

122 FERC ¶ 61,239  
UNITED STATES OF AMERICA  
FEDERAL ENERGY REGULATORY COMMISSION

Before Commissioners: Joseph T. Kelliher, Chairman;  
Sudeen G. Kelly, Marc Spitzer,  
Philip D. Moeller, and Jon Wellinghoff.

Columbia Gas Transmission Corporation

Docket No. RP08-110-000

ORDER ACCEPTING TARIFF SHEETS

(Issued March 20, 2008)

1. On December 7, 2007, Columbia Gas Transmission Corporation (Columbia) filed tariff sheets to establish an hourly no-notice summer-only transportation service via Rate Schedule NTS-S (NTS-S Service) designed to provide enhanced summer-only hourly flexibility exceeding 1/24<sup>th</sup> of a shipper's Maximum Daily Quantity (MDQ).<sup>1</sup> Columbia requested waiver of the 60-day notice period to permit an effective date contemporaneous with the May 1, 2008, launch of its new electronic bulletin board (EBB) system.
2. As discussed below, the tariff sheets reflecting Rate Schedule NTS-S rates and services are accepted, effective May 1, 2008, as proposed.

**I. Details of the Filing**

3. Columbia states that it proposes NTS-S Service to allow electric generators, as well as other shippers valuing enhanced hourly service, to take firm services more tailored to their needs, especially for scheduling and dispatching gas-fired electric generation and scheduling the gas necessary to fuel such generators.
4. Columbia states that NTS-S Service would allow shippers to accelerate flow rates without notice during any hour within the gas day, by permitting them to take up to their Maximum Hourly Quantity (MHQ) and up to the MDQ set forth in their service agreement without submitting an accurate nomination. Columbia explains that, as with

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<sup>1</sup> See Appendix for a list of the proposed tariff sheets.

its existing Rate Schedule NTS (NTS Service)<sup>2</sup> transportation service, NTS-S Service will be provided on a no-notice basis and will benefit shippers by providing the means of avoiding Columbia's Delivery Point Scheduling Penalty. NTS-S Service will provide the flexibility on any hour during the gas day to request deliveries of gas from Columbia that exceed the quantities of gas the customer has scheduled to be received by Columbia, without incurring an overrun charge except that a shipper's MHQ cannot be less than 4.17 percent or exceed 100 percent of its MDQ. Columbia's shippers taking Off-Peak Firm Transportation Service (OPT Service) and FTS Firm Transportation Service (FTS) will have a one-time right to convert their summer period service to NTS-S Service while retaining their firm rights to winter firm capacity under OPT or FTS.

5. Further, Columbia states that, again as with Columbia's existing NTS service, customers will have a running Gas Supply Quantity (GSQ) balance that, to the extent drawn upon during the month (i.e., when deliveries exceed GSQ draws), must be replenished by the customer no later than the last day of the month immediately following the month in which the GSQ draws were taken. A shipper failing to replenish its GSQ balance must pay a penalty equal to the unreplenished quantity multiplied by 120 percent of the applicable index price for gas delivered to "Columbia Gas Transmission Corporation, Appalachia," as reported in *Inside FERC's Gas Market Report*. However, Columbia notes that, unlike NTS Service, NTS-S Service will be provided only during the summer season (April 1 through September 30).

6. Columbia states that transportation capacity under Rate Schedule NTS-S will be subject to release under section 14 of the General Terms and Conditions (GT&C) of Columbia's tariff. However, it states, the capacity will be released as if under Rate Schedule FTS, unless the customer's GSQ is also released to the replacement shipper.

7. In order to provide NTS-S Service to a wide array of shippers, Columbia states that NTS-S Service will be provided to all primary points of delivery on its system regardless of whether they are directly connected or are equipped with electronic metering and flow control devices. Instead of requiring this equipment, Columbia states that it will manage NTS-S Service using its SST Service<sup>3</sup> shippers' coinciding summer season (April 1 - September 30) 50 percent contract demand reduction.<sup>4</sup> If hourly

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<sup>2</sup> Rate Schedule NTS is for firm No Notice Transportation Service.

<sup>3</sup> Rate Schedule SST is for Storage Service Transportation.

<sup>4</sup> See Rate Schedule § 2(a), First Rev. Sheet No. 115.

customers abuse over-takes, Columbia states that it will require them to install flow control devices at their own expense under section 9.2 of the General Terms and Conditions (GT&C) of its tariff. Subject to operational availability, Shippers may use secondary points of receipt and other qualified points of delivery on Columbia's system as secondary points of delivery.

8. Columbia explains the remaining features of its proposal as follows. At any time during the gas day, a shipper may change its Scheduled Daily Delivery Quantities (SDDQ) and Scheduled Hourly Delivery Quantities (SHDQ) via Columbia's EBB, within the limits of the shipper's GSQ balance, provided the shipper's daily and hourly quantities do not exceed the MDQ and MHQ in its Service Agreement. A shipper must provide Columbia's Gas Control Department advance notice of changes to its SDDQ and SHDQ no later than one hour after Columbia posts deliveries for the final hour of the Gas Day in question.

9. NTS-S Service shippers will have the right to receive their MDQ at higher hourly rates of flow than other shippers, but NTS-S Service is a daily and hourly service with maximum daily and hourly contractual entitlements. NTS-S Service will have the same priority as Columbia's existing NTS Service.

10. Columbia states that NTS-S Service will not impair or diminish the current firm primary service rights of any existing customer and will not affect existing receipt and delivery point flexibility, nominating and scheduling priorities, the allocation of capacity, operating conditions or curtailment on Columbia's system. Columbia will review requests for NTS-S Service on a case-by-case basis, and provide the service only if there is sufficient capacity without impairing existing customers' firm contractual entitlements.

11. New service requests for any firm service will be evaluated in accordance with GT&C section 7. Along with ascertaining mainline capacity and delivery point capacity, Columbia Gas will determine whether it physically can accommodate the swing patterns of any service requested at the proposed delivery point without impairing the rights of existing firm shippers, including considering the effect of service on flowing pressures at all points potentially affected by the requested NTS-S Service delivery point.

12. An NTS-S Service shipper may elect its entire MHQ over any hourly period within the Gas Day, as long as its deliveries do not exceed its Transportation Demand (TD) on any day. Rates are based on current firm rates for NTS Service. Likewise, the individual rate components are the same, except for the fact that NTS-S Service will permit an hourly flow rate not to exceed the MHQ and MDQ. Because NTS-S Service will allow a shipper to take its MDQ over an hourly period during the gas day ranging from 1 to 24 hours, the reservation charge will be the product of each decatherm of TD

multiplied by 24 and then divided by the quotient of the MDQ divided by the MHQ as specified in a formula.<sup>5</sup>

13. Because NTS-S Service is a new service, Columbia states that it was unable to forecast the amount of revenue it will produce. However, Columbia states that it anticipates revenue will be minimal because NTS-S Service will only be offered during the summer season and will only be available via unmarketed pockets of available capacity.

## **II. Notice, Interventions and Protests**

14. Public notice of the filing was issued on January 23, 2007 with comments, interventions and protests due as provided in Rule 210.<sup>6</sup> Pursuant to Rule 214,<sup>7</sup> all timely motions to intervene and any motions to intervene out-of-time filed before the issuance date of this order are granted.

15. Several parties filed protests, including a motion for summary rejection, technical conference and suspension, that Columbia moved to answer. Baltimore Gas and Electric Company (BG&E) and Old Dominion Electric Cooperative (ODEC) moved to answer Columbia's answer. Under Rule 213(a)(2),<sup>8</sup> answers to protests are not accepted unless otherwise ordered. The Commission accepts the answers because they may assist the Commission's analysis of the filing.

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<sup>5</sup> The formula is  $NTS-S = NTS \times (24/EPF)$  where:

NTS-S = NTS-S Reservation Fee

NTS = Applicable NTS Reservation Fee

24 = Number of hours in a Gas Day

EPF = Expedited period of gas flow in hours corresponding with the shipper's accelerated flow rate, expressed as the equation of MDQ under the NTS-S Agreement divided by the MHQ under the NTS-S Agreement.

<sup>6</sup> 18 C.F.R. § 385.210 (2007).

<sup>7</sup> 18 C.F.R. § 385.214 (2007).

<sup>8</sup> 18 C.F.R. § 385.213(a)(2) (2007).

16. The Easton Utilities Commission (Easton) and the City of Charlottesville, Virginia (Charlottesville) do not oppose Columbia's filing, but ask the Commission to condition acceptance on Columbia guaranteeing that other services will not be adversely affected.

17. The Commission denies the requests for summary rejection; the filing is neither patently deficient or a substantive nullity.<sup>9</sup> Columbia's filing contains all of the requirements of the Commission's regulations.<sup>10</sup>

18. As detailed below, Columbia has sufficiently addressed or clarified the various issues raised. Therefore, the Commission will accept the filing without the requested technical conference and suspension.

### III. Discussion

19. The Commission has approved hourly firm transportation services for numerous pipelines<sup>11</sup> and hourly, no-notice services similar to the one Columbia is proposing

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<sup>9</sup> *ANR Pipeline Co.*, 66 FERC ¶ 61,335, at 62,099-62,100 (1994) (citing *Lansdale v. FPC*, 494 F.2d 1104, 1110 n.33 (D.C. Cir. 1974); *Municipal Light Board v. FPC*, 450 F.2d 1341, 1345-46 (D.C. Cir. 1971).

<sup>10</sup> 18 C.F.R. § 154.1, *et seq.* (2007).

<sup>11</sup> *El Paso Natural Gas Co.*, 112 FERC ¶ 61,150 (2005), *order on technical conference*, 114 FERC ¶ 61,305 (2006), *reh'g denied*, 116 FERC ¶ 61,016 (2006), *order approving settlement*, 120 FERC 61,208 (2007); *Great Lakes Transmission Limited Partnership*, 120 FERC ¶ 61,105 (2007); *Vector Pipeline, L.P.*, 103 FERC ¶ 61,391 (2003), *order accepting settlement*, 106 FERC ¶ 61,071 (2004); *Portland Natural Gas Transmission System*, 106 FERC ¶ 61,289 (2004), *reh'g denied*, 110 FERC ¶ 61,375 (2005), *order on compliance filing*, 111 FERC ¶ 61,430 (2005); *Panhandle Eastern Pine Line Co.*, 90 FERC ¶ 61,119 (2000), *order on reh'g and compliance filing*, 91 FERC ¶ 61,174 (2000), *order on reh'g and compliance filing*, 93 FERC ¶ 61,211 (2000); *Reliant Energy Gas Transmission Co.*, 87 FERC 61,298 (1999), *reh'g denied*, 89 FERC ¶ 61,187 (1999); *Gulfstream Natural Gas System, L.L.C.*, 91 FERC ¶ 61,119 (2000); *Trunkline Gas Co.*, 64 FERC ¶ 61,141 (1993).

here.<sup>12</sup> NTS-S Service will benefit electric generators (as well as other shippers valuing enhanced hourly service) by providing firm services more tailored to their specific needs. NTS-S Service's flexibility for scheduling gas should improve both the scheduling of gas used to fuel electric generators, and the scheduling and dispatch of gas-fired electric generation, thereby furthering the Commission's goal of improving reliability in the gas and electric industries.<sup>13</sup> Accordingly, the Commission accepts the filing.

20. BG&E asserts that the filing raises many questions that should be addressed in a technical conference. Claiming that the proposed NTS-S rate will be higher than a market price would clear, BG&E alleges that customers will choose NTS-S Service solely to avoid scheduling penalties. BG&E contends that this raises the question of whether this is really a reduced penalty for running imbalances that would otherwise be incurred. BG&E questions whether Columbia proposed the service because it will retain more revenue from a cost of service based rate than from a penalty (which Columbia must credit to customers). It is the Commission's policy to encourage pipelines to provide service allowing shippers to avoid penalties. The proposed hourly service is consistent with that policy because it will give shippers the needed hourly flexibility to aid them in avoiding scheduling penalties.<sup>14</sup> Columbia clarified that it designed NTS-S as a firm, no-notice service to accommodate the needs of shippers requiring non-ratable accelerated flow rates without notice during any hour within the gas day without submitting accurate nominations.

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<sup>12</sup> *El Paso Natural Gas Co.*, 112 FERC ¶ 61,150 (2005), *order on technical conference*, 114 FERC ¶ 61,305 (2006), *reh'g denied*, 116 FERC ¶ 61,016 (2006), *order approving settlement*, 120 FERC ¶ 61,208 (2007) (approving implementation of hourly no-notice service under Rate Schedule NNTH).

<sup>13</sup> *Standards for Business Practices for Interstate Natural Gas Pipelines; Standards for Business Practices for Public Utilities*, Order No. 698, FERC Statutes and Regulations ¶ 31,251 (2007).

<sup>14</sup> Under Commission policy, scheduling penalties do not apply to no-notice service. *Pipeline Service Obligations and Revisions to Regulations Governing Self-Implementing Transportation; and Regulation of Natural Gas Pipelines After Partial Wellhead Decontrol*, Order No. 636, FERC Stats. & Regs. ¶ 30,939, at 30,425 (1992); *South Georgia Natural Gas Co.*, 66 FERC ¶ 61,112, at 61,185 (1994); *Columbia Gas Transmission Corp.*, 64 FERC ¶ 61,060, at 61,541 (1993).

21. BG&E asks how a local gas distribution company (LDC) customer will balance at its city-gate if the shipper uses secondary points and, for either primary or secondary points, how the delivery point operator will balance for the day if a third party can change deliveries after the day is over. Columbia explains that LDCs and delivery point operators currently balance at the city-gate under NTS Service without any problems, including under circumstances in which shippers utilize secondary delivery points and that NTS-S service will function no differently. In other words, it states, the NTS-S shipper's firm storage account will take the swing when receipts do not match deliveries.

22. BG&E asks Columbia to clarify how capacity releases will work. Columbia clarifies that the capacity release rights under section 2(k) of Rate Schedule NTS-S are identical to those under section 2(h) of Rate Schedule NTS.

23. ODEC asks the Commission to reject Columbia's proposed condition that NTS-S Service keep Columbia revenue-neutral, pointing out that Columbia has already proposed rates for the service it believes are just and reasonable. ODEC asserts that generating shippers will decide whether to convert to NTS-S Service by determining whether penalties would cost more or less. ODEC asserts that continued reliance on penalties would cause operational problems leading to increasing penalties. To make NTS-S Service viable for generators, ODEC asks the Commission to direct that the NTS-S Service be provided at the same rates as firm service. ODEC also complains that Columbia has not defined revenue neutrality.

24. In response to ODEC, Columbia clarifies that when considering a request to convert to NTS-S Service, it will project the total demand revenues lost under the OPT or FTS contracts and compare it to the total projected demand revenues for the requested NTS-S Service. If conversion would cause Columbia to lose revenues, it states that it reserves the right to reject the request. The Commission finds Columbia's proposal is reasonable as a condition of allowing conversion to the new service. ODEC's requests are inconsistent with established precedent keeping pipelines whole (revenue-wise) when allowing shippers to convert their service<sup>15</sup> for example, allowing pipelines to assess a surcharge for any revenue shortfall due to converting from one rate schedule to another.<sup>16</sup>

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<sup>15</sup> *Transcontinental Gas Pipe Line Corp.*, 67 FERC ¶ 61,372 at 62,269 (1994); *Texas Eastern Transmission Corp.*, 63 FERC ¶ 61,100, at 61,445 (1993), *order on reh'g*, 64 FERC ¶ 61,305, at 63,274 (1993).

<sup>16</sup> *Id.*

25. ODEC also opposes Columbia's proposed one-time irrevocable right to convert to NTS-S service, asserting that Columbia has failed to explain why shippers should not be able to convert to NTS-S Service on a yearly basis. ODEC claims a one-time irrevocable conversion would lock shippers into paying for NTS-S Service even though, subsequently, pipelines may allow or NAESB may require hourly scheduling. The Commission disagrees with ODEC's concern about being locked into NTS-S Service. As Columbia notes, the election is not mandatory and provides its customers with a reasonable opportunity to obtain such enhanced services. Even if a shipper elects to convert from NTS to NTS-S, and then finds the new service does not address the shipper's need, the shipper is "locked in" only for the duration of the contract. Shippers always retain the right to negotiate new contracts for services as their gas transportation needs may change over time. Further, ODEC's concerns about potential changes by pipelines and NAESB are speculative. We find that the proposed one-time election is just and reasonable.

26. ODEC contends that Columbia's proposal to review requests for a conversion to NTS-S Service on a "case-by-case" basis to ensure that sufficient capacity is available should be clarified to provide that the review will be limited to the requirements stated in the tariff. Columbia responds that ODEC misconstrues the purpose of this requirement which is to ensure that adequate capacity exists to provide the service. We find that there is nothing unclear about Columbia's proposal and that it is appropriate for Columbia to ensure that adequate capacity exists to provide additional services required by a conversion to NTS-S service.

27. ODEC asserts that Columbia's proposed service is unacceptable because Columbia has not demonstrated that it cannot provide a comparable hourly service throughout the year. The Commission does not require pipelines to offer any hourly services. Columbia's proposal to limit its proposed hourly service to the summer is reasonable, in light of its assertion that the service will use capacity made available due to the 50 percent reduction in contract demand for SST Service during the Summer Period. Columbia has shown that the hourly service it is able to provide should benefit customers. The fact that there may be other alternatives to Columbia's proposal does not render the proposed service unjust or unreasonable.

28. Virginia Power Energy Marketing, Inc. (VPEM) and BG&E contend, essentially, that Columbia cannot increase firm service options using existing capacity and, at the same time, avoid degrading system reliability and existing firm service.<sup>17</sup> Similarly,

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<sup>17</sup> *Citing* 18 C.F.R. §§ 154.201(b) and 154.202(a)(1)(iv) (2007).

BG&E contends that if Columbia cannot project the amount of usage of NTS-S Service, it is unclear how it has the capability to allow additional flexibility, especially when it so recently convinced the Commission in Docket No. RP07-340 to impose a new penalty on shippers because of operational problems that exist on the system.<sup>18</sup>

29. The Commission finds that Columbia has adequately explained that NTS-S service will be provided through the capacity available due to the 50 percent reduction in contract demand for SST Service during the Summer Period. Moreover, Columbia reserves the right to review the adequacy of its capacity to accommodate conversions to NTS-S service. Similar to all of its other existing no-notice services, Columbia will have to plan for and accommodate the demand levels of these NTS-S shippers. Columbia's stated ability to plan for the proposed no-notice summer services, stands in stark contrast to the record in the Docket No. RP07-340 proceeding, where the Commission found that penalties were appropriate because Columbia's shippers were neither complying with the scheduling and nomination cycle requirements of Columbia's firm service nor subscribing to no-notice services, thereby causing scheduling variance issues that have the potential to impair reliable service.<sup>19</sup>

30. VPEM argues the proposed service would create the potential for undue discrimination because it would charge shippers for the flexibility to negotiate hourly flows whereas existing section 9.3 of the GT&C would not. VPEM contends the Commission must, at a minimum, review all existing agreements under section 9.3 to set non-discriminatory rates for NTS-S Service.

31. Contrary to VPEM and BG&E's assertions, the Commission finds that Columbia's stated intention to evaluate service requests on a case by case basis does not present an unacceptable potential for undue discrimination. As noted above, the case-by-case evaluation is only to determine the adequacy of its capacity to provide the service. Further, Columbia states that it will post NTS-S Service capacity for auction and if it

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<sup>18</sup> See *Columbia Gas Transmission Corp.*, 119 FERC ¶ 61,267 (2007). ODEC points out that generators are dispatched hourly and contends, therefore, that entities purchasing natural gas for electric generation have limited ability to avoid hourly scheduling penalties. We reject this protest as a collateral attack on the Commission regulations adopting the NAESB scheduling and nomination standards, with which Columbia's tariff is consistent.

<sup>19</sup> *Id.* P 26.

receives equivalent bids, it clarifies that the capacity will be awarded pursuant GTC Section 4.2(d) of Columbia's tariff, i.e., based on the highest value bid or pro rata.

32. Further, VPEM's arguments regarding discrimination are unpersuasive because services negotiated under section 9.3 and Rate Schedule NTS-S are distinguishable. Section 9.3 allows shippers to negotiate on a case-by-case basis to receive non-ratable service on an operationally available basis when mutually agreed upon between the shipper and Columbia, while the proposed NTS-S service is offered to any shipper desiring the service at identical terms as set forth in Rate Schedule NTS-S. Thus, the examples cited by VPEM of the potential for undue discrimination are speculative and do not constitute a sufficient proof to reject NTS-S service.

33. BG&E and VPEM state that Columbia should have included an estimate of revenues as part of its filing because they believe Columbia can estimate the revenues required by section 154.202(a)(1)(viii) of the Commission's regulations.<sup>20</sup> They argue that because this service has been offered elsewhere rates may be calculated using the data Columbia used to support its new scheduling penalty. VPEM argues the Commission found an insufficient basis for waiver in *Texas Gas*<sup>21</sup> although Texas Gas claimed it did not have actual cost or revenue experience and in *Panhandle Eastern*,<sup>22</sup> a case that, VPEM asserts, involved an identical proposal.

34. Columbia replies that the Commission does not always require pipelines to estimate a new service's impact on revenue.<sup>23</sup> It states that NTS-S Service is new and unique for Columbia and any request for NTS-S Service must be reviewed on a case-by-case basis, so any more general revenue analysis would be meaningless. Further, despite notifying shippers of NTS-S Service and discussing it with customers, Columbia states that it has yet to receive enough customer interest to reasonably calculate the quantity of service and revenues, but will update the record if ODEC, VPEM, or others provide sufficient information to Columbia that they plan to convert or subscribe to NTS-S service. Accordingly, in this circumstance, we find that Columbia has justified waiver of section 154.202(a)(1)(viii).

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<sup>20</sup> *Citing*, 18 C.F.R. § 154.202(a)(1)(viii) (2007).

<sup>21</sup> *Texas Gas Transmission Corp.*, 79 FERC ¶ 61,257 (1997) (*Texas Gas*).

<sup>22</sup> *Panhandle Eastern Pipeline Co.*, 90 FERC ¶ 61,119 (2000) (*Panhandle Eastern*).

<sup>23</sup> *Guardian Pipeline, L.L.C.*, 101 FERC ¶ 61,271, at P 52 (2002).

35. Because NTS-S service will use capacity available from seasonal reductions in contract demand for Rate Schedule SST, VPEM concludes that the costs of NTS-S service have been allocated to other services and are already being recovered. Citing *Discovery Gas Transmission, LLC*,<sup>24</sup> VPEM suggests revenue crediting to avoid double recovery.<sup>25</sup> For the same reason, BG&E argues that Columbia should provide this service at no additional charge.

36. In between rate cases, the Commission accepts initial rates for new services if designed properly based on a currently-approved cost-based rate.<sup>26</sup> Issues regarding the levels and allocation of costs can be addressed in the pipeline's next rate case. Here, Columbia's NTS-S Service rates are appropriately based on its existing no notice NTS Service rates, and are adjusted to give consideration to the hourly flexibility under this new service. The Commission also finds that they are consistent with rates allowed for enhanced hourly flexible no notice service on other pipelines. Accordingly, we find Columbia's proposed rate formula to be adequately supported.<sup>27</sup>

The Commission orders:

(A) Waiver of the Commission's notice requirements is granted.

(B) The tariff sheets listed in the Appendix are accepted, effective May 1, 2008, as requested.

By the Commission.

( S E A L )

Nathaniel J. Davis, Sr.,  
Deputy Secretary.

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<sup>24</sup> 108 FERC ¶ 61,060 (2004).

<sup>25</sup> *Id.*

<sup>26</sup> *See, e.g., Panhandle Eastern Pipeline Co.*, 90 FERC ¶ 61,119 (2000).

<sup>27</sup> *Great Lakes Transmission Limited Partnership*, 120 FERC ¶ 61,105 (2007).

**APPENDIX**

**Columbia Gas Transmission Corporation  
FERC Gas Tariff  
Second Revised Volume No. 1**

**Accepted Effective May 1, 2008:**

Sixth Revised Sheet No. 1  
Eleventh Revised Sheet No. 2  
Eighty-Fifth Revised Sheet No. 25  
Thirty-Seventh Revised Sheet No. 30A  
Third Revised Sheet No. 165  
First Revised Sheet No. 250  
First Revised Sheet No. 252  
Original Sheet No. 253  
Original Sheet No. 254  
Original Sheet No. 255  
Original Sheet No. 256  
Tenth Revised Sheet No. 266  
Ninth Revised Sheet No. 267  
Ninth Revised Sheet No. 268  
First Revised Sheet No. 268A  
Fourth Revised Sheet No. 276  
Fifth Revised Sheet No. 305  
Seventh Revised Sheet No. 306  
Sixth Revised Sheet No. 307  
Seventh Revised Sheet No. 307A  
Ninth Revised Sheet No. 310  
Fifth Revised Sheet No. 311

First Revised Sheet No. 312  
Third Revised Sheet No. 313  
Fourth Revised Sheet No. 315  
First Revised Sheet No. 321A  
Sixth Revised Sheet No. 371  
Fourth Revised Sheet No. 372  
Fifth Revised Sheet No. 373  
Fourth Revised Sheet No. 381  
Fourth Revised Sheet No. 382  
Ninth Revised Sheet No. 385  
2nd Revised Fourth Revised Sheet No. 390  
2nd Revised Fifth Revised Sheet No. 391  
Fourth Revised Sheet No. 445  
Eighth Revised Sheet No. 452  
Fifth Revised Sheet No. 458  
Sixth Revised Sheet No. 463  
Seventh Revised Sheet No. 480  
Ninth Revised Sheet No. 500  
2nd Revised Eighth Revised Sheet No. 501  
2nd Revised Third Revised Sheet No. 501A  
2nd Rev Second Revised Sheet No. 502B  
Fifth Revised Sheet No. 551