

## **STANDARD TRANSPORTATION COMMODITY CODE HISTORY AND BACKGROUND**

In the early 1960's, market research assumed a more commanding role in railroad planning, More precise commodity information became essential for market and sales analysis, traffic flow studies, profit analysis and other applications. Concurrently, the Federal Government undertook studies related to national transportation planning leading to the establishment of the Federal Department of Transportation and the first Census of Transportation in 1963.

The Census of Transportation is one of six censuses mandated by Federal law at five year intervals. Other censuses are for Agricultural, Business (retail, wholesale and service), Manufacturing, Mineral Industry and State/Local Governments. All of these censuses are designed to measure the economic health of their respective areas. The commodity code is used heavily in the agricultural, business, manufacturing and mineral censuses, as well as the transportation census.

The Census of Transportation offered an opportunity for detailed comparisons between rail traffic and the total transportation pattern by industry and commodity. Recognizing the importance of a code to facilitate such comparisons, in May 1961 the AAR Board of Directors authorized formation of a policy committee. This committee consisted of railroad accounting, research and traffic representatives brought together to develop a transportation commodity code that would do the following:

1. Identify commodities moved in a more detailed manner than the ICC classification;
2. Use a format that would allow comparisons with past statistics;
3. Be adaptable to machine accounting;
4. Provide a framework of commodity classification that would be of use both for market research and the impending Census of Transportation.

The AAR Board authorized the policy committee (known as the Special Commodity Code Committee) to investigate and report its findings to the AAR Board. This committee, in turn, appointed a technical subcommittee consisting of its representatives and additional ad hoc members, including representatives of the Federal Government. The Special Commodity Code Committee authorized the technical subcommittee to perform a feasibility study and eventually oversee the development of the commodity code system.

### **STCC COMPARABILITY WITH STANDARD INDUSTRIAL CLASSIFICATION (SIC)**

In addition to the impending Census of Transportation requirements for a commodity classification system, impetus for the AAR's transportation commodity code program came from the then Bureau of the Budget's Office of Statistical Standards (OSS.). The OSS advocated the use of standard identification codes in the government, including carrier statistics reported to the ICC. The railroad industry believed that it should play a major role in the development of a national system of commodity classification that might become the uniform code for the transportation industry based on the SIC.

It became apparent in these joint efforts that the SIC, because of its detail and complete industry orientation, was not a practical solution from a carrier standpoint either as a transportation code or for use in the proposed Census of Transportation. As a result, a basic structure was developed, calling for a five-digit numeric code compatible with, but not identical to, the structure of the SIC. This five-digit code, a commodity adaptation of the SIC was developed primarily for use in the collection, presentation and analysis of commodity data associated with the Census of Transportation. The Bureau of the Budget published this code as the "Commodity Classification for Transportation Statistics."

The Technical Committee incorporated the Government's code as the first five digits of the STCC, thereby providing maximum comparability between transportation and production statistics. Two digits were added to gain the precise commodity identification that the railroads were seeking. The Technical Committee agreed upon this seven-digit code after long debate at its meeting of December 18-19, 1962.

The code additive concept was an important feature of the railroads' code. Data gathered at the 5-digit level is the sum of all data collected at the seven digit level with the detail at the 3, 4, and 5-digit levels. Collapsibility of the STCC structure facilitates summarization of commodity information at any level-product class, industry, minor industry groups, and major industry groups. Each level provides meaningful information. Statistics developed may be compared to published data on production, distribution and consumption.

The first two digits of the code denote the thirty-six (36) Major Industry Groups in the Product Class code. The third digit of the STCC denotes the one hundred and eighty-one (181) Minor Industry Groups within the Major Industry Groups. The Code's fourth digit indicates the four hundred and forty-seven (447) Specific Industries within the Minor Industry Groups. The fifth digit of the Code represents the one thousand two hundred and seven (1,207) Product Classes within these specific industry groups. These classes are identical to those in the Office of Management and Budget's "Commodity Classification for Transportation Statistics" (also known as the Transportation Census Code or the Transportation Commodity Code) and the ICC's code. The sixth and seventh digit of the Code refer to the approximately fourteen thousand six hundred (14,600) specific commodities identified by the Code.

## **RAILROADS APPROVE CODE DEVELOPMENT**

The Technical Committee conducted a year-long study on behalf of the Special Commodity Code Committee. Subsequently, at its September 28, 1962 meeting, the AAR Board of Directors authorized development of a transportation commodity code.

The Technical Committee developed this code by using the descriptions in Uniform Freight Classification (UFC) No. 6 for initial commodity identification, along with rail commodity tariff items specifically requested by the railroads. Additionally, by special railroad request, the Committee assigned several commodity descriptions that were not named in either the UFC or other tariffs. These items were designated with a code of "100" to denote the absence of a tariff reference of "tariff authority." Also, the Technical Committee assigned STCC identification codes to certain descriptions from the former Freight Commodity Statistics Classification (Red Book) and Bureau of the Budget product classes, which were designated with codes '90' and '91', respectively, in the data field.

Coding classifications covered products of agriculture, forestry, fisheries, mining, and manufacturing.

A separate two-digit major group of scrap and waste materials was added, to meet special railroad needs. The Committee decided, however, that waste or by-product material associated with a specific manufacturing process would be identified with the products from which scrap or by-products arise, such as 20 939 68, "Waste pulp, flax mill," 28 299 68, "Waste pulpwood" or 21 419 40, "Waste tobacco." The five-digit groups or so-called "product classes" of products were formed from: (1) significant revenue producing items for one or more modes of transportation (rail, water, air or truck); (2) detail frequently used commodity descriptions on bills of lading or other shipping documents; and (3) items or groups of items for which production data were readily available.

## **CODE DIRECTION**

The technical committee employed several critical areas of code design in conceiving the STCC format. The code was required to meet the following criteria:

- Provide a far more detailed commodity identification than previously possible;
- Be universally adaptable, thereby eliminating individual road subcoding and increasing commodity detail;
- Reduce the needs for special studies;
- Provide complete comparability with transportation statistics in the Census of Transportation;
- Simplify comparability with published statistics on production, consumption, and movement of commodities;
- Be a single code system acceptable to the ICC for reporting purposes by all regulated carriers; and
- Be translatable to former statistics.

Regulations were adopted to achieve these goals:

1 - Comparability at five digits would be achieved with OMB transportation codes rather than an alternate numeric structure requiring translation for purposes of comparison. This matter was debated by the original Technical Committee for over two years before selection of the current system. The decision affected timing of proposed changes and required the acquiescence of the Office of Management and Budget (OMB). The OMB reciprocated by placing suggested changes to the STCC before the Technical Committee.

2 - Commodities listed in the UFC with different carload ratings would be given an individual STCC number. Other commodities from rail and motor carrier tariffs not specifically listed in the UFC would be added. Adoption of this rule resulted in the inclusion of modifiers such as SU (set up) and KD (knocked down), as well as obsolete commodities and historic differences not important to later commodity tariffs. Also, by disregarding Less Than Carload (LCL) rating differences, the STCC did not include all numbers necessary to uniquely identify all UFC ratings.

3 - Packaging would be completely excluded in the code structure as would all other modifiers except

to the extent that they appeared in the UFC and influenced carload ratings.

4 - A commodity must be published in a tariff before assignment of a STCC identification number.

5 - There would be an absolute prohibition of any Committee action that would have a rate implication (insofar as it lay within the power of the Committee to prevent such implications). A direct tie to a government production oriented code not based on rate or transportation criteria, supplies a foundation to disclaim any rate responsibility for commodity number assignments.

## **RAILROADS ANNOUNCE NEW CODE**

In April 1963, the AAR announced the availability of the Standard Transportation Commodity Code (STCC) as a common language to identify freight commodities, to be effective January 1, 1964.

The initial STCC Manual consisted of five sections:

Section 1 - Introduction - Explanation of Manual, along with a list of abbreviations used in the STCC. Also included was a STCC/SIC Cross Reference List (the first Bridge Table) and a Tariff Code Number List.

Section II - Numeric Code Listing - List of STCC codes in numerical sequence.

Section III - Alphabetical Code Index - Alphabetic index to the STCC Numerical Section.

Section IV - Tariff Reference Code Listing - the STCC in tariff number and tariff item sequence showing the tariff classification or other source from which the description of each article was taken. The listing also showed the two letter "DA" (dangerous articles) code and the AAR Red Book three-digit code.

Section V - AAR Red Book reference Code Listing - The STCC in AAR Red Book three-digit code sequence. This listing also included the STCC seven-digit numbers, "DA," and tariff reference.

In addition, the STCC seven digit article number was cross-referenced to the Illinois central gulf Railroad's six-digit version of the AAR Red Book three-digit code.

## **NEW CODE ADOPTED BY ICC AS MANDATORY FOR ALL REGULATED CARRIERS**

The STCC Technical committee recognized that the new code should be prescribed by the ICC for reporting purposes in order to insure full compliance. Throughout development of the STCC, the Committee kept the ICC informed on its progress. When the basic 5-digit structure was completed in agreement with the Office of Statistical Standards, the ICC issued Order No. 32406, served September 30, 1963, adopting the structure as the mandatory reporting form for all ICC regulated carriers, effective January 1, 1964, coincident with the effective date of the STCC.

The entire railroad system shifted to a totally new record-keeping procedure with the adoption of the STCC. The breach with the old codes was substantial. Although considerable effort was made to bridge the STCC to the former codes, some discontinuity was unavoidable. Consequently, some historic series were destroyed, record-keeping changes were overwhelming, and conversion costs were considerable. The Technical committee, however, has maintained a bridge to the former commodity code system to allow construction of a time series running from the old to the new structure.

AAR Freight Mandatory Railway Accounting Rule 5 was revised, effective January 1, 1964, coincident with the new Code, to provide that “the commodity number shall be shown in the proper block on all carload waybills” and amendments to Rule 110 presented specific instructions for listing the seven-digit STCC. The STCC is carried through as the control number from the waybill to interchange reports, interline settlement statements, and revenue analysis statements used by accounting, operating and marketing departments.

The STCC is a fundamental source of information contained in the annual Carload Waybill Sample. The Waybill Sample is based on a sample of audited revenue waybills submitted to the ICC by approximately 87 railroads and is the most comprehensive source of information regarding the movement of individual commodities by rail.

## **STCC SECTION 49**

Early in 1974, the Hazardous Materials Regulations Board of the U. S. Department of Transportation (DOT) began proceedings to incorporate specific identification of hazardous materials in transportation documentation and, through a systems application, provide an indication of appropriate responses in case of an emergency. Railroad operating officers and the AAR Bureau of Explosives asked the Technical Committee to index all items from the Hazardous Materials Regulations Board list in the STCC so that the commodity code number would signify the hazard as well as the commodity.

The AAR Board of Directors endorsed the request for the identification of hazardous materials. A joint ad hoc committee of the Technical committee and the Steering Committee of the Bureau of Explosives met to design a new hazardous materials series within the present structure of the Code. This series would bridge to the existing product class seven-digit code series, thereby maintaining the viability of the STCC for traffic and statistical uses.

Effective January 1, 1976, STCC Section 49 was created to meet carriers’ need to identify those commodities designated as hazardous by the U.S. Department of Transportation. STCC Section 49 reflects the type and level of hazard associated with the particular commodity being transported. STCC Section 49 codes are assigned to all proper shipping names listed in DOT’s Hazardous Materials Table 172.101 that are matched to the appropriate STCC Product Class tariff description. This unique bridging technique provides the capability to identify not only the hazard of a commodity but the industry and group of products under which it is identified, thereby establishing the necessary link to the carrier tariff description under which the commodity is transported or reported for statistical and Government requirements

When commodities or proper shipping names are added or hazard classes amended by DOT, changes are made as a result in Section 49. As carriers and/or shippers advise the STCC Technical Committee about hazardous materials that are moving but are not specifically named in DOT's Table, that commodity is matched to the appropriate DOT hazard class and a STCC 49 identification is assigned accordingly. Carrier personnel using STCC 49 code numbers on transportation documents are constantly made aware of any hazards that have been identified. The 49 number also serves as a red flag to those handling the hazardous materials or substance. In 1981, when the DOT adopted its Hazard Information System, DOT's Hazard Identification number was added to STCC Section 49 as a further aid to Code users in tracking hazardous shipments.

## **STCC SECTION 50**

Effective July 1, 1982, STCC Section 50, identifying bulk commodities shipped in boxcars, was created to serve as an aid in the implementation of the AAR's National Car Grading System. The Car Grading System was developed in response to railroads' increased need to recognize cars by grade because the ICC had restored control over Car Service rules to the railroad industry effective August 24, 1980. Because the STCC Product Class codes identify commodities only, these codes did not and do not indicate whether a commodity in a boxcar is packaged or in bulk form. Bridging tables of Section 50 codes with corresponding STCC Product Class codes and vice versa increases the utility of Section 50 codes. Section 50 codes were assigned to commodities from STCC Product Classes, as selected by the National Car Grading Task Force, to provide identification of their movement in bulk in boxcars for car grading purposes.

## **STCC SECTION 48**

In July 1987, STCC Section 48 became effective. This commodity group consist of descriptions of commodities designated as hazardous wastes by the Environmental Protection Agency (EPA) and by the DOT.

STCC 48 is structured in a format similar to STCC 49 with matching classes and hazard groups. STCC 48 contains the DOT Hazard Information System Identification number and the EPA reportable quantity or 'RQ'. However, as STCC 48 is part of the product class, no bridge table is required.

STCC 48 codes are assigned to identify only hazardous wastes. Waste commodities that are not hazardous are identified in other appropriate product classes. Hazardous wastes are materials that are:

- 1 - Subject to the hazardous waste manifest requirements of the EPA specified in 40 CFR, Part 262, or
- 2 - Would be subject to these requirements absent an interim authorization to a state under 40 CFR, Part 262, Subpart F, or
- 3 - Are under DOT regulations and are shipped as waste.

## **PUBLICATION OF THE STCC AS A TARIFF**

In 1968 when the railroad industry proposed an increase in freight rates in Ex Parte 259, General Rate Increase Proceeding, the ICC required the submission of a commodity list as a reference document for the increased tariff. The STCC was the obvious selection as the source for identification of commodities, and was

an important ingredient in the processing of all general rate increase proceedings until enactment of the Staggers Rail Act of 1980 led to the phasing out of general increases.

Following its successful use in connection with Ex Parte 259, railroad traffic officers recognized that the tariff status of the STCC was desirable. In July 1972, copyright permission was granted for publication of the STCC as a tariff. Accordingly, STCC Tariff 1-A was issued providing a single document for all Code users and thereby resulting in economies to those requiring both the master Code file and the tariff. In granting copyright privileges, the STCC Technical committee requested that the railroad traffic officers price STCC 1-A so that revenues would be sufficient to provide the Technical Committee with funds to fulfill its responsibilities for maintenance and development of the Code program. It was understood that the annual royalty allowance from tariff publication would cover these costs. Additionally, arrangements were agreed upon for publication of cumulative supplements prior to the annual reissue of the complete tariff.

Through use of the STCC, railroads could create modern master tariffs for applying freight rate adjustments, with a resultant savings in time and expense for both the railroad industry and the shipping public.

In 1980, Ex Parte 270, Tariff Improvement, stated that the ICC sanctioned STCC as “the only permissible stand-alone code for commodity identification.” This position was reaffirmed in a decision of June 10, 1981 of the same proceeding.

Beginning in 1993, if a commodity is exempted from regulation under Ex Parte 346 or 394, the STCC Tariff 6001 includes a bullet ( • ) to the right of the STCC number.

In 1994, in order to reduce STCC confusion, the 6049 Tariff was replaced by the Directory of Hazardous Materials Shipping Descriptions.

## **TECHNICAL COMMITTEE MEMBERSHIP EXPANDED**

In order to encourage intermodal application and wider usage of the STCC, the Technical Committee expanded its membership to include representatives from the National Motor Freight Traffic Association, the National Industrial Transportation League, and the railroads’ Uniform Classification Committee in 1966. Again in 1972, the Technical Committee expanded its membership to permit broader transportation industry representation and to perpetuate and insure the intermodality of the Code. Roadway Express joined the Committee representing individual motor common carriers and the Eastern Central Motor Carriers Association (ECMCA) agreed to represent the motor carrier tariff bureaus. The ECMCA vacated its seat in November 1981, resumed it in 1986, and relinquished the seat again within a year. The Central and Southern Motor Freight Tariff Association represented the motor carrier tariff bureaus from September 1983 until December 1984. Representation from each of the three major traffic associations was added in 1974.

Representation on the current Technical Committee is as follows:

Railroads - Members from individual railroad accounting, statistical or traffic departments; one member representing the major tariff bureaus replaced three tariff bureaus’ representatives in 1984; one non-voting member representing the AAR; and one member representing the National Railroad Freight Committee.

Motor Carriers - One member representing the National Motor Freight Traffic Association; one member representing the motor carrier tariff bureaus; and one carrier member.

Shippers - One member representing the National Industrial Transportation League.

Federal Government - One non-voting member representing the Department of Transportation; one non-voting member representing the Office of Management and Budget. (Past representation included seats for non-voting members representing the Interstate Commerce Commission and the Civil Aeronautics Board.)

Water Carriers and Air Carriers - Membership is available for representatives of water and air carriers, but none are currently on the Committee. (As a demonstration of the Codes's intermodal applications, several air carrier tariff descriptions were assigned specific seven-digit codes.)