Likewise, at this preliminary stage, we cannot yet determine if there will be a significant economic impact to a substantial number of small entities, or what the paperwork burden might be.

Issued in Washington, DC, on July 18, 2001.

Ronald T. Wojnar,

Deputy Director, Aircraft Certification Service.

[FR Doc. 01–18310 Filed 7–23–01; 8:45 am]

BILLING CODE 4910–13–M

SECURITIES AND EXCHANGE COMMISSION

17 CFR Part 240

[Release No. 34–44568; File No. S7–14–01]

RIN 3235–AI23

Request for Comment on the Effects of Decimal Trading in Subpennies

AGENCY: Securities and Exchange Commission.

ACTION: Concept release; request for comments.

SUMMARY: The Securities and Exchange Commission (''Commission'') seeks comment on the impact on fair and orderly markets and investor protection of trading and potentially quoting securities in an increment of less than a penny. As of April 9, 2001, all U.S. equity markets have been quoting stocks in pennies. In the past, some Nasdaq market makers and electronic communication networks (''ECNs'') traded stocks in smaller price increments than the public quote. This practice has continued in the new decimal environment, with some trades occurring in Nasdaq securities priced in subpennies. The Commission seeks comment on the effects of subpenny prices on market transparency and the operation and effectiveness of Commission and self-regulatory organization (''SRO'') rules that are dependent on trading or quoting price differentials. The Commission also seeks comment on the effects of subpenny trading on automated systems.

DATES: Comments must be received on or before September 24, 2001.

ADDRESSES: Persons wishing to submit written comments should send three copies to Jonathan G. Katz, Secretary, Securities and Exchange Commission, 450 Fifth Street, NW., Washington, DC 20549–0609. Comments also may be submitted electronically at the following E-mail address: *rule-comments@sec.gov.* All comment letters should refer to File No. S7–14–01. Comments submitted by E-mail should include this file number in the subject line. Comment letters received will be available for public inspection and copying in the Commission's Public Reference Room, 450 Fifth Street, NW., Washington, DC 20549. Electronically submitted comment letters will be posted on the Commission's Internet web site (http://www.sec.gov).[1]

FOR FURTHER INFORMATION CONTACT: Any of the following attorneys in the Division of Market Regulation, Securities and Exchange Commission, 450 Fifth Street, NW., Washington, DC 20549: James Brigagliano, Jo Anne Swindler, Gregory Dumark, or Kevin Campion at (202) 942–0772; Alton Harvey, Patrick Joyce, or John Roeser at (202) 942–0154.

SUPPLEMENTARY INFORMATION:

I. Introduction and Summary

The conversion from fractional to decimal pricing for consolidated quotations in all equity securities and options was successfully completed on April 9, 2001. As a result, the minimum price variation (''MPV'') for consolidated quotations in equity securities has been narrowed from 1⁄16 of a dollar to a penny. The decimal conversion was effected with no significant operational problems on the markets, clearing organizations, and key market participants.[2] Preliminary estimates indicate that decimal pricing has reduced quotation spreads (the difference between the highest bid quotation and the lowest offer quotation) in both exchange-traded and Nasdaq securities with manageable increases in quotation volumes.[3]

While the move from fractions to decimals was designed to simplify pricing for investors and to make our markets more competitive internationally,[4] a number of market structure and investor protection issues have been raised by this fundamental change. In particular, difficult issues have been raised in connection with the limited practice of pricing orders and trades in increments that are smaller than the MPV for quotations.

For years, some ECNs and Nasdaq market makers have permitted trading in increments smaller than the public quote. This practice has continued in the decimal environment, with approximately 4% to 6% of trades in Nasdaq securities priced in subpenny increments even though the quotations for these securities are at a penny MPV. Trading in subpennies raises difficult questions under rules based on the MPV, which markets allowing subpenny trading have attempted to address.[5] The Commission approved these measures on a pilot basis.

Before considering whether to permanently approve these measures, however, the Commission is seeking comment on their impact on market transparency, as well as the impact of subpenny trading on customer protection rules, and alternative approaches, if any.[6]

In ordering the conversion to decimals, the Commission noted that this effort might require further analyses of the impact of a small MPV on trading rules and the markets.[7] There may be a point at which the incremental costs of

[1] Personal identifying information, such as names or e-mail addresses, will not be edited from electronic submission. Submit only information that you wish to make publicly available.

[2] *See, e.g.,* Nasdaq Decimalization Impact Study (June 11, 2001) (''Nasdaq Study'') at 55. This study can be accessed at www.nasdaqnews.com.

[3] The Nasdaq Study found that, on average, quoted and effective spreads both have fallen by about 50%, with greater declines in stocks with greater trading volume and lower prices. For the most actively traded stocks, quoted spreads fell from 6.6 cents to 1.9 cents when penny increments were introduced. *Id.* at pp. 2, 15–16.

[4] *See* Securities Exchange Act Release No. 42360 (January 28, 2000), 65 FR 5004 (February 2, 2000).

[5] On April 6, 2001, the Commission approved, on a pilot basis, a rule filed by the NASD specifying the protections Nasdaq market makers must provide to customer limit orders in subpennies. *See* Securities Exchange Act Release No. 44165 (April 6, 2001), 66 FR 19268 (April 13, 2001). On April 6, 2001, the Commission also granted the Chicago Stock Exchange (''CHX''), on a pilot basis, the flexibility to compete with ECNs and Nasdaq market makers by accepting orders in Nasdaq/NM securities priced in subpenny increments while maintaining the uniform penny MPV for quotations. *See* Letter to Paul O'Kelley, Chief Operations Officer, CHX, from Annette L. Nazareth, Director, Division of Market Regulation, Commission (April 6, 2001). This letter provided CHX specialists and market makers with the same flexibility in handling subpenny orders that had been granted to ECNs and Nasdaq market makers in a no-action letter to the Nasdaq Stock Market from the Division of Market Regulation, dated July 30, 1997. *See infra* n.30. The Commission also approved on April 6 a pilot program setting forth protections that must be provided by CHX specialists and market makers for customer subpenny orders in Nasdaq/NM securities. Securities Exchange Act Release No. 44164 (April 6, 2001), 66 FR 19263 (April 13, 2000) (order approving a proposed rule change by the CHX relating to the precedence of customer limit orders on the book).

[6] The Nasdaq and CHX proposals were originally approved as pilot programs until July 9, 2001, and were recently extended until November 5, 2001. *See* Securities Exchange Act Release No. 44529 (July 9, 2001), 66 FR 37082 (July 16, 2001) (order extending the Nasdaq pilot); Securities Exchange Act Release No. 44535 (July 10, 2001), 66 FR 37251 (July 17, 2001) (order extending the CHX pilot). During this time the markets will supply the Commission staff with monthly reports on their activity in subpenny increments.

[7] *See* Securities Exchange Act Release No. 42914 (June 8, 2000), 65 FR 38010 (June 19, 2000). *See also* Securities Exchange Act Release No. 42360 (January 28, 2000), 65 FR 5004 (February 2, 2000).

reducing the MPV exceed the incremental benefits. With the conversion to decimal pricing complete, the Commission believes it is an appropriate time to seek comment on the effect of subpenny trading on Commission and SRO rules that are dependent on trading or quoting price differentials. In particular, the Commission seeks comment on the effect of subpenny trading on market transparency, customer limit orders, various price dependent rules, and automated systems.

II. Background

A. Subpenny Trading

Even before the decimal conversion, a small amount of trading in Nasdaq stocks was being effected in increments smaller than the quoting increment. For example, the Commission's Office of Economic Analysis (''OEA'') found that, in a sample of five active Nasdaq stocks on January 12, 2001, approximately 4.4% of transactions were reported in the equivalent of subpenny prices.[8] A broader review by OEA of post-conversion trading in all Nasdaq securities found little change in the level of subpenny trading. For April 9–12, 2001 (the first week in which all Nasdaq securities were priced in decimals), subpenny prices accounted for approximately 5.7% of the trades and 4.2% of the dollar volume in these stocks.[9]

The decimals study submitted by Nasdaq[10] found that with a penny increment after decimals, the incentive to submit limit orders within the quotation increment has decreased.[11] But despite the finer increment, sub-quotation level limit orders have not disappeared and continue to play an active role, especially on ECNs.[12] The study also found that the importance of limit orders at finer than the minimum tick size has decreased in a decimals environment.[13] It was also determined that the number of subpenny executions has decreased from 12.8% to 5.4% under decimals.[14] Additional statistics on subpenny trading will be available in the near future.[15]

B. The Transition to Decimal Pricing

On June 8, 2000, the Commission ordered the exchanges and the NASD to submit a plan that would phase in decimal pricing for stocks and options beginning no later than September 5, 2000, and ending by April 9, 2001.[16] In its June 8 Order, the Commission acknowledged that there was little agreement among commenters regarding the appropriate minimum quoting increment for stocks during the phase-in process, with suggestions ranging from $0.10 to $0.01. Accordingly, the Order permitted the exchanges and the NASD to select a uniform increment for stock quotations during the phase-in period of no greater than $0.05 and no less than $0.01.[17] The Decimals Implementation Plan that was submitted to the Commission by the exchanges and Nasdaq on July 24, 2000 set the MPV for equity securities quotations at a penny.[18]

The June 8 Order also directed the SROs to submit a study (jointly or separately) to the Commission sixty days after full implementation on April 9, 2001, regarding the impact of decimal pricing on systems capacity, liquidity, and trading behavior, including an analysis of whether there should be a uniform price increment for securities. In particular, the Commission stated that, if an exchange or Nasdaq wished to move to quoting stocks in an increment of less than a penny, the study should include a full analysis of the potential impact on the market requesting the change and the markets as a whole. Within thirty days after submitting the study, the exchanges and Nasdaq must individually submit for notice, comment, and Commission consideration, proposed rule changes under Section 19(b) of the Securities Exchange Act of 1934 (''Exchange Act'') to establish their individual choice of minimum increments by which equities and options are quoted on their markets.[19]

In view of the complexities of some of the issues that have been raised concerning decimal pricing, the Commission extended the deadline for the markets' studies to September 10, 2001.[20] In the interim, the Commission is soliciting the views of a wider range of commenters concerning the appropriate price increments for quotations, orders, and trading for stocks in a decimal environment. To assist commenters, we have identified and requested comments on a number of specific issues. Commenters should provide data supporting their views, including costs and benefits, whenever possible.

III. Specific Topics To Be Addressed

A. Impact of Subpenny Trading on Transparency

Market transparency—the dissemination of meaningful quote and trade information—assists investors to make informed order entry decisions

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[8] OEA reviewed trading in shares of Intel Corp. (INTC), Cisco Systems, Inc. (CSCO), Dell Computer Corp. (DELL), Microsoft Corp. (MSFT) and Apple Computer, Inc. (AAPL).

[9] In exchange-listed stocks, however, the current level of subpenny trading appears to be minimal. For example, OEA reviewed trading in 148 New York Stock Exchange (''NYSE'') listed stocks over 15 trade dates from February 26 to March 16 and found that only 0.2% of the reported trades had price increments of less than a penny. All of the subpenny transactions were effected in over-the-counter (''OTC'') trading in these NYSE-listed stocks. While the overall level of subpenny trading was light for these NYSE-listed stocks, OEA found that this activity represented a relatively larger proportion (8.4% of the share volume) of OTC trading in these securities.

[10] *See* Nasdaq Study, *supra* n.2. Nasdaq explains that the bulk of its report is based on an empirical analysis of various characteristics of Nasdaq. Nasdaq explains that its general methodology is to measure and compare these characteristics two weeks before (3/26/01–4/6/01) and two weeks (4/9/01–4/20/01) after the April 9th conversion date. The subject of Nasdaq's analysis is, then, the set of stocks that converted to decimal quoting on April 9th. Nasdaq includes in its report a caveat that it attempts to measure the *initial* impact of decimals only, and that in light of the major changes it has induced, it is possible, if not likely, that the ultimate impact of decimals may take a number of months to reveal itself. Many market participants, investors as well as market intermediaries, are in the process of adapting to the new trading environment. It is also possible that some of the observed effects are due to a novelty effect. Nasdaq thus notes that what was measured in the first two weeks may be substantially different a year from now. *Id.* at 6.

[11] The study found that the percentage of limit orders entered within the minimum quotation increment has decreased from 35.1% to 14.6% under decimals. *See* Nasdaq Study at 31.

[12] The study found that only 0.5% of subpenny limit orders are routed to and kept by market makers. Nasdaq found that market makers either do not generally accept subpenny limit orders or route the orders to ECNs, with the vast majority of subpenny limit orders handled by a single ECN (95%). *Id.*

[13] Nasdaq broke down the usage of sub-increments by the price aggressiveness of limit orders relative to the prevailing NBBO. The percentages of sub-increment orders were much higher both during the pre- and post-decimal periods. In a fraction world 81% of inside-setting limit orders were quoted at finer increments, compared to just 47% under decimals. For near-the-inside limit orders, the percentage dropped from 47% to 17%. Overall, Nasdaq found that the percentages do not vary much from one day to the other. *Id.*

[14] The study found that the majority (84%) of subpenny executions involve ECNs at least one side of trades, though the percentage is lower than that for subpenny limit orders (99.5%). *Id.* at 32.

[15] Nasdaq and CHX have agreed to provide monthly data submissions to the Commission staff that should provide more information concerning subpenny order flow and trading.

[16] *See* Securities Exchange Act Release No. 42914 (June 8, 2000), 65 FR 38010 (June 19, 2000).

[17] *Id.*

[18] The minimum quotation increment for option issues quoted under $3 a contract was set at $.05 and for options issues quoted at $3 and greater it was set at a $.10.

[19] *Id.*

[20] *See* Securities Exchange Act Release No. 44336 (May 22, 2001), 66 FR 29368 (May 30, 2001) (order extending the deadline for the exchanges and SROs to submit studies and rule filings concerning the implementation of decimal pricing in equity securities and options). Nasdaq submitted a study on June 11, 2001. *See supra* n.2.

and enables broker-dealers to meet their best execution duties for their customer orders. Moreover, market transparency plays an essential role in linking dispersed markets and improving the price discovery, fairness, competitiveness, and attractiveness of U.S markets.

1. Price Clarity, Order Entry Decisions, and Quotation Management

Decimal pricing presumably has enhanced the ability of investors to understand the consolidated quotations of competing market centers. Investors can now compare prices to buy and sell stocks in dollars and cents without having to deal with prices in fractions.

Subpenny pricing, however, has the potential to undercut this price clarity in at least two ways. If the consolidated quotations used by investors do not fully reflect the subpenny orders available for execution at various price levels, the accuracy of the quotations could be compromised. In particular, the quoted spreads may not accurately reflect the true trading interest in the market.

On the other hand, if quotes were in subpennies, investors and market participants might have to deal with confusing and rapidly changing quote montages—*e.g.,* an investor might have to choose quickly between one market bidding at $10.0101 for a stock and a competing market with a bid at $10.0110.[21] In addition, as this could result in ''flickering'' quotes in miniscule price increments, issues would be raised about how broker-dealers could comply with their best execution duties for customer orders.[22] Moreover, the potential for rapidly changing consolidated quotes in miniscule increments could have implications for market rules pertaining to ''locked'' and ''crossed'' markets[23] and the Intermarket Trading System (''ITS'') Plan's ''trade-through'' provisions.[24]

2. Effects on Market Depth

Another aspect of transparency that has been affected by the decimals conversion is quotation depth. In order for investors and other market participants to make use of the price information provided by the consolidated quotation systems, there needs to be meaningful information available concerning the amount of buy or sell interest that is available at the quotations. As the minimum quoting increment has narrowed to a penny, the market depth at any particular price level (that is, the number of shares reflected at the published bid or offer) has decreased as well. For example, OEA has estimated that quote sizes in NYSE-listed securities have been reduced an average of 60% since the conversion to decimals, and preliminary analyses of Nasdaq securities show a 68% reduction in quote sizes.[25] Some firms and institutional investors have also expressed concerns that the reduction in quoted market depth may be adversely affecting their ability to execute large orders.[26] In particular, market participants have indicated that smaller trading and quoting increments have increased the risk of displaying limit orders, particularly larger limit orders, leading to a reduction in the amount of liquidity provided by such orders. In an effort to provide more information about available liquidity, the NYSE recently began disseminating ''depth indications'' and ''depth conditions'' to reflect market interest in a security below the published bid and above the published offer.[27] Market participants, however, have asserted that these measures alone are unlikely to address all of their liquidity concerns in a decimal environment, particularly where liquidity may be spread over more numerous price points if bids and offers are quoted in prices of less than a penny.

3. Order Handling Rules

In recent years, the Commission has sought to ensure the transparency benefits of the national market system through inclusion of limit orders and ECN prices in the quote.[28] One area in which ECNs have offered their customers added flexibility has been in the price increments accepted for their orders. As discussed above, even before the decimal conversion, some ECNs permitted their customers to enter orders in penny and subpenny increments or their equivalents (*e.g.,* in increments as small as 1/256 of a dollar). When the Commission's Order Handling Rules brought ECNs into the national market system framework, some accommodation was necessary for ECN price increments. Accordingly, the Commission staff permitted orders in small increments held by ECNs and OTC market makers to be rounded to the nearest price increment accepted by the Nasdaq system.[29] While the Commission originally believed that rounding indicators should be provided in the public quotes under these circumstances, market participants claimed that this was not feasible due to the then-current limitations in quotation systems and vendor displays. Accordingly, the Commission staff provided a no action letter in 1997 to Nasdaq for ECNs and market makers to handle orders priced in increments

[21] It could also raise order handling and systems issues, particularly because displays have physical limits. *See* discussion at Part 3, *infra.*

[22] The Nasdaq Study found that the number of inside quote *price-only* updates (a.k.a. ''quote flickering'') went up 90% for the final-phase stocks, similar to what was found before with the pilot stocks. The results confirmed Nasdaq's prior expectation that as tick-size goes down, the inside quote would flicker more often as market participants compete at less cost for the inside positions. *See* Nasdaq Study, *supra* n.2 at 12.

[23] In a locked market, the best bid price equals the best ask price; in a crossed market, the best bid price exceeds the best ask price. The Nasdaq Study found that there are more instances of locked or crossed markets under decimals. The study notes that due to the more frequent changes of inside quotes, many quote updates may have locked or crossed the other side inadvertently. *See* Nasdaq Study, *supra* n.2 at 2.

[24] The ITS Plan includes a trade-through rule protecting displayed bids and offers for ITS-eligible exchange-listed securities. *See* Securities Exchange Act Release No. 17703 (April 9, 1981).

[25] The Nasdaq Study found that displayed depth has decreased by two-thirds under decimals. The total amount of cumulative displayed depth near the inside has likewise fallen, though by a much smaller percentage. *See* Nasdaq Study, *supra* n.2 at 2.

[26] *See* letter to Richard A. Grasso, Chairman, NYSE, from Craig S. Tyle, General Counsel, Investment Company Institute, dated March 1, 2001.

[27] *See* Securities Exchange Act Release No. 44084 (March 16, 2001), 66 FR 16307 (March 23, 2001) (NYSE Rule 60).

[28] On August 28, 1997, the Commission adopted Rule 11Ac1–4 (''Limit Order Display Rule'') and amendments to Rule 11Ac1–1 (''Quote Rule'') under the Exchange Act. *See* Securities Exchange Act Release No. 37619A (September 6, 1996), 61 FR 48290 (September 12, 1996) (17 CFR 240.11Ac1–4; 17 CFR 240.11Ac1–1) The Limit Order Display Rule requires the display of certain customer limit orders priced better than an OTC market maker's or specialist's quote, or when the limit order adds to the size associated with such quote if that quote is at the national best bid or offer (''NBBO''). The Quote Rule generally requires the collection and public dissemination of the best bid, best offer, and size for each market quoting a security covered by the rule, as well as the consolidation and public dissemination of those markets' quotations. The Quote Rule also requires an OTC market maker or specialist to make publicly available any superior prices that the market maker or specialist privately quotes through an ECN. Alternatively, an OTC market maker or specialist can deliver better priced orders to an ECN without changing its public quote if that ECN: (1) Ensures that the best prices market markers and specialists have entered in the ECN are communicated to the public quotation system; and (2) provides brokers and dealers with equivalent access to those orders entered by market makers and specialists into the ECN. In addition, the ''ECN Display Alternative'' allows an ECN to act as a voluntary intermediary in communicating to the public quotation system the best price and size of orders that specialists and market makers enter into the ECN. *See also* Rule 301(b)(3), 17 CFR 240.301(b)(3) (order display and access to certain alternative trading systems).

[29] Securities Exchange Act Release No. 37619A (September 6, 1996), 61 FR 48290 (September 12, 1996).

smaller than 1⁄16 in Nasdaq securities without having consolidated quotations reflect that bids or offers had been rounded.[30] Following the complete conversion to decimal pricing with a penny minimum increment for consolidated quotations on April 9, 2001, the flexibility to handle subpenny orders in Nasdaq/NM securities, including continued quote displays without rounding indicators, was temporarily extended to CHX specialists and market makers.[31]

Now that the decimal conversion has been completed, the Commission believes that it would be appropriate to reevaluate the interim measures that were implemented to preserve the benefits of the Order Handling Rules.

4. Scenarios To Be Addressed

As discussed above, if subpenny bids and offers are not reflected in the public quote, this may reduce the accuracy of the quotation for investors. On the other hand, the possible incorporation of subpenny prices into the consolidated quotes could potentially undercut some of the gains from decimal pricing in terms of pricing clarity, and could significantly complicate order entry decisions and the markets' quoting and trading rules based on meaningful quoting increments. Subpenny pricing could also potentially exacerbate difficulties faced by investors in determining the market depth at or near the NBBO. Moreover, the routine use of subpenny increments for trading and quoting could reduce the value of displaying limit orders, perhaps leading to a reduction in market liquidity. The Commission, therefore, seeks comment on the impact of subpenny trading and possible subpenny quoting on market transparency and liquidity. Commenters should address their comments to two mutually independent scenarios under which subpenny trading might be accommodated, as described below.

Rounding Scenario. If the exchanges and Nasdaq accept orders in subpenny increments, should they round the quotations to display the orders in whole penny increments? If so:

1. What effect would this practice have on price discovery, price competition, liquidity, transparency, trading costs, and execution quality?

2. How would investors monitor executions and execution quality?

3. How would this practice affect different market participants? Would this practice promote or hinder institutional participation?

4. Would this practice encourage or impede competition among multiple markets?

5. If rounding is maintained, have the quotation systems, vendors, and others developed sufficient capability to accommodate rounding indicators to reflect subpenny orders? If so, would rounding indicators be beneficial for investors and the markets?

6. What other alternatives should the Commission consider? *Inclusion Scenario.* Alternatively, if the exchanges and Nasdaq accept orders in subpenny increments, should they display consolidated quotes in subpenny increments? If so:

7. How small should the allowable quotation increment be?

8. At what point would the quoting increment be so small as to be economically insignificant for order entry decisions (including best execution duties owed by broker-dealers to customer orders)?

9. What impact would this practice have on the displayed quote size and the overall depth of the markets, and how should this be addressed? Would increased display of the limit order book help to alleviate concerns about transparency?

10. What effect would this practice have on price discovery, price competition, liquidity, transparency, trading costs, and execution quality?

11. Would this practice affect the ability of investors to monitor executions and execution quality?

12. How would it affect the exchanges' and Nasdaq's ability to maintain fair and orderly markets? Consider the impact on quoting and trading rules, such as rules addressing locked and crossed markets and intermarket trade-throughs.

13. How would this practice affect institutional participation in the markets?

14. How would this practice affect competition among multiple markets?

Finally, the Commission invites public comment on any other market transparency and liquidity issues raised by subpenny trading.

B. Order Priority

Markets use priority rules to determine which orders are filled first.[32] The highest bids and the lowest offers are filled before orders with inferior prices. Historically, traders were required to make an economically significant contribution to the price of a security to gain priority over other traders.[33]

Subpenny orders may significantly affect priority rules and order submission strategy. For example, a trader may post a best bid of $10.00 in a security, while another trader may gain priority by bidding $10.001 in the same security. By offering price improvement of $0.001, the other trader gains priority over the trader who bid $10.00.[34]

There are many potential behavioral effects of such activity on the markets. Investors may use floor brokers to shield their orders from being publicly displayed or they may increasingly use market orders. Investors may seek to trade more in automated systems that offer greater confidentiality by not displaying their orders.

15. Should there be a minimum trading increment that requires a trader to make an economically significant change to the quoted price of a security in order to obtain priority over another order? If so, what should that increment be? Should all market participants be subject to the same trading increment?

16. Should the minimum increment used to establish priority over other orders be dependent upon the security price or quotation spread?

C. Effects of Subpenny Trading on Other Price Dependent Rules

1. Customer Limit Order Protection

Commission and SRO rules provide customer limit orders with priority over specialist and market maker orders at the same price on the exchanges and on Nasdaq. Rule 11a1–1(T)[35] under the Exchange Act requires exchange members to grant priority to any bid or offer at the same price for the account of a person who is not a member. Exchanges have generally applied the basic requirements of Rule 11a1–1(T) to specialists as well as all other members of the exchange.[36]

[30] *See* Letter to Robert Aber, Vice President and General Counsel, Nasdaq, from Richard R. Lindsey, Director, Division of Market Regulation (July 31, 1997). While the orders were rounded for quotation purposes, the trades were reported and printed in the actual price increments.

[31] *See* discussion in Part I, *supra.*

[32] For example, the NYSE Rule 71 gives precedence to the highest bid and the lowest offer.

[33] *See* Lawrence Harris, *Decimalization: A Review of the Arguments and Evidence* (April 1997).

[34] Arguably, if the price of the security declines, the trader who offered price improvement of $0.001 will suffer a loss. However, it is possible that this trader could sell the security to the trader who bid $10.00 and limit his loss to $0.001 per share.

[35] 17 CFR 240.11a1–1(T).

[36] For example, NYSE Rule 92(b) prohibits NYSE members from trading for their own account at the same price as an unexecuted customer limit order. Rule 92(b) states that no member shall ''(1) personally buy or initiate the purchase of any security on the Exchange for any such account, at or below the price at which he personally holds or has knowledge that his member organization holds an unexecuted limited price order to buy such

Continued

The rules under Section 11(a) do not address ''stepping ahead'', *i.e.,* transactions by market professionals trading for their own account at prices better than customer limit orders. However, exchange rules, in effect, establish a *de facto* ''stepping-ahead'' increment because exchanges generally set the exchange minimum quoting *and* trading increments. Therefore, for a member to trade ahead of a customer limit order, the member must improve the price by the minimum increment. In the current decimals environment, that increment has been a penny. As discussed above, CHX recently amended its rules to accept orders in Nasdaq/NM securities in subpenny increments while maintaining a uniform penny MPV for quotations. Allowing CHX to take orders and trade in subpenny increments in Nasdaq/NM securities has, in effect, altered the *de facto* ''stepping ahead'' increment to a subpenny for some CHX orders outside the NBBO.

NASD's Manning Interpretation requires the execution of a customer limit order upon the execution of a proprietary trade at a price that would satisfy the customer limit order.[37] For example, the Interpretation requires market makers who want to trade ahead of customer limit orders to trade at a price $0.01 better than the customer limit order priced at or better than (inside) the best displayed inside market. For customer limit orders priced outside the best displayed inside market, a market maker must trade at a price at least equal to the next superior minimum quotation increment.[38]

The Interpretation previously had required a market maker to protect all limit orders within $0.01 of the price at which it sought to trade for its proprietary account.[39] Nasdaq modified its rule because of certain anomalies that occurred under the earlier Interpretation when market makers elected to accept customer limit orders in price increments smaller than a penny. For example, the operation of the Interpretation was problematic where the market was $10.00 to $10.01 and the market maker accepted a customer limit order to buy 100 shares at $9.994. If the market maker then sought to buy 1,000 shares at $10.00 on a proprietary basis, it would be obligated to execute the customer limit order at $9.994 as well as all other customer limit orders to buy it accepted and priced above $9.990 and up to $10.00, up to a total of 1,000 shares.[40] Customers may have been submitting subpenny orders within a penny of a market maker's bid, *i.e.,* ''stepping-behind'' the bid by less than a penny, in order to obtain execution of their limit buy orders at a price less than the best bid.[41]

Subpenny trading may have an adverse effect on the operation of ''customer first'' rules and the use of limit orders.[42] Further, to the extent that ''stepping-behind'' activity is facilitated by subpenny orders, it may discourage market making. Therefore, the Commission solicits comment on how subpenny orders and trades should be treated under the limit order protection rules. In particular, the Commission seeks commenters' views in response to the following questions:

17. Is price improvement by less than $0.01 an economically sufficient amount for specialists or market makers to be able to ''step-ahead'' of customer limit orders? [43] If not, what amount of price improvement would be considered economically sufficient in order to ''step-ahead'' of a customer limit order?

18. Should the minimum price improvement increment for ''stepping-ahead'' be dependent upon the minimum trading or quoting increment in a market? If so, how should this minimum increment be determined? Alternatively, should the ''stepping-ahead'' increment be dependent upon the security price or quotation spread?

19. Who should the ''stepping-ahead'' minimum increment apply to, *e.g.,* specialists, market makers, floor brokers, or other market participants? Would imposing a minimum ''stepping-ahead'' increment on these individuals benefit non-professional customers?

20. If ''customer first'' provisions continue to incorporate the minimum pricing increment in each market, will customers seek alternative means of displaying their orders to avoid ''stepping-ahead'' activity or will they use automated systems which do not display orders? Will these reactions cause or result in greater market fragmentation, *i.e.,* the trading of orders in multiple locations without interaction among those orders? [44] Will customer responses differ between market structures?

2. Effect of Trading in Subpennies on Short Sale Regulation

Rule 10a–1 was adopted in 1938 under the Exchange Act and was designed to prevent short selling in a declining market. A short sale is the sale of a security that the seller does not own or that the seller owns but does not deliver.[45] In order to deliver the security to the purchaser, the short seller will borrow the security, typically from a broker-dealer or an institutional investor. The short seller later closes out the position by returning the security to the lender, typically by purchasing equivalent securities on the open market. In general, short selling is utilized to profit from an expected downward price movement, or to hedge the risk of a long position in the same security or in a related security.

Rule 10a–1 generally applies to short sales in any security registered on a national securities exchange (''listed securities'') if trades of the security are reported pursuant to an ''effective transaction reporting plan'' and if information as to such trades is made available in accordance with such plan on a real-time basis to vendors of market transaction information.[46] Rule 10a–

security in the unit of trading for a customer, or (2) personally sell or initiate the sale of any security on the Exchange for any such account at or above the price at which he personally holds or has knowledge that his member organization, holds an unexecuted limited price order to sell such security in the unit trading for a customer.'' Pursuant to Section 11(b) and Rule 11b–1 under the Act, the NYSE applies the provisions of Rule 92(b) to specialists since they are allowed to trade for their own accounts.

[37] NASD IM–3220–2—Trading Ahead of Customer Limit Order.

[38] *See supra* n.5. Nasdaq does not specify a minimum trading increment.

[39] *See* Securities Exchange Act Release No. 44030 (March 2, 2001), 66 FR 14235 (March 9, 2001) (order approving Nasdaq proposed rule change to the Manning Interpretation adopting a $0.01 price improvement standard for securities quoting in decimals).

[40] A firm that executes in front of customer limit orders that are owed Manning protection is obligated to fill such limit orders for a total amount of shares equal to the number of shares traded on a proprietary basis by the firm. NASD's Notice to Members 95–43 (June 1995).

[41] Further, these anomalies may occur in situations in which the market maker is not affirmatively trading in front of customer orders but may instead have its displayed quotes accessed by other market participants.

[42] Limit orders are a very important source of price information and market liquidity. A customer uses a limit order to obtain an execution at the limit price or better. By submitting a limit order, the customer competes for a better price than the market is offering, or limits the price that the investor will accept. As a result, limit orders provide liquidity to those who demand immediate execution. *See* Kenneth A. Kravajecz, *A Specialist's Quoted Depth and the Limit Order Book,* 54 J. Fin. 747, 749 (1999).

[43] While the Commission seeks comments on the effects of subpenny trading, it is nonetheless aware that decimal trading in a penny increment presents many of the same questions. *See* Norris, *Big Board Will Study Effects of Decimal Trading,* The New York Times, Feb. 17, 2001, at C1. However, our request is generally limited to subpenny trading activity as a means to complement the Decimals Study.

[44] *See* Securities Exchange Act Release No. 42450 (February 23, 2000), 65 FR 10577 (February 28, 2000).

[45] *See* Rule 3b–3 under the Exchange Act, 17 CFR 240.3b–3.

[46] Rule 10a–1 uses the term ''effective transaction reporting plan'' as defined in Rule 11Aa3–1 (17 CFR

1(a)(1) provides that, subject to certain exceptions, a listed security may be sold short: (i) At a price above the price at which the immediately preceding sale was effected (plus tick), or (ii) at the last sale price if it is higher than the last different price (zero-plus tick). Conversely, short sales are not permitted on minus ticks or zero-minus ticks, subject to narrow exceptions. The operation of these provisions is commonly described as the ''tick test.''

The Commission adopted the ''tick test'' to achieve three objectives: (i) Allowing relatively unrestricted short selling in an advancing market; (ii) preventing short selling at successively lower prices, thus eliminating short selling as a tool for driving the market down; and (iii) preventing short sellers from accelerating a declining market by exhausting all remaining bids at one price level, causing successively lower prices to be established by long sellers.

The NASD's short sale rule, Rule 3350, prohibits short sales by NASD members in Nasdaq/NM securities at or below the current best (inside) bid as shown on the Nasdaq screen when that bid is lower than the previous best (inside) bid (this is commonly referred to as the ''bid test''). Stated differently, this rule requires a short sale to be effected at a price above the current bid in a declining market. Until recently, the rule did not specify how much above the current bid a ''legal'' short sale must be. On March 2, 2001, the Commission approved a Nasdaq rule change, on a pilot basis, that amended Rule 3350 in light of decimalization.[47] Specifically, Rule 3350 presently requires that when the current best bid in an NMS security is lower than the preceding best bid in that security, a ''legal'' short sale must be executed at a price at least $0.01 above the current best bid.

In approving an amendment to Rule 3350, we noted that transactions based on very small price changes could undermine the operation of short sale regulation.[48] While the Commission stated that a $0.01 increment standard for short sales was a reasonable approach during the initial stages of the conversion to decimal pricing, we required Nasdaq to submit a study analyzing the operation of the short sale rule as amended.

In this Release, we ask commenters to focus specifically on the actual or potential impact of subpenny trading on short sale regulations in answering the following questions:

21. Would short sale rules that operate off a minimum price increment, such as Rule 10a–1 and NASD Rule 3350, be less effective if the minimum up ''tick'' or up ''bid'' required were less than a penny? If so, would these rules be sufficient to protect investors?

22. Should the minimum price increment used for short sale regulation be dependent upon the minimum trading or quoting increment? If so, how should this minimum increment be determined? Alternatively, should the increment used for short sale regulation be dependent upon security price or quotation spread?

23. Would subpenny trading increase the frequency of price changes, *i.e.,* rapid trade and quote changes, and make it more difficult to effect a short sale on the proper ''tick'' or ''bid''? If so, what steps should be taken to address the problem?[49]

D. Automated Systems Issues

At each stage of the decimal phase-in of stocks and options, no significant problems were reported with regard to systems operations or capacity at the markets, clearing organizations, or major broker-dealers. The Commission is nevertheless concerned that a widespread transition to quoting, trading, or reporting of stocks in increments of less than a penny could result in system issues that could compromise essential market and broker-dealer operations or disrupt the successful transition to decimals. The Commission seeks information related to the readiness of the industry's automated systems to handle potential quoting, trading, and reporting securities in increments of less than a penny and options on those stocks.[50]

24. Are the automated systems at the exchanges, Nasdaq, the clearing organizations, broker-dealers, and vendors currently capable of handling trading, reporting, or quoting stocks and options in subpennies? If not, how long would it take to prepare these systems for subpennies?

25. If system changes need to be made to accommodate subpenny trading, reporting, or quoting, what types and scope of changes would need to be made (*e.g.,* hardware and software) and how much time would be required? What are the associated costs and benefits?

26. What is the anticipated impact on industry systems capacity associated with trading, reporting, or quoting of stocks and options in subpennies?

IV. General Issues for Comment

We have identified a number of specific issues for comment regarding the effect of subpenny trading on the operation and effectiveness of Commission and SRO rules. In discussing these issues, commenters should consider the possibility and advisability of allowing trading in subpennies, but limiting the operation of price dependent rules (such as ''stepping-ahead,'' short sales, and order priority rules) to increments in whole pennies.

We recognize that given the complexity and diversity of today's markets there may be other subpenny-related issues not identified above. Accordingly, we solicit comments on the following general questions regarding subpenny trading behavior:

27. Are there any other market issues associated with subpenny trading that have not been addressed in this Release? If so, please provide a description of the issues and, where possible, provide specific examples of the trading behavior that gives rise to the issue.

28. If the minimum trading increment is less than a penny, should there be a limit on this increment? Is there a practical or logical limit to the number of decimal places in our trading market?

29. One of the perceived benefits of decimal trading was that decimal prices would be easier for investors to understand than fractional prices. Would allowing trading and possibly quoting in very fine increments increase investor confusion?

30. Would vendors and reporting services, *i.e.,* news-wires and newspapers, have the capability to handle such quotes or trades?

Dated: July 18, 2001.

By the Commission.

Margaret H. McFarland,

Deputy Secretary.

[FR Doc. 01–18357 Filed 7–23–01; 8:45 am]

BILLING CODE 8010–01–P

240.11Aa3–1) under the Exchange Act. *See* 17 CFR 240.10a–1(a)(1)(i).

[47] *See* Securities Exchange Act Release No. 44030 (March 2, 2001), 66 FR 14235 (March 9, 2001).

[48] *Id.* at n.16.

[49] The Commission is considering possible rule changes to address short selling in a decimals environment as a part of its overall review of Rule 10a–1. *See* Securities Exchange Act Release No. 42037 (October 20, 1999), 64 FR 57996 (October 28, 1999) (concept release soliciting public comment on the regulation of short sales).

[50] As discussed, *supra,* options priced above $3 trade in 10-cent increments, and options priced at $3 or less trade in 5-cent increments. In the Decimals Study, the Commission anticipates that the industry will address whether the minimum increment on options should be less than the current nickel and dime increments. *See supra* n.20.

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 261

[FRL–7017–4]

RIN 2090–AA14

Project XL Site-Specific Rulemaking for the Ortho-McNeil Pharmaceutical, Inc. Facility in Spring House, Pennsylvania

AGENCY: Environmental Protection Agency (EPA).

ACTION: Proposed rule.

SUMMARY: The Environmental Protection Agency (EPA) is proposing this rule to implement a pilot project under the Project XL program that would provide site-specific regulatory flexibility under the Resource Conservation and Recovery Act (RCRA), as amended, for the Ortho-McNeil Pharmaceutical, Inc. (OMP) facility in Spring House, Pennsylvania. The principal objective of this XL project is to determine whether regulatory oversight by the Nuclear Regulatory Commission (NRC) or NRC Agreement States under authority of the Atomic Energy Act (AEA) is sufficient to ensure protection of human health and the environment regarding the management of certain small volumes of mixed wastes (i.e., RCRA hazardous wastes that are also radioactive) that are both generated and treated in an NRC-licensed pharmaceutical research and development laboratory. Specifically, this XL project will allow for the treatment (through high-temperature catalytic oxidation) of small volumes of low-level mixed wastes (LLMW) to destroy the organic portion of the waste, generating a residual (in which the hazardous organic constituents are no longer detected) that can be managed as a low-level radioactive waste (i.e., no longer designated as a RCRA mixed waste and thus, no longer subject to RCRA regulatory requirements). If, as a result of this XL project, the Agency determines that certain small volumes of mixed wastes generated and managed in a research and development facility under NRC oversight need not also be subject to RCRA hazardous waste regulations to ensure protection of human health and the environment, EPA may consider adopting the approach on a national basis.

To implement this XL project, this proposed rule, when finalized, will provide a site-specific exclusion from the regulatory definition of hazardous waste for the mixed wastes generated and treated in OMP's research and development laboratory. The terms of the overall XL project are contained in a Final Project Agreement (FPA) which is included in the docket for this proposal. A draft version of the FPA was the subject of a Notice of Availability published in the **Federal Register** on September 1, 2000 (65 FR 53297) in which EPA solicited comment. The FPA was signed on September 22, 2000 by representatives of EPA, the Pennsylvania Department of Environmental Protection, and Ortho-McNeil Pharmaceutical. This proposed rule, when finalized, will allow for the implementation of the FPA.

DATES: *Public Comments:* Comments on the proposed rule and/or FPA must be received on or before August 23, 2001. All comments should be submitted in writing to the address listed below.

Public Hearing: Commenters may request a public hearing by August 7, 2001, during the public comment period. Commenters requesting a public hearing should specify the basis for their request. If EPA determines that there is sufficient reason to hold a public hearing, it will do so by August 14, 2001, during the last week of the public comment period. Requests for a public hearing should be submitted to the address below. If a public hearing is scheduled, the date, time, and location will be available through a **Federal Register** notice or by contacting Mr. Charles Howland at the U.S. EPA Region III office, at the address below.

ADDRESSES: *Comments:* Written comments should be mailed to the RCRA Information Center Docket Clerk (5305W), U.S. Environmental Protection Agency, 1200 Pennsylvania Ave. NW, Washington, DC 20460. Please send an original and two copies of all comments, and refer to Docket Number F–2001–OMPP–FFFFF.

Request for a Hearing: Requests for a hearing should be mailed to the RCRA Information Center Docket Clerk (5305G), U.S. Environmental Protection Agency, 1200 Pennsylvania Ave. NW, Washington, D.C. 20460. Please send an original and two copies of all comments, and refer to Docket Number F–2001–OMPP–FFFFF. A copy should also be sent to Mr. Charles Howland at U.S. EPA Region III. Mr. Howland may be contacted at the following address: U.S. Environmental Protection Agency, Region III (3OR00), 1650 Arch Street, Philadelphia, PA, 19103–2029, (215) 814–2645.

Viewing Project Materials: A docket containing the proposed rule, Final Project Agreement, supporting materials, and public comments is available for public inspection and copying at the RCRA Information Center (RIC), located at Crystal Gateway, 1235 Jefferson Davis Highway, First Floor, Arlington, Virginia. The RIC is open from 9:00am to 4:00pm Monday through Friday, excluding Federal holidays. The public is encouraged to phone in advance to review docket materials. Appointments can be scheduled by phoning the Docket Office at (703) 603–9230. Refer to RCRA docket number F–2001-OMPP-FFFFF. The public may copy a maximum of 100 pages from any regulatory docket at no charge. Additional copies cost 15 cents per page. Project materials are also available for review for today's action on the World Wide Web at *http://www.epa.gov/projectxl/.*

A duplicate copy of the docket is available for inspection and copying at U.S. EPA Library, Region III, 1650 Arch Street, Philadelphia, PA 19107 during normal business hours. Persons wishing to view the duplicate docket at the Philadelphia location are encouraged to contact Mr. Charles Howland in advance, by telephoning (215) 814–2645.

FOR FURTHER INFORMATION CONTACT: Mr. Charles Howland, U.S. Environmental Protection Agency, Region III (3OR00), 1650 Arch Street, Philadelphia, PA, 19103–2029. Mr. Howland can be reached at (215) 814–2645 (or *howland.charles@epa.gov*). Further information on today's action may also be obtained on the World Wide Web at *http://www.epa.gov/projectxl/.*

SUPPLEMENTARY INFORMATION: All other hazardous wastes generated and/or managed at the OMP facility remain subject to current RCRA Subtitle C regulations. Similarly, mixed wastes generated in other pharmaceutical research and development facilities remain subject to current RCRA regulations. This pilot project is intended to assess the appropriateness of the dual oversight (i.e., concurrent RCRA and AEA regulatory controls) exerted over the small volumes of mixed wastes generated and treated at this pharmaceutical research and development facility and to characterize those factors that may determine whether mixed wastes generated and treated in similar circumstances should also be excluded from the regulatory definition of hazardous wastes (and thus, RCRA regulatory control) by providing such regulatory flexibility on a national basis (in effect, deferring regulatory oversight of these specific types of mixed wastes to NRC or NRC Agreement States). The pilot project will also provide the Agency additional data regarding the performance of the on-site, bench-scale high-temperature catalytic