE ZONE 2	**USA BORDER**	WB	49-53-00.0 97-09-30.0	26 Z					761111
CO	WINNIPEG-ST BONIFACE ZONE 2	**USA BORDER**	WB	49-53-00.0 97-09-30.0	30 Z					761111
CO	WINNIPEG-ST BONIFACE ZONE 2	**USA BORDER**	WB	49-53-00.0 97-09-30.0	42 Z					761111
CO	WINNIPEG-ST BONIFACE ZONE 2	**USA BORDER**	WB	49-53-00.0 97-09-30.0	48 Z					761111

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CO	WINNIPEG-ST BONIFACE NB ZONE 2 **USA BORDER**	49-53-00.0 97-09-30.0	71 Z							761111
CO	WINNIPEG-ST BONIFACE NB ZONE 2 **USA BORDER**	49-53-00.0 97-09-30.0	77 +							761111
CO	WINNIPEG-ST BONIFACE NB ZONE 2 **USA BORDER**	49-53-00.0 97-09-30.0	83 Z							761118
CO	BATHURST NB ZONE 2 **USA BORDER**	47-36-00.0 65-39-00.0	54 +							751217
CO	BATHURST NB ZONE 2 **USA BORDER**	47-36-00.0 65-39-00.0	82 Z							751217
CHSJT01 CO LIC	BON ACCORD NB ZONE 2 **USA BORDER**	46-38-57.0 67-35-35.0	06 -	100(KW) HOR	1000(FT)			NEW BRUNSWICK BCTING CO		751217
CO	BUCTOUCHE NB ZONE 2 **USA BORDER**	46-28-00.0 64-43-00.0	27 Z							760512
CACDTV00 CO LIC	CAMPBELLTON NB ZONE 2 **USA BORDER**	48-04-57.0 66-34-54.0	07 -	2(KW) HOR	9640(FT)			MONCTON BCTING LTD		751217
CO	CAMPBELLTON NB ZONE 2 **USA BORDER**	48-00-00.0 66-40-00.0	38 Z							760512
CO	CAMPBELLTON NB ZONE 2 **USA BORDER**	48-00-00.0 66-40-00.0	78 +							760512
CO	CARAQUET NB ZONE 2 **USA BORDER**	47-48-00.0 64-57-00.0	64 Z							760512
CO	CHATHAM NB ZONE 2 **USA BORDER**	47-02-00.0 65-28-00.0	06 Z					ALLOCATION USED NEWCASTLE-CHATHAM, NB.		770408
CO	CHATHAM NB ZONE 2 **USA BORDER**	47-02-00.0 65-28-00.0	82 +							751217
CO	CHIMMAN NB ZONE 2 **USA BORDER**	46-11-00.0 65-53-00.0	67 +							760512
CO	DALHOUSIE NB ZONE 2 **USA BORDER**	48-04-00.0 66-23-00.0	80 Z							751217
CO	DORCHESTER NB ZONE 2 **USA BORDER**	45-54-00.0 64-31-00.0	18 +							760512
CJBRV01 CO LIC	EDMUNDSTON NB ZONE 2 **USA BORDER**	47-23-25.0 66-18-59.0	13 Z	2.6(KW) HOR	0856(FT)					751217
CO	EDMUNDSTON NB ZONE 2 **USA BORDER**	47-22-00.0 66-20-00.0	18 Z							760512

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CO	EDMUNDSTON NB ZONE 2 **USA BORDER**	47-22-00.0 66-20-00.0	68 Z							760512
CLTTV01 CO LIC	FLORENCE-WOODSTOCK NB ZONE 2 **USA BORDER**	46-25-12.0 67-33-34.0	03 Z	35(KW) HOR	439(FT)			ALLOCATED TO WOODSTOCK, NB.		770324
CBAPT01 CO LIC	FREDERICTON-ST JOHN NB ZONE 2 **USA BORDER**	45-34-57.0 65-47-41.0	05 -	80(KW) HOR	0840(FT)					761111
CO	FREDERICTON-ST JOHN NB ZONE 2 **USA BORDER**	45-58-00.0 66-39-00.0	15 Z							761111
CO	FREDERICTON-ST JOHN NB ZONE 2 **USA BORDER**	45-58-00.0 66-39-00.0	45 +							761111
CO	FREDERICTON-ST JOHN NB ZONE 2 **USA BORDER**	45-58-00.0 66-39-00.0	61 Z							761111
CO	GRAND FALLS NB ZONE 2 **USA BORDER**	47-02-45.0 67-44-42.0	04 Z							751217
CO	GRAND FALLS NB ZONE 2 **USA BORDER**	47-03-00.0 67-44-00.0	20 Z							760512
CO	MCADAM NB ZONE 2 **USA BORDER**	45-36-00.0 67-20-00.0	71 -							760512
CO	MCADAM NB ZONE 2 **USA BORDER**	45-36-00.0 67-20-00.0	77 -							760512
CO	WILLTOWN NB ZONE 2 **USA BORDER**	45-10-00.0 67-18-00.0	33 Z							760512
CKCWTV CO LIC	MONCTON NB ZONE 2 **USA BORDER**	46-51-06.0 64-48-47.0	02 Z	25(KW) HOR	0990(FT)			MONCTON BCTING LTD		751217
CHMTTV CO LIC	MONCTON NB ZONE 2 **USA BORDER**	45-48-32.0 64-45-11.0	07 Z	325(KW) HOR	1128(FT)			NB BCTING CO LTD		751217
CSAFT CO LIC	MONCTON NB ZONE 2 **USA BORDER**	46-08-41.0 64-54-14.0	11 Z	325(KW) HOR	0781(FT)			CANADIAN BCTING CORP		751217
CO	MONCTON NB ZONE 2 **USA BORDER**	46-06-00.0 64-47-00.0	24 +							760512
CO	MONCTON NB ZONE 2 **USA BORDER**	46-06-00.0 64-47-00.0	30 Z							760512
CO	MONCTON NB ZONE 2 **USA BORDER**	46-06-00.0 64-47-00.0	70 Z							760512
CO	MONCTON NB ZONE 2 **USA BORDER**	46-06-00.0 64-47-00.0	83 Z							760512

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CBAFT03	CO LIC	NEGUAZ ZONE 2	NB	47-15-40.0 65-05-24.0	03 Z DA	1(KW) 0557(FT)		751217
CHQNTV	CO LIC	NEWCASTLE-CHATHAM ZONE 2	NB	47-03-32.0 65-34-38.0	06 Z DA	12.0(KW) 340(FT)	ALLOCATED TO CHATHAM, NB.	770408
	CO	NEWCASTLE ZONE 2	NB	47-00-00.0 65-34-00.0	25 Z			751217
	CO	DROMOCTO ZONE 2	NB	45-51-00.0 66-29-00.0	21 -			760512
	CO	DROMOCTO ZONE 2	NB	45-51-00.0 66-29-00.0	81 -			761111
	CO	PERTH ZONE 2	NB	46-44-00.0 67-42-00.0	37 +			760512
	CO	RICHIBUCTO ZONE 2	NB	46-41-00.0 64-52-00.0	40 -			760512
	CO	SACKVILLE ZONE 2	NB	45-54-00.0 64-22-00.0	53 Z			751217
	CO	SAINT ANDREWS ZONE 2	NB	45-05-00.0 67-03-00.0	82 +			761111
CH5JTV	CO LIC	SAINT JOHN ZONE 2	NB	45-28-39.0 66-14-02.0	04 + DA	100(KW) 1263(FT)	NEW BRUNSWICK BCTING CO	761111
CKLTV	CO LIC	SAINT JOHN ZONE 2	NB	45-28-39.0 66-14-02.0	09 + DA	325(KW) 1361(FT)	MONCTON BCTING LTD	761111
	CO	SAINT JOHN ZONE 2	NB	45-16-00.0 66-03-00.0	17 Z			751217
	CO	SAINT JOHN ZONE 2	NB	45-16-00.0 66-03-00.0	23 Z			751217
	CO	SAINT JOHN ZONE 2	NB	45-16-00.0 66-03-00.0	39 Z			751217
	CO	SAINT JOHN ZONE 2	NB	45-16-00.0 66-03-00.0	69 Z			751217
	CO	SAINT JOHN ZONE 2	NB	45-16-00.0 66-03-00.0	78 Z			751217
	CO	SAINT LEONARD ZONE 2	NB	47-10-00.0 67-56-00.0	50 +			761111
	CO	SAINT QUENTIN ZONE 2	NB	47-30-00.0 67-23-00.0	42 -			761111

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	CO	SAINT STEPHENS ZONE 2	NB	45-12-00.0 67-17-00.0	49 -			761111
	CO	SALISBURY ZONE 2	NB	46-02-00.0 65-03-00.0	14 Z			760512
	CO	SHEDIAC ZONE 2	NB	46-13-00.0 64-32-00.0	36 Z			760512
	CO	SHIPPEGAN ZONE 2	NB	47-45-00.0 64-42-00.0	46 Z			760512
	CO	SUSSEX ZONE 2	NB	45-43-00.0 65-31-00.0	48 Z			751217
	CO	TRACADIE ZONE 2	NB	47-31-00.0 64-54-00.0	52 Z			760512
CKMTV	CO LIC	NPSALQUITCH LAKE ZONE 2	NB	47-27-19.0 66-25-07.0	12 Z DA	280(KW) 1331(FT)	MONCTON BCTING LTD	761111
	CO	WOODSTOCK ZONE 2	NB	46-08-59.0 67-34-45.0	03 +		ALLOCATION USED FLORENCEVILLE-WOODSTOCK, NB.	770302
	CO	WOODSTOCK ZONE 2	NB	46-09-00.0 67-34-00.0	19 +			760512
	CO	BAKER LAKE ZONE 2	NT	64-19-00.0 96-02-00.0	09 +			760722
	CO	ESKIMO POINT ZONE 2	NT	61-06-00.0 94-04-00.0	09 Z			760722
	CO	FORT MCPHERSON ZONE 2	NT	67-25-42.0 134-51-45.0	13 Z			751217
	CO	FORT SIMPSON ZONE 2	NT	61-52-18.0 121-32-45.0	09 Z			760722
	CO	FORT SMITH ZONE 2	NT	60-00-19.0 111-52-32.0	08 -			760722
	CO	IGLDOLIN ZONE 2	NT	69-23-00.0 81-48-00.0	09 Z			760722
CHMTV	CO LIC	INUVIA ZONE 2	NT	68-21-46.0 133-41-43.0	06 Z DA	5.8(KW) 0394(FT)	CANADIAN BCTING CORP	751217
	CO	NORMAN WELLS ZONE 2	NT	65-16-40.0 126-47-00.0	09 Z			760722
	CO	BANKIN INLET ZONE 2	NT	62-48-26.0 92-04-35.0	09 Z			760722

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CO	RESOLUTE ZONE 2	NS	74-41-00.0 94-54-00.0	09 Z					761007
CO	AMHERST ZONE 2	NS	45-50-00.0 64-12-00.0	47 Z					751217
CO	AMHERST ZONE 2	NS	45-50-00.0 64-12-00.0	79 Z					751217
CO	ANNAPOLIS ROYAL ZONE 2	NS	44-45-00.0 65-31-00.0	42 Z					760512
CJCBTV02	CO LIC	ANTIGONISH ZONE 2	NS	45-32-45.0 62-15-39.0	09 Z	260(KW) DA	0902(FT)	CAPE BRETON BCTRS LTD	751217
CO	ANTIGONISH ZONE 2	NS	45-37-00.0 61-59-00.0	23 -					760512
CO	BRIDGETOWN ZONE 2	NS	44-50-00.0 65-18-00.0	20 Z					760512
CO	BRIDGEMATER ZONE 2	NS	44-22-42.0 64-31-12.0	09 -					751217
CO	BRIDGEMATER ZONE 2	NS	44-23-00.0 64-31-00.0	54 Z					751217
CJCHTV08	CO LIC	CALEDONIA ZONE 2	NS	44-20-26.0 65-06-34.0	06 +	100(KW) DA	0633(FT)	CJCH LTD	751217
CJCHTV91	CO LIC	CANNING ZONE 2	NS	45-12-12.0 64-24-06.0	10 Z	18.1(KW) DA	0886(FT)	CJCH LTD	751217
CO	DIGBY ZONE 2	NS	44-37-00.0 65-46-00.0	52 -					760512
CBHT	CO LIC	HALIFAX ZONE 2	NS	44-39-03.0 63-39-28.0	03 Z	100(KW) DA	0868(FT)	CANADIAN BCTING CORP	751217
CJCHTV	CO LIC	HALIFAX ZONE 2	NS	44-39-03.0 63-39-28.0	06 Z	100(KW) DA	0822(FT)	CJCH LTD	751217
CBHT00	CO LIC	HALIFAX ZONE 2	NS	44-39-03.0 63-39-28.0	13 Z	410(KW) DA	0771(FT)	CANADIAN BCTING CORP	751217
CO	HALIFAX ZONE 2	NS	44-39-00.0 63-36-00.0	22 Z					751217
CO	HALIFAX ZONE 2	NS	44-39-00.0 63-36-00.0	32 Z					751217
CO	HALIFAX ZONE 2	NS	44-39-00.0 63-36-00.0	38 +					751217

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CO	HALIFAX ZONE 2	NS	44-39-00.0 63-36-00.0	44 +					751217
CO	HALIFAX ZONE 2	NS	44-39-00.0 63-36-00.0	63 Z					751217
CO	HALIFAX ZONE 2	NS	44-39-00.0 63-36-00.0	74 Z					751217
CO	KENTVILLE ZONE 2	NS	45-05-00.0 64-30-00.0	76 Z					760512
CBHT01	CO LIC	LIVERPOOL ZONE 2	NS	44-03-59.0 64-43-00.0	12 Z	1.87(KW) DA	0647(FT)	CANADIAN BCTING CORP	751217
CO	LIVERPOOL ZONE 2	NS	44-02-00.0 64-43-00.0	62 Z					751217
CO	LUNenburg ZONE 2	NS	44-23-00.0 64-19-00.0	41 Z					751217
CO	MIDDLETON ZONE 2	NS	44-57-00.0 65-04-00.0	60 +					760512
CBHT08	CO LIC	NEW GLASGOW ZONE 2	NS	45-32-00.0 62-38-14.0	04 -	1.10(KW) DA	0422(FT)	CANADIAN BCTING CORP	761111
CO	NEW GLASGOW ZONE 2	NS	45-35-00.0 62-39-00.0	15 -					761111
CO	NEW GLASGOW ZONE 2	NS	45-35-00.0 62-39-00.0	43 Z					761111
CO	NEW GLASGOW ZONE 2	NS	45-35-00.0 62-39-00.0	65 Z					761111
CO	PARRSBORO ZONE 2	NS	45-24-00.0 64-19-00.0	20 +					760512
CO	PICTOU ZONE 2	NS	45-41-00.0 62-43-00.0	25 Z					760512
CBHT04	CO LIC	SHEET HARBOUR ZONE 2	NS	44-55-29.0 62-29-55.0	11 +	17.0(KW) DA	0368(FT)	CANADIAN BCTING CORP	751217
CO	SHEET HARBOUR ZONE 2	NS	44-55-00.0 62-32-00.0	35 +					760512
CBHT02	CO LIC	SHELBURNE ZONE 2	NS	43-46-35.0 65-18-29.0	08 Z	.752(KW) DA	0449(FT)	CANADIAN BCTING CORP	751217
CO	SHELBURNE ZONE 2	NS	43-46-00.0 65-20-00.0	75 Z					760512

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CO	SPRINGHILL ZONE 2	NS	45-39-00.0 84-03-00.0	26 Z					751217
CO	TATAMAGOUCHE ZONE 2	NS	45-43-00.0 63-18-00.0	48 Z					760512
CO	TATAMAGOUCHE ZONE 2	NS	45-43-00.0 63-18-00.0	77 Z					760512
CO	TRURO ZONE 2	NS	45-22-00.0 63-16-00.0	55 Z					760512
CO	TRURO ZONE 2	NS	45-22-00.0 63-16-00.0	71 Z					760512
CO	WINDSOR ZONE 2	NS	44-59-00.0 64-08-00.0	16 +					760512
CO	WOLFVILLE ZONE 2	NS	45-05-00.0 64-32-00.0	50 Z					751217
CBHT01	CO LIC	YARMOUTH ZONE 2	NS	43-55-55.0 66-06-10.0	03 - DA	5.0(KW) HOR	0558(FT)	CANADIAN BCTING CORP	751217
CBHT03	CO LIC	YARMOUTH ZONE 2	NS	43-55-55.0 66-06-10.0	11 - DA	38.4(KW) HOR	0620(FT)	CANADIAN BCTING CORP	751217
CO	YARMOUTH ZONE 2	NS	43-50-00.0 66-07-00.0	40 Z					751217
CO	ARMSTRONG ZONE 2	ON	50-17-40.0 89-02-00.0	10 Z					760525
CO	ARNPRIOR ZONE 1	ON	45-26-00.0 76-21-00.0	20 Z					760512
CBWCT01	CO LIC	ATIKOKAN ZONE 2	ON	48-46-18.0 91-38-50.0	07 - DA	1.08(KW) HOR	0385(FT)	CANADIAN BCTING CO	751217
CO	ATIKOKAN ZONE 2	ON	48-45-00.0 91-37-00.0	39 Z					760512
CO	AYR ZONE 1	ON	43-15-35.0 80-26-39.0	28 Z				ALLOCATION USED PARIS-KITCHENER, ON.	761210
CKGTV02	CO LIC	BANCROFT ZONE 1	ON	45-03-34.0 77-12-00.0	02 + DA	100(KW) HOR	0949(FT)		751217
CKVRTV	CO LIC	BARRIE ZONE 1	ON	44-21-05.0 79-41-55.0	02 + HOR	100(KW) HOR	1118(FT)	RALGH SHELROVE TV LTD	740828
CBFLT97	CO LIC	BARRIE ZONE 1	ON	44-21-05.0 79-41-55.0	55 + DA BT	14.7(KW) HOR	620(FT)		770310

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CO	BARRIE ZONE 1	ON	44-24-00.0 79-40-00.0	74 Z					760512
CO	BARRIE ZONE 1	ON	44-24-00.0 79-40-00.0	83 +					760512
CO	BELLEVILLE ZONE 1	ON	44-10-00.0 77-22-00.0	15 -					760512
CO	BELLEVILLE ZONE 1	ON	44-10-00.0 77-22-00.0	28 Z					760722
CO	BLIND RIVER ZONE 2	ON	46-11-00.0 82-57-00.0	40 +					751217
CO	BRANTFORD ZONE 1	ON	43-08-00.0 80-16-00.0	63 Z					760512
CO	BROCKVILLE ZONE 1	ON	44-36-00.0 75-41-00.0	27 +					751217
CO	BROCKVILLE ZONE 1	ON	44-36-00.0 75-41-00.0	75 Z					751217
CFCLTV06	CO LIC	CHAPLEAU ZONE 2	ON	47-51-15.0 83-25-08.0	07 + DA	.322(KW) HOR	0420(FT)	J CONRAD LAVIGNE	751217
CO	CHAPLEAU ZONE 2	ON	47-50-00.0 83-24-00.0	33 +					760512
CBLFT3	CO LIC	CHATHAM ZONE 1	ON	42-27-00.0 82-05-00.0	48 Z DA BT	40.6(KW) HOR	634(FT)		761120
CICOTV59	CO LIC	CHATHAM ZONE 1	ON	42-27-00.0 82-05-00.0	59 Z BT	20.6(KW) HOR	715(FT)		761120
CO	CHATHAM ZONE 1	ON	42-24-00.0 82-11-00.0	81 -					751217
CO	COBourg-PORT HOPE ZONE 1	ON	43-58-00.0 78-10-00.0	67 +					761118
CO	COBourg-PORT HOPE ZONE 1	ON	43-58-00.0 78-10-00.0	80 Z					761118
CO	COLLINGWOOD ZONE 1	ON	44-29-00.0 80-13-00.0	78 +					760512
CJONTV08	CO LIC	CORNWALL ZONE 1	ON	45-10-35.0 74-31-38.0	08 + DA	260(KW) HOR	0615(FT)	CORNWALL BCTING LTD	751217
CO	CORNWALL ZONE 1	ON	45-02-00.0 74-44-00.0	36 +					760512

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CO	CORNWALL ZONE 1	ON	45-02-00.0 74-44-00.0	77 Z					760512
CO	CORNWALL ZONE 1	ON	45-02-00.0 74-44-00.0	83 Z					760512
CHQHTV01	CO LIC	COITAM-WINDSOR ZONE 1	ON	42-08-00.0 83-45-42.0	22 -	210(KW) HOR	0396(FT)		760115
CO	DEEP RIVER ZONE 2	ON	46-06-00.0 77-29-00.0	25 -					760512
CJQHTV81	CO LIC	DESEHONTO ZONE 1	ON	44-08-30.0 27-04-34.0	06 -	100(KW) DA	0671(FT)	OTTAWA-CORNWALL BCTING	760115
CO	DRIFTWOOD ZONE 2	ON	48-55-30.0 81-48-00.0	74 -					760512
CO	DRYDEN ZONE 2	ON	49-47-00.0 92-49-30.0	04 +					751217
CO	DRYDEN ZONE 2	ON	49-45-49.0 92-40-52.0	06 Z					761105
CBWOT00	CO LIC	DRYDEN ZONE 2	ON	49-45-52.0 92-41-01.0	09 -	16(KW) DA	0569(FT)	CANADIAN BCTING CORP	751217
CO	DRYDEN ZONE 2	ON	49-47-00.0 92-49-00.0	20 Z					760512
CKSOTV01	CO LIC	ELLIOT LAKE ZONE 2	ON	46-25-50.0 82-40-21.0	03 Z	19(KW) HOR	0532(FT)	CAMBRIAN BCTING LTD	751217
CKNCTV01	CO LIC	ELLIOT LAKE ZONE 2	ON	46-23-21.0 82-37-06.0	07 -	24.8(KW) DA	0577(FT)		751217
CBF8T03	CO LIC	ELLIOT LAKE ZONE 2	ON	46-23-21.0 82-37-06.0	12 +	37(KW) DA	0532(FT)	CANADIAN BCTING CORP	751217
CO	ELLIOT LAKE ZONE 2	ON	46-23-00.0 82-39-00.0	18 -					751217
CO	ESPANOLA ZONE 2	ON	46-15-00.0 81-46-00.0	77 Z					760512
CO	EXETER ZONE 1	ON	43-21-00.0 81-28-48.0	52 -					760512
CO	FOREST ZONE 1	ON	43-06-00.0 82-00-00.0	21 +					760512
CBMCT	CO LIC	FORT FRANCES ZONE 2	ON	46-48-18.0 93-53-24.0	05 Z	38.3(KW) DA	0660(FT)	CANADIAN BCTING CORP	751217

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CO	FORT FRANCES ZONE 2	ON	46-37-00.0 93-24-00.0	25 Z					751217
CO	FT WILLIAM-PT ARTHUR ZONE 2	ON	48-23-00.0 89-15-00.0	20 -					761118
CO	FT WILLIAM-PT ARTHUR ZONE 2	ON	48-23-00.0 89-15-00.0	28 Z					761110
CO	FT WILLIAM-PT ARTHUR ZONE 2	ON	48-23-00.0 89-15-00.0	32 Z					761118
CO	FT WILLIAM-PT ARTHUR ZONE 2	ON	48-23-00.0 89-15-00.0	38 Z					761118
CO	FT WILLIAM-PT ARTHUR ZONE 2	ON	48-23-00.0 89-15-00.0	44 Z					761118
CO	GANANOUQUE ZONE 1	ON	44-20-00.0 78-10-00.0	19 +					760512
CBLAT	CO LIC	GERALDTON ZONE 2	ON	49-43-50.0 86-43-21.0	13 +	43(KW) DA	0598(FT)	CANADIAN BCTING CORP	751217
CO	GOERICH ZONE 1	ON	43-45-00.0 81-43-00.0	38 Z					760512
CO	GUELPH ZONE 1	ON	43-33-00.0 80-15-00.0	20 Z					751217
CRVRTV03	CO LIC	HALIBURTON ZONE 1	ON	45-02-35.0 78-29-56.0	05 Z	.31(KW) DA	0149(FT)	RALPH SHEL GROVE TV	751217
CHQHTV00	CO LIC	HAMILTON ZONE 1	ON	43-12-37.0 79-46-28.0	11 +	325(KW) DA	1173(FT)	NIAGARA TV LTD	751217
CO	HAMILTON ZONE 1	ON	43-15-00.0 79-51-00.0	41 -					760512
CO	HAMILTON ZONE 1	ON	43-15-00.0 79-51-00.0	47 -					760512
CO	HAMILTON ZONE 1	ON	43-15-00.0 79-51-00.0	53 Z					760512
CO	HANOVER ZONE 1	ON	44-09-00.0 81-02-00.0	36 Z					760512
CFCLTV04	CO LIC	HEARST ZONE 2	ON	49-42-56.0 83-38-49.0	04 -	.402(KW) DA	0200(FT)	J CONRAD LAVIGNE LTD	751217
CBFOT02	CO LIC	HEARST ZONE 2	ON	49-38-50.0 83-30-50.0	07 Z	16.8(KW) DA	0611(FT)	CANADIAN BCTING CORP	751217

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CHRTV02	CD LIC	HUMTSVILLE ZONE 2	**USA BORDER**	DN 45-24-38.0 79-15-22.0	08 +	115(KW) HOR	0481(FT)	RALPH SNELGROVE LTD	730401
	CO	HUMTSVILLE ZONE 2	**USA BORDER**	DN 45-19-30.0 79-13-30.0	11 -				751217
CFCLTV03	CD LIC	KAPUSKASING ZONE 2	**USA BORDER**	DN 49-23-32.0 82-21-35.0	02 +	.42(KW) DA	0363(FT) HOR	J CONRAD LAVIGNE LTD	751217
CKOSTV04	CD LIC	KAPUSKASING ZONE 2	**USA BORDER**	DN 49-24-51.0 82-25-26.0	10 Z	2.2(KW) DA	0155(FT) HOR		751217
CBFOT01	CD LIC	KAPUSKASING ZONE 2	**USA BORDER**	DN 49-17-48.0 82-11-19.0	12 Z	30(KW) DA	0438(FT) HOR	CANADIAN BCTING CORP	751217
	CO	KAPUSKASING ZONE 2	**USA BORDER**	DN 49-25-00.0 82-26-00.0	77 -				751217
	CO	KAPUSKASING ZONE 2	**USA BORDER**	DN 49-25-00.0 82-26-00.0	83 Z				751217
CKSOTV03	CD LIC	KEARNS ZONE 2	**USA BORDER**	DN 48-08-12.0 79-33-12.0	11 Z	325(KW) DA	0734(FT) HOR	ALLOC TO KIRKLAND LK	751217
	CO	KENORA ZONE 2	**USA BORDER**	DN 49-46-13.0 94-30-13.0	02 +				761105
CBWAT	CD LIC	KENORA ZONE 2	**USA BORDER**	DN 49-46-13.0 94-30-13.0	08 Z	16.4(KW) DA	0240(FT) HOR	CANADIAN BCTING CORP	751217
	CO	KENORA ZONE 2	**USA BORDER**	DN 49-46-00.0 94-29-00.0	21 Z				751217
	CO	KENORA ZONE 2	**USA BORDER**	DN 49-46-00.0 94-29-00.0	32 +				751217
CKWTV	CD LIC	KINGSTON ZONE 1	**USA BORDER**	DN 44-10-02.0 76-25-40.0	11 -	325(KW) DA	0842(FT) HOR	FRONTENAC BCTING LTD	751217
	CO	KINGSTON ZONE 1	**USA BORDER**	DN 44-14-00.0 76-30-00.0	32 -				751217
	CO	KINGSTON ZONE 1	**USA BORDER**	DN 44-14-00.0 76-30-00.0	38 -				751217
	CO	KINGSTON ZONE 1	**USA BORDER**	DN 44-14-00.0 76-30-00.0	73 Z				751217
CFCLTV02	CD LIC	KIRKLAND LAKE ZONE 2	**USA BORDER**	DN 48-08-12.0 79-33-12.0	02 Z	26.5(KW) DA	0722(FT) HOR	J CONRAD LAVIGNE LTD	761118
CKCOTV	CD LIC	KITCHENER ZONE 1	**USA BORDER**	DN 43-24-15.0 80-38-05.0	13 +	325(KW) HOR	0954(FT)	CENTRAL ONTARIO TV	730401

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CBLFT1	CD LIC	KITCHENER-WATERLOO ZONE 1	**USA BORDER**	DN 43-27-00.0 80-36-08.0	78 Z	299(KW) DA BT	750(FT) HOR		761129
	CO	KITCHENER-WATERLOO ZONE 1	**USA BORDER**	DN 43-27-00.0 80-29-00.0	82 Z				761118
	CO	LEAMINGTON ZONE 1	**USA BORDER**	DN 42-03-00.0 82-36-00.0	72 Z				760512
CFPLTV	CD LIC	LONDON ZONE 1	**USA BORDER**	DN 42-57-15.0 81-15-58.0	10 Z	325(KW) DA	1000(FT) HOR	CFPL BCTING LTD	730401
	CO	LONDON ZONE 1	**USA BORDER**	DN 42-57-20.0 81-21-20.0	18 Z				760512
CBLFT2	CD LIC	LONDON ZONE 1	**USA BORDER**	DN 42-57-20.0 81-21-20.0	40 Z	70.6(KW) DA BT	953(FT) HOR		761118
CBLAT01	CD LIC	MANITOWADGE ZONE 2	**USA BORDER**	DN 49-08-21.0 85-49-24.0	08 +	40(KW) DA	0599(FT) HOR	CANADIAN BCTING CORP	751217
CBLAT04	CD LIC	MARATHON ZONE 2	**USA BORDER**	DN 48-44-50.0 86-34-00.0	11 -	18.7(KW) DA	0932(FT) HOR	CANADIAN BCTING CORP	751217
	CO	MIDLAND ZONE 1	**USA BORDER**	DN 44-45-00.0 79-53-00.0	58 +				760512
	CO	MOOSEHAWK ZONE 3	**USA BORDER**	DN 51-17-00.0 80-39-00.0	09 Z				760722
	CO	NIAGRA FALLS ZONE 1	**USA BORDER**	DN 43-06-00.0 79-04-00.0	81 Z				760512
CHNBTV08	CD LIC	NORTH BAY ZONE 2	**USA BORDER**	DN 46-03-46.0 79-26-05.0	04 -	100(KW) DA	0730(FT) HOR	J CONRAD LAVIGNE LTD	751217
	CO	NORTH BAY ZONE 2	**USA BORDER**	DN 46-19-00.0 79-28-00.0	08 +				760210
CKNYTV	CD LIC	NORTH BAY ZONE 2	**USA BORDER**	DN 46-12-15.0 79-21-05.0	10 -	214(KW) DA	0420(FT) HOR	TEL-AD CO LTD	751217
	CO	NORTH BAY ZONE 2	**USA BORDER**	DN 46-19-00.0 79-28-00.0	48 +				751217
	CO	NORTH BAY ZONE 2	**USA BORDER**	DN 46-19-00.0 79-28-00.0	70 Z				751217
	CO	NORTH BAY ZONE 2	**USA BORDER**	DN 46-19-00.0 79-28-00.0	76 +				751217
	CO	OAKVILLE ZONE 1	**USA BORDER**	DN 43-27-00.0 79-41-00.0	73 +				751217

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CO	OIL SPRINGS ZONE 1	ON	42-43-21.0 82-10-00.0	42 -						760512
CO	OPASATJKA ZONE 2	ON	49-32-00.0 82-52-00.0	71 Z						760512
CO	ORILLIA ZONE 1	ON	44-37-00.0 79-25-00.0	24 -						760512
CO	ORILLIA ZONE 1	ON	44-37-00.0 79-25-00.0	46 -						760512
CO	OSHAWA ZONE 1	ON	43-54-00.0 78-51-00.0	16 +						760512
CO	OSHAWA ZONE 1	ON	43-54-00.0 78-51-00.0	77 -						760512
CBOT	CO LIC	OTTAWA ZONE 1	ON	45-30-11.0 75-51-02.0	04 +	100(KW) HOR	1304(FT)	CANADIAN BCTING CORP		751217
CKGHTV08	CO LIC	OTTAWA ZONE 1	ON	45-31-05.0 75-44-48.0	06 Z	12.6(KW) DA	0149(FT)			751217
CBOFT	CO LIC	OTTAWA ZONE 1	ON	45-30-11.0 75-51-02.0	09 +	252(KW) HOR	1394(FT)	CANADIAN BCTING CORP		751217
CJQHTV06	CO LIC	OTTAWA ZONE 1	ON	45-30-11.0 75-51-02.0	13 +	325(KW) DA	1225(FT)	BUSHWELL COMM LTD		760525
CO	OTTAWA-HULL ZONE 1	ON	45-25-00.0 75-42-00.0	14 Z						760115
CO	OTTAWA-HULL ZONE 1	ON	45-25-00.0 75-42-00.0	24 Z						760512
CO	OTTAWA-HULL ZONE 1	ON	45-25-00.0 75-42-00.0	40 Z						760512
CO	OTTAWA-HULL ZONE 1	ON	45-25-00.0 75-42-00.0	48 Z						760512
CO	OTTAWA-HULL ZONE 1	ON	45-25-00.0 75-42-00.0	52 -						760512
CO	OTTAWA-HULL ZONE 1	ON	45-25-00.0 75-42-00.0	58 Z						760512
CO	OWEN SOUND ZONE 1	ON	44-34-00.0 80-56-00.0	26 Z						760512
CO	OWEN SOUND ZONE 1	ON	44-34-00.0 80-56-00.0	32 Z						760512

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CKGHTV	CO LIC	PARIS ZONE 1	ON	43-15-39.0 80-26-39.0	06 +	100(KW) HOR	1037(FT)			740322
CICDTV28	CO CP	PARIS-KITCHENER ZONE 1	ON	43-15-35.0 80-26-39.0	28 Z	210(KW) DA BT	972(FT)	ALLOCATED TO XYN, ON.		761210
CO	PARRY SOUND ZONE 2	ON	45-21-00.0 80-02-00.0	62 -						751217
CHOVTV	CO LIC	PENBROKE ZONE 1	ON	45-50-02.0 77-09-50.0	05 +	36.0(KW) DA	0498(FT)	OTTAWA VALLEY TV CO		751217
CO	PENBROKE ZONE 1	ON	45-49-00.0 77-07-00.0	41 Z						751217
CO	PENBROKE ZONE 1	ON	45-49-00.0 77-07-00.0	47 Z						751217
CO	PENBROKE ZONE 1	ON	45-49-16.0 77-07-01.0	53 -						760512
CO	PENETUNGUISHENE ZONE 1	ON	44-46-00.0 79-56-00.0	34 -						760512
CHXTV	CO LIC	PETERBOROUGH ZONE 1	ON	44-19-45.0 78-18-03.0	12 +	325(KW) DA	771(FT)	KAWARTHA BCTING CO		760825
CO	PETERBOROUGH ZONE 1	ON	44-18-00.0 78-19-00.0	33 +						760512
CO	PETERBOROUGH ZONE 1	ON	44-18-00.0 78-19-00.0	44 Z						760512
CO	PETERBOROUGH ZONE 1	ON	44-18-00.0 78-19-00.0	54 Z						760512
CO	PICKLE LAKE ZONE 2	ON	51-30-00.0 90-03-20.0	09 Z						760525
CO	PICTON ZONE 1	ON	44-00-00.0 77-08-00.0	58 Z						760512
CO	PRESOTT ZONE 1	ON	44-43-00.0 75-31-00.0	48 Z						760512
CRWET	CO LIC	RED LAKE ZONE 2	ON	51-01-35.0 93-49-44.0	10 -	1.14(KW) DA	0288(FT)	CANADIAN BCTING CORP		751217
CO	RENFREW ZONE 1	ON	45-28-00.0 76-41-00.0	69 Z						760512
CO	ST CATHERINES ZONE 1	ON	43-10-00.0 79-15-00.0	69 +						760512

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CO	ST THOMAS ZONE 1	ON	42-47-00.0 81-12-00.0	65 Z				760512
CKGNTV12	CO LIC	SARINA ZONE 1	ON	42-43-21.0 82-10-00.0	29 + DA	370(KW) HJR	0605(FT) ALOC TO OIL SPRINGS ON.	751217
CO	SARINA ZONE 1	ON	42-58-00.0 82-23-00.0	68 Z				760512
CO	SARINA ZONE 1	ON	42-58-00.0 82-23-00.0	79 -				760512
CJLCTV	CO LIC	SAULT STE MARIE ZONE 2	ON	46-30-32.0 84-19-36.0	02 - DA	45(KW) HJR	0-19(FT) HYLAND RADIO-TV LTD	751217
CO	SAULT STE MARIE ZONE 2	ON	46-30-30.0 84-19-40.0	05 Z				751217
CO	SAULT STE MARIE ZONE 2	ON	46-31-00.0 84-20-00.0	20 Z				760512
CO	SAULT STE MARIE ZONE 2	ON	46-31-00.0 84-20-00.0	26 -				760512
CO	SAULT STE MARIE ZONE 2	ON	46-31-00.0 84-20-00.0	48 Z				760512
CO	SAULT STE MARIE ZONE 2	ON	46-31-00.0 84-20-00.0	54 Z				760512
CO	SAULT STE MARIE ZONE 2	ON	46-31-00.0 84-20-00.0	83 +				760512
CO	SIoux LOOKOUT ZONE 2	ON	50-04-31.0 92-01-40.0	12 +				770302
CO	SMITHS FALLS ZONE 1	ON	44-54-00.0 76-01-00.0	71 Z				760512
CO	SMITHS FALLS ZONE 1	ON	44-54-00.0 76-01-00.0	81 +				760512
CO	STRATFORD ZONE 1	ON	43-22-00.0 80-57-00.0	36 -				760512
CBFST	CO LIC	STURGEON FALLS ZONE 2	ON	46-25-10.0 79-56-04.0	07 Z DA	17.5(KW) HJR	0617(FT) CANADIAN BCTING CORP	751217
CO	STURGEON FALLS ZONE 2	ON	46-22-00.0 79-56-00.0	82 +				751217
CKSOTV	CO LIC	SUDBURY ZONE 2	ON	46-30-02.0 81-01-16.0	05 Z DA	100(KW) HJR	1049(FT) CAMBRIAN BCTING LTD	730401

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CKNCTV00	CO LIC	SUDBURY ZONE 2	ON	46-30-44.0 81-00-19.0	09 + DA	293(KW) HJR	0627(FT) J CONRAD LAVIGNE LTD	751217
CBFST01	CO LIC	SUDBURY ZONE 2	ON	46-30-14.0 80-58-04.0	13 - DA	17.1(KW) HJR	0478(FT) CANADIAN BCTING CORP	751217
CO	SUDBURY ZONE 2	ON	46-30-00.0 81-00-00.0	19 Z				760512
CO	SUDBURY ZONE 2	ON	46-30-00.0 81-00-00.0	25 +				760512
CO	SUDBURY ZONE 2	ON	46-30-00.0 81-00-00.0	41 +				760512
CO	SUDBURY ZONE 2	ON	46-30-00.0 81-00-00.0	47 +				760512
CO	SUDBURY ZONE 2	ON	46-30-00.0 81-00-00.0	69 -				760512
CO	THESSALON ZONE 2	ON	46-15-00.0 83-33-00.0	70 +				760512
CKPRTV00	CO LIC	THUNDER BAY ZONE 2	ON	48-31-30.0 89-06-50.0	02 Z DA	56(KW) HJR	1202(FT) THUNDER BAY ELECTRONICS	750708
CHFOTV00	CO LIC	THUNDER BAY ZONE 2	ON	48-31-30.0 89-06-50.0	04 - DA	56(KW) HJR	1202(FT) HJR	740322
CO	THUNDER BAY ZONE 2	ON	48-22-52.0 89-15-07.0	09 Z				760525
CO	THUNDER BAY ZONE 2	ON	48-22-52.0 89-15-07.0	12 Z				760525
CKSOTV02	CO LIC	TIMMINS ZONE 2	ON	48-29-30.0 81-19-45.0	03 - DA	100(KW) HJR	0544(FT) CAMBRIAN BCTING LTD	751217
CFCLTV	CO LIC	TIMMINS ZONE 2	ON	48-29-30.0 81-19-45.0	06 Z DA	100(KW) HJR	0562(FT) J CONRAD LAVIGNE	730401
CO	TIMMINS ZONE 2	ON	48-28-34.0 81-20-00.0	07 -				751217
CBFOT	CO LIC	TIMMINS ZONE 2	ON	48-28-00.0 81-17-50.0	09 - DA	30(KW) HJR	0706(FT) CANADIAN BCTING CORP	751217
CO	TIMMINS ZONE 2	ON	48-28-00.0 81-20-00.0	82 Z				751217
CO	TIMMINS ZONE 2	ON	48-28-00.0 81-20-00.0	88 +				751217

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CO	TIMMINS	ON	48-28-00.0	78 Z					751217
	ZONE 2	**USA BORDER**	81-20-00.0						
CBLT	CO LIC	TORONTO	ON	43-38-33.0	05 Z	100(KW)	1520(FT)	CANADIAN BCTING CORP	770302
		ZONE 1	**USA BORDER**	79-23-15.0	DA	HOR			
CFTDTV	CO LIC	TORONTO	ON	43-38-33.0	09 Z	325(KW)	1532(FT)	BATON BCTING LTD	770302
		ZONE 1	**USA BORDER**	79-23-15.0	DA BT	HOR			
CICATV	CO LIC	TORONTO	ON	43-38-33.0	19 -	1000(KW)	1640(FT)	CANADIAN BCTING CORP	770302
		ZONE 1	**USA BORDER**	79-23-15.0		HOR			
CBLFT	CO LIC	TORONTO	ON	43-38-33.0	25 Z	2140(KW)	1640(FT)	CANADIAN BCTING CORP	770302
		ZONE 1	**USA BORDER**	79-23-15.0		HOR			
CO	TORONTO	ON	43-39-00.0	45 Z					760512
	ZONE 1	**USA BORDER**	79-23-00.0						
CO	TORONTO	ON	43-39-00.0	51 Z					760512
	ZONE 1	**USA BORDER**	79-23-00.0						
CO	TORONTO	ON	43-39-00.0	57 Z					760512
	ZONE 1	**USA BORDER**	79-23-00.0						
CITYTV	CO LIC	TORONTO	ON	43-38-33.0	79 Z	323(KW)	1690(FT)	CHANNEL SEVENTY NINE	770302
		ZONE 1	**USA BORDER**	79-23-15.0	DA BT	HOR			
CKMTV22	CO LIC	UXBRIDGE	ON	44-01-54.0	22 +	5000(KW)	0598(FT)	ALLOC TO OSHAWA ON	751217
		ZONE 1	**USA BORDER**	79-08-13.0	DA	HOR			
CBLAT03	CO LIC	WAMA	ON	48-01-13.0	09 +	32(KW)	0581(FT)	CANADIAN BCTING CORP	751217
		ZONE 2	**USA BORDER**	84-44-08.0	DA	HOR			
CO	WELLAND	ON	42-59-00.0	75 +					751217
	ZONE 1	**USA BORDER**	79-15-00.0						
CBLAT02	CO LIC	WHITE RIVER	ON	48-37-45.0	12 -	94(KW)	0761(FT)	CANADIAN BCTING CORP	751217
		ZONE 2	**USA BORDER**	85-11-24.0	DA	HOR			
CKCOTV02	CO LIC	WILKINSON	ON	44-56-41.0	02 -	100(KW)	0943(FT)	CARL A POLLOCK ESQ	730401
		ZONE 2	**USA BORDER**	81-07-55.0		HOR			
CBET	CO LIC	WINDSOR	ON	42-18-59.0	09 -	316(KW)	0631(FT)	W ONTARIO BCTING CO	751217
		ZONE 1	**USA BORDER**	83-02-58.0	DA	HOR			
CO	WINDSOR	ON	42-17-42.0	26 -					760512
	ZONE 1	**USA BORDER**	83-05-00.0						
CICOTV33	CO LIC	WINDSOR	ON	42-09-09.0	32 +	217(KW)	703(FT)		761129
		ZONE 1	**USA BORDER**	82-57-05.0	BT	HOR			
CBFT	CO LIC	WINDSOR	ON	42-09-09.0	78 Z	147(KW)	635(FT)		761129
		ZONE 1	**USA BORDER**	82-57-05.0	DA BT	HOR			

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CKMTV	CO LIC	WINGHAM	ON	44-05-26.0	08 -	160(KW)	0802(FT)	RADIO STA CBNV LTD	751217
		ZONE 1	**USA BORDER**	81-12-26.0	DA	HOR			
CO	WINGHAM	ON	43-53-00.0	60 Z					751217
	ZONE 1	**USA BORDER**	81-19-00.0						
CO	WOODSTOCK	ON	43-08-00.0	71 Z					751217
	ZONE 1	**USA BORDER**	80-45-00.0						
CKCWT01	CO LIC	CHARLOTTETOWN	PE	46-16-05.0	08 +	29(KW)	0489(FT)		751217
		ZONE 2	**USA BORDER**	63-20-30.0	DA	HOR			
CBCT	CO LIC	CHARLOTTETOWN	PE	46-12-44.0	13 +	113(KW)	0918(FT)	CANADIAN BCTING CORP	751217
		ZONE 2	**USA BORDER**	63-20-32.0	DA	HOR			
CO	CHARLOTTETOWN	PE	46-14-00.0	31 Z					751217
	ZONE 2	**USA BORDER**	63-08-00.0						
CO	CHARLOTTETOWN	PE	46-14-00.0	37 Z					751217
	ZONE 2	**USA BORDER**	63-08-00.0						
CO	CHARLOTTETOWN	PE	46-14-00.0	81 Z					751217
	ZONE 2	**USA BORDER**	63-08-00.0						
CO	SUMMERSIDE	PE	46-24-00.0	57 Z					751217
	ZONE 2	**USA BORDER**	63-47-00.0						
CO	SUMMERSIDE	PE	46-24-00.0	75 +					751217
	ZONE 2	**USA BORDER**	63-47-00.0						
CO	ALMA	QU	48-33-00.0	48 +					751217
	ZONE 2	**USA BORDER**	71-39-00.0						
CO	ALMA	QU	48-33-00.0	74 +					751217
	ZONE 3	**USA BORDER**	71-39-00.0						
CO	ALMA	QU	48-33-00.0	80 -					751217
	ZONE 3	**USA BORDER**	71-39-00.0						
CO	ASBESTOS	QU	45-46-00.0	53 Z					751217
	ZONE 1	**USA BORDER**	71-57-00.0						
CO	BATE COMEAU-HAUTERIV	QU	49-13-00.0	05 +					761118
	ZONE 2	**USA BORDER**	68-10-00.0						
CO	BATE COMEAU-HAUTERIV	QU	49-13-00.0	28 Z					761118
	ZONE 2	**USA BORDER**	68-10-00.0						
CO	BATE COMEAU-HAUTERIV	QU	49-13-00.0	57 +					761118
	ZONE 2	**USA BORDER**	68-10-00.0						
CO	BATE COMEAU-HAUTERIV	QU	49-13-00.0	79 +					761118
	ZONE 2	**USA BORDER**	68-10-00.0						

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CO	BAIE ST PAUL ZONE 2 **USA BORDER**	QU 47-27-00.0 70-30-00.0	75 Z						751217
CO	BEARN FABRE ZONE 2 **USA BORDER**	QU 47-15-18.0 79-22-38.0	63 Z						760525
CO	BUCKINGHAM ZONE 1 **USA BORDER**	QU 45-35-00.0 75-25-00.0	80 +						760512
CO	CABANO ZONE 2 **USA BORDER**	QU 47-41-00.0 68-54-00.0	63 +						760512
CO	CARLETON ZONE 2 **USA BORDER**	QU 48-07-00.0 68-08-00.0	64 -						760525
CHAUTV08	CO LIC CARLETON ZONE 2 **USA BORDER**	QU 48-08-07.0 66-07-00.0	05 Z DA	100(KW) HOR	1543(FT)	TV D LA BAIE D CHALEURS			751217
CO	CHAPAIS ZONE 2	QU 49-47-00.0 74-52-00.0	02 Z						760722
CBQFT01	CO LIC CHAPEAU ZONE 1 **USA BORDER**	QU 45-55-15.0 77-04-10.0	11 +	4.75(KW) HOR	6374(FT)				751217
CHRSTV02	CO LIC CHICOUTIMI ZONE 2 **USA BORDER**	QU 48-26-09.0 71-02-34.0	02 +	.04(KW) HOR	80(FT)	RADIO SAGUENAY LTD			760624
CJPMTV	CO LIC CHICOUTIMI ZONE 2 **USA BORDER**	QU 48-24-27.0 71-05-08.0	08 Z DA	100(KW) HOR	6440(FT)	CJPMTV INC			751217
CO	CHICOUTIMI-ARVIDA ZONE 2 **USA BORDER**	QU 48-26-00.0 71-04-00.0	36 Z						761118
CBJET	CO LIC CHICOUTIMI-ARVIDA ZONE 2 **USA BORDER**	QU 48-25-29.0 71-06-32.0	58 Z DA	12(KW) HOR	525(FT)				770324
CO	CHICOUTIMI-ARVIDA ZONE 2 **USA BORDER**	QU 48-26-00.0 71-04-00.0	70 Z						761118
CO	CHICOUTIMI-ARVIDA ZONE 2 **USA BORDER**	QU 48-26-00.0 71-04-00.0	78 -						761118
CO	CHICOUTIMI-ARVIDA ZONE 2 **USA BORDER**	QU 48-26-00.0 71-04-00.0	82 -						761118
CO	CLERMONT CITY ZONE 2 **USA BORDER**	QU 47-42-00.0 70-14-00.0	31 Z						760809
CO	COATICOOK ZONE 1 **USA BORDER**	QU 46-08-00.0 71-48-00.0	75 -						760512
CO	COMANVILLE ZONE 1 **USA BORDER**	QU 45-12-00.0 72-45-00.0	78 Z						760512

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CO	DOLBEAU ZONE 2 **USA BORDER**	QU 48-53-00.0 72-14-00.0	78 -						760512
CO	DOMNACONA ZONE 1 **USA BORDER**	QU 48-40-00.0 71-44-00.0	24 +						751217
CO	DORCHESTER COUNTY ZONE 1 **USA BORDER**	QU 46-15-58.0 70-15-11.0	06 Z						761118
CO	DRUMMONDVILLE ZONE 1 **USA BORDER**	QU 45-53-00.0 72-30-00.0	18 -						760512
CO	DRUMMONDVILLE ZONE 1 **USA BORDER**	QU 45-53-00.0 72-30-00.0	41 +						760512
CO	ESTCOURT ZONE 2 **USA BORDER**	QU 47-30-14.0 69-17-56.0	43 -						751217
CO	FORESTVILLE ZONE 2 **USA BORDER**	QU 48-45-00.0 69-06-00.0	77 Z						760512
CO	FORT CHIMO ZONE 2	QU 58-08-31.0 68-24-33.0	02 Z						760722
CO	FORT GEORGE ZONE 2	QU 53-49-41.0 79-00-13.0	09 +						760722
CO	FORT RUPERT ZONE 2	QU 51-29-14.0 78-44-50.0	09 -						760722
CHAUTV08	CO LIC GASPE ZONE 2 **USA BORDER**	QU 48-50-15.0 64-29-35.0	13 -	157(KW) HOR	242(FT)				761128
CO	GRANBY ZONE 1 **USA BORDER**	QU 45-24-00.0 72-43-00.0	73 -						760512
CFVOTV	CO LIC HULL ZONE 1 **USA BORDER**	QU 45-30-11.0 75-51-02.0	30 + DA	2654(KW) HOR	1184(FT)	ALLOC TO OTTAWA-HULL			751217
CO	INDOULOJAC ZONE 2	QU 58-27-00.0 78-10-00.0	08 +						760722
CO	JOLLIETIE ZONE 1 **USA BORDER**	QU 46-01-26.0 73-26-20.0	86 +						760512
CHRSTV	CO LIC JONQUIERE ZONE 2 **USA BORDER**	QU 48-24-29.0 71-14-52.0	12 + DA	41(KW) HOR	6312(FT)	RADIO SAGUENAY LTD			751217
CO	JONQUIERE-KENOGAMI ZONE 2 **USA BORDER**	QU 48-25-00.0 71-15-00.0	14 Z						761118
CO	JONQUIERE-KENOGAMI ZONE 2 **USA BORDER**	QU 48-25-00.0 71-15-00.0	20 -						761118

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CO	JONQUIERE-KENOGAMI ZONE 2 **USA BORDER**	QU	48-25-00.0 71-15-00.0	30 -					761118
CO	JONQUIERE-KENOGAMI ZONE 2 **USA BORDER**	QU	48-25-00.0 71-15-00.0	42 Z					761118
CO	JOUTEL ZONE 2	QU	49-27-30.0 78-19-52.0	12 +					760722
CO	LA POCATIERE ZONE 2 **USA BORDER**	QU	47-22-00.0 70-02-00.0	85 Z					760809
CO	LA SARRE ZONE 2	QU	48-48-00.0 79-12-00.0	13 +					760722
CBVT02	CO LIC	LA TUQUE ZONE 2 **USA BORDER**	QU	47-25-25.0 72-45-40.0	03 -	20(KW) DA	0407(FT)	CANADIAN BCTING CORP	751217
CO	LA TUQUE ZONE 2 **USA BORDER**	QU	47-27-00.0 72-47-00.0	09 -					760210
CO	LA TUQUE ZONE 2 **USA BORDER**	QU	47-27-00.0 72-47-00.0	34 Z					751217
CO	LA TUQUE ZONE 2 **USA BORDER**	QU	47-27-00.0 72-47-00.0	66 Z					751217
CBVT04	CO LIC	LAC ETCHEMIN ZONE 2 **USA BORDER**	QU	46-24-42.0 70-35-37.0	55 +	2.47(KW) DA	0800(FT)		751217
CO	LAC MEGANTIC ZONE 2 **USA BORDER**	QU	45-35-00.0 70-53-00.0	42 +					760512
CO	MAGOO ZONE 2 **USA BORDER**	QU	45-16-00.0 72-09-00.0	81 Z					760512
CKQTV01	CO LIC	MANICOUAGAN ZONE 2 **USA BORDER**	QU	50-38-45.0 68-44-22.0	10 Z	.092(KW) DA	71(FT)	NE SOCIAL CLUB	760624
CBGAT06	CO LIC	MATANE ZONE 2 **USA BORDER**	QU	48-49-34.0 67-32-34.0	08 +	.422(KW) DA	0134(FT)	RADIO DIFFUSION D MATANE	730401
CBGAT	CO LIC	MATANE ZONE 2 **USA BORDER**	QU	48-53-25.0 66-38-25.0	09 -	303(KW) DA	2336(FT)	RADIO DIFFUSION D MATANE	751217
CO	MATANE ZONE 2 **USA BORDER**	QU	48-51-00.0 67-32-00.0	24 Z					760512
CO	MATANE ZONE 2 **USA BORDER**	QU	48-51-00.0 67-32-00.0	49 +					760512
CBGAT01	CO LIC	MONT CLIMONT ZONE 2 **USA BORDER**	QU	46-23-50.0 67-19-27.0	11 Z	1.33(KW) DA	0732(FT)	RADIO DIFFUSION D MATANE	751217

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CO	MONT JOLI ZONE 2 **USA BORDER**	QU	48-35-00.0 68-11-00.0	22 Z					751217
CBFT02	CO LIC	MONT LAURIER ZONE 2 **USA BORDER**	QU	46-33-37.0 75-42-20.0	03 +	11.3(KW) DA	0513(FT)	CANADIAN BCTING CORP	751217
CO	MONT LAURIER ZONE 2 **USA BORDER**	QU	46-33-00.0 75-30-00.0	60 Z					760512
CBFT01	CO LIC	MONT TREMBLANT ZONE 2 **USA BORDER**	QU	46-13-10.0 74-33-11.0	11 Z	1.20(KW) DA	1779(FT)	CANADIAN BCTING CORP	751217
CO	MONTMAGNY ZONE 2 **USA BORDER**	QU	46-59-00.0 70-33-00.0	49 Z					760512
CO	MONTMAGNY ZONE 2 **USA BORDER**	QU	46-59-00.0 70-33-00.0	67 Z					760512
CBFT	CO LIC	MONTREAL ZONE 1 **USA BORDER**	QU	45-30-20.0 73-35-32.0	02 Z	100(KW) DA	0912(FT)	CANADIAN BCTING CORP	751217
CBMT	CO LIC	MONTREAL ZONE 1 **USA BORDER**	QU	45-30-20.0 73-35-32.0	06 +	100(KW) DA	0828(FT)	CANADIAN BCTING CORP	751217
CFTMTV	CO LIC	MONTREAL ZONE 1 **USA BORDER**	QU	45-30-20.0 73-35-32.0	10 Z	325(KW) DA	0972(FT)	TELEMETROPOLE CORP.	730401
CFCFTV	CO LIC	MONTREAL ZONE 1 **USA BORDER**	QU	45-30-20.0 73-35-32.0	12 Z	325(KW) DA	0970(FT)	CANADIAN MARCONI CO	730401
CIVMTV	CO LIC	MONTREAL ZONE 1 **USA BORDER**	QU	45-30-20.0 73-35-32.0	17 Z	1359(KW) DA	0628(FT)		751217
CO	MONTREAL-VERDUN ZONE 1 **USA BORDER**	QU	45-31-00.0 73-34-00.0	23 Z					760512
CO	MONTREAL-VERDUN ZONE 1 **USA BORDER**	QU	45-31-00.0 73-34-00.0	29 Z					761118
CO	MONTREAL-VERDUN ZONE 1 **USA BORDER**	QU	45-31-00.0 73-34-00.0	35 +					760512
CO	MONTREAL-VERDUN ZONE 1 **USA BORDER**	QU	45-31-00.0 73-34-00.0	60 Z					760512
CO	MONTREAL-VERDUN ZONE 1 **USA BORDER**	QU	45-31-00.0 73-34-00.0	76 Z					760512
CO	MONTREAL-VERDUN ZONE 1 **USA BORDER**	QU	45-31-00.0 73-34-00.0	82 Z					760512
CO	MT LOUIS EN HAUT ZONE 2 **USA BORDER**	QU	49-13-20.0 65-45-36.0	19 Z					770324

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CO	NEW CARLISLE	QU	48-01-00.0	17 +					760512
	ZONE 2 **USA BORDER**		65-20-00.0						
CHAUTV05	CO LIC	PERCE	QU	48-31-38.0	02 +	.045(KW)	1215(FT)	TV D LA BAIE D CHALEURS	751217
		ZONE 2 **USA BORDER**		84-14-40.0	0A				
CO		PERCE	QU	48-31-00.0	15 +				760512
		ZONE 2 **USA BORDER**		84-13-00.0					
CO		PLESSISVILLE	QU	46-13-00.0	61 +				760512
		ZONE 1 **USA BORDER**		71-47-00.0					
CHRSTV01	CO LIC	PORT ALFRED	QU	48-19-20.0	09 +	.038(KW)	006(FT)	RADIO SAGUENAY LTD	751217
		ZONE 2 **USA BORDER**		70-49-40.0	0A				
CO		PT ALFRED-BAGOTVILLE	QU	48-20-00.0	52 +				761118
		ZONE 2 **USA BORDER**		70-53-00.0					
CO		PT ALFRED-BAGOTVILLE	QU	48-20-00.0	64 +				761118
		ZONE 2 **USA BORDER**		70-53-00.0					
CFCMTV	CO LIC	QUEBEC	QU	46-47-04.0	04 Z	100(KW)	0460(FT)	TV DE QUEBEC LTD	730401
		ZONE 1 **USA BORDER**		71-15-54.0					
CMITY	CO LIC	QUEBEC	QU	46-47-04.0	05 -	13.9(KW)	0460(FT)	TV DE QUEBEC	730401
		ZONE 1 **USA BORDER**		71-15-54.0					
CBVT	CO LIC	QUEBEC	QU	46-51-40.4	11 +	310(KW)	0641(FT)	CANADIAN SCTING CORP	751217
		ZONE 1 **USA BORDER**		71-04-46.2	0A				
CIVQTV	CO LIC	QUEBEC	QU	46-48-27.0	15 -	1455(KW)	0628(FT)		751217
		ZONE 1 **USA BORDER**		71-12-02.0					
CO		QUEBEC-LEVIS	QU	46-49-00.0	02 +				760512
		ZONE 1 **USA BORDER**		71-13-00.0					
CO		QUEBEC-LEVIS	QU	46-49-00.0	21 Z				760512
		ZONE 1 **USA BORDER**		71-13-00.0					
CO		QUEBEC-LEVIS	QU	46-49-00.0	27 Z				760512
		ZONE 1 **USA BORDER**		71-13-00.0					
CO		QUEBEC-LEVIS	QU	46-49-00.0	45 Z				760512
		ZONE 1 **USA BORDER**		71-13-00.0					
CO		QUEBEC-LEVIS	QU	46-49-00.0	51 +				760512
		ZONE 1 **USA BORDER**		71-13-00.0					
CO		QUEBEC-LEVIS	QU	46-49-00.0	77 +				760512
		ZONE 1 **USA BORDER**		71-13-00.0					
CO		QUEBEC-LEVIS	QU	46-49-00.0	82 +				760512
		ZONE 1 **USA BORDER**		71-13-00.0					

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CO	RAPIDES DES JOUCHIMS	QU	46-11-50.0	08 -					761118
	ZONE 2 **USA BORDER**		77-42-40.0						
CJBTV	CO LIC	RIMOUSKI	QU	48-19-40.0	03 -	100(KW)	0900(FT)	LOWER ST LAWRENCE RADIO	751217
		ZONE 2 **USA BORDER**		68-50-09.0	0A				
CO		RIMOUSKI	QU	48-27-00.0	16 Z				760512
		ZONE 2 **USA BORDER**		68-32-00.0					
CO		RIMOUSKI	QU	48-27-00.0	51 Z				760512
		ZONE 2 **USA BORDER**		68-32-00.0					
CHRTV	CO LIC	RIVIERE DU LOUP	QU	47-35-03.0	07 +	49(KW)	1156(FT)	CHRTV LTEE	730401
		ZONE 2 **USA BORDER**		69-22-10.0					
CO		RIVIERE DU LOUP	QU	47-50-00.0	35 -				751217
		ZONE 2 **USA BORDER**		69-32-00.0					
CO		RIVIERE DU LOUP	QU	47-50-00.0	71 Z				751217
		ZONE 2 **USA BORDER**		69-32-00.0					
CHAUTV07	CO LIC	RIVIERE-RENAUD	QU	48-59-52.0	07 Z	.090(KW)	0708(FT)	TV D LA BAIE D CHALEURS	751217
		ZONE 2 **USA BORDER**		64-25-55.0					
CHRSTV03	CO LIC	ROBERVAL	QU	48-24-05.0	08 +	4.12(KW)	0932(FT)	RADIO SAGUENAY LTD	751217
		ZONE 2 **USA BORDER**		72-05-23.0	0A				
CO		ROBERVAL	QU	48-31-00.0	10 I				760921
		ZONE 2 **USA BORDER**		72-13-00.0					
CO		ROBERVAL	QU	48-31-00.0	26 +				751217
		ZONE 2 **USA BORDER**		72-13-00.0					
CO		ST ADELE	QU	45-56-38.0	56 +				751217
		ZONE 1 **USA BORDER**		74-08-10.0					
CO		ST FABIEN DE PANET	QU	46-39-23.0	13 Z				761118
		ZONE 2 **USA BORDER**		70-08-51.0					
CO		ST FILICIEN	QU	48-39-00.0	72 +				760512
		ZONE 2 **USA BORDER**		72-27-00.0					
CO		ST GEORGES DE BEAUCE	QU	46-07-00.0	72 Z				761118
		ZONE 1 **USA BORDER**		70-40-00.0					
CO		ST HYACINTHE	QU	45-38-00.0	47 +				760512
		ZONE 1 **USA BORDER**		72-57-00.0					
CO		ST JEAN-IBERVILLE	QU	45-19-00.0	70 -				761118
		ZONE 1 **USA BORDER**		73-14-00.0					
CO		ST JEROME	QU	45-46-41.0	04 Z				751217
		ZONE 1 **USA BORDER**		74-00-11.0					

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CO	ST JEROME	QU	45-47-00.0	70 Z					751217
	ZONE 1	**USA BORDER**	74-00-00.0						
CHMTV01	CO LIC	STE MARGUERITE-MARIE	QU	48-18-40.0	02 -	8.15(KW)	0700(FT)	TV D LA BAIE D CHALEURS	761118
		ZONE 2	**USA BORDER**	67-05-06.0	0A				
CBVAT	CO LIC	ST PAMPHILE	QU	46-55-53.0	03 +	.370(KW)	399(FT)		760825
		ZONE 2	**USA BORDER**	69-49-20.0	0A				
CO	ST PROSPER	QU	46-13-00.0	23 +					760809
	ZONE 2	**USA BORDER**	70-29-00.0						
CO	SEPT ILES	QU	50-12-00.0	03 +					751217
	ZONE 2	**USA BORDER**	66-23-00.0						
CO	SEPT ILES	QU	50-12-00.0	11 -					751217
	ZONE 2	**USA BORDER**	66-23-00.0						
CBST	CO LIC	SEPT ILES	QU	50-08-56.0	13 +	20(KW)	0903(FT)		751217
		ZONE 2	**USA BORDER**	66-28-12.0	0A				
CO	SEPT ILES	QU	50-12-00.0	14 Z					751217
	ZONE 2	**USA BORDER**	66-23-00.0						
CO	SEPT ILES	QU	50-12-00.0	20 +					751217
	ZONE 2	**USA BORDER**	66-23-00.0						
CO	SHAMINGAN FALL	QU	46-33-00.0	18 +					760512
	ZONE 1	**USA BORDER**	72-45-00.0						
CO	SHAMINGAN FALL	QU	46-33-00.0	63 Z					760512
	ZONE 1	**USA BORDER**	72-45-00.0						
CHLTV	CO LIC	SHERBROOKE	QU	45-18-43.0	07 Z	300(KW)	1920(FT)	RADIO TV SHERBROOKE INC	751217
		ZONE 1	**USA BORDER**	72-14-32.0	0A				
CRSHTV00	CO LIC	SHERBROOKE	QU	45-18-43.0	09 Z	325(KW)	2026(FT)		751217
		ZONE 1	**USA BORDER**	72-14-32.0	0A				
CO	SHERBROOKE	QU	45-24-00.0	14 -					751217
	ZONE 1	**USA BORDER**	71-54-00.0						
CO	SHERBROOKE	QU	45-24-00.0	30 Z					751217
	ZONE 1	**USA BORDER**	71-54-00.0						
CO	SHERBROOKE	QU	45-24-00.0	50 Z					751217
	ZONE 1	**USA BORDER**	71-54-00.0						
CO	SOREL-TRACY	QU	46-03-00.0	25 Z					760512
	ZONE 1	**USA BORDER**	73-07-00.0						
CO	THETFORD MINES	QU	46-05-00.0	32 Z					760512
	ZONE 1	**USA BORDER**	71-18-00.0						

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CO	THETFORD MINES	QU	46-05-00.0	74 Z					760512
	ZONE 1	**USA BORDER**	71-18-00.0						
CO	THETFORD MINES	QU	46-05-00.0	88 Z					760512
	ZONE 1	**USA BORDER**	71-18-00.0						
CBFST02	CO LIC	TIMISKAMING	QU	46-38-28.0	12 -	14.2(KW)	0860(FT)	CANADIAN BCTING CORP	760115
		ZONE 2	**USA BORDER**	79-04-24.0	0A				
CO	TROIS PISTOLES	QU	48-07-00.0	73 Z					760512
	ZONE 2	**USA BORDER**	69-11-00.0						
CHMTV	CO LIC	TROIS RIVIERES	QU	46-30-10.0	08 Z	12.5(KW)	626(FT)		770310
		ZONE 2	**USA BORDER**	72-38-15.0	0A				
CKTMTV	CO LIC	TROIS RIVIERES	QU	46-29-27.0	13 -	325(KW)	1323(FT)	TV ST MAURICE INC	751217
		ZONE 1	**USA BORDER**	72-39-00.0	0A				
CO	TROIS RIVIERES	QU	46-21-00.0	28 Z					770324
	ZONE 1	**USA BORDER**	72-33-00.0						
CO	TROIS RIVIERES	QU	46-21-00.0	37 Z					751217
	ZONE 1	**USA BORDER**	72-33-00.0						
CO	TROIS RIVIERES	QU	46-21-00.0	69 +					751217
	ZONE 1	**USA BORDER**	72-33-00.0						
CO	VALLEYFIELD	QU	45-15-00.0	26 Z					760512
	ZONE 1	**USA BORDER**	74-08-00.0						
CO	VALLEYFIELD	QU	45-15-00.0	66 +					760512
	ZONE 1	**USA BORDER**	74-08-00.0						
CO	VICTORIAVILLE	QU	46-03-00.0	71 +					760512
	ZONE 1	**USA BORDER**	71-58-00.0						
CO	ASSINIBOIA	SA	49-38-00.0	61 Z					760512
	ZONE 2	**USA BORDER**	105-59-00.0						
CO	BEAUVAL	SA	55-09-00.0	07 +					760723
	ZONE 2	**USA BORDER**	107-36-00.0						
CO	BIGGAR	SA	52-04-00.0	41 -					760512
	ZONE 2	**USA BORDER**	108-00-00.0						
CO	BROADVIEW	SA	50-20-00.0	62 Z					760512
	ZONE 2	**USA BORDER**	102-30-00.0						
CO	BUFFALO NARROWS	SA	55-51-00.0	11 Z					760722
	ZONE 2	**USA BORDER**	108-30-00.0						
CO	CANDRA	SA	51-37-00.0	64 -					760512
	ZONE 2	**USA BORDER**	102-26-00.0						

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CFSTV00	CO LIC	CARLYLE LAKE ZONE 2	SA **USA BORDER**	49-44-22.0 102-16-38.0	07 + 04	100(KW) HOR	0880(FT)	YORKTOWN TV CO LTD	751217
CKCKTV01	CO LIC	COLGATE ZONE 2	SA **USA BORDER**	49-26-18.0 103-47-53.0	12 Z 04	27.5(KW) HOR	9532(FT)	TRANSCANADA COMM LTD	751217
	CO	ESTERHAZY ZONE 2	SA **USA BORDER**	50-40-00.0 102-08-00.0	83 +				760512
	CO	ESTEVAN ZONE 2	SA **USA BORDER**	49-00-00.0 102-59-00.0	40 Z				760512
	CO	ESTON ZONE 2	SA **USA BORDER**	51-10-00.0 108-46-00.0	32 Z				760512
	CO	FT QU'APPELLE ZONE 2	SA **USA BORDER**	50-46-00.0 103-48-00.0	41 Z				761118
	CO	GRAVELBOURG ZONE 2	SA **USA BORDER**	49-53-00.0 106-34-00.0	39 -				760512
CR81TV03	CO LIC	GREENWATER LAKE ZONE 2	SA **USA BORDER**	52-28-03.0 103-30-15.0	04 Z HOR	3(KW)	0718(FT)	CENTRAL BCTING CO	730401
	CO	HUMBOLT ZONE 2	SA **USA BORDER**	52-12-00.0 105-07-00.0	25 Z				760512
	CO	ILE A LA CROSSE ZONE 2	SA **USA BORDER**	55-27-00.0 107-53-00.0	09 +				760722
	CO	INDIAN HEAD ZONE 2	SA **USA BORDER**	50-31-00.0 103-40-00.0	75 +				751317
	CO	KANSAS ZONE 2	SA **USA BORDER**	51-34-00.0 101-54-00.0	42 +				760512
	CO	KINDERSLEY ZONE 2	SA **USA BORDER**	51-27-00.0 109-10-00.0	38 +				760512
	CO	LA LUCHE ZONE 2	SA **USA BORDER**	56-29-00.0 108-38-00.0	13 -				760722
	CO	LA RONGE ZONE 2	SA **USA BORDER**	55-06-30.0 105-19-00.0	12 Z				760722
	CO	LEOVILLE ZONE 2	SA **USA BORDER**	53-37-00.0 107-35-00.0	12 +				760722
	CO	MAPLE CREEK ZONE 2	SA **USA BORDER**	49-55-00.0 109-27-00.0	53 +				760512
	CO	MELVILLE ZONE 2	SA **USA BORDER**	50-55-00.0 102-48-00.0	46 +				760512

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	CO	MICHEL ZONE 2	SA **USA BORDER**	55-59-00.0 109-05-00.0	08 +				760722
CBAMT	CO LIC	MOOSE JAW ZONE 2	SA **USA BORDER**	50-23-35.0 105-05-38.0	04 - DA	100(KW) HOR	0793(FT)	CANADIAN BCTING CORP	751217
CRMJTV	CO LIC	MOOSE JAW ZONE 2	SA **USA BORDER**	50-38-43.0 105-48-08.0	07 - DA	88(KW) HOR	0768(FT)	TRANSCANADA COMM LTD	751217
	CO	MOOSE JAW ZONE 2	SA **USA BORDER**	50-23-00.0 105-32-00.0	16 Z				760512
	CO	MOOSE JAW ZONE 2	SA **USA BORDER**	50-23-00.0 105-32-00.0	26 Z				760512
	CO	MOOSE JAW ZONE 2	SA **USA BORDER**	50-23-00.0 108-22-00.0	55 Z				760512
	CO	MOOSOMIN ZONE 2	SA **USA BORDER**	50-07-00.0 101-40-00.0	54 +				760512
C1CCTV2	CO LIC	NORQUAY ZONE 2	SA **USA BORDER**	52-03-00.0 102-03-18.0	07 - DA	13(KW) HOR	353(FT)		761128
CR0STV1	CO LIC	NORQUAY ZONE 2	SA **USA BORDER**	52-03-00.0 102-03-18.0	13 Z DA	35(KW) HOR	374(FT)		761128
	CO	OASOW ZONE 2	SA **USA BORDER**	49-14-00.0 102-11-00.0	56 +				760512
	CO	PRINCE ALBERT ZONE 2	SA **USA BORDER**	53-12-06.0 105-45-12.0	03 +				760722
	CO	PRINCE ALBERT ZONE 2	SA **USA BORDER**	53-12-06.0 105-45-12.0	09 +				751217
CKCKTV	CO LIC	REGINA ZONE 2	SA **USA BORDER**	50-26-52.0 104-30-00.0	02 Z	100(KW) HOR	0568(FT)	TRANSCANADA COMM LTD	730401
CBKAT	CO LIC	REGINA ZONE 2	SA **USA BORDER**	50-28-56.0 104-30-20.0	09 - DA	250(KW) HOR	0680(FT)	CANADIAN BCTING CORP	751217
	CO	REGINA ZONE 2	SA **USA BORDER**	50-27-00.0 104-36-36.0	13 -				760526
	CO	REGINA ZONE 2	SA **USA BORDER**	50-25-00.0 104-39-00.0	18 +				760512
	CO	REGINA ZONE 2	SA **USA BORDER**	50-25-00.0 104-39-00.0	24 +				760512
	CO	REGINA ZONE 2	SA **USA BORDER**	50-25-00.0 104-39-00.0	47 Z				760512

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CD	REGINA ZONE 2	**USA BORDER**	SA	50-25-00.0 104-39-00.0	53 Z					760512
CD	REGINA ZONE 2	**USA BORDER**	SA	50-25-00.0 104-39-00.0	71 Z					760512
CD	REGINA ZONE 2	**USA BORDER**	SA	50-25-00.0 104-39-00.0	77 -					760512
CJFBTV93	CD LIC	RIVERHURST ZONE 2	**USA BORDER**	SA	50-44-25.0 106-54-34.0	10 -	.71(KW) DA	0776(FT) HOR	SWIFT CURRENT BCTING	751217
CD	ROSETOWN ZONE 2	**USA BORDER**	SA	51-33-00.0 108-00-00.0	83 Z					751217
CFOCTV	CD LIC	SASKATOON ZONE 2	**USA BORDER**	SA	52-11-30.0 108-23-01.0	08 +	325(KW) DA	0868(FT) HOR	A & MURPHY & SONS	760414
CBNST	CD LIC	SASKATOON ZONE 2	**USA BORDER**	SA	52-10-25.0 106-25-42.0	11 Z	325(KW) HOR	0786(FT)	CANADIAN BCTING CORP	730401
CD	SASKATOON ZONE 2	**USA BORDER**	SA	52-11-00.0 106-26-00.0	13 Z					751217
CD	SASKATOON ZONE 2	**USA BORDER**	SA	52-07-00.0 106-38-00.0	17 Z					760512
CD	SASKATOON ZONE 2	**USA BORDER**	SA	52-07-00.0 106-38-00.0	23 Z					760512
CD	SASKATOON ZONE 2	**USA BORDER**	SA	52-07-00.0 106-38-00.0	33 Z					760512
CD	SASKATOON ZONE 2	**USA BORDER**	SA	52-07-00.0 106-38-00.0	54 Z					760512
CD	SASKATOON ZONE 2	**USA BORDER**	SA	52-07-00.0 106-38-00.0	70 Z					760512
CD	SASKATOON ZONE 2	**USA BORDER**	SA	52-07-00.0 106-38-00.0	76 Z					760512
CBCTV01	CD LIC	SHALHAVON ZONE 2	**USA BORDER**	SA	49-28-05.0 108-26-04.0	07 +	2.65(KW) DA	0560(FT) HOR	CANADIAN BCTING CORP	751217
CD	SHALHAVON ZONE 2	**USA BORDER**	SA	49-40-00.0 108-25-00.0	78 Z					760512
CFOCTV01	CD LIC	STRANRAER ZONE 2	**USA BORDER**	SA	51-40-55.0 108-30-15.0	03 +	10.3(KW) DA	0930(FT) HOR	A.A. MURPHY & SONS LTD	751217
CBNST01	CD LIC	STRANRAER ZONE 2	**USA BORDER**	SA	51-40-25.0 108-28-54.0	09 Z	55(KW) DA	0765(FT)	CANADIAN BCTING CORP	751217

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CJFBTV	CD LIC	SWIFT CURRENT ZONE 2	**USA BORDER**	SA	50-20-20.0 107-47-17.0	05 -	13.3(KW) HOR	0511(FT)	SWIFT CURRENT BCTING CO	730401
CKMCTV	CD LIC	SWIFT CURRENT ZONE 2	**USA BORDER**	SA	50-18-31.0 107-52-35.0	12 -	25(KW) DA	949(FT) HOR		770310
CD	SWIFT CURRENT ZONE 2	**USA BORDER**	SA	52-17-00.0 107-50-00.0	40 +					751217
CD	SWIFT CURRENT ZONE 2	**USA BORDER**	SA	50-17-00.0 107-50-00.0	56 Z					760512
CD	UNITY ZONE 2	**USA BORDER**	SA	52-27-00.0 109-10-00.0	09 -					760512
CD	WATROUS ZONE 2	**USA BORDER**	SA	51-40-00.0 105-28-00.0	78 +					751217
CD	WETBURN ZONE 2	**USA BORDER**	SA	49-41-00.0 103-52-00.0	48 +					760512
CD	WILKIE ZONE 2	**USA BORDER**	SA	52-25-00.0 108-43-00.0	31 Z					751217
CKCKTV02	CD LIC	WILLOW BUNCH ZONE 2	**USA BORDER**	SA	49-20-58.0 105-38-08.0	06 -	17.5(KW) DA	0864(FT) HOR	TRANSCANADA COMM LTD	751217
CBAMT01	CD LIC	WILLOW BUNCH ZONE 2	**USA BORDER**	SA	49-23-10.0 105-40-17.0	10 +	65.8(KW) DA	0839(FT) HOR	CANADIAN BCTING CORP	751217
CHSSTV	CD LIC	WYNYARD ZONE 2	**USA BORDER**	SA	51-42-30.0 104-17-55.0	08 Z	11(KW) HOR	0614(FT)	YORKTOWN TV CO LTD	761129
CICCTV01	CD LIC	WYNYARD ZONE 2	**USA BORDER**	SA	51-42-30.0 104-17-55.0	12 +	61(KW) DA	0560(FT) HOR		761129
CD	WYNYARD ZONE 2	**USA BORDER**	SA	51-47-00.0 104-10-00.0	31 +					761129
CKOSTV	CD LIC	YORKTON ZONE 2	**USA BORDER**	SA	51-13-33.0 102-43-59.0	03 Z	15(KW) HOR	0534(FT)	YORKTOWN TV CO LTD	751217
CICCTV	CD LIC	YORKTON ZONE 2	**USA BORDER**	SA	51-13-33.0 102-43-59.0	10 Z	39.2(KW) HOR	0444(FT)		750708
CD	YORKTON ZONE 2	**USA BORDER**	SA	51-13-00.0 102-28-00.0	20 Z					751217
CD	YORKTON ZONE 2	**USA BORDER**	SA	51-13-00.0 102-28-00.0	33 +					751217
CD	CLINTON CREEK ZONE 2	**USA BORDER**	TU	84-24-07.0 140-36-50.0	08 Z					751217

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CO	DAWSON ZONE 2	YU	64-04-00.0 139-25-30.0	03 Z					751217
CO	DAWSON ZONE 2	YU	64-35-00.0 139-25-36.0	10 Z					751217
CO	DAWSON ZONE 2	YU	64-03-00.0 139-25-00.0	14 Z					751217
CO	DAWSON ZONE 2	YU	64-03-00.0 139-25-00.0	20 Z					751217
CO	ELSA ZONE 2	YU	63-52-48.0 138-34-00.0	09 Z					751217
CO	FARO ZONE 2	YU	62-13-47.0 133-20-00.0	08 Z					751217
CBKMT	CO LIC	KENO HILL ZONE 2	YU	63-54-55.0 135-23-50.0	13 Z	2.52(RW) DA	1990(FT) HOR		760414
CO	MAYO ZONE 2	YU	63-40-00.0 135-51-36.0	07 Z					751217
CBDAT	CO LIC	WATSON LAKE ZONE 2	YU	60-03-52.0 128-42-52.0	08 *	.19(RW) DA	0-29(FT) HOR	CANADIAN BCTING CORP	760414
CO	WHITEHORSE ZONE 2	YU	60-42-00.0 135-05-30.0	02 *					751217
CFWHTV	CO LIC	WHITEHORSE ZONE 2	YU	60-39-35.0 134-52-56.0	06 Z	.3(RW) HOR	1248(FT)	CANADIAN BCTING CORP	730401
CO	WHITEHORSE ZONE 2	YU	60-44-00.0 135-05-30.0	14 Z					751217
CO	WHITEHORSE ZONE 2	YU	60-44-00.0 135-05-30.0	20 Z					751217

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