

**CONTAINS PROTECTED MATERIAL-
NOT AVAILABLE TO COMPETITIVE DUTY PERSONNEL**

**UNITED STATES OF AMERICA
BEFORE THE
FEDERAL ENERGY REGULATORY
COMMISSION**

San Diego Gas & Electric Company,)	Docket Nos.	EL00-95-000
Complainant,)		EL00-95-045
)		EL00-95-075
v.)		
)		
Sellers of Energy and Ancillary Services)		
into Markets Operated by the California)		
Independent System Operator Corporation)		
and the California Power Exchange,)		
Respondents.)		
)		
Investigation of Practices of the California)		EL00-98-000
Independent System Operator and the)		EL00-98-042
California Power Exchange)		EL00-98-063
)		
)		

**PREPARED TESTIMONY OF RICHARD J. McCANN, PH.D.
ON BEHALF OF THE CALIFORNIA PARTIES**

Index of Relevant Material Template

Submitter (Party Name)	The California Parties
Index Exh. No.	CA-11
Privileged Info (Yes/No)	Yes
Document Title	Prepared Testimony of Richard J. McCann, Ph.D. on Behalf of the California Parties.
Document Author	Richard J. McCann, Ph.D.
Doc. Date (mm/dd/yyyy)	03/03/ 2003
Specific finding made or proposed	Prices in the ISO and PX Spot Markets from October 2, 2000 to June 20, 2001 were unjust and unreasonable. Prices before October 2, 2000 were not consistent with Sellers' market-based rate tariffs and those of the ISO and PX. California's environmental regulations were not a primary driver in restricting output or increasing costs from power plants during the summer of 2000. Dynergy and AES may have engaged in wash trades in the RECLAIM market in July and August 2000.
Time period at issue	a) Before 10/2000; b) between 10/2000 and 6/2001.
Docket No(s). and case(s) finding pertains to *	EL00-95 and EL00-98 (including all subdockets)
Indicate if Material is New or from the Existing Record (include references to record material)	Exh. No. CA-11 includes both new and existing evidence. Existing evidence includes references to Exhibits filed in the refund subdocket in EL00-95-045 <i>et al</i> and the Reliant settlement issued by the Commission in docket No. PA02-2-001.
Explanation of what the evidence purports to show	Dr. McCann's Prepared Testimony shows: (1) environmental regulations in California did not restrict output or raise costs significantly between 1/1/00 through mid summer 2000; (2) between summer 2000 and 12/31/00 emissions regulations rarely constrained output and raised costs only late in 2000 and only for very few suppliers; (3) between 1/1/01 and February 2001 emissions regulations did not limit output as sellers received new allowances of free emission credits and annual run time limits, and began to negotiate mitigation fees in lieu of high cost credits; (4) between February 2001 and 6/20/01 emissions regulations did not restrict output and increased costs were restricted as air districts issued variances to emission limits that might cause output restrictions or imposed nominal mitigation fees; (5) the RECLAIM market in the South Coast Air Quality Management District was dysfunctional between mid-2000 and 6/2001; and (6) Dynergy and AES may have

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	engaged in "wash" trades in the RECLAIM market in July and August 2000.
Party/Parties performing any alleged manipulation	Duke, Dynegy, Mirant, Reliant and Williams (sellers identified in Exh. CA-5, Reynolds withholding analysis); AES.

* This entry is not limited to the California and Northwest Docket Numbers.

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**PREPARED TESTIMONY OF RICHARD J. McCANN, PH.D.
ON BEHALF OF THE CALIFORNIA PARTIES**

- 1 **Q. Please state your name, business address and occupation.**
- 2 A. My name is Richard J. McCann. My business address is M.Cubed, 2655
- 3 Portage Bay, Suite 3, Davis, California 95616. I am a Partner in M.Cubed.
- 4 **Q. Please state your educational and professional background.**

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- 1 A. I have a Doctorate in Agricultural and Resource Economics from the
2 University of California at Berkeley. I also have a Masters degree in Public
3 Policy from the University of Michigan at Ann Arbor, and a Bachelor of
4 Science in Political Economy of Natural Resources from the University of
5 California at Berkeley. I have been a consultant on energy and
6 environmental regulatory issues since 1985. I have been a Partner in
7 M.Cubed since 1993. Previous to that I was a senior economist at Foster
8 Associates/Spectrum Economics starting in 1988, a senior economist with
9 QED Research starting in 1986, and an economist with Dames and Moore
10 beginning in 1985. I have testified before the California Public Utilities
11 Commission (CPUC), California Energy Commission, California Air
12 Resources Board, State Water Resources Control Board, the Illinois
13 Commerce Commission and the Oklahoma Corporation Commission. I
14 also served as the task leader on economic and power system analysis for
15 the CPUC in its environmental review of the proposed power plant
16 divestitures by Pacific Gas and Electric Company (PG&E), Southern
17 California Edison Company (SCE) and San Diego Gas and Electric
18 Company (SDG&E). My qualifications are attached in Exh. No. CA-12,
19 (Appendix A) at 2.
- 20 Q. **Have you testified before the Commission previously?**

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1 A. Yes, I testified on emission costs issues in Phase II of the Refund
2 Proceeding (Docket No. EL00-95).

3 **Q. On whose behalf are you testifying?**

4 A. My testimony is submitted on behalf of the California Parties (collectively,
5 the California Electricity Oversight Board (CEOB), the People of the State
6 of California, *ex rel.*, Bill Lockyer, Attorney General (AG), CPUC, PG&E,
7 and SCE). I am under contract with the CEOB.

8 **Q. What is the purpose of your testimony?**

9 A. My testimony focuses on whether generation in California, in the January
10 1, 2000 through June 20, 2001 time period, was significantly constrained by
11 environmental regulations, and whether these regulations added significant
12 costs to generation.

13 **Introduction and Summary**

14 **Q. What does your analysis entail?**

15 A. My analysis is divided into three areas:

16 First, while considering the variety of measures to control emissions from
17 power plants, I particularly examine the air district in which any type of
18 "market" existed for emissions credits, the South Coast Air Quality
19 Management District's (SCAQMD) Regional Clean Air Incentives Market

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1 (RECLAIM) program for oxides of nitrogen (NOx). This program covered
2 about 40% of the state's merchant plant generating capacity. This market
3 appears to have been seriously dysfunctional, with SCAQMD eventually
4 removing the generators out of the RECLAIM market on February 8, 2001,
5 because of the dysfunction.

6 Second, I assess the potential impact of California's emissions regulations
7 in constraining operations or increasing costs in four distinct periods
8 between January 1, 2000 and June 20, 2001. These regulations generally
9 did not restrict output or increase costs from January 1, 2000 through mid-
10 summer of 2000. Even in the late summer of 2000, only the apparent prices
11 of RECLAIM trading credits (RTC) increased, and only Duke's Moss
12 Landing plant appeared to have reached its seasonal emissions limit. In the
13 fall of 2000 until the end of the year, the unusual market conditions caused
14 demand for RTCs to increase further, and certain combustion turbines
15 (CTs) unexpectedly and uncharacteristically reached their annual run-time
16 limits. The air districts recognized that these constraints and costs could
17 pose potential problems for generators, and issued variances and rule
18 modifications that addressed these issues in the winter of 2000-2001. By
19 March 2001, the air districts had, in large part, lifted emissions limits and
20 replaced them with fixed mitigation fees instead. My testimony includes

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1 analysis of applicable emissions costs for power plants from January 1,
2 2000 to June 20, 2001 based on the changing nature of these emissions
3 regulations.

4 Third, my analysis of the RECLAIM market reveals characteristics that are
5 not consistent with a properly functioning market. Moreover, my review of
6 the publicly-available SCAQMD RTC transaction database reveals that
7 Dynegy appears to have engaged in a set of "wash" trades in July and
8 August 2000, which constituted almost half of the market activity in a two
9 week period in August 2000, that could have significantly affected the
10 apparent RTC "market" price. Unfortunately, the RTC market is too opaque
11 to easily discern whether other possible attempts at market manipulation
12 may have occurred. Finally, AES' failure to purchase adequate NOx
13 credits in November 2000 appears to be the result of a contractual dispute
14 with Williams, and had little to do with constraints imposed by air district
15 regulations.

16 **Q. Please summarize the types of environmental regulations in the various**
17 **air and water quality districts in California that might affect power**
18 **plant operations.**

19 A. There are three general regulatory limitations imposed by these districts
20 that are relevant to power plant operations:

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- 1 (1) ***Concentration or average air emissions rates per unit of input or***
2 ***output.*** These standards are typically met through installation of
3 pollution control devices (e.g., selective catalytic reduction or SCR),
4 but are not a function of plant output. Thus, these are not a
5 constraint on operations per se.
- 6 (2) ***Daily, seasonal or annual mass air emissions limits.*** These limit
7 the cumulative pollution over a year, and can be measured in terms
8 of tons per year, average daily tonnage, or hours of operation per
9 year (which is most typical for combustion turbines). The
10 SCAQMD RECLAIM emissions trading program is a form of mass
11 emissions limit where plant operators can purchase extensions on
12 their annual allowances. These standards can constrain plant output,
13 and operators must estimate how current generation may affect the
14 availability of allowances for the remainder of the year.
- 15 (3) ***Cooling water discharge thermal limits.*** These limit the range of
16 temperature between that of the effluent and the receiving body of
17 water. Most of the existing plants owned by the merchant generators
18 use seawater for once-through cooling systems, which are no longer
19 approved for new plants. In most cases, these limits are not binding;
20 however, Mirant's Pittsburg and Contra Costa plants located in the

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1 San Francisco Bay-Sacramento and San Joaquin River Delta (the
2 “Bay-Delta”) used a joint dispatch algorithm to meet permit
3 requirements.

4 **Q. Have sellers and commentators relied upon emissions regulations to**
5 **justify high electricity prices?**

6 A. Yes. Several commentators, including Scott Harvey and William Hogan in
7 their critique¹ of the study by Paul Joskow and Edward Kahn,² have
8 identified environmental regulations as crucial elements in driving up
9 California’s electricity prices beginning in May 2000 either because these
10 regulations constrained physical output of generation or because the
11 incremental cost of purchasing RTC credits rose significantly, pushing up
12 the marginal cost of the marginal generator. While some of these
13 regulations may have played some role in escalating market prices at
14 certain times, their effect was, in fact, relatively minor. Generally, most of
15 these regulations were not binding on power plant output except during a
16 very limited period in the late fall of 2000 for certain specific units. As far
17 as the marginal cost of RTC credits is concerned, 60% of the state’s power

¹ Scott M. Harvey and William W. Hogan, *On The Exercise of Market Power through Strategic Withholding in California*, (LECG, LLC, April 24 2001).

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1 plants were not subject to market pricing at all. Of the 40% of power plants
2 that were subject to market pricing (located in the SCAQMD), although
3 prices rose in late 2000 and early 2001, there are indicators that the market
4 was dysfunctional and may have been subject to manipulation.
5 Furthermore, not all RTCs are market priced. Each power plant receives an
6 annual allocation of free RTCs and even during the time period of the
7 highest prices, lower priced RTCs were available.

8 **Background on Air Emissions Regulations**

9 **Q. What were the state's air emissions regulations in effect during the**
10 **period of January 2000 to June 2001?**

11 A. California's air quality is regulated by 35 different air quality control
12 districts (either Air Quality Management Districts or Air Pollution Control
13 Districts). Merchant-owned power plants are located in eight of those
14 districts. Exh. No. CA-12 (Appendix H) at 41 identifies all of the plants in
15 the state and indicates which district each power plant is located and
16 specifies the total amount of rated generating capacity located in each
17 district as of June 30, 2001. Exh. No. CA-12 (Appendix I) at 42 identifies

² Paul Joskow and Edward Kahn, *A Quantitative Analysis of Pricing Behavior In California's Wholesale Electricity Market During Summer 2000 The Final Word*, (Analysis Group/Economics, February 4 2002).

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1 the districts in which the merchant plants are located and summarizes the
2 relevant air quality rules. The SCAQMD contains 40 percent of the state's
3 17,116 MW of merchant-owned capacity.

4 The Bay Area Air Quality Management District (BAAQMD) regulates
5 3,105 MW of merchant-owned generation. The BAAQMD rules use
6 average concentration rates to regulate emissions and, except in the case of
7 the three small CTs at Potrero in 2001, no direct costs are associated with
8 emissions from those plants.

9 Other districts that regulate merchant-owned plants include the San Diego
10 County Air Pollution Control District (SDCAPCD) with two steam turbine
11 plants and 17 combustion turbine units totaling 1,953 MW, the Ventura
12 County Air Pollution Control District (VCAPCD) with two plants and
13 2,025 MW, the San Luis Obispo County Air Pollution Control District
14 (SLOCAPCD) with one steam turbine plant of 1,001 MW, the Monterey
15 Bay Unified Air Pollution Control District (MBUAPCD) with one steam
16 turbine plant of 1,489 MW, the Mojave Desert Air Quality Management
17 District (MDAQMD) with one combined cycle plant of 627 MW, and the
18 Santa Barbara County Air Pollution Control District (SBCAPCD) with one
19 combustion turbine plant of 56 MW.

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1 Only the SCAQMD instituted per pound emissions mitigation charges that
2 can also be traded at market rates through its RECLAIM program in 2000
3 for steam turbines. All other districts regulated emissions through more
4 traditional regulatory means that do not employ mitigation fees or trading
5 credit provisions. In other words, the only plants that faced incremental
6 costs for emissions in 2000 were those located in the SCAQMD, and the
7 Mandalay 3 CT in the VCAPCD.

8 In 2001, SDCAPCD began charging an emissions mitigation fee on all
9 merchant-owned generation, and the BAAQMD charged a mitigation fee
10 for emissions from the three small Potrero CTs. None of the remaining
11 8,160 MW of generating capacity owned by the merchant generators were
12 required to pay emissions-related mitigation fees or purchase permits for
13 generation through June 20, 2001.

14 Finally, on June 11, 2001, California Governor Gray Davis issued
15 Executive Order D-40-01 that exempted all fossil-fuel-fired generation
16 from air quality emissions quantity limits of the type imposed in the
17 RECLAIM program. Exh. No. CAL-62, (Refund Proceeding).³ Further,
18 the Governor ordered that if a mitigation fee of \$7.50 per pound of NOx

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1 were paid, such emissions would not be counted against current or future
2 emissions limits. Exh. No. CA-12 (Appendix J) at 44 shows the mitigation
3 fees charged per pound of NOx emissions for each of the districts and each
4 of the plants in 2001.

5 **Q. Which merchant power plants are located in the SCAQMD?**

6 A. Only four of the six merchant owners have any generating resources within
7 the SCAQMD, and only three of the owners—Dynegy, Thermo Ecotek
8 (whose plants are now owned by AES) and the Williams/AES
9 consortium—have the majority of their generation resources in the
10 SCAQMD. Reliant has one out of five plants it owns, Etiwanda, which is
11 its third largest and least efficient steam plant, located in the SCAQMD.
12 Duke and Mirant do not own plants located in the district.

13 **Q. What are the relevant SCAQMD Rules and how did the RECLAIM**
14 **Program work?**

15 A. The RECLAIM has replaced traditional command-and-control regulations
16 for NOx and oxides of sulfur (SOx) emissions in the SCAQMD.⁴
17 RECLAIM regulations require subject facilities to operate under an annual

³Exh. No.s admitted into evidence in Docket No. EL00-95 shall hereafter be cited by the designation given in that proceeding, with the reference afterward of (Refund Proceeding).

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1 facility-wide emissions cap. The rules governing this program are in
2 Regulation XX, Rules 2000, et seq. To comply with annual emissions caps,
3 or allocations, subject facilities can decrease emissions or purchase surplus
4 RECLAIM Trading Credits (RTCs) from other facilities. All of the large
5 power plants in the SCAQMD are subject to the RECLAIM program for
6 NOx and SOx emissions.

7 When the RECLAIM program was initiated in 1995, each facility to which
8 the program was applicable received RECLAIM allocations. These
9 allocations were calculated by determining the facility's historic use of each
10 piece of NOx and/or SOx emitting equipment from 1989 to 1992 and then,
11 subtracting the emissions that were required to be reduced under adopted
12 command-and-control rules. Allocations were established for 2000 and
13 2003 that represented an annual reduction of 8 percent per annum from
14 1994; these emissions levels represented full implementation of the Tier I
15 and Tier II control measures in the SCAQMD's Air Quality Management
16 Plan. To ensure compliance with RECLAIM requirements, facilities are
17 required to report their emissions to the SCAQMD. In addition to filing
18 electronic reports each day, facilities must certify their quarterly emissions.

⁴ Because California generation relies predominately on natural gas to fuel most stationary source uses, controlling SOx emissions is not viewed as an important environmental constraint.

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1 At the end of each compliance year, facilities are required to report their
2 emissions and have a three-month reconciliation period to buy or sell RTCs
3 as needed to balance their reported emissions with their allocations. To
4 make RTCs more available, the District created a staggered compliance
5 schedule by dividing facilities into two compliance cycles. Cycle One runs
6 from January 1 to December 31 of each year; Cycle Two runs from July 1
7 to June 30. Facilities may obtain RTCs from or sell RTCs to facilities in
8 either cycle.

9 The District is also divided into two RECLAIM trading zones: Zone 1 is
10 the Coastal Zone and Zone 2 is the Inland Zone. Zone restrictions apply to
11 trades that involve a new or relocated facility or a facility exceeding its
12 starting allocation of RTCs. A facility in the Coastal Zone may only obtain
13 and use RTCs that originated in the Coastal Zone. However, a facility in the
14 Inland Zone may obtain and use RTCs from either the Coastal or Inland
15 Zones.

16 **Q. During January 2000 to January 2001, what was the pattern in RTC**
17 **prices?**

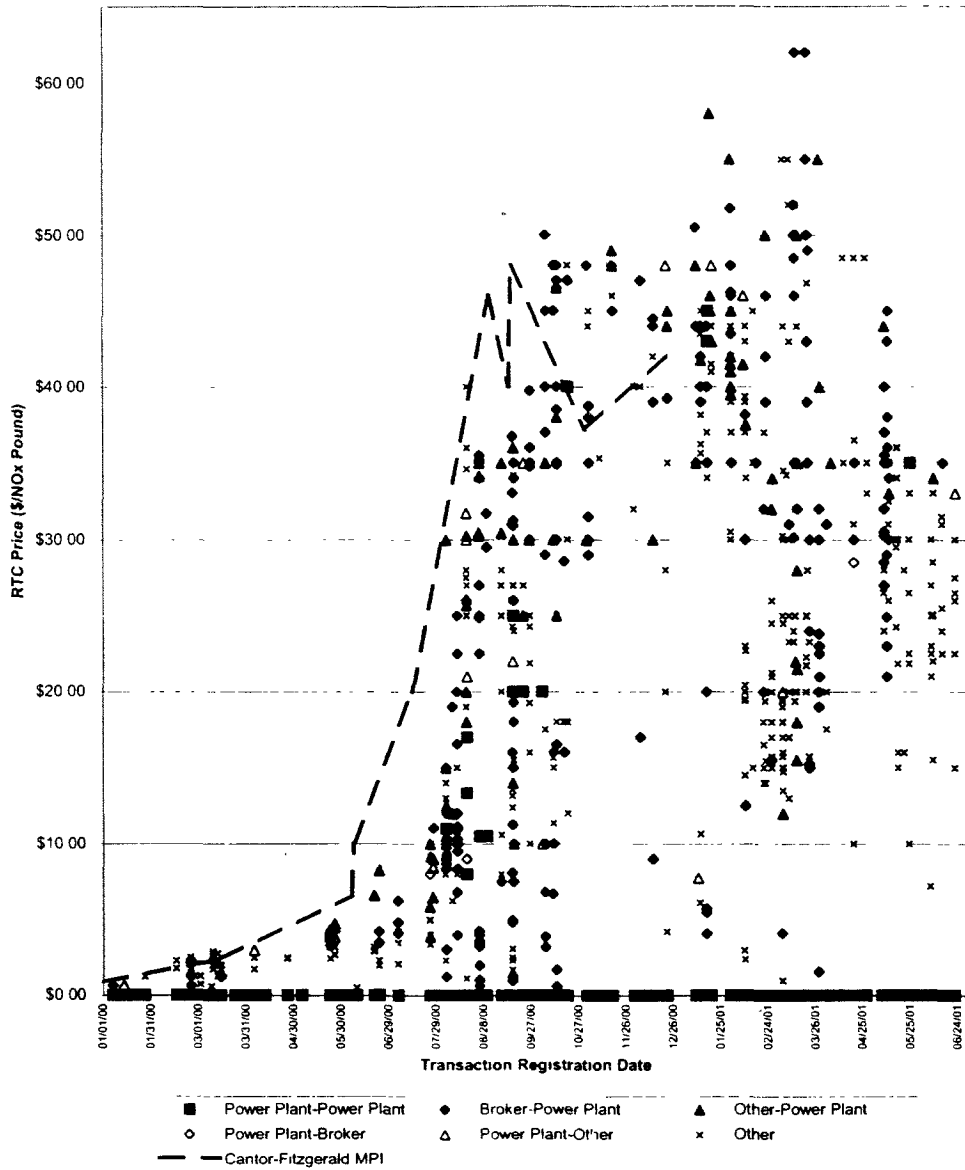
18 A. Prior to 2000, RTC prices rarely rose above \$1 per pound NOx. Figure 1
19 shows the distribution of RTC prices for 2000 Cycle 1 and Cycle 2 and
20 2001 Cycle 1 RTCs over the January 2000 to June 2001 period.

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1
2

Figure 1

2000-2001 RTC Transaction Prices By Participant Types



3

4

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1 These were the three Cycles for which RTCs were needed in order to
2 comply with RECLAIM during this period. Even through May 2000, RTC
3 prices did not exceed \$3. However, in June 2000, prices for some trades
4 began to rise, reaching \$8 by the end of the month. In July, prices
5 continued to rise up to \$20, although many trades were still concluded at
6 less than \$7 per pound. As the prices rose through August, the dispersion
7 of prices also increased, indicating that the market was devolving from,
8 rather than converging toward, a single price as trading activity and volume
9 increased. Even as some prices approached \$40 per RTC in late August
10 and \$50 at the end of September, the price dispersion continued. As
11 evidenced in Figure 1, prices continued to be widely dispersed throughout
12 the period, never converging on a narrow range of "market" prices.

13 **Q. What proportion of the RTC market transactions involved generators**
14 **as either buyer or seller?**

15 A. Power plants control approximately 20% of the RTCs issued in the
16 SCAQMD, so one would expect the proportion of transactions involving
17 power plants to be roughly proportional. Yet, for the period from January
18 1, 2000 to February 18, 2001, right after SCAQMD suspended generator
19 participation in RECLAIM, 59% of the transactions involved generators, as
20 shown in Exh. No. CA-12 (Appendix L) at 46. During the two-week period

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1 beginning August 14, 2000, just as the highest prices began to escalate
2 rapidly, generators were involved in 93% of the transactions. As a result
3 this thin market was dominated by only three entities—AES/Williams,
4 Dynegy, and Reliant—during a period of extreme price volatility (LADWP
5 was out of the market after August 14, 2000, and the other municipalities
6 were small buyers).

7 **Q. What actions did the SCAQMD take to remedy the extraordinary**
8 **volatility and prices in RECLAIM?**

9 A. On January 11, 2001, in response to the sustained high RTC prices and due
10 to the confluence of RTC and electricity spot market prices, the SCAQMD
11 initiated a rulemaking to remove the large generation plants, which
12 represent less than 20% of the emissions permits in the RECLAIM
13 program, from the remainder of the RECLAIM market. According to the
14 SCAQMD Board minutes, several generators commented in the proposed
15 rule, and were aware of its implications. Exh. No. CAL-64 (Refund
16 Proceeding). The SCAQMD Executive Officer formalized this proposal on
17 an interim basis beginning February 6, 2001. Exh. No. CAL-63 (Refund
18 Proceeding). The Executive Order made two important provisions. First,
19 generators were given the opportunity to pay the District a mitigation fee of
20 \$7.50 per pound of NO_x emitted above the generator's existing allowance

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1 of RTCs retroactively to January 11, 2001. Second, for each pound of NOx
2 mitigated, a deduction would be made from the generator's future RTC
3 allowance two years hence (i.e., starting in 2003). Exh. No. CAL-65
4 (Refund Proceeding). The Executive Order was renewed continually until
5 the Board adopted a formal rule on May 11, 2001. Barbara Baird, District
6 Counsel for SCAQMD testified before the California Senate Select
7 Committee to Investigate Price Manipulation of the Wholesale Energy
8 Market on June 14, 2001:

9 Subsequent to the Governor issuing the Executive Order declaring –
10 or issuing the Proclamation of Emergency on January 17th, our
11 District Executive Officer determined to issue an executive order,
12 which is authorized by one of our rules which is basically contingent
13 on the Governor declaring a state of emergency. Our Executive
14 Officer then authorized to suspend for a limited period of time, ten
15 days at a time, the operation of the District rules.

16
17 So, what he did is, he suspended the RECLAIM Program insofar as
18 it applied to power producers who had run out of RECLAIM
19 allocations and said they no longer had to purchase credits. This was
20 effective February 6th. [Exh. No. CA-12 (Appendix M) at 50.]

21 A SCAQMD Staff report summarized the proposed RECLAIM rules
22 revisions in the Board's agenda item No. 35 from the March 11, 2001
23 meeting. Exh. No. CA-12 (Appendix N) at 51. The second paragraph
24 under the heading "Power Producing Facilities" states:

25 Trading would also be limited to isolate the rest of the market from

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1 credit demands from power producing facilities. RTC purchases
2 after January 11, 2001 could only be used to reconcile facility
3 emissions if the RTCs are from facilities under common ownership
4 or have been generated from approved mobile source credit
5 generation programs. Power Producing Facilities could sell credits
6 back to the District for a price not to exceed \$7.50 per pound. Any
7 emissions in excess of their allocation can be offset by the payment
8 of a mitigation fee of \$7.50 per pound (\$15,000 per ton) to the
9 District, which will in turn invest the money in NOx emission
10 reduction projects to mitigate the air pollution effects.

11 The Board adopted this item with modifications on May 11, 2001. Exh.
12 No. CAL-65 (Refund Proceeding). The May 11 rule removed the option of
13 generators to purchase current RTCs and completely removed them from
14 the RECLAIM market. However, the new rule did allow generators to
15 purchase RTCs for use beginning 2003, and encouraged generators to
16 install new emissions control devices. The generators had largely avoided
17 this latter step after buying the plants in 1998. On June 11, 2001, the
18 Governor issued an Executive Order that removed the requirement to
19 deduct future RTCs for current usage through October 2001. Exh. No.
20 CAL-62 (Refund Proceeding).

21 Of the four merchant generators in the district, three of them immediately
22 took advantage of the District's new ruling on February 6. Reliant, AES,
23 using Williams funding, and Thermo Ecotek all elected to pay the \$7.50 per
24 pound mitigation fee. Exh. No. CA-12 (Appendix E) at 25. Given that

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1 RTC prices were being quoted at \$30 to \$50 per pound in January 2001,
2 this cut the apparent immediate short-term emissions costs for these
3 generators by 75% to 85%.

4 **Q. How did the various generators respond to the February 8 Executive**
5 **Order allowing the substitution of the \$7.50 mitigation fee for RTCs?**

6 A. The generators other than Dynegy chose the \$7.50 mitigation fee. While
7 the choice not to buy 2001 RTC credits might expose a seller to some risk
8 in 2003, that risk would be no more than \$9 per pound, as 2003 RTCs were
9 selling for less than \$9 per pound. Nonetheless, Dynegy alone among the
10 sellers continued to buy RTCs from the market at a higher price. Dynegy
11 never assessed its other options as revealed in its data response in the
12 Refund Proceeding. Exh. No. CA-12 (Appendix P) at 72. The only
13 apparent benefit of this strategy was that it facilitated the purported
14 justification of Dynegy's bids above the \$150 per MWH "soft cap"
15 imposed in the Commission's December 9, 2000 Order. Exh. No. CA-12
16 (Appendix O) at 71. The true cost for Dynegy in this period, as evidenced
17 by the choices made by all other generators, was the \$7.50 per pound
18 mitigation fee.

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1 **Q. What were the relevant SDCAPCD rules during this period?**

2 A. SDCAPCD rules that apply specifically to gas turbines or electrical-
3 generating steam boilers include Rules 69, and 69.3. Rule 69, Electrical
4 Generating Steam Boilers, Replacement Units and New Units, establishes a
5 system-wide aggregate NOx emissions limit for all SDG&E steam-electric
6 boilers. As such, the aggregate NOx emissions limit currently applies to the
7 emissions from nine steam boilers: the five boilers at the Encina/Cabrillo I
8 power plant (Dynegy) and the four boilers at the South Bay plant (Duke).
9 Upon the sale of a steam boiler or boilers to a new owner in which SDG&E
10 does not have a controlling interest, the Rule imposed a boiler-specific NOx
11 emissions standard on the unit or units that have been sold. The boiler-
12 specific emissions standards are 0.15 pound per megawatt-hour when
13 burning natural gas and 0.40 pound per megawatt-hour when burning fuel
14 oil, averaged over each calendar day. Under SDCAPCD Rule 69, the new
15 owner had two years from the date of transfer, but not later than January 1,
16 2001, to equip the steam boilers with adequate control technology to meet
17 these boiler-specific NOx standards.

18 Also, under SDAPCD Rule 69, the boilers at the Encina and South Bay
19 power plants have not been allowed to burn fuel oil unless SDAPCD has
20 determined that no exceedance of the state ozone standard is predicted

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1 during the time of fuel oil burn. This provision, however, does not apply
2 during periods of *force majeure* natural gas curtailment.

3 Rule 69.3, Stationary Gas Turbine Engines, specifically addresses NOx
4 emissions from stationary gas turbine engines and limits NOx stack
5 emissions to a maximum concentration of 42 parts per million when
6 operated on a gaseous fuel and 65 parts per million when operated on a
7 liquid fuel. The Rule and associated permits further limit operations to 877
8 hours per year. This Rule applies to the 17 combustion turbines owned and
9 operated by Dynegy under the Cabrillo II nomenclature, and the unit at
10 South Bay operated by Duke.

11 As a condition of sale, the CPUC issued a Mitigated Negative Declaration
12 (MND) on potential environmental impacts. Exh. No. CAL-66 (Refund
13 Proceeding). The MND required that the annual NOx emissions "bubble"
14 of 2,100 tons per year be split between Encina (1,100 tons) and South Bay
15 (1,000 tons) for 1999 and 2000. SDCAPCD modified the permits for those
16 plants to comply with the MND. After January 1, 2001, the SDCAPCD
17 calculated the emissions cap based on an average emissions rate of 0.15
18 pounds of NOx per megawatt-hour.

19 **Q. What actions did the SDCAPCD and the generators take to relieve**
20 **emission constraints on the power plants?**

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1 A. At the outset of 2001, facing these lower allowances, Dynegy and Duke
2 negotiated variances with the SDCAPCD and intervenors to allocate
3 emissions caps for each plant based on the original cap established for
4 SDG&E ownership in Rule 69, Duke doing so on November 15, 2000, and
5 Encina on March 22, 2001.⁵ Exh. Nos. DUK-1R at 9-10 and DUK-4;
6 Exh. No. DYN-16 at 18-20 (Refund Proceeding). The emissions mitigation
7 fee was established at \$13,750 per ton for 2001 for emissions beyond the
8 2001 caps. Exh. No. CAL-68 (Refund Proceeding). Dynegy also signed
9 an agreement with the Environmental Health Coalition for additional
10 mitigation fees to be paid when NOx emissions exceeded 277 tons per year.
11 Exh. No. CAL-67 (Refund Proceeding). The SDCAPCD provided relief
12 from the annual operating limits for Dynegy's CTs as well, establishing a
13 mitigation fee of \$15,000 per ton of NOx. Exh. No. CAL-68 (Refund
14 Proceeding). Unlike in the SCAQMD, there was no provision to deduct
15 excess emissions from future allowances because both Duke and Dynegy
16 were scheduled to install emissions control devices at their respective plants
17 in the near future.

⁵ Dynegy should have been aware of the public action taken by SDCAPCD on Duke's behalf in November 2000 to release Duke from its 2001 "hard" emission cap.

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1 **Q. What were the relevant VCAPCD Rules during this period?**

2 A. NOx emissions from the Mandalay and Ormond Beach power plants
3 (Reliant) in Ventura County are currently regulated by VCAPCD Rule 59,
4 *Electrical Power Generating Equipment - Oxides of Nitrogen*. Although
5 this rule formerly applied only to utility electric power generating steam
6 boilers, owned and/or operated by a CPUC-regulated utility or
7 municipality, Rule 59 was revised on July 15, 1997 to apply to any future
8 owner of the Mandalay power plant. Upon the sale of the divested
9 generating stations to new owners, the new owners were reissued a new air
10 emissions permit with terms and restrictions substantially the same as those
11 contained in the permits Southern California Edison held for those stations.
12 A restriction on annual fuel consumption for Mandalay Unit 3, the
13 combustion peaking turbine unit, limits the allowable annual operation of
14 this unit to 200 hours per year.

15 **Q. What actions did the VCAPCD and Reliant take to relieve the**
16 **emissions constraint for the Mandalay combustion turbine?**

17 A. Reliant paid a mitigation fee for operation of the 120 MW Mandalay Unit 3
18 combustion turbine after it exceeded its annual operating limit of 200 hours
19 beginning in 2000. The fee was \$4,000 per hour from August 1, 2000 until
20 January 1, 2001, when it rose to \$6,000 per hour. Exh. No. REC-12

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1 (Refund Proceeding). This converts to an average of \$30.30 per MWH
2 prior to January 1, and \$45.45 per MWH after January 1. Neither the
3 Mandalay 1 and 2 or Ormond Beach 1 and 2 steam units were required to
4 pay any mitigation fees. Those units were regulated on a maximum
5 concentration per unit of output basis with no associated fees. Thus, there
6 were no emissions costs associated with the 1,905 MW of generation from
7 these units.

8 **Q. What accommodations were made for BAAQMD Rules to relieve any**
9 **emissions-related constraints in 2001?**

10 A. In the BAAQMD, Mirant owns 3,105 MW of generation capacity. Of this,
11 2,784 MW is produced from steam turbines which are regulated under an
12 average emissions rate "bubble," and for which no emissions mitigation or
13 permit fees are paid on a per unit of output basis.⁶ Duke owns the smaller
14 Oakland plant that operates under an annual cap of 5,000 hours total for the
15 three CTs. Oakland has never approached this cap.

16 BAAQMD's Rules and Regulations that apply to the combustion turbines
17 at the Potrero power plant are Regulation 9, Rule 9 (Nitrogen Oxides from
18 Stationary Gas Turbines). Potrero Units 4, 5, and 6 are subject to the

⁶ Regulation 9, Rule 11.

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1 requirements of BAAQMD Regulation 9, Rule 9, and under that rule, they
2 have been equipped with water injection systems. The three combustion
3 turbines at Potrero are fired with distillate fuel rather than natural gas. With
4 these systems in place, Units 4, 5, and 6 comply with the rule by meeting a
5 NOx stack gas concentration limit of 65 parts per million (ppm) and by
6 limiting the number of hours of operation per year to less than 877 (i.e., less
7 than 10 percent capacity factor). Mirant reached a settlement with the
8 BAAQMD in March 2001 in which it agreed to pay \$10 per pound of NOx
9 emitted from its Potrero 4-6 CTs for the remainder of 2001. Exh. No. CA-
10 12 (Appendix D) at 14.

11 **Cooling Water Discharge Regulations**

12 **Q. How are power plants' cooling water discharge regulated?**

13 A. Most of the steam turbine power plants owned by the merchant generators
14 and municipal utilities in 2000 and 2001 have once-through cooling
15 systems that use ocean water. California has very few large inland power
16 plants for several reasons, including the fact that the oldest population
17 centers are located on the coast and cooling water is available in large
18 volumes in a state where water is otherwise scarce. In general, the effluent
19 discharge permit restrictions on these plants are not binding on output
20 levels. The ocean outfall permits usually limit the temperature differential

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1 compared to the receiving water. While the differential falls for plants
2 further south, most of that occurs because the receiving water temperature
3 increases. Exh. No. CA-12 (Appendix V) at 83 summarizes the NPDES
4 permit conditions and Regional Water Quality Control Board (RWQCB)
5 orders relevant to plant operations. While these discharge temperatures
6 may become elevated if the plants run at a high load around the clock, these
7 problems are usually alleviated quickly by cycling the plant down
8 overnight.

9 **Q. Were these regulations an important constraint on operating any of the**
10 **power plants during this period?**

11 A. The only plants at which the cooling water discharge may have become a
12 constraint even during peak-load hours is at the Pittsburg and Contra Costa
13 facilities, collectively known as the Delta plants. PG&E developed a
14 Resource Management Plan to reduce the impacts on the striped bass and
15 other fishery populations during a key reproductive period. The CPUC
16 adopted as an environmentally-preferred alternative the joint sale of the two
17 plants so that the joint management of water discharge could continue. The
18 sale of all of the Bay Area plants to Southern Energy (now Mirant) in 1999
19 obviated the need for the CPUC to impose this requirement.

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1 Mirant adopted PG&E's Resource Management Plan (RMP) and
2 incorporated it into its own permit requirements.⁷ This plan requires that
3 the units be dispatched in a sequence that maximizes use of Pittsburg 7,
4 which uses a closed cycle cooling system, and the larger, more efficient 330
5 MW units before the 150 MW units at Pittsburg. The RMP dictates
6 sequencing from May 1 to July 15. Exh. No. CA-195. Pittsburg 7 must be
7 at maximum capacity (or on the way to maximum) before raising
8 production at any other unit at Pittsburg or Contra Costa. All other
9 committed units must be kept at or below a discharge temperature of 86°F.
10 This may require the operation of the variable speed drive pumps. If the
11 ISO requests additional generation after all units are discharging at 86°F,
12 Mirant can bring 330 MW, then 150 MW class units up one at a time, and
13 reverse the sequence when system demand decreases. If the ISO requests
14 all available generation, then the 150 MW units can be loaded ahead of or
15 in conjunction with the 330 MW units.

16 Based on these criteria, the operation of Pittsburg 7 was never binding on
17 the operation of the other units on weekdays from HE 9 to 19, as shown in
18 the column "Pitt 7 Constraint" in Exh. No. CA-12 (Appendix W) at 85 of

⁷ For Pittsburg, NPDES CA0004880; and for Contra Costa, NPDES CA0004863.

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1 113. The sequence loading constraint appears to have been binding during
2 peak hours after May 22, 2000, from May 25 to June 9, and again from July
3 4 to July 10, as shown in column "330 MW Constraint" in Exh. No. CA-12
4 (Appendix W) at 85. However, these constraints could have been created
5 by Mirant's failure to raise the output at all of the available 330 MW units
6 despite prices being above these units' marginal costs.

7 **How Environmental Regulations Varied in the Period**

8 **Q. Did environmental regulations constrain the operations of power**
9 **plants during the May to September 2000 time period?**

10 A. Environmental regulations played virtually no role in increasing electricity
11 prices through the end of June 2000 beyond the effect that would be felt in
12 any year. The only potentially binding regulations were (1) the annual
13 emissions caps on the San Diego steam turbines owned and/or operated by
14 Dynegy at Encina, and Duke at South Bay, and (2) the water-discharge-
15 driven dispatch sequencing from May 1 to July 15 at Mirant's Delta plants.
16 Encina and South Bay historically have always generated near their
17 respective output limits, so these plants should have been operated in a
18 similar fashion as in the past.

19 At the Pittsburg and Contra Costa plants, a review of their operations finds
20 that the cooling water discharge permit requirements may have had an

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1 effect only in early June and early July. However, even this may have been
2 a function of Mirant's bidding behavior and operating decisions.

3 At the end of June 2000, RTC prices began to escalate, but had only
4 reached \$10 per pound by early July for some trades. The prices for some
5 RTCs rose through the summer of 2000, reaching \$40 per pound of NOx by
6 the end of August; however, many program participants were still paying
7 less than \$10 per pound. Los Angeles Department of Water and Power
8 (LADWP) reached a \$14 million settlement with the SCAQMD on August
9 14, 2000 that allowed LADWP to avoid buying RTCs for the rest of the
10 year and to divert funds to LADWP's environmental and generation
11 research programs. Exh. Nos. DWP-13 and CAL-59 at 36 (Refund
12 Proceeding).

13 In the VCAPCD, Reliant's Mandalay 3 combustion turbine exhausted its
14 rolling annual limit of 200 hours. VCAPCD lifted this limit and imposed
15 an emission mitigation fee of \$4,000 per hour, equivalent to about \$30 per
16 MWH. Exh. No. REC-12 (Refund Proceeding).

17 The only other plant that faced emissions limits was Duke's Moss Landing
18 plant in September 2000 when it reached its daily average emissions limit
19 on September 15, and had to restrict output to the end of the month.

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1 Reliant traders are documented at misrepresenting the importance of
2 emissions constraints on operations during this period in the transcript
3 released with the Commission's Order on Reliant's withholding actions
4 during June 20-21, 2000. The pertinent passages are reproduced from the
5 transcript attached to Commission January 31, 2003 Order issued in Docket
6 No. PA02-2-001 (emphasis added):

7 **June 20, 2000, 6:30 (p. 11):**

8 Reliant Manager 1: Heard anything yet this morning?

9 Reliant Trader 2: No we have not heard anything yet. We're just
10 kind of talking about our plan.

11 Reliant Manager 1: Okay. The other thing is—we could come out
12 and do—in order to do it is to come out and sell it, but if it comes up,
13 put the sells that we have into the plant book and take the larger sells
14 into our book.

15 Reliant Trader 2: What we are kinda thinking about doing right now
16 is coming out and trying to buy Q3. Buy dailies and then shut down
17 all the plants and then if it goes against us putting that, unwind
18 hedges in the plant book.

19 Reliant Manager 1: Yeah.

20 Reliant Trader 2: And then that way we going to put out that we are
21 short NOx, we're short capacity factor—or we're worried about the
22 capacity factor of units, and trying to get people to say look we can't
23 – these levels don't make sense to do. I mean at 88 bucks and just
24 kinda um....then we can make the argument internally if we have to.

25 **June 20, 2000, 6:56 (p. 13):**

26 Broker: Alrighty. Anything you up to?

27 Reliant Trader 1: Yeah. I'm going to look at some Q3 today. We've
28 kind of had some

29 change over here. We're getting from our guys it looks like we could
30 be in NOx trouble.

31 Broker: In what?

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1 Reliant Trader 1: NOx trouble. That's a credits, so we may not be
2 able to run like we thought.
3 Broker: Right.

4 In fact, on June 20, 2000 Reliant faced no emissions constraints
5 whatsoever. Under the VCAPCD Rule 59, the Mandalay and Ormond
6 Beach steam turbines, Reliant's least costly and largest plants, had only
7 average concentration limits that were independent of the amount of
8 generation. Reliant's Coolwater plant never approached its annual NOx
9 emissions limit imposed by the Mojave Desert AQMD in Rule 1158 of
10 1,370 tons, ending up at just under 900 tons in 2000. The Etiwanda plant
11 could buy RTCs at any time to allow it to run, and Reliant always
12 purchased sufficient RTCs. Reliant never paid more than \$4.23 per NOx
13 lbs. before August 7, 2000. Exh. No. CA-12 (Appendix B) at 10. This
14 added at most \$5 per MWH to generation costs based on emission rates
15 supplied by Reliant. The Mandalay 3 CT had run only 40 hours through
16 May, against its annual 200-hour limit, and added about 50 hours
17 throughout June. Likewise, Reliant's Ellwood CT had run only 50 hours
18 through May, against its annual 200-hour limit, and added about 75 hours
19 throughout June. The latter two units total less than 200 MW of capacity.

20 As an important note, only the peaking combustion turbines with annual
21 run limits of 200 hours (i.e., Ellwood, Alamitos 7, Huntington Beach 5)

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1 were approaching their limits at the end of September, and no one could
2 have reasonably anticipated that the other CTs would be called on to such
3 an extent in the next four months.

4 **Q. Did environmental regulations constrain the operations of power**
5 **plants during the October to December 2000 time period?**

6 A. During this time period, certain power plants were pushed toward their air
7 emissions regulatory constraints. However, most of the steam turbines in
8 the state continued to be unconstrained during this period. The only
9 exceptions were the Encina (Dynergy) and South Bay plants (Duke) in San
10 Diego, which approached, but did not exceed, their annual emissions limits
11 in December. The plants in the SCAQMD generally were able to purchase
12 sufficient RTCs, at a wide range of prices, with only one incident of note
13 previously discussed. RTC prices for some trades approached \$50 per
14 pound, but the unusually large price dispersion still existed, with many
15 trades occurring at less than \$20 per pound. This price dispersion is
16 illustrated graphically in Figure 1 above.

17 AES apparently exhausted its supply of RTCs, but only because it failed to
18 purchase a sufficient amount and Williams, which markets the output of the
19 AES plants, was slow to resolve a contractual dispute over how emissions
20 costs should be allocated under their tolling agreement. Exh. No. DME-32

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1 at 3 (Refund Proceeding); Exh. Nos. CA-23, CA-24 and CA-26. In his
2 deposition, Dennis Elliot, Williams Co. executive director of energy
3 resources, responding to a question about whether AES failed to manage its
4 RTCs properly, stated, "I believe that [AES] failed to manage their NOx
5 position." Exh. No. CA-162 (Deposition of Dennis Michael Elliot,
6 February 6, 2003) at 34:13-14. The SCAQMD issued an abatement order
7 on November 30 against several (but not all) AES units, and Williams
8 stepped in on December 7 to pay \$13 million of the \$17 million fine and
9 purchase more RTCs. Exh. No. DME-31 at 4 (Refund Proceeding).

10 In December 2000, Duke negotiated a settlement with the SDCAPCD to
11 extend the mass emissions allowance for the South Bay plant, but South
12 Bay did not surpass its annual limit. Exh. No. DUK-1R at 5 (Refund
13 Proceeding). Encina approached its limit, but did not exceed it. Exh. No.
14 DYN-22 (Refund Proceeding). The Monterey Bay Unified APCD Rule
15 429 imposing a daily average NOx limit on Moss Landing, starting on May
16 1 of each year, ended October 31.

17 While many combustion turbines approached their annual hourly limit, this
18 did not occur until December in almost all cases. The hours of operation by
19 month are shown along with the regulatory ceilings for CTs in Exh. No.
20 CA-12 (Appendix C) at 12. Also shown in Exh. No. CA-12 (Appendix C)

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1 are the historic average hours of operation for the combustion turbines
2 based on five-year periods prior to divestiture. Outside of the Potrero CTs
3 that are used to meet the San Francisco Operating Criterion, the Encinia and
4 South Bay CTs that serve a similar role in San Diego, and the Naval Station
5 CT that is associated with a cogeneration plant, none of the other CTs had
6 annual averages exceeding 80 hours per year—and most averaged less than
7 50 hours per year. Of particular note is that the period covered includes the
8 end of the seven-year drought from 1987 to 1994 that depressed Western
9 U.S. hydropower output, and the year with the previous high for statewide
10 natural gas generation based on California Energy Commission statistics,
11 1994. In addition, combustion turbines rarely ran outside of San Francisco
12 in November and December. Combustion turbines are the highest cost and
13 emitting power plants, and as a result, are universally dispatched after all
14 other units are called. Absent market power, only an extraordinary set of
15 conditions, beyond even low Northwest hydro output similar to the
16 previous drought, should have induced CT operations during the winter
17 months. Catherine Wolfram found that in the England and Wales market in
18 the 1990s, that the larger portfolio holders exerted market power by
19 “increasing” outages at their units with middle efficiency rates, and pushed
20 their CTs and other expensive units onto the margin to set the market

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1 clearing price (MCP), thus increasing the output from the CTs.⁸ The
2 dramatic increase in CT operations would be consistent with Wolfram's
3 findings.

4 **Q. Did environmental regulations constrain the operations of power
5 plants during the January to February 2001 time period?**

6 A. The beginning of 2001 coincided with increased crisis levels, but in most
7 cases, also with new annual environmental accounts. Most combustion
8 turbines started with another set of annual hourly limits, and the steam
9 turbines in the SDCAPCD and the Coolwater combined-cycle plant in the
10 Mojave Desert AQMD restarted accruing against their annual mass
11 emissions limits. In addition, most of the large merchant power plants
12 received more free RTC allowances in January 2001, including Alamitos
13 (AES), Redondo (AES), El Segundo (Dynergy), and Etiwanda (Reliant).
14 Yet, it became readily apparent that power plants were running at
15 extraordinary rates that would quickly exceed the annual restrictions long
16 before the summer of 2001 was over. In response, the air districts
17 negotiated various emissions mitigation fees for generation beyond their

⁸ Catherine D. Wolfram, "Strategic Bidding in a Multi-Unit Auction: An Empirical Analysis of Bids to Supply Electricity in England and Wales" (paper presented at the Electricity Industry Restructuring: Second Annual Research Conference, Berkeley, California, March 14 1997).

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1 current regulatory standards. Most of these fees were charged at the
2 equivalent of \$7.50 per pound of NOx, although the Bay Area AQMD
3 charged Mirant the equivalent of \$10 per pound for the Potrero 4-6 CTs,
4 and VCAPCD increased its fee to \$45 per MWH on the Mandalay 3 CT.
5 Exh. No. CA-12 (Appendix D) at 14 and Exh. No. REC-12 (Refund
6 Proceeding). On February 8, the SCAQMD allowed the generators to pay a
7 fee of \$7.50 per pound in lieu of buying RTCs, retroactively to January 11.
8 Exh. No. CA-12 (Appendix E) at 25 and Exh. No. CAL-63 (Refund
9 Proceeding). On January 1, 2001, Duke's Morro Bay plant faced a daily
10 total NOx emissions limit under Rule 429, although it appears that Morro
11 Bay exceeded this limit with no penalties on 17 days prior to June 30, 2001.
12 Exh. No. CA-12 (Appendix F) at 32. By March, every district with
13 significant generation capacity had released the generators from the most
14 stringent regulations.

15 **Q. Did environmental regulations constrain the operations of power**
16 **plants during the March to June 2001 time period?**

17 A. While the crisis continued until late June, 2001, the environmental
18 regulations had been converted to clearly identifiable costs for most
19 generators. The Governor issued Executive Orders D-24-01 on February 8
20 and D-28-01 on March 7 directing air districts to revise their regulations

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1 and permits to allow power plants to sell to the ISO and the Department of
2 Water Resources. Exh. No. CA-12 (Appendix G) at 36 and 39. For most
3 units, the added cost amounted to less than \$10 per MWh, though it was
4 larger for some units, such as the Potrero CTs, which typically ran only
5 when called under RMR instructions. The Governor formalized the new
6 emission control regime with his June 11 Executive Order. Exh. No. CAL-
7 62 (Refund Proceeding).

8 **Q. What potential emissions-induced constraints need to be considered in**
9 **2000 and 2001?**

10 A. Five steam turbine plants may have faced emissions-regulation induced
11 constraints, although in two of these cases, the constraint was either non-
12 binding, or only during the late summer of 2000.

13 In 2000, the Encina steam turbines were limited to 1,100 tons of NOx
14 emissions over the year. The South Bay steam turbines were limited to
15 1,000 tons annually. Based on available information, both plants appear to
16 have nearly reached these annual limits in 2000, which was not atypical of
17 these plants historically.

18 The Moss Landing plant had a limit on daily average NOx emissions of
19 9.64 tons from May 1 to October 31 each year. Based on the available
20 CEMS data, Moss Landing approached this limit in mid-September, and its

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1 operations were constrained at that time. Exh. No. CA-12 (Appendix T) at
2 81. The output of the plant dropped enough beginning on September 28
3 that shortly thereafter this emission limit was no longer binding, and Moss
4 Landing was unconstrained throughout the remainder of the analysis period
5 to June 2001.

6 The Morro Bay plant faced a daily NOx emissions cap of 3.5 tons
7 beginning January 1, 2001. This may have constrained Duke's operations
8 during this period, although Duke appears to have exceeded this limit on a
9 number of occasions according to the CEMS data, as shown in Exh. No.
10 CA-12 (Appendix F) at 32.

11 The Coolwater plant was limited to emitting 1,387 tons of NOx in 2000,
12 and 1,353 tons in 2001 under MDAQMD Rule 1158. Based on the CEMS
13 data, Coolwater emitted 864 tons in 2000, which is 62 percent of its
14 permitted limit. Exh. No. CA-12 (Appendix U) at 82. To test if Coolwater
15 operations might have been constrained in 2001, I assumed that the summer
16 and fall of 2000 was a "worst case" scenario for gas-fired generation, and
17 added that to the emissions through June 30, 2001. The estimated
18 emissions are 926 tons in 2001, again only 68 percent of the permit
19 allowance.

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1 **Emissions Costs**

2 **Q. How did you calculate emissions-related costs that were utilized in the**
3 **withholding analyses sponsored by the California Parties?**

4 A. One component of a marginal cost calculation is emissions costs, including
5 RTCs. The analysis I present here is the most conservative representation
6 of these costs: that is, I use the highest costs that realistically might be
7 charged to a generator, assuming, however, that the market prices have not
8 been manipulated and that generators have not overused their dirtiest
9 units—neither of which may be valid assumptions, particularly in the
10 SCAQMD.

11 **Q. How were the costs estimated for plants outside of the SCAQMD?**

12 A. For plants outside of the SCAQMD, this calculation is a relatively
13 straightforward calculation of multiplying the per pound fee charged by the
14 respective district times the NOx emissions rate per MWH after the date
15 that the fee was imposed. Even in the case where a unit has a free
16 allowance, running the unit to meet load during the winter of 2001
17 represents a lost opportunity to use that allowance later in the year. Only
18 steam turbines in the SDCAPCD paid such fees, while the majority of
19 combustion turbines, located in the SDCAPCD, VCAPCD and BAAQMD,
20 paid these fees, albeit at disparate rates.

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1 **Q. Given the problems identified in the RECLAIM market, how were**
2 **RTC “prices” formulated for this analysis?**

3 A. The task of determining a single “cost” for plants in the SCAQMD is much
4 more difficult than the other districts. As I discussed, the RTC market had
5 a wide dispersion of prices at any single moment, even among transactions
6 by a single participant, and that dispersion tended to increase with the
7 number and volume of trades, contrary to expectations about normal market
8 behavior. Putting it simply, there is no “market price” to point to for RTCs.
9 To be conservative in the California Parties’ analysis of the electricity
10 market, I used an opportunity cost measure for RTCs that I constructed
11 from the sales prices of registered transactions from the publicly available
12 SCAQMD RECLAIM transaction database⁹ that represented the 90th
13 percentile in the distribution of prices within two-week segments from
14 January 1, 2000 to February 19, 2001. These transactions are those
15 reported to the SCAQMD for RTCs that are used to comply with facility
16 emissions allowances within each emissions Cycle. After February 19,
17 2001, the emissions mitigation fee is set at \$7.50 per NOx pound for all
18 generators, consistent with the SCAQMD Executive Order on February 6,

⁹ Fortune Chen of the SCAWMD transmitted the database to me on April 26, 2002.

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1 2001. Exh. No. CA-12 (Appendix Q) at 74 shows the 90th percentile price,
2 the 50th percentile (or median) price assumed to be representative in
3 properly functioning markets, and the Cantor-Fitzgerald EBS RTC Market
4 Price Index for current year RTCs, which was often quoted during the
5 crisis. Of particular note is the wide gap between the 90th percentile and
6 median prices over the period. As discussed above, there is no reason to
7 accept any of these "price" series as being truly representative of an RTC
8 market price, nor necessarily of the opportunity costs actually faced by the
9 generators. This price series is intended to illustrate that even with these
10 costs, generators' bidding and scheduling behavior was aberrant, as
11 discussed by the other California Parties' witnesses.

12 **Q. How were unit emissions rates determined?**

13 A. The unit emissions rates were taken from several sources. The first source
14 were exhibits submitted or data responses that were provided in the Refund
15 Proceeding which had explicit hourly rates. Rates for units owned by
16 Dynegy, Reliant, Anaheim and Pasadena fall into this category. The
17 second source was rates calculated from the constant emission monitoring
18 system (CEMS) and ISO generation data for the period. Because the
19 CEMS data does not appear to be 100% reliable, these estimates may not be
20 as accurate as those provided directly by the generators. This data is the

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1 same as was provided in support of Exh. No. CAL-59 (Refund Proceeding).
2 The third source was the SCAQMD Electrical Equipment Emissions Rates
3 sheet for units, such as CTs, that do not have CEMS equipment. Exh. No.
4 CA-12 (Appendix R) at 75.

5 **Q. What were the emissions costs for each power plant that paid either a**
6 **mitigation fee or purchased emissions credits?**

7 A. Exh. No. CA-12 (Appendix S) at 77 shows the emission rates and the
8 emission costs per MWH for each unit included in the electricity market
9 analysis. The costs are shown for each two-week segment, and the costs
10 are assumed to be constant over that segment. For units being charged a
11 fixed mitigation fee, the costs are constant throughout the period (with
12 Mandalay 3 being the exception—the VCAPCD mitigation fee increased
13 on January 1, 2001). The costs vary for units in the SCAQMD, but since
14 the constructed RTC “price” series is necessarily a construction, this
15 representation should be adequate.

16 **RECLAIM Market Irregularities**

17 **Q. Did the RECLAIM market behave in a manner expected of a liquid,**
18 **well-functioning commodities market?**

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1 A. No. As discussed above, RTC prices tended to diverge, rather than
2 converge, as the transaction volume increased. This persistent
3 characteristic is in direct contradiction of expectations about markets and
4 increasing liquidity, demonstrating that the RECLAIM market was not a
5 well-functioning market. Saleth, Braden and Erheart showed how markets
6 with little trading activity, such as the RECLAIM program, could exhibit
7 widely divergent prices as that there are multiple potential equilibria
8 outcomes from the bargaining process.¹⁰ Saleth, Braden and Erheart also
9 showed that under conditions without other market failures that the prices
10 for transactions should converge toward a single market equilibrium as the
11 number of participants approaches ten. The number of parties involved
12 weekly in RTC transactions with non-zero prices¹¹ grew substantially over
13 the summer, and the number of transactions exceeded 40 by mid-August.
14 In theory, the process of price discovery and increased bargaining
15 alternatives should have forced price convergence, but instead price

¹⁰R. Maria Saleth, John B. Braden, and J. Wayland Erheart, "Bargaining Rules for a Thin Spot Water Market," Land Economics 67 (1991): 326-339. (A direct analogy between water and emission markets can be drawn. Richard J. McCann, "Environmental Commodity Markets: 'Messy' Versus 'Ideal' Worlds," Contemporary Economic Policy 14, no. 3 (1996): 85-97.)

¹¹ RTCs were often transferred at a price of zero for two reasons: 1) to be transferred from one affiliated facility to another (for example, from AES' Huntington to Redondo generating plants) because RTCs are allocated to facilities, not corporate owners, or 2) to be offered for consignment sale by a broker, such as Cantor Fitzgerald. This latter reason was eliminated on May 11, 2001 when the SCAQMD ended the necessity of transferring ownership when using an intermediary.

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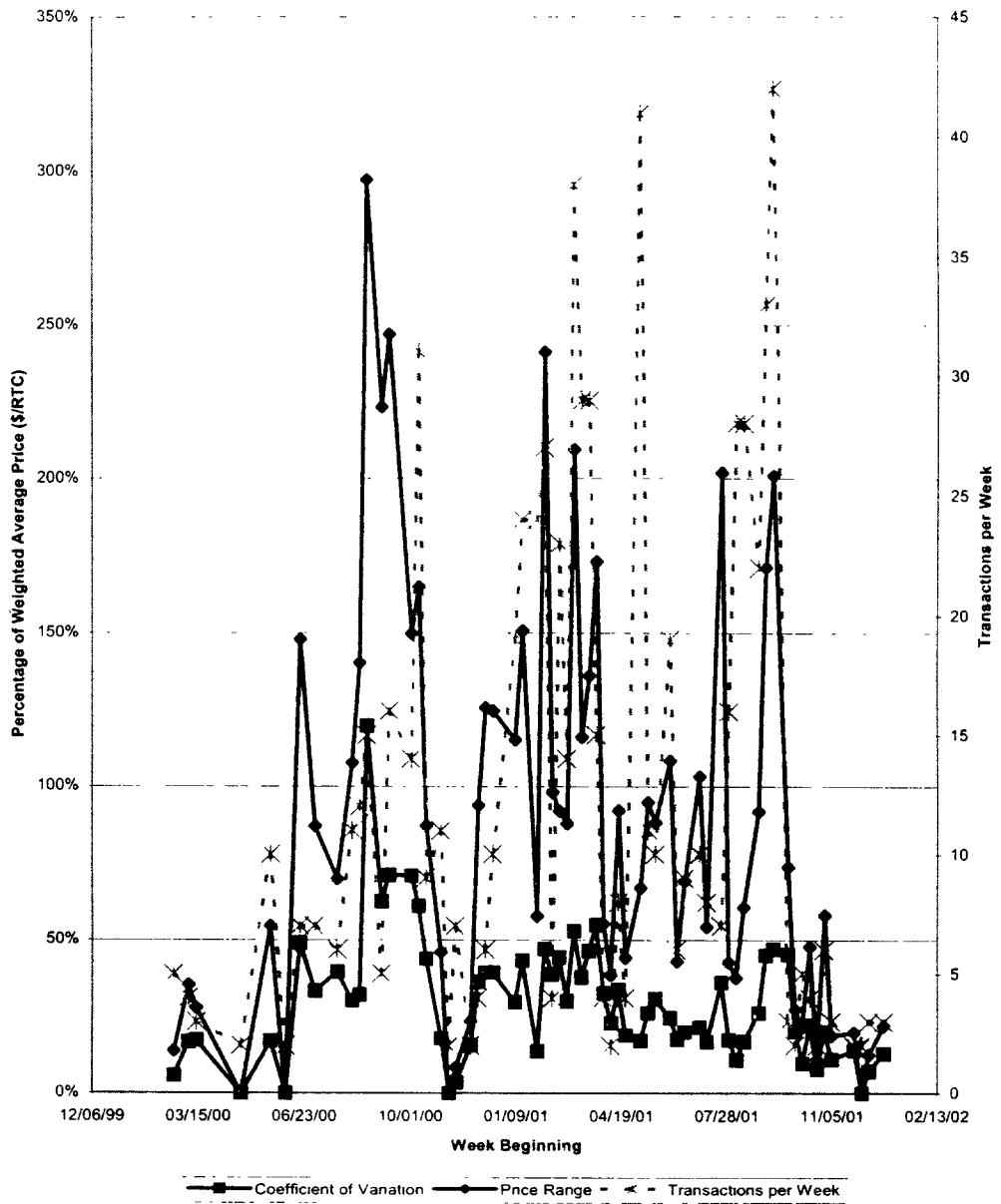
1 dispersion persisted, and even increased, during this period, as measured by
2 both the coefficient of variation and the range of weekly prices shown in
3 Figure 2. In fact, the price dispersion is positively correlated with the
4 number of weekly trades, with an R^2 equal to 0.36.

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1

Figure 2

Price Volatility Compared to Transactions



2

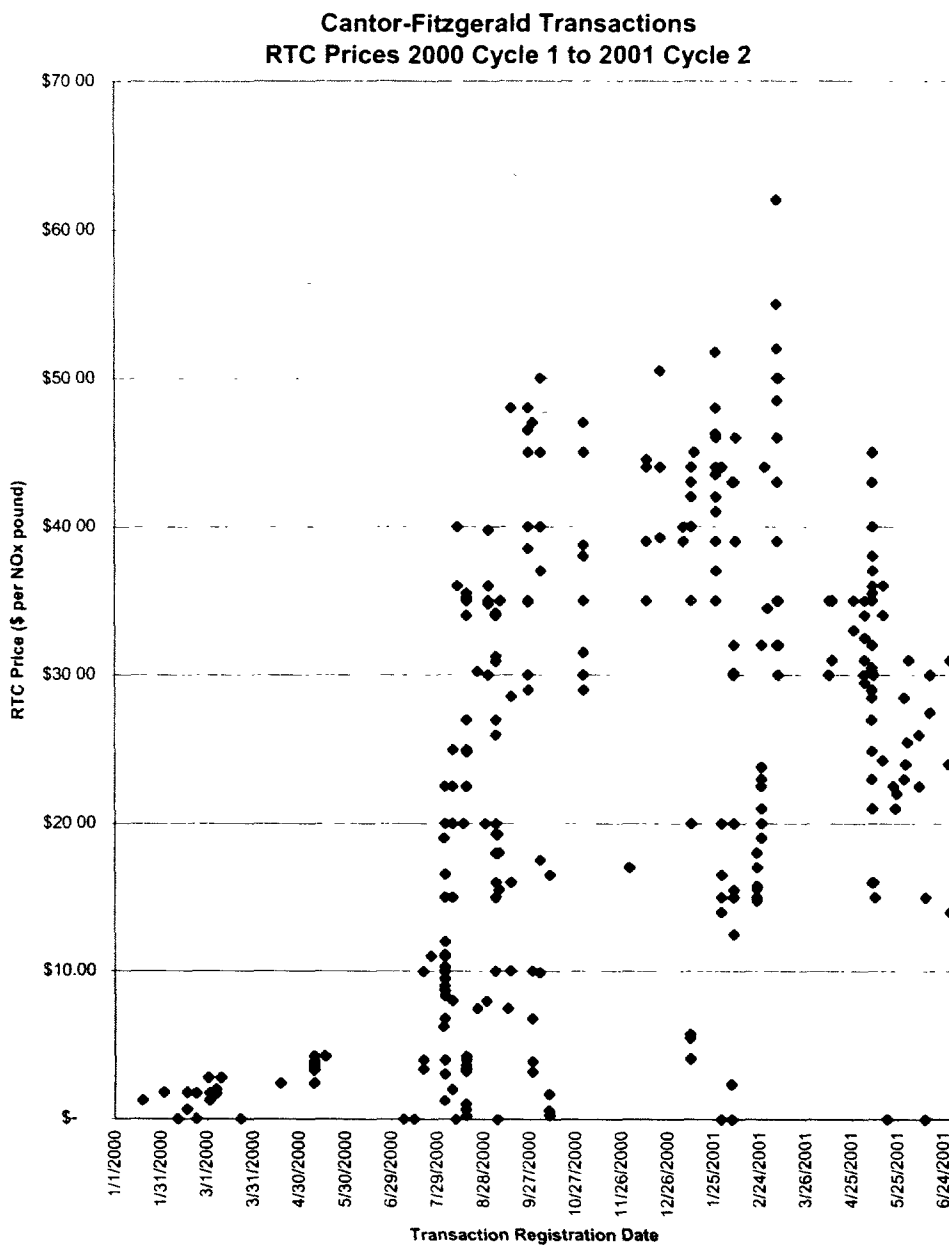
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1 Even the best-informed agent that participated in the most transactions,
2 Cantor-Fitzgerald which operated the Environmental Brokerage Service,
3 shows a similar price dispersion in its RTC sales over the period, as shown
4 in Figure 3. This behavior can only be interpreted as the symptoms of a
5 severely dysfunctional market in which determining the market price or
6 opportunity cost lost by consuming a credit is not possible.

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1

Figure 3



2

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1 Nor would a “first-in, first-out” (FIFO) accounting approach provide an
2 appropriate opportunity cost measure. Once the RTCs were purchased,
3 those costs were sunk. There was no linkage between when the RTCs are
4 consumed for generation and what the generators might be able to sell those
5 RTCs for. As a result, such an accounting mechanism would not be an
6 adequate substitute for a functional market price.

7 **Q. Is there evidence that RTC prices were manipulated in a manner**
8 **similar to certain practices that affected energy prices at the time?**

9 A. The run-up in RTC prices in August 2000 coincided with at least one set of
10 potential “wash” trades consummated by Dynegy.¹² The SCAQMD-
11 maintains publicly available RECLAIM trading database reveals six sets of
12 paired trades involving Dynegy and six different companies from mid July
13 to mid August 2000, shown in Exh. No. CA-12 (Appendix K) at 45. These
14 wash trades differ importantly from the definition that first arose in the
15 context of the energy crisis—that two entities traded a like amount of a
16 commodity at the same price. The RTC wash trades generally involved one

¹² The existence of these transactions appears to contradict a response to the California Parties Data Request No. 35 to Dynegy in Docket EL00-95-045. The California Parties asked “Please provide all documents that relate or refer to sales and/or purchases of RECLAIM trading credits (RTCs) from July 1, 1999 through December 31, 2001, that were not used to meet compliance for generation under the direct or in direct control of Dynegy or any affiliate of Dynegy.” Dynegy responded, after stating its objections, “Dynegy.. (s)tates that it made no purchases not used to meet compliance.”

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1 party selling a larger amount at a lower price and the other buying a smaller
2 amount at a higher price, so that the total dollar amount expended by each
3 party is approximately equal so that cash transfer netted to zero. In all but
4 one of these trades, Dynegy paid the higher price. The net effect was that
5 Dynegy gave several of these parties RTCs at a heavily discounted price, or
6 even for free, to gain the benefits from the transaction. Among these
7 trades, Dynegy and AES also sold each other large, but differing, amounts
8 of RTCs at differing prices, so as, with the other trades involving Dynegy,
9 the total dollar amount of the two transactions netted to approximately zero.
10 The five wash trades reported in August represented 37 percent of the
11 trades and 47 percent of the transaction volume during the two-week period
12 beginning August 14. This represents a greater proportion of the market
13 than the reported wash trades in the gas and electricity markets that have
14 raised concerns at the Commission.

15 These transactions could have had two intended effects:

- 16 (1) To “walk” up the RTC “market price” from \$10 to over \$30 in a
17 short period; and
18 (2) To create the false impression that the RTC market was active, and
19 thus that the prices were valid indicators of market value.

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1 Dynegy could benefit from this rise in RTC prices in at least two ways.
2 First, the increased RTC “market price” allowed Dynegy to claim a greater
3 “mark to market” value for its free allowance and previously purchased
4 reserve of RTCs. This inflated Dynegy’s assets value—a practice now well
5 documented at Enron, among other corporations. Second, the higher RTC
6 “market price” increased the apparent marginal cost for the 40% of capacity
7 in the SCAQMD, which in turn increased the overall market clearing price.
8 Dynegy was able to directly recover this benefit through sales from its other
9 plants in the SP15 zone, Encina (a.k.a. Cabrillo I) and the Cabrillo II
10 complex of CTs. At the same time, Dynegy could harm its competitors who
11 also had most or all of their generation in the SCAQMD, such as
12 AES/Williams and LADWP, who needed these credits. If Dynegy could
13 move the apparent price of RTCs through wash trading, their competitors
14 would now face greater production costs and would be disadvantaged
15 relative to Dynegy. For these reasons, Dynegy may have been willing to
16 pass a premium to the counterparties in these transactions by selling
17 additional RTCs at a lower price than what Dynegy was buying at as a
18 means of inducing them to participate. I could conceive of more complex
19 structured transactions in which these apparently inexplicable trades could

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1 be explained. But despite discovery requests concerning these transactions,
2 Dynegy has not provided information suggesting any such explanation.

3 Whether other similar “wash” trades or other market gaming activities were
4 happening cannot be easily discerned because the transactions were often
5 opaque, frequently passing through a broker who combines or separates
6 purchased RTCs into various batches to be sold on consignment. The RTC
7 market was not regulated in the same manner as other commodities or
8 securities, and, until May 2001, the buyer only had to register a transaction
9 with the SCAQMD if the RTC was used, and then, only data on the final
10 transaction was required. Intermediate transactions were not required to be
11 registered. The widespread practice of selling RTCs on consignment
12 through brokers also obscures the trail of transactions that might indicate
13 further activity similar to Dynegy’s actions.

14 **Conclusions**

15 **Q. What conclusions do you draw about the importance of environmental**
16 **regulations on the operations of California’s power plants from**
17 **January 2000 to June 2001?**

18 A. While California’s environmental regulations are stringent, in general these
19 were not a primary driver in restricting output or increasing costs from
20 power plants in 2000, particularly during the summer. The same is true for

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1 2001, except during the late fall of 2000 and early winter of 2001. Prices
2 for some RTC transactions rose to extraordinary levels, but the large
3 dispersion of prices is inconsistent with expectations about market
4 behavior and raises questions about what the true price really was. In
5 addition, there is evidence that Dynegy engaged in RTC wash trades that
6 may have affected perceptions about RTC prices. By early 2001, most air
7 districts had transformed their quantitative emissions limits into mitigation
8 fees that in fact added little to the cost of generation relative to the
9 electricity market prices, particularly for steam turbines, i.e., less than \$15
10 per MWh, that dominate California's generation mix.

11 **Q. Does this conclude your testimony?**

12 **A. Yes.**

UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

San Diego Gas & Electric Company,)
Complainant)

v.)

) Docket Nos. EL00-95-069
)

Sellers of Energy and Ancillary Services Into)
Markets Operated by the California)
Independent System Operator Corporation)
and the California Power Exchange,)
Respondents.)

Investigation of Practices of the California)
Independent System Operator and the)
California Power Exchange.)

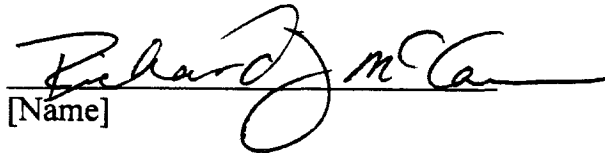
) Docket Nos. EL00-98-058
)

AFFIDAVIT OF [Name]

I declare under penalty of perjury that the foregoing is true and correct.

Executed on February 22nd, 2003.

[Name]



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Index of Relevant Material Template

Submitter (Party Name)	The California Parties
Index Exh. No.	CA-12 (Appendices A-W)
Privileged Info (Yes/No)	Yes
Document Title	Appendices to Prepared Testimony of Richard J. McCann, Ph.D. on Behalf of the California Parties
Document Author	Richard J. McCann, Ph.D.
Doc. Date (mm/dd/yyyy)	03/03/2003
Specific finding made or proposed	<p>Prices in the ISO and PX Spot Markets from October 2, 2000 to June 20, 2001 were unjust and unreasonable.</p> <p>Prices before October 2, 2000 were not consistent with Sellers' market-based rate tariffs and those of the ISO and PX.</p> <p>California's environmental regulations were not a primary driver in restricting output or increasing costs from power plants during the summer of 2000.</p> <p>Dynegy and AES may have engaged in wash trades in the RECLAIM market in July and August 2000.</p>
Time period at issue	a) Before 10/2000; b) between 10/2000 and 6/2001
Docket No(s). and case(s) finding pertains to *	EL00-95 and EL00-98 (including all subdockets)
Indicate if Material is New or from the Existing Record (include references to record material)	New
Explanation of what the evidence purports to show	<p>The appendices support Dr. McCann's Prepared Testimony on six points: (1) environmental regulations in California did not restrict output or raise costs significantly between 1/1/00 through mid summer 2000; (2) between summer 2000 and 12/31/00 emissions regulations rarely constrained output and raised costs only late in 2000 and only for very few suppliers; (3) between 1/1/01 and February 2001 emissions regulations did not limit output as sellers received new allowances of free emission credits and annual run time limits, and began to negotiate mitigation fees in lieu of high cost credits; (4) between February 2001 and 6/20/01 emissions regulations did not restrict output and increased costs were restricted as air districts issued variances to emission limits that might cause output restrictions or imposed nominal mitigation fees; (5) the RECLAIM market in the South Coast Air Quality Management District was dysfunctional between mid-2000 and 6/2001; and (6)</p>

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	Dynergy and AES may have engaged in "wash" trades in the RECLAIM market in July and August 2000.
Party/Parties performing any alleged manipulation	Duke, Dynergy, Mirant, Reliant and Williams (sellers identified in Exh. CA-5, Reynolds withholding analysis); AES.

* This entry is not limited to the California and Northwest Docket Numbers.

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**UNITED STATES OF AMERICA
BEFORE THE
FEDERAL ENERGY REGULATORY
COMMISSION**

San Diego Gas & Electric Company,)	
Complainant,)	
)	
v.)	Docket Nos. EL00-95-069
)	
Sellers of Energy and Ancillary Services)	
into Markets Operated by the California)	
Independent System Operator Corporation)	
and the California Power Exchange,)	
Respondents.)	
)	
Investigation of Practices of the California)	
Independent System Operator and the)	
California Power Exchange)	EL00-98-058
)	
)	

**APPENDICES TO PREPARED TESTIMONY
OF RICHARD J. McCANN, PH.D.
ON BEHALF OF THE CALIFORNIA PARTIES**

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Appendix A

Qualifications of RICHARD J. McCANN, Ph.D

Partner, M.Cubed

Dr. Richard McCann specializes in environmental and energy resource economics and policy. He has completed numerous project benefit assessments and impact analyses. He also has testified before the Federal Energy Regulatory Commission, California Public Utilities Commission, California Energy Commission, Air Resources Board, State Water Resources Control Board, and other regulatory agencies.

PROFESSIONAL EXPERIENCE

Dr. McCann has analyzed many different aspects of energy utility operations and restructuring in California, including the environmental impacts of proposed fossil-fueled, geothermal, and hydropower generation plant divestitures for the CPUC, and restructuring issues for the CEC, petroleum companies and agricultural energy users. He is working with the CEC to estimate the costs for new alternative generating technologies. He testified before the CPUC on impacts of electricity rates on agricultural groundwater pumping patterns, assessed competitive fuel choices, and proposed drought-mitigation policies. He also testified on setting appropriate rates for oil production, agricultural and master-metered manufactured housing community customers for electricity and natural gas. He assessed the impact of natural gas demand created by SCAQMD Clean Fuels Rule in Southern California on transport and storage capability to determine need for new pipeline, as well as the stationary fuel use in the region. He also evaluated options for the Rancho Seco nuclear plant, and assessed future resources available to California utilities in five siting cases at the CEC, which included cogeneration, solar-thermal and waste-to-energy facilities.

REPRESENTATIVE CLIENTS

California Electricity Oversight Board, California Attorney General, California Public Utilities Commission, California Energy Commission, California Air Resources Board, California Environmental Protection Agency, Metropolitan Water District, San Diego County Water Agency, Agricultural Energy Consumers Association, Southern California Gas Company, Cadiz Land Company, Inc., Western States Petroleum Association, USA Waste, Inc., Reason Public Policy Institute, Environmental Defense Fund, California Trucking Association, Western Manufactured Housing Communities Association, Golden State Power Cooperative.

ACADEMIC ACHIEVEMENTS

- Doctor of Philosophy, Agricultural and Resource Economics, University of California, Berkeley, 1998.
- Masters of Science, Agricultural and Resource Economics, University of California, Berkeley, 1990.
- Masters of Public Policy, Institute of Public Policy Studies, the University of Michigan, Ann Arbor, 1986.
- Bachelors of Science in Political Economy of Natural Resources, University of California, Berkeley, 1981.

PROFESSIONAL EMPLOYMENT

- Partner, M.Cubed, 1993 – Present.
- Senior Economist, Foster Associates, Spectrum Economics, 1986 – 1992.
- Senior Economist, QED Research, Inc., 1986 – 1992.
- Consultant, Dames & Moore, San Francisco, 1985.

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PROFESSIONAL AFFILIATIONS

American Agricultural Economics Association, Association of Environmental and Resource Economists, American Economics Association, Western Economics Association International, and Association of Environmental Professionals.

Publications

Testimony

- McCann, Richard J. 2002. *Rebuttal Testimony of Richard J. McCann, Ph.D. on Behalf of the California Parties Before the Federal Energy Regulatory Commission*, in San Diego Gas & Electric Company v. Sellers of Energy and Ancillary Service into Markets Operated by the California Independent System Operator Corporation and the California Power Exchange EL00-95-045 and EL00-98-042, Exhibit No. CAL-59. San Francisco, California: July 26.
- . 2002. *Surrebuttal Testimony on Emission Issues of Richard J. McCann, Ph.D. on Behalf of the California Parties Before the Federal Energy Regulatory Commission*, in San Diego Gas & Electric Company v. Sellers of Energy and Ancillary Service into Markets Operated by the California Independent System Operator Corporation and the California Power Exchange EL00-95-045 and EL00-98-042, Exhibit No. CAL-89. San Francisco, California: August 9.
- . 2002. *Prepared Direct Testimony of Richard J. McCann, Ph.D. on behalf of Dunex, Inc. and Knollwood Mobilehome Estates, Ltd. in Yucaipa Mobilehome Residents' Association, Complainants v. Knollwood Mobilehome Estates, Ltd. Defendant* Before the California Public Utilities Commission, in Yucaipa Mobilehome Residents' Association, Complainants v. Knollwood Mobilehome Estates, Ltd. Defendant C.01-06-008. San Francisco, California: June 17.
- . 2002. *Prepared Direct Testimony of Richard J. McCann, Ph.D. on Behalf of the Western Manufactured Housing Communities Association (WMA) in San Diego Gas and Electric Company's 2001 Rate Design Window Proceeding*. California Public Utilities Commission in Application of San Diego Gas & Electric Company for Authority to Make Various Electric Rate Design Changes, Close Certain Rates, and Revise Cost Allocation among Customer Classes Effective August 1, 2002. San Francisco, California: May 9.
- . 2002. *Prepared Direct Testimony of Richard J. McCann, Ph.D. on Behalf of the California Independent Petroleum Association* Before the California Public Utilities Commission, in Order Instituting Rulemaking Regarding the Implementation of the Suspension of Direct Access Pursuant to Assembly Bill 1X and Decision 01-09-060 R.02-01-011. San Francisco, California: June 6.
- . 2001. *Prepared Direct Testimony of Richard J. McCann, Ph.D. on Behalf of the Western Manufactured Housing Communities Association (WMA)* Before the California Public Utilities Commission, in In the Matter of the Application of Southern California Water Company (U 133 W) For Authority To Establish A Lifeline Rate For Residential Domestic Water Service In Region III A.00-09-048, Exhibit 100. San Francisco, California: May 21.
- . 2001. *Direct Prepared Testimony of Richard McCann, Ph.D. on Behalf of the California Independent Petroleum Association on Proposed Revenue Allocation and Rate Design* Before the California Public Utilities Commission, in Application of Southern California Edison Company For Authority to Institute a Rate Stabilization Plan With a Rate Increase and End of Rate Freeze Tariffs; Emergency Application of Pacific Gas and Electric Company to Adopt a Rate Stabilization Plan; Petition of The Utility Reform Network for Modification of Resolution E-3527 A.00-11-038, A.00-11-056, A.00-11-028, Exhibit 86. San Francisco, California: April 13.

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Appendix B

Reliant RTC Trading Activity January to August 2000

REC No.	Trade Date	Seller ID	Seller Name	Buyer ID	Buyer Name	Cycle	Zone	Quantity (lbs)	Price (\$/lbs)	Total Cost
2502	2/17/2000	700004	CANTOR FITZGERALD BROKERAGE, L.P.	115315	RELIANT ENERGY ETIWA	2000 1	COASTAL	16,500	\$ 0.64	\$ 10,560
2525	2/22/2000	700058	US TRUST COMPANY, NATIONAL ASSOCIATION	115315	RELIANT ENERGY ETIWA	2000.1	COASTAL	33,765	\$ 1.31	\$ 44,097
2525	2/22/2000	700058	US TRUST COMPANY, NATIONAL ASSOCIATION	115315	RELIANT ENERGY ETIWA	2000 1	INLAND	107,560	\$ 1.31	\$ 140,473
2525	2/22/2000	700058	US TRUST COMPANY, NATIONAL ASSOCIATION	115315	RELIANT ENERGY ETIWA	2000.1	INLAND	2,000	\$ 2.30	\$ 4,600
2525	2/22/2000	700058	US TRUST COMPANY, NATIONAL ASSOCIATION	115315	RELIANT ENERGY ETIWA	2000.1	INLAND	7,000	\$ 2.22	\$ 15,519
2669	3/7/2000	115315	RELIANT ENERGY ETIWA	700004	CANTOR FITZGERALD BROKERAGE, L.P.	2000.1	COASTAL	900	\$ -	\$ -
2808	6/20/2000	700058	US TRUST COMPANY, NATIONAL ASSOCIATION	115315	RELIANT ENERGY ETIWA	2000 1	COASTAL	18,700	\$ 4.23	\$ 79,082
2808	6/20/2000	700058	US TRUST COMPANY, NATIONAL ASSOCIATION	115315	RELIANT ENERGY ETIWA	2000 1	COASTAL	43,073	\$ 4.23	\$ 182,156
2808	6/20/2000	700058	US TRUST COMPANY, NATIONAL ASSOCIATION	115315	RELIANT ENERGY ETIWA	2000 1	INLAND	1,673	\$ 3.49	\$ 5,839
2843	7/11/2000	800240	INLAND PAPERBOARD AN	115315	RELIANT ENERGY ETIWA	2000 1	INLAND	130,000	\$ 3.90	\$ 507,000
2879	7/25/2000	700061	MULTI-FUELS MARKETING CO	115315	RELIANT ENERGY ETIWA	2000 1	COASTAL	1,000	\$ 6.50	\$ 6,500
2948	8/8/2000	700004	CANTOR FITZGERALD BROKERAGE, L.P.	115315	RELIANT ENERGY ETIWA	2000 1	COASTAL	55,000	\$ 20.00	\$ 1,100,000
2948	8/8/2000	700004	CANTOR FITZGERALD BROKERAGE, L.P.	115315	RELIANT ENERGY ETIWA	2000.1	COASTAL	45,000	\$ 25.00	\$ 1,125,000
3079	8/30/2000	700061	MULTI-FUELS MARKETING CO	115315	RELIANT ENERGY ETIWA	2000 1	COASTAL	17,000	\$ 36.00	\$ 612,000
3086	8/30/2000	700058	US TRUST COMPANY, NATIONAL ASSOCIATION	115315	RELIANT ENERGY ETIWA	2000 1	INLAND	85,930	\$ 1.17	\$ 100,710
3113	8/31/2000	700004	CANTOR FITZGERALD BROKERAGE, L.P.	115315	RELIANT ENERGY ETIWA	2000 1	COASTAL	45,062	\$ 39.75	\$ 1,791,215
3113	8/31/2000	700004	CANTOR FITZGERALD BROKERAGE, L.P.	115315	RELIANT ENERGY ETIWA	2000 1	COASTAL	715	\$ 36.00	\$ 25,740
3113	8/31/2000	700004	CANTOR FITZGERALD BROKERAGE, L.P.	115315	RELIANT ENERGY ETIWA	2000 1	COASTAL	20	\$ 35.00	\$ 700
3113	8/31/2000	700004	CANTOR FITZGERALD BROKERAGE, L.P.	115315	RELIANT ENERGY ETIWA	2000 1	COASTAL	10,871	\$ 35.00	\$ 380,485
3113	8/31/2000	700004	CANTOR FITZGERALD BROKERAGE, L.P.	115315	RELIANT ENERGY ETIWA	2000 1	COASTAL	25,180	\$ 34.75	\$ 875,005
3113	8/31/2000	700004	CANTOR FITZGERALD BROKERAGE, L.P.	115315	RELIANT ENERGY ETIWA	2000 1	INLAND	2,138	\$ 30.00	\$ 64,140

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Appendix C												
Combustion Turbine Hours of Operation, Historic and 2000 and 2001												
January 2000 - December 2001												
	AES			Duke			Mirant			Reliant		
	Alamitos Unit 7	Huntington Beach Unit 5	Oakland Unit 1	Oakland Unit 2	Oakland Unit 3	Potrero Unit 4	Potrero Unit 5	Potrero Unit 6	Etiwanda Unit 5	Ellwood Unit 1	Mandalay Unit 3	
Air District Rule	SCAQMD RECLAIM Rule 1134	SCAQMD RECLAIM Rule 1134	BAAQMD Reg. 9 Rule 9	BAAQMD Reg. 9 Rule 9	BAAQMD Reg. 9 Rule 9	BAAQMD Reg. 9 Rule 9	BAAQMD Reg. 9 Rule 9	BAAQMD Reg. 9 Rule 9	SCAQMD RECLAIM Rule 1134	SBCAPCD Rule 431.2	VCAPCD Rule 59	
Historic Avg.	44	46	18	61	26	210	333	280	39	34	24	
00 Hrs Limit	200	5,000-3 units	5,000-3 units	5,000-3 units	5,000-3 units	877	877	877	1300	200	200	
00 Fee \$	RTC price	RTC price	NA	NA	NA	NA	NA	NA	RTC price	NA	\$4,000 per hour	
\$/Unit	\$/# NOx	\$/# NOx	NA	NA	NA	NA	NA	NA	\$/# NOx	NA	NA	
01 Hrs	NA	NA	5,000-3 units	5,000-3 units	5,000-3 units	877	877	877	NA	200	200	
Free/Limit			units	units	units	units	units	units				
01 Fee \$	\$7.50	\$7.50	NA	NA	NA	\$10.00	\$10.00	\$10.00	\$7.50	\$7.50	\$6,000	
\$/Unit	\$/# NOx	\$/# NOx	NA	NA	NA	\$/# NOx	\$/# NOx	\$/# NOx	\$/# NOx	\$/# NOx	per hour	
Jan-00	1	2	0	0	3	14	15	13	5	2	1	
Feb-00	0	5	0	0	0	68	123	114	7	0	0	
Mar-00	0	1	0	0	0	3	4	30	11	4	0	
Apr-00	2	8	1	0	0	2	4	2	17	12	4	
May-00	15	6	4	16	13	45	42	47	43	21	18	
Jun-00	29	33	27	61	27	108	114	105	58	56	33	
Jul-00	57	88	47	9	22	38	62	56	63	56	17	
Aug-00	39	12	24	17	33	143	137	174	155	25	113	
Sep-00	6	1	40	38	42	143	53	137	50	0	57	
Oct-00	1	0	27	14	17	29	20	60	0	0	13	
Nov-00	0	0	69	112	50	129	101	99	10	0	18	
Dec-00	0	14	420	253	385	157	104	52	57	5	51	
2000 Total	150	170	659	520	592	879	789	889	476	181	325	
2001 Hours												
Jan-01	95	57	376	226	392	198	224	522	180	38	108	
Feb-01	60	56	256	185	261	150	302	85	87	0	57	
Mar-01	27	35	38	18	58	61	119	119	29	0	10	
Apr-01	2	10	38	63	15	44	100	138	38	1	1	
May-01	22	34	0	61	14	73	201	142	58	26	10	

Combustion Turbine Hours of Operation, Historic and 2000 and 2001

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January 2000 - December 2001
Dynergy

	South Bay North		North Island Unit 2	Division Unit 1	Naval Station Unit 1	El Cajon Encina Unit 1	Kearny Unit 1	Kearny Unit 2	Kearny Unit 3	Miramar Units	Naval Training Unit 1
	Unit GT1	Unit 1									
Air District	SDCAPCD	SDCAPCD	SDCAPCD	SDCAPCD	SDCAPCD	SDCAPCD	SDCAPCD	SDCAPCD	SDCAPCD	SDCAPCD	SDCAPCD
Rule	69.3	69.3	69.3	69.3	69.3	69.3	69.3	69.3	69.3	69.3	69.3
Historic Avg.	175	19	43	13	99	21	175	37	35	34	78
00 Hrs	877	877	877	877	877	877	877	877	877	877	877
Limit											
00 Fee \$	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
\$/Unit	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
01 Hrs	877	877	877	877	877	877	877	877	877	877	877
Free/Limit											
01 Fee \$	\$7.50	\$7.50	\$7.50	\$7.50	\$7.50	\$7.50	\$7.50	\$7.50	\$7.50	\$7.50	\$7.50
\$/Unit	\$/# NOX	\$/# NOX	\$/# NOX	\$/# NOX	\$/# NOX	\$/# NOX	\$/# NOX	\$/# NOX	\$/# NOX	\$/# NOX	\$/# NOX
Jan-00	10	3	9	5	8	6	8	10	18	2	14
Feb-00	0	5	3	3	5	3	2	2	7	4	6
Mar-00	4	2	12	3	14	1	2	20	8	8	17
Apr-00	21	13	23	16	28	19	19	22	20	24	35
May-00	46	20	20	25	34	22	21	32	37	32	46
Jun-00	88	44	44	43	37	36	49	55	49	44	49
Jul-00	106	56	55	49	39	45	41	54	49	45	68
Aug-00	279	132	124	108	124	137	115	169	144	164	194
Sep-00	68	67	65	50	37	52	41	64	65	63	64
Oct-00	0	4	0	2	11	4	10	10	13	13	17
Nov-00	27	76	0	55	53	52	72	94	95	101	128
Dec-00	158	138	0	34	27	91	91	174	159	160	146
2000 Total	807	560	355	391	417	468	463	706	664	660	784
2001 Hours											
Jan-01	79	251	222	234	164	272	203	273	286	272	280
Feb-01	106	152	116	129	114	142	120	159	173	137	157
Mar-01	0	196	186	181	159	138	154	220	209	114	233
Apr-01	0	84	79	50	72	84	71	95	99	33	94
May-01	0	65	70	61	36	72	46	75	65	45	26

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COMPLIANCE AND MITIGATION AGREEMENT**

This Compliance and Mitigation Agreement ("Agreement") is dated as of March 29, 2001, for reference purposes only, and is entered into between Mirant Potrero, LLC, formerly known as Southern Energy Potrero, LLC ("Mirant") and the BAY AREA AIR QUALITY MANAGEMENT DISTRICT ("Bay Area AQMD").

This Agreement is made by Mirant and the Bay Area AQMD (collectively, the "Parties") on behalf of, and is binding upon, their respective officers, directors, employees, agents, shareholders, subsidiaries and partners. This Agreement shall become binding and effective upon execution by each of the Parties (the "Effective Date").

**ARTICLE I
RECITALS**

1.1 WHEREAS, the Bay Area AQMD is the local agency with primary responsibility for regulating stationary source air pollution in the San Francisco Bay Area Air Basin in the State of California; and

1.2 WHEREAS, Mirant is a Delaware limited liability corporation that owns and operates six non-gaseous fuel fired combustion turbines at Mirant's Potrero Power Plant in San Francisco, California, within the jurisdiction of the Bay Area AQMD. These six combustion turbines are identified by the Bay Area AQMD as Permitted Source Nos. 10, 11, 12, 13, 14, and 15, in Bay Area AQMD Major Facility Permit for Plant No. 26 (the "Permit") and power three generation units commonly known as Potrero Units 4, 5, and 6 (the "Potrero Peaking Turbines"). Each of Potrero Units 4, 5, and 6 has a nameplate capacity of 52 megawatts; and

1.3 WHEREAS, the prior owner and operator of the Potrero Peaking Turbines voluntarily requested and accepted an 877-hour annual operating limit set forth in Permit Condition No. 15816 in the Permit; and

1.4 WHEREAS, Bay Area AQMD Regulation 9, Rule 9, Section 302 ("Regulation 9-9-302"), limits NO_x emissions from combustion turbines rated at 4.0 MW or greater and operating less than 877 hours per year to 65 parts per million (volume) ("ppmv") at fifteen percent (15%) O₂ (dry basis) when firing with non-gaseous fuel; and

1.5 WHEREAS, the most recent source test for the Potrero Peaking Turbines reflects that NO_x emissions were less than or equal to 65 ppmv at 15% O₂ dry basis; and

1.6 WHEREAS, Mirant has been and is currently operating the Potrero Peaking Turbines in compliance with Regulation 9-9-302 and Permit Condition No 15816; and

1.7 WHEREAS, Mirant operates the Potrero Peaking Turbines pursuant to the terms of applicable California Independent System Operator ("ISO") tariffs, a Reliability Must Run Agreement ("RMR Agreement") with the ISO, and a Participating Generator

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Agreement with the ISO, all of which are on file with the Federal Energy Regulatory Commission ("FERC"). All of these agreements are referred to collectively throughout the remainder of this Agreement as the ISO Generating Agreements; and

1.8 WHEREAS, Mirant supplies electrical energy from the Potrero Peaking Turbines, among other electrical generation facilities owned and operated by Mirant, to the California Department of Water Resources ("DWR") pursuant to the terms of a contract or contracts with the DWR; and

1.9 WHEREAS, due to the electrical energy shortage in the State of California, on January 17, 2001, California Governor Gray Davis declared a State of Emergency; and

1.10 WHEREAS, on February 8, 2001, pursuant to that State of Emergency, California Governor Gray Davis issued Executive Order D-24-01 requiring, in its first ordering paragraph that "local air pollution control and air quality management districts [shall modify emissions limits that limit the hours of operation in air quality permits as necessary to ensure that power generation facilities that provide power under contract to the [California] Department of Water Resources are not restricted in their ability to operate;" and

1.11 WHEREAS, the first ordering paragraph of California Governor Gray Davis' Executive Order D-24-01 further requires that "[t]he districts shall require a mitigation fee for all applicable emissions in excess of the previous limits in the air quality permits;" and

1.12 WHEREAS, on March 7, 2001, pursuant to the State of Emergency, California Governor Gray Davis issued Executive Order D-28-01, the fourth ordering paragraph of which provides "that the authority provided to local air pollution control and air quality management districts (hereinafter "districts") and the Air Resources Board in the first ordering paragraph of Executive Order D-24-01 shall also apply to any power generating facility, including any previously permitted existing power generating facility that is not currently operating, as necessary to ensure reliability of the grid and delivery of power in the State. No permit modification (or reinstatement and modification) under Executive Order D-24-01 or this Order shall be valid for a period of more than 3 years from the date of this Order. The authority to modify permits for the purposes identified above shall also include the authority to modify other applicable conditions for those purposes. In exercising the powers to modify (or reinstate and modify) permits and other applicable conditions, districts shall not be required to comply with the notice and hearing requirements of Division 26 of the Health and Safety Code;" and

1.13 WHEREAS, the Potrero Peaking Turbines are a crucial electric generation facility within the local San Francisco generation and transmission system which have historically been operated only during periods of peak electrical energy demand and in emergency circumstances to avoid load shedding and provide generation and transmission support to the local San Francisco Bay Area transmission network and for substantially fewer hours per year than the 877-hour operating limit; and

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1.14 WHEREAS, although Mirant was never required to operate any of the Potrero Peaking Turbines in excess of the 877-hour annual operating limit, in December 2000, due to the electrical energy shortage in the State of California, Mirant and the ISO discussed with the Bay Area AQMD possible use of the Potrero Peaking Turbines beyond the 877-hour annual permit limit under limited emergency conditions for the remainder of calendar year 2000 to maintain local San Francisco transmission system reliability and as a system resource to avert and/or reduce the magnitude of firm load shedding. The result of those joint discussions is memorialized in a letter dated December 22, 2000, from Ellen Garvey, Executive Officer of the Bay Area AQMD to Anne Cleary, Chief Executive Officer of Southern Energy Potrero LLC; and

1.15 WHEREAS, due to the electrical energy shortage in the State of California, in calendar year 2001, Mirant has already been required under the ISO Generating Agreements to operate the Potrero Peaking Turbines substantially in excess of their historic operating hours. As of March 29, 2001, at 6:00 a.m. PST, the Potrero Peaking Turbines had the following hours remaining before they reach their 877-hour annual operating limits: Potrero 4: 330.9 hours; Potrero 5: 213 hours; Potrero 6: 198.9 hours; and

1.16 WHEREAS, the ISO has informed Mirant, and Mirant expects, that due to the electrical energy shortage in the State of California and the limited availability of electric generating capacity in the San Francisco Bay Area, the Potrero Peaking Turbines will be required by the ISO to operate for additional hours, which may result in the Potrero Peaking Turbines exceeding the applicable 877-hour per year operating limit set forth in Regulation 9-9-302 and Permit Condition No. 15816; and

1.17 WHEREAS, an immediate circumstance that may require Mirant to operate the Potrero Peaking Turbines in excess of the 877-hour annual operating limit is that the ISO has scheduled an outage beginning on or about March 27, 2001, for Mirant to perform maintenance work deemed necessary by Mirant and the ISO on the utility boiler electrical generating unit at Mirant's Potrero Power Plant. This maintenance outage is expected by Mirant and the ISO to overlap for several days with a scheduled outage at the Hunter's Point Power Plant to perform certain maintenance work on the Hunter's Point utility boiler electrical generating unit and to last for several additional weeks. Due to the nature of the local San Francisco electrical transmitting and generating system, Mirant and the ISO believe that the Potrero Peaking Turbines will be required by the ISO to generate electricity beyond their historic peaking generation usage; and

1.18 WHEREAS, the United States Environmental Protection Agency is expected to issue an Administrative Order in accordance with the federal Clean Air Act (42 U.S.C. § 7413) to Mirant regarding operation of the Potrero Peaking Turbines in excess of the 877-hour annual operating limit; and

1.19 WHEREAS, Mirant is entering into this Agreement for the purpose of obtaining additional operating hours for the Potrero Peaking Turbines to meet expected operating demand from the ISO, DWR, and other California Load Serving Entities (as defined in

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Attachment A to this Agreement) pursuant to Executive Orders D-24-01 and D-28-01;
and

1.20 WHEREAS, the Bay Area AQMD is entering into this Agreement to execute Executive Orders D-24-01 and D-28-01 as ordered by California Governor Gray Davis to provide Mirant additional operating hours for the Potrero Peaking Turbines and to require Mirant to pay a mitigation fee to the local air quality management district for all excess emissions from such operations;

NOW, THEREFORE, in consideration of the mutual promises and covenants contained in this Agreement, and for other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, Mirant and the Bay Area AQMD do hereby agree as follows:

**ARTICLE 2
POTRERO PEAKING TURBINE OPERATION**

2.1 In accordance with Executive Orders D-24-01 and D-28-01 identified in paragraphs 1.10 and 1.12, above, Mirant may operate each of the Potrero Peaking Turbines for more than 877 hours per calendar year for the term of this Agreement and remains subject to the 65 ppmv NOx emission limit in Rule 9-9-302, subject to the terms and conditions of this Agreement.

2.2 Operation of the Potrero Peaking Turbines beyond the 877-hour annual operating limit in accordance with the terms of this Agreement shall be allowed only until the earlier of (1) unless amended by further written agreement in accordance with paragraph 4.13, below, a period of one year from the Effective Date of this agreement; or (2) a declaration by the Governor of California rescinding or otherwise terminating the declaration of a State of Emergency due to the energy shortage in the State of California made by California Governor Gray Davis on January 17, 2001. Either of these occurrences is referred to in the remainder of this Agreement as the "Terminating Event." Unless by the date of the Terminating Event, Mirant has sought and obtained a modification to the Major Facility Review Permit for Plant No. 26 to allow operations of the Potrero Peaking Turbines for more than 877 hours per year, operation of the Potrero Peaking Turbines shall revert to operations under the 877-hour per year operating limit. If, at the time of the Terminating Event, any of the Potrero Peaking Turbines have already operated for more than 877 hours in the then-current calendar year, Mirant shall immediately cease operations of that Potrero Peaking Turbine until the next January 1st. All operations in excess of the 877-hour operating limit in the same calendar year as the Terminating Event shall be deemed to have occurred under the terms of this Agreement.

2.3 The Potrero Peaking Turbines shall be operated by Mirant only under the terms and conditions set forth in Attachment A to this Agreement ("Operating Criteria for the Utilization of Combustion Turbines at Potrero Power Plant"). The Bay Area AQMD understands that the ISO has committed to dispatch the Potrero Peaking Turbines only under the conditions set forth in Attachment A and to provide corroborating evidence of

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such dispatch to Mirant and the Bay Area AQMD. Failure of the ISO to comply with the operating criteria in Attachment A or to satisfy any other requirement, duty, or obligation under this Agreement shall not constitute a breach of the Agreement by Mirant or the Bay Area AQMD. Mirant shall provide to the Bay Area AQMD any information or reports specified in this Agreement. If Mirant does not have such information, Mirant shall undertake all reasonable efforts to obtain such information and to provide such information promptly to the Bay Area AQMD. Mirant shall make all reasonable efforts to obtain the ISO's compliance with the terms of this Agreement.

2.4 Mirant shall complete and provide to the Bay Area AQMD by September 1, 2001, an engineering and cost study of all available retrofit emission controls for reducing NOx emissions from the Potrero Peaking Turbines, including, but not limited to, the options of use of low-sulfur and/or low-nitrogen fuel, combustion modifications, converting to natural gas or dual-fuel firing, and installing low-NOx combustors and selective catalytic reduction.

2.5 Based on the results of the study referenced in paragraph 2.4, above, and in conjunction with the exercise of the Bay Area AQMD's discretion regarding the allocation of Mitigation Fees as set forth in paragraph 3.4, below, Mirant may request, and the Bay Area AQMD may in its sole discretion allocate, a certain portion of the Mitigation Fees set forth in paragraph 3.1, below, to fund installation of retrofit emission controls to reduce NOx emissions from the Potrero Peaking Turbines, pursuant to a Bay Area AQMD Authority to Construct. Upon the commencement of operation of, and demonstration to the satisfaction of the Bay Area AQMD of the actual emission level achieved with, any such retrofit emission controls, the excess NOx emission calculation procedure specified in paragraph 3.1, below, shall be amended to reflect the new NOx emission rate from the affected turbines.

2.6 Execution by Mirant of this Agreement and submission by Mirant to the Bay Area AQMD of the reports and information specified in this Agreement shall, with respect to Condition 15816 and Rule 9-9-302, be deemed to satisfy any and all requirements imposed pursuant to Title V of the Clean Air Act for prompt reporting of deviations from permit conditions.

**ARTICLE 3
MITIGATION FEES**

3.1 **Mitigation Fee Payment.** Mirant shall pay a mitigation fee to the Bay Area AQMD of \$20,000.00 per ton or part of a ton of NOx emitted by any one or more of the Potrero Peaking Turbines resulting from operation of such turbine(s) after the 877th hour of operations for such turbine in calendar years 2001 and 2002. Tons of excess NOx emissions shall be calculated in accordance with the following formula:

[[Emission Factor (65 ppm converted to pounds per mmbtu)] x [[fuel throughput] x [higher heating value (based on generic BAAQMD conversion factor for higher heating value of oil OR fuel-specific higher heating value data supplied by Mirant)]]

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3.2 Mitigation Fee Deposit. Within ten (10) days of the execution of this Agreement, Mirant shall make a lump sum payment to the Bay Area AQMD of four hundred thousand dollars (\$400,000.00) as a deposit on anticipated future mitigation fees. Mitigation fees owed by Mirant in accordance with this Agreement shall first be charged against the Mitigation Fee Deposit described in this paragraph. Incurred mitigation fees in excess of the Mitigation Fee Deposit shall then be made periodically in accordance with paragraph 3.3 of this Agreement, below.

3.3 Mitigation Fee Payments Schedule. Upon depletion of the mitigation fee deposit provided by Mirant pursuant to paragraph 3.2, above, Mirant shall pay the Bay Area AQMD the mitigation fee calculated in accordance with paragraph 3.1 of this Agreement, above, within fifteen (15) business days following the last day of each calendar quarter.

3.4 Mitigation Program. The Bay Area AQMD shall allocate any Mitigation Fees paid by Mirant in the Bay Area AQMD's sole discretion to projects that, in the Bay Area AQMD's sole judgment, will achieve reductions of NOx emissions comparable to the excess NOx emissions resulting from operation of the Potrero Peaking Turbines for which Mirant paid such fees to the Bay Area AQMD. Such NOx emission reduction projects may reduce emissions from mobile, portable, area-wide, or stationary sources.

3.5 Excess NOx Emissions Report. Within ten (10) business days of the end of each month, Mirant shall provide to the Bay Area AQMD a report for each of the Potrero Peaking Turbines, detailing operating hours and fuel usage during the month. Within ten (10) business days of the end of each calendar quarter, Mirant shall provide to the Bay Area AQMD a report in substantially the form set forth in Exhibit B to this Agreement that details operating hours and fuel usage for each of the Potrero Peaking Turbines and a calculation of the excess NOx emissions and of the Mitigation Fee owed to the Bay Area AQMD resulting from operation of such turbine(s) in accordance with paragraph 3.1.

**ARTICLE 4
MISCELLANEOUS PROVISIONS**

4.1 Scope of Agreement. This Agreement is binding upon Mirant and the Bay Area AQMD only with respect to the matters specifically addressed and does not otherwise bind Mirant and the Bay Area AQMD.

4.2 Notices. All notices required pursuant to this Agreement shall be in writing and shall be served either by personal delivery (including by overnight delivery service), by regular mail, postage prepaid, or facsimile, to Mirant and the Bay Area AQMD at the respective addresses set forth below.

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To Mirant:

Ronald M. Kino
Environmental Health & Safety Manager
Mirant California, LLC
1350 Treat Boulevard, Suite 500
Walnut Creek, CA 94596
Telephone: (925) 287-3118
Facsimile: (925) 947-3001

David R. Farabee
Pillsbury Winthrop LLP
50 Fremont Street
San Francisco, CA 94105-2228
Telephone: (415) 983-1000
Facsimile: (415) 983-1200

To the Bay Area AQMD:

William DeBoisblanc
Director of Permit Services
Bay Area Air Quality Management District
939 Ellis Street
San Francisco, CA 94109
Telephone: (415) 749-4704
Facsimile: (415) 749-5030

Brian C. Bunger
Senior Assistant District Counsel
939 Ellis Street
San Francisco, CA 94109
Telephone: (415) 749-4920
Facsimile: (415) 749-5103

4.3 Payments. Any and all payments required under this Agreement shall be made to the Bay Area Air Quality Management District, c/o Brian C. Bunger, Senior Assistant District Counsel, Bay Area Air Quality Management District, 939 Ellis Street, San Francisco, CA 94109.

4.4 Headings. The title headings of the respective articles of this Agreement are inserted for convenience of reference only and shall not be deemed to be part of this Agreement.

4.5 Successors and Assigns. The terms of this Agreement shall inure to the benefit of and be binding upon the Parties and their respective predecessors, successors, subsidiaries, partners, limited partners, agents, principals, and assigns.

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- 4.6 **Severability.** If any provision of this Agreement or the application of this Agreement to either Mirant or the Bay Area AQMD is held by any judicial authority to be invalid, the application of such provision to the other Party and the remainder of this Agreement shall remain in force and shall not be affected thereby, unless such holding materially changes the terms of this Agreement.
- 4.7 **Authority to Bind.** Each of the undersigned represents and warrants that he or she has read and understands and has full and complete lawful authority to grant, bargain, convey, and undertake the rights and duties contained in this Agreement, and that he or she has full and complete lawful authority to bind any respective principals, predecessors, successors, subsidiaries, partners, limited partners, agents and assigns to this Agreement. Each of the undersigned understands and agrees that this representation and warranty is a material term of this Agreement, without which it would not have been executed.
- 4.8 **Understanding of Terms.** Mirant and the Bay Area AQMD hereby affirm and acknowledge that they have read this Agreement, that they know and understand its terms, and that they have signed it voluntarily and on the advice of counsel of their own choosing. The Parties have had the opportunity to consult with their attorneys and any other consultant each deemed appropriate prior to executing this Agreement.
- 4.9 **Governing Law.** This Agreement shall be governed by and construed in accordance with the laws of the State of California.
- 4.10 **Entire Agreement.** The mutual obligations and undertakings of Mirant, on the one hand, and the Bay Area AQMD, on the other hand, expressly set forth in this Agreement are the sole and only consideration of this Agreement and supersede and replace all prior negotiations and proposed agreements between Mirant and the Bay Area AQMD written or oral, on the specific matters addressed in this Agreement. Mirant and the Bay Area AQMD each acknowledges that no other party, nor the agents nor attorneys of any other party, has made any promise, representation or warranty whatsoever (express or implied), not contained herein, to induce the execution of this Agreement. This Agreement constitutes the full, complete and final statement of Mirant and the Bay Area AQMD on the matters addressed by this Agreement.
- 4.11 **Counterparts.** This Agreement may be executed in one or more counterparts, each of which shall have the same force and effect as an original, but all of which together shall constitute one and the same instrument.
- 4.12 **Jointly Drafted.** Mirant and the Bay Area AQMD have jointly prepared this Agreement. This Agreement shall be deemed to have been jointly drafted by the Parties for the purpose of applying any rule of construction to the effect that ambiguities are to be construed against the party drafting the agreement.
- 4.13 **Amendments.** This Agreement may be amended and supplemented only by a written instrument signed by both Mirant and the Bay Area AQMD or their successors-

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in-interest. However, such execution may be in counterparts and, when so executed, shall be deemed to constitute one and the same document.

4.14 **Material Breach.** Any material breach of this Agreement by either Party shall make the agreement subject to termination upon notice by the non-breaching Party.

4.15 **Waiver.** The waiver of any provision or term of this Agreement shall not be deemed as a waiver of any other provision or term of this Agreement. The mere passage of time, or failure to act upon a breach, shall not be deemed as a waiver of any provision or term of this Agreement.

IN WITNESS WHEREOF, the Parties have executed this Agreement on March 30, 2001.

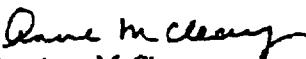
BAY AREA AIR QUALITY MANAGEMENT DISTRICT


By: Ellen Garvey
Title: Executive Officer/Air Pollution Control Officer

Approved as to form:


Brian C. Bungler
Senior Assistant Counsel

MIRANT POTRERO, LLC


By: Anne M. Cleary
Title: President of Mirant Potrero, LLC

Approved as to form:
Pillsbury Winthrop LLP


David R. Farabee
Counsel for Mirant Potrero, LLC

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ATTACHMENT A

Operating Criteria for the Utilization of Combustion Turbines at Potrero Power Plant

Beginning on the Effective Date of this Agreement and terminating on December 31, 2001, then beginning again for each unit at such time as that unit's operating hours in 2002 exceed 877, and terminating on the occurrence of a Terminating Event as described in Paragraph 2.2 of this Agreement, the Potrero Power Plant ("Potrero") Units 4, 5, and 6 ("Potrero Peaking Turbines") may commence operation at any time the requirements specified in Condition 1 (operation to provide local area support), Condition 2 (operation to provide zonal area support) and/or Condition 3 (operation as a system resource) are satisfied.

For purposes of this Agreement, a California Load Serving Entity shall be defined as including the California Independent System Operator (ISO), California Department of Water Resources (DWR) or any California municipal agency, California irrigation district, California water district, California electric cooperative, California investor owned utility, or the Western Area Power Administration ("WAPA"), but only to the extent that the WAPA arranges for sale of the electricity within California.

Condition 1: Local Area Support

The Potrero Peaking Turbines may be used as the last resource committed to satisfy the ISO Operating Procedure for San Francisco under emergency transmission system conditions and to avert firm load shedding in the Greater San Francisco Bay Area ("Bay Area"). The operations of the Potrero Peaking Turbines for local reliability will be limited to conditions associated with the outage of transmission or generation facilities which affect the reliable operations of the transmission network necessary to serve the San Francisco Peninsula area or to avert firm load shedding in the Bay Area. Prior to coming on-line under this Condition, Mirant shall use its best efforts in such conditions to determine that the ISO has implemented the following unit commitment order (unless the action will have an adverse impact on the transmission grid):

1. Hunters Point Unit 4 (utility boiler) and Potrero Unit 3 (utility boiler);
2. Hunters Point Unit 1 (two combustion turbines);
3. Potrero Units 4, 5, and 6 (six combustion turbines).

For purposes of this Agreement, the Greater San Francisco Bay Area consists primarily of the counties of Alameda, Contra Costa, San Francisco, San Mateo and Santa Clara, as served primarily by the Vaca-Dixon, Tesla, Metcalf and Tracy 500/230kV substations

Condition 2: Zonal Area Support

The Potrero Peaking Turbines may be used to avert firm load curtailment in the Northern California area caused by a constraint on Western System Coordinating Council ("WSCC") transmission Path 15. This action will only be in response to a request by the ISO, and the Potrero Peaking Turbines will be called upon only after all available utility boilers in the Northern California area are operating at their maximum available output. Under dispatch from the ISO, Mirant will commit the Potrero Peaking Turbines for support of the North of Path 15 ("NP-15") zone subject to an Environmental Dispatch Procedure established by the ISO in conjunction with the California Air Resources Board ("ARB") and the Bay Area AQMD.

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Condition 3: System Resource

The Potrero Peaking Turbines may be brought on line as a system resource only under one of the following conditions:

1. For sales to a California Load Serving Entity only after a) a declaration by the ISO that actual operating reserves have fallen below 4% and b) to the extent necessary to maintain system reserves at 4% and c) either firm load shedding is occurring or the ISO has given notice to Mirant of imminent interruption of firm load.
2. To replace some or all of the output of a unit at the Contra Costa, Pittsburg or Potrero Power plants operating under the ISO Participating Generator Agreement and which was committed and scheduled to a California Load Serving Entity, or to replace energy that Mirant had committed to supply from outside California and scheduled to a California Load Serving Entity. This provision may only be used for energy that is pre-scheduled with the ISO pursuant to the Western System Coordinating Council Interchange Scheduling and Accounting Subcommittee calendar or the ISO hour-ahead and real-time markets. Prior to the use of the Potrero Peaking Turbines, all other units at the specified power plants that are available to increase their generation will be employed. Operation of each Potrero Peaking Turbine pursuant to the criteria specified in this paragraph 2 shall not exceed 877 hours per calendar year, including for 2001 any hours a turbine has already operated under the conditions specified in this paragraph prior to the effective date of this Agreement. As of March 27, 2001, at 6:00 a.m. Pacific, the Potrero Peaking Turbines had the following hours remaining available for operation under this Condition: Unit 4: 833 hours; Unit 5: 798 hours; and Unit 6: 798 hours.

General Conditions

Compliance with Operating Conditions. Prior to coming on line under any of the above operating conditions, Mirant shall use its best efforts to determine that all applicable terms of the operating conditions are met. If Mirant determines that the ISO has not followed the operating criteria specified in this Attachment A, Mirant shall refuse subsequent requests by the ISO to operate the Potrero Peaking Turbines, unless a) the ISO commits in writing to Mirant and the Bay Area AQMD to conform to the operating criteria in this Attachment A, or b) at the time of a subsequent ISO request to operate, Mirant independently determines, on the basis of reasonable inquiry, that one or more of the operating conditions specified above are satisfied.

Daily Operation Reports. Operation of the Potrero Peaking Turbines beyond the respective 877-hour annual operating limits shall be reported by Mirant by 12:00 noon Pacific following each operating date (report on the operations of the Potrero Peaking Turbines over the weekend or on a holiday will be made on the first business day following the weekend or holiday) to the Bay Area AQMD.

Monthly Operation Reports. Commencing with the month of April 2001, and regardless of whether the 877-hour annual operating limit has been reached for any of the Potrero Peaking Turbines, Mirant shall provide to the Bay Area AQMD a comprehensive monthly summary of each instance (date, start time, end time, reason (specifying the applicable operating condition above)) that the Potrero Peaking Turbines were operating on and after the effective date of this agreement. Mirant shall submit these monthly operating summaries within ten (10) business days of the end of any month in which such operations occurred.



South Coast Air Quality Management District

21865 E. Copley Drive, Diamond Bar, CA 91765-4182
(909) 396-2000 • <http://www.aqmd.gov>

*Office of the Executive Officer
Barry R. Wallerstein, D.Env.
909.396.2100, fax 909.396.3340*

May 16, 2001

Daniel Larcamp
Director, Office of Markets, Tariffs, & Rates
FEDERAL ENERGY REGULATORY COMMISSION
Washington D.C. 20426

Re: San Diego Gas & Electric Company v. Sellers of Energy,
FERC Docket No. EL00-95-017 - Response to Your May 9, 2001 Letter

Dear Mr. Larcamp:

I am pleased to respond to your letter dated May 9, 2001 requesting additional information on nitrogen oxide (NOx) emission costs for electric generators regulated by the South Coast Air Quality Management District (SCAQMD).¹ The SCAQMD is concerned about the appropriateness of including NOx emission costs that are unique to the SCAQMD in any statewide "proxy market clearing price" for electricity. I understand that this issue is particularly important, because it not only relates to the March 9, 2001 Order issued by the Federal Energy Regulatory Commission (FERC) relating to refunds, but also to FERC's April 26, 2001 Order establishing a mitigation and monitoring plan for wholesale electricity prices in the State of California.

Your request for information is timely, because recently on May 11 our Governing Board amended SCAQMD regulations (RECLAIM) to provide significant relief to electric generators in response to the ongoing electricity crisis. Since these rule amendments, in effect, codified the SCAQMD Executive Orders that you are requesting information about, I will also be discussing them in the context of my responses to your questions. Before addressing your questions, I believe it will be helpful to provide you with some background information on the RECLAIM

¹ Cantor Fitzgerald and your letter refer to us as the Southern California Air Quality Management District. However, there is no entity known as the Southern California AQMD. Our jurisdiction is much more limited, and does not cover all of Southern California. The SCAQMD includes all of Orange County, and the non-desert portions of Los Angeles, Riverside, and San Bernardino Counties, as well as the Palm Springs/Indio area. The South Coast AQMD includes 12,000 square miles and 15 million people.

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program, which created this ability, which only exists in the SCAQMD and not elsewhere in California, to trade NOx emission credits or RTCs (RECLAIM Trading Credits). Thereafter, I will provide answers to your specific questions. Finally, I will provide some additional comments about the significance of the information you requested.

RECLAIM Program Description

The Regional Clean Air Incentives Market (RECLAIM) program was adopted by the SCAQMD Governing Board in October 1993 and the program was implemented in 1994. It applies only within the SCAQMD and has no applicability in other parts of California. The program was developed with widespread industry and electrical utility support and represents a significant departure from traditional command-and-control regulations. Under command-and-control, facilities would be required to purchase NOx emission reduction credits (ERCs) at the time of construction to offset all NOx emissions from their future intended operation. As a result, these purchases of ERCs would represent a sunk cost and further purchases would not be required as a result of the operation.

On the other hand, facilities under the RECLAIM program were issued a declining annual emissions allocation based on their past maximum production levels. Allocations are issued in the form of RECLAIM Trading Credits (RTCs), which represent pounds of NOx allowed to be emitted. Each RTC is valid for a period of one year and may be traded or sold. All of the medium and larger sized fossil fuel fired power plants in the District were in the RECLAIM program until the program was changed as explained below. Today, several hundred other industrial facilities remain in the program. There are presently no power generators over 50 MW participating in the program. A RECLAIM source may choose to install emission control equipment that enables it to operate within its allocation, or may exceed its emissions allocation, so long as it acquires sufficient RTCs from other sources. (Likewise, a source that emits at lower levels than its allocation may sell the excess at whatever price the market will bear to facilities needing RTCs.) RTCs must be used for the year they are issued. If not used, they expire. Most, if not all power plant owners chose to purchase RTCs instead of adding control equipment. As a result, power plant owners were able to defer until now the costs of installing advanced pollution control equipment such as selective catalytic reduction (SCR) on their large power generation boilers.²

From the start of RECLAIM, the price of NOx RTCs had remained relatively stable until the summer of 2000, at which time an increased demand for power generation resulted in the electric power industry purchasing inordinately large quantities of RTCs. This action resulted in

² Under command-and-control, they would have been required to install this control equipment years ago in the mid-1990's.

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the near depletion of available RTCs and caused the price of NOx RTCs for Compliance Year 2000 to jump from approximately \$4,284 per ton traded in 1999 to approximately \$45,609 per ton traded during 2000. This sharp rise in RTC prices caused havoc in the RECLAIM market, particularly to those non-power-producing industry businesses that could not install pollution controls and could not compete with the power producers for the RTCs they needed for compliance. (Power producers could pass on these increased costs.) Even for those facilities that could install air pollution control equipment, the inevitable time required for permitting and installation of controls forced them into the wildly escalating RTC market.

As a result, on January 11, 2001, SCAQMD staff proposed rule amendments for the RECLAIM program which would eliminate the need for power-producing facilities to purchase RTCs in order to comply with their emissions allocations. On February 6, 2001, I issued SCAQMD Executive Order #01-02, which immediately allowed large power-producing facilities (over 50 MW) to exceed their emissions allocation by paying a mitigation fee of \$7.50 per pound of NOx emitted in excess of their allocation. (This order has now been replaced by SCAQMD Executive Order #01-03, making a technical correction.) The Executive Order was issued pursuant to SCAQMD Rule 118, authorizing suspension of SCAQMD rules to alleviate an emergency as declared by the Governor. Since then, the Order has been extended in 10-day increments as allowed by Rule 118. The relief provided by the Executive Order has now been formally codified by the SCAQMD Board's amendment of RECLAIM on May 11, 2001. The effect of the Executive Order and the new RECLAIM amendments was to decouple compliance costs of power producers from the RTC prices paid by other facilities that remain in RECLAIM.

I will now address the specific questions you have raised in your letter.

Responses to FERC Questions

Q-1. Please explain how the provisions of the Executive Order apply to and what are the practical implications for electric generators. Please list the generating units to which this Order applies. What are the cost implications of deducting RTCs from the facility's allocations for the subsequent compliance year 2003?

A. As indicated earlier in this letter, SCAQMD Executive Order #01-03 allowed the power plant operators to exceed their RECLAIM NOx allocations and provided a mechanism to pay a mitigation fee of \$7.50 per pound of NOx instead of purchasing RTCs to cover any exceedances. In effect, power generators were no longer constrained from operation by their emissions allocation and the cost of exceeding their allocation is now fixed at a price well below the then market price of RTCs. (FERC's Notice of Proxy Price for February referred to a February RTC market price of over \$40.00 per lb.)

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SCAQMD Executive Order #01-03 was available to all RECLAIM power plant operators with 50 or more megawatts of generation who wished to take advantage of it. To date, four separate facilities have sought use of the Executive Order. These power plant facilities are listed in Table I below. Since RECLAIM provides an allocation for the entire facility, rather than on a generating unit by unit basis, the Executive Order applied to all the generating units within the facility. Consequently, a third party could not determine a specific mitigation fee for a specific generating unit under the RECLAIM program.

Under the RECLAIM rules prior to the May 11 amendment, facilities that exceeded their allocation had those excess emissions deducted from their next year's allocation in order to make the environment whole. Under SCAQMD Executive Order #01-03 and the amended RECLAIM rules, power-producing facilities may further delay this deduction by two years, at which time it is anticipated that full control equipment will be in place, and the demand and supply of electricity will come into balance. In addition, the mitigation fees will be used by the SCAQMD to generate NOx emission reductions that will be credited to offset any deductions from the power-producing facilities. As a result, the SCAQMD sees no significant additional costs stemming from the subsequent year deductions. Indeed, the SCAQMD has already identified emission reduction projects that will create enough NOx reductions to fully compensate for power plant NOx emission exceedances that occurred in the first quarter of 2001.

Q-2. Over what period has the suspension of rules for RECLAIM-power-producing facilities having the capacity to produce 50 MW or more been in effect?

A. The suspension of rules for RECLAIM-power-producing facilities has been in effect since February 6, 2001 and the substantive relief provided by the suspension continues to remain in effect as a result of the May 11, 2001 RECLAIM rule amendments. Under the May 11 RECLAIM amendments, the power producers are removed from the RECLAIM RTC market through 2003 and possibly longer. If they emit in excess of their allocation, they need only pay a \$7.50 per lb. mitigation fee. The SCAQMD is required by the RECLAIM rules to use that money to obtain NOx emission reductions from mobile sources, such as cleaner marine engines. Existing large power producers are now prohibited from using RTCs acquired after January 11, 2001 to compensate for excess emissions occurring after April 1, 2001. They now pay mitigation fees instead, which are not a tradable instrument.

Q-3. Facility operators are to pay the District a mitigation fee at the time of the quarterly or annual report required by Rule 2004. Have these payments and reports been made by electric generators? If so, please provide the Commission a copy of the reports and records of the payments. If the payments and reports have not been received, when do you expect them to be made? Please provide the Commission a copy of the reports and records of the payments when you receive them.

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A. Facility operators need only pay a mitigation fee if their actual reported NOx emissions exceeds their annual allocation. Pursuant to SCAQMD Rule 2004, facility operators are provided 30 days after the first three compliance quarters and 60 days after the last quarter to reconcile their emissions with their annual allocation. By the end of the reconciliation period, facilities pay a mitigation fee if there are emission exceedances. As a result, mitigation fees are not paid at the time of exceedance, and therefore may not be determined on a real time basis. Thus, there is no way for a third party to determine when mitigation fees may need to be paid. In addition, no mitigation fees are paid for emissions that are covered by the facility's allocation. Further, if mitigation fees are paid at all, the amount is unique to each facility and is not tradable. Therefore, mitigation fees should not be incorporated as part of a proxy market-clearing price.

During the reconciliation period following the RECLAIM compliance quarter ending March 31, 2001, four power-producing facilities reported NOx emissions in excess of their RTC holdings and paid mitigation fees. As a result, these facilities submitted a mitigation fee in the amount of \$7.50 per pound of excess NOx emissions. Table I below summarizes these mitigation payments. (Some RECLAIM power producers chose not to use the Executive Order and chose to remain in the RECLAIM market, an option which they no longer have.)

TABLE I

Company Name	Payment (\$)
AES Huntington Beach	2,044,290
AES Alarnitos	2,382,375
AES Redondo Beach	989,333
Reliant Energy - Etiwanda	1,184,160
Total	6,600,158

Attached to this letter as Exhibit A are copies of the records of payments made by these facilities as well as their quarterly reports. Please note that these quarterly reports only reflect the facility's reported emissions in that particular quarter. Additional information such as the facility's allocation and cumulative emissions would be required to verify the amount of exceedance. In addition, it should be noted that facility emission reports are subject to field audit by SCAQMD compliance staff and may require revision. The above payments were based on the facility's calculation of emissions in excess of its allocations.

Q-4. The Executive Order requires facilities to provide written notification 24 hours prior to generating excess emissions. Please provide the Commission copies of these notifications.

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A. The SCAQMD staff has been in numerous meetings with the major power producers and knew that they would be using the Executive Order. As a result, staff waived the written notice requirements. Under the rule amendments adopted on May 11, 2001, advance notice is not required.

Q-5. The Commission is relying on one emissions broker for information on NOx emission allowance costs. Are there other brokers? If so, please identify them.

A. Before answering this question, the SCAQMD must first point out that since the issuance of SCAQMD Executive Order #01-03 on February 6, 2001, any reported brokerage prices for NOx RTCs would not reflect the cost of RTCs for RECLAIM-power-producing facilities. As you are aware, these costs are now capped at \$7.50 per pound of excess NOx emissions by both the Order and the amended RECLAIM rules.

As to your specific question, there are several brokers participating in the RECLAIM trading market. Similar to Cantor Fitzgerald, most brokers serve as a third party assisting both buyers and sellers in negotiating RTC prices. Many of these brokers have a vested interest in higher RTC prices, since their commissions are based on these prices. Another major participant in the RTC market is ACE. This firm periodically holds an auction where potential buyers and seller input their desired prices into the system. Based on the bidding prices, the ACE system creates a single "market price." Sellers who bid at "market price" or lower and buyers who bid at "market price" or higher will be able to participate at the market price. This process is different from the method used by Cantor Fitzgerald and other brokers who serve as intermediary in the direct price negotiation between two parties. A list of the brokers, both active and non-active, that have been participating in the RECLAIM market is also attached as Exhibit B for your information.

General Comments and Suggestion for a Technical Conference

Based on the above information, I believe that you will conclude that the inclusion of emission costs, particularly as suggested using SCAQMD-specific NOx RTC prices as reported by Cantor Fitzgerald, is inappropriate in setting state-wide market-clearing prices for electricity. The use of NOx RTC prices as input for a market clearing price would inevitably lead to potential upward manipulation of NOx RTC prices, thereby potentially undoing the SCAQMD's work in separating out the power-producing facilities from RECLAIM. The SCAQMD has recently observed situations in which power producers have bought RTCs at prices greatly exceeding market prices from out-of-state companies that had purchased RTCs that same day at market prices. Also, the inclusion of emissions costs in the market-clearing price would undermine the SCAQMD's program by encouraging the use of dirtier equipment in an attempt to maintain a high market-clearing price for all units. Inclusion of emissions costs could even

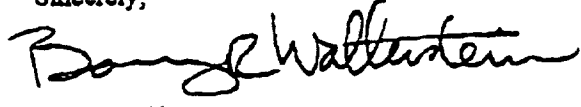
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provide an incentive for facilities to delay installing needed controls in order to keep their emissions high, resulting in higher mitigation fees and higher proxy prices. Further, we understand that the proxy prices will be allowed for all power producers, even for those that are operating within their allocations, which cost them nothing.

The SCAQMD's Governing Board is extremely concerned that NOx emission costs should not be used to inappropriately calculate higher prices for power in California and to create incentives for more pollution. However, SCAQMD has acted expeditiously to alleviate the power crisis by amending its rules to allow power producers to exceed otherwise applicable emission limits upon compliance with specific conditions. SCAQMD would be pleased to meet in a technical conference or other appropriate forum with FERC representatives to discuss this matter further. Should you have any questions, please call me at (909) 396-2100

Sincerely,



Barry R. Wallerstein, D.Env.
Executive Officer

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cc: Michael P. Kerry, Executive Officer, California Air Resources Board
Jack P. Broadbent, Director, Air Division, EPA Region IX

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Appendix F					
Morro Bay Daily NOx Emissions					
Date	Morro Bay 1	Morro Bay 2	Morro Bay 3	Morro Bay 4	Total
1/1/2001	0	767	502	507	1,777
1/2/2001	0	796	1,619	1,147	3,562
1/3/2001	0	1,179	829	623	2,632
1/4/2001	40	1,012	362	441	1,855
1/5/2001	983	1,148	525	725	3,381
1/6/2001	851	26	426	538	1,841
1/7/2001	246	0	389	251	886
1/8/2001	423	0	963	1,350	2,736
1/9/2001	525	0	1,754	1,753	4,032
1/10/2001	1,115	0	1,808	1,919	4,842
1/11/2001	3,167	0	2,363	3,007	8,537
1/12/2001	700	0	1,452	2,338	4,489
1/13/2001	514	0	1,633	2,089	4,236
1/14/2001	207	0	1,007	1,380	2,594
1/15/2001	2,666	0	2,685	2,019	7,370
1/16/2001	2,436	0	2,662	2,164	7,263
1/17/2001	1,937	0	2,023	1,944	5,903
1/18/2001	3,908	0	1,902	1,927	7,737
1/19/2001	1,318	0	2,163	2,144	5,625
1/20/2001	1,094	0	1,964	2,116	5,175
1/21/2001	784	0	2,024	1,824	4,632
1/22/2001	2,291	0	1,761	2,043	6,095
1/23/2001	1,876	0	1,775	1,867	5,518
1/24/2001	1,293	0	1,853	2,389	5,535
1/25/2001	1,123	0	2,296	2,169	5,588
1/26/2001	3,376	0	2,117	1,668	7,161
1/27/2001	3,372	0	1,657	1,653	6,682
1/28/2001	669	0	1,484	1,476	3,630
1/29/2001	2,510	46	1,684	1,725	5,966
1/30/2001	2,698	0	1,964	1,997	6,660
1/31/2001	3,362	0	2,160	2,159	7,681
2/1/2001	3,331	614	1,547	1,867	7,359
2/2/2001	3,374	0	1,130	1,259	5,762
2/3/2001	3,655	0	1,297	1,462	6,415
2/4/2001	2,405	876	1,185	1,578	6,043
2/5/2001	764	2,508	1,361	1,453	6,085
2/6/2001	265	272	2,509	942	3,988
2/7/2001	3,490	735	3,130	3,165	10,519
2/8/2001	3,222	4,085	2,985	2,304	12,596
2/9/2001	1,234	3,534	1,347	1,730	7,844
2/10/2001	0	2,374	1,518	1,758	5,651

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2/11/2001	0	1,936	1,351	1,627	4,914
2/12/2001	0	2,304	1,690	1,775	5,769
2/13/2001	0	3,861	1,198	1,502	6,561
2/14/2001	0	1,988	1,663	1,619	5,270
2/15/2001	0	2,058	1,546	1,415	5,020
2/16/2001	0	1,801	1,419	1,361	4,580
2/17/2001	0	3,247	2,109	1,462	6,818
2/18/2001	0	3,496	1,657	1,718	6,871
2/19/2001	0	2,153	1,582	1,781	5,516
2/20/2001	0	2,957	1,513	1,927	6,397
2/21/2001	0	2,252	1,476	1,602	5,329
2/22/2001	0	1,857	1,484	1,389	4,731
2/23/2001	0	2,430	945	1,297	4,672
2/24/2001	0	2,211	1,522	1,609	5,342
2/25/2001	0	1,440	1,318	1,387	4,145
2/26/2001	545	1,586	1,167	1,622	4,920
2/27/2001	1,783	2,105	1,547	56	5,491
2/28/2001	2,347	2,441	1,772	0	6,559
3/1/2001	2,221	2,146	1,524	0	5,891
3/2/2001	4,094	16	1,045	0	5,155
3/3/2001	4,177	177	2,035	0	6,389
3/4/2001	3,540	724	1,675	0	5,939
3/5/2001	3,502	1,577	1,569	0	6,648
3/6/2001	2,914	1,653	1,106	0	5,673
3/7/2001	1,679	1,747	979	0	4,405
3/8/2001	2,946	1,719	1,018	0	5,683
3/9/2001	786	2,143	1,146	0	4,075
3/10/2001	2,676	2,036	1,312	0	6,024
3/11/2001	763	2,570	1,571	0	4,904
3/12/2001	1,983	1,657	1,406	0	5,045
3/13/2001	2,009	2,005	1,006	0	5,019
3/14/2001	2,935	1,472	1,478	0	5,884
3/15/2001	2,373	2,295	1,526	0	6,194
3/16/2001	2,553	2,006	1,585	0	6,144
3/17/2001	2,505	1,851	1,232	0	5,587
3/18/2001	2,026	1,730	1,297	0	5,053
3/19/2001	2,965	1,570	1,128	0	5,662
3/20/2001	3,843	2,081	1,439	0	7,362
3/21/2001	3,278	1,964	1,146	0	6,387
3/22/2001	2,782	1,487	2,040	0	6,310
3/23/2001	2,509	1,985	1,409	0	5,903
3/24/2001	3,064	1,772	1,323	0	6,160
3/25/2001	3,143	1,844	1,195	0	6,182
3/26/2001	2,427	2,280	1,206	0	5,914
3/27/2001	2,281	2,272	1,356	0	5,910
3/28/2001	2,387	2,217	1,448	0	6,052
3/29/2001	2,285	2,362	1,247	0	5,894
3/30/2001	2,198	1,746	1,202	0	5,145

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3/31/2001	4,548	2,211	1,400	0	8,159
4/1/2001	1,892	2,105	1,509	0	5,507
4/2/2001	4,689	2,790	1,776	0	9,255
4/3/2001	3,703	2,450	1,839	0	7,993
4/4/2001	3,018	1,856	1,498	0	6,371
4/5/2001	2,229	1,999	1,316	0	5,545
4/6/2001	1,990	2,004	1,789	0	5,783
4/7/2001	1,688	2,438	1,905	0	6,031
4/8/2001	400	924	1,969	0	3,293
4/9/2001	2,318	2,348	1,704	0	6,370
4/10/2001	2,173	2,157	1,658	0	5,988
4/11/2001	2,739	2,042	1,400	0	6,181
4/12/2001	2,161	2,307	1,419	0	5,886
4/13/2001	2,390	1,935	1,307	0	5,632
4/14/2001	2,123	1,781	1,355	249	5,508
4/15/2001	2,170	1,587	947	93	4,798
4/16/2001	2,689	1,777	1,182	326	5,974
4/17/2001	2,377	1,580	1,288	226	5,472
4/18/2001	2,246	1,319	948	586	5,099
4/19/2001	2,098	1,163	1,466	169	4,897
4/20/2001	2,976	1,825	438	105	5,344
4/21/2001	1,230	2,132	316	1,055	4,733
4/22/2001	415	3,171	0	2,461	6,047
4/23/2001	1,915	1,754	0	2,391	6,060
4/24/2001	2,991	2,583	0	1,279	6,853
4/25/2001	1,471	2,006	0	2,279	5,756
4/26/2001	2,990	1,423	0	1,203	5,615
4/27/2001	3,326	1,821	0	849	5,996
4/28/2001	3,673	1,818	0	966	6,457
4/29/2001	1,748	1,769	0	1,107	4,625
4/30/2001	1,728	1,760	0	1,098	4,587
5/1/2001	1,385	1,370	0	954	3,710
5/2/2001	2,872	1,808	0	1,144	5,824
5/3/2001	2,727	1,673	0	1,144	5,545
5/4/2001	3,114	1,512	0	1,362	5,988
5/5/2001	1,586	2,286	0	1,652	5,524
5/6/2001	1,539	2,787	0	1,410	5,736
5/7/2001	4,394	2,127	0	1,390	7,912
5/8/2001	4,558	1,749	0	1,087	7,395
5/9/2001	3,868	1,821	0	1,036	6,725
5/10/2001	4,388	1,898	0	1,161	7,447
5/11/2001	2,724	1,907	0	1,642	6,273
5/12/2001	2,041	1,652	258	1,167	5,118
5/13/2001	3,129	1,725	139	1,087	6,080
5/14/2001	2,318	1,956	400	1,152	5,826
5/15/2001	1,514	1,772	1,354	1,102	5,742
5/16/2001	994	1,206	1,989	1,230	5,419
5/17/2001	813	1,357	2,636	1,333	6,139

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5/18/2001	488	1,350	2,868	872	5,578
5/19/2001	426	1,243	3,247	1,356	6,273
5/20/2001	455	1,012	2,454	2,076	5,998
5/21/2001	421	1,344	2,717	1,055	5,537
5/22/2001	1,735	1,670	1,379	1,100	5,884
5/23/2001	1,532	1,951	1,278	1,249	6,011
5/24/2001	934	1,581	712	1,467	4,694
5/25/2001	523	1,758	1,121	1,326	4,727
5/26/2001	464	1,593	1,057	1,404	4,519
5/27/2001	0	1,109	1,188	1,759	4,056
5/28/2001	45	1,241	1,209	1,665	4,159
5/29/2001	814	832	920	1,328	3,894
5/30/2001	1,590	1,204	755	2,412	5,960
5/31/2001	2,426	2,346	2,233	2,390	9,394
6/1/2001	687	958	2,123	2,321	6,089
6/2/2001	705	1,077	1,722	2,330	5,834
6/3/2001	516	467	1,998	2,182	5,162
6/4/2001	826	806	1,577	2,180	5,389
6/5/2001	951	625	2,054	2,011	5,641
6/6/2001	536	599	1,174	1,298	3,607
6/7/2001	500	1,803	1,927	1,679	5,910
6/8/2001	315	923	2,079	1,890	5,207
6/9/2001	287	716	1,094	1,237	3,333
6/10/2001	288	394	1,159	1,260	3,100
6/11/2001	288	360	1,425	1,607	3,681
6/12/2001	816	964	900	1,574	4,255
6/13/2001	571	951	1,192	1,807	4,521
6/14/2001	446	0	988	1,289	2,723
6/15/2001	566	0	1,085	1,301	2,952
6/16/2001	523	0	1,079	1,473	3,075
6/17/2001	347	332	323	594	1,596
6/18/2001	1,246	1,041	901	1,241	4,429
6/19/2001	1,502	1,135	999	1,739	5,376
6/20/2001	1,030	864	1,430	1,688	5,012

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Appendix G-1**

**EXECUTIVE ORDER D-24-01
by the
Governor of the State of California**

WHEREAS, on January 17, 2001, I proclaimed a State of Emergency to exist due to the energy shortage in the State of California; and

WHEREAS, there is a high probability that the electricity supply shortage will continue to cause rolling blackouts throughout California affecting millions of Californians; and

WHEREAS, all reasonable conservation, allocation, and service restriction measures will not alleviate this energy supply emergency; and

WHEREAS, the energy supply emergency poses a threat to public health, safety, and welfare;

NOW, THEREFORE, I, Gray Davis, Governor of the State of California, by the virtue of the power and authority vested in me by the Constitution and statutes of the State of California, do hereby issue this order to become effective immediately:

IT IS ORDERED that the local air pollution control and air quality management districts (hereinafter "districts") shall modify emissions limits that limit the hours of operation in air quality permits as necessary to ensure that power generation facilities that provide power under contract to the Department of Water Resources are not restricted in their ability to operate. The districts shall require a mitigation fee for all applicable emissions in excess of the previous limits in the air quality permits. The Board is directed to ensure that appropriate modifications are made in all applicable permits of the districts or other local or regional agencies (hereinafter "agencies"). In the event that such modifications do not occur expeditiously, the Board or the Executive Officer shall immediately exercise the powers of the districts or agencies and modify the permits consistent with this order. In exercising the powers of the districts or agencies, the Board or the

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Executive Officer shall not be required to comply with the provisions of the Administrative Procedure Act, or with the normally required notice and hearing procedures specified in Division 26 of the Health and Safety Code.

IT IS FURTHER ORDERED that the Board shall establish an emissions reduction credit bank using emissions reductions from all available sources. Such credits shall be made available through the Board to powerplant peaking sources that need emissions offsets in order to add new or expanded peaking capacity for the summer peak season in 2001. Such credits shall be provided to such facilities at up to the market rate for emissions reduction credits. In the case of a powerplant that agrees to sell its power under contract to the Department of Water Resources, the State of California will make available where necessary and available the required emissions credits at up to a 50 percent reduction. In order to maximize the amount of electrical generating

capacity that can be created with available funding, emissions reduction credits for new generation capacity shall be made available to facilities where necessary and available. Proceeds from the sales of these emissions reduction credits shall be made available to fund emissions reduction programs in the air district where the new or expanded facility is located.

IT IS FURTHER ORDERED that the Board shall make its remaining appropriated funds immediately available for the purchase of emissions offset credits for its emissions reduction credit bank or that of any district.

IT IS FURTHER ORDERED that the Board may contract for the services of necessary qualified personnel to perform these functions. Each is authorized to enter into such contracts as expeditiously as possible and for this purpose shall be exempt from the provisions of the Government Code and the Public Contract Code applicable to state contracts, including, but not limited to, advertising and competitive bidding requirements, to the extent that they would prevent, hinder, or delay the prompt mitigation of the effects of this emergency.

IT IS FURTHER ORDERED that this order shall expire on December 31, 2001, unless extended by further executive order responding to the continued need for emergency action to deal with the electricity emergency or unless terminated by proclamation of the Governor or concurrent resolution of the Legislature that the state of emergency has ended.

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The activities herein are authorized to be carried out pursuant to the Emergency Services Act, Government Code Sections 8550 et seq.

I FURTHER DIRECT that as soon as hereafter possible, this order be filed in the Office of the Secretary of State and that widespread publicity and notice be given to this order.

IN WITNESS WHEREOF, I have hereunto set my hand and caused the Great Seal of California to be affixed this 8th day of February 2001.

Governor of California

ATTEST:

Secretary of State

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**Appendix G-2
EXECUTIVE ORDER D-28-01
by the
Governor of the State of California**

WHEREAS, on January 17, 2001, I proclaimed a State of Emergency to exist due to the energy shortage in the State of California; and

WHEREAS, there is a high probability that the electricity supply shortage will continue to cause rolling blackouts throughout California affecting millions of Californians; and

WHEREAS, all reasonable conservation, allocation, and service restriction measures will not alleviate this energy supply emergency; and

WHEREAS, this energy supply emergency poses a threat to public health, safety, and welfare and requires the siting of new powerplants, increasing the output from operating powerplants, and bringing powerplants that are not currently in operation back on-line to ensure reliability of the grid and delivery of power in the State;

NOW, THEREFORE, I, GRAY DAVIS, Governor of the State of California, by virtue of the power and authority vested in me by the Constitution and statutes of the State of California, do hereby issue this order to become effective immediately:

IT IS ORDERED that the California Energy Resources Conservation and Development Commission (hereinafter "Energy Commission") and all other reviewing agencies shall have the authority to modify their procedural requirements, including the timelines for notices and hearings in the Warren-Alquist Act and implementing regulations and other applicable statutes and regulations for projects covered by Executive Orders D-22-01, D-24-01, D-25-01, and D-26-01. Procedures established by the Energy Commission and other reviewing agencies for state energy projects in accordance with these orders are exempt from the Administrative Procedure Act (Chapters 3.5, 4.5, and 5 of the California Government Code).

IT IS FURTHER ORDERED that all agencies involved in the expeditious implementation of Executive Orders D-22-01, D-24-01, D-25-01, and D-26-01 shall follow substantive requirements designed to achieve environmental protection and the protection of public health and safety to the maximum extent consistent with the prompt execution of those executive orders.

IT IS FURTHER ORDERED that the Energy Commission, in addition to expediting the processing of Applications for Certification for peaking or renewable powerplants pursuant to Public Resources Code section 25705 and

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Executive Order D-26-01, shall expedite the processing of Applications for Certification for peaking or renewable powerplants for construction and operation by September 30, 2001. Peaking or renewable powerplants that have a current contract with the Independent System Operator and can be on-line by September 30, 2001, may also apply to be permitted by the Energy Commission under the emergency siting process. All proposals processed pursuant to Public Resources Code section 25705 and Executive Order D-26-01 or this order shall be considered emergency projects under Public Resources Code section 21080(b)(4).

IT IS FURTHER ORDERED that the authority provided to local air pollution control and air quality management districts (hereinafter "districts") and the Air Resources Board in the first ordering paragraph of Executive Order D-24-01 shall also apply to any power generating facility, including any previously permitted existing power generating facility that is not currently operating, as necessary to ensure reliability of the grid and delivery of power in the State. No permit modification (or reinstatement and modification) under Executive Order D-24-01 or this Order shall be valid for a period of more than 3 years from the date of this Order. The authority to modify permits for the purposes identified above shall also include the authority to modify other applicable conditions for those purposes. In exercising the powers to modify (or reinstate and modify) permits and other applicable conditions, districts shall not be required to comply with the notice and hearing requirements of Division 26 of the Health and Safety Code.

IT IS FURTHER ORDERED that this order shall expire on December 31, 2001 unless extended by further executive order responding to the continued need for emergency action to deal with the electricity emergency or unless terminated by proclamation of the Governor or concurrent resolution of the Legislature that the state of emergency has ended.

The activities herein are authorized to be carried out pursuant to the Emergency Services Act, Government Code Sections 8550 et seq.

I FURTHER DIRECT that as soon as hereafter possible, this order be filed in the Office of the Secretary of State and that widespread publicity and notice be given to this order.

IN WITNESS WHEREOF I have hereunto set my hand and caused the Great Seal of the State of California to be affixed this the seventh day of March 2001.

/s/ Gray Davis
Governor of California

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Appendix H					
Plant Capacity Located in Air Districts					
Air District	Owner	Plant	MW	% MW	Type
BAAQMD	Mirant	Potrero	362		ST/CT
BAAQMD	Mirant	Contra Cost	672		ST
BAAQMD	Mirant	Pittsburg	1,906		ST
BAAQMD	Duke Energy	Oakland	165		CT
BAAQMD	Total		3,105	18.1%	
MBUAPCD	Duke Energy	Moss Landing	1,489	8.7%	CT
MDAQMD	Reliant Energy	Coolwater	627	3.7%	CC
SBCAPCD	Reliant Energy	Ellwood	56	0.3%	CT
SCAQMD	AES/Williams	Huntington Beach**	563		ST/CT
SCAQMD	AES/Williams	Redondo Beach	1,310		ST
SCAQMD	AES/Williams	Alamitos	2,083		ST/CT
SCAQMD	Dynergy/NRG	Long Beach	580		CC
SCAQMD	Dynergy/NRG	El Segundo	1,020		ST
SCAQMD	Reliant Energy	Etiwanda	1,024		ST/CT
SCAQMD	ThermoEcotek*	Riverside	126		ST
SCAQMD	ThermoEcotek*	Mountainview	154		ST
SCAQMD	Total		6,860	40.1%	
SDCAPCD	Duke/Port of SD	South Bay	709		ST/CT
SDCAPCD	Dynergy/NRG	Cabrillo II	281		CT
SDCAPCD	Dynergy/NRG	Encina/Cabrillo I	963		ST
SDCAPCD	Total		1,953	11.4%	
SLOAPCD	Duke Energy	Morro Bay**	1,001	5.8%	ST
VCAPCD	Reliant Energy	Mandalay	550		ST/CT
VCAPCD	Reliant Energy	Ormond Beach	1,475		ST
VCAPCD	Total		2,025	11.8%	
	Total		17,116		

* - AES purchased Thermo Ecotek's plants in fall, 2001.
** - Duke has expanded the capacity of Morro Bay and AES has refurbished 2 units at Huntington Beach

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Appendix I				
Summary of Air District Regulations and Rules				
Owner	Plant	MW	Air District Rule No.	Rule Summary
Duke Energy	Morro Bay	1,001	SLOAPCD Rule 429-D.1.b-c	NOx <56 ppm; 1/01-<10 ppm or 3.5 tpd
Duke Energy	Moss Landing	1,489	MBUAPCD Rule 431-3.7	NOx <90 ppm rate; 5/1-10/31 <9.64 tpd; 1/01-1 unit<10 ppm; 8/02-2 units<10 ppm, <0.30#/MMBtu
Duke Energy	Oakland	165	BAAQMD Reg. 9 Rule 11, 9-9-112, 301	CT=5000 hrs/yr all 3 units, NOx <42 ppm
Mirant	Pittsburg	1,906	BAAQMD Reg. 9 Rule 11, 9-11-309	Advanced Technology Alternative Emission Control Plan- #MMBtu=1998, 0.160, 1999, 0.115, 2000: 0.105
Mirant	Contra Cost	672	BAAQMD Reg. 9 Rule 11, 9-11-309	See Pittsburg
Mirant	Potrero	362	BAAQMD Reg. 9 Rule 11, 9-11-309, Reg. 9 Rule 11, 9-9-112, 301	See Pittsburg, CTs<877 hrs/yr, NOx<65 ppm; 3/01, \$10/# NOx
AES/Williams	Alamitos	2,083	SCAQMD RECLAIM, Rule 1134	RTCs, Peaking CT<200 hrs/yr
AES/Williams	Huntington Beach	563	SCAQMD RECLAIM, Rule 1134	RTCs, Peaking CT<200 hrs/yr
AES/Williams	Redondo Beach	1,310	SCAQMD RECLAIM	RTCs
ThermoEcotek*	Riverside	126	SCAQMD RECLAIM	RTCs
ThermoEcotek*	Mountainview	154	SCAQMD RECLAIM	RTCs
Dynergy/NRG	El Segundo	1,020	SCAQMD RECLAIM	RTCs
Dynergy/NRG	Long Beach	580	SCAQMD RECLAIM, Cstl Cmm	RTCs, Coastal Comm<34% CF
Reliant Energy	Cool Water	627	MDAQMD Rule 1158	Rule 1158, '00, 1387 NOx tpy, '01, 1350 tpy
Reliant Energy	Ellwood	56	SBCAPCD Rule 431.2	Rule 431.2, CT<200 hrs/yr
Reliant Energy	Etiwanda	1,024	SCAQMD RECLAIM, Rule 2012(F)	RTCs; Peaking CT<1300 hrs/yr
Reliant Energy	Mandalay	550	VCAPCD Rule 59	Rule 59-ppm, CT<200 hrs/yr, 8/00, \$4k/hr, 1/01, \$6k/hr
Reliant Energy	Ormond Beach	1,475	VCAPCD Rule 59	Rule 59-ppm
Dynergy/NRG	Encina/Cabrillo I	963	SDCAPCD Rule 69	Cap: '00: 1100 tons NOx/Yr, '01: \$7.50/# NOx (v 407 tpy)

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Dynergy/NRG	Cabrillo II-CT	281	SDCAPCD	Rule 69.3	42 ppm gas, 65 ppm oil; <877 hrs per yr; '01: \$7.50/# NOx
Duke/Port of SD	South Bay 1-4	709	SDCAPCD	Rule 69	Cap. '00:1000 tons NOx/Yr, '01 \$7.50/# NOx

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Appendix J					
Air District Mitigation Fees in 2001					
Air District	Owner	Plant	MW	Fee \$/# NOx*	Type
BAAQMD	Mirant	Potrero 3	206	\$0.00	ST
BAAQMD	Mirant	Potrero 4-6	156	\$10.00	CT
BAAQMD	Mirant	Contra Cost	672	\$0.00	ST
BAAQMD	Mirant	Pittsburg	1,906	\$0.00	ST
BAAQMD	Duke Energy	Oakland	165	\$0.00	CT
MBUAPCD	Duke Energy	Moss Landing	1,489	\$0.00	CT
MDAQMD	Reliant Energy	Cool Water	627	\$0.00	CC
SBCAPCD	Reliant Energy	Ellwood	56	\$0.00	CT
SCAQMD	AES/Williams	Huntington Beach	563	\$7.50	ST/CT
SCAQMD	AES/Williams	Redondo Beach	1,310	\$7.50	ST
SCAQMD	AES/Williams	Alamitos	2,083	\$7.50	ST/CT
SCAQMD	Dynergy/NRG	Long Beach	580	\$7.50	CC
SCAQMD	Dynergy/NRG	El Segundo	1,020	\$7.50	ST
SCAQMD	Reliant Energy	Etiwanda	1,024	\$7.50	ST/CT
SCAQMD	ThermoEcotek	San Bernardino	126	\$7.50	ST
SCAQMD	ThermoEcotek	Mountainview	154	\$7.50	ST
SDCAPCD	Duke/Port of SD	South Bay	693	\$7.50	ST/CT
SDCAPCD	Dynergy/NRG	Cabrillo II	253	\$7.50	CT
SDCAPCD	Dynergy/NRG	Encina/Cabrillo I	965	\$7.50	ST
SLOAPCD	Duke Energy	Morro Bay	1,002	\$0.00	ST
VCAPCD	Reliant Energy	Mandalay 1-2	430	\$0.00	ST
VCAPCD	Reliant Energy	Mandalay 3**	140	\$6,000/hr	CT
VCAPCD	Reliant Energy	Ormond Beach	1,500	\$0.00	ST
	No Mitigation Fees		8,053	47.0%	
	Mitigation Fees above Free Allowance		9,067	53.0%	
	SCAQMD		6,860		
	Total		17,120		

* - Mitigation Fees are paid on emissions above a free allowance awarded by the district, measured either in total mass emitted or in hours run for CTs.

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**Appendix K
Dynegy RTC Wash Trades in July and August 2000**

Market	Trade	Symbol	Share	Price	Value	Company Name	City	State	Zip	Zone	Total Cost
	2840	7/11/2000	17,800	\$ 8.43	115663	EL SEGUNDO POWER, LL	43436	TIMCO	2000 1	INLAND	\$ 150,054
	2838	7/11/2000	15,000	\$ 10.00	43436	TIMCO	115663	EL SEGUNDO POWER, LL	2000.1	INLAND	\$ 150,000
	3017	08/17/00	125,000	\$8.00	115394	AES ALAMITOS, LLC	115663	EL SEGUNDO POWER, LL	2000.1	COASTAL	\$ 1,000,000
	3018	8/17/2000	75,000	\$ 13.33	115663	EL SEGUNDO POWER, LL	115394	AES ALAMITOS, LLC	2000.1	COASTAL	\$ 999,750
	3021	8/17/2000	8,700	\$ 10.50	68042	CORONA ENERGY PARTNE	115663	EL SEGUNDO POWER, LL	2000 1	INLAND	\$ 91,350
	3034	8/24/2000	23	\$ 10.50	115663	EL SEGUNDO POWER, LL	68042	CORONA ENERGY PARTNE	2000 1	INLAND	\$ 242
	3019	8/17/2000	10,066	\$ 26.09	3585	R. R. DONNELLEY & SO	115663	EL SEGUNDO POWER, LL	2000 1	COASTAL	\$ 262,622
	3020	8/17/2000	8,753	\$ 30.00	115663	EL SEGUNDO POWER, LL	3585	R. R. DONNELLEY & SO	2000.1	COASTAL	\$ 262,590
	3009	8/17/2000	14,500	\$ 25.67	23907	JOHNS MANVILLE CORP	115663	EL SEGUNDO POWER, LL	2000.1	INLAND	\$ 372,215
	3006	8/16/2000	23,500	\$ 31.73	115663	EL SEGUNDO POWER, LL	23907	JOHNS MANVILLE CORP	2000.1	INLAND	\$ 745,655
	3014	8/17/2000	17,250	\$ 30.43	40196	GUARDIAN INDUSTRIES	115663	EL SEGUNDO POWER, LL	2000 1	COASTAL	\$ 524,918
	3012	8/17/2000	15,000	\$ 35.00	115663	EL SEGUNDO POWER, LL	40196	GUARDIAN INDUSTRIES	2000 1	COASTAL	\$ 525,000

% RTC Market 37%

47%

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Appendix L

Powerplant Transaction Volume vs. Total RTC Market

2 Weeks Beginning	Transactions	Cumulative	Volume	Total Cost	Wtd. Avg Price
02/14/00	43%	43%	8%	7%	98%
02/28/00	0%	27%	0%	0%	0%
03/13/00	0%	21%	0%	0%	0%
03/27/00	0%	21%	0%	0%	0%
04/10/00	0%	21%	0%	0%	0%
04/24/00	0%	19%	0%	0%	0%
05/08/00	0%	19%	0%	0%	0%
05/22/00	30%	23%	26%	31%	119%
06/05/00	0%	21%	0%	0%	0%
06/19/00	43%	26%	69%	76%	110%
07/03/00	57%	31%	78%	90%	116%
07/17/00	33%	31%	62%	76%	122%
07/31/00	92%	43%	90%	92%	102%
08/14/00	93%	59%	99%	98%	99%
08/28/00	67%	59%	63%	59%	94%
09/11/00	44%	57%	51%	51%	100%
09/25/00	79%	59%	93%	98%	105%
10/09/00	70%	62%	82%	79%	97%
10/23/00	82%	63%	82%	81%	99%
11/06/00	56%	63%	71%	76%	107%
11/20/00	0%	62%	0%	0%	0%
12/04/00	70%	63%	85%	79%	94%
12/18/00	40%	61%	7%	8%	125%
01/01/01	58%	61%	29%	33%	113%
01/15/01	71%	62%	83%	80%	97%
01/29/01	41%	59%	58%	70%	120%
02/12/01	37%	57%	65%	77%	119%
02/26/01	13%	51%	12%	10%	79%
03/12/01	53%	51%	49%	57%	117%
03/26/01	84%	53%	99%	99%	101%
04/09/01	30%	52%	14%	10%	76%
04/23/01	0%	52%	0%	0%	0%
05/07/01	62%	53%	81%	86%	106%
05/21/01	10%	52%	23%	28%	123%
06/04/01	8%	50%	8%	10%	132%
06/18/01	11%	49%	9%	12%	127%

1 STATE OF CALIFORNIA

2
3 SENATE SELECT COMMITTEE TO INVESTIGATE
4 PRICE MANIPULATION OF THE WHOLESALE ENERGY MARKET

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9 OVERVIEW OF INVESTIGATIONS, STUDIES, AND
10 REPORTS REGARDING THE ENERGY CRISIS

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13 STATE CAPITOL
14 ROOM 3191
15 SACRAMENTO, CALIFORNIA

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18 THURSDAY, JUNE 14, 2001

19 1:18 P.M.
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25 Reported by:

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27 Evalyn J. Mirak
28 Shorthand Reporter

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APPEARANCES

MEMBERS PRESENT

SENATOR JOSEPH DUNN, Chair
SENATOR DEBRA BOWEN
SENATOR WES CHESBRO
SENATOR WILLIAM MORROW

MEMBERS ABSENT

SENATOR MARTHA ESCUTIA
SENATOR MAURICE JOHANNESSEN
SENATOR SHEILA KUEHL
SENATOR BYRON SHER

STAFF PRESENT

LARRY DRIVON, Special Council to Committee
DONNA DRIVON, Committee Technical Assistant
ALEXANDRA MONTGOMERY, Committee Consultant
RONDA PASCHAL, Committee Consultant
WADE TEASDALE, Chief of Staff to SENATOR MORROW
JUDYANNE MCGINLEY, Deputy Legislative Counsel
Office of Legislative Counsel

ALSO PRESENT

CAROL COY, Deputy Executive Officer
Engineering and Compliance
South Coast Air Quality Management District
BARBARA BAIRD, District Counsel
Office of District Counsel
South Coast Air Quality Management District

We'll

1 of the proxy price, where the power producers are allowed to
2 recover that price without needing to justify it in terms of
3 potential refunds for being in excess of price.

4 In other words, the power companies would all be
5 able to recover that cost, whether or not they had actually
6 incurred that cost.

7 Our significant concern there was two-fold. The
8 first concern is that the RECLAIM trading credit price is really
9 no longer relevant at all to what power producers actually have
10 to pay because of some changes that we had made in the program.

11 CHAIRMAN DUNN: Ms. Baird, my apologies for
12 interrupting.

13 Explain that in some detail, why, for this time
14 period, winter and spring and up till now -- my words now --
15 it's really not relevant to this calculation?

16 MS. BAIRD: Sure.

17 The power producers had expressed concerns to us
18 that they were having difficulty in complying with their RECLAIM
19 caps that Carol described, and they also -- there were very high
20 prices which caused our Board to be concerned that facilities
21 other than power producers that are required to purchase these
22 credits in order to comply would have difficulty in affording
23 those credits. And basically, they told us that they might have
24 to curtail operations or cease operations if something wasn't
25 done about this problem.

26 Subsequent to the Governor issuing the Executive
27 Order declaring -- or issuing the Proclamation of Emergency on
28 January 17th, our District Executive Officer determined to issue

1 an executive order, which is authorized by one of our rules,
2 which is basically contingent on the Governor declaring an
3 emergency. Our Executive Officer then authorized to suspend for
4 a limited period of time, ten days at a time, the operation of
5 District rules.

6 So, what he did is, he suspended the RECLAIM
7 Program insofar as it applied to power producers who had run out
8 of RECLAIM allocations and said they no longer had to purchase
9 credits. This was effective February 6th. They no longer had
10 to purchase credits in order to operate at whatever level was
11 necessary for them to operate, but they did need to pay to the
12 District a mitigation fee of \$7.50 per pound of NOx pollution
13 emitted.

14 And we then committed that we would use that
15 money to obtain emission reductions from sources that are not
16 otherwise regulated, and therefore, providing a net emission
17 reduction equivalency as to what would have occurred if the
18 power plants hadn't exceeded their caps.

19 So, that Executive Order basically made it so
20 that power plants did not have to comply by buying RECLAIM
21 credits as of February 6th.

22 SENATOR MORROW: What was the mitigation fee
23 again?

24 MS. BAIRD: Yes, it's \$7.50 per pound of NOx
25 emissions, whereas the price that Carol testified to you earlier
26 was in the neighborhood of \$43, and prices had gone up to as
27 high as \$62.

28 After we issued our Executive Order, at the same

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Appendix N

**SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
BOARD MEETING DATE: May 11, 2001 AGENDA NO. 35**

PROPOSAL:

Adopt Proposed Changes to RECLAIM

SYNOPSIS:

At the January 19, 2001 Board Meeting, the Board directed staff to initiate rule development to help stabilize RTC prices and address California energy issues. Key proposed changes for power producing facilities include removing the influence of power producing facilities from the market and requiring installation of controls. For other RECLAIM facilities, compliance plans are proposed for larger facilities and forecast reports are proposed for medium sized facilities. Other changes include development of temporary credit assistance programs to offset excess emissions from utilities and assist certain small or new RECLAIM facilities. Information requirements for trade registration and revised procedures for late or missing electronic reports will also be proposed.

COMMITTEE:

Stationary Source, February 23, 2001, March 23, 2001, and April 27, 2001 Reviewed.

RECOMMENDED ACTION:

Adopt the attached resolution:

1. Certifying the attached Final Environmental Assessment for Proposed New and Amended rules, Regulation XX – RECLAIM; Proposed Rule (PR) 1631 – Pilot Credit Generation Program for Marine Vessels; PR 1632 – Pilot Credit Generation Program for Hotelling Operations; PR 1633 – Pilot Credit Generation Program for Truck/Trailer Refrigeration Units; and PR 2507 – Pilot Credit Generation Program for Agricultural Pumps.
2. Amending Rules 2000, 2001, 2002, 2004, 2006, 2007, 2010, 2011, 2012, and 2015.

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3. Adopting Proposed RECLAIM Rule 2009 – Compliance Plans for Power Producing Facilities; Rule 2009.1 – Compliance Plans and Forecast Reports for Non-Power Producing Facilities; and Rule 2020 – RECLAIM Reserve.

Barry R. Wallerstein, D.Env. Executive Officer

Background

The Regional Clean Air Incentives Market (RECLAIM) program was adopted in October 1993. The program sets an emissions cap and declining balance for many of the largest NOx and SOx facilities in the Basin. The program was designed to provide additional incentives for industry to reduce emissions and advance pollution control technologies. In addition, the program was designed to give facilities added flexibility in meeting emission reduction requirements. Facilities within the RECLAIM program have the option of complying with their allocation allowance by either installing control equipment or purchasing RECLAIM Trading Credits (RTCs) from other facilities.

Each year, an annual report on RECLAIM has been presented to the Governing Board. These reports highlighted that there would be a crossover point in approximately 1998 or 1999 where aggregate actual emissions would approach total allocations unless facilities installed control equipment.

Between compliance year 1994 and compliance year 1999, NOx emissions at RECLAIM facilities, in aggregate, were below allocations, and the price of NOx RTCs remained relatively stable. However, beginning June 2000, RECLAIM program participants experienced a sharp and sudden increase in NOx RTC prices for both 1999 and 2000 compliance years. This was due mainly to an increased demand for power generation and delayed installation of controls by power plants. The electric power industry purchased a large quantity of RTCs and depleted the available RTCs. This situation was compounded because few RECLAIM facilities added control equipment.

The Governing Board, at its October 2000 meeting, directed staff to form an Advisory Committee to help examine issues affecting the price of NOx RTCs and recommend actions that could be taken to stabilize RTC prices. This effort resulted in staff's development of a White Paper, which included a series of recommendations developed to help address the energy situation and stabilize RTC prices. At the January 19, 2001 Governing Board meeting, the Governing Board directed staff to proceed with rule development based on the recommendations in the White Paper.

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Public Process

Through the rule-making process, AQMD staff has worked with the RECLAIM Working Group which includes power producers, other RECLAIM facilities, environmental groups, EPA, ARB, CEC, and other interested parties. Many of these individuals and organizations participated in the Advisory Committee process that assisted staff in development of the White Paper. Since the January 11, 2001 Board meeting, there have been RECLAIM Working Group meetings every 1-2 weeks, a public workshop on February 28, 2001, and a pre-hearing Board meeting on March 16, 2001. The pre-hearing included an update on rule development efforts, including a description of the proposals and identification of key issues. The Board also heard testimony from many individuals and organizations regarding the draft proposals. AQMD staff has participated in weekly conference calls with EPA and ARB, consulted with California Independent System Operator (Cal-ISO) and the California Energy Commission (CEC) on electricity issues, and has met with power plants, refineries, and other parties.

An advisory letter was mailed to RECLAIM Facility Permit holders to provide information on available, cost-effective control options. AQMD staff also conducted 4 technology meetings (April 3-5, 2001, one meeting in each county) to help disseminate information on available control options.

Proposal

Staff has developed proposed amendments to existing RECLAIM rules and three proposed new rules to implement improvements to the RECLAIM program. The proposed amendments will work together to lower and stabilize RTC prices by increasing supply, reducing demand, and increasing the exchange of RTC trading information. Amendments are designed to expedite installation of the emissions control equipment at power plants, while reducing the impacts of the California electricity crisis on the RECLAIM market and facilitating the development of reliable statewide electricity supply. The rule amendments and the new rules include the following key elements:

- For existing large power plants: bifurcation from the rest of the RECLAIM market, requiring installation of Best Available Retrofit Control Technology (BARCT) through compliance plans, and a temporary mitigation fee program for emissions in excess of allocations, which will be used by the District to obtain emission reductions;
- Initiation of a temporary, limited, pilot RECLAIM Air Quality Investment Program (AQIP) for new power plants and structural buyers, allowing access to mobile and area source credits;

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- Requiring large RECLAIM facilities to file a compliance plan to demonstrate compliance with NO_x RTCs held by those facilities for Compliance Years 2001 through 2005;
- Improving registration and timely reporting of RTC trades; and
- Modifying procedures for late electronic reports.

In addition to modifying several existing rules, three new rules are being proposed including: PR 2009 – Compliance Plans for Power Producing Facilities; PR 2009.1 – Compliance Plans and Forecast Reports for Non-Power Producing Facilities; and PR 2020 – RECLAIM Reserve which includes a Mitigation Fee Program for power producing facilities, a RECLAIM Air Quality Investment Program (AQIP) for certain facilities, and a mechanism to use credits from the State's Emission Reduction Credit Bank for new peaking generation units able to begin operation by September 1, 2001.

The main elements of the proposed amendments to Regulation XX and the new rules are summarized briefly below:

Power Producing Facilities

The proposed rule changes will separate power producing facilities from the rest of the RECLAIM market while energy supply issues are being addressed. Existing power plants will not rejoin the full RECLAIM program unless the Governing Board, in a public hearing prior to July 2003, determines that their re-entry will not result in any negative impact on the remainder of the RECLAIM universe or California's energy security needs. The proposed rules would require a compliance plan for power producing facilities with capacity ≥ 50 megawatts and require installation of best available retrofit control technology at the earliest feasible date, but no later than 2003 for boilers or 2004 for turbines. In addition to the initial compliance plans, power producing facilities are required to update information annually for 2001 through 2005 Compliance Years. Annual update reports provide AQMD with the necessary information to access the impacts of emissions from these facilities on the RECLAIM program and anticipate future demands of credits from the Mitigation Fee Program. The proposed rules also include environmental dispatch, which requires prioritization of the use of cleaner emitting equipment first.

Trading would also be limited to isolate the rest of the market from credit demands from power producing facilities. RTC purchases after January 11, 2001 could only be used to reconcile facility emissions if the RTCs are from facilities under common ownership or have been generated from approved mobile source credit generation programs. Power Producing Facilities could sell credits back to the District for a price not to exceed \$7.50 per pound. Any emissions in excess of their allocation can be offset by the payment of a mitigation fee of \$7.50 per pound

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(\$15,000 per ton) to the District, which will in turn invest the money in NOx emission reduction projects to mitigate the air pollution effects.

Compliance Plans and Forecast Reports for other Facilities

For facilities other than large power producing facilities, compliance plans are proposed for facilities with 1999 or any subsequent year emissions greater than or equal to 50 tons per year (tpy). These compliance plans provide flexibility by including options for installing controls or purchasing credits. The plans are being designed to allow as much flexibility as possible, while requiring timely, enforceable commitments to be made to ensure compliance. Facilities may provide several options in their original plan submittal and can amend their compliance plans at any time. The Board resolution directs staff to expedite review and approval of compliance plans and plan modifications (60 days for plans and 30 days for modification).

Facilities between 25 and 50 tpy emissions in 1999 will be required to submit informational forecast reports and update forecasts annually. Compliance plans and forecast reports from the large and medium facilities will help ensure adequate advance planning by facilities to meet the overall RECLAIM program emission targets.

Mitigation Fee Program

A temporary mitigation fee program through compliance year 2004 is proposed for power producing facilities that exceed their RTC holdings. The facility would pay \$7.50 per pound of NOx to the District, which uses the funds to achieve emission reductions from a variety of mobile source or other credit generation avenues. The current rules require that excess emissions be deducted from the subsequent year allocation to ensure that the environment is not impacted by additional emissions. In this proposed amendment, staff recommends the deduction of excess emissions from the second year to account for the lead time necessary for installation of control equipment at the power producing facilities. When emission reductions are secured for the Reserve by the District, the deduction would be credited back to the facility. In addition, if the mitigation fee program achieves emission reductions equal to at least 75 percent of those requested, in aggregate, by the second compliance year, an additional year can be granted to generate reductions, thereby minimizing the need to further deduct future year allocations.

RECLAIM Air Quality Investment Program (AQIP)

Another short-term credit assistance program, the RECLAIM AQIP, is being proposed for use by certain facilities through the 2004 compliance year. This program would be available for structural buyers, such as new facilities and small

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facilities with installed controls at a minimum of BARCT. The RECLAIM AQIP would provide structural buyers additional compliance options to reduce the overall demand for RTCs from the RECLAIM trading market. Facilities that request participation would pay \$7.50 per pound of NOx to use the RECLAIM AQIP, if reductions are available. No deduction from allocations is proposed for this program since emission reductions must be available prior to use. The District is pre-funding the AQIP program with emission reduction credits. The Governing Board has allocated \$2 million from the AES Settlement Fund to use to obtain emission reductions from marine vessels.

Other Rule Changes

To help improve trade information, the proposed rules would require identification of both the seller and buyer of RTCs after the completion of a trade. The rule includes registration requirements for pooled trading and contractual agreements for future transfer of RTCs. In addition, timely filing of trades is proposed to help facilitate market information.

Staff has also proposed that more time be afforded for submittal of late electronic reports, provided the original data is stored at the facility. The proposed amendments include a provision that missing data requirements would not apply if the problem is due to the receiving end of the transmission.

Key Issues

There were many issues involved in development of these RECLAIM amendments. Many issues have been resolved, including: federal enforceability of compliance plans in Title V permits, flexibility for compliance plans, missing data issues, and dissemination of market information. The AQMD staff has also committed to study the development of a centralized trading market. Attachment A highlights the key issues and staff's recommendations. The Board resolution also includes several directions to staff regarding concerns expressed by various parties. Each of the key issues is also described briefly below.

Power Producing Facilities

Key issues for power producing facilities include concerns about deductions from future allocations should the AQMD fail to produce adequate reductions for the mitigation fee program and would prefer less trading restrictions. Staff is committed to work diligently in funding reduction projects and is working with ARB and EPA on several mobile source credit rules that can be quickly approved by these agencies to increase credit generation opportunities. Staff believes that deductions from future allocations are a necessary element to ensure integrity for the environment, as a backstop method to ensure that exceedances are fully offset even if the Mitigation Fee Program does not obtain sufficient reductions.

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Compliance Plans

The business community has expressed concerns about proposed requirements for compliance plans. Staff has made significant revisions to the initial proposed rule amendments that were developed to implement recommendations in the White Paper. The White Paper recommendation was to require plans and addition of controls for all facilities over 10 tpy emissions in 1999. The proposed amendments would require plans for facilities over 50 tpy and afford the option of adding controls or securing credits.

Another issue related to compliance plans is that the facilities do not want an enforceable commitment which they believe would be difficult to change and cumbersome for Title V facilities. Staff has since designed the compliance plan requirements to be only locally enforceable, not part of Title V or SIP requirements. EPA has concurred with this approach. There are also concerns about the confidential information contained in plan submittals, which may offer advantages to competitors if that information was disclosed. Confidential information can be maintained in separate files to address this concern. Others would like forecast reports for all facilities on a quarterly basis, but not to have any elements that would be enforceable, even by AQMD. Staff does not object to more frequent updates to the compliance plans, if necessary. However, a non-enforceable forecast report does not ensure timely commitments toward meeting emission requirements. Compliance plans may be structured to allow multiple options for compliance, and plans may be amended to adapt to changed circumstances. The Board resolution directs staff to expedite review and approval of compliance plans and plan modifications (60 days for plans and 30 days for modifications).

RECLAIM AQIP

Several facilities have requested that access to the RECLAIM AQIP be expanded to allow more facilities to use this program. Others have expressed the concern that the RECLAIM AQIP may discourage credit generation from the private market. Staff is trying to balance the need for providing market stability and direct AQMD assistance with the function of a private market. The Board resolution directs staff to evaluate the threshold for access to AQIP during annual reports to the Board on RECLAIM.

Other Issues

Other issues include the use of mobile source credits by RECLAIM facilities, the function and structure of the market, and how to make better market information available. Some environmental representatives remain unchanged in their position that the use of mobile source credits should not be included in RECLAIM. Staff has worked with these groups to help address the issues that they raised. Mobile

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and area source credit programs can help stabilize RTC prices and provide credits for temporary credit assistance programs or for facilities that need RTCs to balance emissions while controls are being planned and installed. In addition, state law directs AQMD to allow for mobile source trading in RECLAIM (see Health & Safety Code §40440.1), and mobile source trading was included in the original design of RECLAIM as reflected in Rule 2008. Staff has committed to evaluating a central market, and how to streamline trade registration. AQMD has also recently added a spreadsheet on the AQMD website to list trades within days of their receipt by AQMD.

California Environmental Quality Act (CEQA)

Pursuant to the California Environmental Quality Act (CEQA) and the AQMD's Certified Regulatory Program (Rule 110), staff has prepared appropriate CEQA documentation for the proposed project, including a Draft Environmental Assessment (EA). The Draft EA is a joint assessment of the proposed RECLAIM amendments and Proposed Rules 1631, 1632, 1633, and 2507. The Draft EA concluded that the proposed project may result in significant adverse impacts relative to air quality and the increased use of hazardous materials (i.e., ammonia for NOx control). Comments on the Draft EA and staff's responses are included in the Final EA, which is included as part of this Adoption Hearing package.

Socioeconomic Assessment

Staff has also prepared a socioeconomic assessment (see Appendix C) to identify overall RECLAIM market impacts and potential cost impacts to facilities affected by the proposed amendments. Several noted economists were retained to evaluate the proposed changes. They provided input on the draft socioeconomic assessment. Impacts would result from the installation of control equipment, or access to a RECLAIM Air Quality Investment Program or Mitigation Fee Program. The economic impacts of the amendments are expected to be less than impacts if the program is not amended.

Recommendations

Staff recommends that proposed changes to Regulation XX – RECLAIM be adopted. Staff continues to support market-based programs and believes that market-based programs are essential to achieving clean air objectives. The proposed changes will help stabilize RECLAIM credit prices and enable the overall program to function in compliance. The proposed rule amendments will not affect the findings in Health & Safety Code Section 39616, including equivalent emission reductions at lower or equal cost. In the unforeseen event that the RECLAIM program needs further enhancement, staff recommends that development commence on backstop measures. Compliance plans and requiring BARCT at power plants should facilitate emission reduction projects at facilities

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with the majority of the emissions in RECLAIM. In addition, staff will expedite review of compliance plans and report to the Governing Board in November on projected emission reductions, schedule and impact on overall program compliance. At that time, the Board can consider whether any other actions are necessary to further enhance RECLAIM.

Attachment (2,354 KB)

Summary of Proposal

Key Issues and Responses

Rule Development Process

Key Contact List

Resolution

Proposed Rule Language

Staff Report (including Socioeconomic Assessment)

Final Environmental Assessment

**ATTACHMENT A
SUMMARY OF PROPOSAL**

The proposed amendments to Regulation XX and the proposed rules:

- For large power plants: bifurcation from the rest of the RECLAIM market, requiring installation of BARCT through compliance plans, environmental dispatch, and a temporary mitigation fee program for emissions in excess of allocations;
- Initiation of a temporary, limited, pilot RECLAIM Air Quality Investment Program (AQIP);
- Requiring large RECLAIM facilities to file a compliance plan to demonstrate compliance with NOx RTCs held by those facilities for Compliance Years 2001 through 2005;
- Improving registration and timely reporting of RTC trades; and
- Modifying procedures for late electronic reports.

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**ATTACHMENT B
KEY ISSUES AND RESPONSES**

There were many issues involved in development of the RECLAIM amendments. Many have been resolved, including: federal enforceability of compliance plans in Title V permits, flexibility for compliance plans, missing data issues, and dissemination of market information. The AQMD staff has also committed to study the development of a centralized trading market. The following identifies the key issues:

- Power producing facilities are concerned that they cannot use RTCs purchased after January 11, 2001 to reconcile emissions and they cannot shut down equipment because they are under orders from the Cal-ISO to operate. They have no alternative but to continue exceeding their RTC allocations.

Power Producing Facilities have options to avoid violations. On February 6, 2001, the District issued an Executive Order pursuant to Rule 118 allowing power plants to operate in excess of their RTC allocations if they pay a mitigation fee. Under the proposed amendments, power producers who add or increase peaking capacity for summer 2001 will be able to purchase emission reduction credits through the State Emission Reduction Credit Bank. Also, power producing facilities will be able to purchase credits at \$7.50 per pound through participation in the Mitigation Fee Program. The fees will fund projects to produce emission reductions. The amount of credits purchased will be subtracted from future year allocations but, when the District is able to generate credits to replace those purchased through the MFP, the power producing facilities' RTC accounts will be reimbursed. AQMD staff believes there will be adequate credits available to meet this need. However, if facilities still have to obtain an abatement order or settlement agreement to allow continued operation prior to rule adoption, power producers can work with the District Prosecutor's office.

- Power producing facilities are concerned regarding deductions from future allocations should the AQMD fail to produce adequate reductions for the mitigation fee program.

The deduction helps ensure that the environment is made whole and is an important element of the changes being proposed. A rule without any deduction for exceedances would have difficulty being approved by EPA since it would be a relaxation of a current rule requirement that is in place for environmental protection. Also, deductions from future year allocations help the RECLAIM program maintain equivalency to command and control rules. Staff is committed to work diligently in funding reduction projects and is working with ARB and EPA on several mobile and area source credit rules that can be quickly approved by these

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agencies to increase credit generation opportunities.

- Compliance plans have been the subject of intensive discussion through the rule development process. Some parties do not think that compliance plans should be required of non-power producing facilities. Others would like forecast reports for all facilities on a quarterly basis, but do not want enforceable compliance plans.

Analysis shows that facilities in the non-power producing sector also need to reduce emissions in order to stabilize the NOx RTC market. The larger emitting facilities are responsible for more than 80 percent of the NOx emissions in this sector and the projected demand for RTCs in this sector exceeds the supply for the next two years. Compliance plans help provide assurance that controls will be expeditiously installed by these facilities. Compliance plans are an important approach to ensure timely and adequate planning and adherence to the committed schedule to achieve emission reductions. Staff believes these plans need to be enforceable to make sure commitments to install controls are implemented in a timely manner. However, plans may include multiple options for compliance and plans may be amended to allow them to adapt to changed circumstances. Requiring quarterly reports from over 350 facilities for informational purposes, without enforceable commitments, would not ensure adequate advance planning to reduce emissions.

- Access to RECLAIM AQIP should be expanded to allow participation by more facilities. In addition, concerns have been raised that RECLAIM AQIP may discourage credit generation from the private market.

The supply of credits from RECLAIM AQIP is limited. Larger facilities in the non-power producing segment of RECLAIM will be able to purchase RTCs on the open market or may purchase RTCs generated by mobile or stationary sources. In addition, staff is trying to balance the need for providing market stability and direct AQMD assistance with the function of a private market. The Board resolution directs staff to evaluate the threshold for access to the AQIP in annual reports to the Governing Board on RECLAIM.

- Natural gas turbine power plant peaking sources should not be included in the RECLAIM program. EPA initially raised this concern, but has worked with AQMD staff to develop a mutually satisfactory resolution.

Natural gas turbine power plant peaking units will remain in the RECLAIM program and have access to the State Emission Reduction Credit Bank. Access to this bank is limited to units qualifying under the criterion set forth in Executive Order D-24-01 dated February 8, 2001 and modified by Executive Order D-28-01 dated March 8, 2001. Additional rule language was added to clarify use of the Bank.

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**ATTACHMENT C
RULE DEVELOPMENT PROCESS**

Proposed Amended Regulation XX – Regional Clean Air Incentives Market
(RECLAIM)

**ATTACHMENT D
KEY CONTACTS LIST**

Over 100 industry representatives attended one or more of the working group meetings and public workshop over the last seven months. ARB and EPA staff also participated extensively in this effort. Other agencies that were involved include the California Energy Commission, California Independent System Operators, and State of California Trade and Commerce Agency. The lists below include those Industry Organizations and Companies that participated in working group meetings on a regular basis:

3M	A&N Technical Services
Ablestik Labs	Advanced Environmental Controls (AEC)
Aera Energy LLC	AES Alamitos, LLC
AES RB	Angelica Textiles
Anheiser Bush	ARB
Arlon	Artesia Sawdust Products
Automated Credit Exchange (ACE)	Aves/ATC
B Braun Medical Inc	BOC Gases
Boeing	Boldwater Brokers
BP	Breitburn Energy Company LLC
Broadway Entr.	Broiles & Trimes
Cal Mfrs Assn So Calif AQ Alliance	Cal State Fullerton
CALEPA	California Dairies Inc.
California SteelCal-SO	Camp Dresser & McKee Inc.
Canners Steam Co	Canter Fitzgerald

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Magnolia Power Project	Manatt Phelps & Phillips
Marine Fuel Cells	Market.Based Solutions
MC Squared	MDE
Metal Coaters of Calif	MIT
Mountainview Power Co	Multi Fuels
Multifuels Marketing	Natsource
Nelco Products Inc	Northrop Grumman
NP Cogen Inc	NRDC
NRG	NRG Energy, Inc.
NRG Power Marketing Inc	Ocean Views
Oglebay Norton	Omnibus Environmental Services
Pacific Clay Products	Paramount Petroleum
Parsons E.S.	PES
PQ Corp	Praxair
PSE	Quemetco Inc
RBF Consulting	Reliant Energy
Richoh Electronics	Riverside Cement
RR Donnelley & Sons	Rubbermaid Inc.
SCE	Schlosser Forge
Schultz Steel	SEHBNA
Sempra Energy	Sierra Aluminum Co
Sierra Research	Smurfit Newsprint
Smilard & Khachigian	Solar Turbines
Southern California Gas	Stocker Resources
Sully-Miller	TAMCO
The Boeing Company	The Gas Company
Tosco Refining Co	Tri.Alloy Inc
TRW Inc	TST Inc
Ultramar Inc	Univ. of California
Cal Inst. for Energy Efficiency	Vertis Advertising
Vista Metals	West Coast Environmental
Weston Benshoff for NRG	Weyerhaeuser
Williams	WSPA

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ATTACHMENT E

RESOLUTION NO. 00-XX

A Resolution of the South Coast Air Quality Management District Governing Board (Governing Board) certifying the Final Environmental Assessment for Proposed New and Amended rules, Regulation XX – RECLAIM; Proposed Rule (PR) 1631 – Pilot Credit Generation Program for Marine Vessels; PR 1632 – Pilot Credit Generation Program for Hotelling Operations; PR 1633 – Pilot Credit Generation Program for Truck/Trailer Refrigeration Units; and PR 2507 – Pilot Credit Generation Program for Agricultural Pumps.

A Resolution of the Governing Board amending Rules 2000 – General, 2001 – Applicability, 2002 – Allocation for Oxides of Nitrogen (NOx) and Oxides of Sulfur (SOx), 2004 – Requirements, 2006 – Permits, 2007 – Trading Requirements, 2010 – Administrative Remedies and Sanctions, 2011 – Requirements for Monitoring, Reporting and Recordkeeping for Oxides of Sulfur (SOx) Emissions, 2012 - Requirements for Monitoring, Reporting and Recordkeeping for Oxides Nitrogen (NOx) Emissions, and 2015 – Backstop Provisions and adopting Rules 2009 – Compliance Plans for Power Producing Facilities, 2009.1 – Compliance Plans and Forecast Reports for Non-Power Producing Facilities, and 2020 – RECLAIM Reserve.

WHEREAS, the AQMD Governing Board recognizes the need to have adequate power supply for the region and the need to act quickly to address energy related issues, to help relieve the energy emergency declared by the Governor on January 17, 2001, and to implement the Governor's Executive Orders issued February 8, 2001, while balancing the need for environmental protection and reliable power supply; and

WHEREAS, the AQMD Governing Board has determined with certainty that proposed amended rules and proposed new rules, Regulation XX – RECLAIM, are a "project" pursuant to the terms of the California Environmental Quality Act; and

WHEREAS, the AQMD has had its regulatory program certified pursuant to Public Resources Code § 21080.5 and has conducted CEQA review pursuant to such program (AQMD Rule 110); and

WHEREAS, AQMD staff has prepared a Draft Environmental Assessment (EA) pursuant to its certified regulatory program and state CEQA Guidelines Section 15252, setting forth the potential environmental consequences

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of proposed amended rules and proposed new rules, Regulation XX – RECLAIM;
and

WHEREAS, the Draft EA was circulated for public review, comments received were responded to, and a Final EA has been prepared; and

WHEREAS, the adequacy of the Final EA, including responses to comments, must be determined by the AQMD Governing Board prior to its certification; and

WHEREAS, it is necessary that the AQMD prepare a Statement of Findings and Statement of Overriding Considerations pursuant to state CEQA Guidelines Section 15091 and 15093, respectively, regarding adverse environmental impacts that cannot be mitigated to insignificance; and a Mitigation Monitoring Plan pursuant to Public Resources Code Section 21081.6, regarding the mitigation included in the Final Subsequent EA; and

WHEREAS, the AQMD Governing Board voting on proposed amended rules and proposed new rules, Regulation XX – RECLAIM, has reviewed, considered, and hereby certifies the Final Subsequent EA and approves the Statement of Findings, the Statement of Overriding Considerations, and the Mitigation Monitoring Plan of these proposed rules; and

WHEREAS, the Governing Board has determined that the socioeconomic impact assessment of the proposed amended rules and proposed new rules, Regulation XX – RECLAIM, is consistent with the provisions of Health and Safety Code Sections 40440.8, 40728.5 and 40920.6; and

WHEREAS, the Governing Board has reviewed and considered the staff's findings related to cost and employment impacts of the proposed amended rules and proposed new rules, Regulation XX – RECLAIM as set forth in the socioeconomic impact assessment, and hereby finds and determines that cost and employment impacts are as set forth in that assessment; and

WHEREAS, the Governing Board has actively considered the socioeconomic impact analysis and has made a good faith effort to minimize any socioeconomic impacts; and

WHEREAS, the Governing Board obtains its authority to amend/adopt the proposed rules, Regulation XX – RECLAIM, pursuant to California Health and Safety Code Sections 39002, 39616, 39620, 40000, 40001, 40440, 40440.1, and 40702; and

WHEREAS, the Governing Board has determined that a need exists to amend Regulation XX – RECLAIM to address the current energy emergency and to lower and stabilize RTC prices by increasing supply, reducing demand, and

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increasing RTC trading information availability and accuracy while helping address California's energy emergency; and

WHEREAS, the Governing Board has determined that Regulation XX – RECLAIM should be adopted for the reasons contained in the staff report.

WHEREAS, the AQMD specifies the manager of Regulation XX - RECLAIM as the custodian of the documents or other materials which constitute the record of proceedings upon which the adoption of this proposed amendment is based, which are located at the South Coast Air Quality Management District, 21865 E. Copley Drive, Diamond, California; and

WHEREAS, the Governing Board has determined that proposed amended rules and proposed new rules, Regulation XX – RECLAIM are written or displayed so that their meaning can be easily understood by the persons directly affected by them; and

WHEREAS, the Governing Board has determined that proposed amended rules and proposed new rules, Regulation XX – RECLAIM are in harmony with and not in conflict with or contradictory to, existing statutes, court decisions or state or federal regulations; and

WHEREAS, the Governing Board has determined that proposed amended rules and proposed new rules, Regulation XX – RECLAIM will not impose the same requirements as any existing state or federal regulations. The amendments and the proposed rules are necessary and proper to execute the powers and duties granted to, and imposed upon, AQMD; and

WHEREAS, the Governing Board has determined that by adopting the proposed amended rules and proposed new rules, Regulation XX – RECLAIM the AQMD Governing Board will be implementing, interpreting and making specific the provisions of the California Health and Safety Code Sections 39002, 39616, 40001, 40440 (a), 40440.1, 40702, and 40725 through 40728.5; and Title 42 U. S. C. Sections 7410, 7502, 7503, 7511a; and

WHEREAS, the Governing Board has determined that the California Health and Safety Code 39616 findings are not altered by these amendments and the Governing Board incorporates, by reference, the findings in the staff report; and

WHEREAS, a public hearing has been properly noticed in accordance with the provisions of Health and Safety Code Section 40725; and

WHEREAS, the Governing Board has held a public hearing in accordance with all provisions of law;

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WHEREAS, the Governing Board has determined a need exists for an expedited review and approval of compliance plans submitted by facilities as required by proposed Rules 2009 and 2009.1; and

WHEREAS, AQMD staff believes the proposed amended rules and proposed new rules, Regulation XX – RECLAIM will stabilize the RECLAIM RTC market, however, a possibility exists that additional measures may need to be taken to ensure adequate emission reductions in future years to decrease RTC demand and ensure compliance with RECLAIM’s emission reduction requirements;

WHEREAS, the Governing Board finds and determines, taking into consideration the factors in Section (d)(4)(D) of the Governing Board Procedures, that the modifications adopted which have been made to Regulation XX – RECLAIM since notice of public hearing was published do not significantly change the meaning of the proposed new and amended rules within the meaning of Health and Safety Code Section 40726 and would not constitute new information pursuant to CEQA;

NOW, THEREFORE BE IT RESOLVED that the Governing Board hereby certifies, pursuant to the authority granted by law, the Final EA for Proposed New and Amended rules, Regulation XX – RECLAIM; Proposed Rule (PR) 1631 – Pilot Credit Generation Program for Marine Vessels; PR 1632 – Pilot Credit Generation Program for Hotelling Operations; PR 1633 – Pilot Credit Generation Program for Truck/Trailer Refrigeration Units; and PR 2507 – Pilot Credit Generation Program for Agricultural Pumps; and

BE IT FURTHER RESOLVED, that the AQMD Governing Board hereby approves the Statement of Findings and Statement of Overriding Considerations pursuant to state CEQA Guidelines Sections 15091 and 15093, respectively, regarding adverse environmental impacts that cannot be mitigated to insignificance; and the Mitigation Monitoring Plan pursuant to Public Resources Code Section 21081.6, regarding the mitigation included in the Final Subsequent EA, which are included in Attachment 1, attached and incorporated herein by reference; and

BE IT FURTHER RESOLVED, that the Governing Board does hereby approve the written response to CEQA comments; and

BE IT FURTHER RESOLVED, that the Governing Board does hereby approve the Socioeconomic Impact Assessment; and

BE IT FURTHER RESOLVED, that the Governing Board directs staff to expedite review and approval of compliance plans, with a goal of review within 60 days for initial compliance plan submittal and 30 days for plan modifications, to ensure timely program compliance; and

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BE IT FURTHER RESOLVED, that the Governing Board directs staff to expedite SIP submittals and to work with CARB and EPA to facilitate their expedited review and approval; and

BE IT FURTHER RESOLVED, that the Governing Board directs staff to diligently pursue projects for the RECLAIM Reserve that will achieve sufficient emission reductions within the allowable time specified in Rule 2010 to satisfy the need for such reduction and minimize the potential for future year deductions; and

BE IT FURTHER RESOLVED, that the Governing Board directs staff to evaluate the access threshold for the RECLAIM AQIP as a part of the annual program review conducted pursuant to Rule 2015; and

BE IT FURTHER RESOLVED, that the Governing Board directs staff that excess credits from the RECLAIM AQIP may be purchased by AQMD for use in the Mitigation Fee Program; and

BE IT FURTHER RESOLVED, that the Governing Board directs staff to report to the Board in November 2001 on the status of compliance plan submittals, estimated emission reductions for compliance years 2001-2005, types of control options identified, cost information submitted, and whether the compliance plans demonstrate, in aggregate, overall programmatic compliance; and

BE IT FURTHER RESOLVED, the Governing Board directs staff during compliance years 2001 and 2002 to report to the Stationary Source Committee monthly on 1) permit applications received for NOx control equipment, estimated emission reductions and when equipment will become operational and 2) trading activities and price and make a quarterly status/progress report to the Governing Board; and

BE IT FURTHER RESOLVED, that the Governing Board directs staff to report to the Board, prior to July 2003, as to whether the reentry of Power Producing Facilities into RECLAIM would result in any negative impact on remainder of the RECLAIM facilities or on California's energy security needs. Further staff is directed to report on whether power producing facilities will be able to comply with their allocations, and if not, consider extending the mitigation fee program, and also to evaluate and report on whether any threat to California energy security needs which would occur due to inability to comply without substantial power curtailments outweighs any negative impact on the remainder of RECLAIM, and prepare amendments as appropriate; and

BE IT FURTHER RESOLVED, that the Governing Board directs staff to develop proposed amendments to Rule 1309.1 - Community Bank and

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Priority Reserve, for the Board's consideration by December 2001 to establish SOx offsets from the Priority Reserve for power producing facilities; and

BE IT FURTHER RESOLVED, the Governing Board is strongly supportive of trading programs, including RECLAIM, and believes that market incentive programs are essential to achieving clean air objectives. The Governing Board thereby directs staff to begin development of backstop measures, deemed appropriate, to further enhance the RECLAIM program, taking into consideration the information submitted in compliance plans, to ensure program compliance in a timely fashion; and

BE IT FURTHER RESOLVED, the Governing Board directs staff, in conjunction with stakeholders, to develop implementation guidelines to set forth the criteria for approving compliance plans and subsequent modifications and streamlining the trade registration process, and report to the Stationary Source Committee at their July 2001 meeting; and

BE IT FURTHER RESOLVED, that the Governing Board does hereby adopt/amend, pursuant to the authority granted by law, proposed amended rules and proposed new rules, Regulation XX – RECLAIM (Rules 2000 – General, 2001 – Applicability, 2002 – Allocation for Oxides of Nitrogen (NOx) and Oxides of Sulfur (SOx), 2004 – Requirements, 2006 – Permits, 2007 – Trading Requirements, 2010 – Administrative Remedies and Sanctions, 2011 – Requirements for Monitoring, Reporting and Recordkeeping for Oxides of Sulfur (SOx) Emissions, 2012 - Requirements for Monitoring, Reporting and Recordkeeping for Oxides Nitrogen (NOx) Emissions, and 2015 – Backstop Provisions and adopting Rules 2009 – Compliance Plans for Power Producing Facilities, 2009.1 – Compliance Plans and Forecast Reports for Non-Power Producing Facilities, and 2020 – RECLAIM Reserve) as set forth in the attached and incorporated herein by reference.

DATE: _____

Clerk of the District Board

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This page updated: May 4, 2001

URL: <http://www.aqmd.gov/hb/010535a.html>

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Appendix O							
RTC Forward Prices for January-June 2001							
Average of Price for Compliance Year.Cycle (\$/lbs)							
Month	Jan-01	Feb-01	Mar-01	Apr-01	May-01	Jun-01	Jul-01
2003.1	\$7.04	\$2.42	\$5.69		\$9.46	\$11.61	
2003.2	\$1.71	\$9.60	\$6.14	\$8.99	\$9.58	\$8.69	\$10.86
2004.1	\$7.04	\$2.42	\$5.69		\$8.00	\$6.47	
2004.2	\$4.14	\$7.02	\$5.41	\$5.65	\$6.26	\$8.14	
2005.1	\$7.04	\$2.82	\$5.69		\$8.00	\$7.75	
2005.2	\$4.14	\$7.85	\$5.41	\$5.65	\$6.26	\$5.27	
2006.1	\$7.04	\$2.82	\$5.69		\$8.00	\$7.75	
2006.2	\$4.14	\$6.47	\$5.41	\$5.65	\$6.26	\$4.67	\$7.35
2007.1	\$7.04	\$2.87	\$4.40		\$8.00	\$7.75	
2007.2	\$6.92	\$3.73	\$5.41	\$4.15	\$1.27	\$4.67	\$7.35
2008.1	\$7.04	\$2.90	\$4.66		\$8.00	\$7.75	
2008.2	\$6.92	\$3.73	\$4.23	\$4.15	\$1.27	\$4.67	\$7.35
2009.1	\$7.04	\$2.90	\$4.66		\$8.00	\$7.75	
2009.2	\$6.92	\$3.73	\$4.23	\$4.15	\$1.27	\$4.67	\$7.35
2010.1	\$7.04	\$2.90	\$4.70		\$8.00	\$7.75	
2010.2	\$6.92	\$3.73	\$4.23	\$4.15	\$1.27	\$4.67	\$7.35
2011.2	\$6.92	\$3.73	\$4.23	\$4.15	\$1.27	\$4.67	\$7.35

**CONTAINS PROTECTED MATERIAL-
NOT AVAILABLE TO COMPETITIVE DUTY PERSONNEL**

Appendix P

**Dynergy Partial Responses To The Second Set Of Data Requests Of The
California Parties In Docket E100-95-045**

Data Request No. 13

At pages 11 to 13 in your testimony, you discuss how Dynergy purchased RTCs in 2001 as a risk management strategy. Given that the South Coast Air Quality Management District is required to review and consider terminating the RECLAIM Program under Rule 2015 and that the conditions for termination were fulfilled in 2000, please discuss in detail the risk management strategy that Dynergy has pursued to mitigate its exposure to elimination of its holdings of RTCs.

Response to Data Request No. 13

Dynergy objects to this request on the grounds that it is vague, ambiguous, and unduly burdensome. Furthermore, Dynergy objects on the ground that the request assumes facts that are wrong: the statement that "the conditions for termination were fulfilled in 2000" is incorrect. Notwithstanding these objections, and without waiving any right to challenge responding further to this request in the future, Dynergy states that it purchased Cycle 1 2000 RTCs in 2001 to be used for emissions generated at El Segundo and Long Beach during the fourth quarter of 2000. This was a risk management strategy because it allowed Dynergy to preserve Cycle 2 2000 RTCs for use during the first two quarters of 2001.

The May 11, 2001 RECLAIM rule revisions bifurcated power generators from the emission trading portion of the program, but did not terminate RECLAIM. In place of the trading program, a power generator can use its frozen RTC allocations and pre-January 12, 2001 purchases, and can use the Mitigation Fee Program when, and if, those allocations are exceeded. If the Mitigation Fee Program is used, future year RTC allocations are reduced pound per pound. Therefore, the risk Dynergy was managing was to avoid the Mitigation Fee Program and preserve future year RTC allocations for future year operations. Without the early 2001 RTC purchases, Dynergy would have run out of Cycle 2 2000 and Cycle 1 2001 RTCs prior to the end of the Cycle 2 2000 compliance year (June 30, 2001) and would have been forced to use the Mitigation Fee Program for both facilities (even with the purchases there were only 3,200 remaining RTCs by June 30, 2001). The financial risk of the Mitigation Program, which imposed certain requirements on generators, as well as the unknown cost of replacing future year RTC allocation deductions, was not quantified by Dynergy during the first quarter of 2001.

**CONTAINS PROTECTED MATERIAL-
NOT AVAILABLE TO COMPETITIVE DUTY PERSONNEL**

In addition, even though the SCAQMD passed the above RECLAIM rule revisions, EPA has not approved the revisions, leaving the generators subject to litigation risk under the Clean Air Act.

**CONTAINS PROTECTED MATERIAL-
NOT AVAILABLE TO COMPETITIVE DUTY PERSONNEL**

Appendix Q							
RTC "Market" Prices and Activity - January 2000-June 2001							
2 Weeks Beginning:	High	75%	Wtd. Avg Price	Min Price	Transaction NOx Volume	Transaction \$ Volume	
02/14/00	\$2.53		\$2.30	\$2.28	\$2.22	118,000	\$269,443
02/28/00	\$2.90		\$2.90	\$2.59	\$1.99	23,000	\$59,656
03/13/00	\$2.78		\$2.78	\$2.72	\$2.02	47,000	\$127,636
03/27/00							
04/10/00							
04/24/00	\$2.45		\$2.45	\$2.45	\$2.45	64,258	\$157,432
05/08/00							
05/22/00	\$4.36		\$4.24	\$3.51	\$2.44	405,083	\$1,423,716
06/05/00	\$0.50		\$0.50	\$0.50	\$0.50	100,000	\$50,000
06/19/00	\$8.25		\$4.23	\$4.24	\$1.99	72,604	\$307,521
07/03/00	\$6.25		\$5.54	\$4.79	\$2.09	139,191	\$666,703
07/17/00	\$11.03		\$9.00	\$8.68	\$4.98	58,835	\$510,729
07/31/00	\$20.00		\$12.75	\$12.28	\$6.81	146,125	\$1,794,911
08/14/00	\$35.00		\$26.05	\$12.84	\$0.25	794,396	\$10,201,358
08/28/00	\$35.00		\$30.20	\$12.82	\$7.50	77,616	\$994,955
09/11/00	\$36.75		\$25.25	\$14.19	\$1.72	179,981	\$2,554,225
09/25/00	\$50.00		\$39.25	\$31.26	\$3.20	523,375	\$16,359,255
10/09/00	\$48.00		\$45.38	\$32.16	\$0.27	878,567	\$28,256,464
10/23/00	\$48.00		\$41.38	\$41.32	\$29.00	249,414	\$10,306,418
11/06/00	\$49.00		\$48.00	\$44.16	\$35.33	119,937	\$5,296,202
11/20/00	\$40.00		\$38.00	\$33.98	\$32.00	6,650	\$226,000
12/04/00	\$47.00		\$43.50	\$30.03	\$9.00	149,724	\$4,495,808
12/18/00	\$48.00		\$42.81	\$35.14	\$4.23	170,325	\$5,984,931
01/01/01	\$50.50		\$44.00	\$38.56	\$6.13	533,874	\$20,587,704
01/15/01	\$58.00		\$45.00	\$35.76	\$4.10	356,724	\$12,757,323
01/29/01	\$55.00		\$43.00	\$37.14	\$2.40	688,046	\$25,550,603
02/12/01	\$50.00		\$40.50	\$38.21	\$14.00	218,773	\$8,358,560
02/25/01	\$55.00		\$33.00	\$25.27	\$1.00	1,321,928	\$33,409,963
03/12/01	\$62.00		\$43.75	\$36.70	\$15.00	822,890	\$30,195,387
03/26/01	\$55.00		\$30.50	\$30.89	\$1.59	335,463	\$10,363,461
04/09/01	\$48.50		\$36.13	\$40.30	\$10.00	151,347	\$6,099,722
04/23/01	\$48.50		\$38.38	\$35.14	\$33.00	16,750	\$588,625
05/07/01	\$45.00		\$35.50	\$34.47	\$15.00	533,965	\$18,403,789
05/21/01	\$35.00		\$30.00	\$28.37	\$10.00	44,169	\$1,253,109
06/04/01	\$35.00		\$30.00	\$25.83	\$7.20	115,977	\$3,021,043
06/18/01	\$33.00		\$30.00	\$26.06	\$15.00	44,514	\$1,160,025

Electric Utility Equipment in SCAQMD

Plant	Existing Equipment/APC	Maximum Rating MW	Nat Gas lbs NOx per MWH	Proposed Control Equipment	Est. Reduction Capability	P/C Issue Date	Expected Date of Operation	Current Max 24 hr lbs/day	Controlled Max 24 hr lbs/day	NOx Reduce lbs/day
AES 115536 Redondo Cycle 1	Boiler #5/staged comb	175	2.6	SCR	5 ppm	1-23-01	1-Jun-01	10,920	546	-10,374
	Boiler #6/staged comb	175	3.0	SCR	5 ppm	1-23-01	1-Jun-01	12,600	630	-11,970
	Boiler #7/SCR/FGR/staged comb	480	0.26					2,995	2,995	0
	Boiler #8/SCR/FGR/staged comb	480	0.26					2,995	2,995	0
AES 115394 Alamitos Cycle 1	Boiler #1	175	2.7	SCR	5 ppm	3-9-01	1-Jun-01	11,340	567	-10,773
	Boiler #2	175	2.7	SCR	5 ppm	3-9-01	1-Jun-01	11,340	567	-10,773
	Boiler #3/FGR	320	1.37	SCR	10 ppm	3-9-01	1-Jun-01	10,522	1,473	-9,049
	Boiler #4/FGR	320	1.74	SCR	10 ppm	3-9-01	1-Jun-01	13,363	1,871	-11,492
	Boiler #5/SCR/LNB	480	0.26					2,995	2,995	0
	Boiler #6/SCR/FGR	480	0.26					2,995	2,995	0
	Turbine #7-1A each 225 MMbtuhr	16.625	3.65					1,456	1,456	0
	Turbine #7-1B	16.625	3.65					1,456	1,456	0
	Turbine #7-2A	16.625	3.65					1,456	1,456	0
	Turbine #7-2B	16.625	3.65					1,456	1,456	0
	Turbine #7-3A	16.625	3.65					1,456	1,456	0
	Turbine #7-3B	16.625	3.65					1,456	1,456	0
	Turbine #7-4A	16.625	3.65					1,456	1,456	0
Turbine #7-4B	16.625	3.65					1,456	1,456	0	
AES 115389 Huntington Beach Cycle 2	Boiler #1	215	1.75	SCR	95.80%	3-7-01	1-Jun-01	9,030	379	-8,651
	Boiler #2	215	2.25	SCR	95.80%	3-7-01	1-Jun-01	11,610	488	-11,122
	Boiler #3/Retired Unit	225	0.07	SCR	5 ppm	Pending	1-Jun-01	0	378	378
	Boiler #4/Retired Unit	225	0.07	SCR	5 ppm	Pending	1-Jun-01	0	378	378
	Turbine #5A1 each 244 MMbtuhr	16.625	3.96					1,580	1,580	0
	Turbine #5A2	16.625	3.96					1,580	1,580	0
	Turbine #5B1	16.625	3.96					1,580	1,580	0
	Turbine #5B2	16.625	3.96					1,580	1,580	0
	Turbine #5C1	16.625	3.96					1,580	1,580	0
	Turbine #5C2	16.625	3.96					1,580	1,580	0
LADWP 80017 Harbor Cycle 1	Gas Turbine #1/SCR	182	0.101					441	441	0
	Gas Turbine #2/SCR	182	0.101					441	441	0
	Peaking Turbine #6 28,150 hp	21	3.08					1,552	1,552	0
	Peaking Turbine #7 28,150 hp	21	3.08					1,552	1,552	0
	5 simple cycle Turbines Non Pea	235	0.17	SCR	5 ppm	Pending ERC	1-Jun-01	0	959	959
LADWP 80007 Haynes Cycle 1	Boiler #1/SCR	230	0.12					662	662	0
	Boiler #2/SCR	230	0.12					662	662	0
	Boiler #3/Staged Combustion, FG	230	0.66					3,643	3,643	0
	Boiler #4/None	230	1.35					7,452	7,452	0
	Boiler #5/SCR	330	0.18					1,426	1,426	0
	Boiler #6/None	330	1.35	SCR	90%	1994	1-Jun-01	10,692	1,069	-9,623
LADWP 80007 Scattergood Cycle 1	Boiler #1/Urea	179	1.62	SCR	7 ppm	1-22-01	31-Dec-01	6,960	348	-6,612
	Boiler #2/Urea	179	1.62	SCR	7 ppm	1-22-01	1-Jun-01	6,960	348	-6,612
	Boiler #3/Staged Combustion, FG	460	1.78	SCR	7 ppm	1-22-01	1-Jun-01	19,651	1,965	-17,686
LADWP 80019 Valley Cycle 2	Boiler #1/None	101	1.81	NON-USE				0	0	0
	Boiler #2/None	105	1.81	NON-USE				0	0	0
	Boiler #3/None	172	1.81					7,472	0	-7,472
	Boiler #4/None	168	1.81					7,298	0	-7,298
	Simple Cycle Turbine Non-Peakin	47	0.17	SCR	5 ppm	Pend ERC	1-Jun-01	0	192	192
	2 Combined Cycle Turbines	500	0.0673	SCR	2.5 ppm	Pending	1-Jun-03	0	808	808
Repower for Boilers 1,2,3,4								0	0	
Mountainview Power Cycle 1 121737	Boiler #1	63	1.75	H2O	20%	Est 4-1-01	1-Jun-01	2,646	2,117	-529
	Boiler #2	63	1.75	H2O	20%	Est 4-1-01	1-Jun-01	2,646	2,117	-529
	4 new Turbines	1056	0.0673	SCR	2.5 ppmv	Est 3-5-01	2003	0	1,708	1,708
NRG 115314 Long Beach Cycle 2	Turbine #1 750MMbtuhr each/ste	61	1.36					1,991	1,991	0
	Turbine #2/steam inj	61	1.36					1,991	1,991	0
	Turbine #3/steam inj	61	1.36					1,991	1,991	0
	Turbine #4/steam inj	61	1.36					1,991	1,991	0

CONTAINS PROTECTED
MATERIAL NOT AVAILABLE
TO COMPETITIVE
DUTY PERSONNEL

CAH000 CA-12

(Appendix R)

Electric Utility Equipment in SCAQMD

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Plant	Existing Equipment/APC	Maximum Rating MW	Nat Gas lbs NOx per MWH	Proposed Control Equipment	Est. Reduction Capability	P/C Issue Date	Expected Date of Operation	Current Max 24 hr lbs/day	Controlled Max 24 hr lbs/day	Re lbs
NRG 115314 Long Beach	Turbine #5/steam inj	61	1.36					1,991	1,991	
	Turbine #6/steam inj	61	1.36					1,991	1,991	
	Turbine #7/steam inj	61	1.36					1,991	1,991	
NRG 115663 El Segundo Cycle 1	Boiler #1	175	3.35	LNB	30%	Est 4-15-01	1-May-01	14,070	9,849	
	Boiler #2	175	3.08	LNB	30%	Est 4-15-01	1-May-01	12,936	9,055	
	Boiler #3	335	2.5	SCR	90%	1-19-01	1-Jun-01	20,100	2,010	-1
	Boiler #4/SCR	335	0.25					2,010	2,010	
Edison 18572 Highgrove Cycle 2	Boiler #1	32.5	4.63					3,611	3,611	
	Boiler #2	32.5	4.63					3,611	3,611	
	Boiler #3/LNB/FGR	44.5	3.6					3,845	3,845	
	Boiler #4	44.5	5.16					5,511	5,511	
Reliant Energy Etiwanda Cycle 1 115315	Boiler #1/staged comb	132	2.4	FGR	47%	Est 4-15-01	1-Jun-01	7,603	4,030	
	Boiler #2/staged comb	132	2.4	FGR	47%	Est 4-15-01	1-Jun-01	7,603	4,030	
	Boiler #3/FGR/staged comb	320	1.6	SCR	7 ppm	3-2-01	1-Jun-01	12,288	1,352	-1
	Boiler #4/FGR/staged comb	320	1.4	SCR	7 ppm	3-2-01	1-Jun-01	10,752	1,183	
	Turbine #5A1 each 220 MMbtuhr	15.75	3.77					1,425	1,425	
	Turbine #5A2	15.75	3.77					1,425	1,425	
	Turbine #5B1	15.75	3.77					1,425	1,425	
	Turbine #5B2	15.75	3.77					1,425	1,425	
	Turbine #5C1	15.75	3.77					1,425	1,425	
	Turbine #5C2	15.75	3.77					1,425	1,425	
	Turbine #5D1	15.75	3.77					1,425	1,425	
Turbine #5D2	15.75	3.77					1,425	1,425		
Pasadena Cycle 1 800168	Boiler #B1	45	3.48					3,758	3,758	
	Boiler #B2/LNB	45	3.92					4,234	4,234	
	Boiler #B3/SCR	71	0.412					702	702	
	Turbine #GT-1 298 Mmbtuhr/stea	31	2.59					1,927	1,927	
	Turbine #GT-2 298 Mmbtuhr/stea	30	2.68					1,930	1,930	
Burbank Cycle 2 25638	Boiler Olive #1/LNB	44	1.87					1,975	1,975	
	Boiler Olive #2	55	2.46					3,247	3,247	
	Boiler Magnolia #3/LNB	20	2.43					1,166	1,166	
	Boiler Magnolia #4/LNB	28	2.61					1,754	1,754	
	Turbine Peaking Olive #3 528MM	24.2	5.89					3,421	3,421	
	Turbine Peaking Olive #4 350MM	32.85	2.88					2,271	2,271	
Turbine Peaking Magnolia #5 240	21.5	3.01					1,553	1,553		
SCE Pebble Beach Cycle 1 4477	ICE #7 1500 BHP	1	Oil Fired					1,258	1,258	
	ICE #8 2150 BHP NOxTECH	1.5	Oil Fired					1,887	1,887	
	ICE #10 1575 BHP	1.125	Oil Fired					1,415	1,415	
	ICE #12 2200 BHP	1.5	Oil Fired					1,887	1,887	
	ICE #14 1950 BHP	1.4	Oil Fired					1,761	1,761	
	ICE #15 3900 BHP NOxTECH	2.8	Oil Fired					122	122	
Glendale 800327	Boiler #3/LNB/FGR	20	0.54					307	307	
	Boiler #4/LNB/FGR	44	1.14					1,204	1,204	
	Boiler #5/FGR	44	1.14					1,204	1,204	
	Turbine #8A/water inj 350MM	30	3.14	SCR	9 ppmv	2-16-01	April 01	2,261	226	
	Turbine #8B-C/water inj 700MM	60	3.14	SCR	9 ppmv	2-16-01	April 01	4,522	452	
	Turbine #6 240MM	22	2.94					1,552	1,552	
	Turbine #7 350MM	31.4	3.01	SCR	9 ppmv	Est 6-1-01	1-Jan-02	2,268	227	
Anaheim Cyc 1	Turbine D2/H2O inj/CO/SCR 442	48	0.1101					127	127	
Vernon Cycle 2 14502	ICE #1 7000 BHP <200 hr/yr	6	Oil Fired					1,038	1,038	
	ICE #2 7000 BHP <200 hr/yr	6	Oil Fired					1,038	1,038	
	ICE #3 7000 BHP <200 hr/yr	6	Oil Fired					1,038	1,038	
	ICE #4 7000 BHP <200 hr/yr	6	Oil Fired					1,038	1,038	
	ICE #5 7000 BHP <200 hr/yr	6	Oil Fired					1,038	1,038	
	Turbine #6/H2O inj 69.12 MM	6	0.999					144	144	
Turbine #6/H2O inj 69.12 MM	6	0.999					144	144		
Nueva Azalea	2 New Turbines	550	0.0239	SCONOx	1 ppmv	Pending	2003	0	315	
Total NOx								393,622	195,803	-15

**CONTAINS PROTECTED MATERIAL-
NOT AVAILABLE TO COMPETITIVE DUTY PERSONNEL**

Unit Name	NOx/MWH	Alamitos 1	Alamitos 2	Alamitos 3	Alamitos 4	Alamitos 5	Alamitos 6	Alamitos 7	Segundo 1	Segundo 2	Segundo 3	Segundo 4	Etowanda 1	Etowanda 2	Etowanda 3	Etowanda 4	Etowanda 5	Huntington Beach 1	Huntington Beach 2	Huntington Beach 5
02/14/00	1.07	1.38	0.74	0.68	0.07	0.05	3.65	1.81	1.55	0.44	0.10	1.12	0.66	0.66	0.66	0.66	3.42	0.98	0.78	3.96
02/26/00	2.45	3.20	1.71	1.56	0.15	0.11	8.40	4.16	3.57	1.02	0.22	2.58	2.81	1.52	1.52	1.52	7.87	2.25	1.80	9.11
03/13/00	3.06	4.00	2.14	1.95	0.19	0.14	10.50	5.21	4.47	1.27	0.28	3.22	3.51	1.90	1.90	1.90	9.84	2.82	2.26	11.39
03/27/00	2.88	3.77	2.01	1.84	0.18	0.13	9.87	4.89	4.20	1.19	0.26	3.03	3.30	1.76	1.76	1.76	9.25	2.65	2.12	10.71
04/10/00	2.79	3.65	1.94	1.78	0.18	0.13	9.56	4.74	4.07	1.16	0.25	2.93	3.20	1.73	1.73	1.73	8.96	2.56	2.05	10.37
04/24/00	2.70	3.53	1.88	1.72	0.17	0.12	9.25	4.59	3.94	1.12	0.25	2.84	3.09	1.67	1.67	1.67	8.67	2.48	1.99	10.04
05/08/00	2.61	3.41	1.82	1.66	0.16	0.12	8.94	4.43	3.80	1.08	0.24	2.74	2.99	1.62	1.62	1.62	8.38	2.40	1.92	9.70
05/22/00	3.60	4.70	2.51	2.29	0.23	0.17	12.32	6.11	5.24	1.49	0.33	3.78	4.12	2.23	2.23	2.23	11.55	3.31	2.65	13.37
06/05/00	4.59	5.98	3.19	2.92	0.29	0.21	15.71	7.79	6.68	1.90	0.42	4.82	5.25	2.84	2.84	2.84	14.72	4.21	3.37	17.04
06/19/00	2.25	2.94	1.57	1.43	0.14	0.10	7.70	3.82	3.27	0.93	0.20	2.36	2.57	1.39	1.39	1.39	7.21	2.06	1.65	8.35
07/03/00	5.61	7.33	3.91	3.58	0.35	0.26	19.22	9.53	8.18	2.33	0.51	5.90	6.43	3.48	3.48	3.48	18.01	5.16	4.13	20.86
07/17/00	6.41	8.37	4.46	4.08	0.40	0.30	21.94	10.88	9.33	2.65	0.58	6.73	7.33	3.97	3.97	3.97	20.56	5.88	4.71	23.80
07/31/00	10.78	14.08	7.51	6.87	0.68	0.50	36.92	18.31	15.71	4.47	0.98	11.33	12.34	6.68	6.68	6.68	34.59	9.90	7.83	40.06
08/14/00	16.53	21.60	11.52	10.53	1.04	0.76	56.62	28.07	24.08	6.85	1.50	17.37	18.92	10.24	10.24	10.24	53.05	15.18	12.17	61.42
08/28/00	34.00	44.42	23.69	21.66	2.14	1.57	116.45	57.74	49.54	14.09	3.09	35.73	38.92	21.06	21.06	21.06	109.11	31.23	25.02	126.34
09/11/00	31.83	41.59	22.18	20.28	2.01	1.47	109.03	54.07	46.38	13.19	2.89	33.46	36.44	19.72	19.72	19.72	102.16	29.24	23.43	118.29
09/25/00	30.70	40.12	21.39	19.56	1.93	1.41	105.17	52.15	44.74	12.72	2.78	32.27	35.15	19.02	19.02	19.02	98.54	28.20	22.60	114.10
10/09/00	47.69	62.31	33.23	30.38	3.00	2.20	163.34	81.00	69.48	19.76	4.33	50.12	54.60	29.54	29.54	29.54	153.05	43.80	35.10	177.21
10/23/00	50.35	65.79	35.08	32.08	3.17	2.32	172.46	85.52	73.36	20.86	4.57	52.92	57.65	31.19	31.19	31.19	161.60	46.25	37.06	187.11
11/06/00	49.12	64.19	34.23	31.30	3.09	2.26	168.27	83.44	71.58	20.36	4.46	51.63	56.24	30.43	30.43	30.43	157.66	45.13	36.16	182.56
11/20/00	51.15	66.84	35.64	32.59	3.22	2.36	175.20	86.88	74.53	21.20	4.64	53.76	58.56	31.68	31.68	31.68	164.16	46.99	37.65	190.08
12/04/00	44.78	58.52	31.20	28.53	2.82	2.06	153.39	76.06	65.25	18.56	4.06	47.07	51.27	27.74	27.74	27.74	143.73	41.14	32.96	166.42
12/18/00	46.27	60.47	32.24	29.48	2.92	2.13	158.50	78.60	67.42	19.18	4.20	48.64	52.98	28.66	28.66	28.66	148.51	42.51	34.06	171.96
01/01/01	48.06	62.80	33.49	30.62	3.03	2.21	164.62	81.63	70.03	19.92	4.36	50.51	55.02	29.77	29.77	29.77	154.24	44.15	35.37	178.60
01/15/01	47.90	62.59	33.37	30.52	3.02	2.21	164.07	81.36	69.79	19.85	4.35	50.34	54.84	29.67	29.67	29.67	153.73	44.00	35.25	178.00
01/29/01	33.41	43.85	23.28	21.29	2.10	1.54	114.43	56.74	48.68	13.84	3.03	35.11	38.25	20.69	20.69	20.69	107.22	30.69	24.59	124.15
02/12/01	50.22	65.82	34.98	32.00	3.16	2.31	172.01	85.29	73.17	20.81	4.56	52.78	57.49	31.10	31.10	31.10	161.17	46.13	36.96	186.62
02/26/01	7.99	10.44	5.57	5.09	0.50	0.37	27.38	13.57	11.65	3.31	0.73	8.40	9.15	4.95	4.95	4.95	25.65	7.34	5.88	29.70
03/12/01	7.99	10.44	5.57	5.09	0.50	0.37	27.38	13.57	11.65	3.31	0.73	8.40	9.15	4.95	4.95	4.95	25.65	7.34	5.88	29.70
03/26/01	7.99	10.44	5.57	5.09	0.50	0.37	27.38	13.57	11.65	3.31	0.73	8.40	9.15	4.95	4.95	4.95	25.65	7.34	5.88	29.70
04/09/01	7.99	10.44	5.57	5.09	0.50	0.37	27.38	13.57	11.65	3.31	0.73	8.40	9.15	4.95	4.95	4.95	25.65	7.34	5.88	29.70
04/23/01	7.99	10.44	5.57	5.09	0.50	0.37	27.38	13.57	11.65	3.31	0.73	8.40	9.15	4.95	4.95	4.95	25.65	7.34	5.88	29.70
05/07/01	7.99	10.44	5.57	5.09	0.50	0.37	27.38	13.57	11.65	3.31	0.73	8.40	9.15	4.95	4.95	4.95	25.65	7.34	5.88	29.70
05/21/01	7.99	10.44	5.57	5.09	0.50	0.37	27.38	13.57	11.65	3.31	0.73	8.40	9.15	4.95	4.95	4.95	25.65	7.34	5.88	29.70

**CONTAINS PROTECTED MATERIAL-
NOT AVAILABLE TO COMPETITIVE DUTY PERSONNEL**

Unit Name	Long Beach 5-7	Long Beach 4-8-9	Redondo 5	Redondo 6	Redondo 7	Redondo 8	Anahelm CT	High Grove 1	High Grove 2	High Grove 3	High Grove 4	Broadway 1	Broadway 2	Broadway 3	Pasadena Glenasm Unit1	Pasadena Glenasm Unit2	Mandalay 3 CT
NOx/MWH	2.11	0.85	1.53	1.20	0.06	0.09	0.12	3.1R	2.65	1.49	1.72	1.73	1.31	0.26	2.59	2.68	0.10
02/14/00	4.85	1.95	3.51	2.75	0.15	0.20	0.28	7.30	6.10	3.43	3.95	3.98	3.01	0.60	5.96	6.16	-
02/28/00	6.06	2.44	4.39	3.44	0.19	0.25	0.35	8.13	7.83	4.29	4.84	4.98	3.77	0.75	7.45	7.71	-
03/13/00	5.70	2.29	4.13	3.24	0.18	0.24	0.32	8.59	7.18	4.03	4.65	4.68	3.54	0.71	7.00	7.25	-
03/27/00	5.52	2.22	4.00	3.14	0.17	0.23	0.31	8.32	6.95	3.91	4.50	4.54	3.43	0.68	6.78	7.02	-
04/10/00	5.34	2.15	3.87	3.04	0.16	0.22	0.30	8.05	6.73	3.78	4.35	4.39	3.32	0.66	6.57	6.79	-
04/24/00	5.16	2.08	3.74	2.93	0.16	0.21	0.29	7.78	6.50	3.65	4.21	4.24	3.21	0.64	6.35	6.57	-
05/08/00	7.12	2.86	5.15	4.04	0.22	0.30	0.41	10.72	8.96	5.03	5.80	5.85	4.42	0.88	8.75	9.05	-
05/22/00	9.07	3.65	6.57	5.15	0.28	0.38	0.52	13.67	11.42	6.41	7.38	7.45	5.64	1.13	11.14	11.53	-
06/05/00	4.44	1.79	3.22	2.53	0.14	0.18	0.25	6.70	5.60	3.14	3.62	3.65	2.76	0.55	5.46	5.65	-
06/19/00	11.10	4.47	8.04	6.31	0.34	0.46	0.63	16.73	13.98	7.85	9.05	9.12	6.90	1.38	13.64	14.12	-
07/03/00	12.67	5.10	9.18	7.20	0.39	0.53	0.72	19.09	15.95	8.96	10.33	10.41	7.87	1.57	15.57	16.11	-
07/31/00	11.10	4.47	8.04	6.31	0.34	0.46	0.63	16.73	13.98	7.85	9.05	9.12	6.90	1.38	13.64	14.12	-
07/17/00	21.32	8.58	15.44	12.11	0.66	0.88	1.21	32.12	26.85	15.08	17.38	17.52	13.25	2.64	26.20	27.11	-
07/31/00	32.69	13.16	23.68	18.58	1.01	1.36	1.86	49.26	41.17	23.12	26.65	26.87	20.31	4.08	40.17	41.57	\$30.30
08/14/00	67.23	27.06	48.71	38.21	2.07	2.79	3.83	101.32	84.67	47.56	54.81	55.27	41.78	8.34	82.63	85.50	\$30.30
08/28/00	62.95	25.34	45.60	35.77	1.94	2.61	3.58	94.86	78.28	44.53	51.31	51.75	39.12	7.81	77.37	80.06	\$30.30
09/11/00	60.72	24.44	43.99	34.51	1.87	2.52	3.46	91.50	76.47	42.95	49.50	49.91	37.74	7.53	74.62	77.22	\$30.30
09/25/00	94.30	37.96	68.32	53.59	2.91	3.91	5.37	142.11	118.77	66.71	76.87	77.52	58.61	11.70	115.90	119.93	\$30.30
10/09/00	99.57	40.08	72.13	56.59	3.07	4.13	5.67	150.05	125.40	70.44	81.17	81.85	61.88	12.35	122.38	126.63	\$30.30
10/23/00	97.15	39.10	70.38	55.21	3.00	4.03	5.53	146.40	122.35	68.72	79.19	79.88	60.38	12.05	119.40	123.55	\$30.30
11/06/00	101.15	40.72	73.28	57.48	3.12	4.19	5.76	152.44	127.39	71.56	82.46	83.15	62.87	12.55	124.32	128.64	\$30.30
11/20/00	88.56	35.65	64.16	50.33	2.73	3.67	5.04	133.46	111.53	62.65	72.19	72.80	55.04	10.99	108.84	112.63	\$30.30
12/04/00	91.51	36.83	66.30	52.01	2.82	3.79	5.21	137.91	115.25	64.73	74.60	75.23	58.87	11.35	112.47	116.38	\$30.30
12/18/00	95.04	38.26	68.85	54.01	2.93	3.94	5.41	143.23	119.70	67.23	77.47	78.13	59.07	11.79	116.81	120.87	\$30.30
01/01/01	94.72	38.13	68.62	53.83	2.92	3.93	5.39	142.75	119.30	67.01	77.22	77.87	58.87	11.75	116.42	120.47	\$30.30
01/15/01	66.06	26.59	47.86	37.54	2.04	2.74	3.76	99.56	83.20	46.73	53.85	54.31	41.06	8.20	81.20	84.02	45.45
01/29/01	99.31	39.97	71.94	56.44	3.06	4.12	5.66	149.66	125.07	70.25	80.95	81.63	61.72	12.32	122.05	126.30	45.45
02/12/01	15.80	6.36	11.45	8.98	0.49	0.66	0.90	23.82	19.90	11.18	12.88	12.99	9.82	1.96	19.43	20.10	45.45
02/26/01	15.80	6.36	11.45	8.98	0.49	0.66	0.90	23.82	19.90	11.18	12.88	12.99	9.82	1.96	19.43	20.10	45.45
03/12/01	15.80	6.36	11.45	8.98	0.49	0.66	0.90	23.82	19.90	11.18	12.88	12.99	9.82	1.96	19.43	20.10	45.45
03/28/01	15.80	6.36	11.45	8.98	0.49	0.66	0.90	23.82	19.90	11.18	12.88	12.99	9.82	1.96	19.43	20.10	45.45
04/09/01	15.80	6.36	11.45	8.98	0.49	0.66	0.90	23.82	19.90	11.18	12.88	12.99	9.82	1.96	19.43	20.10	45.45
04/23/01	15.80	6.36	11.45	8.98	0.49	0.66	0.90	23.82	19.90	11.18	12.88	12.99	9.82	1.96	19.43	20.10	45.45
05/07/01	15.80	6.36	11.45	8.98	0.49	0.66	0.90	23.82	19.90	11.18	12.88	12.99	9.82	1.96	19.43	20.10	45.45
05/21/01	15.80	6.36	11.45	8.98	0.49	0.66	0.90	23.82	19.90	11.18	12.88	12.99	9.82	1.96	19.43	20.10	45.45

**CONTAINS PROTECTED MATERIAL-
NOT AVAILABLE TO COMPETITIVE DUTY PERSONNEL**

Appendix S-Emission Costs per MWH for Each Two Week Period

Unit Name	NOx/MWH	Encna 1	Encna 2	Encna 3	Encna 4	Encna 5	South Bay 5 GT	South Bay 1	South Bay 1	South Bay 1	South Bay 1	South Bay 1	South Bay 1	Division Naval Station	Division Street	El Cajon	Encina Power Plant
02/14/00	1.62	1.66	1.38	0.58	0.24	1.17	0.79	0.79	0.99	1.42							
02/28/00																	
03/13/00																	
03/27/00																	
04/10/00																	
04/24/00																	
05/08/00																	
05/22/00																	
06/05/00																	
06/19/00																	
07/03/00																	
07/17/00																	
07/31/00																	
08/14/00																	
08/28/00																	
09/11/00																	
09/25/00																	
10/09/00																	
10/23/00																	
11/06/00																	
11/20/00																	
12/04/00																	
12/18/00																	
01/01/01	12.14	12.41	10.36	4.37	1.82	8.76	5.90	5.90	7.41	10.69	\$30.99	\$28.66	\$18.91	\$18.58	\$18.58	\$18.58	
01/15/01	12.14	12.41	10.36	4.37	1.82	8.76	5.90	5.90	7.41	10.69	\$30.99	\$28.66	\$18.91	\$18.58	\$18.58	\$18.58	
01/29/01	12.14	12.41	10.36	4.37	1.82	8.76	5.90	5.90	7.41	10.69	\$30.99	\$28.66	\$18.91	\$18.58	\$18.58	\$18.58	
02/12/01	12.14	12.41	10.36	4.37	1.82	8.76	5.90	5.90	7.41	10.69	\$30.99	\$28.66	\$18.91	\$18.58	\$18.58	\$18.58	
02/26/01	12.14	12.41	10.36	4.37	1.82	8.76	5.90	5.90	7.41	10.69	\$30.99	\$28.66	\$18.91	\$18.58	\$18.58	\$18.58	
03/12/01	12.14	12.41	10.36	4.37	1.82	8.76	5.90	5.90	7.41	10.69	\$30.99	\$28.66	\$18.91	\$18.58	\$18.58	\$18.58	
03/26/01	12.14	12.41	10.36	4.37	1.82	8.76	5.90	5.90	7.41	10.69	\$30.99	\$28.66	\$18.91	\$18.58	\$18.58	\$18.58	
04/09/01	12.14	12.41	10.36	4.37	1.82	8.76	5.90	5.90	7.41	10.69	\$30.99	\$28.66	\$18.91	\$18.58	\$18.58	\$18.58	
04/23/01	12.14	12.41	10.36	4.37	1.82	8.76	5.90	5.90	7.41	10.69	\$30.99	\$28.66	\$18.91	\$18.58	\$18.58	\$18.58	
05/07/01	12.14	12.41	10.36	4.37	1.82	8.76	5.90	5.90	7.41	10.69	\$30.99	\$28.66	\$18.91	\$18.58	\$18.58	\$18.58	
05/21/01	12.14	12.41	10.36	4.37	1.82	8.76	5.90	5.90	7.41	10.69	\$30.99	\$28.66	\$18.91	\$18.58	\$18.58	\$18.58	

**CONTAINS PROTECTED MATERIAL-
NOT AVAILABLE TO COMPETITIVE DUTY PERSONNEL**

Appendix T - Moss Landing Emission Limits											
Date	NOx Tons	May-Oct Avg	Available MWH	Date	NOx Tons	May-Oct Avg	Available MWH	Date	NOx Tons	May-Oct Avg	Available MWH
1-May-00	4.38	4.38	16,910	1-Jul-00	12.43	8.94	138,965	1-Sep-00	9.17	9.60	16,356
2-May-00	4.04	4.21	34,908	2-Jul-00	9.98	8.96	137,861	2-Sep-00	9.56	9.60	16,619
3-May-00	3.36	3.93	55,121	3-Jul-00	11.69	9.00	131,272	3-Sep-00	7.93	9.59	22,121
4-May-00	1.21	3.25	82,229	4-Jul-00	5.54	8.95	144,446	4-Sep-00	7.57	9.57	28,767
5-May-00	4.36	3.47	99,222	5-Jul-00	7.51	8.93	151,290	5-Sep-00	10.79	9.58	25,078
6-May-00	1.67	3.17	124,859	6-Jul-00	5.45	8.88	164,758	6-Sep-00	11.99	9.60	17,534
7-May-00	1.79	2.97	150,112	7-Jul-00	3.65	8.80	184,030	7-Sep-00	12.09	9.62	9,666
8-May-00	5.31	3.26	164,041	8-Jul-00	3.65	8.72	203,288	8-Sep-00	10.03	9.62	8,416
9-May-00	6.34	3.61	174,665	9-Jul-00	5.76	8.68	215,765	9-Sep-00	10.17	9.62	6,721
10-May-00	8.36	4.08	178,769	10-Jul-00	8.81	8.68	218,447	10-Sep-00	9.79	9.63	6,233
11-May-00	7.75	4.42	184,843	11-Jul-00	9.78	8.70	217,987	11-Sep-00	9.99	9.63	5,103
12-May-00	6.67	4.60	194,389	12-Jul-00	6.57	8.67	227,849	12-Sep-00	10.86	9.64	1,175
13-May-00	7.02	4.79	202,803	13-Jul-00	5.31	8.62	241,763	13-Sep-00	10.61	9.64	(1,929)
14-May-00	3.83	4.72	221,479	14-Jul-00	5.22	8.58	255,992	14-Sep-00	10.06	9.65	(3,295)
15-May-00	5.61	4.78	234,431	15-Jul-00	5.84	8.54	268,200	15-Sep-00	9.83	9.65	(3,899)
16-May-00	8.55	5.02	237,935	16-Jul-00	6.97	8.52	276,779	16-Sep-00	10.96	9.66	(8,144)
17-May-00	8.54	5.22	241,487	17-Jul-00	8.66	8.52	279,923	17-Sep-00	10.60	9.66	(11,235)
18-May-00	8.23	5.39	246,012	18-Jul-00	11.27	8.56	274,681	18-Sep-00	9.98	9.67	(12,318)
19-May-00	10.31	5.65	243,852	19-Jul-00	13.37	8.62	262,698	19-Sep-00	10.12	9.67	(13,873)
20-May-00	9.40	5.84	244,638	20-Jul-00	13.55	8.68	250,135	20-Sep-00	9.61	9.67	(13,784)
21-May-00	9.81	6.03	244,088	21-Jul-00	13.52	8.74	237,653	21-Sep-00	8.91	9.66	(11,439)
22-May-00	9.36	6.18	244,992	22-Jul-00	12.98	8.79	226,897	22-Sep-00	8.60	9.66	(8,092)
23-May-00	10.45	6.36	242,390	23-Jul-00	13.33	8.84	215,026	23-Sep-00	10.00	9.66	(9,264)
24-May-00	10.27	6.53	240,360	24-Jul-00	13.10	8.89	203,898	24-Sep-00	9.78	9.66	(9,706)
25-May-00	9.56	6.65	240,613	25-Jul-00	12.85	8.94	193,579	25-Sep-00	8.80	9.65	(6,999)
26-May-00	9.48	6.76	241,131	26-Jul-00	12.67	8.98	183,841	26-Sep-00	9.08	9.65	(5,191)
27-May-00	8.78	6.83	243,894	27-Jul-00	12.96	9.03	173,175	27-Sep-00	8.88	9.65	(2,746)
28-May-00	8.70	6.90	246,928	28-Jul-00	12.35	9.07	164,463	28-Sep-00	9.45	9.64	(2,122)
29-May-00	8.26	6.94	251,379	29-Jul-00	11.71	9.09	157,797	29-Sep-00	8.48	9.64	1,617
30-May-00	10.00	7.05	250,234	30-Jul-00	11.02	9.12	153,348	30-Sep-00	4.94	9.61	16,723
31-May-00	10.98	7.17	245,917	31-Jul-00	11.43	9.14	147,604	1-Oct-00	3.72	9.57	35,772
1-Jun-00	10.66	7.28	242,624	1-Aug-00	11.23	9.16	142,494	2-Oct-00	4.02	9.53	53,853
2-Jun-00	10.07	7.37	241,227	2-Aug-00	11.66	9.19	136,009	3-Oct-00	0.00	9.47	84,857
3-Jun-00	8.71	7.41	244,205	3-Aug-00	11.23	9.21	130,909	4-Oct-00	0.00	9.41	115,861
4-Jun-00	9.30	7.46	245,292	4-Aug-00	11.87	9.24	123,739	5-Oct-00	0.24	9.35	146,094
5-Jun-00	9.85	7.53	244,619	5-Aug-00	8.94	9.24	125,981	6-Oct-00	4.47	9.32	162,735
6-Jun-00	9.96	7.59	243,580	6-Aug-00	10.54	9.25	123,078	7-Oct-00	4.55	9.29	179,122
7-Jun-00	9.96	7.66	242,562	7-Aug-00	11.32	9.27	117,670	8-Oct-00	5.09	9.27	193,750
8-Jun-00	9.78	7.71	242,127	8-Aug-00	11.34	9.29	112,199	9-Oct-00	4.85	9.24	209,141
9-Jun-00	9.58	7.76	242,309	9-Aug-00	11.42	9.31	106,482	10-Oct-00	5.13	9.21	223,658
10-Jun-00	10.30	7.82	240,198	10-Aug-00	11.45	9.33	100,658	11-Oct-00	5.60	9.19	236,655
11-Jun-00	7.26	7.81	247,854	11-Aug-00	11.65	9.36	94,194	12-Oct-00	5.56	9.17	249,768
12-Jun-00	10.02	7.86	246,621	12-Aug-00	10.64	9.37	90,964	13-Oct-00	5.56	9.15	262,887
13-Jun-00	7.98	7.86	251,955	13-Aug-00	11.48	9.39	85,045	14-Oct-00	5.42	9.13	276,463
14-Jun-00	8.84	7.88	254,532	14-Aug-00	12.05	9.41	77,308	15-Oct-00	5.32	9.10	290,347
15-Jun-00	13.14	8.00	243,283	15-Aug-00	11.88	9.44	70,112	16-Oct-00	5.63	9.08	303,251
16-Jun-00	11.68	8.07	236,720	16-Aug-00	11.32	9.45	64,708	17-Oct-00	6.14	9.06	314,494
17-Jun-00	8.63	8.09	239,963	17-Aug-00	11.47	9.47	58,825	18-Oct-00	5.82	9.05	326,784
18-Jun-00	7.37	8.07	247,267	18-Aug-00	11.57	9.49	52,618	19-Oct-00	5.98	9.03	338,571
19-Jun-00	10.72	8.12	243,786	19-Aug-00	11.01	9.50	48,199	20-Oct-00	5.62	9.01	351,488
20-Jun-00	10.20	8.16	241,993	20-Aug-00	7.26	9.48	55,848	21-Oct-00	6.02	8.99	363,116
21-Jun-00	11.21	8.22	236,959	21-Aug-00	10.21	9.49	54,010	22-Oct-00	6.23	8.98	374,071
22-Jun-00	14.02	8.33	222,878	22-Aug-00	11.34	9.51	48,529	23-Oct-00	6.06	8.96	385,601
23-Jun-00	13.13	8.42	211,662	23-Aug-00	11.31	9.52	43,147	24-Oct-00	5.63	8.94	398,509
24-Jun-00	11.92	8.48	204,316	24-Aug-00	11.67	9.54	36,606	25-Oct-00	5.91	8.92	410,497
25-Jun-00	10.04	8.51	203,041	25-Aug-00	11.55	9.56	30,448	26-Oct-00	5.65	8.90	423,322
26-Jun-00	12.16	8.58	194,946	26-Aug-00	11.04	9.57	25,946	27-Oct-00	5.70	8.89	436,009
27-Jun-00	13.31	8.66	183,145	27-Aug-00	6.99	9.55	34,483	28-Oct-00	6.13	8.87	447,298
28-Jun-00	12.74	8.73	173,189	28-Aug-00	10.92	9.56	30,378	29-Oct-00	6.19	8.86	458,381
29-Jun-00	13.88	8.81	159,559	29-Aug-00	12.28	9.58	21,880	30-Oct-00	5.99	8.84	470,118
30-Jun-00	13.26	8.89	147,931	30-Aug-00	11.26	9.60	16,664	31-Oct-00	5.81	8.82	482,434
				31-Aug-00	10.21	9.60	14,831				

**CONTAINS PROTECTED MATERIAL-
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Appendix U			
Coolwater Generation and Emissions			
	MWH	NOx Tons	Avg #/MWH
2000 All Year	2,594,827	864.22	0.6661
2001 to Jun 20	1,430,746	427	0.5963
2001 NOx Tons		426.6	
E(2001) NOx Tons	3,104,507	925.6	
2001 Limit Tons	4,537,947	1,353	

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Appendix V Summary of Cooling Water Discharge Permits						
Owner	Plant	RWQCB	NPDES Permit #	Conditions at Divestiture	New NPDES Permit#	New Conditions
Duke Energy	Morro Bay	Central Coast	CA0003743/95-28	<+30F intake	same	same
Duke Energy	Moss Landing	Central Coast	CA0006254/95-22	<+28F intake	CA0006254/00-041	<+ 28F delta T for units 6 & 7, new limit <+20F delta T for new units 1-2
Duke Energy Total	Oakland	San Francisco	NA	NA	NA	NA
Mirant	Pittsburg	San Francisco	CA0004880/95-225	Resource Mgmt Plan curtailment period 5/1-7/15, <+29F intake	CA0004880 0072	R2-2002- <+28F
Mirant	Contra Costa	Central Valley	CA0004863/95-234	Resource Mgmt Plan curtailment period 5/1-7/15, <+37F intake	CA0004863 order No. 01-107	5- <+37 F (for Outfall 001) and <+39 F (for Outfall 002).
Mirant	Potrero	San Francisco	CA0005657/94-056	<86F discharge	new permit not yet issued	NA
AES/Williams	Alamitos	Los Angeles	CA0001139/94-128	<105F discharge	CA0001139/00-082	<+30F ocean temp, 516 mgd
AES/Williams	Huntington Beach	Santa Ana	CA0001163/93-58	<+30F ocean	CA0001163/00-005	
AES/Williams	Redondo Beach	Los Angeles	CA0001201/94-133	<106F discharge	CA0001201/00-085	<90F June/Oct, <78F rest of year, 2.3 mgd
ThermoEcotek (AES)	Mountainview/San Bernardino	Santa Ana	CA0001210/94-8	<95F, 2.1 mgd	CA0001210/00-003	<90F June/Oct, <78F rest of year, 0.13 mgd
ThermoEcotek (AES)	Riverside/Highgrove	Santa Ana	CA001555/94-95	<95F, 0.611 mgd	CA0001555/00-004	
Dynegy/NRG	El Segundo	Los Angeles	CA0001147/94-129	<105F discharge	CA0001147/00-084	
Dynegy/NRG	Long Beach	Los Angeles	CA0001171/94-130	<105F discharge	no other listed	
Reliant Energy	Cool Water	Lahontan	Order 6-84-20	0.82 mgd to lined evap. ponds	Order 6-98-054	0.82 mgd to lined evap. ponds
Reliant Energy	Eilwood	Central Coast	NA	NA	Order 97-03-DWQ	
Reliant Energy	Etiwanda	Inland Empire Util. Agency	POTW #10358	<120F, 3.36 mgd	N/A	same
Reliant Energy	Mandalay	Los Angeles	CA0001180/94-131	<106F discharge	CA0001180/01-057	
Reliant Energy	Ormond Beach	Los Angeles	CA0001198/94-132	<105F discharge	CA0001198/01-092	

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Dyney/IRG	Cabrillo I/Encina	San Diego	CA0001350/94-59	<+20F (avg. of any 24-hr period), <+25F (at any time): 863 MGD	<+20F (avg. of any 24-hr period), <+25F (at any time): 863 MGD
Dyney/IRG Port of SD/Duke	Cabrillo II-CT South Bay	San Diego San Diego	NA CA0001368/96-05	NA <+15° F. (ave. of any 24-hr new permit has yet been issued 602 MGD via a single discharge channel	<+15° F. (ave. of any 24-hr period), <+250 F (at any time), 602 MGD via a single discharge channel

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Appendix W

Date	Mirant Delta Plants Resource Management Plan Loading Constraints							
	HE	Weekend	Pitt 7	MW Net of Pitt 7	Pitt7 Max-MW	Pitt 7 Constraint	Sum >300 MW	330 MW Constraint
5/1/2000	1	0	89.8	47	607	1	47.2	0
5/1/2000	2	0	90.1	47	607	0	47.1	1
5/1/2000	3	0	91.3	77	606	0	76.7	1
5/1/2000	4	0	90.0	105	607	1	94.0	1
5/1/2000	5	0	89.3	123	608	1	94.4	1
5/1/2000	6	0	150.7	155	546	0	126.4	1
5/1/2000	7	0	295.7	171	401	0	140.7	1
5/1/2000	8	0	585.2	201	112	0	169.7	1
5/1/2000	9	0	688.0	183	9	0	155.4	1
5/1/2000	10	0	686.5	216	11	0	187.5	1
5/1/2000	11	0	685.0	509	12	0	480.5	1
5/1/2000	12	0	684.1	636	13	0	605.5	1
5/1/2000	13	0	682.9	764	14	0	714.3	1
5/1/2000	14	0	682.0	874	15	0	838.6	1
5/1/2000	15	0	681.2	902	16	0	871.5	1
5/1/2000	16	0	680.2	759	17	0	728.9	1
5/1/2000	17	0	679.6	549	18	0	521.3	1
5/1/2000	18	0	679.9	536	17	0	506.9	1
5/1/2000	19	0	680.4	561	17	0	530.8	1
5/1/2000	20	0	641.0	328	56	1	298.4	1
5/1/2000	21	0	560.7	193	136	1	165.6	1
5/1/2000	22	0	508.9	169	188	1	140.6	1
5/1/2000	23	0	256.0	168	441	1	140.2	1
5/1/2000	24	0	125.6	170	571	1	140.5	1
5/2/2000	1	0	89.9	170	607	1	140.5	1
5/2/2000	2	0	89.7	170	607	1	140.7	1
5/2/2000	3	0	89.6	170	607	1	140.5	1
5/2/2000	4	0	89.3	170	608	1	140.6	1
5/2/2000	5	0	89.7	171	607	0	140.5	1
5/2/2000	6	0	233.7	172	463	0	140.4	1
5/2/2000	7	0	372.4	171	325	0	140.4	1
5/2/2000	8	0	411.5	167	286	0	139.8	1
5/2/2000	9	0	540.8	220	156	0	191.8	1
5/2/2000	10	0	686.2	344	11	0	313.5	1
5/2/2000	11	0	683.9	587	13	0	557.2	1
5/2/2000	12	0	682.2	804	15	0	732.8	1
5/2/2000	13	0	681.1	968	16	0	829.6	1
5/2/2000	14	0	680.1	969	17	0	827.7	1
5/2/2000	15	0	679.0	968	18	0	827.1	1
5/2/2000	16	0	678.4	972	19	0	830.3	1
5/2/2000	17	0	678.0	975	19	0	834.1	1
5/2/2000	18	0	677.7	927	19	0	790.8	1
5/2/2000	19	0	677.7	692	19	0	645.1	1
5/2/2000	20	0	665.4	279	32	1	251.0	1
5/2/2000	21	0	661.8	198	35	1	169.6	1
5/2/2000	22	0	619.4	178	78	1	149.4	1
5/2/2000	23	0	288.0	169	409	1	139.6	1
5/2/2000	24	0	154.0	169	543	1	140.2	1
5/3/2000	1	0	89.6	169	607	1	140.2	1
5/3/2000	2	0	87.9	169	609	1	140.3	1
5/3/2000	3	0	87.6	170	610	1	140.5	1
5/3/2000	4	0	88.2	169	609	0	140.4	1
5/3/2000	5	0	125.0	169	572	0	140.4	1
5/3/2000	6	0	213.1	169	484	0	140.3	1
5/3/2000	7	0	393.9	169	303	0	140.0	1
5/3/2000	8	0	441.5	168	256	0	138.7	1
5/3/2000	9	0	507.1	167	190	0	138.2	1

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5/3/2000	10	0	681.8	186	15	0	157.0	1
5/3/2000	11	0	684.8	438	12	0	409.5	1
5/3/2000	12	0	683.6	755	13	0	726.2	1
5/3/2000	13	0	682.9	864	14	0	833.1	1
5/3/2000	14	0	681.8	941	15	0	826.0	1
5/3/2000	15	0	680.4	962	17	0	823.9	1
5/3/2000	16	0	679.4	786	18	0	713.6	1
5/3/2000	17	0	679.8	672	17	0	643.9	1
5/3/2000	18	0	679.5	383	18	0	354.1	1
5/3/2000	19	0	679.4	380	18	0	351.6	1
5/3/2000	20	0	680.1	390	17	0	361.2	1
5/3/2000	21	0	680.2	402	17	0	372.9	1
5/3/2000	22	0	680.3	420	17	0	391.0	1
5/3/2000	23	0	646.2	271	51	1	242.7	1
5/3/2000	24	0	307.6	169	389	1	140.5	1
5/4/2000	1	0	95.4	169	602	1	140.3	1
5/4/2000	2	0	83.9	169	613	1	140.4	1
5/4/2000	3	0	87.0	169	610	0	140.4	1
5/4/2000	4	0	90.7	169	606	0	140.5	1
5/4/2000	5	0	93.0	169	604	0	140.4	1
5/4/2000	6	0	113.8	169	583	0	140.4	1
5/4/2000	7	0	297.8	168	399	0	140.1	1
5/4/2000	8	0	556.1	167	141	0	138.9	1
5/4/2000	9	0	564.8	167	132	0	138.6	1
5/4/2000	10	0	623.2	333	74	0	305.1	1
5/4/2000	11	0	683.9	606	13	0	578.4	1
5/4/2000	12	0	683.4	600	14	0	572.0	1
5/4/2000	13	0	682.3	610	15	0	581.8	1
5/4/2000	14	0	681.3	717	16	0	664.7	1
5/4/2000	15	0	680.9	935	16	0	827.2	1
5/4/2000	16	0	680.8	939	16	0	830.3	1
5/4/2000	17	0	680.4	939	17	0	830.3	1
5/4/2000	18	0	680.3	940	17	0	831.0	1
5/4/2000	19	0	680.5	951	17	0	842.5	1
5/4/2000	20	0	680.6	944	16	0	835.3	1
5/4/2000	21	0	681.6	746	15	0	672.7	1
5/4/2000	22	0	631.1	191	66	1	161.9	1
5/4/2000	23	0	258.0	169	439	1	139.2	1
5/4/2000	24	0	91.5	170	606	1	139.8	1
5/5/2000	1	0	90.8	170	606	1	139.8	1
5/5/2000	2	0	90.7	170	606	1	139.9	1
5/5/2000	3	0	90.1	170	607	1	139.2	1
5/5/2000	4	0	90.2	170	607	0	139.1	1
5/5/2000	5	0	90.6	170	606	0	139.0	1
5/5/2000	6	0	91.0	170	606	0	139.1	1
5/5/2000	7	0	92.6	168	604	0	138.8	1
5/5/2000	8	0	232.3	166	465	0	138.2	1
5/5/2000	9	0	364.5	166	333	0	138.2	1
5/5/2000	10	0	384.3	166	313	0	138.2	1
5/5/2000	11	0	377.1	166	320	1	138.1	1
5/5/2000	12	0	427.3	166	270	0	138.3	1
5/5/2000	13	0	553.6	166	143	0	138.3	1
5/5/2000	14	0	554.2	166	143	0	138.3	1
5/5/2000	15	0	553.8	166	143	1	138.3	1
5/5/2000	16	0	553.9	167	143	0	138.5	1
5/5/2000	17	0	554.2	167	143	0	138.3	1
5/5/2000	18	0	553.7	167	143	1	138.7	1
5/5/2000	19	0	550.1	167	147	1	138.7	1
5/5/2000	20	0	335.8	167	361	1	139.1	1
5/5/2000	21	0	302.3	167	395	1	138.9	1
5/5/2000	22	0	325.1	167	372	0	138.7	1
5/5/2000	23	0	157.8	200	539	1	171.6	1
5/5/2000	24	0	91.8	168	605	1	138.6	1
5/6/2000	1	1	92.8	100	604	0	99.7	1
5/6/2000	2	1	92.2	93	605	1	92.8	1

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5/6/2000	3	1	93.9	92	603	0	92.4	1
5/6/2000	4	1	92.4	93	605	1	92.5	1
5/6/2000	5	1	93.8	92	603	0	92.4	1
5/6/2000	6	1	92.8	92	604	1	92.5	1
5/6/2000	7	1	93.2	93	604	0	92.6	1
5/6/2000	8	1	92.2	93	605	1	93.1	1
5/6/2000	9	1	91.1	93	606	1	92.9	1
5/6/2000	10	1	117.3	93	580	0	93.3	1
5/6/2000	11	1	208.0	93	489	0	92.9	1
5/6/2000	12	1	203.9	93	493	1	92.8	1
5/6/2000	13	1	205.2	93	492	0	92.9	1
5/6/2000	14	1	204.2	93	493	1	92.9	1
5/6/2000	15	1	203.8	93	493	1	93.0	1
5/6/2000	16	1	255.8	93	441	0	93.3	1
5/6/2000	17	1	315.4	93	382	0	93.2	1
5/6/2000	18	1	367.0	93	330	0	93.3	1
5/6/2000	19	1	339.2	93	358	1	93.2	1
5/6/2000	20	1	288.2	93	409	1	93.2	1
5/6/2000	21	1	368.0	93	329	0	93.0	1
5/6/2000	22	1	376.3	93	321	0	92.9	1
5/6/2000	23	1	228.0	93	469	1	92.9	1
5/6/2000	24	1	166.7	93	530	1	93.3	1
5/7/2000	1	1	91.6	93	605	1	93.2	1
5/7/2000	2	1	91.5	93	606	1	93.2	1
5/7/2000	3	1	90.2	93	607	1	93.2	1
5/7/2000	4	1	90.2	93	607	0	93.2	1
5/7/2000	5	1	90.9	93	606	0	93.1	1
5/7/2000	6	1	91.3	93	606	0	93.2	1
5/7/2000	7	1	91.5	94	606	0	93.7	1
5/7/2000	8	1	91.7	94	605	0	94.4	1
5/7/2000	9	1	91.2	94	606	1	94.4	1
5/7/2000	10	1	91.4	94	606	0	94.4	1
5/7/2000	11	1	92.1	94	605	0	93.9	1
5/7/2000	12	1	91.1	93	606	1	92.6	1
5/7/2000	13	1	148.4	92	549	0	92.0	1
5/7/2000	14	1	200.0	91	497	0	91.5	1
5/7/2000	15	1	199.3	92	498	1	91.6	1
5/7/2000	16	1	199.6	92	497	0	91.7	1
5/7/2000	17	1	199.4	92	498	1	91.8	1
5/7/2000	18	1	214.2	92	483	0	91.6	1
5/7/2000	19	1	344.8	92	352	0	91.7	1
5/7/2000	20	1	349.2	92	348	0	92.1	1
5/7/2000	21	1	319.9	93	377	1	92.8	1
5/7/2000	22	1	248.8	93	448	1	92.7	1
5/7/2000	23	1	165.8	94	531	1	94.1	1
5/7/2000	24	1	95.6	94	601	1	94.4	1
5/8/2000	1	0	91.9	94	605	1	94.5	1
5/8/2000	2	0	89.4	94	608	1	94.4	1
5/8/2000	3	0	90.0	94	607	0	94.5	1
5/8/2000	4	0	91.9	94	605	0	94.4	1
5/8/2000	5	0	92.0	98	605	0	94.5	1
5/8/2000	6	0	91.6	117	605	1	94.4	1
5/8/2000	7	0	111.0	123	586	0	94.4	1
5/8/2000	8	0	255.3	120	442	0	92.2	1
5/8/2000	9	0	281.2	120	416	0	92.4	1
5/8/2000	10	0	445.6	139	251	0	111.5	1
5/8/2000	11	0	674.2	225	23	0	197.1	1
5/8/2000	12	0	684.8	278	12	0	249.7	1
5/8/2000	13	0	682.7	260	14	0	232.8	1
5/8/2000	14	0	681.3	190	16	0	162.4	1
5/8/2000	15	0	680.4	404	17	0	376.2	1
5/8/2000	16	0	679.1	541	18	0	512.0	1
5/8/2000	17	0	678.5	715	19	0	685.9	1
5/8/2000	18	0	678.5	660	19	0	630.1	1
5/8/2000	19	0	678.3	345	19	0	315.2	1

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5/8/2000	20	0	678.9	270	18	0	240.1	1
5/8/2000	21	0	679.2	276	18	0	246.1	1
5/8/2000	22	0	671.9	251	25	0	221.0	1
5/8/2000	23	0	552.3	169	145	1	140.4	1
5/8/2000	24	0	181.4	169	516	1	140.7	1
5/9/2000	1	0	87.5	169	610	1	140.7	1
5/9/2000	2	0	89.8	169	607	0	140.9	1
5/9/2000	3	0	91.6	169	605	0	141.0	1
5/9/2000	4	0	91.2	169	606	1	140.9	1
5/9/2000	5	0	90.3	169	607	1	140.9	1
5/9/2000	6	0	91.7	169	605	0	140.8	1
5/9/2000	7	0	162.5	169	535	0	140.6	1
5/9/2000	8	0	432.1	168	265	0	139.5	1
5/9/2000	9	0	433.6	168	263	0	139.6	1
5/9/2000	10	0	421.5	168	276	1	139.5	1
5/9/2000	11	0	424.5	168	273	0	139.4	1
5/9/2000	12	0	600.2	168	97	0	139.4	1
5/9/2000	13	0	691.1	168	6	0	139.5	1
5/9/2000	14	0	689.5	168	8	0	139.4	1
5/9/2000	15	0	685.8	168	11	0	139.5	1
5/9/2000	16	0	682.4	226	15	0	197.2	1
5/9/2000	17	0	681.5	274	16	0	245.5	1
5/9/2000	18	0	681.2	274	16	0	245.4	1
5/9/2000	19	0	681.3	418	16	0	389.3	1
5/9/2000	20	0	681.6	337	16	0	308.1	1
5/9/2000	21	0	682.0	402	15	0	373.2	1
5/9/2000	22	0	675.8	555	21	0	526.2	1
5/9/2000	23	0	434.2	185	263	1	156.8	1
5/9/2000	24	0	141.8	175	555	1	146.5	1
5/10/2000	1	0	87.4	170	610	1	141.5	1
5/10/2000	2	0	91.7	170	605	0	141.0	1
5/10/2000	3	0	92.9	169	604	0	140.7	1
5/10/2000	4	0	93.8	169	603	0	140.8	1
5/10/2000	5	0	92.8	169	604	1	140.8	1
5/10/2000	6	0	127.7	169	569	0	140.9	1
5/10/2000	7	0	320.1	169	377	0	140.8	1
5/10/2000	8	0	649.8	169	47	0	140.4	1
5/10/2000	9	0	687.8	169	9	0	140.3	1
5/10/2000	10	0	685.7	186	11	0	157.4	1
5/10/2000	11	0	652.9	182	44	1	153.7	1
5/10/2000	12	0	655.6	193	41	0	164.8	1
5/10/2000	13	0	684.1	203	13	0	174.9	1
5/10/2000	14	0	683.5	200	14	0	172.1	1
5/10/2000	15	0	683.2	168	14	0	139.4	1
5/10/2000	16	0	632.0	168	65	1	139.5	1
5/10/2000	17	0	352.5	168	345	1	139.4	1
5/10/2000	18	0	398.9	168	298	0	139.6	1
5/10/2000	19	0	236.1	168	461	1	139.6	1
5/10/2000	20	0	348.8	168	348	0	139.9	1
5/10/2000	21	0	586.4	260	111	0	231.4	1
5/10/2000	22	0	684.8	301	12	0	272.0	1
5/10/2000	23	0	452.7	185	244	1	156.9	1
5/10/2000	24	0	174.7	170	522	1	140.7	1
5/11/2000	1	0	92.5	170	605	1	140.6	1
5/11/2000	2	0	93.0	169	604	0	140.7	1
5/11/2000	3	0	93.3	169	604	0	140.7	1
5/11/2000	4	0	93.3	169	604	0	140.7	1
5/11/2000	5	0	94.2	169	603	0	140.6	1
5/11/2000	6	0	143.3	169	554	0	140.7	1
5/11/2000	7	0	312.5	168	385	0	140.6	1
5/11/2000	8	0	429.4	168	268	0	140.2	1
5/11/2000	9	0	429.5	168	268	0	140.0	1
5/11/2000	10	0	574.2	168	123	0	140.1	1
5/11/2000	11	0	676.1	181	21	0	153.8	1
5/11/2000	12	0	685.2	235	12	0	207.3	1

**CONTAINS PROTECTED MATERIAL-
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5/11/2000	13	0	685.7	168	11	0	141.1	1
5/11/2000	14	0	685.5	166	12	0	139.0	1
5/11/2000	15	0	684.3	190	13	0	162.9	1
5/11/2000	16	0	684.1	194	13	0	165.7	1
5/11/2000	17	0	559.2	167	138	1	139.0	1
5/11/2000	18	0	424.6	167	273	1	139.0	1
5/11/2000	19	0	437.1	167	260	0	139.1	1
5/11/2000	20	0	419.7	167	277	1	139.3	1
5/11/2000	21	0	501.6	167	196	0	139.0	1
5/11/2000	22	0	548.3	167	149	0	139.0	1
5/11/2000	23	0	495.6	167	202	1	139.1	1
5/11/2000	24	0	227.1	168	470	1	139.7	1
5/12/2000	1	0	185.6	168	511	1	139.6	1
5/12/2000	2	0	90.6	168	607	1	139.6	1
5/12/2000	3	0	89.9	168	607	1	139.5	1
5/12/2000	4	0	89.4	168	608	1	139.5	1
5/12/2000	5	0	88.6	168	608	1	139.5	1
5/12/2000	6	0	96.2	168	601	0	139.6	1
5/12/2000	7	0	233.8	168	463	0	139.4	1
5/12/2000	8	0	451.8	168	245	0	139.0	1
5/12/2000	9	0	683.5	187	14	0	157.6	1
5/12/2000	10	0	684.7	194	12	0	164.6	1
5/12/2000	11	0	685.2	193	12	0	164.6	1
5/12/2000	12	0	685.0	193	12	0	164.6	1
5/12/2000	13	0	683.6	193	14	0	164.6	1
5/12/2000	14	0	681.9	193	15	0	164.7	1
5/12/2000	15	0	681.2	193	16	0	164.4	1
5/12/2000	16	0	680.7	193	16	0	164.4	1
5/12/2000	17	0	680.9	191	16	0	162.6	1
5/12/2000	18	0	680.8	168	16	0	139.2	1
5/12/2000	19	0	680.4	168	17	0	139.5	1
5/12/2000	20	0	679.5	168	18	0	139.5	1
5/12/2000	21	0	678.9	168	18	0	139.2	1
5/12/2000	22	0	549.4	167	148	1	139.0	1
5/12/2000	23	0	378.6	195	318	1	166.6	1
5/12/2000	24	0	114.2	168	583	1	138.3	1
5/13/2000	1	1	79.7	99	617	1	98.0	1
5/13/2000	2	1	81.0	89	616	0	89.4	1
5/13/2000	3	1	83.3	89	614	0	89.4	1
5/13/2000	4	1	85.5	89	612	0	89.2	1
5/13/2000	5	1	86.0	89	611	0	89.0	1
5/13/2000	6	1	85.1	89	612	1	88.8	1
5/13/2000	7	1	86.5	89	611	0	89.1	1
5/13/2000	8	1	85.6	89	612	1	89.0	1
5/13/2000	9	1	86.7	89	610	0	89.2	1
5/13/2000	10	1	86.1	89	611	1	89.1	1
5/13/2000	11	1	86.0	89	611	1	88.9	1
5/13/2000	12	1	85.0	89	612	1	88.8	1
5/13/2000	13	1	86.5	89	611	0	88.8	1
5/13/2000	14	1	85.7	89	611	1	89.0	1
5/13/2000	15	1	86.3	89	611	0	89.2	1
5/13/2000	16	1	86.9	89	610	0	89.1	1
5/13/2000	17	1	123.3	89	574	0	89.3	1
5/13/2000	18	1	200.4	89	497	0	89.2	1
5/13/2000	19	1	199.4	89	498	1	89.4	1
5/13/2000	20	1	285.3	89	412	0	89.3	1
5/13/2000	21	1	492.6	89	204	0	89.0	1
5/13/2000	22	1	433.3	89	264	1	89.2	1
5/13/2000	23	1	249.9	89	447	1	89.3	1
5/13/2000	24	1	160.4	90	537	1	89.8	1
5/14/2000	1	1	81.9	90	615	1	89.8	1
5/14/2000	2	1	81.4	90	616	1	89.8	1
5/14/2000	3	1	83.8	90	613	0	89.8	1
5/14/2000	4	1	85.2	90	612	0	89.8	1
5/14/2000	5	1	86.1	90	611	0	89.8	1

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5/14/2000	6	1	87.0	91	610	0	90.6	1
5/14/2000	7	1	86.9	92	610	1	91.7	1
5/14/2000	8	1	86.9	92	610	1	91.7	1
5/14/2000	9	1	86.5	92	611	1	91.8	1
5/14/2000	10	1	87.2	92	610	0	91.6	1
5/14/2000	11	1	86.0	91	611	1	91.3	1
5/14/2000	12	1	86.6	91	610	0	91.1	1
5/14/2000	13	1	86.0	91	611	1	91.2	1
5/14/2000	14	1	87.0	91	610	0	91.1	1
5/14/2000	15	1	85.8	91	611	1	91.2	1
5/14/2000	16	1	87.5	91	610	0	91.1	1
5/14/2000	17	1	86.4	91	611	1	91.1	1
5/14/2000	18	1	87.4	91	610	0	91.4	1
5/14/2000	19	1	87.6	92	610	0	91.6	1
5/14/2000	20	1	87.2	92	610	1	91.6	1
5/14/2000	21	1	86.8	91	610	1	91.2	1
5/14/2000	22	1	86.7	91	610	1	91.1	1
5/14/2000	23	1	86.5	91	611	1	91.3	1
5/14/2000	24	1	86.7	92	610	0	91.9	1
5/15/2000	1	0	86.2	90	611	1	90.4	1
5/15/2000	2	0	86.7	92	610	0	91.8	1
5/15/2000	3	0	87.3	92	610	0	91.8	1
5/15/2000	4	0	87.4	103	610	0	91.9	1
5/15/2000	5	0	89.2	120	608	0	91.8	1
5/15/2000	6	0	88.9	119	608	1	91.9	1
5/15/2000	7	0	89.2	119	608	0	91.9	1
5/15/2000	8	0	145.3	121	552	0	91.4	1
5/15/2000	9	0	383.7	200	313	0	170.5	1
5/15/2000	10	0	641.1	361	56	0	330.8	1
5/15/2000	11	0	686.0	414	11	0	382.5	1
5/15/2000	12	0	684.8	677	12	0	596.2	1
5/15/2000	13	0	683.8	728	13	0	625.6	1
5/15/2000	14	0	683.7	723	13	0	620.8	1
5/15/2000	15	0	683.1	719	14	0	617.3	1
5/15/2000	16	0	683.4	719	14	0	618.7	1
5/15/2000	17	0	683.1	721	14	0	621.0	1
5/15/2000	18	0	683.0	705	14	0	605.9	1
5/15/2000	19	0	682.2	678	15	0	578.5	1
5/15/2000	20	0	682.6	667	14	0	571.8	1
5/15/2000	21	0	682.4	645	15	0	570.6	1
5/15/2000	22	0	679.8	489	17	0	459.8	1
5/15/2000	23	0	418.4	186	279	1	158.0	1
5/15/2000	24	0	132.1	121	565	1	92.5	1
5/16/2000	1	0	84.7	120	612	1	91.9	1
5/16/2000	2	0	78.9	120	618	1	92.1	1
5/16/2000	3	0	77.3	120	620	1	91.9	1
5/16/2000	4	0	78.1	120	619	0	92.0	1
5/16/2000	5	0	79.3	120	618	0	91.9	1
5/16/2000	6	0	101.8	120	595	0	92.0	1
5/16/2000	7	0	202.7	120	494	0	92.0	1
5/16/2000	8	0	356.1	120	341	0	91.7	1
5/16/2000	9	0	263.7	119	433	1	91.4	1
5/16/2000	10	0	230.7	119	466	1	91.5	1
5/16/2000	11	0	446.5	119	251	0	91.4	1
5/16/2000	12	0	582.1	185	115	0	156.8	1
5/16/2000	13	0	684.3	329	13	0	301.0	1
5/16/2000	14	0	681.3	302	16	0	274.3	1
5/16/2000	15	0	682.7	253	14	0	224.9	1
5/16/2000	16	0	682.5	253	15	0	225.0	1
5/16/2000	17	0	681.2	253	16	0	224.9	1
5/16/2000	18	0	657.7	218	39	1	190.5	1
5/16/2000	19	0	514.7	119	182	1	91.8	1
5/16/2000	20	0	365.4	120	332	1	91.9	1
5/16/2000	21	0	405.2	119	292	0	91.3	1
5/16/2000	22	0	480.4	119	217	0	91.4	1

**CONTAINS PROTECTED MATERIAL-
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5/16/2000	23	0	326.5	119	371	1	91.4	1
5/16/2000	24	0	177.7	120	519	1	91.9	1
5/17/2000	1	0	85.6	120	611	1	91.9	1
5/17/2000	2	0	83.2	121	614	1	91.9	1
5/17/2000	3	0	83.2	121	614	1	92.2	1
5/17/2000	4	0	85.2	121	612	0	92.0	1
5/17/2000	5	0	86.9	120	610	0	91.9	1
5/17/2000	6	0	96.1	120	601	0	92.0	1
5/17/2000	7	0	285.6	120	412	0	91.9	1
5/17/2000	8	0	541.9	120	155	0	91.4	1
5/17/2000	9	0	504.3	119	193	1	91.4	1
5/17/2000	10	0	675.8	208	21	0	180.2	1
5/17/2000	11	0	683.0	329	14	0	300.9	1
5/17/2000	12	0	680.5	351	17	0	323.4	1
5/17/2000	13	0	680.2	364	17	0	335.9	1
5/17/2000	14	0	680.5	366	17	0	338.0	1
5/17/2000	15	0	679.7	359	17	0	331.4	1
5/17/2000	16	0	679.0	295	18	0	267.5	1
5/17/2000	17	0	678.2	279	19	0	250.9	1
5/17/2000	18	0	678.1	279	19	0	250.9	1
5/17/2000	19	0	677.7	279	19	0	251.0	1
5/17/2000	20	0	677.4	279	20	0	250.9	1
5/17/2000	21	0	677.9	279	19	0	250.9	1
5/17/2000	22	0	678.3	254	19	0	226.7	1
5/17/2000	23	0	631.1	122	66	1	94.2	1
5/17/2000	24	0	271.5	120	426	1	91.9	1
5/18/2000	1	0	83.0	120	614	1	92.0	1
5/18/2000	2	0	84.6	120	612	0	92.0	1
5/18/2000	3	0	86.1	120	611	0	92.0	1
5/18/2000	4	0	87.2	120	610	0	92.0	1
5/18/2000	5	0	87.7	120	609	0	92.0	1
5/18/2000	6	0	160.9	120	536	0	92.0	1
5/18/2000	7	0	446.2	120	251	0	92.0	1
5/18/2000	8	0	556.5	119	141	0	91.4	1
5/18/2000	9	0	687.1	148	10	0	119.9	1
5/18/2000	10	0	686.6	399	11	0	370.9	1
5/18/2000	11	0	685.6	625	11	0	561.0	1
5/18/2000	12	0	680.2	702	17	0	562.4	1
5/18/2000	13	0	678.3	705	19	0	563.7	1
5/18/2000	14	0	676.0	716	21	0	575.1	1
5/18/2000	15	0	675.7	723	21	0	578.5	1
5/18/2000	16	0	674.4	718	23	0	572.4	1
5/18/2000	17	0	674.6	715	23	0	569.2	1
5/18/2000	18	0	673.8	722	23	0	574.9	1
5/18/2000	19	0	674.5	723	23	0	578.7	1
5/18/2000	20	0	674.1	710	23	0	570.2	1
5/18/2000	21	0	674.7	671	22	0	531.5	1
5/18/2000	22	0	675.3	638	22	0	505.1	1
5/18/2000	23	0	550.5	279	147	1	172.3	1
5/18/2000	24	0	399.3	130	298	1	97.7	1
5/19/2000	1	0	174.1	120	523	1	91.8	1
5/19/2000	2	0	86.8	126	610	1	91.8	0
5/19/2000	3	0	86.4	149	611	1	92.0	0
5/19/2000	4	0	88.1	157	609	0	92.0	0
5/19/2000	5	0	88.8	178	608	0	92.0	0
5/19/2000	6	0	174.5	178	523	0	91.9	0
5/19/2000	7	0	308.3	183	389	0	92.1	0
5/19/2000	8	0	400.1	176	297	0	91.5	0
5/19/2000	9	0	486.2	154	211	0	91.8	0
5/19/2000	10	0	681.1	323	16	0	262.3	0
5/19/2000	11	0	679.1	550	18	0	492.5	0
5/19/2000	12	0	677.0	618	20	0	535.7	0
5/19/2000	13	0	675.8	738	21	0	514.3	0
5/19/2000	14	0	674.9	798	22	0	515.0	0
5/19/2000	15	0	674.0	845	23	0	569.1	0

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5/19/2000	16	0	673.1	940	24	0	651.7	0
5/19/2000	17	0	672.5	888	25	0	598.1	0
5/19/2000	18	0	672.5	838	25	0	548.0	0
5/19/2000	19	0	672.7	839	24	0	549.7	0
5/19/2000	20	0	672.7	689	24	0	547.4	0
5/19/2000	21	0	672.4	375	25	0	313.1	0
5/19/2000	22	0	460.7	171	236	1	110.6	0
5/19/2000	23	0	311.7	153	385	1	91.5	0
5/19/2000	24	0	296.1	152	401	1	92.3	0
5/20/2000	1	1	121.4	103	576	1	91.7	0
5/20/2000	2	1	87.7	92	609	1	92.0	1
5/20/2000	3	1	87.5	92	610	1	91.9	1
5/20/2000	4	1	87.7	92	609	0	91.9	1
5/20/2000	5	1	87.2	92	610	1	91.9	1
5/20/2000	6	1	87.8	92	609	0	92.0	1
5/20/2000	7	1	87.6	92	609	1	91.9	1
5/20/2000	8	1	131.5	92	566	0	91.8	1
5/20/2000	9	1	254.6	92	442	0	91.7	1
5/20/2000	10	1	400.4	91	297	0	90.9	1
5/20/2000	11	1	505.3	91	192	0	90.7	1
5/20/2000	12	1	508.9	91	188	0	90.8	1
5/20/2000	13	1	625.7	123	71	0	122.9	1
5/20/2000	14	1	675.4	195	22	0	195.4	1
5/20/2000	15	1	673.7	195	23	0	194.7	1
5/20/2000	16	1	672.5	183	25	0	182.6	1
5/20/2000	17	1	671.0	241	26	0	241.0	1
5/20/2000	18	1	670.6	216	27	0	215.6	1
5/20/2000	19	1	670.3	195	27	0	194.6	1
5/20/2000	20	1	672.3	196	25	0	195.7	1
5/20/2000	21	1	673.8	196	23	0	195.8	1
5/20/2000	22	1	675.6	198	21	0	197.7	1
5/20/2000	23	1	678.2	198	19	0	198.0	1
5/20/2000	24	1	679.0	198	18	0	198.5	1
5/21/2000	1	1	679.5	198	18	0	198.5	1
5/21/2000	2	1	664.5	186	33	1	186.0	1
5/21/2000	3	1	349.4	92	348	1	92.4	1
5/21/2000	4	1	108.8	92	588	1	91.9	1
5/21/2000	5	1	89.3	96	608	1	91.9	1
5/21/2000	6	1	90.3	98	607	0	92.0	1
5/21/2000	7	1	91.4	92	606	0	92.0	1
5/21/2000	8	1	114.6	91	582	0	91.4	1
5/21/2000	9	1	379.7	88	317	0	87.9	1
5/21/2000	10	1	454.5	90	243	0	89.7	1
5/21/2000	11	1	493.1	91	204	0	90.9	1
5/21/2000	12	1	676.3	184	21	0	183.7	1
5/21/2000	13	1	674.6	209	23	0	208.9	1
5/21/2000	14	1	674.0	271	23	0	265.5	1
5/21/2000	15	1	674.6	384	22	0	366.2	1
5/21/2000	16	1	674.2	457	23	0	429.3	1
5/21/2000	17	1	673.2	402	24	0	364.3	1
5/21/2000	18	1	673.7	517	23	0	441.9	1
5/21/2000	19	1	672.3	586	25	0	459.4	1
5/21/2000	20	1	672.7	594	24	0	465.8	1
5/21/2000	21	1	672.4	524	25	0	470.7	1
5/21/2000	22	1	644.3	456	53	1	427.7	1
5/21/2000	23	1	331.4	145	366	1	116.5	1
5/21/2000	24	1	185.1	124	512	1	91.9	1
5/22/2000	1	0	93.3	123	604	1	91.8	1
5/22/2000	2	0	90.7	122	606	1	94.3	1
5/22/2000	3	0	90.7	180	606	1	151.8	1
5/22/2000	4	0	90.3	175	607	1	140.3	0
5/22/2000	5	0	132.1	215	565	0	140.0	0
5/22/2000	6	0	412.3	227	285	0	139.8	0
5/22/2000	7	0	678.8	225	18	0	139.9	0
5/22/2000	8	0	676.6	241	20	0	151.4	0

**CONTAINS PROTECTED MATERIAL-
NOT AVAILABLE TO COMPETITIVE DUTY PERSONNEL**

5/22/2000	9	0	676.4	608	21	0	478.0	0
5/22/2000	10	0	677.5	992	20	0	681.7	0
5/22/2000	11	0	676.6	1210	20	0	870.1	0
5/22/2000	12	0	675.0	1289	22	0	871.9	0
5/22/2000	13	0	674.3	1319	23	0	872.2	0
5/22/2000	14	0	673.1	1324	24	0	872.2	0
5/22/2000	15	0	671.9	1282	25	0	872.3	0
5/22/2000	16	0	672.0	1160	25	0	871.0	0
5/22/2000	17	0	671.0	1167	26	0	871.7	0
5/22/2000	18	0	670.2	1167	27	0	872.1	0
5/22/2000	19	0	670.1	1183	27	0	872.6	0
5/22/2000	20	0	671.0	1175	26	0	872.0	0
5/22/2000	21	0	672.3	989	25	0	843.5	0
5/22/2000	22	0	674.5	1070	23	0	866.0	0
5/22/2000	23	0	675.5	552	22	0	450.9	0
5/22/2000	24	0	483.3	227	214	1	140.9	0
5/23/2000	1	0	209.7	225	487	1	139.3	0
5/23/2000	2	0	204.4	226	493	1	139.5	0
5/23/2000	3	0	204.4	227	493	1	139.8	0
5/23/2000	4	0	150.3	226	547	1	139.7	0
5/23/2000	5	0	90.3	226	607	1	139.6	0
5/23/2000	6	0	183.8	226	513	0	139.7	0
5/23/2000	7	0	477.8	269	219	0	183.3	0
5/23/2000	8	0	681.6	289	15	0	204.1	0
5/23/2000	9	0	679.2	354	18	0	268.5	0
5/23/2000	10	0	678.0	613	19	0	474.7	0
5/23/2000	11	0	676.8	1008	20	0	702.8	0
5/23/2000	12	0	675.7	1224	21	0	866.5	0
5/23/2000	13	0	674.9	1320	22	0	871.9	0
5/23/2000	14	0	674.1	1320	23	0	871.6	0
5/23/2000	15	0	672.8	1320	24	0	871.6	0
5/23/2000	16	0	672.6	1319	24	0	871.2	0
5/23/2000	17	0	672.3	1190	25	0	871.3	0
5/23/2000	18	0	671.5	1039	26	0	845.1	0
5/23/2000	19	0	671.5	848	26	0	676.0	0
5/23/2000	20	0	670.9	759	26	0	566.5	0
5/23/2000	21	0	673.1	751	24	0	584.3	0
5/23/2000	22	0	672.9	765	24	0	588.5	0
5/23/2000	23	0	673.0	478	24	0	385.7	0
5/23/2000	24	0	455.9	227	241	1	142.4	0
5/24/2000	1	0	143.6	226	553	1	140.3	0
5/24/2000	2	0	89.9	225	607	1	140.3	0
5/24/2000	3	0	90.6	226	606	0	140.3	0
5/24/2000	4	0	91.6	226	605	0	140.6	0
5/24/2000	5	0	92.1	227	605	0	140.5	0
5/24/2000	6	0	161.9	227	535	0	140.5	0
5/24/2000	7	0	433.6	227	264	0	139.7	0
5/24/2000	8	0	438.3	224	259	0	137.8	0
5/24/2000	9	0	449.1	224	248	0	137.7	0
5/24/2000	10	0	478.8	224	218	0	137.6	0
5/24/2000	11	0	670.3	224	27	0	137.4	0
5/24/2000	12	0	680.5	224	17	0	137.4	0
5/24/2000	13	0	679.4	329	18	0	242.8	0
5/24/2000	14	0	678.1	480	19	0	393.3	0
5/24/2000	15	0	677.3	627	20	0	473.8	0
5/24/2000	16	0	676.3	783	21	0	470.3	0
5/24/2000	17	0	675.9	759	21	0	493.2	0
5/24/2000	18	0	665.5	353	32	1	263.1	0
5/24/2000	19	0	611.7	229	85	1	139.1	0
5/24/2000	20	0	610.8	229	86	1	139.3	0
5/24/2000	21	0	611.4	229	86	0	139.1	0
5/24/2000	22	0	615.8	313	81	0	223.4	0
5/24/2000	23	0	410.9	227	286	1	139.1	0
5/24/2000	24	0	401.2	225	296	1	139.8	0
5/25/2000	1	0	255.3	196	442	1	139.8	0

**CONTAINS PROTECTED MATERIAL-
NOT AVAILABLE TO COMPETITIVE DUTY PERSONNEL**

5/25/2000	2	0	260.5	196	437	0	140.0	1
5/25/2000	3	0	232.7	195	464	1	140.0	1
5/25/2000	4	0	197.7	195	499	1	140.0	1
5/25/2000	5	0	320.7	195	376	0	139.8	1
5/25/2000	6	0	410.3	195	287	0	139.9	1
5/25/2000	7	0	552.3	195	145	0	139.8	1
5/25/2000	8	0	601.8	194	95	0	139.3	1
5/25/2000	9	0	614.2	195	83	0	139.0	1
5/25/2000	10	0	543.0	195	154	1	139.1	1
5/25/2000	11	0	517.7	246	179	1	190.3	1
5/25/2000	12	0	684.1	425	13	0	368.7	1
5/25/2000	13	0	681.1	410	16	0	353.3	1
5/25/2000	14	0	679.1	405	18	0	347.0	1
5/25/2000	15	0	677.8	404	19	0	330.8	1
5/25/2000	16	0	677.5	410	20	0	322.7	1
5/25/2000	17	0	676.9	375	20	0	277.6	1
5/25/2000	18	0	677.1	255	20	0	149.1	1
5/25/2000	19	0	674.9	245	22	0	139.1	1
5/25/2000	20	0	569.4	225	128	1	139.5	1
5/25/2000	21	0	570.5	197	127	0	139.4	1
5/25/2000	22	0	641.4	197	56	0	139.1	1
5/25/2000	23	0	619.8	195	77	1	139.0	1
5/25/2000	24	0	443.6	195	254	1	139.8	1
5/26/2000	1	0	243.7	172	453	1	143.7	1
5/26/2000	2	0	96.7	172	600	1	143.9	1
5/26/2000	3	0	86.8	171	610	1	143.5	1
5/26/2000	4	0	80.5	171	617	1	143.4	1
5/26/2000	5	0	80.8	172	616	0	144.0	1
5/26/2000	6	0	89.0	169	608	0	141.5	1
5/26/2000	7	0	229.8	168	467	0	140.1	1
5/26/2000	8	0	299.2	255	398	0	227.7	1
5/26/2000	9	0	524.9	224	172	0	195.1	1
5/26/2000	10	0	664.8	168	32	0	139.4	1
5/26/2000	11	0	644.9	170	52	1	141.2	1
5/26/2000	12	0	609.0	254	88	1	225.0	1
5/26/2000	13	0	617.9	281	79	0	251.7	1
5/26/2000	14	0	674.1	361	23	0	322.2	1
5/26/2000	15	0	674.2	337	23	0	302.2	1
5/26/2000	16	0	673.2	333	24	0	305.1	1
5/26/2000	17	0	671.9	297	25	0	269.1	1
5/26/2000	18	0	671.9	179	25	0	151.4	1
5/26/2000	19	0	672.6	248	25	0	220.8	1
5/26/2000	20	0	579.2	230	118	1	202.2	1
5/26/2000	21	0	659.9	254	37	0	226.6	1
5/26/2000	22	0	674.9	310	22	0	278.2	1
5/26/2000	23	0	665.6	219	32	1	190.5	1
5/26/2000	24	0	446.9	168	250	1	140.0	1
5/27/2000	1	1	147.0	142	550	1	113.6	1
5/27/2000	2	1	86.5	120	611	1	91.6	1
5/27/2000	3	1	90.3	120	607	0	91.8	1
5/27/2000	4	1	87.4	120	610	1	91.8	1
5/27/2000	5	1	86.1	120	611	1	91.8	1
5/27/2000	6	1	85.9	120	611	1	91.8	1
5/27/2000	7	1	86.2	120	611	0	91.9	1
5/27/2000	8	1	237.5	120	460	0	91.9	1
5/27/2000	9	1	491.0	121	206	0	92.8	1
5/27/2000	10	1	523.2	121	174	0	92.6	1
5/27/2000	11	1	623.2	121	74	0	92.6	1
5/27/2000	12	1	677.7	121	19	0	92.6	1
5/27/2000	13	1	675.6	121	21	0	92.5	1
5/27/2000	14	1	673.4	121	24	0	92.4	1
5/27/2000	15	1	672.0	121	25	0	92.4	1
5/27/2000	16	1	671.6	121	25	0	92.2	1
5/27/2000	17	1	672.0	154	25	0	125.5	1
5/27/2000	18	1	671.2	163	26	0	133.8	1

**CONTAINS PROTECTED MATERIAL-
NOT AVAILABLE TO COMPETITIVE DUTY PERSONNEL**

5/27/2000	19	1	671.3	191	26	0	161.7	1
5/27/2000	20	1	672.0	197	25	0	168.5	1
5/27/2000	21	1	625.7	177	71	1	148.1	1
5/27/2000	22	1	624.0	141	73	1	112.0	1
5/27/2000	23	1	673.6	126	23	0	97.3	1
5/27/2000	24	1	459.6	121	237	1	92.5	1
5/28/2000	1	1	183.3	122	514	1	92.4	1
5/28/2000	2	1	90.4	122	607	1	92.3	1
5/28/2000	3	1	88.1	122	609	1	92.6	1
5/28/2000	4	1	90.7	122	606	0	92.7	1
5/28/2000	5	1	92.8	122	604	0	92.7	1
5/28/2000	6	1	92.8	122	604	0	92.8	1
5/28/2000	7	1	91.1	122	606	1	93.1	1
5/28/2000	8	1	87.7	122	609	1	93.1	1
5/28/2000	9	1	86.0	122	611	1	93.0	1
5/28/2000	10	1	86.4	122	611	0	92.7	1
5/28/2000	11	1	91.7	121	605	0	92.7	1
5/28/2000	12	1	195.0	121	502	0	92.6	1
5/28/2000	13	1	250.8	121	446	0	92.4	1
5/28/2000	14	1	344.9	121	352	0	92.5	1
5/28/2000	15	1	648.0	143	49	0	114.1	1
5/28/2000	16	1	678.4	152	19	0	123.5	1
5/28/2000	17	1	677.0	190	20	0	161.7	1
5/28/2000	18	1	675.6	198	22	0	169.5	1
5/28/2000	19	1	675.1	211	22	0	182.7	1
5/28/2000	20	1	676.0	157	21	0	127.9	1
5/28/2000	21	1	672.1	134	25	0	105.8	1
5/28/2000	22	1	663.7	182	33	1	153.3	1
5/28/2000	23	1	375.8	130	321	1	101.2	1
5/28/2000	24	1	169.7	121	527	1	92.8	1
5/29/2000	1	0	89.2	121	608	1	92.7	1
5/29/2000	2	0	86.6	122	610	1	93.1	1
5/29/2000	3	0	86.0	121	611	1	92.8	1
5/29/2000	4	0	82.8	121	614	1	92.8	1
5/29/2000	5	0	82.6	121	614	1	92.8	1
5/29/2000	6	0	83.8	121	613	0	92.9	1
5/29/2000	7	0	84.6	121	612	0	92.8	1
5/29/2000	8	0	103.5	121	594	0	92.9	1
5/29/2000	9	0	213.1	121	484	0	92.8	1
5/29/2000	10	0	283.5	121	414	0	92.8	1
5/29/2000	11	0	419.1	120	278	0	92.4	1
5/29/2000	12	0	505.3	119	192	0	92.4	1
5/29/2000	13	0	541.9	122	155	0	92.3	1
5/29/2000	14	0	584.5	121	113	0	92.3	1
5/29/2000	15	0	652.4	121	45	0	92.2	1
5/29/2000	16	0	652.1	121	45	1	92.2	1
5/29/2000	17	0	655.0	120	42	0	92.1	1
5/29/2000	18	0	655.2	121	42	0	92.2	1
5/29/2000	19	0	623.4	121	74	1	92.1	1
5/29/2000	20	0	568.4	121	129	1	92.3	1
5/29/2000	21	0	520.8	122	176	1	92.1	1
5/29/2000	22	0	508.4	121	189	1	92.2	1
5/29/2000	23	0	351.3	121	346	1	92.1	1
5/29/2000	24	0	188.0	122	509	1	92.8	1
5/30/2000	1	0	85.6	121	612	1	92.6	1
5/30/2000	2	0	84.0	122	613	1	92.8	1
5/30/2000	3	0	85.1	121	612	0	92.7	1
5/30/2000	4	0	85.1	121	612	1	92.5	1
5/30/2000	5	0	85.6	121	612	0	92.4	1
5/30/2000	6	0	85.7	132	611	0	103.5	1
5/30/2000	7	0	88.1	168	609	0	139.8	1
5/30/2000	8	0	252.2	166	445	0	138.0	1
5/30/2000	9	0	389.5	166	308	0	138.0	1
5/30/2000	10	0	651.7	197	45	0	168.7	1
5/30/2000	11	0	684.2	477	13	0	448.4	1

**CONTAINS PROTECTED MATERIAL-
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5/30/2000	12	0	683.3	577	14	0	536.2	1
5/30/2000	13	0	681.9	589	15	0	528.1	1
5/30/2000	14	0	681.3	590	16	0	529.5	1
5/30/2000	15	0	680.5	601	17	0	540.6	1
5/30/2000	16	0	679.4	649	18	0	589.1	1
5/30/2000	17	0	678.9	603	18	0	543.4	1
5/30/2000	18	0	687.4	549	10	0	489.0	1
5/30/2000	19	0	677.7	317	19	0	282.8	1
5/30/2000	20	0	677.3	308	20	0	279.8	1
5/30/2000	21	0	676.2	271	21	0	242.1	1
5/30/2000	22	0	679.6	249	17	0	220.3	1
5/30/2000	23	0	530.1	167	167	1	138.7	1
5/30/2000	24	0	288.9	166	408	1	137.7	1
5/31/2000	1	0	229.5	166	468	1	137.7	1
5/31/2000	2	0	227.0	166	470	1	137.7	1
5/31/2000	3	0	199.2	166	498	1	137.7	1
5/31/2000	4	0	220.2	166	477	0	137.7	1
5/31/2000	5	0	216.2	166	481	1	137.8	1
5/31/2000	6	0	253.4	166	444	0	137.7	1
5/31/2000	7	0	464.5	166	233	0	137.8	1
5/31/2000	8	0	561.8	163	135	0	135.1	1
5/31/2000	9	0	603.2	143	94	0	131.2	1
5/31/2000	10	0	618.4	252	79	0	247.4	1
5/31/2000	11	0	675.5	340	22	0	311.3	1
5/31/2000	12	0	675.9	380	21	0	351.8	1
5/31/2000	13	0	675.7	449	21	0	420.9	1
5/31/2000	14	0	676.0	622	21	0	571.5	1
5/31/2000	15	0	675.7	666	21	0	606.1	1
5/31/2000	16	0	675.8	668	21	0	609.3	1
5/31/2000	17	0	677.8	665	19	0	607.2	1
5/31/2000	18	0	680.1	621	17	0	574.8	1
5/31/2000	19	0	679.0	549	18	0	510.4	1
5/31/2000	20	0	678.3	517	19	0	478.6	1
5/31/2000	21	0	678.8	548	18	0	509.0	1
5/31/2000	22	0	678.8	544	18	0	489.7	1
5/31/2000	23	0	581.3	255	116	1	199.2	1
5/31/2000	24	0	389.0	194	308	1	136.5	1
6/1/2000	1	0	231.8	196	465	1	136.8	1
6/1/2000	2	0	208.9	194	488	1	137.4	1
6/1/2000	3	0	210.1	194	487	0	137.5	1
6/1/2000	4	0	228.7	194	468	0	137.5	1
6/1/2000	5	0	200.6	196	496	1	137.6	1
6/1/2000	6	0	318.4	194	379	0	137.6	1
6/1/2000	7	0	640.5	268	57	0	212.7	1
6/1/2000	8	0	684.8	264	12	0	208.3	1
6/1/2000	9	0	683.1	379	14	0	323.7	1
6/1/2000	10	0	681.4	470	16	0	415.3	1
6/1/2000	11	0	679.7	662	17	0	606.3	1
6/1/2000	12	0	678.4	766	19	0	621.7	1
6/1/2000	13	0	678.3	927	19	0	755.0	1
6/1/2000	14	0	678.1	957	19	0	785.3	1
6/1/2000	15	0	676.7	1086	20	0	913.4	1
6/1/2000	16	0	676.3	1089	21	0	916.3	1
6/1/2000	17	0	675.3	1091	22	0	918.4	1
6/1/2000	18	0	675.5	818	22	0	722.4	1
6/1/2000	19	0	676.4	650	21	0	531.6	1
6/1/2000	20	0	676.9	522	20	0	402.2	1
6/1/2000	21	0	677.8	408	19	0	303.8	1
6/1/2000	22	0	677.6	388	19	0	298.3	1
6/1/2000	23	0	658.0	227	39	1	145.4	1
6/1/2000	24	0	650.3	503	47	1	372.0	1
6/2/2000	1	0	445.8	236	251	1	148.8	1
6/2/2000	2	0	203.7	227	493	1	138.2	1
6/2/2000	3	0	224.0	227	473	0	138.2	1
6/2/2000	4	0	262.6	228	434	0	138.1	1

**CONTAINS PROTECTED MATERIAL-
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6/2/2000	5	0	278.8	228	418	0	138.1	1
6/2/2000	6	0	321.4	228	376	0	138.1	1
6/2/2000	7	0	616.5	227	81	0	138.1	1
6/2/2000	8	0	661.3	227	36	0	137.2	1
6/2/2000	9	0	661.3	227	36	0	137.1	1
6/2/2000	10	0	654.8	227	42	1	137.2	1
6/2/2000	11	0	669.2	227	28	0	138.9	1
6/2/2000	12	0	679.4	287	18	0	200.3	1
6/2/2000	13	0	678.3	300	19	0	214.2	1
6/2/2000	14	0	677.1	393	20	0	308.0	1
6/2/2000	15	0	676.2	487	21	0	401.7	1
6/2/2000	16	0	675.1	515	22	0	430.0	1
6/2/2000	17	0	675.1	459	22	0	374.2	1
6/2/2000	18	0	675.1	507	22	0	416.7	1
6/2/2000	19	0	675.7	596	21	0	415.9	1
6/2/2000	20	0	672.2	457	25	0	235.2	1
6/2/2000	21	0	674.7	384	22	0	160.4	1
6/2/2000	22	0	679.2	416	18	0	192.6	1
6/2/2000	23	0	626.7	402	70	1	177.8	1
6/2/2000	24	0	681.2	414	16	0	220.0	1
6/3/2000	1	1	682.4	329	15	0	220.7	1
6/3/2000	2	1	580.1	279	117	1	170.4	1
6/3/2000	3	1	269.9	247	427	1	139.2	1
6/3/2000	4	1	204.1	248	493	1	138.9	1
6/3/2000	5	1	261.5	228	436	0	139.0	1
6/3/2000	6	1	389.3	241	308	0	155.3	1
6/3/2000	7	1	624.6	238	72	0	152.6	1
6/3/2000	8	1	667.7	226	29	0	141.0	1
6/3/2000	9	1	678.0	350	19	0	266.4	1
6/3/2000	10	1	682.3	503	15	0	418.7	1
6/3/2000	11	1	681.7	530	15	0	423.9	1
6/3/2000	12	1	680.7	561	16	0	439.9	1
6/3/2000	13	1	679.6	599	17	0	482.8	1
6/3/2000	14	1	678.4	577	19	0	492.8	1
6/3/2000	15	1	677.5	576	20	0	491.0	1
6/3/2000	16	1	677.3	666	20	0	551.8	1
6/3/2000	17	1	676.2	695	21	0	568.0	1
6/3/2000	18	1	676.2	687	21	0	559.3	1
6/3/2000	19	1	676.4	687	21	0	582.1	1
6/3/2000	20	1	677.4	630	20	0	528.2	1
6/3/2000	21	1	678.3	551	19	0	418.5	1
6/3/2000	22	1	679.3	574	18	0	378.5	1
6/3/2000	23	1	680.0	431	17	0	367.0	1
6/3/2000	24	1	680.1	311	17	0	249.2	1
6/4/2000	1	1	583.9	254	113	1	192.1	1
6/4/2000	2	1	455.8	201	241	1	139.2	1
6/4/2000	3	1	465.0	202	232	0	139.3	1
6/4/2000	4	1	469.9	202	227	0	139.2	1
6/4/2000	5	1	469.8	201	227	1	139.3	1
6/4/2000	6	1	502.1	201	195	0	139.1	1
6/4/2000	7	1	536.5	200	161	0	139.3	1
6/4/2000	8	1	486.3	196	211	1	139.0	1
6/4/2000	9	1	399.8	197	297	1	140.8	1
6/4/2000	10	1	409.9	277	287	0	220.9	1
6/4/2000	11	1	639.7	297	57	0	241.7	1
6/4/2000	12	1	668.7	228	28	0	172.7	1
6/4/2000	13	1	611.9	257	85	1	201.3	1
6/4/2000	14	1	679.7	355	17	0	299.3	1
6/4/2000	15	1	679.0	429	18	0	373.5	1
6/4/2000	16	1	677.1	441	20	0	385.6	1
6/4/2000	17	1	677.3	442	20	0	386.0	1
6/4/2000	18	1	658.5	360	39	1	304.6	1
6/4/2000	19	1	663.1	498	34	0	443.2	1
6/4/2000	20	1	676.2	431	21	0	376.6	1
6/4/2000	21	1	678.2	423	19	0	366.9	1

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6/4/2000	22	1	680.1	432	17	0	376.7	1
6/4/2000	23	1	661.5	227	36	1	171.5	1
6/4/2000	24	1	460.7	194	236	1	138.3	1
6/5/2000	1	0	251.4	194	446	1	138.4	1
6/5/2000	2	0	202.9	194	494	1	138.6	1
6/5/2000	3	0	219.3	195	478	0	138.5	1
6/5/2000	4	0	232.4	194	465	0	138.6	1
6/5/2000	5	0	277.7	194	419	0	138.5	1
6/5/2000	6	0	450.2	195	247	0	138.5	1
6/5/2000	7	0	638.3	195	59	0	138.5	1
6/5/2000	8	0	663.8	194	33	0	138.4	1
6/5/2000	9	0	608.9	210	88	1	154.0	1
6/5/2000	10	0	664.4	213	33	0	185.3	1
6/5/2000	11	0	680.0	352	17	0	323.8	1
6/5/2000	12	0	678.4	440	19	0	412.2	1
6/5/2000	13	0	678.4	477	19	0	449.0	1
6/5/2000	14	0	677.6	553	19	0	501.4	1
6/5/2000	15	0	677.0	606	20	0	519.3	1
6/5/2000	16	0	676.9	624	20	0	538.9	1
6/5/2000	17	0	676.3	649	21	0	564.5	1
6/5/2000	18	0	676.3	524	21	0	452.7	1
6/5/2000	19	0	676.3	313	21	0	271.7	1
6/5/2000	20	0	677.3	320	20	0	279.3	1
6/5/2000	21	0	676.5	259	21	0	218.4	1
6/5/2000	22	0	677.6	307	19	0	266.5	1
6/5/2000	23	0	484.3	179	213	1	137.8	1
6/5/2000	24	0	372.4	179	325	1	138.3	1
6/6/2000	1	0	298.5	179	399	1	138.2	1
6/6/2000	2	0	304.5	179	393	0	138.4	1
6/6/2000	3	0	303.8	179	393	1	138.4	1
6/6/2000	4	0	304.7	180	392	0	138.4	1
6/6/2000	5	0	304.2	179	393	1	138.4	1
6/6/2000	6	0	489.5	180	208	0	138.4	1
6/6/2000	7	0	683.3	234	14	0	192.6	1
6/6/2000	8	0	682.4	350	15	0	318.6	1
6/6/2000	9	0	681.1	255	16	0	226.8	1
6/6/2000	10	0	680.1	319	17	0	290.8	1
6/6/2000	11	0	678.6	334	18	0	301.2	1
6/6/2000	12	0	677.6	401	19	0	369.6	1
6/6/2000	13	0	676.5	602	21	0	565.9	1
6/6/2000	14	0	676.6	636	20	0	584.8	1
6/6/2000	15	0	676.1	630	21	0	560.6	1
6/6/2000	16	0	676.4	653	21	0	556.1	1
6/6/2000	17	0	676.3	717	21	0	614.1	1
6/6/2000	18	0	674.5	595	23	0	497.3	1
6/6/2000	19	0	675.3	485	22	0	422.3	1
6/6/2000	20	0	676.1	424	21	0	395.1	1
6/6/2000	21	0	677.3	372	20	0	343.4	1
6/6/2000	22	0	678.0	408	19	0	378.7	1
6/6/2000	23	0	597.8	172	99	1	142.7	1
6/6/2000	24	0	517.4	170	180	1	140.6	1
6/7/2000	1	0	338.0	167	359	1	139.3	1
6/7/2000	2	0	285.1	167	412	1	139.5	1
6/7/2000	3	0	354.6	167	343	0	139.4	1
6/7/2000	4	0	346.4	167	351	1	139.3	1
6/7/2000	5	0	343.1	167	354	1	139.3	1
6/7/2000	6	0	540.5	172	157	0	144.8	1
6/7/2000	7	0	683.9	385	13	0	356.6	1
6/7/2000	8	0	682.6	452	15	0	424.0	1
6/7/2000	9	0	681.8	424	15	0	466.0	1
6/7/2000	10	0	680.9	567	16	0	539.0	1
6/7/2000	11	0	680.7	596	16	0	566.7	1
6/7/2000	12	0	680.0	598	17	0	566.6	1
6/7/2000	13	0	679.1	597	18	0	542.6	1
6/7/2000	14	0	678.7	551	18	0	487.3	1

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6/7/2000	15	0	677.8	574	19	0	488.8	1
6/7/2000	16	0	677.8	575	19	0	485.5	1
6/7/2000	17	0	677.1	628	20	0	528.5	1
6/7/2000	18	0	677.0	651	20	0	550.3	1
6/7/2000	19	0	676.8	654	20	0	553.7	1
6/7/2000	20	0	677.3	654	20	0	554.5	1
6/7/2000	21	0	677.6	655	19	0	554.5	1
6/7/2000	22	0	677.6	629	19	0	535.5	1
6/7/2000	23	0	637.4	279	60	1	242.5	1
6/7/2000	24	0	391.8	169	305	1	140.1	1
6/8/2000	1	0	308.5	170	389	1	140.1	1
6/8/2000	2	0	277.7	170	419	1	140.1	1
6/8/2000	3	0	332.9	170	364	0	140.1	1
6/8/2000	4	0	424.9	170	272	0	140.1	1
6/8/2000	5	0	453.8	170	243	0	140.1	1
6/8/2000	6	0	453.7	170	243	1	140.2	1
6/8/2000	7	0	489.6	215	208	0	184.8	1
6/8/2000	8	0	493.9	439	203	0	408.5	1
6/8/2000	9	0	493.9	594	203	1	563.5	1
6/8/2000	10	0	493.8	872	203	1	841.2	1
6/8/2000	11	0	494.1	775	203	0	744.6	1
6/8/2000	12	0	493.6	840	203	1	809.5	1
6/8/2000	13	0	493.6	781	203	1	739.2	1
6/8/2000	14	0	493.9	656	203	0	613.1	1
6/8/2000	15	0	493.7	631	203	1	564.0	1
6/8/2000	16	0	494.0	574	203	0	508.1	1
6/8/2000	17	0	494.1	537	203	0	470.9	1
6/8/2000	18	0	586.2	465	111	0	412.3	1
6/8/2000	19	0	679.4	447	18	0	392.1	1
6/8/2000	20	0	679.1	614	18	0	503.6	1
6/8/2000	21	0	678.7	623	18	0	532.9	1
6/8/2000	22	0	678.3	674	19	0	559.2	1
6/8/2000	23	0	678.8	564	18	0	478.3	1
6/8/2000	24	0	523.3	187	174	1	158.0	1
6/9/2000	1	0	302.8	169	394	1	140.9	1
6/9/2000	2	0	214.8	168	482	1	140.2	1
6/9/2000	3	0	196.1	169	501	1	140.3	1
6/9/2000	4	0	90.8	169	606	1	140.4	1
6/9/2000	5	0	91.9	168	605	0	139.9	1
6/9/2000	6	0	289.1	169	408	0	140.1	1
6/9/2000	7	0	664.3	237	33	0	209.0	1
6/9/2000	8	0	673.3	232	24	0	204.1	1
6/9/2000	9	0	661.2	168	36	1	139.9	1
6/9/2000	10	0	681.0	258	16	0	230.4	1
6/9/2000	11	0	681.1	284	16	0	255.8	1
6/9/2000	12	0	680.4	296	17	0	255.8	1
6/9/2000	13	0	679.6	279	17	0	226.3	1
6/9/2000	14	0	677.4	292	20	0	232.4	1
6/9/2000	15	0	678.7	322	18	0	250.9	1
6/9/2000	16	0	677.0	299	20	0	228.4	1
6/9/2000	17	0	676.3	285	21	0	205.0	1
6/9/2000	18	0	676.6	284	20	0	205.2	1
6/9/2000	19	0	677.0	284	20	0	205.4	1
6/9/2000	20	0	679.6	313	18	0	234.2	1
6/9/2000	21	0	680.7	419	16	0	339.8	1
6/9/2000	22	0	678.8	410	18	0	353.6	1
6/9/2000	23	0	406.2	181	291	1	151.7	1
6/9/2000	24	0	289.3	170	408	1	141.2	1
6/10/2000	1	1	220.2	144	477	1	140.7	1
6/10/2000	2	1	204.2	141	493	1	140.7	1
6/10/2000	3	1	204.3	140	493	0	140.5	1
6/10/2000	4	1	167.3	141	530	1	140.5	1
6/10/2000	5	1	116.3	140	581	1	140.4	1
6/10/2000	6	1	4.8	97	692	1	97.2	1
6/10/2000	7	1	0.0	95	697	0	95.5	1

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6/10/2000	8	1	0.0	95	697	0	95.3	1
6/10/2000	9	1	0.0	256	697	0	255.8	1
6/10/2000	10	1	0.0	454	697	0	453.5	1
6/10/2000	11	1	0.0	448	697	0	447.5	1
6/10/2000	12	1	0.0	463	697	0	463.3	1
6/10/2000	13	1	0.0	488	697	0	488.3	1
6/10/2000	14	1	0.0	447	697	0	447.1	1
6/10/2000	15	1	0.0	506	697	0	506.4	1
6/10/2000	16	1	0.0	531	697	0	530.5	1
6/10/2000	17	1	0.0	537	697	0	536.9	1
6/10/2000	18	1	0.0	537	697	0	537.1	1
6/10/2000	19	1	0.0	565	697	0	565.0	1
6/10/2000	20	1	0.0	556	697	0	555.9	1
6/10/2000	21	1	0.0	565	697	0	564.8	1
6/10/2000	22	1	0.0	611	697	0	610.9	1
6/10/2000	23	1	0.0	360	697	0	360.3	1
6/10/2000	24	1	0.0	208	697	0	208.1	1
6/11/2000	1	1	0.0	159	697	0	159.0	1
6/11/2000	2	1	0.0	140	697	0	140.3	1
6/11/2000	3	1	0.0	180	697	0	180.2	1
6/11/2000	4	1	0.0	160	697	0	159.7	1
6/11/2000	5	1	0.0	180	697	0	180.3	1
6/11/2000	6	1	0.0	237	697	0	237.3	1
6/11/2000	7	1	0.0	145	697	0	144.6	1
6/11/2000	8	1	0.0	161	697	0	161.1	1
6/11/2000	9	1	0.0	197	697	0	197.5	1
6/11/2000	10	1	0.0	202	697	0	201.6	1
6/11/2000	11	1	0.0	292	697	0	291.6	1
6/11/2000	12	1	0.0	239	697	0	239.1	1
6/11/2000	13	1	0.0	311	697	0	311.1	1
6/11/2000	14	1	0.0	311	697	0	310.9	1
6/11/2000	15	1	0.0	310	697	0	310.0	1
6/11/2000	16	1	0.0	309	697	0	309.1	1
6/11/2000	17	1	0.0	308	697	0	307.8	1
6/11/2000	18	1	0.0	309	697	0	309.2	1
6/11/2000	19	1	0.0	401	697	0	400.8	1
6/11/2000	20	1	0.0	414	697	0	414.1	1
6/11/2000	21	1	0.0	414	697	0	414.0	1
6/11/2000	22	1	0.0	565	697	0	564.9	1
6/11/2000	23	1	0.8	546	696	0	545.9	1
6/11/2000	24	1	27.7	453	669	0	453.4	1
6/12/2000	1	0	2.3	202	695	1	201.5	1
6/12/2000	2	0	0.0	215	697	0	214.9	1
6/12/2000	3	0	0.0	178	697	0	172.7	1
6/12/2000	4	0	0.0	159	697	0	140.3	1
6/12/2000	5	0	0.0	162	697	0	140.5	0
6/12/2000	6	0	0.0	185	697	0	140.7	0
6/12/2000	7	0	0.0	203	697	0	152.7	0
6/12/2000	8	0	0.0	766	697	0	564.9	0
6/12/2000	9	0	12.2	890	685	0	628.6	0
6/12/2000	10	0	2.1	925	695	1	670.4	0
6/12/2000	11	0	81.5	943	616	0	689.1	0
6/12/2000	12	0	211.8	978	485	0	692.3	0
6/12/2000	13	0	388.8	948	308	0	637.7	0
6/12/2000	14	0	643.8	954	53	0	638.7	0
6/12/2000	15	0	675.6	950	21	0	666.7	0
6/12/2000	16	0	675.1	883	22	0	676.2	1
6/12/2000	17	0	673.8	801	23	0	592.3	1
6/12/2000	18	0	673.0	681	24	0	546.3	1
6/12/2000	19	0	672.6	676	24	0	531.2	1
6/12/2000	20	0	672.9	607	24	0	444.3	1
6/12/2000	21	0	673.7	555	23	0	439.0	1
6/12/2000	22	0	674.3	640	23	0	511.1	1
6/12/2000	23	0	514.0	309	183	1	248.2	1
6/12/2000	24	0	436.8	215	260	1	140.3	0

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6/13/2000	1	0	297.2	224	400	1	140.2	0
6/13/2000	2	0	199.7	226	497	1	140.5	0
6/13/2000	3	0	199.1	226	498	1	140.3	0
6/13/2000	4	0	118.3	230	579	1	140.4	0
6/13/2000	5	0	92.3	250	605	1	140.3	0
6/13/2000	6	0	245.2	253	452	0	140.2	0
6/13/2000	7	0	408.7	256	288	0	140.2	0
6/13/2000	8	0	651.3	267	46	0	147.0	0
6/13/2000	9	0	680.5	466	17	0	343.9	0
6/13/2000	10	0	679.0	550	18	0	427.7	0
6/13/2000	11	0	678.0	822	19	0	530.3	0
6/13/2000	12	0	678.2	1062	19	0	679.6	0
6/13/2000	13	0	677.7	1299	19	0	901.3	0
6/13/2000	14	0	676.1	1340	21	0	897.3	0
6/13/2000	15	0	674.4	1381	23	0	900.1	0
6/13/2000	16	0	673.9	1392	23	0	903.3	0
6/13/2000	17	0	672.9	1508	24	0	956.9	0
6/13/2000	18	0	672.1	1436	25	0	978.3	0
6/13/2000	19	0	672.7	1434	24	0	976.2	0
6/13/2000	20	0	672.9	1409	24	0	959.1	0
6/13/2000	21	0	673.5	1422	24	0	950.8	0
6/13/2000	22	0	674.2	1454	23	0	979.4	0
6/13/2000	23	0	674.4	1202	23	0	979.5	0
6/13/2000	24	0	674.2	1098	23	0	964.9	0
6/14/2000	1	0	557.1	682	140	1	537.8	0
6/14/2000	2	0	336.6	279	360	1	141.9	0
6/14/2000	3	0	409.9	274	287	0	140.5	0
6/14/2000	4	0	255.8	273	441	1	140.4	0
6/14/2000	5	0	208.9	273	488	1	140.6	0
6/14/2000	6	0	275.9	289	421	0	139.6	0
6/14/2000	7	0	471.2	439	226	0	230.4	0
6/14/2000	8	0	680.1	693	17	0	433.4	0
6/14/2000	9	0	677.0	1275	20	0	854.8	0
6/14/2000	10	0	674.0	1405	23	0	966.9	0
6/14/2000	11	0	671.7	1498	25	0	976.3	0
6/14/2000	12	0	663.4	1565	34	1	974.4	0
6/14/2000	13	0	669.3	1572	28	0	974.9	0
6/14/2000	14	0	670.3	1569	27	0	972.4	0
6/14/2000	15	0	669.9	1566	27	0	969.5	0
6/14/2000	16	0	669.4	1565	28	0	968.8	0
6/14/2000	17	0	669.3	1565	28	0	969.1	0
6/14/2000	18	0	672.5	1559	25	0	967.7	0
6/14/2000	19	0	673.1	1554	24	0	967.1	0
6/14/2000	20	0	671.2	1554	26	0	967.4	0
6/14/2000	21	0	670.9	1555	26	0	967.5	0
6/14/2000	22	0	669.6	1560	27	0	970.1	0
6/14/2000	23	0	668.4	1471	29	0	970.3	0
6/14/2000	24	0	669.3	599	28	0	401.8	0
6/15/2000	1	0	644.0	275	53	1	138.1	0
6/15/2000	2	0	370.7	274	326	1	138.3	0
6/15/2000	3	0	212.2	270	485	1	138.2	0
6/15/2000	4	0	216.1	268	481	0	138.3	0
6/15/2000	5	0	206.9	272	490	1	137.9	0
6/15/2000	6	0	201.9	272	495	1	138.2	0
6/15/2000	7	0	199.7	499	497	1	309.5	0
6/15/2000	8	0	198.0	817	499	1	451.6	0
6/15/2000	9	0	196.9	1228	500	1	775.2	0
6/15/2000	10	0	197.6	1400	499	0	921.0	0
6/15/2000	11	0	198.4	1413	499	0	924.9	0
6/15/2000	12	0	198.8	1548	498	0	962.1	0
6/15/2000	13	0	199.3	1548	498	0	961.8	0
6/15/2000	14	0	199.6	1550	497	0	964.1	0
6/15/2000	15	0	198.7	1550	498	1	963.9	0
6/15/2000	16	0	197.0	1551	500	1	965.5	0
6/15/2000	17	0	198.4	1551	499	0	965.6	0

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6/15/2000	18	0	199.6	1550	497	0	965.6	0
6/15/2000	19	0	201.4	1552	496	0	967.1	0
6/15/2000	20	0	202.5	1553	495	0	968.8	0
6/15/2000	21	0	204.1	1552	493	0	968.4	0
6/15/2000	22	0	205.2	1508	492	0	968.2	0
6/15/2000	23	0	205.4	881	492	0	635.0	0
6/15/2000	24	0	206.5	372	491	0	237.7	0
6/16/2000	1	0	207.2	359	490	0	221.8	0
6/16/2000	2	0	207.7	279	489	0	140.1	0
6/16/2000	3	0	205.8	322	491	1	185.2	0
6/16/2000	4	0	206.0	303	491	0	166.0	0
6/16/2000	5	0	210.8	280	486	0	142.8	0
6/16/2000	6	0	213.2	321	484	0	175.3	0
6/16/2000	7	0	209.9	390	487	1	207.5	0
6/16/2000	8	0	210.4	701	487	0	404.5	0
6/16/2000	9	0	213.3	868	484	0	517.0	0
6/16/2000	10	0	213.7	1366	483	0	943.7	0
6/16/2000	11	0	213.6	1546	484	1	967.8	0
6/16/2000	12	0	212.5	1565	485	1	968.5	0
6/16/2000	13	0	210.9	1555	486	1	969.5	0
6/16/2000	14	0	210.1	1535	487	1	966.2	0
6/16/2000	15	0	209.9	1536	487	1	966.4	0
6/16/2000	16	0	209.1	1536	488	1	966.4	0
6/16/2000	17	0	208.9	1535	488	1	966.3	0
6/16/2000	18	0	208.8	1535	488	1	966.3	0
6/16/2000	19	0	209.6	1536	487	0	966.4	0
6/16/2000	20	0	210.3	1483	487	0	966.4	0
6/16/2000	21	0	210.9	1299	486	0	908.7	0
6/16/2000	22	0	211.6	968	486	0	583.9	0
6/16/2000	23	0	211.7	825	485	0	440.0	0
6/16/2000	24	0	211.8	628	435	0	405.7	0
6/17/2000	1	1	211.9	323	485	0	187.8	0
6/17/2000	2	1	212.2	274	485	0	140.3	0
6/17/2000	3	1	212.1	274	485	1	140.3	0
6/17/2000	4	1	212.1	274	485	0	140.3	0
6/17/2000	5	1	212.1	275	485	1	140.4	0
6/17/2000	6	1	212.8	275	484	0	140.6	0
6/17/2000	7	1	212.7	277	484	1	141.9	0
6/17/2000	8	1	212.3	293	485	1	157.9	0
6/17/2000	9	1	215.7	385	481	0	251.0	0
6/17/2000	10	1	217.2	464	480	0	329.4	0
6/17/2000	11	1	215.6	524	482	1	375.6	0
6/17/2000	12	1	210.6	659	487	1	406.0	0
6/17/2000	13	1	202.2	707	495	1	444.0	0
6/17/2000	14	1	202.1	704	495	1	439.8	0
6/17/2000	15	1	201.3	770	496	1	468.0	0
6/17/2000	16	1	203.3	772	494	0	486.4	0
6/17/2000	17	1	203.6	696	493	0	428.0	0
6/17/2000	18	1	201.9	701	495	1	432.4	0
6/17/2000	19	1	201.6	659	495	1	419.4	0
6/17/2000	20	1	213.8	575	483	0	399.6	0
6/17/2000	21	1	10.3	537	687	1	406.7	0
6/17/2000	22	1	0.0	596	697	0	462.9	0
6/17/2000	23	1	0.0	488	697	0	346.6	0
6/17/2000	24	1	0.0	377	697	0	240.1	0
6/18/2000	1	1	0.0	331	697	0	195.4	0
6/18/2000	2	1	0.0	276	697	0	140.3	0
6/18/2000	3	1	0.0	275	697	0	140.5	0
6/18/2000	4	1	0.0	275	697	0	140.5	0
6/18/2000	5	1	0.0	276	697	0	140.4	0
6/18/2000	6	1	0.0	276	697	0	140.4	0
6/18/2000	7	1	0.0	276	697	0	140.6	0
6/18/2000	8	1	0.0	274	697	0	140.3	0
6/18/2000	9	1	0.0	275	697	0	140.3	0
6/18/2000	10	1	32.4	276	665	0	140.2	0

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6/18/2000	11	1	166.2	276	531	0	140.1	0
6/18/2000	12	1	212.8	274	484	0	140.1	0
6/18/2000	13	1	226.0	274	471	0	140.0	0
6/18/2000	14	1	232.5	275	465	0	140.0	0
6/18/2000	15	1	208.8	276	488	1	140.1	0
6/18/2000	16	1	209.2	275	488	0	140.0	0
6/18/2000	17	1	208.9	275	488	1	140.0	0
6/18/2000	18	1	209.1	275	488	0	140.0	0
6/18/2000	19	1	235.3	275	462	0	140.1	0
6/18/2000	20	1	270.7	281	426	0	146.8	0
6/18/2000	21	1	501.3	344	196	0	211.4	0
6/18/2000	22	1	589.9	273	107	0	139.9	0
6/18/2000	23	1	376.9	275	320	1	139.9	0
6/18/2000	24	1	204.5	276	493	1	140.5	0
6/19/2000	1	0	204.7	276	492	0	140.5	0
6/19/2000	2	0	204.8	277	492	0	140.5	0
6/19/2000	3	0	204.7	276	492	1	140.4	0
6/19/2000	4	0	204.7	276	492	0	140.4	0
6/19/2000	5	0	205.3	276	492	0	140.4	0
6/19/2000	6	0	426.9	275	270	0	140.4	0
6/19/2000	7	0	689.4	442	8	0	306.5	0
6/19/2000	8	0	689.5	508	8	0	372.9	0
6/19/2000	9	0	687.7	605	9	0	421.3	0
6/19/2000	10	0	687.7	758	9	0	421.9	0
6/19/2000	11	0	684.8	763	12	0	420.6	0
6/19/2000	12	0	684.2	760	13	0	416.5	0
6/19/2000	13	0	682.8	804	14	0	460.7	0
6/19/2000	14	0	681.9	801	15	0	467.5	0
6/19/2000	15	0	679.2	1001	18	0	672.7	0
6/19/2000	16	0	677.5	1159	20	0	868.5	0
6/19/2000	17	0	677.1	1107	20	0	812.3	0
6/19/2000	18	0	676.7	882	20	0	490.5	0
6/19/2000	19	0	676.2	814	21	0	445.8	0
6/19/2000	20	0	674.2	768	23	0	428.6	0
6/19/2000	21	0	674.3	597	23	0	424.9	0
6/19/2000	22	0	675.7	480	21	0	341.2	0
6/19/2000	23	0	544.3	277	153	1	139.0	0
6/19/2000	24	0	279.7	261	417	1	139.4	0
6/20/2000	1	0	127.3	252	570	1	139.4	0
6/20/2000	2	0	89.6	251	608	1	139.4	0
6/20/2000	3	0	89.5	252	608	1	139.7	0
6/20/2000	4	0	90.2	253	607	0	139.6	0
6/20/2000	5	0	100.5	253	597	0	140.0	0
6/20/2000	6	0	209.3	252	488	0	139.9	0
6/20/2000	7	0	352.9	373	344	0	228.8	0
6/20/2000	8	0	629.8	716	67	0	431.0	0
6/20/2000	9	0	689.1	776	8	0	438.2	0
6/20/2000	10	0	686.3	737	11	0	430.3	0
6/20/2000	11	0	684.1	730	13	0	438.7	0
6/20/2000	12	0	683.6	730	13	0	438.6	0
6/20/2000	13	0	682.6	931	15	0	641.4	0
6/20/2000	14	0	680.9	1167	16	0	837.6	0
6/20/2000	15	0	679.9	1245	17	0	831.0	0
6/20/2000	16	0	679.0	1346	18	0	867.3	0
6/20/2000	17	0	678.4	1538	19	0	963.1	0
6/20/2000	18	0	676.7	1541	20	0	963.8	0
6/20/2000	19	0	677.0	1535	20	0	967.2	0
6/20/2000	20	0	678.6	1261	18	0	858.0	0
6/20/2000	21	0	680.2	1108	17	0	713.3	0
6/20/2000	22	0	680.9	747	16	0	437.8	0
6/20/2000	23	0	682.4	645	15	0	438.7	0
6/20/2000	24	0	484.7	374	212	1	249.5	0
6/21/2000	1	0	250.8	272	446	1	156.3	0
6/21/2000	2	0	91.7	256	605	1	139.6	0
6/21/2000	3	0	91.1	266	606	1	139.6	0

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6/21/2000	4	0	111.6	266	585	0	139.5	0
6/21/2000	5	0	229.5	266	468	0	139.6	0
6/21/2000	6	0	441.2	329	256	0	187.6	0
6/21/2000	7	0	689.0	588	8	0	342.5	0
6/21/2000	8	0	689.9	769	7	0	425.7	0
6/21/2000	9	0	687.9	771	9	0	422.4	0
6/21/2000	10	0	686.1	743	11	0	401.8	0
6/21/2000	11	0	684.6	739	12	0	434.7	0
6/21/2000	12	0	683.1	772	14	0	457.7	0
6/21/2000	13	0	682.3	819	15	0	471.1	0
6/21/2000	14	0	681.3	1176	16	0	671.3	0
6/21/2000	15	0	680.0	1541	17	0	962.5	0
6/21/2000	16	0	678.9	1541	18	0	966.6	0
6/21/2000	17	0	677.2	1533	20	0	963.8	0
6/21/2000	18	0	677.1	1535	20	0	963.2	0
6/21/2000	19	0	668.0	1537	29	0	963.5	0
6/21/2000	20	0	673.7	1435	23	0	956.2	0
6/21/2000	21	0	679.1	879	18	0	727.0	0
6/21/2000	22	0	681.1	638	16	0	490.9	0
6/21/2000	23	0	526.4	348	171	1	220.8	0
6/21/2000	24	0	418.0	252	279	1	139.1	0
6/22/2000	1	0	393.3	252	304	1	139.9	0
6/22/2000	2	0	358.6	252	339	1	139.8	0
6/22/2000	3	0	354.4	252	343	1	140.2	0
6/22/2000	4	0	249.1	253	448	1	140.3	0
6/22/2000	5	0	214.0	253	483	1	140.1	0
6/22/2000	6	0	436.2	263	261	0	143.9	0
6/22/2000	7	0	686.6	534	11	0	324.1	0
6/22/2000	8	0	689.2	655	8	0	368.7	0
6/22/2000	9	0	686.3	655	11	0	369.3	0
6/22/2000	10	0	684.9	666	12	0	381.7	0
6/22/2000	11	0	683.3	658	14	0	394.0	0
6/22/2000	12	0	683.5	561	14	0	381.1	0
6/22/2000	13	0	681.9	531	15	0	383.8	0
6/22/2000	14	0	681.0	654	16	0	477.6	0
6/22/2000	15	0	681.8	815	15	0	531.0	0
6/22/2000	16	0	681.0	872	16	0	587.1	0
6/22/2000	17	0	680.8	882	16	0	598.0	0
6/22/2000	18	0	682.0	1043	15	0	757.4	0
6/22/2000	19	0	682.5	917	15	0	630.9	0
6/22/2000	20	0	684.0	785	13	0	498.9	0
6/22/2000	21	0	685.3	768	12	0	481.2	0
6/22/2000	22	0	685.4	824	12	0	539.5	0
6/22/2000	23	0	577.7	467	119	1	317.3	0
6/22/2000	24	0	436.8	254	260	1	139.6	0
6/23/2000	1	0	393.9	253	303	1	139.5	0
6/23/2000	2	0	309.3	253	388	1	139.6	0
6/23/2000	3	0	204.0	254	493	1	139.7	0
6/23/2000	4	0	203.7	254	493	1	139.9	0
6/23/2000	5	0	248.1	255	449	0	140.0	0
6/23/2000	6	0	504.6	259	193	0	145.5	0
6/23/2000	7	0	694.2	517	3	0	336.8	0
6/23/2000	8	0	691.5	642	6	0	370.4	0
6/23/2000	9	0	689.4	654	8	0	370.3	0
6/23/2000	10	0	688.4	652	9	0	370.1	0
6/23/2000	11	0	687.3	653	10	0	369.7	0
6/23/2000	12	0	685.7	668	11	0	386.3	0
6/23/2000	13	0	684.3	663	13	0	381.6	0
6/23/2000	14	0	683.2	687	14	0	415.3	0
6/23/2000	15	0	682.2	958	15	0	731.0	0
6/23/2000	16	0	681.7	1070	15	0	886.0	0
6/23/2000	17	0	681.3	1103	16	0	948.6	0
6/23/2000	18	0	681.2	692	16	0	499.8	0
6/23/2000	19	0	682.0	686	15	0	449.6	0
6/23/2000	20	0	682.7	641	14	0	386.8	0

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6/23/2000	21	0	684.1	617	13	0	369.1	0
6/23/2000	22	0	684.9	644	12	0	406.7	0
6/23/2000	23	0	558.3	317	139	1	194.5	0
6/23/2000	24	0	474.2	290	223	1	173.0	0
6/24/2000	1	1	233.1	276	464	1	156.8	0
6/24/2000	2	1	98.8	260	598	1	140.3	0
6/24/2000	3	1	92.6	260	605	1	140.8	0
6/24/2000	4	1	92.8	260	604	0	140.9	0
6/24/2000	5	1	92.7	259	604	1	140.8	0
6/24/2000	6	1	92.7	260	604	1	140.8	0
6/24/2000	7	1	92.8	260	604	0	140.8	0
6/24/2000	8	1	94.0	261	603	0	141.1	0
6/24/2000	9	1	259.6	259	437	0	140.6	0
6/24/2000	10	1	465.9	256	231	0	141.4	0
6/24/2000	11	1	558.7	392	138	0	275.4	0
6/24/2000	12	1	690.8	509	6	0	348.4	0
6/24/2000	13	1	687.8	541	9	0	343.5	0
6/24/2000	14	1	685.4	636	12	0	414.2	0
6/24/2000	15	1	683.6	678	13	0	441.8	0
6/24/2000	16	1	682.6	739	14	0	492.3	0
6/24/2000	17	1	681.5	695	16	0	451.1	0
6/24/2000	18	1	680.7	837	16	0	600.8	0
6/24/2000	19	1	681.6	712	15	0	563.8	0
6/24/2000	20	1	682.9	635	14	0	521.6	0
6/24/2000	21	1	683.8	606	13	0	491.9	0
6/24/2000	22	1	680.7	346	16	0	231.7	0
6/24/2000	23	1	561.1	313	136	1	197.8	0
6/24/2000	24	1	448.7	315	248	1	198.4	0
6/25/2000	1	1	174.1	317	523	1	198.1	0
6/25/2000	2	1	95.4	317	602	1	198.4	0
6/25/2000	3	1	91.2	316	606	1	198.4	0
6/25/2000	4	1	92.8	316	604	0	198.5	0
6/25/2000	5	1	93.7	315	603	0	198.4	0
6/25/2000	6	1	94.1	316	603	0	198.4	0
6/25/2000	7	1	93.8	317	603	1	198.4	0
6/25/2000	8	1	151.1	315	546	0	199.6	0
6/25/2000	9	1	263.3	288	434	0	173.2	0
6/25/2000	10	1	416.1	253	281	0	140.1	0
6/25/2000	11	1	482.6	253	215	0	141.3	0
6/25/2000	12	1	574.8	277	122	0	165.8	0
6/25/2000	13	1	687.2	437	10	0	323.8	0
6/25/2000	14	1	683.8	536	13	0	422.8	0
6/25/2000	15	1	682.2	516	15	0	402.5	0
6/25/2000	16	1	681.4	496	16	0	382.3	0
6/25/2000	17	1	677.1	574	20	0	462.7	0
6/25/2000	18	1	653.8	747	43	1	633.3	0
6/25/2000	19	1	678.0	925	19	0	740.6	0
6/25/2000	20	1	678.8	986	18	0	778.5	0
6/25/2000	21	1	679.2	999	18	0	801.9	0
6/25/2000	22	1	680.3	929	17	0	756.2	0
6/25/2000	23	1	544.3	455	153	1	337.4	0
6/25/2000	24	1	235.9	314	461	1	197.3	0
6/26/2000	1	0	203.9	313	493	1	194.6	0
6/26/2000	2	0	203.7	315	493	1	195.9	0
6/26/2000	3	0	171.2	315	526	1	195.6	0
6/26/2000	4	0	102.3	313	595	1	194.3	0
6/26/2000	5	0	200.1	312	497	0	194.3	0
6/26/2000	6	0	389.1	314	308	0	197.2	0
6/26/2000	7	0	680.5	454	17	0	339.4	0
6/26/2000	8	0	689.0	580	8	0	453.5	0
6/26/2000	9	0	687.0	646	10	0	502.5	0
6/26/2000	10	0	685.6	769	11	0	558.3	0
6/26/2000	11	0	683.5	850	14	0	584.3	0
6/26/2000	12	0	681.4	979	16	0	707.2	0
6/26/2000	13	0	680.0	1123	17	0	803.2	0

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6/26/2000	14	0	678.8	1495	18	0	1066.4	0
6/26/2000	15	0	677.9	1748	19	0	1243.2	0
6/26/2000	16	0	676.6	1769	21	0	1262.0	0
6/26/2000	17	0	675.1	1764	22	0	1258.6	0
6/26/2000	18	0	674.9	1762	22	0	1257.3	0
6/26/2000	19	0	675.9	1763	21	0	1257.3	0
6/26/2000	20	0	677.2	1734	20	0	1230.5	0
6/26/2000	21	0	679.1	1436	18	0	1109.4	0
6/26/2000	22	0	676.8	1240	20	0	927.9	0
6/26/2000	23	0	628.9	752	68	1	518.3	0
6/26/2000	24	0	602.6	319	94	1	195.7	0
6/27/2000	1	0	445.1	312	252	1	189.6	0
6/27/2000	2	0	415.3	312	282	1	189.9	0
6/27/2000	3	0	239.1	312	458	1	189.7	0
6/27/2000	4	0	254.4	313	443	0	189.9	0
6/27/2000	5	0	333.3	311	364	0	189.8	0
6/27/2000	6	0	419.3	315	278	0	194.1	0
6/27/2000	7	0	654.0	550	43	0	430.0	0
6/27/2000	8	0	686.7	716	10	0	586.4	0
6/27/2000	9	0	684.8	845	12	0	636.0	0
6/27/2000	10	0	683.3	1022	14	0	734.7	0
6/27/2000	11	0	682.2	1167	15	0	872.4	0
6/27/2000	12	0	680.5	1503	17	0	1203.8	0
6/27/2000	13	0	679.4	1701	18	0	1247.0	0
6/27/2000	14	0	677.9	1871	19	0	1298.3	0
6/27/2000	15	0	676.6	1875	20	0	1298.9	0
6/27/2000	16	0	676.0	1859	21	0	1298.0	0
6/27/2000	17	0	675.3	1856	22	0	1295.5	0
6/27/2000	18	0	674.9	1856	22	0	1295.0	0
6/27/2000	19	0	675.1	1856	22	0	1294.9	0
6/27/2000	20	0	676.2	1857	21	0	1296.2	0
6/27/2000	21	0	677.8	1859	19	0	1296.6	0
6/27/2000	22	0	680.1	1860	17	0	1296.9	0
6/27/2000	23	0	542.2	1250	155	1	838.6	0
6/27/2000	24	0	405.1	348	292	1	223.1	0
6/28/2000	1	0	490.4	311	207	0	189.2	0
6/28/2000	2	0	679.4	311	18	0	189.3	0
6/28/2000	3	0	445.1	313	252	1	189.3	0
6/28/2000	4	0	254.3	313	443	1	189.4	0
6/28/2000	5	0	253.7	312	443	1	189.4	0
6/28/2000	6	0	258.0	313	439	0	189.6	0
6/28/2000	7	0	515.1	508	182	0	356.2	0
6/28/2000	8	0	689.7	596	7	0	474.6	0
6/28/2000	9	0	686.7	622	10	0	506.8	0
6/28/2000	10	0	684.0	772	13	0	641.5	0
6/28/2000	11	0	682.0	976	15	0	775.9	0
6/28/2000	12	0	680.8	1271	16	0	1051.0	0
6/28/2000	13	0	679.6	1507	17	0	1129.6	0
6/28/2000	14	0	678.2	1725	19	0	1203.4	0
6/28/2000	15	0	677.8	1869	19	0	1295.9	0
6/28/2000	16	0	677.0	1856	20	0	1298.8	0
6/28/2000	17	0	675.6	1837	21	0	1297.4	0
6/28/2000	18	0	675.8	1819	21	0	1296.2	0
6/28/2000	19	0	676.0	1815	21	0	1294.2	0
6/28/2000	20	0	677.4	1814	20	0	1293.8	0
6/28/2000	21	0	679.0	1815	18	0	1293.8	0
6/28/2000	22	0	679.7	1685	17	0	1260.2	0
6/28/2000	23	0	680.8	661	16	0	535.5	0
6/28/2000	24	0	631.2	446	66	1	331.2	0
6/29/2000	1	0	447.5	305	250	1	188.5	0
6/29/2000	2	0	407.8	305	289	1	186.9	0
6/29/2000	3	0	254.9	306	442	1	187.0	0
6/29/2000	4	0	254.3	305	443	1	187.0	0
6/29/2000	5	0	277.4	304	420	0	187.1	0
6/29/2000	6	0	580.6	302	116	0	187.4	0

**CONTAINS PROTECTED MATERIAL-
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6/29/2000	7	0	689.1	468	8	0	354.3	0
6/29/2000	8	0	687.2	551	10	0	437.7	0
6/29/2000	9	0	685.8	605	11	0	491.7	0
6/29/2000	10	0	684.0	749	13	0	636.2	0
6/29/2000	11	0	682.0	868	15	0	724.3	0
6/29/2000	12	0	681.5	1116	16	0	934.4	0
6/29/2000	13	0	680.3	1340	17	0	1098.7	0
6/29/2000	14	0	679.5	1757	18	0	1251.0	0
6/29/2000	15	0	678.8	1864	18	0	1296.6	0
6/29/2000	16	0	678.8	1700	18	0	1185.3	0
6/29/2000	17	0	679.1	1610	18	0	1138.8	0
6/29/2000	18	0	679.6	1673	17	0	1254.1	0
6/29/2000	19	0	679.7	1383	17	0	1129.2	0
6/29/2000	20	0	680.4	1238	17	0	1041.2	0
6/29/2000	21	0	677.5	762	20	0	613.9	0
6/29/2000	22	0	677.3	839	20	0	723.0	0
6/29/2000	23	0	671.5	1071	26	0	829.8	0
6/29/2000	24	0	439.6	433	258	1	288.0	0
6/30/2000	1	0	355.7	339	341	1	221.6	0
6/30/2000	2	0	261.0	305	436	1	187.5	0
6/30/2000	3	0	256.2	305	441	1	187.5	0
6/30/2000	4	0	246.0	305	451	1	187.5	0
6/30/2000	5	0	206.3	305	491	1	187.4	0
6/30/2000	6	0	379.1	304	318	0	187.4	0
6/30/2000	7	0	688.0	443	9	0	326.5	0
6/30/2000	8	0	688.9	513	8	0	396.7	0
6/30/2000	9	0	688.2	497	9	0	380.8	0
6/30/2000	10	0	688.0	503	9	0	383.5	0
6/30/2000	11	0	685.2	569	12	0	430.8	0
6/30/2000	12	0	684.4	587	13	0	446.1	0
6/30/2000	13	0	682.9	600	14	0	459.5	0
6/30/2000	14	0	681.9	617	15	0	498.3	0
6/30/2000	15	0	682.8	612	14	0	499.1	0
6/30/2000	16	0	682.1	708	15	0	595.1	0
6/30/2000	17	0	681.2	751	16	0	638.8	0
6/30/2000	18	0	681.7	799	15	0	654.3	0
6/30/2000	19	0	683.0	661	14	0	522.4	0
6/30/2000	20	0	682.7	538	14	0	420.9	0
6/30/2000	21	0	684.0	591	13	0	472.3	0
6/30/2000	22	0	685.2	559	12	0	440.0	0
6/30/2000	23	0	495.1	372	202	1	250.3	0
6/30/2000	24	0	179.3	318	518	1	198.5	0
7/1/2000	1	1	48.6	377	648	1	267.1	0
7/1/2000	2	1	0.0	419	697	0	306.7	0
7/1/2000	3	1	0.0	376	697	0	265.1	0
7/1/2000	4	1	0.0	307	697	0	189.0	0
7/1/2000	5	1	0.0	306	697	0	187.8	0
7/1/2000	6	1	0.0	399	697	0	283.5	0
7/1/2000	7	1	0.0	347	697	0	235.2	0
7/1/2000	8	1	0.0	517	697	0	338.3	0
7/1/2000	9	1	0.0	391	697	0	269.5	0
7/1/2000	10	1	0.0	345	697	0	222.2	0
7/1/2000	11	1	0.0	626	697	0	468.3	0
7/1/2000	12	1	0.0	851	697	0	653.6	0
7/1/2000	13	1	0.0	931	697	0	668.1	0
7/1/2000	14	1	0.0	997	697	0	681.2	0
7/1/2000	15	1	0.0	1006	697	0	685.3	0
7/1/2000	16	1	0.0	957	697	0	650.3	0
7/1/2000	17	1	0.0	979	697	0	680.5	0
7/1/2000	18	1	0.0	972	697	0	681.8	0
7/1/2000	19	1	0.0	765	697	0	609.8	0
7/1/2000	20	1	0.0	660	697	0	543.0	0
7/1/2000	21	1	0.0	605	697	0	489.3	0
7/1/2000	22	1	0.0	641	697	0	505.5	0
7/1/2000	23	1	0.0	668	697	0	524.6	0

**CONTAINS PROTECTED MATERIAL-
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7/1/2000	24	1	0.0	687	697	0	544.8	0
7/2/2000	1	1	0.0	641	697	0	513.6	0
7/2/2000	2	1	0.0	407	697	0	293.4	0
7/2/2000	3	1	0.0	409	697	0	296.1	0
7/2/2000	4	1	0.0	392	697	0	279.2	0
7/2/2000	5	1	0.0	409	697	0	296.1	0
7/2/2000	6	1	0.0	393	697	0	280.1	0
7/2/2000	7	1	0.0	351	697	0	237.4	0
7/2/2000	8	1	0.0	476	697	0	363.7	0
7/2/2000	9	1	0.0	579	697	0	466.5	0
7/2/2000	10	1	0.0	529	697	0	416.5	0
7/2/2000	11	1	0.0	400	697	0	288.7	0
7/2/2000	12	1	0.0	391	697	0	278.8	0
7/2/2000	13	1	0.0	360	697	0	248.3	0
7/2/2000	14	1	0.0	297	697	0	186.6	0
7/2/2000	15	1	0.0	311	697	0	197.5	0
7/2/2000	16	1	0.0	342	697	0	229.6	0
7/2/2000	17	1	0.0	380	697	0	264.6	0
7/2/2000	18	1	0.0	382	697	0	266.8	0
7/2/2000	19	1	0.0	429	697	0	313.7	0
7/2/2000	20	1	0.0	435	697	0	320.5	0
7/2/2000	21	1	0.0	593	697	0	477.3	0
7/2/2000	22	1	0.0	657	697	0	530.2	0
7/2/2000	23	1	0.0	427	697	0	291.7	0
7/2/2000	24	1	0.0	300	697	0	186.9	0
7/3/2000	1	0	0.0	343	697	0	228.7	0
7/3/2000	2	0	0.0	326	697	0	212.0	0
7/3/2000	3	0	0.0	301	697	0	187.6	0
7/3/2000	4	0	0.0	301	697	0	187.7	0
7/3/2000	5	0	0.0	301	697	0	187.4	0
7/3/2000	6	0	0.0	305	697	0	190.8	0
7/3/2000	7	0	0.0	572	697	0	458.6	0
7/3/2000	8	0	0.0	522	697	0	408.5	0
7/3/2000	9	0	0.0	511	697	0	398.5	0
7/3/2000	10	0	0.0	519	697	0	407.1	0
7/3/2000	11	0	0.0	573	697	0	461.9	0
7/3/2000	12	0	0.0	531	697	0	420.6	0
7/3/2000	13	0	0.0	558	697	0	446.4	0
7/3/2000	14	0	0.0	629	697	0	514.2	0
7/3/2000	15	0	0.0	668	697	0	554.7	0
7/3/2000	16	0	0.0	670	697	0	555.7	0
7/3/2000	17	0	0.0	632	697	0	515.4	0
7/3/2000	18	0	0.0	631	697	0	514.9	0
7/3/2000	19	0	0.0	632	697	0	515.8	0
7/3/2000	20	0	0.0	620	697	0	502.8	0
7/3/2000	21	0	0.0	545	697	0	426.4	0
7/3/2000	22	0	0.0	546	697	0	425.7	0
7/3/2000	23	0	0.0	442	697	0	379.5	0
7/3/2000	24	0	0.0	281	697	0	224.2	1
7/4/2000	1	0	0.0	241	697	0	185.3	1
7/4/2000	2	0	0.0	241	697	0	185.3	1
7/4/2000	3	0	0.0	269	697	0	213.5	1
7/4/2000	4	0	0.0	249	697	0	194.0	1
7/4/2000	5	0	0.0	249	697	0	193.9	1
7/4/2000	6	0	0.0	247	697	0	192.3	1
7/4/2000	7	0	0.0	195	697	0	139.3	1
7/4/2000	8	0	0.0	195	697	0	139.4	1
7/4/2000	9	0	0.0	269	697	0	213.5	1
7/4/2000	10	0	0.0	263	697	0	207.0	1
7/4/2000	11	0	0.0	275	697	0	218.9	1
7/4/2000	12	0	0.0	283	697	0	231.1	1
7/4/2000	13	0	0.0	246	697	0	192.1	1
7/4/2000	14	0	0.0	243	697	0	187.5	1
7/4/2000	15	0	0.0	230	697	0	173.3	1
7/4/2000	16	0	0.0	221	697	0	163.7	1

**CONTAINS PROTECTED MATERIAL-
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7/4/2000	17	0	0.0	221	697	0	163.7	1
7/4/2000	18	0	0.0	222	697	0	163.9	1
7/4/2000	19	0	0.0	222	697	0	163.4	1
7/4/2000	20	0	0.0	210	697	0	152.2	1
7/4/2000	21	0	0.0	196	697	0	137.4	1
7/4/2000	22	0	0.0	196	697	0	137.6	1
7/4/2000	23	0	0.0	214	697	0	155.3	1
7/4/2000	24	0	0.0	195	697	0	138.6	1
7/5/2000	1	0	2.8	195	694	0	138.4	1
7/5/2000	2	0	45.9	195	651	0	138.9	1
7/5/2000	3	0	183.9	198	513	0	139.1	1
7/5/2000	4	0	213.4	194	484	0	139.1	1
7/5/2000	5	0	208.1	194	489	1	139.0	1
7/5/2000	6	0	207.2	194	490	1	139.1	1
7/5/2000	7	0	206.9	221	490	1	165.8	1
7/5/2000	8	0	203.8	253	493	1	195.7	1
7/5/2000	9	0	204.3	269	493	0	211.9	1
7/5/2000	10	0	203.9	321	493	1	264.0	1
7/5/2000	11	0	267.0	329	430	0	271.5	1
7/5/2000	12	0	568.3	326	129	0	268.6	1
7/5/2000	13	0	618.8	325	78	0	268.5	1
7/5/2000	14	0	649.4	331	48	0	274.0	1
7/5/2000	15	0	681.2	341	16	0	283.2	1
7/5/2000	16	0	683.6	341	13	0	283.3	1
7/5/2000	17	0	686.0	341	11	0	283.4	1
7/5/2000	18	0	687.0	334	10	0	275.8	1
7/5/2000	19	0	686.2	326	11	0	267.6	1
7/5/2000	20	0	686.5	222	11	0	162.5	1
7/5/2000	21	0	576.3	198	121	1	138.1	1
7/5/2000	22	0	248.8	200	448	1	138.0	1
7/5/2000	23	0	102.0	198	595	1	137.8	1
7/5/2000	24	0	99.4	195	598	1	138.8	1
7/6/2000	1	0	99.4	125	598	0	95.0	1
7/6/2000	2	0	100.0	120	597	0	92.1	1
7/6/2000	3	0	99.0	120	598	1	92.1	1
7/6/2000	4	0	100.4	120	597	0	92.2	1
7/6/2000	5	0	100.1	119	597	1	92.1	1
7/6/2000	6	0	167.2	121	530	0	94.6	1
7/6/2000	7	0	386.9	120	310	0	93.0	1
7/6/2000	8	0	505.8	120	191	0	92.4	1
7/6/2000	9	0	636.0	235	61	0	208.6	1
7/6/2000	10	0	693.5	250	4	0	223.0	1
7/6/2000	11	0	690.5	249	7	0	222.5	1
7/6/2000	12	0	688.5	248	9	0	222.1	1
7/6/2000	13	0	688.3	248	9	0	221.7	1
7/6/2000	14	0	687.3	249	10	0	221.7	1
7/6/2000	15	0	686.1	249	11	0	221.9	1
7/6/2000	16	0	685.2	250	12	0	222.2	1
7/6/2000	17	0	686.3	250	11	0	222.4	1
7/6/2000	18	0	686.9	251	10	0	222.7	1
7/6/2000	19	0	686.1	249	11	0	221.4	1
7/6/2000	20	0	671.9	134	25	0	105.9	1
7/6/2000	21	0	330.3	122	367	1	91.4	1
7/6/2000	22	0	254.5	122	443	1	91.4	1
7/6/2000	23	0	109.4	123	588	1	91.6	1
7/6/2000	24	0	97.1	121	600	1	92.6	1
7/7/2000	1	0	97.7	120	599	0	92.6	1
7/7/2000	2	0	97.6	120	599	1	92.6	1
7/7/2000	3	0	97.4	120	600	1	92.5	1
7/7/2000	4	0	98.1	120	599	0	92.6	1
7/7/2000	5	0	98.1	119	599	0	92.5	1
7/7/2000	6	0	136.5	120	561	0	92.6	1
7/7/2000	7	0	277.9	120	419	0	92.6	1
7/7/2000	8	0	476.4	122	221	0	93.2	1
7/7/2000	9	0	588.7	239	108	0	211.8	1

**CONTAINS PROTECTED MATERIAL-
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7/7/2000	10	0	695.9	256	1	0	228.8	1
7/7/2000	11	0	691.8	291	5	0	263.1	1
7/7/2000	12	0	692.1	291	5	0	263.2	1
7/7/2000	13	0	690.2	270	7	0	242.4	1
7/7/2000	14	0	689.7	251	7	0	223.0	1
7/7/2000	15	0	688.3	266	9	0	223.0	1
7/7/2000	16	0	688.4	267	9	0	223.1	1
7/7/2000	17	0	688.6	278	8	0	233.1	1
7/7/2000	18	0	687.2	267	10	0	223.3	1
7/7/2000	19	0	687.6	244	9	0	216.0	1
7/7/2000	20	0	536.0	130	161	1	100.6	1
7/7/2000	21	0	310.8	123	386	1	92.9	1
7/7/2000	22	0	248.0	123	449	1	92.5	1
7/7/2000	23	0	108.4	122	589	1	92.4	1
7/7/2000	24	0	93.2	120	604	1	93.4	1
7/8/2000	1	1	94.0	50	603	0	50.0	1
7/8/2000	2	1	93.1	48	604	1	47.8	1
7/8/2000	3	1	94.5	48	603	0	47.8	1
7/8/2000	4	1	96.0	48	601	0	47.8	1
7/8/2000	5	1	96.6	48	600	0	47.9	1
7/8/2000	6	1	167.4	48	530	0	47.8	1
7/8/2000	7	1	251.9	48	445	0	47.9	1
7/8/2000	8	1	416.5	48	281	0	47.8	1
7/8/2000	9	1	610.6	48	86	0	47.8	1
7/8/2000	10	1	678.0	48	19	0	47.7	1
7/8/2000	11	1	697.1	48	0	0	47.8	1
7/8/2000	12	1	695.0	47	2	0	46.8	1
7/8/2000	13	1	696.5	70	1	0	70.0	1
7/8/2000	14	1	696.4	77	1	0	76.6	1
7/8/2000	15	1	691.0	77	6	0	76.7	1
7/8/2000	16	1	686.3	77	11	0	76.7	1
7/8/2000	17	1	685.3	77	12	0	76.7	1
7/8/2000	18	1	684.5	77	13	0	76.7	1
7/8/2000	19	1	684.4	77	13	0	76.8	1
7/8/2000	20	1	684.9	58	12	0	57.8	1
7/8/2000	21	1	649.8	47	47	1	46.8	1
7/8/2000	22	1	538.4	47	159	1	46.8	1
7/8/2000	23	1	384.4	47	313	1	46.7	1
7/8/2000	24	1	263.0	47	434	1	46.8	1
7/9/2000	1	1	280.4	47	417	0	46.8	1
7/9/2000	2	1	244.7	47	452	1	46.9	1
7/9/2000	3	1	218.1	47	479	1	46.8	1
7/9/2000	4	1	287.5	47	410	0	47.0	1
7/9/2000	5	1	304.6	47	393	0	47.1	1
7/9/2000	6	1	305.0	47	392	0	47.0	1
7/9/2000	7	1	253.6	47	443	1	47.0	1
7/9/2000	8	1	271.6	47	426	0	46.9	1
7/9/2000	9	1	373.0	47	324	0	47.1	1
7/9/2000	10	1	545.0	47	152	0	47.0	1
7/9/2000	11	1	664.9	47	32	0	46.8	1
7/9/2000	12	1	690.0	47	7	0	46.7	1
7/9/2000	13	1	659.8	47	37	1	46.7	1
7/9/2000	14	1	636.7	47	60	1	46.6	1
7/9/2000	15	1	636.8	47	60	0	46.5	1
7/9/2000	16	1	636.8	45	60	0	45.0	1
7/9/2000	17	1	636.7	46	60	1	45.8	1
7/9/2000	18	1	637.3	46	60	0	45.9	1
7/9/2000	19	1	636.8	46	60	1	46.4	1
7/9/2000	20	1	636.8	47	60	1	46.7	1
7/9/2000	21	1	633.1	47	64	1	46.9	1
7/9/2000	22	1	652.2	47	45	0	46.6	1
7/9/2000	23	1	432.2	48	265	1	46.8	1
7/9/2000	24	1	315.2	122	382	1	82.2	1
7/10/2000	1	0	252.2	196	445	1	142.9	1
7/10/2000	2	0	122.9	197	574	1	139.2	1

**CONTAINS PROTECTED MATERIAL-
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7/10/2000	3	0	97.8	201	599	1	139.1	1
7/10/2000	4	0	97.6	201	600	1	139.3	1
7/10/2000	5	0	96.2	203	601	1	139.5	1
7/10/2000	6	0	114.2	202	583	0	139.4	1
7/10/2000	7	0	202.9	199	494	0	139.5	1
7/10/2000	8	0	217.6	345	479	0	285.1	1
7/10/2000	9	0	218.3	605	479	0	500.0	1
7/10/2000	10	0	204.0	796	493	1	602.1	1
7/10/2000	11	0	204.3	1061	493	0	853.3	1
7/10/2000	12	0	309.9	1131	387	0	907.6	1
7/10/2000	13	0	671.2	1056	26	0	835.0	1
7/10/2000	14	0	691.7	899	5	0	677.9	1
7/10/2000	15	0	688.9	804	8	0	595.5	1
7/10/2000	16	0	687.1	665	10	0	484.9	1
7/10/2000	17	0	685.9	627	11	0	474.0	1
7/10/2000	18	0	685.9	464	11	0	408.5	1
7/10/2000	19	0	685.7	361	11	0	304.8	1
7/10/2000	20	0	681.2	207	16	0	150.0	1
7/10/2000	21	0	623.9	199	73	1	142.1	1
7/10/2000	22	0	629.3	215	68	0	155.1	0
7/10/2000	23	0	459.1	222	238	1	141.9	0
7/10/2000	24	0	301.7	257	395	1	162.6	0
7/11/2000	1	0	262.0	283	435	1	190.5	0
7/11/2000	2	0	152.0	281	545	1	193.7	0
7/11/2000	3	0	96.5	284	601	1	195.7	0
7/11/2000	4	0	97.7	282	599	0	194.9	0
7/11/2000	5	0	101.7	282	595	0	194.4	0
7/11/2000	6	0	118.5	283	579	0	194.8	0
7/11/2000	7	0	270.8	283	426	0	194.5	0
7/11/2000	8	0	318.3	337	379	0	245.6	0
7/11/2000	9	0	284.6	583	412	1	495.6	0
7/11/2000	10	0	203.9	698	493	1	610.1	0
7/11/2000	11	0	203.9	706	493	0	613.7	0
7/11/2000	12	0	235.5	741	462	0	612.5	0
7/11/2000	13	0	378.9	889	318	0	762.0	0
7/11/2000	14	0	675.9	850	21	0	722.3	0
7/11/2000	15	0	689.5	921	8	0	770.7	0
7/11/2000	16	0	686.5	928	11	0	757.3	0
7/11/2000	17	0	685.6	876	11	0	723.6	0
7/11/2000	18	0	684.5	794	13	0	658.4	0
7/11/2000	19	0	683.8	772	13	0	645.5	0
7/11/2000	20	0	685.0	571	12	0	485.8	0
7/11/2000	21	0	574.0	493	123	1	406.9	0
7/11/2000	22	0	446.6	324	251	1	237.4	0
7/11/2000	23	0	247.5	269	450	1	180.6	0
7/11/2000	24	0	204.3	270	493	1	180.8	0
7/12/2000	1	0	204.4	270	493	0	180.8	0
7/12/2000	2	0	224.3	270	473	0	181.0	0
7/12/2000	3	0	214.8	270	482	1	180.7	0
7/12/2000	4	0	213.7	270	483	1	180.8	0
7/12/2000	5	0	214.0	270	483	0	181.1	0
7/12/2000	6	0	256.3	270	441	0	181.4	0
7/12/2000	7	0	262.5	270	435	0	181.3	0
7/12/2000	8	0	491.7	276	205	0	186.5	0
7/12/2000	9	0	692.6	421	4	0	336.9	0
7/12/2000	10	0	692.2	426	5	0	338.5	0
7/12/2000	11	0	689.4	477	8	0	350.2	0
7/12/2000	12	0	689.0	651	8	0	524.5	0
7/12/2000	13	0	686.4	785	11	0	658.8	0
7/12/2000	14	0	686.8	600	10	0	474.6	0
7/12/2000	15	0	686.6	645	10	0	491.5	0
7/12/2000	16	0	686.0	818	11	0	659.3	0
7/12/2000	17	0	685.7	918	11	0	760.3	0
7/12/2000	18	0	685.9	943	11	0	776.6	0
7/12/2000	19	0	684.9	883	12	0	710.8	0

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7/12/2000	20	0	685.9	827	11	0	671.8	0
7/12/2000	21	0	686.6	499	11	0	421.5	0
7/12/2000	22	0	672.4	418	25	0	340.0	0
7/12/2000	23	0	397.1	270	300	1	186.3	0
7/12/2000	24	0	305.4	274	392	1	186.3	0
7/13/2000	1	0	363.1	275	334	0	186.2	0
7/13/2000	2	0	380.7	277	316	0	186.4	0
7/13/2000	3	0	359.7	278	337	1	186.5	0
7/13/2000	4	0	250.9	274	446	1	186.4	0
7/13/2000	5	0	222.8	273	474	1	186.3	0
7/13/2000	6	0	249.0	272	448	0	186.6	0
7/13/2000	7	0	266.8	271	430	0	186.8	0
7/13/2000	8	0	479.9	276	217	0	192.8	0
7/13/2000	9	0	695.8	507	1	0	423.1	0
7/13/2000	10	0	694.2	706	3	0	611.7	0
7/13/2000	11	0	695.0	774	2	0	663.4	0
7/13/2000	12	0	692.4	943	5	0	766.3	0
7/13/2000	13	0	688.5	1218	9	0	922.8	0
7/13/2000	14	0	686.9	1229	10	0	925.8	0
7/13/2000	15	0	685.8	1254	11	0	924.1	0
7/13/2000	16	0	685.1	1362	12	0	1079.8	0
7/13/2000	17	0	685.0	1337	12	0	1108.9	0
7/13/2000	18	0	627.1	1405	70	1	1123.9	0
7/13/2000	19	0	292.1	1643	405	1	1275.7	0
7/13/2000	20	0	78.0	1363	619	1	1272.6	1
7/13/2000	21	0	0.0	1235	697	0	1171.8	1
7/13/2000	22	0	0.0	912	697	0	848.0	1
7/13/2000	23	0	0.0	817	697	0	751.9	1
7/13/2000	24	0	0.0	815	697	0	754.2	1
7/14/2000	1	0	0.0	723	697	0	665.8	1
7/14/2000	2	0	0.0	529	697	0	472.1	1
7/14/2000	3	0	0.0	398	697	0	341.2	1
7/14/2000	4	0	0.0	390	697	0	333.3	1
7/14/2000	5	0	0.0	391	697	0	332.3	1
7/14/2000	6	0	0.0	436	697	0	377.6	1
7/14/2000	7	0	0.0	393	697	0	334.7	1
7/14/2000	8	0	0.0	663	697	0	598.1	0
7/14/2000	9	0	0.0	778	697	0	656.9	0
7/14/2000	10	0	0.0	792	697	0	656.6	0
7/14/2000	11	0	0.0	970	697	0	806.6	0
7/14/2000	12	0	0.0	1176	697	0	1009.6	0
7/14/2000	13	0	0.0	1307	697	0	1129.3	0
7/14/2000	14	0	0.0	1537	697	0	1289.9	0
7/14/2000	15	0	0.0	1632	697	0	1288.9	0
7/14/2000	16	0	0.0	1637	697	0	1288.7	0
7/14/2000	17	0	0.0	1627	697	0	1280.9	0
7/14/2000	18	0	0.0	1307	697	0	1097.8	0
7/14/2000	19	0	0.0	1166	697	0	962.7	0
7/14/2000	20	0	0.0	1294	697	0	962.9	0
7/14/2000	21	0	0.0	1040	697	0	723.9	0
7/14/2000	22	0	0.0	709	697	0	417.1	0
7/14/2000	23	0	0.0	663	697	0	372.8	0
7/14/2000	24	0	0.0	619	697	0	368.5	0
7/15/2000	1	1	0.0	523	697	0	332.9	0
7/15/2000	2	1	0.0	453	697	0	316.0	0
7/15/2000	3	1	0.0	284	697	0	193.6	0
7/15/2000	4	1	0.0	277	697	0	189.7	0
7/15/2000	5	1	0.0	317	697	0	230.1	0
7/15/2000	6	1	0.0	379	697	0	291.8	0
7/15/2000	7	1	0.0	384	697	0	295.7	0
7/15/2000	8	1	0.0	471	697	0	382.4	0
7/15/2000	9	1	0.0	665	697	0	578.9	0
7/15/2000	10	1	0.0	700	697	0	613.6	0
7/15/2000	11	1	0.0	766	697	0	657.8	0
7/15/2000	12	1	0.0	902	697	0	700.6	0

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7/15/2000	13	1	0.0	884	697	0	685.9	0
7/15/2000	14	1	0.0	929	697	0	686.1	0
7/15/2000	15	1	0.0	927	697	0	684.5	0
7/15/2000	16	1	0.0	925	697	0	682.7	0
7/15/2000	17	1	0.0	926	697	0	685.1	0
7/15/2000	18	1	0.0	880	697	0	665.4	0
7/15/2000	19	1	0.0	795	697	0	649.9	0
7/15/2000	20	1	0.0	776	697	0	631.9	0
7/15/2000	21	1	0.0	791	697	0	647.7	0
7/15/2000	22	1	0.0	713	697	0	569.1	0
7/15/2000	23	1	0.0	634	697	0	489.7	0
7/15/2000	24	1	0.0	499	697	0	365.8	0