

A04-02-026

SDGE-4

**Work Paper in Support
of Testimony
for
Richard Sheaffer**

TESTIMONY OF
RICHARD SHEAFFER
WITH CROSS-REFERENCE
TO WORK PAPERS.

Application of Southern California Edison)
Company (U 338-E) for Authorization:)
(1) to replace San Onofre Nuclear)
(SONGS 2 & 3) steam generators; (2))
establish ratemaking for cost recovery; and)
(3) address other related steam generator)
replacement issues.)
_____)

Application No. 04-02-026
Exhibit No. __ (SDG&E-2)
Witness: Richard Sheaffer

**PREPARED DIRECT TESTIMONY
OF RICHARD SHEAFFER
ON BEHALF OF SAN DIEGO GAS & ELECTRIC COMPANY**

**BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA**

DECEMBER 13, 2004

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1 **PREPARED DIRECT TESTIMONY**
2 **OF RICHARD A. SHEAFFER**
3 **ON BEHALF OF SAN DIEGO GAS & ELECTRIC COMPANY**
4

5 **I. INTRODUCTION**

6 The purpose of this testimony is to demonstrate that the decision of Southern
7 California Edison Company ("SCE") to undertake a non-collaborative technical study
8 process resulted in numerous material inaccurate modeling assumptions. These incorrect
9 assumptions critically impeach any credibility in SCE's technical study conclusions. I
10 describe why the need for a new 500 kV transmission line within the San Diego Gas &
11 Electric Company ("SDG&E") service territory is needed regardless whether San Onofre
12 Nuclear Generating Station ("SONGS") continues to operate or is shut down. I explain
13 why SCE's system separation scenario used to justify and allocate cost responsibility
14 incorrectly ignores NERC fundamental principles of system interconnection and
15 therefore should be disregarded. My testimony contains a discussion of the results of
16 SDG&E's studies that were derivative from the joint studies abandoned by SCE. Based
17 on SDG&E's studies, I explain why there would be significant cost savings for SCE and
18 SDG&E ratepayers as compared to SCE's study conclusions.

19 **II. SCE'S STUDY PROCESS WAS UNNECESSARILY A NON-**
20 **COLLABORATIVE EFFORT**

21 SCE and SDG&E (the "Companies") began a joint planning study by mutual
22 agreement between the Transmission Planning Departments of the Companies in the
23 second quarter of 2003 to evaluate possible transmission mitigation alternatives if
24 SONGS Units 2 & 3 were shut down in 2010. Such a shutdown is an alternative that

1 could possibly occur (in that year or some other year) in place of the steam generator
2 replacement project ("SGRP") proposed by SCE.

3 From the time the joint study plan was developed in May, 2003, until SCE filed
4 its application to commence this proceeding, SCE led SDG&E to believe that there
5 existed between the Companies a spirit of cooperation. The Companies' lead technical
6 engineers were exchanging data assumptions, jointly reviewing base cases and held
7 several meetings to review the progress of the study. At the December 2, 2003 joint
8 study meeting, SDG&E challenged certain study assumptions that SCE had assumed in
9 that joint study, such as SDG&E load and schedules on the East-of-the-River path.
10 SDG&E was surprised to see SCE's application it filed in this proceeding, because SCE
11 apparently had been performing its own studies while at the same time continuing the
12 appearance of a joint study process with SDG&E. SCE's study used assumptions that
13 were not mutually-agreed upon. SCE's study obviously did not contain mutually-agreed
14 upon conclusions. In hindsight, SCE's appearance of a willingness to complete a joint
15 study with SDG&E was a charade that continued past SCE's filing of its application in
16 this proceeding, and study assumptions to be used in the joint study (which was
17 eventually abandoned) were never resolved and mutually-agreed.

18 **III. SCE'S TRANSMISSION ALTERNATIVES AND ASSOCIATED COSTS**
19 **STUDY RESULTS ARE INVALID DUE TO EXTENSIVE MODELING**
20 **ERRORS**

21 Exhibit SCE-5 contains SCE's Transmission Alternatives And Associated Costs
22 Study results. The results from this study, based on inaccurate system modeling and
23 invalid input assumptions, are not credible. Some of these erroneous conclusions are
24 being used as the critical justifications for the SGRP and must accordingly be
25 disregarded. The significance of each of these errors is discussed below.

1 **A. SCE Inappropriately Considers The Addition Of A New 500 kV**
2 **Transmission Line As A Mitigation Alternative**

3 SCE's transmission study developed five base cases, derived from one 2010
4 Heavy Summer case. One case illustrated a "Base Case" scenario with SONGS Units 2
5 and 3 remaining in service ("SONGS On"). Another case was run to illustrate the impact
6 of removing SONGS Units 2 and 3 without mitigation ("SONGS Off"). Three other
7 cases illustrated mitigations for the absence of SONGS if the SGR were not to proceed
8 and SONGS Units 2 and 3 were assumed to shut down in 2010. Specifically, these cases
9 were:

- 10 • "SONGS On" Case;
- 11 • "SONGS Off" Case ("Off" meaning that SONGS Units 2
12 and 3 were removed from the case as if permanently out-of-
13 service);
- 14 • "SONGS Off with No New SDG&E 500 kV Line" Case;
- 15 • "SONGS Off with Imperial Valley – Ramona 500 kV
16 Line" Case; and
- 17 • "SONGS Off with Rainbow - Valley 500 kV Line" Case.
18
19

20 Although SCE did assume that a new Palo Verde – Devers #2 500 kV Line would
21 be added to its own system by 2010 (thus its cost would not be included as an "absence of
22 SONGS" mitigation), SCE assumed in all of its cases that there would not already be a
23 new 500 kV line into the SDG&E system. This assumption is critically mistaken. Based
24 on current planning assumptions, as reflected in SDG&E's long term resource plan filed
25 with this Commission, and ongoing discussions with the Southwest Transmission
26 Expansion Plan ("STEP") group, SDG&E will face a grid reliability deficiency beginning
27 in 2010. A new 500 kV transmission line is SDG&E's proposed means by which it will

1 meet this grid reliability deficiency.¹ Therefore, SCE's assumption that a new 500 kV
2 line to SDG&E (and the associated cost) is a mitigation alternative if SONGS were to be
3 shut down is incorrect and not relevant to the SGRP analysis. Therefore, SCE should
4 have assumed a new 500 kV line was constructed as a starting point of its cases, rather
5 than including it (or additional voltage support in the case of the "No New SDG&E 500
6 kV Line"), and the associated costs, as a mitigation for the absence of the SONGS Units.

7 **B. SCE's Modeling of the Otay Mesa Generator Interconnection**
8 **Inaccurately Adds Additional Congestion at the Miguel Substation**

9 Another critical assumption made in SCE's Transmission Alternatives And
10 Associated Costs Study involved its modeling of the new Otay Mesa generation
11 interconnection. SCE assumed the interconnection would be as shown in Figure 1-1.
12 These assumptions are incorrect. The proper interconnection² is shown in Figure 1-2.
13 The correct interconnection was designed to bypass the Miguel bottleneck and to
14 strengthen the SDG&E system significantly. The interconnection modeled in SCE's
15 filing incorrectly simulated much more stress into the Miguel bottleneck than what is
16 proposed.

17
18

¹ For example, please refer to the July 9, 2004 testimony of Linda P. Brown in R.04-04-003, page 14 regarding "Adoption of 500 kV Transmission Expansion is a Key Element of SDG&E's Long-Term Resource Plan". Please also refer to the Dec. 26, 2003 draft "Southwest Transmission Expansion Plan 2003 Report", pages 45-48, the October 17, 2003 "Imperial Valley San Diego Expansion Plan (ISEP) Study" and many STEP group documents at <http://www.caiso.com/docs/2002/11/04/2002110417450022131.html>.

² Direct Testimony of David M. Korinek in Order Instituting Rulemaking to establish Policies and Cost Recovery Mechanisms for Generation Procurement and Renewable Resource Development, R.01-10-024, dated October 7, 2003.

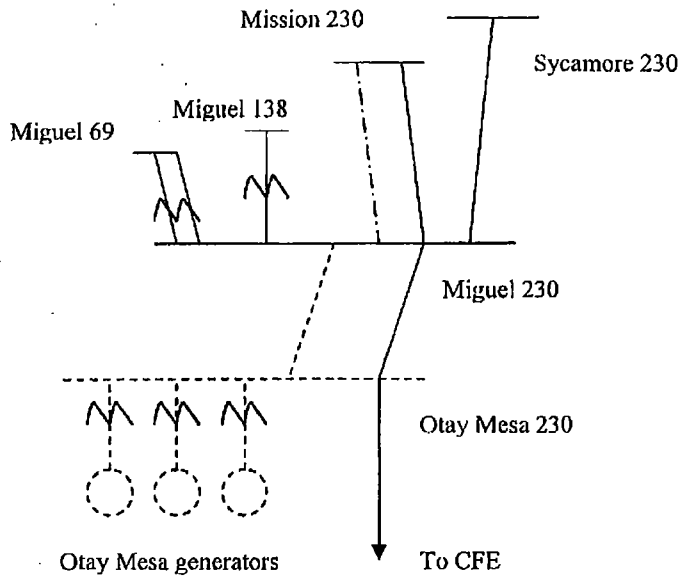


Figure 1-1: Incorrect Otay Mesa Interconnection Represented in SCE Filing Cases

1

2

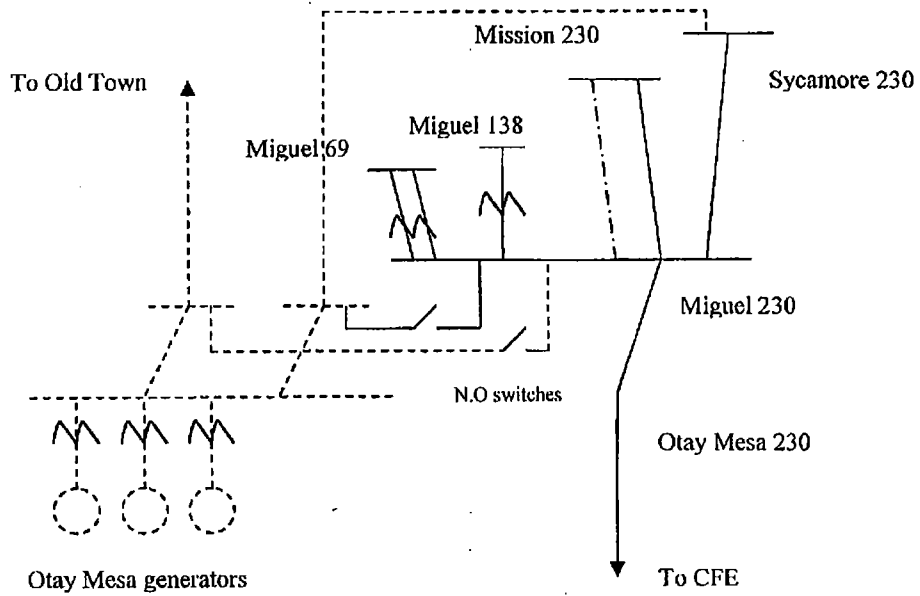


Figure 1-2: Correct Otay Mesa Interconnection Cases

3

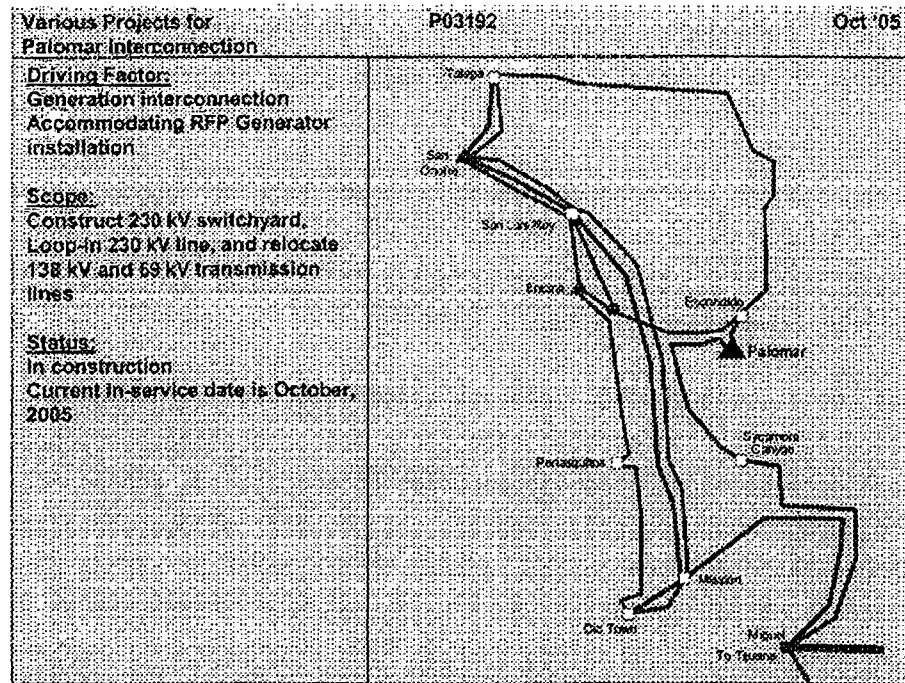
1 **C. SCE's Modeling of the Palomar Generation Interconnection Results in**
2 **Erroneous Conclusions**

3 Another critical assumption made in SCE's Transmission Alternatives And
4 Associated Costs Study involved its modeling of the Palomar generation and associated
5 interconnection. SCE used these incorrect assumptions in the study cases it utilized in
6 Exhibit SCE-5. In the SCE "SONGS On" case, the Palomar generation was not shown as
7 running. In the other four SCE cases, the 551 MW (and corresponding reactive flow up
8 to 306 MVAR) of Palomar generation was directly tied into the Escondido 230 bus as
9 one large unit. Such a simplifying representation was undoubtedly easier for modeling
10 purposes, but incorrectly placed the Palomar generation output onto SDG&E's existing
11 230/138/69 kV system. As a result, this model results in unrealistic power flows and
12 other system stresses within SDG&E's system that would lead to substantially erroneous
13 conclusions.

14 The correct representation for the Palomar generation and associated
15 interconnection is to accurately represent the Palomar power plant as three distinct units
16 (two Combustion Turbines or "CTs" and one Steam unit). Further, the units are to be
17 connected to a Palomar 230 kV bus that has the existing Escondido – Sycamore 230 kV
18 line looped into it (presently planned by October 2005), shown below in Figure 2-1.³
19 Additionally, the nearby 138 kV system needs to be modeled as being reinforced as well
20 for reliability reasons in preventing overloads (presently planned by June 2006), as
21 shown below in Figure 2-2. The following diagram represents these planned system
22 additions, including a new transformer at Sycamore Canyon Substation, which are not

³ Direct Testimony of David M. Korinek in Order Instituting Rulemaking to establish Policies and Cost Recovery Mechanisms for Generation Procurement and Renewable Resource Development, R.01-10-024, dated October 7, 2003.

1 represented properly in SCE's cases. SCE's incorrect modeling in this area also
2 contributed to showing what appears to be "absence of SONGS" stresses, which in fact
3 are not due to the absence of SONGS but rather due to failing to show system additions
4 and changes that SDG&E plans to make irregardless of the status of the SONGS units.



5
6

Figure 2-1

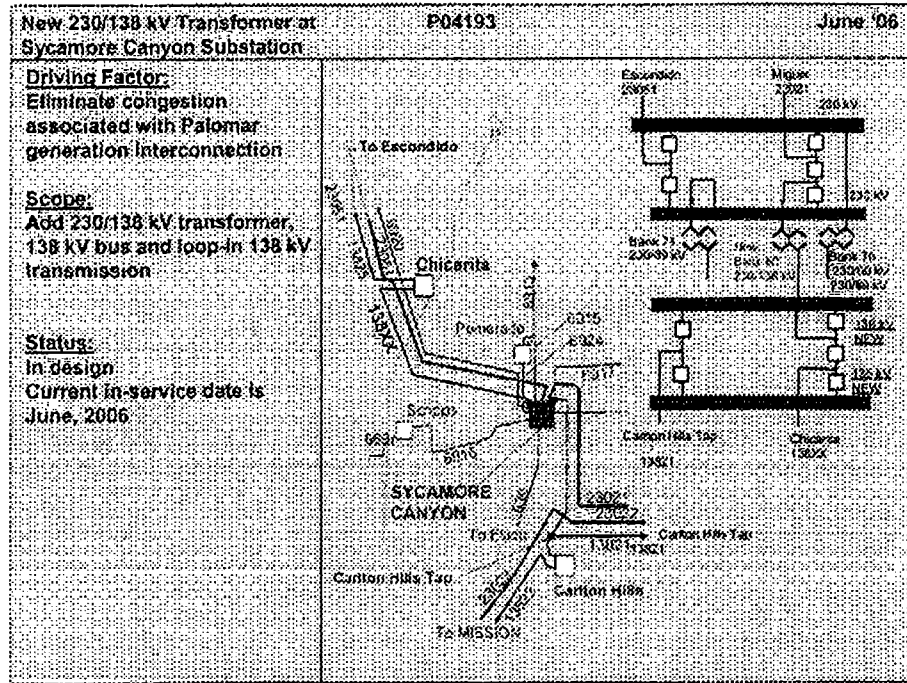


Figure 2-2

D. SCE Incorrectly Adds Excessive Load to SDG&E's Model

For the year 2010, SDG&E's projected load and loss is 4924 MW, as in the Long Term Resource Plan filed with the CPUC. SCE contends in its Exhibit SCE-5 is that "San Diego Gas & Electric Company's (SDG&E) Transmission Planning department provided information that SCE used to model SDG&E's transmission system in future year 2010". Not only does this not make reference to the fact that this information was obtained for purported joint study purposes, but also infers that SDG&E agrees with the way that SCE used this data, which SDG&E does not. SCE's Transmission Alternatives And Associated Costs Study incorrectly added losses again to this load number, thus double-counting the losses and representing SDG&E's load and loss quantity to be 5044 MW. This additional 120 MW, which essentially acts as 120 MW of load above and beyond what is expected in SDG&E's area, unrealistically stresses SDG&E's system,

SEE RS TAB 1 FOR WORKPAPERS REGARDING LOAD ASSUMPTION.

1 mistakenly giving the appearance that certain mitigations are needed, when in fact those
2 mitigations are not needed. Therefore, the conclusions pertaining to this aspect of SCE's
3 study are not accurate or credible.

4 **E. SCE's Inaccurate Modeling of Voltage Control Devices Results in Excess**
5 **Need for Voltage Support**

6 All five cases used in SCE's Transmission Alternatives And Associated Costs
7 Study modeled Heavy Summer peak load and high Southwest Powerlink ("SWPL") flow.
8 Based on those conditions, SCE incorrectly modeled many voltage control devices as
9 being on-line when in fact they should have been off. These types of devices are needed
10 for light loading conditions, when the MVAR "charging" of long transmission lines
11 causes voltage to rise excessively. Conversely, for heavy loading conditions (such as
12 those modeled in SCE's and SDG&E's studies), these types of devices need to be
13 removed to avoid degrading the voltage. Specifically, these included:

- 14 • two 114 MVAR line reactors on the Hassayampa (Palo Verde area) – North Gila 500 kV Line;
- 15
- 16
- 17 • one 114 MVAR line reactor at the Imperial Valley side of the North Gila – Imperial Valley 500 kV Line; and
- 18
- 19
- 20 • one of the Miguel 45 MVAR tertiary shunt reactors.
- 21

22 These reactors are used to regulate the voltage at these substations, and the
23 simulation of these reactors on-line, when in fact they should be off, artificially creates
24 the apparent, erroneous "need" for additional Static VAR Compensators ("SVCs"). The
25 same type of erroneous assumptions also occurred in regard to the line reactors at both
26 ends of the existing Palo Verde – Devers 500 kV Line. Separate from other data errors
27 pointed out by SDG&E, the reactor errors described here alone account for about 640
28 MVAR of excessive need for SVCs seen in SCE's transmission study.

SEE RS TAB 2 FOR WORKPAPERS
REGARDING REACTOR (VOLTAGE CONTROL DEVICE)
MODELING.
RS - 9

1 **F. SCE's modeling assumptions on major path flow schedules result in**
2 **unreasonable mitigation costs**

3 As described in detail below, all of the base cases used in SCE's analysis assumed
4 unreasonable path flows on major paths, such as the East of River ("EOR"), West of
5 River ("WOR"), and SCIT ("Southern California Import Transmission") paths. Such
6 unreasonable dispatches greatly damage the credibility of SCE's study results.
7 Additionally, as SCE advised SDG&E in its data request response (Data Request Set
8 SDG&E-SCE-01, Question 038), SCE did not perform any reactive resource
9 optimization, which omission forces even more mitigation requirements. SCE
10 characterized such study as "premature", yet has submitted quantitative results in its
11 filing upon which it expects the Commission to act. Such studies, if and when
12 performed, would likely have the effect of reducing the amount of reactive support
13 actually seen to be needed, thus reduce the cost-effectiveness that SCE has presented in
14 this case.

15 In all of SCE's cases, SCE modeled the EOR power flow to unreasonably high
16 levels, while having very low flows on all other parallel paths into Southern California.
17 At the December 2, 2003 joint study meeting between SCE and SDG&E, SDG&E
18 strongly opposed unreasonable path flow schedules on the East-of-the-River (EOR)
19 path.⁴ Such artificial stressing of one path among many paths in parallel is generally
20 modeled only in a "non-simultaneous path rating study". To help understand the
21 extremity of such dispatches, SDG&E collected data for Heavy Summer cases developed
22 in past two years from both the California Independent System Operator Corporation
23 ("CAISO") and WECC for the years 2004 through 2014. The average flows of paths into

⁴ SDG&E also challenged SCE on various assumptions at that December 2 meeting, but apparently SCE pursued studies irrespective of SDG&E's attempted corrections to those assumptions.

1 Southern California are listed next to two of SCE cases for comparison. These values are
 2 representative of those seen in SCE's cases.

3
 4 **Table 1: Major Path Flow Compared**
 5 **to Average of Available Peak Summer Cases**
 6

Path Name	Path Rating	SCE "SONGS On" Case	SCE "SONGS Off with No New SDG&E 500 kV Line" Cases	Typical number in WECC operating cases
Midway-Vincent *	3400 ⁵	1210	1759	2546
IPPDC *	1920	1536	1536	1726
North of Lugo *	1200	1461	1462	North of Lugo flow is not generally one of the paths monitored in most WECC cases
West of River *	10118	8689	9402	5893
PDCI *	3100	1054	1053	2196
SCIT	NS: 18886 S: 15200	13908	15153	13561
East of River ⁶	7550	7550	8263	4475
SCIT+EOR		21458	23413	18036

7
 8 * The sum of the power flows on these five paths is considered in the Southern California
 9 Import Transmission (SCIT) nomogram.

SEE RS TAB 3 FOR WORKPAPERS
 REGARDING DETERMINATION OF
 TYPICAL FLOW NUMBERS

⁵ The 3400 MW Midway-Vincent rating is the present rating, but may be increased in the future depending on the schedule of future upgrades.

⁶ The EOR Path Rating Increase from 7055 MW to 8055 MW, based on short-term upgrades, is currently in Phase II of the WECC Study Process. An additional increase to 9000 MW, following addition of the proposed Palo Verde - Devers #2 500 kV Line, is also currently in the Phase II Review Process.

1 It is very clear from Table 1 that for the summer peak conditions studied, SCE's
2 cases had modeled the East-of-the-River ("EOR") and West-of-the-River ("WOR") flows
3 at very extreme levels. Such flow assumptions are inappropriate for a study that was
4 purportedly designed to seek reasonable means of maintaining reliability and of serving
5 load if SONGS Units 2 & 3 are shut down, rather than for the purpose of determining a
6 maximum rating of a particular transmission path.

7 SCE also assumed the Midway - Vincent power flow from Northern California,
8 the Pacific DC Intertie ("PDCI") power flow from the Northwest and the Intermountain
9 Power Project DC ("IPPDC") power flow from State of Utah area were much lower than
10 average heavy summer cases. Such unreasonable dispatches once again demonstrates
11 that SCE's study is not credible and its conclusions and remedial proposals cannot be
12 trusted.

13 In response to SCE's unrealistic path flow assumptions, SDG&E took SCE's
14 "SONGS Off with No New SDG&E 500 kV Line" case, reduced 1000 MW of flow off
15 the EOR system (and therefore a similar amount off the WOR system) and increased the
16 PDCI flow by 1000 MW. SDG&E made no other changes to this SCE case. SDG&E's
17 simulation resulted in an EOR flow at 7370 MW, WOR flow at 8472 MW, and PDCI
18 flow at 1931 MW. Though reduced, the EOR and WOR flows are still at relatively high
19 levels of the typical operating range and PDCI is at the low end of the typical operating
20 range.

21 In contrast to SCE, this single re-dispatch assumption to replicate reasonable
22 system path flows made very significant changes in the results and substantially lowered
23 the cost of mitigating the problems seen in the "SONGS Off with No New SDG&E 500

1 kV Line” case. The needed SVC for the 500 kV system could be reduced by 600
2 MVAR. Another 700 MVAR of proposed SVC could be moved to 230 kV level.
3 However, SCE and SDG&E did not undertake reactive resource optimization (as should
4 be performed in a more detailed study). Had this optimization been undertaken, the SVC
5 requirements would be further reduced. Significantly, all of the NERC, WECC and
6 CAISO planning standards were met in SDG&E’s studies, yet SDG&E’s studies show far
7 lower SVC requirements than SCE’s studies.

SEE RS TAB 4 FOR
WORKPAPERS REGARDING
SVC CORRECTIONS.

8 Unlike SCE, SDG&E further made another reasonable assumption concerning the
9 path flow for SCE’s Imperial Valley - Ramona 500kV Line case (the “ivrma” case).
10 Similar to SCE’s representation of the second Palo Verde – Devers 500 kV Line as being
11 in-service, it is appropriate to model the Imperial Valley – Ramona 500 kV Line (or other
12 alternative 500 kV Line) as being in service as needed for the SDG&E system regardless
13 whether SONGS Units 2 & 3 continue to operate or are shut down. The use of the
14 previously-discussed assumptions that reflects a typical operating range of major path
15 flows, as well as modeling a new 500 kV Line to SDG&E, significantly reduced the need
16 for SVCs. For the “ivrma” case, SDG&E undertook a study in which the EOR flow was
17 reduced by 1200 MW and, therefore, the WOR flow was reduced a like amount. SDG&E
18 also assumed that the PDCI flow was increased by 1200 MW. As a result, the “ivrma”
19 case had an EOR flow at 7077 MW, WOR flow at 8250 MW and PDCI flow at 2242
20 MW. Once again, EOR and WOR flows are still at relatively high levels of the typical
21 operating range and PDCI is at the low end of the typical operating range.

22 Unlike SCE, this re-dispatch to reasonable system path flow levels made very
23 significant changes in the results and substantially lowered the cost of mitigating the case

1 results. The study results reflect that from the 1374 MVAR of proposed SVC
2 requirement, the needed SVC for the 500 kV system could be reduced by 776 MVAR.
3 The remaining of 598 MVAR of needed SVC installation can be installed at the 230 kV
4 level. However, SCE and SDG&E did not undertake reactive resource optimization for
5 this case, like the previous case described above. Again, had this optimization been
6 undertaken (as should be done in a more detailed study), the SVC requirements would be
7 further reduced. Significantly, all of the NERC, WECC and CAISO planning standards
8 were met in SDG&E's studies, yet SDG&E's studies show far lower SVC requirements
9 than SCE's studies.

10 **G. SDG&E's Validation Analysis Finds Flaws in SCE's Recommended** 11 **Mitigation Proposals**

12 SDG&E's validation analysis took all of SCE's cases "as is" and conducted
13 necessary thermal screening, post transient analysis and transient stability analysis.⁷ The
14 results of this further study reflect that with all of the transmission mitigation proposed by
15 SCE, there are still various Post Transient overloads. Thus, this indicates that SCE's
16 studies are not complete and further study, or further mitigation, may be needed beyond
17 what has been presented by SCE.

18 SCE proposed to remedy the Barre - Ellis 230 kV line overloading in its "No New
19 SDG&E 500 kV Line" case. However, in the same case, SCE's Lugo - Serrano 500 kV
20 and Vista - San Bernardino 230 kV Lines were also overloaded, and there seemed to be
21 no mitigation proposed by SCE in its studies. SCE appears to be "cherry-picking" its
22 study results. Regardless, this further undermines the credibility of SCE's study

⁷ Note that SCE uses the term "Dynamic Stability" to describe studies of system oscillations from 0 to 10 seconds after a system disturbance, whereas SDG&E generally uses the term "Transient Stability" to describe such studies.

1 conclusions. Specifically, by SCE's effort to perform and analyze studies in a manner
2 that seems to minimize facilities required by SCE for the "absence of SONGS" scenario,
3 while maximizing facilities required by SDG&E, the resultant cost-sharing ratio is
4 erroneously tilted in SCE's favor.

5 It is well known under the reliability criteria that generator tripping and load
6 dropping are permissible for N-2 contingencies (such as the WECC Category C outage
7 criteria), which would include the double-line outage of the Palo Verde – Devers 500 kV
8 Lines. Such remedial actions were simulated by SCE under the SCE "SONGS Off with
9 No New SDG&E 500 kV Line" case. For that case, tripping 908 MW of generation and
10 780 MW of load, along with other Remedial Action Scheme (RAS) elements, did not
11 mitigate post transient voltage drop violations in the Devers area. Furthermore, the
12 Hassayampa – North Gila and North Gila – Imperial Valley segments of the SWPL were
13 seen to be loading in the study results over the newly-proposed 2200 Ampere rating that
14 is planned by the Path 49 (EOR) short-term upgrade. Maintaining the tripping of 908
15 MW of generation while increasing the amount of load dropping from 780 MW to 1219
16 MW, eliminated the post transient voltage drop violations. That change slightly reduced,
17 but did not eliminate, the SWPL overload. In addition, transient voltage dip criteria
18 violation existed in all of SCE's cases with proposed mitigations. Again, this further
19 impeaches the credibility of the study and conclusions drawn from it.

20 **IV. SYSTEM SEPARATION IS NOT AN ACCEPTABLE ALTERNATIVE TO**
21 **ALLOCATE MITIGATION COST**

22 SDG&E does not agree that system separation is an adequate alternative to deal
23 with transmission contingencies or for the purpose of allocating cost responsibility. Such
24 a scenario assumes that the SCE and SDG&E systems are interconnected under normal

1 operation before contingency. At the moment of contingency, all five 230 kV lines
2 connecting SDG&E to SCE system through SONGS are assumed to be tripped or opened.

3 Tripping off the five lines is not part of any valid Remedial Action Scheme
4 (“RAS”), as it is against NERC interconnection principles and would worsen the system
5 performance under an emergency situation.

6 SDG&E studied the two contingencies listed below.

- 7 • Double Palo Verde – Devers 500 kV Line outage
- 8 • Imperial Valley - Miguel 500 kV Line outage

9
10 Along with the tripping of the five 230 kV lines, both contingencies become
11 WECC/NERC Category D contingencies. This means that these contingencies would
12 constitute an “[e]xtreme event resulting in two or more (multiple) elements removed or
13 cascading out of service.” Accepted WECC study practices recognize that this “[m]ay
14 involve substantial loss of customer demand and generation in a widespread area or
15 areas” and “[e]valuation of these events may require joint studies with neighboring
16 systems.”⁸ For these reasons, SDG&E does not support such a severe and unilateral
17 approach by SCE in using such a scenario as its rationale for cost sharing.

18 Using a system separation scenario to justify and allocate cost responsibility may
19 be unique, but it ignores NERC fundamental principles of system interconnection.
20 However, since SCE pursued this course of study, SDG&E performed a sensitivity
21 analysis of such a system separation to verify how correction of the system assumptions,
22 as I have earlier described, changes the study results significantly.

23 With both a new SDG&E 500 kV Line and a second Devers - Palo Verde 500 kV
24 Line assumed for 2010, and after making the above-mentioned assumption corrections,

⁸ April 2004 Western Electricity Coordinating Council “Reliability Criteria”, page 25.

1 the following table summarizes SDG&E's analysis results. These results do not
 2 acknowledge any legitimacy of assuming that a theoretical system separation is a valid
 3 rationale for cost allocation. They are merely presented to show that even if pursuing
 4 SCE's rationale, the quantitative results are very different from SCE's results when using
 5 corrected study assumptions.

6 **Table 2: Corrected MVAR Requirements for System Separation Scenario**
 7

Contingency	IV-ML + South of SONGS	2 DPV + South of SONGS
SCE load drop	None	2764 MW
SCE additional SVC required	300MVAR@500kV 400MVAR@230kV	300MVAR@500kV 400MVAR@230kV
SDG&E load drop	333MW	None
SDG&E additional SVC required	200MVAR@230kV	200MVAR@230kV

8•
 9 The following study assumptions were used in creating Table 2;

- 10•
- 11 • A 388/-300 MVAR SVC at Devers 500 kV and a 388/-300
- 12 MVAR SVC at Valley 500 kV are part of the second Palo
- 13 Verde – Devers 500 kV Line project.
- 14 • A 200/-100 SVC at Imperial Valley 230 kV and a 100/-100
- 15 SVC at Ramona 230 kV are part of the Imperial Valley -
- 16 Ramona 500 kV line project.
- 17 • The Talega 138 kV bus has an existing 100/-100 MVAR
- 18 STATCOM (a new- generation type of SVC)
- 19 • SVCs reported in the above table are mitigation needed in
- 20 addition to the above- mentioned assumed projects (the
- 21 second Palo Verde – Devers 500 kV Line and the Imperial
- 22 Valley – Ramona 500 kV Line projects).

23
 24 Based on the above assessment, the ratio of SVCs required for the SCE system as
 25 compared to the SDG&E system is in a 700:200 ratio (3.50:1), not a 600:2520 (0.24:1)
 26 ratio as shown in SCE's Filing.
 27

1 V. SCE'S "WALK AWAY AND PAY NOTHING" THEORY DOES NOT
2 HAVE TECHNICAL MERIT

3 SDG&E's position was characterized by SCE at the April 15, 2004 Prehearing
4 Conference (page 54 of the transcript) as "... their plan is they walk away, pay nothing
5 and still get substantial voltage support ... from the project." SCE's claim is utterly
6 without merit, as shown by technical studies that demonstrate that SDG&E is not getting
7 any implied "free ride" from SONGS or from SCE. To the contrary, study results
8 indicate that it is SCE and not SDG&E that benefits from SONGS voltage support more
9 than its Ownership Share. For example, examination of SCE's own "SONGS On" base
10 case power flow indicates that of the 323 MVAR output from the SONGS units
11 (reflecting reactive power which provides voltage support), 308 MVAR flow to SCE and
12 15 MVAR flow to SDG&E: a 95.4% / 4.6% ratio. Thus, SCE's own case shows that

13 SDG&E receives far less voltage support (MVARs) than their ownership share would
14 represent.

*SEE RS TAB 5 FOR SDG&E/SCE
MVAR FLOWS AT SONGS FOR STUDY CASES.*

15 For the "SONGS Off" cases, I cannot examine such MVAR splitting, since the
16 SONGS units are modeled as being absent. For those cases, I examined the MVAR flow
17 occurring at the SONGS 230 kV bus interconnection between SCE and SDG&E.
18 Depending on which SCE case we examine, I see the range of 204 MVAR flowing from
19 SDG&E to SCE for the SONGS Off base case (no mitigation) to 277 MVAR flowing
20 from SDG&E to SCE for the SONGS Off base case in which SCE assumed that no new
21 500 kV line would be built to the SDG&E system and all mitigation was in the form of
22 voltage support measures. In SDG&E's "SONGS Off" case that reflects the modeling
23 corrections described above and a new 500 kV line being added to SDG&E's system that
24 is part of SDG&E's transmission plan regardless of the presence or absence of SONGS

1 Units 2 & 3, there exist 130 MVAR that flow from SDG&E to SCE at the SONGS
2 interconnection.

3 All of these case scenarios undertaken by SCE and SDG&E indicate that
4 SDG&E's system is providing voltage support to the SCE system. Thus, it is SCE that
5 benefits from voltage support from SDG&E, with or without the presence of the SONGS
6 units, not the other way around as SCE incorrectly would lead us to believe.

7 These conclusions are confirmed by examining historical real-time data
8 recordings as opposed to study results of future scenarios. For example, both SONGS
9 Units 2 and 3 were recently off-line in the November 19 to November 23, 2004 period.
10 At that time, Unit 3 was down for refueling and other repairs, when Unit 2 tripped off-
11 line. Real-time data of the MVAR flow from SDG&E's five 230 kV lines to the SONGS
12 230 kV bus during that period indicate that an average of 73 MVAR were flowing from
13 SDG&E's system to SCE's system, again illustrating the voltage support that SDG&E
14 was providing to SCE (via the SONGS 230 kV bus) during that period. In yet another
15 example, the hourly recorded data was examined for the second half of the previous year,
16 2003. In that data, I see an average of 77.7 MVAR flowing from the SDG&E system to
17 the SONGS 230 kV bus (the SONGS interconnection with SCE). At the same time, the
18 recorded data shows that the average MVAR output of Unit 2 was 16.1 MVAR and the
19 MVAR output of Unit 3 was 16.7 MVAR, a total of 32.8 MVAR. Therefore, I conclude
20 that on average for that data period, 100% of the MVAR output of the SONGS units
21 flowed to the SCE system (to support the SCE system voltage). While on average
22 SDG&E received none of those SONGS-produced MVARs to support its own system
23 voltage, the SDG&E system actually sent an additional 44.9 MVARs of voltage support

SEE
RS
TAB 6
FOR
MVAR
FLOWS
DURING
RECENT
2-UNIT
OUTAGE.

SEE
RS
TAB 7
FOR
MVAR
FLOWS
DURING
2003.

1 to SCE's system to create the average total 77.7 MVAR flow seen in that historic data.
2 Again, these data show that it is SCE that receives voltage support from SONGS and
3 from SDG&E, not the other way around.⁹

4 **VI. SUMMARY**

5 Regrettably, SCE chose to pursue a "parallel path" study process -- performing a
6 joint study with SDG&E and at the same time pursuing studies unknown to SDG&E. In
7 reviewing SCE's study results, I find many flaws in the study assumptions and the
8 resulting conclusions. Therefore, SCE's transmission study should not be relied on as
9 accurately portraying the transmission grid facilities required for the scenarios presented
10 by SCE and its study results should be discarded.

11 The attached summary indicates the differences between the five SCE cases, and
12 shows one SDG&E case for comparison. SDG&E's case includes, for comparison
13 purposes, the Imperial Valley – Ramona 500 kV Line, regardless of the presence or
14 absence of SONGS Units 2 and 3. SDG&E's case includes the many study corrections
15 discussed herein. Accordingly, the net amount of SVCs required because of the absence
16 of SONGS are reduced from SCE's figure of 1374 MVAR down to a corrected level of
17 598 MVAR, representing a significant cost savings for SCE and SDG&E ratepayers as
18 compared to SCE's study conclusions.

19 SCE's cost-sharing methodology for transmission grid mitigations, based on a
20 system separation scenario that would not withstand scrutiny under established reliability
21 standards, should also be rejected as being without foundation or precedent. However,

⁹ SDG&E's historical data referenced here does have some data points that represent bad data or no data for a given hour. Most of the data recorded in the first half of 2003, at least until May 2, was recorded as 0. For that reason, the data given here is only for the second half of 2003. Although the data for the second half of 2003 still has some occasional 0 data for certain hours, these should have no significant impact on the concepts presented here.

1 even if that methodology were to be accepted over SDG&E's objection, SDG&E's study
2 results to date indicate that the SCE / SDG&E cost-sharing ratio for SVC costs (voltage
3 support mitigation) should be corrected from the 0.24:1 ratio proposed by SCE to a
4 corrected 3.50:1 ratio. This corrected ratio could change based on future updated and
5 optimized studies, and any such studies should be jointly performed and agreed-to by
6 SCE and SDG&E. Any possible suggestion that SDG&E is benefiting, or may possibly
7 benefit in the future, from a "pay nothing and receive free voltage support" philosophy
8 should be soundly rejected based on the technical study results of both SCE and SDG&E,
9 which indicate that the opposite is true for all the study scenarios examined.

10 To conclude, I am drawn to page 35 of SCE's Exhibit SCE-5, where it claims that
11 "SDG&E ratepayers receive more benefits from SONGS 2 & 3 continued operation
12 based on the cost responsibility for transmission upgrades required to mitigate SONGS 2
13 & 3 shutdown. These transmission upgrades required to mitigate SONGS 2 & 3
14 shutdown benefit SDG&E ratepayers more than SCE ratepayers because SDG&E is a
15 relatively higher beneficiary from the availability of SONGS 2 & 3 to the electrical grid."
16 These are words that do not remotely resemble any words I have ever seen or heard in
17 previous "absence of SONGS" studies that have withstood the scrutiny of the
18 collaborative process. In my professional opinion, based on the facts I have
19 demonstrated in this testimony, SCE's statements are completely without merit and
20 appear to be merely an attempt to show mitigation costs for the absence of SONGS
21 scenario that are far too high, then shift cost responsibility unjustifiably to SDG&E
22 ratepayers.

SEE
RS
TABS
8, 9 & 10
FOR
PREVIOUS
"ABSENCE
OF SONGS"
STUDIES.

1 It is simply inappropriate to rely on studies that SCE has performed independently
2 in this matter. Such studies are of such great importance, and of significance to many
3 parties, that they should be performed on a joint, collaborative process as in the past.
4 Thus, SCE's studies should be discarded, and, if needed, SCE should be directed to
5 perform updated studies collaboratively with at least SDG&E, and preferably with the
6 CAISO and Interested Stakeholders, to the extent that such study results are needed to be
7 relied on by the Commission in making a decision in this matter.

8 **VII. QUALIFICATIONS**

9 My name is Richard A. Sheaffer. My business address is San Diego Gas &
10 Electric Company, 8316 Century Park Court, CP52A, San Diego, CA 92123. I am
11 presently employed by San Diego Gas & Electric Company (SDG&E) as Principal
12 Engineer in the Electric Transmission Planning Section.

13 I graduated with a Bachelor of Science degree in Electrical Engineering (BSEE)
14 from The Pennsylvania State University (Penn State) in 1972. I later received a Master
15 of Science degree in Electrical Engineering (MSEE) from the University of Southern
16 California (USC) in 1975. I further received a Master of Business Administration (MBA)
17 degree, with a management focus, from Pepperdine University in 1996. I am also a
18 registered Professional Engineer (in the Electrical Branch) in the State of California (No.
19 E8877) and in the State of Florida (No. PE-0030014).

20 With respect to my professional experience, I worked for Southern California
21 Edison Company (SCE) during the period from 1973 to 1979, and again from 1980 to
22 1990. For approximately one year, between 1979 and 1980, I was employed by Harris
23 Corporation (Controls Division), located in Melbourne, Florida. I began working for
24 SDG&E in 1990, and continue to do so.

1 I have held a number of positions throughout my career involving electric
2 utilities, the majority of which have involved electric transmission planning and grid
3 operations. Such positions have involved modeling of the transmission grid for both
4 California and the interconnected system of the Western Systems Coordinating Council
5 (WSCC). I have also served as a representative on the WSCC Technical Studies
6 Subcommittee, Pacific and Southwest Transfer Subcommittee, and Rating Methods Task
7 Force. WSCC is now known as the Western Electricity Coordinating Council (WECC).
8 In addition, I have also served as SDG&E's representative to the San Onofre Nuclear
9 Generating Station (SONGS) in regard to decommissioning Unit 1.

10 Having worked for both SDG&E and SCE, I am familiar with their transmission
11 systems and the systems to which they interconnect. In the past, I led the SDG&E effort
12 in a joint study with SCE to determine grid mitigations for the "absence of SONGS"
13 scenario. This study was entitled "SCE and SDG&E Joint Study: Transmission System
14 Performance Absent the San Onofre Nuclear Generating Station," issued in 1999. That
15 study was a precursor to the "Phase 2" study later undertaken by the California
16 Independent System Operator (CAISO), SCE, SDG&E and Interested Stakeholders, later
17 issued in 2000. Although those studies are now outdated, the study methodologies were
18 similar to today's studies.

19 I have been familiar with the evolution of the system referred to as the "Arizona-
20 California" transmission system, also called the "East of the River" (EOR) system or
21 "Path 49," and its impact on studies of transmission grid reliability, since I began
22 working in SCE's transmission planning area in 1976. The "River", for this purpose,
23 refers to the Colorado River, which has made a convenient dividing line for defining

1 major East-West transmission. While working in SDG&E's transmission planning area, I
2 was responsible for leading the effort to increase the EOR rating, under the then-existing
3 WSCC rating procedures, from the then-existing rating of 7365 MW up to the present
4 rating of 7550 MW. Such ratings define the maximum permissible flow while
5 maintaining adequate reliability under the various reliability criteria.

6 Similar to my knowledge of the EOR system, my knowledge of the "West of the
7 River" (WOR) system, and its impact on studies of transmission grid reliability, started in
8 1976 when I was working in SCE's transmission planning area. While later working in
9 SCE's grid operations area, around 1984, I performed studies and developed a
10 methodology for rating the WOR system for the first time on a real-time basis while
11 maintaining adequate grid reliability. That methodology, based on a WOR nomogram
12 that I developed, was later replaced by a new methodology using a Southern California
13 Import Transmission (SCIT) nomogram, which now considers the dynamic system rating
14 based on the EOR flow and five interdependent paths, one of which is the WOR system.

15 I have not previously testified before this Commission.

16 This concludes my prepared direct testimony.

MITIGATION COMPARISON

SONGS SGR EVALUATION

SVC	Comment	SCE Filing Cases						SDG&E Case	Final		
		SONGS On Base		SONGS Off Base		SONGS Off no 500 kV (ie. SONGS Off 230 kV)				SONGS Off with Imperial Valley - Ramona *	SONGS Off with Imperial Valley - Ramona **
		Max	Max	Max	Max	Max	Max			Max	Max
SVC @ Devers 500	388/-300 for DPV2	388	388	867	800	600	387				
SVC @ Valley 500	388/-300 for DPV2	388	388	667	600	500	387				
SVC @ Serrano 500 (have "-300")		0	0	1200	200	300	0				
SVC @ Santiago 230							150				
SVC @ Viejosc 230							250				
SVC @ Chino 230											
SVC @ Talega 138 (have "-100)		100	100	300	200	150	100				
SVC @ Sycamore 230		0	0	0	0	0	0				
SVC @ IV 500		0	0	360	0	500	0				
SVC @ IV 230	200/-100 for IV-Ramona	0	0	0	0	200	300				
SVC @ Ramona 500											
SVC @ Ramona 230	100/-100 for IV-Ramona	0	0	0	583	0	0				
SVC @ Rainbow 230		0	0	0	200	0	200				
SVC @ Mission 230											
SVC as part of new lines proposed and as existing SVC		876	876	876	1599	876	1176				
Total		876	876	3364	2393	2280	1774				
Net SVC Due to SONGS Off		N/A	N/A	2518	924	1374	598				

* SCE failed to count SVCs that are part of the IV - Ramona 500 kV Line project
 ** SDG&E shows 200MVAR @ IV 230 kV and 100 MVAR @ Ramona 230 kV as part of the IV - Ramona 500 kV Line project

TABLE OF CONTENTS FOR WORKPAPERS SUPPORTING THE TESTIMONY OF RICHARD SHEAFFER

Note That Workpapers Are Organized by Tabs

RS Tab 1: Load Assumption for SDG&E.

RS Tab 2: Reactor Modeling (Voltage Control Devices) for Transmission Grid.

RS Tab 3: Typical Path Flows.

RS Tab 4: SVC Corrections with Path Re-Dispatches.

RS Tab 5: MVAR Flows at SONGS for Study Cases.

RS Tab 6: MVAR Flow at SONGS During November 19–23, 2004 SONGS 2-Unit Outage.

RS Tab 7: MVAR Flow at SONGS During 2003.

RS Tab 8: June 1994 “Absence of SONGS” Study Entitled “Preliminary Evaluation of the Impact of Shutting Down SONGS Units 2&3 on the SCE and SDG&E Transmission Systems”.

RS Tab 9: August 16, 1999 “Absence of SONGS” Study Entitled “Screening Study of the Cal-ISO Grid: Impacts and Mitigations Absent the San Onofre Nuclear Generating Station Interim Report”.

RS Tab 10: June 9, 2000 California ISO Memo and Attached June 12, 2004 “Absence of SONGS” Study Entitled “San Onofre Nuclear Generating Station Operational Study Phase-2 Report Transmission Plan-of-Service Final Report”.

1

RS TAB 1

SCE CASE

SEE PAGE RS-8 OF SDS/E TESTIMONY RE: SDS/E LOAD

SCE-ivrma-load.txt
PSLF - V13.0

GENERAL ELECTRIC INTERNATIONAL, INC. - PSLF - V13.0
SONGS STUDY
2010 HEAVY SUMMER, SONGS OFF

area name		generation		--- load categories ----				net		slack	
mw	mvar	capacity	on-line	power	current	imped.	shunt	-- svd --	inter	losses	bus
ALBERTA											
54		10728.6	7374.1	7437.9	0.0	0.0	0.0	0.0	-399.6	335.8	145.7
		4938.9	1136.2	2417.4	0.0	0.0	-1.6	-1093.9	-34.2	-151.5	15.7
B.C. HYDRO											
50		14685.1	10566.4	7188.1	0.0	0.0	0.0	0.0	2800.2	578.1	104.9
		6627.2	1099.0	2633.8	0.0	0.0	2973.5	1385.9	5.7	-5900.0	2.8
IDAHO											
60		4541.4	3550.6	3039.0	0.0	0.0	0.0	0.0	286.7	224.9	176.3
		2128.0	849.9	739.3	0.0	0.0	-567.7	0.0	-52.7	731.1	27.8
LADWP											
26		6519.1	5025.1	6270.0	0.0	0.0	0.0	0.0	-1464.9	220.0	94.1
		4085.0	1140.5	1000.6	0.0	0.0	-2423.6	0.0	-94.3	2657.8	21.3
MEXICO-CFE											
20		3331.0	1861.2	1994.8	0.0	0.0	0.0	0.0	-10.1	26.5	40.3
		1209.0	259.1	512.7	0.0	0.0	-224.9	0.0	-78.9	42.6	13.4
MONTANA											
62		3257.5	2906.8	1440.2	0.0	0.0	0.2	0.0	1351.4	115.1	735.8
		1186.5	407.7	618.0	0.0	0.0	-107.3	-45.5	-304.0	246.5	122.1
NEW MEXICO											
10		3417.3	2711.9	2893.3	0.0	0.0	0.0	0.0	-325.5	144.2	76.0
		1822.2	169.3	751.2	0.0	0.0	-691.0	0.0	-65.5	174.6	10.0
GENERAL ELECTRIC INTERNATIONAL, INC. - PSLF - V13.0											
SONGS STUDY											
2010 HEAVY SUMMER, SONGS OFF											

area name		generation		--- load categories ----				net		slack	
mw	mvar	capacity	on-line	power	current	imped.	shunt	-- svd --	inter	losses	bus
NORTHWEST											
40		45100.6	29469.7	23282.6	0.0	0.0	0.0	0.0	4881.9	1305.2	757.0
		16247.7	3518.0	7029.1	0.0	0.0	-2406.7	-5657.0	-38.7	4591.2	90.2
area name PACE											

SCE-ivrma-load.txt

65 mw 6122.0 5493.3 7142.4 0.0 0.0 -2737.0 0.0 -2036.9 387.8 159.3
 mvar 3068.9 1377.2 2733.3 0.0 0.0 -946.8 0.0 -362.9 1743.9 41.1

area name PG AND E
 30 mw 32287.2 23257.0 25800.0 0.0 0.0 -946.8 0.0 -3633.4 1090.4 188.0
 mvar 15828.3 5583.8 5179.6 0.0 -76.5 -946.8 0.0 -373.5 4602.8 122.5

area name PSCOLORADO
 70 mw 6202.0 5027.0 6550.6 0.0 0.0 0.0 0.0 -1744.7 221.1 70.0
 mvar 3879.3 2229.4 2452.3 0.0 0.0 0.0 0.0 -476.7 1032.9 75.4

area name SANDIEGO
 22 mw 3108.4 2455.1 4924.0 0.0 0.0 0.0 0.0 -2620.9 152.0 56.8
 mvar 2327.0 850.9 626.6 0.0 0.0 20.1 -1287.9 186.3 1305.8 33.5

area name SIERRA
 64 mw 1901.7 1288.3 1583.8 0.0 0.0 0.0 0.0 -347.0 51.5 79.3
 mvar 925.4 121.4 422.1 0.0 0.0 -211.3 104.8 73.3 -267.6 12.6

area name W KOOTENAY
 52 mw 829.0 552.9 635.3 0.0 0.0 0.0 0.0 -100.0 17.7 60.9
 mvar 450.0 8.6 205.8 0.0 0.0 -133.0 -28.2 -119.5 83.6 -2.5

GENERAL ELECTRIC INTERNATIONAL, INC. - PSLF - V13.0
 SONGS STUDY
 2010 HEAVY SUMMER, SONGS OFF

generation ---- load categories ----
 capacity on-line power current impeded. shunt -- svd -- inter losses bus
 net

area name WAPA R.M.
 73 mw 6564.1 5071.5 3540.7 0.0 0.0 0.0 0.0 1339.3 191.5 465.0
 mvar 3019.4 260.8 1164.9 0.0 0.0 -300.0 -201.5 -595.4 192.7 71.2

area name WAPA U.M.
 63 mw 61.8 53.9 248.0 0.0 0.0 0.0 0.0 -200.9 6.9 53.9
 mvar 34.0 7.2 98.0 0.0 0.0 -79.0 -19.5 49.8 -42.1 7.2

area name SOCALIF
 24 mw 28447.1 13668.2 22853.5 0.0 0.0 0.0 0.0 -9742.9 557.6 61.0
 mvar 13415.1 2867.9 -1904.3 0.0 0.0 -1008.5 -1233.3 -193.8 7207.7 84.6

area name IMPERIALCA
 21 mw 1938.5 983.7 705.4 0.0 0.0 0.0 0.0 243.1 35.2 62.7
 mvar 708.0 71.0 61.3 0.0 0.0 -122.8 0.0 -33.4 166.0 7.1

area name SEM
 mw 1193.4 1150.0 0.0 0.0 0.0 0.0 0.0 1150.0 -0.0 200.0

		SCE-ivrma-load.txt													
area name	82 mvar	738.0	184.9	0.0	0.0	0.0	0.0	0.0	0.0	-27.8	212.7	31.4	0.0	0.0	0.0
generation															
		on-line		power		current		imped.		shunt		-- svd --		net	
		capacity	generation	---	load categories	----	---	load categories	----	---	load categories	----	---	load categories	----
area name	83 mvar	952.0	1144.7	80.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PDE															
area name	85 mvar	1332.0	103.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ARIZONA															
area name	14 mvar	8044.5	3046.5	12410.1	0.0	0.0	0.0	0.0	0.0	-1096.2	0.0	0.0	0.0	0.0	0.0
NEVADA															
area name	18 mvar	5434.2	2147.4	6592.3	0.0	0.0	0.0	0.0	0.0	-805.1	0.0	0.0	0.0	0.0	0.0
WAPA L.C.															
area name	19 mvar	2342.4	431.3	106.7	0.0	0.0	0.0	0.0	0.0	-174.8	0.0	0.0	0.0	0.0	0.0
HGC															
area name	80 mvar	609.0	347.9	36.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DEM															
area name	81 mvar	739.0	167.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AREA 99															
area name	99 mvar	1051.2	270.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
GENERAL ELECTRIC INTERNATIONAL, INC. - PSLF - V13.0															
SONGS STUDY															
2010 HEAVY SUMMER, SONGS OFF															

□

□

SCE-ivrma-load.txt
 --- load categories ----

generation	capacity	on-line	power	current	imped.	shunt	-- svd --	inter	net	losses	slack
TOTL MW	221443.8	153042.8	146794.7	0.0	0.0	0.2	0.0	-0.0	-0.0	6247.9	
mvar	103621.3	28898.8	31142.0	0.0	-76.5	-11043.4	-14004.7	0.0	0.0	22881.0	

GENERAL ELECTRIC INTERNATIONAL, INC. - PSLF - V13.0
 SONGS STUDY
 2010 HEAVY SUMMER, SONGS OFF

Area Interchange Summary

FROM AREA	54 ALBERTA										
TO AREA	50 B.C.HYDRO										
TOTAL											

FROM AREA	50 B.C.HYDRO										
TO AREA	54 ALBERTA										
TO AREA	40 NORTHWEST										
TO AREA	52 W KOOTENAY										
TOTAL											

FROM AREA	60 IDAHO										
TO AREA	40 NORTHWEST										
TO AREA	65 PACE										
TO AREA	64 SIERRA										
TOTAL											

FROM AREA	26 LADWP										
TO AREA	40 NORTHWEST										
TO AREA	65 PACE										
TO AREA	64 SIERRA										
TO AREA	24 SOCALIF										
TO AREA	14 ARIZONA										
TO AREA	18 NEVADA										
TO AREA	19 WAPA L.C.										
TOTAL											

FROM AREA	20 MEXICO-CFE										
TO AREA	22 SANDIEGO										
TO AREA	99 AREA 99										
TOTAL											

FROM AREA	62 MONTANA										
TO AREA	40 NORTHWEST										
TO AREA	65 PACE										
TO AREA	63 WAPA U.M.										
TOTAL											

FROM AREA 10 NEW MEXICO
 GENERAL ELECTRIC INTERNATIONAL, INC. - PSLF - V13.0
 SONGS STUDY
 2010 HEAVY SUMMER, SONGS OFF

TO AREA	73 WAPA R.M.	399.2	51.1
TO AREA	14 ARIZONA	-807.8	-113.9
TO AREA	19 WAPA L.C.	83.1	-2.7
TOTAL		-325.5	-65.5

FROM AREA	40 NORTHWEST	mvar	
TO AREA	50 B.C.HYDRO	-2300.6	148.1
TO AREA	60 IDAHO	1038.2	65.1
TO AREA	26 LADWP	1086.7	197.8
TO AREA	62 MONTANA	-508.5	120.0
TO AREA	30 PG AND E	5388.3	-522.3
TO AREA	64 SIERRA	177.9	-47.3
TOTAL		4881.9	-38.7

FROM AREA	65 PACE	mvar	
TO AREA	60 IDAHO	-1176.0	-56.7
TO AREA	26 LADWP	-93.6	-239.2
TO AREA	62 MONTANA	-606.5	138.0
TO AREA	64 SIERRA	14.1	-8.8
TO AREA	73 WAPA R.M.	243.9	-27.6
TO AREA	14 ARIZONA	-435.3	14.7
TO AREA	18 NEVADA	290.2	-109.7
TO AREA	19 WAPA L.C.	-273.7	-73.7
TOTAL		-2036.9	-362.9

FROM AREA	30 PG AND E	mvar	
TO AREA	40 NORTHWEST	-5388.3	522.3
TO AREA	64 SIERRA	5.0	34.5
TO AREA	24 SOCALIF	1749.9	-183.3
TOTAL		-3633.4	373.5

FROM AREA	70 PSCOLORADO	mvar	
TO AREA	73 WAPA R.M.	-1744.7	476.7
TOTAL		-1744.7	476.7

FROM AREA	22 SANDIEGO	mvar	
TO AREA	20 MEXICO-CFE	159.8	59.6
TO AREA	24 SOCALIF	288.2	235.5
TO AREA	21 IMPERIALCA	-31.3	1.9
TO AREA	14 ARIZONA	-1685.0	105.4

GENERAL ELECTRIC INTERNATIONAL, INC. - PSLF - V13.0
 SONGS STUDY

2010 HEAVY SUMMER, SONGS OFF

TO AREA	99 AREA 99			
TOTAL			-1352.7	-216.1
			-2620.9	186.3
FROM AREA	64 SIERRA			mvar
TO AREA	60 IDAHO		mmw	44.4
TO AREA	26 LADWP		-148.9	8.7
TO AREA	40 NORTHWEST		-177.9	47.3
TO AREA	65 PACE		-14.1	8.8
TO AREA	30 PG AND E		-5.0	-34.5
TO AREA	24 SOCALIF		12.3	-1.4
TOTAL			-347.0	73.3
FROM AREA	52 W KOOTENAY			mvar
TO AREA	50 B.C.HYDRO		mmw	-119.5
TOTAL			-100.0	-119.5
FROM AREA	73 WAPA R.M.			mvar
TO AREA	10 NEW MEXICO		mmw	-51.1
TO AREA	65 PACE		-399.2	27.6
TO AREA	70 PSCOLORADO		-243.9	-476.7
TO AREA	63 WAPA U.M.		1744.7	-3.8
TO AREA	19 WAPA L.C.		-35.4	-91.3
TOTAL			273.2	-595.4
FROM AREA	63 WAPA U.M.			mvar
TO AREA	62 MONTANA		mmw	46.1
TO AREA	73 WAPA R.M.		-236.4	3.8
TOTAL			35.4	49.8
FROM AREA	24 SOCALIF			mvar
TO AREA	26 LADWP		mmw	307.6
TO AREA	30 PG AND E		-2992.9	183.3
TO AREA	22 SANDIEGO		-1749.9	-235.5
TO AREA	64 SIERRA		-288.2	1.4
TO AREA	21 IMPERIALCA		-12.3	58.8
TO AREA	14 ARIZONA		-335.2	-592.8
TO AREA	18 NEVADA		-2474.0	89.6
TO AREA	19 WAPA L.C.		-130.8	62.7
TO AREA	80 HGC		-226.4	-69.0
TOTAL			-1533.4	-193.8
			-9742.9	

GENERAL ELECTRIC INTERNATIONAL, INC. - PSLF - V13.0

SONGS STUDY

2010 HEAVY SUMMER, SONGS OFF

FROM AREA	21 IMPERIALCA			mvar
			mmw	

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TO AREA	22 SANDIEGO	31.3	-1.9
TO AREA	24 SOCALIF	335.2	-58.8
TO AREA	14 ARIZONA	-123.3	27.2
TOTAL		243.1	-33.4
FROM AREA	82 SEM	mvar	
TO AREA	14 ARIZONA	1150.0	-27.8
TOTAL		1150.0	-27.8
FROM AREA	83 RED HAWK	mvar	
TO AREA	14 ARIZONA	-163.2	738.9
TOTAL		-163.2	738.9
FROM AREA	85 PANDA	mvar	
TO AREA	14 ARIZONA	1652.1	-207.1
TOTAL		1652.1	-207.1
FROM AREA	86 PDE	mvar	
TO AREA	14 ARIZONA	550.0	92.3
TOTAL		550.0	92.3
FROM AREA	14 ARIZONA	mvar	
TO AREA	26 LADWP	1132.1	2.8
TO AREA	10 NEW MEXICO	807.8	113.9
TO AREA	65 PACE	435.3	-14.7
TO AREA	22 SANDIEGO	1685.0	-105.4
TO AREA	24 SOCALIF	2474.0	592.8
TO AREA	21 IMPERIALCA	123.3	-27.2
TO AREA	82 SEM	-1150.0	27.8
TO AREA	83 RED HAWK	163.2	-738.9
TO AREA	85 PANDA	-1652.1	207.1
TO AREA	86 PDE	-550.0	-92.3
TO AREA	19 WAPA L.C.	-145.6	-436.9
TO AREA	80 HGC	383.4	17.1
TO AREA	81 DEM	-780.0	64.3
TOTAL		2926.3	-389.7
FROM AREA	18 NEVADA	mvar	
GENERAL ELECTRIC INTERNATIONAL, INC. - PSLF - V13.0			
SONGS STUDY			
2010 HEAVY SUMMER, SONGS OFF			
TO AREA	26 LADWP	-144.0	171.6
TO AREA	65 PACE	-290.2	109.7
TO AREA	24 SOCALIF	130.8	-89.6
TO AREA	19 WAPA L.C.	596.5	-68.9
TOTAL		293.1	122.7

SCE-ivrma-load.txt

FROM AREA	19 WAPA L.C.		
TO AREA	26 LADWP	2490.0	mvar
TO AREA	10 NEW MEXICO	-83.1	-355.0
TO AREA	65 PACE	273.7	2.7
TO AREA	73 WAPA R.M.	-273.2	73.7
TO AREA	24 SOCALIF	226.4	91.3
TO AREA	14 ARIZONA	145.6	-62.7
TO AREA	18 NEVADA	-596.5	436.9
TOTAL		2183.0	68.9
FROM AREA	80 HGC		255.8
TO AREA	24 SOCALIF	1533.4	mvar
TO AREA	14 ARIZONA	-383.4	69.0
TOTAL		1150.0	-17.1
FROM AREA	81 DEM		51.9
TO AREA	14 ARIZONA	780.0	mvar
TOTAL		780.0	-64.3
FROM AREA	99 AREA 99		-64.3
TO AREA	20 MEXICO-CFE		mvar
TO AREA	22 SANDIEGO	-149.7	19.3
TOTAL		1352.7	216.1
		1203.0	235.4

TAB 1

SDGE CASE
SEE PAGE RS-8 OF
SDG&E TESTIMONY
RE: SDG&E LOAD

GENERAL ELECTRIC INTERNATIONAL, INC. - PSLF - V13.0
SDGE-ivtma-load.txt
SONGS STUDY
2010 HEAVY SUMMER, SONGS OFF

		generation				--- load categories ----				net				slack	
		capacity	on-line	power	current	imped.	shunt	-- svd --	inter	losses	bus				
area name	ALBERTA	7373.9	0.0	0.0	0.0	0.0	0.0	0.0	-399.8	335.8	145.5				
mw	10728.6								-34.2	-151.6	15.7				
54 mvar	4938.9	1136.1	0.0	2417.4	0.0	0.0	-1.6	-1093.9							
area name	B.C. HYDRO	10566.0	0.0	7188.1	0.0	0.0	0.0	0.0	2800.3	577.6	104.5				
mw	14685.1								-11.2	-5912.3	2.5				
50 mvar	6627.2	1071.6	0.0	2633.8	0.0	0.0	2974.7	1386.6							
area name	IDAHO	3566.0	0.0	3039.0	0.0	0.0	0.0	0.0	285.9	241.1	191.6				
mw	4541.4								82.8	836.6	47.3				
60 mvar	2128.0	1085.1	0.0	739.3	0.0	0.0	-573.6	0.0							
area name	LADWP	5131.0	0.0	6270.0	0.0	0.0	0.0	0.0	-1464.9	325.9	200.0				
mw	6519.1								-582.1	3376.0	44.4				
26 mvar	4591.0	1402.8	0.0	1000.6	0.0	0.0	-2391.8	0.0							
area name	MEXICO-CFE	1861.9	0.0	1994.8	0.0	0.0	0.0	0.0	-9.5	26.6	41.0				
mw	3331.0								-92.4	42.3	9.2				
20 mvar	1209.0	239.2	0.0	512.7	0.0	0.0	-225.1	0.0							
area name	MONTANA	2915.6	0.0	1440.2	0.0	0.0	0.1	0.0	1350.2	125.2	744.6				
mw	3257.5								-319.3	309.8	133.8				
62 mvar	1186.5	457.8	0.0	618.0	0.0	0.0	-105.9	-44.8							
area name	NEW MEXICO	2710.8	0.0	2893.3	0.0	0.0	0.0	0.0	-325.7	143.3	74.9				
mw	3417.3								-98.4	169.7	9.8				
10 mvar	1822.2	131.3	0.0	751.2	0.0	0.0	-691.1	0.0							
GENERAL ELECTRIC INTERNATIONAL, INC. - PSLF - V13.0															
SONGS STUDY															
2010 HEAVY SUMMER, SONGS ON															
area name	NORTHWEST	31462.1	0.0	23282.6	0.0	0.0	0.0	0.0	6635.3	1544.1	345.3				
mw	45100.6								88.6	8075.1	63.1				
40 mvar	16247.7	6499.4	0.0	7029.1	0.0	0.0	-2376.0	-6317.4							
area name	PACE														

0

SDGE-ivrma-load.txt

65 mw 6122.0 5501.6 7142.4 0.0 0.0 0.0 0.0 0.0 0.0 -2036.3 395.5 167.6
 mvar 3068.9 1420.6 2733.3 0.0 0.0 0.0 0.0 0.0 -393.2 1812.2 44.2

area name PG AND E
 30 mw 32287.2 22786.1 25800.0 0.0 0.0 0.0 0.0 0.0 -4185.9 1172.0 192.7
 mvar 15828.3 6572.7 5179.6 0.0 -76.5 -949.6 -3473.3 423.7 5468.4 156.2

area name PSCOLORADO
 70 mw 6202.0 5028.6 6550.6 0.0 0.0 0.0 0.0 0.0 -1743.6 221.6 71.6
 mvar 3879.3 2246.1 2452.3 0.0 0.0 0.0 -1731.6 486.2 1039.2 76.0

area name SANDIEGO
 22 mw 3714.4 2318.6 4780.0 0.0 0.0 0.0 0.0 0.0 -2595.4 134.0 -36.7
 mvar 2313.0 530.4 608.3 0.0 0.0 -18.0 -1112.4 124.1 928.4 54.9

area name SIERRA
 64 mw 1901.7 1289.1 1583.8 0.0 0.0 0.0 0.0 0.0 -346.4 51.6 80.1
 mvar 925.4 154.3 422.1 0.0 0.0 -209.8 104.7 94.2 -256.9 15.5

area name W KOOTENAY
 52 mw 829.0 552.9 635.3 0.0 0.0 0.0 0.0 0.0 -100.0 17.7 60.9
 mvar 450.0 9.3 205.8 0.0 0.0 -133.1 -28.2 -118.8 83.6 -2.4

GENERAL ELECTRIC INTERNATIONAL, INC. - PSLF - V13.0
 SONGS STUDY
 2010 HEAVY SUMMER, SONGS ON

generation ---- load categories ----
 capacity on-line power current impeded. shunt -- svd -- inter losses bus slack

area name WAPA R.M.
 73 mw 6564.1 5081.5 3540.7 0.0 0.0 0.0 0.0 0.0 1339.0 201.7 475.0
 mvar 3019.4 300.6 1164.9 0.0 0.0 -299.6 -200.0 -633.0 268.3 78.4

area name WAPA U.M.
 63 mw 61.8 53.9 248.0 0.0 0.0 0.0 0.0 0.0 -201.2 7.1 53.9
 mvar 34.0 7.3 98.0 0.0 0.0 -79.0 -20.9 47.5 -38.3 7.3

area name SOCALIF
 24 mw 27683.1 14233.9 22853.5 0.0 0.0 0.0 0.0 0.0 -9142.0 522.5 206.7
 mvar 12530.1 3171.8 -1904.3 0.0 0.0 -974.9 -975.0 291.5 6734.6 86.0

area name IMPERIALCA
 21 mw 1938.5 987.9 705.4 0.0 0.0 0.0 0.0 0.0 243.0 39.5 66.9
 mvar 708.0 97.8 61.3 0.0 0.0 -121.0 0.0 -49.2 206.6 7.5

area name SEM
 1193.4 600.0 0.0 0.0 0.0 0.0 0.0 0.0 600.0 0.0 120.0

		SDGE-ivrrma-load.txt													
area name	mw	mvar	738.0	93.1	0.0	0.0	0.0	0.0	0.0	0.0	29.5	63.6	18.6		
generation															
---- load categories ----															
		capacity	on-line	power	current	imped.	shunt	-- svd	-- inter	net	losses	slack	bus		
PDE															
area name	mw	775.0	550.0	0.0	0.0	0.0	0.0	0.0	0.0	550.0	0.0	100.0			
86 mvar	479.0	141.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	85.8	55.4	28.9			
ARIZONA															
area name	mw	15841.3	13723.2	12410.1	0.0	0.0	0.0	0.0	0.0	1608.0	283.1	137.3			
14 mvar	8044.5	2611.7	0.0	0.0	0.0	-1099.4	-523.6	-322.8	0.0	0.0	629.2	40.0			
NEVADA															
area name	mw	9738.4	7024.3	6592.3	0.0	0.0	0.0	0.0	0.0	294.0	137.9	27.5			
18 mvar	5434.2	2013.6	0.0	0.0	0.0	-801.9	-122.6	-10.3	0.0	0.0	1859.4	12.4			
WAPA L.C.															
area name	mw	6301.0	2417.2	106.7	0.0	0.0	0.0	0.0	0.0	2183.0	127.4	105.2			
19 mvar	2342.4	434.2	0.0	0.0	0.0	-173.8	0.0	300.0	0.0	0.0	272.7	29.2			
HGC															
area name	mw	1224.0	1186.0	36.0	0.0	0.0	0.0	0.0	0.0	1150.0	-0.0	246.0			
80 mvar	609.0	327.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	33.3	271.4	79.0			
DEM															
area name	mw	1200.0	600.0	0.0	0.0	0.0	0.0	0.0	0.0	600.0	-0.0	150.0			
81 mvar	739.0	89.8	0.0	0.0	0.0	0.0	0.0	-0.5	0.0	0.0	90.3	22.4			
AREA 99															
area name	mw	1145.4	901.5	0.0	0.0	0.0	0.0	0.0	0.0	750.0	1.5	142.5			
99 mvar	641.2	248.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	190.6	59.9	37.6			
GENERAL ELECTRIC INTERNATIONAL, INC. -- PSLF - V13.0															
SONGS STUDY															
2010 HEAVY SUMMER, SONGS ON															

SDGE-ivrma-load.txt
 --- load categories ----

generation	capacity	on-line	power	current	imped.	shunt	-- svd --	inter	net	losses	slack
TOTL MW	220606.8	153297.6	146650.7	0.0	0.0	0.1	0.0	0.0	0.0	6646.8	
mvar	102818.3	32652.6	31123.6	0.0	-76.5	-10981.9	-14152.6	-0.0	-0.0	26739.6	

GENERAL ELECTRIC INTERNATIONAL, INC. - PSLF - V13.0
 SONGS STUDY
 2010 HEAVY SUMMER, SONGS ON

Area Interchange Summary

FROM AREA	TO AREA	TOTAL	MMW	MVAR
54 ALBERTA			399.8	-34.2
50 B.C.HYDRO			-399.8	-34.2
TOTAL				

FROM AREA	TO AREA	TOTAL	MMW	MVAR
50 B.C.HYDRO			399.8	34.2
54 ALBERTA			2300.5	-164.2
40 NORTHWEST			100.0	118.8
52 W KOOTENAY			2800.3	-11.2
TOTAL				

FROM AREA	TO AREA	TOTAL	MMW	MVAR
60 IDAHO			1064.3	44.7
40 NORTHWEST			1200.3	90.2
65 PACE			149.8	-52.0
64 SIERRA			285.9	82.8
TOTAL				

FROM AREA	TO AREA	TOTAL	MMW	MVAR
26 LADWP			2410.9	-553.8
40 NORTHWEST			98.3	241.5
65 PACE			8.7	-7.5
64 SIERRA			3932.1	-549.8
24 SOCIALIF			-840.3	22.9
14 ARIZONA			135.3	-128.4
18 NEVADA			-2388.1	392.9
19 WAPA L.C.			-1464.9	-582.1
TOTAL				

FROM AREA	TO AREA	TOTAL	MMW	MVAR
20 MEXICO-CFE			159.2	-79.1
22 SANDIEGO			149.7	-13.3
99 AREA 99			-9.5	-92.4
TOTAL				

FROM AREA	TO AREA	TOTAL	MMW	MVAR
62 MONTANA			458.8	-119.5
40 NORTHWEST			629.6	-153.9
65 PACE			261.8	-45.9
63 WAPA U.M.			1350.2	-319.3
TOTAL				

FROM AREA 10 NEW MEXICO
 GENERAL ELECTRIC INTERNATIONAL, INC. - PSLF - V13.0
 SONGS STUDY
 2010 HEAVY SUMMER, SONGS ON

TO AREA 73 WAPA R.M.	394.2	63.2
TO AREA 14 ARIZONA	-832.8	-155.6
TO AREA 19 WAPA L.C.	112.9	-6.0
TOTAL	-325.7	-98.4

FROM AREA 40 NORTHWEST	mvar
TO AREA 50 B.C.HYDRO	164.2
TO AREA 60 IDAHO	-44.7
TO AREA 26 LADWP	553.8
TO AREA 62 MONTANA	119.5
TO AREA 30 PG AND E	-645.5
TO AREA 64 SIERRA	-58.6
TOTAL	88.6

FROM AREA 65 PACE	mvar
TO AREA 60 IDAHO	-90.2
TO AREA 26 LADWP	-241.5
TO AREA 62 MONTANA	153.9
TO AREA 64 SIERRA	-8.6
TO AREA 73 WAPA R.M.	-29.0
TO AREA 14 ARIZONA	14.2
TO AREA 18 NEVADA	-111.9
TO AREA 19 WAPA L.C.	-80.1
TOTAL	-393.2

FROM AREA 30 PG AND E	mvar
TO AREA 40 NORTHWEST	645.5
TO AREA 64 SIERRA	31.6
TO AREA 24 SOCALIF	-253.3
TOTAL	423.7

FROM AREA 70 PSCOLORADO	mvar
TO AREA 73 WAPA R.M.	486.2
TOTAL	486.2

FROM AREA 22 SANDIEGO	mvar
TO AREA 20 MEXICO-CFE	79.1
TO AREA 24 SOCALIF	129.8
TO AREA 21 IMPERIALCA	-0.6
TO AREA 14 ARIZONA	93.2

GENERAL ELECTRIC INTERNATIONAL, INC. - PSLF - V13.0
 SONGS STUDY

2010 HEAVY SUMMER, SONGS ON

TO AREA	99 AREA 99	-899.7	-177.3
TOTAL		-2595.4	124.1
FROM AREA	64 SIERRA	mvar	
TO AREA	60 IDAHO	52.0	
TO AREA	26 LADWP	-8.7	7.5
TO AREA	40 NORTHWEST	-177.2	58.6
TO AREA	65 PACE	-9.5	8.6
TO AREA	30 PG AND E	-13.0	-31.6
TO AREA	24 SOCALIF	11.9	-0.9
TOTAL		-346.4	94.2
FROM AREA	52 W KOOTENAY	mvar	
TO AREA	50 B.C.HYDRO	-100.0	-118.8
TOTAL		-100.0	-118.8
FROM AREA	73 WAPA R.M.	mvar	
TO AREA	10 NEW MEXICO	-394.2	-63.2
TO AREA	65 PACE	-273.6	29.0
TO AREA	70 PSCOLORADO	1743.6	-486.2
TO AREA	63 WAPA U.M.	-60.6	-1.6
TO AREA	19 WAPA L.C.	323.8	-111.1
TOTAL		1339.0	-633.0
FROM AREA	63 WAPA U.M.	mvar	
TO AREA	62 MONTANA	-261.8	45.9
TO AREA	73 WAPA R.M.	60.6	1.6
TOTAL		-201.2	47.5
FROM AREA	24 SOCALIF	mvar	
TO AREA	26 LADWP	-3932.1	549.8
TO AREA	30 PG AND E	-1543.5	253.3
TO AREA	22 SANDIEGO	209.8	-129.8
TO AREA	64 SIERRA	-11.9	0.9
TO AREA	21 IMPERIALCA	-388.1	66.0
TO AREA	14 ARIZONA	-1861.9	-601.6
TO AREA	18 NEVADA	-117.7	118.9
TO AREA	19 WAPA L.C.	-212.8	56.1
TO AREA	80 HGC	-1284.0	-22.1
TOTAL		-9142.0	291.5

GENERAL ELECTRIC INTERNATIONAL, INC. - PSLF - V13.0

SONGS STUDY

2010 HEAVY SUMMER, SONGS ON

FROM AREA	21 IMPERIALCA	mvar	
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SDGE-ivrma-load.txt

TO AREA	22 SANDIEGO	-100.3	0.6
TO AREA	24 SOCALIF	388.1	-66.0
TO AREA	14 ARIZONA	-44.8	16.2
TOTAL		243.0	-49.2
FROM AREA	82 SEM	mvar	
TO AREA	14 ARIZONA	600.0	29.5
TOTAL		600.0	29.5
FROM AREA	83 RED HAWK	mvar	
TO AREA	14 ARIZONA	330.1	627.8
TOTAL		330.1	627.8
FROM AREA	85 PANDA	mvar	
TO AREA	14 ARIZONA	1831.8	-240.4
TOTAL		1831.8	-240.4
FROM AREA	86 PDE	mvar	
TO AREA	14 ARIZONA	550.0	85.8
TOTAL		550.0	85.8
FROM AREA	14 ARIZONA	mvar	
TO AREA	26 LADWP	840.3	-22.9
TO AREA	10 NEW MEXICO	832.8	155.6
TO AREA	65 PACE	422.3	-14.2
TO AREA	22 SANDIEGO	1745.4	-93.2
TO AREA	24 SOCALIF	1861.9	601.6
TO AREA	21 IMPERIALCA	44.8	-16.2
TO AREA	82 SEM	-600.0	-29.5
TO AREA	83 RED HAWK	-330.1	-627.8
TO AREA	85 PANDA	-1831.8	240.4
TO AREA	86 PDE	-550.0	-85.8
TO AREA	19 WAPA L.C.	-361.6	-420.2
TO AREA	80 HGC	134.0	-11.2
TO AREA	81 DEM	-600.0	0.5
TOTAL		1608.0	-322.8
FROM AREA	18 NEVADA	mvar	
GENERAL ELECTRIC INTERNATIONAL, INC. - PSLF - V13.0			
SONGS STUDY			
2010 HEAVY SUMMER, SONGS ON			
TO AREA	26 LADWP	-135.3	128.4
TO AREA	65 PACE	-304.2	111.9
TO AREA	24 SOCALIF	117.7	-118.9
TO AREA	19 WAPA L.C.	615.9	-131.7
TOTAL		294.0	-10.3

□

SDGE-ivrma-load.txt

FROM AREA	19 WAPA L.C.			
TO AREA	26 LADWP	2388.1	mw	
TO AREA	10 NEW MEXICO	-112.9		mvar
TO AREA	65 PACE	273.0		-392.9
TO AREA	73 WAPA R.M.	-323.8		6.0
TO AREA	24 SOCALIF	212.8		80.1
TO AREA	14 ARIZONA	361.6		111.1
TO AREA	18 NEVADA	-615.9		-56.1
TOTAL		2183.0		420.2
				131.7
				300.0
FROM AREA	80 HGC			
TO AREA	24 SOCALIF	1284.0	mw	
TO AREA	14 ARIZONA	-134.0		mvar
TOTAL		1150.0		22.1
				11.2
				33.3
FROM AREA	81 DEM			
TO AREA	14 ARIZONA	600.0	mw	
TOTAL		600.0		mvar
				-0.5
				-0.5
FROM AREA	99 AREA 99			
TO AREA	20 MEXICO-CFE	-149.7	mw	
TO AREA	22 SANDIEGO	899.7		mvar
TOTAL		750.0		13.3
				177.3
				190.6

2

RS TAB 2

SEE PAGE 25-9 OF SDGTE TESTIMONY
RE: VOLTAGE CONTROL DEVICES
SCF CASE

** shunt ** Page 1 [D:\working\SONGS-R\SCE filing-Rebuttal\To Rich Sheaffer\10hs_off_ivrma_f3_svc.sav]
Mon Dec 20 11:40:33 2004

SONGS STUDY
2010 HEAVY SUMMER, SONGS OFF
--FROM- ---FR--- -BKV- ---TO--- ---TO--- -BKV- ID CK SE ST --G-PU--- --B-PU--- -VSCHED -V-ACT- -AR ZON YI MI DI
YO MO DO OWN
22536 N.GILA 500.0 22360 IMPRLVLY 500.0 t 1 2 1 0.0000 -1.1400 1.0600 1.0492 22 227 40 01 1
39 12 31 136
22152 CREELMAN 69.0 0 0.0 b 1 0 1 0.0000 0.1600 1.0290 0.9990 22 225 40 01 1
39 12 31 136
22452 MIGUEL 12.0 0 0.0 b3 3 0 0 0.0000 -0.4500 0.9750 0.9158 22 222 40 01 1
39 12 31 136
22452 MIGUEL 12.0 0 0.0 b2 2 0 1 0.0000 -0.4500 0.9750 0.9158 22 222 40 01 1
39 12 31 136
22452 MIGUEL 12.0 0 0.0 b4 4 0 0 0.0000 -0.4500 0.9750 0.9158 22 222 40 01 1
39 12 31 136
22452 MIGUEL 12.0 0 0.0 b1 1 0 0 0.0000 -0.4500 0.9750 0.9158 22 222 40 01 1
39 12 31 136
22540 NARROWS 69.0 0 0.0 b 1 0 1 0.0000 0.0200 0.9850 0.9196 22 225 40 01 1
39 12 31 136
22951 RAMONA T 13.8 0 0.0 1 -- 0 0 0.0000 -0.4500 1.0000 0.9808 22 225 90 01 1
89 12 31 1
22951 RAMONA T 13.8 0 0.0 2 -- 0 0 0.0000 -0.4500 1.0000 0.9808 22 225 90 01 1
89 12 31 1
22951 RAMONA T 13.8 0 0.0 3 -- 0 0 0.0000 -0.4500 1.0000 0.9808 22 225 90 01 1
89 12 31 1
** shunt ** Page 1 [D:\working\SONGS-R\SCE filing-Rebuttal\To Rich Sheaffer\10hs_off_ivrma_f3_svc.sav]
Mon Dec 20 11:41:58 2004

SONGS STUDY
2010 HEAVY SUMMER, SONGS OFF
--FROM- ---FR--- -BKV- ---TO--- ---TO--- -BKV- ID CK SE ST --G-PU--- --B-PU--- -VSCHED -V-ACT- -AR ZON YI MI DI
YO MO DO OWN
15011 KYRENE 500.0 15051 BROWNING 500.0 f 1 1 0 0.0000 -0.9300 1.0000 1.0281 14 158 40 01 1
39 12 31 80
15011 KYRENE 500.0 15041 SILVERKG 500.0 f 1 1 0 0.0000 -0.9300 1.0000 1.0281 14 158 40 01 1
39 12 31 80
15001 CORONADO 500.0 15041 SILVERKG 500.0 f 1 1 1 0.0000 -0.9300 1.0000 1.0666 14 140 40 01 1
39 12 31 80
15001 CORONADO 500.0 15041 SILVERKG 500.0 t 1 1 1 0.0000 -0.9300 1.0000 1.0666 14 140 40 01 1
39 12 31 80
14000 CHOLLA 500.0 14004 SAGUARO 500.0 f 1 2 1 0.0013 1.9212 1.0000 1.0621 14 141 40 01 1
39 12 31 2
14000 CHOLLA 500.0 14004 SAGUARO 500.0 f 1 1 1 0.0000 -1.1300 1.0000 1.0621 14 141 40 01 1
39 12 31 2
14000 CHOLLA 500.0 14004 SAGUARO 500.0 t 1 3 1 0.0000 -1.1300 1.0000 1.0621 14 141 40 01 1
39 12 31 2


```

sce-linereactr.txt
79199 HASSYAMP 500.0 22536 N.GILA 500.0 t 1 3 1 0.0000 -1.1400 1.0700 1.0682 14 248 40 01 1
39 12 31 136
15021 PALOVRDE 500.0 24801 DEVERS 500.0 f 1 1 1 0.0000 -1.2731 1.0700 1.0682 14 248 40 01 1
39 12 31 74
15021 PALOVRDE 500.0 24801 DEVERS 500.0 t 1 1 1 0.0000 -1.2731 1.0700 1.0682 14 248 40 01 1
39 12 31 74
14002 MOENKOPI 500.0 24042 ELDORDO 500.0 f 1 1 1 0.0000 -1.1300 1.0000 1.0747 14 141 40 01 1
39 12 31 74
14002 MOENKOPI 500.0 24042 ELDORDO 500.0 t 1 1 0 0.0000 -1.1300 1.0000 1.0747 14 141 40 01 1
39 12 31 74
** shunt ** Page 1 [D:\working\SONGS-R\SCE filling-Rebuttal\To Rich Sheaffer\10hs_off_ivrma_f3_svc.sav]
Mon Dec 20 11:43:30 2004

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```

SONGS STUDY
2010 HEAVY SUMMER, SONGS OFF
--FROM- ---FR--- -BKV- ---TO--- ---TO---- -BKV- ID CK SE ST --G-PU-- --B-PU-- -VSCHED -V-ACT- -AR ZON YI MI DI
YO MO DO OWN
24042 ELDORDO 500.0 24086 LUGO 500.0 f 1 1 0 0.0000 -0.9100 1.0400 1.0447 24 240 40 01 1
39 12 31 74
24042 ELDORDO 500.0 24086 LUGO 500.0 t 1 3 0 0.0000 -0.9100 1.0400 1.0447 24 240 40 01 1
39 12 31 74
24086 LUGO 500.0 24097 MOHAVE 500.0 f 1 1 0 0.0000 -0.9100 1.0500 1.0385 24 240 40 01 1
39 12 31 74
24086 LUGO 500.0 24097 MOHAVE 500.0 t 1 3 0 0.0000 -0.9100 1.0500 1.0385 24 240 40 01 1
39 12 31 74
** shunt ** Page 1 [D:\working\SONGS-R\SCE filling-Rebuttal\To Rich Sheaffer\10hs_off_ivrma_f3_svc.sav]
Mon Dec 20 11:43:30 2004

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** shunt ** Page 1 [D:\working\SONGS-R\SCE filling-Rebutta\To Rich Sheaffer\Q5\10hs_off_r74.sav]
 Mon Dec 20 11:07:50 2004

SONGS STUDY
 2010 HEAVY SUMMER, SONGS OFFN
 --FROM-- --FR--- -BKV- ---TO--- -BKV- ID CK SE ST --G-PU--- -B-PU--- -VSCHED -V-ACT- -AR ZON YI MI DI
 YO MO DO OWN
 22536 N.GILA 500.0 22360 IMPRLVLY 500.0 t 1 2 0 0.0000 -1.1400 1.0600 1.0484 22 227 40 01 1
 39 12 31 136
 22152 CREELMAN 69.0 0 0.0 b 1 0 1 0.0000 0.1600 1.0290 1.0081 22 225 40 01 1
 39 12 31 136
 22452 MIGUEL 12.0 0 0.0 b3 3 0 0 0.0000 -0.4500 0.9750 0.9323 22 222 40 01 1
 39 12 31 136
 22452 MIGUEL 12.0 0 0.0 b2 2 0 0 0.0000 -0.4500 0.9750 0.9323 22 222 40 01 1
 39 12 31 136
 22452 MIGUEL 12.0 0 0.0 b4 4 0 0 0.0000 -0.4500 0.9750 0.9323 22 222 40 01 1
 39 12 31 136
 22452 MIGUEL 12.0 0 0.0 b1 1 0 0 0.0000 -0.4500 0.9750 0.9323 22 222 40 01 1
 39 12 31 136
 22540 NARROWS 69.0 0 0.0 b 1 0 1 0.0000 0.0200 0.9850 0.9258 22 225 40 01 1
 39 12 31 136
 ** shunt ** Page 1 [D:\working\SONGS-R\SCE filling-Rebutta\To Rich Sheaffer\Q5\10hs_off_r74.sav]
 Mon Dec 20 11:08:54 2004

SONGS STUDY
 2010 HEAVY SUMMER, SONGS OFFN
 --FROM-- --FR--- -BKV- ---TO--- -BKV- ID CK SE ST --G-PU--- -B-PU--- -VSCHED -V-ACT- -AR ZON YI MI DI
 YO MO DO OWN
 14001 FOURCORN 500.0 14002 MOENKOPI 500.0 t 1 3 1 0.0000 -1.1300 1.0000 1.0576 14 141 40 01 1
 39 12 31 2
 14003 NAVAJO 500.0 26123 CRYSTAL 500.0 t 1 3 1 0.0000 -1.2000 1.0000 1.0799 14 141 40 01 1
 39 12 31 1
 14003 NAVAJO 500.0 26123 CRYSTAL 500.0 f 1 2 1 0.0237 0.0000 1.0000 1.0799 14 141 40 01 1
 39 12 21 1
 14003 NAVAJO 500.0 26123 CRYSTAL 500.0 f 1 1 1 0.0000 -1.9050 1.0000 1.0799 14 141 40 01 1
 39 12 31 1
 14002 MOENKOPI 500.0 26044 MARKETPL 500.0 t 1 3 0 0.0000 -1.1300 1.0000 1.0794 14 141 40 01 1
 39 12 31 1
 14002 MOENKOPI 500.0 26044 MARKETPL 500.0 t 1 2 0 0.0014 0.0000 1.0000 1.0794 14 141 40 01 1
 39 12 31 1
 14002 MOENKOPI 500.0 26044 MARKETPL 500.0 f 1 2 0 0.0014 0.0000 1.0000 1.0794 14 141 40 01 1
 39 12 31 1
 14002 MOENKOPI 500.0 26044 MARKETPL 500.0 f 1 1 0 0.0000 -1.1300 1.0000 1.0794 14 141 40 01 1
 39 12 31 1
 15001 CORONADO 500.0 14000 CHOLLA 500.0 f 1 1 1 0.0000 -0.9300 1.0000 1.0686 14 140 40 01 1
 39 12 31 80
 14006 YAVAPAI 500.0 14005 WESTWING 500.0 t 1 1 1 0.0004 0.0000 1.0000 1.0787 14 141 40 01 1
 39 12 31 2

sdge-linereactr.txt

14006 YAVAPAI	500.0	14005 WESTWING	500.0	f	1	2	1	0.0000	-1.0400	1.0000	1.0787	14	141	40	01	1
39 12 31	2															
15011 KYRENE	500.0	15051 BROWNING	500.0	f	1	1	0	0.0000	-0.9300	1.0000	1.0299	14	158	40	01	1
39 12 31	80															
14006 YAVAPAI	500.0	14005 WESTWING	500.0	f	1	1	1	0.0004	0.0000	1.0000	1.0787	14	141	40	01	1
39 12 31	2															
14003 NAVAJO	500.0	14005 WESTWING	500.0	t	1	2	1	0.0026	0.0000	1.0000	1.0799	14	141	40	01	1
39 12 31	1															
15001 CORONADO	500.0	15041 SILVERKG	500.0	f	1	1	1	0.0000	-0.9300	1.0000	1.0686	14	140	40	01	1
39 12 31	80															
15001 CORONADO	500.0	15041 SILVERKG	500.0	t	1	1	1	0.0000	-0.9300	1.0000	1.0686	14	140	40	01	1
39 12 31	80															
15021 PALOVRDE	500.0	24801 DEVERS	500.0	t	1	1	0	0.0000	-1.2731	1.0700	1.0700	14	248	40	01	1
39 12 31	74															
15021 PALOVRDE	500.0	24801 DEVERS	500.0	f	1	1	0	0.0000	-1.2731	1.0700	1.0700	14	248	40	01	1
39 12 31	74															
14003 NAVAJO	500.0	14005 WESTWING	500.0	t	1	3	1	0.0000	-1.5500	1.0000	1.0799	14	141	40	01	1
39 12 31	2															
14003 NAVAJO	500.0	14005 WESTWING	500.0	f	1	1	1	0.0000	-1.9050	1.0000	1.0799	14	141	40	01	1
39 12 31	1															
14003 NAVAJO	500.0	14005 WESTWING	500.0	f	1	2	1	0.0026	0.0000	1.0000	1.0799	14	141	40	01	1
39 12 31	2															
14002 MOENKOPI	500.0	14006 YAVAPAI	500.0	t	1	2	1	0.0005	0.0000	1.0000	1.0794	14	141	40	01	1
39 12 31	2															
14002 MOENKOPI	500.0	14006 YAVAPAI	500.0	f	1	1	1	0.0000	-0.5200	1.0000	1.0794	14	141	40	01	1
39 12 31	2															
14002 MOENKOPI	500.0	14006 YAVAPAI	500.0	f	1	2	1	0.0005	0.0000	1.0000	1.0794	14	141	40	01	1
39 12 31	2															
14002 MOENKOPI	500.0	24042 ELDORDO	500.0	t	1	1	0	0.0000	-1.1300	1.0000	1.0794	14	141	40	01	1
39 12 31	74															
14001 FOURCORN	500.0	14002 MOENKOPI	500.0	t	1	2	1	0.0009	1.6723	1.0000	1.0576	14	141	40	01	1
39 12 31	2															
14001 FOURCORN	500.0	14002 MOENKOPI	500.0	f	1	1	1	0.0000	-1.1300	1.0000	1.0576	14	141	40	01	1
39 12 31	2															
14001 FOURCORN	500.0	14002 MOENKOPI	500.0	f	1	2	1	0.0009	1.6723	1.0000	1.0576	14	141	40	01	1
39 12 31	2															
14000 CHOLLA	500.0	14004 SAGUARO	500.0	t	1	2	1	0.0013	1.9212	1.0000	1.0651	14	141	40	01	1
39 12 31	2															
14000 CHOLLA	500.0	14004 SAGUARO	500.0	t	1	3	1	0.0000	-1.1300	1.0000	1.0651	14	141	40	01	1
39 12 31	2															
15011 KYRENE	500.0	15041 SILVERKG	500.0	f	1	1	0	0.0000	-0.9300	1.0000	1.0299	14	158	40	01	1
39 12 31	80															
14002 MOENKOPI	500.0	24042 ELDORDO	500.0	f	1	1	1	0.0000	-1.1300	1.0000	1.0794	14	141	40	01	1
39 12 31	74															
14000 CHOLLA	500.0	14004 SAGUARO	500.0	f	1	1	1	0.0000	-1.1300	1.0000	1.0651	14	141	40	01	1
39 12 31	2															
14000 CHOLLA	500.0	14004 SAGUARO	500.0	f	1	2	1	0.0013	1.9212	1.0000	1.0651	14	141	40	01	1
39 12 31	2															

```

79199 HASSYAMP 500.0 22536 N.GILA 500.0 f 1 1 0 0.0000 -1.1400 1.0700 1.0700 14 248 40 01 1
39 12 31 136
79199 HASSYAMP 500.0 22536 N.GILA 500.0 t 1 3 0 0.0000 -1.1400 1.0700 1.0700 14 248 40 01 1
39 12 31 136
** shunt ** Page 1 [D:\working\SONGS-R\SCE filling-Rebuttal\To Rich Sheaffer\Q5\10hs_off_r74.sav]
Mon Dec 20 11:21:10 2004

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SONGS STUDY
2010 HEAVY SUMMER, SONGS OFFN
--FROM- ---FR--- -BKV- ---TO--- -BKV- ID CK SE ST ---G-PU--- --B-PU-- -VSCHED -V-ACT- -AR ZON YI MI DI
YO MO DO OWN
24042 ELDORDO 500.0 24086 LUGO 500.0 f 1 1 0 0.0000 -0.9100 1.0400 1.0535 24 240 40 01 1
39 12 31 74
24042 ELDORDO 500.0 24086 LUGO 500.0 t 1 3 0 0.0000 -0.9100 1.0400 1.0535 24 240 40 01 1
39 12 31 74
24086 LUGO 500.0 24097 MOHAVE 500.0 t 1 3 0 0.0000 -0.9100 1.0500 1.0396 24 240 40 01 1
39 12 31 74
24086 LUGO 500.0 24097 MOHAVE 500.0 f 1 1 0 0.0000 -0.9100 1.0500 1.0396 24 240 40 01 1
39 12 31 74

```

SDG1E CASE:

** shunt ** Page 1 [D:\working\SONGS-R\SCE filing-Rebuttal\To Rich Sheaffer\Q5\10hs_off_r74.sav]
Mon Dec 20 11:07:50 2004

SONGS STUDY
 2010 HEAVY SUMMER, SONGS OFFN
 --FROM- ---FR--- -BKV- ---TO--- -BKV- ID CK SE ST --G-PU--- --B-PU--- -VSCHED -V-ACT- -AR ZON YI MI DI
 YO MO DO OWN
 22536 N.GILA 500.0 22360 IMPRLVLY 500.0 t 1 2 0 0.0000 -1.1400 1.0600 1.0484 22 227 40 01 1
 39 12 31 136
 22152 CREELMAN 69.0 0 0.0 b 1 0 1 0.0000 0.1600 1.0290 1.0081 22 225 40 01 1
 39 12 31 136
 22452 MIGUEL 12.0 0 0.0 b3 3 0 0 0.0000 -0.4500 0.9750 0.9323 22 222 40 01 1
 39 12 31 136
 22452 MIGUEL 12.0 0 0.0 b2 2 0 0 0.0000 -0.4500 0.9750 0.9323 22 222 40 01 1
 39 12 31 136
 22452 MIGUEL 12.0 0 0.0 b4 4 0 0 0.0000 -0.4500 0.9750 0.9323 22 222 40 01 1
 39 12 31 136
 22452 MIGUEL 12.0 0 0.0 b1 1 0 0 0.0000 -0.4500 0.9750 0.9323 22 222 40 01 1
 39 12 31 136
 22540 NARROWS 69.0 0 0.0 b 1 0 1 0.0000 0.0200 0.9850 0.9258 22 225 40 01 1
 39 12 31 136
 ** shunt ** Page 1 [D:\working\SONGS-R\SCE filing-Rebuttal\To Rich Sheaffer\Q5\10hs_off_r74.sav]
 Mon Dec 20 11:08:54 2004

SONGS STUDY
 2010 HEAVY SUMMER, SONGS OFFN
 --FROM- ---FR--- -BKV- ---TO--- -BKV- ID CK SE ST --G-PU--- --B-PU--- -VSCHED -V-ACT- -AR ZON YI MI DI
 YO MO DO OWN
 14001 FOURCORN 500.0 14002 MOENKOPI 500.0 t 1 3 1 0.0000 -1.1300 1.0000 1.0576 14 141 40 01 1
 39 12 31 2
 14003 NAVAJO 500.0 26123 CRYSTAL 500.0 t 1 3 1 0.0000 -1.2000 1.0000 1.0799 14 141 40 01 1
 39 12 31 1
 14003 NAVAJO 500.0 26123 CRYSTAL 500.0 f 1 2 1 0.0237 0.0000 1.0000 1.0799 14 141 40 01 1
 39 12 21 1
 14003 NAVAJO 500.0 26123 CRYSTAL 500.0 f 1 1 1 0.0000 -1.9050 1.0000 1.0799 14 141 40 01 1
 39 12 31 1
 14002 MOENKOPI 500.0 26044 MARKETPL 500.0 t 1 3 0 0.0000 -1.1300 1.0000 1.0794 14 141 40 01 1
 39 12 31 1
 14002 MOENKOPI 500.0 26044 MARKETPL 500.0 t 1 2 0 0.0014 0.0000 1.0000 1.0794 14 141 40 01 1
 39 12 31 1
 14002 MOENKOPI 500.0 26044 MARKETPL 500.0 f 1 2 0 0.0014 0.0000 1.0000 1.0794 14 141 40 01 1
 39 12 31 1
 14002 MOENKOPI 500.0 26044 MARKETPL 500.0 f 1 1 0 0.0000 -1.1300 1.0000 1.0794 14 141 40 01 1
 39 12 31 1
 15001 CORONADO 500.0 14000 CHOLLA 500.0 f 1 1 1 0.0000 -0.9300 1.0000 1.0686 14 140 40 01 1
 39 12 31 80
 14006 YAVAPAI 500.0 14005 WESTWING 500.0 t 1 1 1 0.0004 0.0000 1.0000 1.0787 14 141 40 01 1
 39 12 31 2

sdge-linereactr.txt

14006 YAVAPAI	500.0	14005 WESTWING	500.0	f	1	2	1	0.0000	-1.0400	1.0000	1.0787	14	141	40	01	1
39 12 31 2																
15011 KYRENE	500.0	15051 BROWNING	500.0	f	1	1	0	0.0000	-0.9300	1.0000	1.0299	14	158	40	01	1
39 12 31 80																
14006 YAVAPAI	500.0	14005 WESTWING	500.0	f	1	1	1	0.0004	0.0000	1.0000	1.0787	14	141	40	01	1
39 12 31 2																
14003 NAVAJO	500.0	14005 WESTWING	500.0	t	1	2	1	0.0026	0.0000	1.0000	1.0799	14	141	40	01	1
39 12 31 1																
15001 CORONADO	500.0	15041 SILVERKG	500.0	f	1	1	1	0.0000	-0.9300	1.0000	1.0686	14	140	40	01	1
39 12 31 80																
15001 CORONADO	500.0	15041 SILVERKG	500.0	t	1	1	1	0.0000	-0.9300	1.0000	1.0686	14	140	40	01	1
39 12 31 80																
15021 PALOVRDE	500.0	24801 DEVERS	500.0	t	1	1	0	0.0000	-1.2731	1.0700	1.0700	14	248	40	01	1
39 12 31 74																
15021 PALOVRDE	500.0	24801 DEVERS	500.0	f	1	1	0	0.0000	-1.2731	1.0700	1.0700	14	248	40	01	1
39 12 31 74																
14003 NAVAJO	500.0	14005 WESTWING	500.0	t	1	3	1	0.0000	-1.5500	1.0000	1.0799	14	141	40	01	1
39 12 31 2																
14003 NAVAJO	500.0	14005 WESTWING	500.0	f	1	1	1	0.0000	-1.9050	1.0000	1.0799	14	141	40	01	1
39 12 31 1																
14003 NAVAJO	500.0	14005 WESTWING	500.0	f	1	2	1	0.0026	0.0000	1.0000	1.0799	14	141	40	01	1
39 12 31 2																
14002 MOENKOPI	500.0	14006 YAVAPAI	500.0	t	1	2	1	0.0005	0.0000	1.0000	1.0794	14	141	40	01	1
39 12 31 2																
14002 MOENKOPI	500.0	14006 YAVAPAI	500.0	f	1	1	1	0.0000	-0.5200	1.0000	1.0794	14	141	40	01	1
39 12 31 2																
14002 MOENKOPI	500.0	14006 YAVAPAI	500.0	f	1	2	1	0.0005	0.0000	1.0000	1.0794	14	141	40	01	1
39 12 31 2																
14002 MOENKOPI	500.0	24042 ELDORDO	500.0	t	1	1	0	0.0000	-1.1300	1.0000	1.0794	14	141	40	01	1
39 12 31 74																
14001 FOURCORN	500.0	14002 MOENKOPI	500.0	t	1	2	1	0.0009	1.6723	1.0000	1.0576	14	141	40	01	1
39 12 31 2																
14001 FOURCORN	500.0	14002 MOENKOPI	500.0	f	1	1	1	0.0000	-1.1300	1.0000	1.0576	14	141	40	01	1
39 12 31 2																
14001 FOURCORN	500.0	14002 MOENKOPI	500.0	f	1	2	1	0.0009	1.6723	1.0000	1.0576	14	141	40	01	1
39 12 31 2																
14000 CHOLLA	500.0	14004 SAGUARO	500.0	t	1	2	1	0.0013	1.9212	1.0000	1.0651	14	141	40	01	1
39 12 31 2																
14000 CHOLLA	500.0	14004 SAGUARO	500.0	t	1	3	1	0.0000	-1.1300	1.0000	1.0651	14	141	40	01	1
39 12 31 2																
15011 KYRENE	500.0	15041 SILVERKG	500.0	f	1	1	0	0.0000	-0.9300	1.0000	1.0299	14	158	40	01	1
39 12 31 80																
14002 MOENKOPI	500.0	24042 ELDORDO	500.0	f	1	1	1	0.0000	-1.1300	1.0000	1.0794	14	141	40	01	1
39 12 31 74																
14000 CHOLLA	500.0	14004 SAGUARO	500.0	f	1	1	1	0.0000	-1.1300	1.0000	1.0651	14	141	40	01	1
39 12 31 2																
14000 CHOLLA	500.0	14004 SAGUARO	500.0	f	1	2	1	0.0013	1.9212	1.0000	1.0651	14	141	40	01	1
39 12 31 2																

```

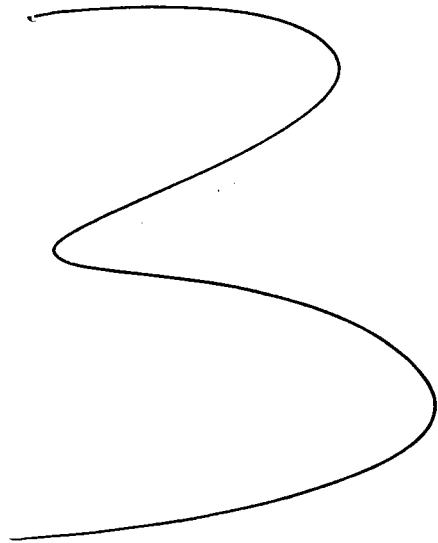
79199 HASSYAMP 500.0 22536 N.GILA 500.0 f 1 1 0 0.0000 -1.1400 1.0700 1.0700 14 248 40 01 1
39 12 31 136
79199 HASSYAMP 500.0 22536 N.GILA 500.0 t 1 3 0 0.0000 -1.1400 1.0700 1.0700 14 248 40 01 1
39 12 31 136
** shunt ** Page 1 [D:\working\SONGS-R\SCE filing-Rebuttal\To Rich Sheaffer\Q5\10hs_off_r74.sav]
Mon Dec 20 11:21:10 2004

```

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SONGS STUDY
2010 HEAVY SUMMER, SONGS OFFN
--FROM- ---FR--- -BKV- ---TO--- -BKV- ID CK SE ST ---G-PU--- --B-PU--- -VSCHED -V-ACT- -AR ZON YI MI DI
YO MO DO OWN
24042 ELDORDO 500.0 24086 LUGO 500.0 f 1 1 0 0.0000 -0.9100 1.0400 1.0535 24 240 40 01 1
39 12 31 74
24042 ELDORDO 500.0 24086 LUGO 500.0 t 1 3 0 0.0000 -0.9100 1.0400 1.0535 24 240 40 01 1
39 12 31 74
24086 LUGO 500.0 24097 MOHAVE 500.0 t 1 3 0 0.0000 -0.9100 1.0500 1.0396 24 240 40 01 1
39 12 31 74
24086 LUGO 500.0 24097 MOHAVE 500.0 f 1 1 0 0.0000 -0.9100 1.0500 1.0396 24 240 40 01 1
39 12 31 74

```



RS TAB 3

HS statistics

cases	Midway-Vincent	IPPDC	PDCI	WOR	N of Lugo	EOR	SCIT
2004HS - OP	2716	1648	2002	5813	1200	4049	13379
2005HS-APD	2623	1783	3104	4016	1200	3504	12726
2006HS (no iface)							
2007HS (PDCI S>N)							
2008HS -CAISO	3388	1561	3104	6297	1200	5091	15550
2012HS-APD	1877	1760	1202	6614	1200	4782	12653
2013HS-CAISO	3374	1760	1760	5495	1200	4811	13589
2014HS-APD	1298	1845	2002	7122	1200	4615	13467
Average path Flow	2546	1726	2196	5893	1200	4475	13561

Note: [1]. The North Lugo is not in the typical "iface" table so just use rating.

[2]. Use all possibl Heavy Summer cases avaiable, giving CAISO cases higher priority.

[3]. The table is only to show typical value.

SEE PAGE RS-11 OF SDGE
 TESTIMONY RE: TYPICAL PATH
 FLOWS.

4

SEE PAGE RS-13 OF
SDGE TESTIMONY RE:
SVC CORRECTION WITH
PATH RE-DISPATCHES.

Contingency code	Contingency Description	Element in violation	criteria	V2 - fine-tuning	SVC	Redis03 - all contingency	Redis031 - IV-ML
SVCs in changes	Deversvc 867/-300			867/-300		367/-300	367/-300
	VallySVC (667/-300)					667/-298	667/-299
	Sarrena 1200/-300			300/-300		300/-300	400/-300
	Viejosc 0/0			250/-100		250/-100	300/-100
		allow VIEJOSC svd to adjust in PT			No	Yes	Yes
	Santiago 0/0			150/-100		200/-100	200/-100
	Chino 230			0/0		100/-100	100/-100
	Talega 138 (300/-100)						
	IV 500 (360/-100)						
	TRABUCA 138 (for TS, 0/0)						100/-100
	SVC reduction at 500kV				-900	-1400	-1300
	SVC addition at 230kV				400	550	700
	Net SVC change from SCE original proposal				-500	-850	-600

Contingency code	Contingency Description	Element in violation	criteria	V2 - fine-tuning	SVC	Redis03 - all contingency	Redis031 - IV-ML
SDGE1	IV-ML 500with cross tripping			Convged1			
		TALEGA 230	Vdrop				
		S.ONOFRE 230	Vdrop				
		VIEJOSC 230	Vdrop	6.2%		5.4%	
		BARRE 230		5.5%			
		CHINO 230		6.1%		5.3%	
		ELLIS 230	Vdrop	5.3%			
		JOHANNA 230	Vdrop	5.8%			
		LEWIS 230	Vdrop	6.0%			
		SANTIAGO 230	Vdrop	5.8%			
		SERRANO 230	Vdrop	6.1%		5.2%	
		VILLA PK 230	Vdrop	6.0%		5.2%	
		MIRALOMW 230	Vdrop	5.6%			
		BARRE-ELLIS 230	Oload	3282A(2480)	3210A(2480)	3174A(2480)	
		CHINO-MIRALOME 230	Oload	2527A(2480)			
		VSTA-SANBRDNO 230	Oload	2624A(2400)	2506A(2400)	2486A(2400)	
SDGE2	HASSYAMP-N.GILA 500						
		VSTA-SANBRDNO 230 2	Oload				
		PaloVrde-Devers 500	Oload				
		Harquaha-Devers 500	Oload				
		DEV SVC-DEVERS 500	Oload				
		RAMONA 5 500	Vpost				
OTHER1	MOENPOKI-ELDORDO 500						
		IMPRLVLY-MIGUEL 500	Oload				
		N.Gila - IMPRLVLY 500	Oload				
		HASSYAMP-N.GILA 500	Oload				
		HARQUAHA-DEVERS 500	Oload				
OTHER2	PALOV RDE-DEVERS 500						
		EAGLEMTN 230	Vdrop				
		IRON MTN 230	Vdrop				
		J.HINDS 230	Vdrop				
		IMPRLVLY 500	Vdrop				
		Miguel 230	Vdrop				
		Miguel 500	Vdrop				
		N. Gila 500	Vdrop				
		IMPRLVLY-MIGUEL 500	Oload				
		N.Gila-Imprlvly 500	Oload				
		Hassyamp-N.Gila 500	Oload				
		Harquaha-Devers 500	Oload				
		Lugo-Victorvl 500	Oload				

OTHER3	LUGO-MIRALOMA 500 1&2	IMPRLVLY-MIGUEL 500	Oload	
		N.Gila-Imprlvly 500	Oload	
		Lugo-Serrano 500	Oload	3549A(3000)
		PALOVRDE-DEVERS 500	Oload	
		Hassyamp-N.Gila 500	Oload	
		HARQUAHA-DEVERS 500	Oload	
		VSTA-SANBRDNO 230 2	Oload	
OTHER4	VALLEYS-C-SERRANO 500	IMPRLVLY-MIGUEL 500	Oload	
		VSTA-SANBRDNO 230 2	Oload	
		N.GILA-IMPRLVLY 500	Oload	
		HASSYAMP-N.GILA 500	Oload	
OTHER5	PALOVRDE-DEVERS 500 1&2 - drop 781MW load at Padau 66	EAGLEMTN 230 (25401)	Vdrop	
		IRON MTN 230 (25405)	Vdrop	
		J.HINDS 230 (25406)	Vdrop	
		IMPRLVLY-MIGUEL 500	Oload	
		N.Gila-IMPRLVLY 500	Oload	
		HASSYAMP-N.Gila 500	Oload	
	PALOVRDE-DEVERS 500 1&2 - drop 781MW load at Padau 66 and 438 at Sanbrdna 66	N.Gila-IMPRLVLY 500	Oload	
		HASSYAMP-N.Gila 500	Oload	
OTHER6	DELAMO-ELLIS 230/BARRE-ELLIS 230	IMPRLVLY-MIGUEL 500	Oload	
		N.Gila-IMPRLVLY 500	Oload	
		HASSYAMP-N.Gila 500	Oload	
OTHER7	JOHANNA-ELLIS 230/SANTIAGO-ELLIS 230	Talega 230	Vdrop	
		JOHANNA 230 (24072)	Vdrop	
		S.ONOFRE 230	Vdrop	
		SANTIAGO 230 (24134)	Vdrop	
		IMPRLVLY-MIGUEL 500	Oload	
		N.Gila-IMPRLVLY 500	Oload	
		HASSYAMP-N.Gila 500	Oload	

Note

Note: [1] If SCE existing DPV1 and new DPV2 line all have 2700AMPS rating for the SC, many overload disappear. Currently, rating is at 1900AMPS.

[2] If short term upgrades of SWPL are at 2200 AMPS versus 1800AMPS now, many overloads are disappear as well.

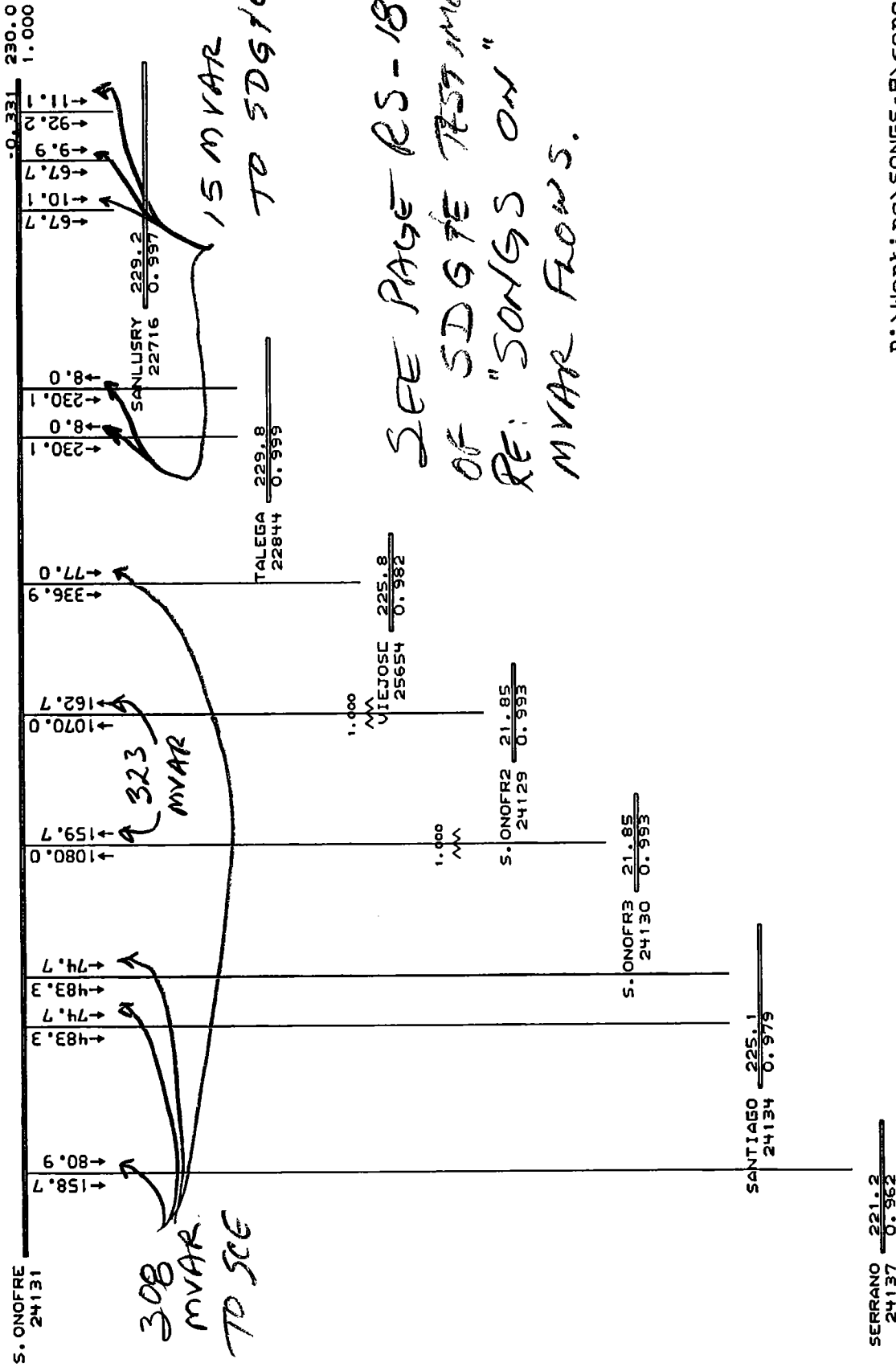
S

RS TAB 5

ASSUMPTIONS	SONGS on base	SONGS off Base	SONGS off no 500 (ie. SONGS Off 230)	SONGS off IVRMA	SONGS off VR	SDG&E final case
	10hs-on-base-f2.sav	10hs-off-base-f3.sav	all SVC	all SVC	all SVC	
South of SONGs Flow, from SDG&E to SCE ("-" means flow from SCE to SDG&E)			10hs-off-no500-f3-svc.sav	10hs-off-ivrma-f3-svc.sav	10hs-off-rv-f3-svc.sav	10hs-off-r74.sav
	MW	43	68	288	796	-210
	MVAR	-15	277	236	229	130
Valley-Rainbow line flow (From SCE to SDG&E)	MW	N/A	N/A	N/A	972	N/A
	MVAR	N/A	N/A	N/A	73	N/A
North of SONGs Flow (From S.Onofre 230 to SCE)	MW	1462				
	MVAR	308				
SONGs Total plant output (injected to S.Onofre 230)	MW	2150	N/A	N/A	N/A	N/A
	MVAR	323	N/A	N/A	N/A	N/A
% SONGS VAR Output to SCE		95.4%				
% SONGS VAR Output to SDG&E		4.6%				

SEE PAGE RS-18 OF SDG&E TESTIMONY RE: 95.4% / 4.6% SPLIT (RATIO) AND REFERENCES TO 204 AND 277 MVAR FLOW NUMBERS.

SONGS ON



SEE PAGE RS-18
OF SDG&E TEST MONY
RE: "SONGS ON"
MVAR FLOWS.

D:\Working\SONGS-R\Songs-inter
P mis = -0.0001 MW
Q mis = -0.0033 MVAR

Song off base

S. ONOFRE 24131 226.9
0.987

→ 262.0 → 93.2 → 192.2 → 34.4 → 192.2 → 34.4 → 192.2 → 34.4

→ 17.2 → 149.9 → 15.1 → 110.4 → 15.4 → 110.4

SANLUSRY 22716 227.9
0.991

→ 78.2 → 163.9 → 78.2 → 163.9

TALEGA 22844 228.0
0.991

→ 42.2 → 79.6

VIEJOSE 25654 225.0
0.978

1.000 → 0.0 → 0.0

S. ONOFR2 24129 21.11
0.960

1.000 → 0.0 → 0.0

S. ONOFR3 24130 21.11
0.960

SANTIAGO 24134 223.8
0.973

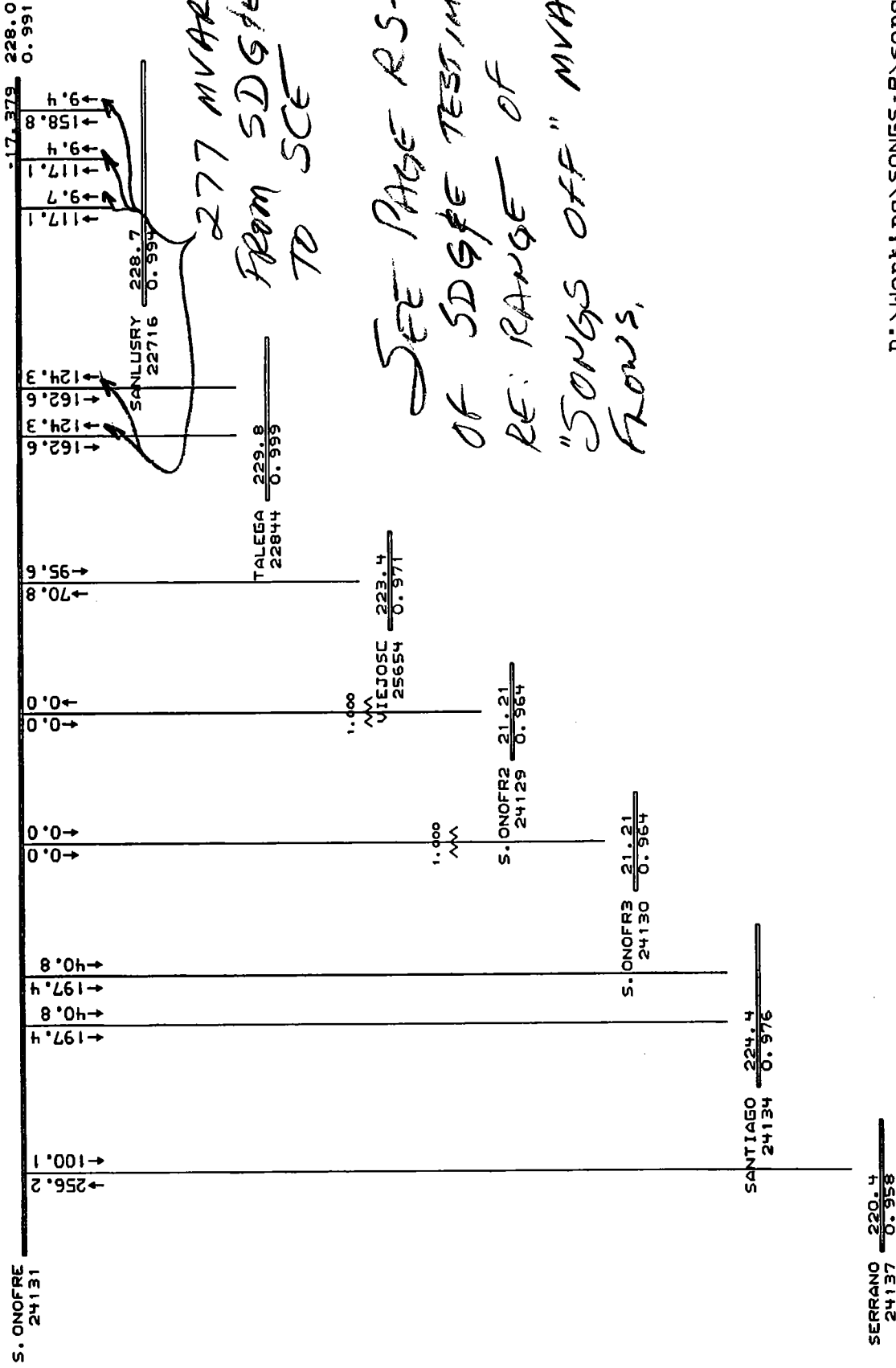
SERRANO 24137 220.1
0.957

204 MVARs
From SDG&E
TO SCE

SEE PAGE RS-18
OF SDG&E TESTIMONY
RE: RANGE OF
"SONGS OFF" MVAR
FLOWS.

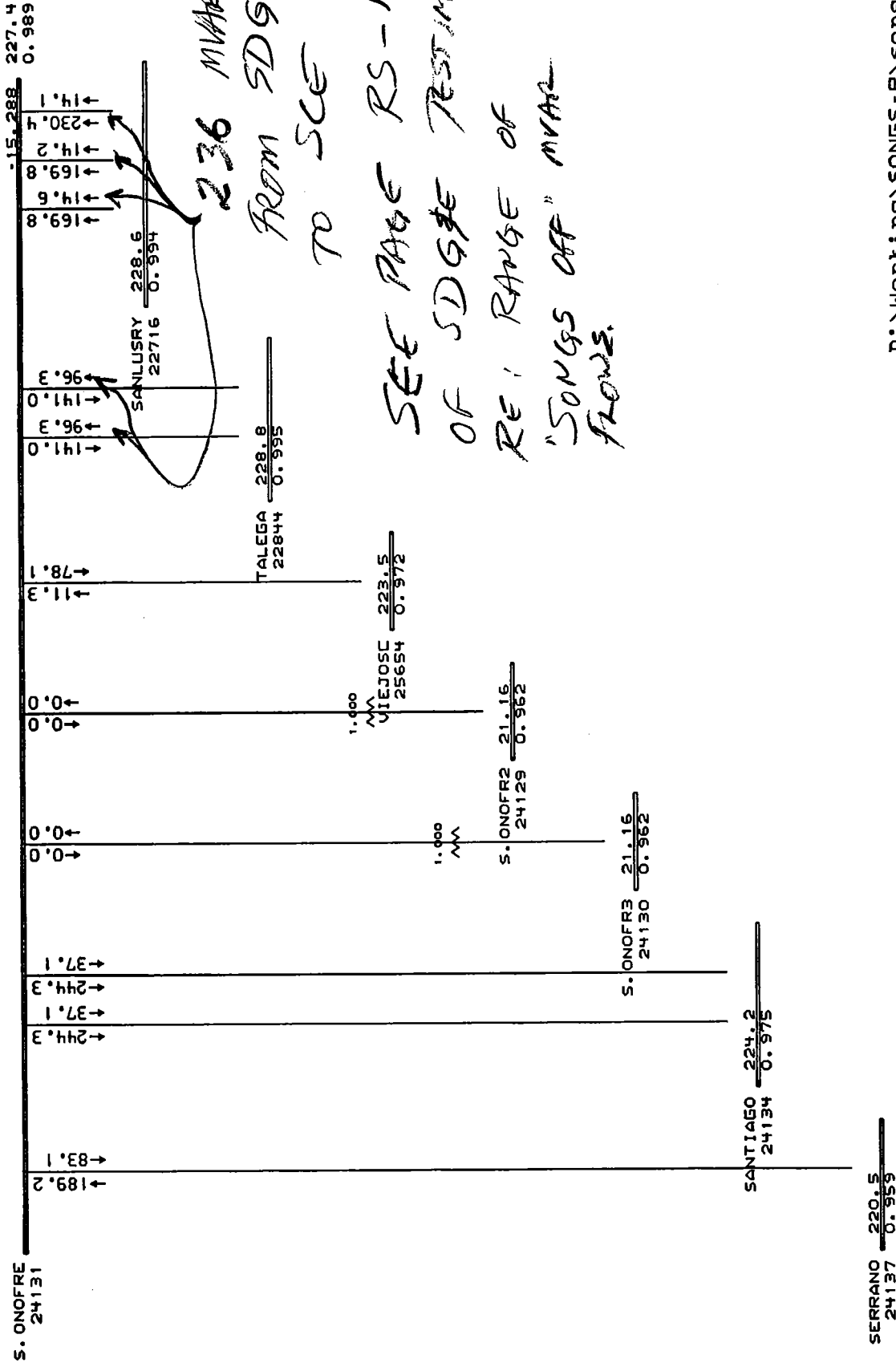
D:\Working\SONGS-R\Songs-Inter
P mis = 0.0013 MW
Q mis = 0.0003 MVAR

SONGS off, no 500



D:\Working\SONGS-R\songs-inter
 P mis = -0.0002 MW
 Q mis = -0.0032 MVAR

SONG off IV-Ramona



D:\Working\SONGS-R\songs-inter
 P mis = -0.0003 MW
 Q mis = 0.0015 MVAR

Songs off, Valley - Rainbow

S. ONOFRE 24131 228.1
0.992

← 27.9
← 68.8
← 349.6
← 44.5
← 349.6
← 44.5
← 44.5
← 44.5

S. ONOFR2 24129 21.22
0.965

← 0.0
← 0.0
← 0.0
← 0.0
← 0.0
← 0.0
← 0.0
← 0.0

1.000
MM
VIEJOSE 25654 224.3
0.975

← 70.7
← 125.0
← 195.3
← 80.9
← 195.3
← 80.9
← 195.3
← 80.9

TALEGA 22844 229.8
0.999

SANLUSRY 22716 229.3
0.997

← 24.7
← 164.1
← 20.9
← 120.8
← 120.8
← 21.1
← 120.8

SANTIAGO 24134 224.6
0.977

S. ONOFR3 24130 21.22
0.965

← 11.121
← 228.1
← 0.992

SERRANO 24137 220.9
0.960

229 MVARs
FROM SD SGE
TO SCE

SEE PAGE RS-18
OF SD GFE TESTimony
RE: RANGE OF
"Songs off" MVAR
FRANS.

D:\Working\SONES-R\songs-inter
P mis = -0.0002 MW
Q mis = 0.0002 MVAR

6

RS
TAB 6

SEE PAGE RS-19 OF SD SITE TEST/MONY
 RE: MVAR FLOW DURING NOV 19 - NOV 23, 2004
 SONGS 2-UNIT OUTAGE

Metered at SO

Date	SO2		SO3		23002	23006	23010	23007	23052	MVAR Flow South of SONGS
	MVAR OutPut	MVAR OutPut	MVAR OutPut	MVAR OutPut						
11/19/04 8:00	20.0	-1.6	-11.1	-24.7	0.2	-6.9	-6.7	-49.2		
11/19/04 9:00	0.1	-1.6	-14.2	-32.4	0.2	-17.8	-17.7	-81.9		
11/19/04 10:00	0.1	-1.6	-17.2	-38.5	0.2	-30.0	-29.9	-115.4		
11/19/04 11:00	0.1	-1.6	-19.8	-45.7	0.2	-28.8	-28.3	-122.4		
11/19/04 12:00	0.1	-1.6	-19.4	-42.8	0.2	-32.9	-33.5	-128.4		
11/19/04 13:00	0.1	-1.6	-14.9	-35.0	0.2	-30.9	-30.5	-111.0		
11/19/04 14:00	0.1	-1.6	-11.5	-29.4	0.2	-25.8	-25.1	-91.7		
11/19/04 15:00	0.1	-1.6	-8.6	-22.4	0.2	-17.2	-17.3	-65.3		
11/19/04 16:00	0.1	-1.7	-11.9	-27.4	0.2	-6.5	-5.6	-51.3		
11/19/04 17:00	0.1	-1.7	-13.1	-29.7	0.2	-17.7	-17.2	-77.5		
11/19/04 18:00	0.1	-1.8	-7.6	-18.8	0.2	-16.4	-15.8	-58.3		
11/19/04 19:00	0.0	-1.8	-12.5	-30.7	0.2	-10.0	-9.5	-62.5		
11/19/04 20:00	0.0	-1.9	-18.4	-41.0	0.2	2.6	3.3	-53.3		
11/19/04 21:00	0.0	-1.9	-16.2	-36.4	0.2	6.0	6.6	-39.8		
11/19/04 22:00	-0.1	-1.9	-15.8	-37.5	0.2	2.3	2.5	-48.3		
11/19/04 23:00	-0.1	-1.9	-31.6	-67.9	0.2	-15.1	-14.7	-129.0		
11/20/04 0:00	-0.1	-1.9	-25.2	-54.2	0.2	-11.9	-11.2	-102.4		
11/20/04 1:00	-0.1	-1.9	-22.9	-50.8	0.2	-7.3	-7.9	-88.8		
11/20/04 2:00	-0.1	-1.9	-21.6	-49.6	0.2	-5.9	-6.3	-83.2		
11/20/04 3:00	-0.1	-1.9	-20.8	-47.6	0.2	-0.7	-1.8	-70.6		
11/20/04 4:00	-0.1	-1.8	-19.7	-45.8	0.2	-4.9	-4.3	-74.5		
11/20/04 5:00	-0.1	-1.8	-13.9	-32.8	0.2	-51.9	-52.0	-150.5		
11/20/04 6:00	-0.1	-1.8	-16.0	-39.3	0.2	-39.2	-39.5	-133.7		
11/20/04 7:00	-0.1	-1.8	-12.5	-29.9	0.2	-8.2	-7.8	-58.2		
11/20/04 8:00	-0.1	-1.8	-18.4	-40.8	0.2	-12.8	-13.5	-85.4		
11/20/04 9:00	-0.1	-1.8	-15.9	-37.3	0.2	-18.7	-18.6	-90.3		
11/20/04 10:00	-0.1	-1.8	-15.8	-35.0	0.2	-21.4	-21.4	-93.4		
11/20/04 11:00	-0.1	-1.8	-17.7	-39.3	0.2	-22.8	-22.3	-101.9		
11/20/04 12:00	-0.1	-1.8	-15.7	-33.9	0.2	-16.0	-15.9	-81.2		
11/20/04 13:00	-0.1	-1.8	-16.5	-37.6	0.2	-17.9	-17.5	-89.3		
11/20/04 14:00	-0.1	-1.8	-12.5	-28.7	0.2	-12.5	-11.6	-65.1		
11/20/04 15:00	-0.1	-1.9	-1.3	-5.3	0.2	-16.9	-16.0	-39.4		

11/20/04 16:00	-0.1	-1.9	-3.8	-11.9	0.2	-17.2	-17.3	-50.1
11/20/04 17:00	-0.1	-1.9	-5.5	-16.2	0.2	-44.8	-44.6	-111.0
11/20/04 18:00	-0.1	-2.0	-11.2	-26.4	0.2	-48.6	-48.1	-134.0
11/20/04 19:00	-0.1	-2.0	-6.2	-17.0	0.2	-41.4	-41.5	-105.9
11/20/04 20:00	-0.1	-2.0	-10.0	-24.7	0.2	-24.9	-24.9	-84.4
11/20/04 21:00	-0.1	-2.1	-13.2	-30.6	0.2	-4.5	-3.5	-51.5
11/20/04 22:00	-0.1	-2.1	-22.8	-48.8	0.2	-0.3	-0.1	-71.8
11/20/04 23:00	-0.1	-2.1	-22.7	-48.5	0.2	-10.5	-10.6	-92.1
11/21/04 0:00	-0.1	-2.1	-12.3	-29.1	0.2	-13.1	-12.3	-66.6
11/21/04 1:00	-0.1	-2.1	-14.2	-33.6	0.2	-10.9	-9.9	-68.5
11/21/04 2:00	-0.1	-2.1	-12.4	-29.0	0.2	-2.3	-2.4	-45.9
11/21/04 3:00	-0.1	-2.1	-12.8	-30.0	0.2	-1.1	-1.2	-45.0
11/21/04 4:00	-0.1	-2.1	-13.4	-31.9	0.2	-4.5	-4.0	-53.5
11/21/04 5:00	-0.1	-2.1	-9.2	-21.7	0.2	-14.6	-14.2	-59.5
11/21/04 6:00	-0.1	-2.1	-14.1	-32.7	0.2	-13.3	-13.0	-72.9
11/21/04 7:00	-0.1	-2.1	-8.6	-22.0	0.2	-11.9	-11.3	-53.7
11/21/04 8:00	-0.1	-2.1	-10.0	-24.1	0.2	-4.8	-4.6	-43.3
11/21/04 9:00	-0.1	-2.1	-8.1	-22.5	0.2	-11.2	-10.5	-52.1
11/21/04 10:00	-0.1	-2.1	-10.3	-25.5	0.2	-11.0	-10.6	-57.1
11/21/04 11:00	-0.1	-2.1	-7.7	-19.8	0.2	-14.3	-14.5	-56.1
11/21/04 12:00	-0.1	-2.1	-7.7	-19.2	0.2	-10.8	-10.3	-47.8
11/21/04 13:00	-0.1	-2.1	-6.3	-18.9	0.2	-9.6	-9.6	-44.1
11/21/04 14:00	-0.1	-2.1	-5.2	-15.8	0.2	-10.3	-10.3	-41.4
11/21/04 15:00	-0.1	-2.1	-3.9	-12.5	0.2	-8.6	-7.9	-32.8
11/21/04 16:00	-0.1	-2.1	-3.8	-12.5	0.2	-11.6	-10.6	-38.3
11/21/04 17:00	-0.1	-2.1	-12.6	-30.3	0.2	-22.6	-21.9	-87.2
11/21/04 18:00	-0.1	-2.1	-12.4	-30.2	0.2	-40.8	-40.7	-123.9
11/21/04 19:00	-0.1	-2.1	-12.8	-29.9	0.2	-39.9	-39.6	-121.9
11/21/04 20:00	-0.1	-2.1	-12.2	-29.2	0.2	-23.8	-23.2	-88.3
11/21/04 21:00	-0.1	-2.1	-9.8	-23.8	0.2	-21.4	-21.4	-76.1
11/21/04 22:00	-0.1	-2.1	-12.1	-26.7	0.2	-15.3	-14.5	-68.4
11/21/04 23:00	-0.1	-2.1	-3.6	-9.5	0.2	-25.0	-24.5	-62.5
11/22/04 0:00	-0.1	-2.1	-4.4	-12.1	0.2	-21.9	-22.9	-61.0
11/22/04 1:00	-0.1	-2.1	-4.0	-10.7	0.2	-22.0	-22.2	-58.7
11/22/04 2:00	-0.1	-2.1	-4.9	-11.8	0.2	-19.8	-19.5	-55.8
11/22/04 3:00	-0.1	-2.1	-5.6	-13.1	0.2	-21.7	-21.1	-61.4
11/22/04 4:00	-0.1	-2.1	-6.8	-16.3	0.2	-24.0	-24.2	-71.1

11/22/04 5:00	-0.1	-2.1	-3.3	-10.4	0.2	-46.8	-46.3	-106.7
11/22/04 6:00	-0.1	-2.1	-8.0	-19.2	0.2	-52.6	-52.1	-131.7
11/22/04 7:00	-0.1	-2.1	-2.0	-9.5	0.2	-39.8	-40.3	-91.4
11/22/04 8:00	-0.1	-2.1	-21.5	-48.0	0.2	-6.9	-6.9	-83.1
11/22/04 9:00	-0.1	-2.1	-30.7	-66.2	0.2	-6.3	-5.5	-108.4
11/22/04 10:00	-0.1	-2.1	-32.8	-69.5	0.2	-12.9	-12.4	-127.5
11/22/04 11:00	-0.1	-2.1	-35.8	-76.0	0.2	-15.0	-14.7	-141.3
11/22/04 12:00	-0.1	-2.1	-35.2	-74.0	0.2	-14.1	-13.8	-136.9
11/22/04 13:00	-0.1	-2.1	-36.1	-77.4	0.2	-14.1	-13.8	-141.1
11/22/04 14:00	-0.1	-2.0	-34.4	-72.6	0.2	-9.2	-8.7	-124.7
11/22/04 15:00	-0.1	-2.0	-34.4	-72.4	0.2	-4.9	-4.4	-115.9
11/22/04 16:00	-0.1	-1.9	-36.8	-76.2	0.2	1.1	1.0	-110.8
11/22/04 17:00	-0.1	-1.9	-38.0	-80.6	0.2	-25.8	-25.4	-169.6
11/22/04 18:00	-0.1	-1.8	-35.6	-76.9	0.2	-26.0	-25.4	-163.7
11/22/04 19:00	-0.1	-1.8	-32.2	-68.9	0.2	-17.6	-16.9	-135.5
11/22/04 20:00	-0.1	-1.7	-31.0	-65.5	0.2	10.2	10.9	-75.3
11/22/04 21:00	-0.1	-1.7	-34.0	-71.7	0.2	9.0	8.9	-87.6
11/22/04 22:00	-0.1	-1.7	-30.9	-66.1	0.2	14.4	15.3	-67.0
11/22/04 23:00	-0.1	-1.7	-26.5	-57.2	0.2	15.0	15.4	-53.1
11/23/04 0:00	-0.1	-1.7	-14.0	-33.0	0.2	6.0	6.3	-34.4
11/23/04 1:00	-0.1	-1.8	-15.0	-32.6	0.2	8.5	8.7	-30.2
11/23/04 2:00	-0.1	-1.8	-15.0	-33.8	0.2	12.2	12.2	-24.3
11/23/04 3:00	-0.1	-1.8	-11.1	-26.3	0.2	-4.5	-3.8	-45.5
11/23/04 4:00	-0.1	-1.8	-14.0	-34.1	0.2	-6.7	-6.3	-60.9
11/23/04 5:00	-0.1	-1.8	-4.5	-13.9	0.2	-87.9	-87.5	-193.7
11/23/04 6:00	51.1	-1.8	4.3	3.0	0.2	-3.5	-3.3	0.7
11/23/04 7:00	47.8	-1.8	0.8	-4.3	0.2	-0.2	-0.2	-3.8
11/23/04 8:00	45.7	-1.8	4.9	4.2	0.2	0.4	1.2	10.9
11/23/04 9:00	43.2	-1.8	3.5	1.7	0.2	2.4	2.8	10.6
11/23/04 10:00	43.8	-1.8	1.3	-3.9	0.2	-0.8	-0.2	-3.4
11/23/04 11:00	42.7	-1.8	-0.7	-7.3	0.2	0.0	0.8	-7.0
11/23/04 12:00	38.0	-1.8	-2.1	-7.9	0.2	5.5	5.9	1.7
11/23/04 13:00	36.8	-1.8	-2.7	-8.9	0.2	3.9	4.5	-3.1
11/23/04 14:00	34.4	-1.8	-0.2	-3.7	0.2	3.6	4.3	4.3
11/23/04 15:00	30.4	-1.8	-1.1	-7.4	0.2	5.9	6.1	3.6
11/23/04 16:00	26.1	-1.8	-4.9	-12.3	0.2	4.2	4.6	-8.2
11/23/04 17:00	35.4	-1.7	-3.3	-10.3	0.2	-4.3	-4.0	-21.7

11/23/04 18:00 31.6 -1.7 -6.9 -17.9 0.2 1.3 1.9 -21.4

Average -73.0

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RS TAB 7

SEE PAGE RS-19 OF SDG&E
 TESTIMONY RE: MVAR FLOW FOR 2003

Date	Metered at SO							MVAR Flow South of SONGS
	SO2 MVAR OutPut	SO3 MVAR OutPut	23002	23006	23010	23007	23052	
1/1/03 0:00	10.8	4.3	0.1	0.0	0.0	0.0	0.0	0.1
1/1/03 1:00	9.5	3.5	0.1	0.0	0.0	0.0	0.0	0.1
1/1/03 2:00	6.9	0.3	0.1	0.0	0.0	0.0	0.0	0.1
1/1/03 3:00	6.9	0.2	0.1	0.0	0.0	0.0	0.0	0.1
1/1/03 4:00	7.1	0.1	0.1	0.0	0.0	0.0	0.0	0.1
1/1/03 5:00	7.4	0.5	0.1	0.0	0.0	0.0	0.0	0.1
1/1/03 6:00	4.9	0.5	0.1	0.0	0.0	0.0	0.0	0.1
1/1/03 7:00	1.2	0.4	0.1	0.0	0.0	0.0	0.0	0.1
1/1/03 8:00	1.1	0.4	0.1	0.0	0.0	0.0	0.0	0.1
1/1/03 9:00	1.0	0.4	0.1	0.0	0.0	0.0	0.0	0.1
1/1/03 10:00	0.9	0.3	0.1	0.0	0.0	0.0	0.0	0.1
1/1/03 11:00	0.8	0.3	0.1	0.0	0.0	0.0	0.0	0.1
1/1/03 12:00	0.8	0.3	0.1	0.0	0.0	0.0	0.0	0.1
1/1/03 13:00	0.7	0.3	0.1	0.0	0.0	0.0	0.0	0.1
1/1/03 14:00	0.6	0.2	0.1	0.0	0.0	0.0	0.0	0.1
1/1/03 15:00	0.5	0.2	0.1	0.0	0.0	0.0	0.0	0.1
1/1/03 16:00	0.5	0.2	0.0	0.0	0.0	0.0	0.0	0.1
1/1/03 17:00	0.4	0.1	0.0	0.0	0.0	0.0	0.0	0.1
1/1/03 18:00	2.5	2.1	0.0	0.0	0.0	0.0	0.0	0.1
1/1/03 19:00	1.2	1.0	0.0	0.0	0.0	0.0	0.0	0.1
1/1/03 20:00	2.2	2.2	0.0	0.0	0.0	0.0	0.0	0.1
1/1/03 21:00	0.8	0.6	0.0	0.0	0.0	0.0	0.0	0.0
1/1/03 22:00	0.8	0.4	0.0	0.0	0.0	0.0	0.0	0.0
1/1/03 23:00	0.5	0.8	0.0	0.0	0.0	0.0	0.0	0.0
1/2/03 0:00	0.8	0.9	0.0	0.0	0.0	0.0	0.0	0.0
1/2/03 1:00	1.0	1.1	0.0	0.0	0.0	0.0	0.0	0.0
1/2/03 2:00	1.3	1.3	0.0	0.0	0.0	0.0	0.0	0.0
1/2/03 3:00	1.5	1.5	0.0	0.0	0.0	0.0	0.0	0.0
1/2/03 4:00	1.8	1.6	0.0	0.0	0.0	0.0	0.0	0.0
1/2/03 5:00	2.1	1.8	0.0	0.0	0.0	0.0	0.0	0.0
1/2/03 6:00	1.7	1.9	0.0	0.0	0.0	0.0	0.0	0.0
1/2/03 7:00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1/2/03 8:00	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0
1/2/03 9:00	0.3	0.2	0.0	0.0	0.0	0.0	0.0	0.0
1/2/03 10:00	0.5	0.3	0.0	0.0	0.1	0.0	0.0	0.1
1/2/03 11:00	0.7	0.4	0.0	0.0	0.1	0.0	0.0	0.1
1/2/03 12:00	0.9	0.5	0.0	0.0	0.1	0.0	0.0	0.1
1/2/03 13:00	1.0	0.6	0.0	0.0	0.1	0.0	0.0	0.1
1/2/03 14:00	1.4	1.0	0.0	0.0	0.1	0.0	0.0	0.1
1/2/03 15:00	1.7	1.4	0.0	0.0	0.2	0.0	0.0	0.2
1/2/03 16:00	2.1	1.8	0.0	0.0	0.2	0.0	0.0	0.2
1/2/03 17:00	2.5	2.2	0.0	0.0	0.2	0.0	0.0	0.2
1/2/03 18:00	1.9	1.5	0.0	0.0	0.2	0.0	0.0	0.2
1/2/03 19:00	1.9	1.5	0.0	0.0	0.2	0.0	0.0	0.2
1/2/03 20:00	1.9	1.4	0.0	0.0	0.3	0.0	0.0	0.3
1/2/03 21:00	3.5	3.2	0.0	0.0	0.3	0.0	0.0	0.3

1/2/03 22:00	3.1	3.0	0.0	0.0	0.3	0.0	0.0	0.3
1/2/03 23:00	4.1	3.9	0.0	0.0	0.3	0.0	0.0	0.3
1/3/03 0:00	1.3	1.4	0.0	0.0	0.3	0.0	0.0	0.3
1/3/03 1:00	0.9	0.5	0.0	0.0	0.4	0.0	0.0	0.4
1/3/03 2:00	2.7	2.5	0.0	0.0	0.4	0.0	0.0	0.4
1/3/03 3:00	1.2	0.6	0.0	0.0	0.4	0.0	0.0	0.4
1/3/03 4:00	1.8	1.7	0.0	0.0	0.4	0.0	0.0	0.4
1/3/03 5:00	3.9	3.0	0.0	0.0	0.4	0.0	0.0	0.4
1/3/03 6:00	0.9	0.1	0.0	0.0	0.5	0.0	0.0	0.5
1/3/03 7:00	1.7	0.3	0.0	0.0	0.5	0.0	0.0	0.5
1/3/03 8:00	2.5	0.4	0.0	0.0	0.5	0.0	0.0	0.5
1/3/03 9:00	0.5	0.6	0.0	0.0	0.5	0.0	0.0	0.5
1/3/03 10:00	3.0	0.7	0.0	0.0	0.5	0.0	0.0	0.5
1/3/03 11:00	0.4	0.9	0.0	0.0	0.6	0.0	0.0	0.6
1/3/03 12:00	1.2	1.7	0.0	0.0	0.6	0.0	0.0	0.6
1/3/03 13:00	1.9	2.6	0.0	0.0	0.6	0.0	0.0	0.6
1/3/03 14:00	1.5	2.1	0.0	0.0	0.6	0.0	0.0	0.6
1/3/03 15:00	1.0	1.6	0.0	0.0	0.6	0.0	0.0	0.6
1/3/03 16:00	0.6	1.1	0.0	0.0	0.7	0.0	0.0	0.7
1/3/03 17:00	0.1	0.6	0.0	0.0	0.7	0.0	0.0	0.7
1/3/03 18:00	0.6	1.2	0.0	0.0	0.7	0.0	0.0	0.7
1/3/03 19:00	1.1	1.8	0.0	0.0	0.7	0.0	0.0	0.7
1/3/03 20:00	1.6	2.3	0.0	0.0	0.7	0.0	0.0	0.7
1/3/03 21:00	2.1	2.9	0.0	0.0	0.8	0.0	0.0	0.8
1/3/03 22:00	2.6	3.5	0.0	0.0	0.8	0.0	0.0	0.8
1/3/03 23:00	2.2	2.6	0.0	0.0	0.8	0.0	0.0	0.8
1/4/03 0:00	3.6	2.2	0.0	0.0	0.8	0.0	0.0	0.8
1/4/03 1:00	2.7	1.0	0.0	0.0	0.8	0.0	0.0	0.8
1/4/03 2:00	0.5	0.7	0.0	0.0	0.9	0.0	0.0	0.9
1/4/03 3:00	1.8	0.4	0.0	0.0	0.9	0.0	0.0	0.9
1/4/03 4:00	2.2	0.3	0.0	0.0	0.9	0.0	0.0	0.9
1/4/03 5:00	0.3	0.1	0.0	0.0	0.9	0.0	0.0	0.9
1/4/03 6:00	0.4	0.4	0.0	0.0	0.9	0.0	0.0	0.9
1/4/03 7:00	0.5	0.3	0.0	0.0	1.0	0.0	0.0	1.0
1/4/03 8:00	0.6	0.2	0.0	0.0	1.0	0.0	0.0	1.0
1/4/03 9:00	0.8	0.1	0.0	0.0	1.0	0.0	0.0	1.0
1/4/03 10:00	0.9	1.2	0.0	0.0	1.0	0.0	0.0	1.0
1/4/03 11:00	0.9	1.2	0.0	0.0	1.0	0.0	0.0	1.0
1/4/03 12:00	0.9	1.2	0.0	0.0	1.1	0.0	0.0	1.1
1/4/03 13:00	0.8	1.2	0.0	0.0	1.1	0.0	0.0	1.1
1/4/03 14:00	0.8	1.2	0.0	0.0	1.1	0.0	0.0	1.1
1/4/03 15:00	0.8	1.3	0.0	0.0	1.1	0.0	0.0	1.1
1/4/03 16:00	0.8	1.3	0.0	0.0	1.1	0.0	0.0	1.1
1/4/03 17:00	0.8	1.3	0.0	0.0	1.2	0.0	0.0	1.2
1/4/03 18:00	4.5	5.6	0.0	0.0	1.2	0.0	0.0	1.2
1/4/03 19:00	1.4	2.5	0.0	0.0	1.2	0.0	0.0	1.2
1/4/03 20:00	0.8	0.5	0.0	0.0	1.2	0.0	0.0	1.2
1/4/03 21:00	0.3	0.8	0.0	0.0	1.2	0.0	0.0	1.2
1/4/03 22:00	1.3	1.5	0.0	0.0	1.3	0.0	0.0	1.3
1/4/03 23:00	4.0	4.4	0.0	0.0	1.3	0.0	0.0	1.3
1/5/03 0:00	2.3	2.7	0.0	0.0	1.3	0.0	0.0	1.3
1/5/03 1:00	2.2	2.6	0.0	0.0	1.3	0.0	0.0	1.3

1/5/03 2:00	2.1	2.4	0.0	0.0	1.3	0.0	0.0	1.3
1/5/03 3:00	2.0	2.3	0.0	0.0	1.4	0.0	0.0	1.4
1/5/03 4:00	1.9	2.1	0.0	0.0	1.4	0.0	0.0	1.4
1/5/03 5:00	1.8	1.9	0.0	0.0	1.4	0.0	0.0	1.4
1/5/03 6:00	1.7	1.8	0.0	0.0	1.4	0.0	0.0	1.4
1/5/03 7:00	1.6	1.6	0.0	0.0	1.4	0.0	0.0	1.4
1/5/03 8:00	1.5	1.5	0.0	0.0	1.5	0.0	0.0	1.5
1/5/03 9:00	1.4	1.3	0.0	0.0	1.5	0.0	0.0	1.5
1/5/03 10:00	1.3	1.2	0.0	0.0	1.5	0.0	0.0	1.5
1/5/03 11:00	1.2	1.0	0.0	0.0	1.5	0.0	0.0	1.5
1/5/03 12:00	1.0	0.8	0.0	0.0	1.5	0.0	0.0	1.5
1/5/03 13:00	0.9	0.7	0.0	0.0	1.6	0.0	0.0	1.6
1/5/03 14:00	0.8	0.5	0.0	0.0	1.6	0.0	0.0	1.6
1/5/03 15:00	0.7	0.4	0.0	0.0	1.6	0.0	0.0	1.6
1/5/03 16:00	0.6	0.6	0.0	0.0	1.6	0.0	0.0	1.6
1/5/03 17:00	0.5	0.9	0.0	0.0	1.6	0.0	0.0	1.6
1/5/03 18:00	6.5	7.1	0.0	0.0	1.7	0.0	0.0	1.7
1/5/03 19:00	3.8	3.9	0.0	0.0	1.7	0.0	0.0	1.7
1/5/03 20:00	3.1	3.6	0.0	0.0	1.7	0.0	0.0	1.7
1/5/03 21:00	2.2	2.5	0.0	0.0	1.7	0.0	0.0	1.7
1/5/03 22:00	0.5	0.9	0.0	0.0	1.7	0.0	0.0	1.7
1/5/03 23:00	4.9	5.1	0.0	0.0	1.8	0.0	0.0	1.8
1/6/03 0:00	2.5	2.8	0.0	0.0	1.8	0.0	0.0	1.8
1/6/03 1:00	3.1	3.8	0.0	0.0	1.8	0.0	0.0	1.8
1/6/03 2:00	2.5	0.1	0.0	0.0	1.8	0.0	0.0	1.8
1/6/03 3:00	1.8	0.1	0.0	0.0	1.8	0.0	0.0	1.8
1/6/03 4:00	1.2	1.0	0.0	0.0	1.9	0.0	0.0	1.9
1/6/03 5:00	3.4	3.6	0.0	0.0	1.9	0.0	0.0	1.9
1/6/03 6:00	2.7	3.0	0.0	0.0	1.9	0.0	0.0	1.9
1/6/03 7:00	0.1	0.3	0.0	0.0	1.9	0.0	0.0	1.9
1/6/03 8:00	1.7	3.8	0.0	0.0	1.9	0.0	0.0	1.9
1/6/03 9:00	3.4	7.6	0.0	0.0	2.0	0.0	0.0	2.0
1/6/03 10:00	5.0	13.1	0.0	0.0	2.0	0.0	0.0	2.0
1/6/03 11:00	6.6	0.1	0.0	0.0	2.0	0.0	0.0	2.0
1/6/03 12:00	3.2	0.1	0.0	0.0	2.0	0.0	0.0	2.0
1/6/03 13:00	3.0	0.1	0.0	0.0	2.0	0.0	0.0	2.0
1/6/03 14:00	0.6	0.1	0.0	0.0	2.1	0.0	0.0	2.1
1/6/03 15:00	0.9	0.1	0.0	0.0	2.1	0.0	0.0	2.1
1/6/03 16:00	1.2	0.1	0.0	0.0	2.1	0.0	0.0	2.1
1/6/03 17:00	1.4	0.1	0.0	0.0	2.1	0.0	0.0	2.1
1/6/03 18:00	4.0	0.1	0.0	0.0	2.1	0.0	0.0	2.1
1/6/03 19:00	3.3	0.1	0.0	0.0	2.2	0.0	0.0	2.2
1/6/03 20:00	2.7	0.1	0.0	0.0	2.2	0.0	0.0	2.2
1/6/03 21:00	2.0	0.1	0.0	0.0	2.2	0.0	0.0	2.2
1/6/03 22:00	1.3	0.1	0.0	0.0	2.2	0.0	0.0	2.2
1/6/03 23:00	3.0	0.1	0.0	0.0	2.2	0.0	0.0	2.2
1/7/03 0:00	2.7	0.1	0.0	0.0	2.3	0.0	0.0	2.3
1/7/03 1:00	1.9	0.1	0.0	0.0	2.3	0.0	0.0	2.3
1/7/03 2:00	0.9	0.1	0.0	0.0	2.3	0.0	0.0	2.3
1/7/03 3:00	0.6	0.1	0.0	0.0	2.3	0.0	0.0	2.3
1/7/03 4:00	2.1	0.1	0.0	0.0	2.3	0.0	0.0	2.3
1/7/03 5:00	6.0	0.1	0.0	0.0	2.4	0.0	0.0	2.4

1/7/03 6:00	5.4	0.1	0.0	0.0	2.4	0.0	0.0	2.4
1/7/03 7:00	5.3	0.1	0.0	0.0	2.4	0.0	0.0	2.4
1/7/03 8:00	4.7	0.1	0.0	0.0	2.4	0.0	0.0	2.4
1/7/03 9:00	8.7	0.1	0.0	0.0	2.4	0.0	0.0	2.4
1/7/03 10:00	10.1	0.1	0.0	0.0	2.5	0.0	0.0	2.5
1/7/03 11:00	7.6	0.1	0.0	0.0	2.5	0.0	0.0	2.5
1/7/03 12:00	10.9	0.1	0.0	0.0	2.5	0.0	0.0	2.5
1/7/03 13:00	10.5	0.1	0.0	0.0	2.5	0.0	0.0	2.5
1/7/03 14:00	7.5	0.1	0.0	0.0	2.5	0.0	0.0	2.5
1/7/03 15:00	4.0	0.1	0.0	0.0	2.6	0.0	0.0	2.6
1/7/03 16:00	1.5	0.1	0.0	0.0	2.6	0.0	0.0	2.6
1/7/03 17:00	6.1	0.1	0.0	0.0	2.6	0.0	0.0	2.6
1/7/03 18:00	5.6	0.1	0.0	0.0	2.6	0.0	0.0	2.6
1/7/03 19:00	4.9	0.1	0.0	0.0	2.6	0.0	0.0	2.6
1/7/03 20:00	4.2	0.1	0.0	0.0	2.6	0.0	0.0	2.6
1/7/03 21:00	3.5	0.1	0.0	0.0	2.7	0.0	0.0	2.7
1/7/03 22:00	2.8	0.1	0.0	0.0	2.7	0.0	0.0	2.7
1/7/03 23:00	4.4	0.1	0.0	0.0	2.7	0.0	0.0	2.7
1/8/03 0:00	1.2	0.1	0.0	0.0	2.7	0.0	0.0	2.7
1/8/03 1:00	1.1	0.1	0.0	0.0	2.7	0.0	0.0	2.7
1/8/03 2:00	1.1	0.1	0.0	0.0	2.8	0.0	0.0	2.8
1/8/03 3:00	1.0	0.1	0.0	0.0	2.8	0.0	0.0	2.8
1/8/03 4:00	1.0	0.1	0.0	0.0	2.8	0.0	0.0	2.8
1/8/03 5:00	0.9	0.1	0.0	0.0	2.8	0.0	0.0	2.8
1/8/03 6:00	1.0	0.1	0.0	0.0	2.8	0.0	0.0	2.8
1/8/03 7:00	1.2	0.1	0.0	0.0	2.9	0.0	0.0	2.9
1/8/03 8:00	1.3	0.1	0.0	0.0	2.9	0.0	0.0	2.9
1/8/03 9:00	1.5	0.1	0.0	0.0	2.9	0.0	0.0	2.9
1/8/03 10:00	1.6	0.1	0.0	0.0	2.9	0.0	0.0	2.9
1/8/03 11:00	1.7	0.1	0.0	0.0	2.9	0.0	0.0	2.9
1/8/03 12:00	1.9	0.1	0.0	0.0	3.0	0.0	0.0	3.0
1/8/03 13:00	2.0	0.1	0.0	0.0	3.0	0.0	0.0	3.0
1/8/03 14:00	2.2	0.1	0.0	0.0	3.0	0.0	0.0	3.0
1/8/03 15:00	2.3	0.1	0.0	0.0	3.0	0.0	0.0	3.0
1/8/03 16:00	2.4	0.1	0.0	0.0	3.0	0.0	0.0	3.0
1/8/03 17:00	2.6	0.1	0.0	0.0	3.1	0.0	0.0	3.1
1/8/03 18:00	3.0	0.1	0.0	0.0	3.1	0.0	0.0	3.1
1/8/03 19:00	3.5	0.1	0.0	0.0	3.1	0.0	0.0	3.1
1/8/03 20:00	3.9	0.1	0.0	0.0	3.1	0.0	0.0	3.1
1/8/03 21:00	4.4	0.1	0.0	0.0	3.1	0.0	0.0	3.1
1/8/03 22:00	2.7	0.1	0.0	0.0	3.2	0.0	0.0	3.2
1/8/03 23:00	3.0	0.1	0.0	0.0	3.2	0.0	0.0	3.2
1/9/03 0:00	3.0	0.1	0.0	0.0	3.2	0.0	0.0	3.2
1/9/03 1:00	3.0	0.1	0.0	0.0	3.2	0.0	0.0	3.2
1/9/03 2:00	3.0	0.1	0.0	0.0	3.2	0.0	0.0	3.2
1/9/03 3:00	3.0	0.1	0.0	0.0	3.3	0.0	0.0	3.3
1/9/03 4:00	3.0	0.1	0.0	0.0	3.3	0.0	0.0	3.3
1/9/03 5:00	3.0	0.1	0.0	0.0	3.3	0.0	0.0	3.3
1/9/03 6:00	3.0	0.1	0.0	0.0	3.3	0.0	0.0	3.3
1/9/03 7:00	1.0	0.1	0.0	0.0	3.3	0.0	0.0	3.3
1/9/03 8:00	2.0	0.1	0.0	0.0	3.4	0.0	0.0	3.4
1/9/03 9:00	3.0	0.1	0.0	0.0	3.4	0.0	0.0	3.4

1/9/03 10:00	4.0	0.1	0.0	0.0	3.4	0.0	0.0	3.4
1/9/03 11:00	4.5	0.1	0.0	0.0	3.4	0.0	0.0	3.4
1/9/03 12:00	2.7	0.1	0.0	0.0	3.4	0.0	0.0	3.4
1/9/03 13:00	2.2	0.1	0.0	0.0	3.5	0.0	0.0	3.5
1/9/03 14:00	1.7	0.1	0.0	0.0	3.5	0.0	0.0	3.5
1/9/03 15:00	1.2	0.1	0.0	0.0	3.5	0.0	0.0	3.5
1/9/03 16:00	0.7	0.1	0.0	0.0	3.5	0.0	0.0	3.5
1/9/03 17:00	0.3	0.1	0.0	0.0	3.5	0.0	0.0	3.5
1/9/03 18:00	1.7	0.1	0.0	0.0	3.6	0.0	0.0	3.6
1/9/03 19:00	2.1	0.1	0.0	0.0	3.6	0.0	0.0	3.6
1/9/03 20:00	2.6	0.1	0.0	0.0	3.6	0.0	0.0	3.6
1/9/03 21:00	3.0	0.1	0.0	0.0	3.6	0.0	0.0	3.6
1/9/03 22:00	3.5	0.1	0.0	0.0	3.6	0.0	0.0	3.6
1/9/03 23:00	3.4	0.1	0.0	0.0	3.7	0.0	0.0	3.7
1/10/03 0:00	4.0	0.1	0.0	0.0	3.7	0.0	0.0	3.7
1/10/03 1:00	3.2	0.1	0.0	0.0	3.7	0.0	0.0	3.7
1/10/03 2:00	1.2	0.1	0.0	0.0	3.7	0.0	0.0	3.7
1/10/03 3:00	1.0	0.1	0.0	0.0	3.7	0.0	0.0	3.7
1/10/03 4:00	2.1	0.1	0.0	0.0	3.8	0.0	0.0	3.8
1/10/03 5:00	3.2	0.1	0.0	0.0	3.8	0.0	0.0	3.8
1/10/03 6:00	4.9	0.1	0.0	0.0	3.8	0.0	0.0	3.8
1/10/03 7:00	3.7	0.1	0.0	0.0	3.8	0.0	0.0	3.8
1/10/03 8:00	2.5	0.1	0.0	0.0	3.8	0.0	0.0	3.8
1/10/03 9:00	1.3	0.1	0.0	0.0	3.9	0.0	0.0	3.9
1/10/03 10:00	0.1	0.1	0.0	0.0	3.9	0.0	0.0	3.9
1/10/03 11:00	0.1	0.1	0.0	0.0	3.9	0.0	0.0	3.9
1/10/03 12:00	0.1	0.1	0.0	0.0	3.9	0.0	0.0	3.9
1/10/03 13:00	0.1	0.1	0.0	0.0	3.9	0.0	0.0	3.9
1/10/03 14:00	0.1	0.1	0.0	0.0	4.0	0.0	0.0	4.0
1/10/03 15:00	0.1	0.1	0.0	0.0	4.0	0.0	0.0	4.0
1/10/03 16:00	0.1	0.1	0.0	0.0	4.0	0.0	0.0	4.0
1/10/03 17:00	0.1	0.1	0.0	0.0	4.0	0.0	0.0	4.0
1/10/03 18:00	0.1	0.1	0.0	0.0	4.0	0.0	0.0	4.0
1/10/03 19:00	0.5	0.1	0.0	0.0	4.1	0.0	0.0	4.1
1/10/03 20:00	1.0	0.1	0.0	0.0	4.1	0.0	0.0	4.1
1/10/03 21:00	1.4	0.1	0.0	0.0	4.1	0.0	0.0	4.1
1/10/03 22:00	1.8	0.1	0.0	0.0	4.1	0.0	0.0	4.1
1/10/03 23:00	1.7	0.1	0.0	0.0	4.1	0.0	0.0	4.1
1/11/03 0:00	1.5	0.1	0.0	0.0	4.2	0.0	0.0	4.2
1/11/03 1:00	2.5	0.1	0.0	0.0	4.2	0.0	0.0	4.2
1/11/03 2:00	0.4	0.1	0.0	0.0	4.2	0.0	0.0	4.2
1/11/03 3:00	0.4	0.1	0.0	0.0	4.2	0.0	0.0	4.2
1/11/03 4:00	0.4	0.1	0.0	0.0	4.2	0.0	0.0	4.2
1/11/03 5:00	1.4	0.1	0.0	0.0	4.3	0.0	0.0	4.3
1/11/03 6:00	1.6	0.1	0.0	0.0	4.3	0.0	0.0	4.3
1/11/03 7:00	1.8	0.1	0.0	0.0	4.3	0.0	0.0	4.3
1/11/03 8:00	2.0	0.1	0.0	0.0	4.3	0.0	0.0	4.3
1/11/03 9:00	2.1	0.1	0.0	0.0	4.3	0.0	0.0	4.3
1/11/03 10:00	2.3	0.1	0.0	0.0	4.4	0.0	0.0	4.4
1/11/03 11:00	2.5	0.1	0.0	0.0	4.4	0.0	0.0	4.4
1/11/03 12:00	2.7	0.1	0.0	0.0	4.4	0.0	0.0	4.4
1/11/03 13:00	2.9	0.1	0.0	0.0	4.4	0.0	0.0	4.4

1/11/03 14:00	3.0	0.1	0.0	0.0	4.4	0.0	0.0	4.4
1/11/03 15:00	3.2	0.1	0.0	0.0	4.5	0.0	0.0	4.5
1/11/03 16:00	3.4	0.1	0.0	0.0	4.5	0.0	0.0	4.5
1/11/03 17:00	3.6	0.1	0.0	0.0	4.5	0.0	0.0	4.5
1/11/03 18:00	3.8	0.1	0.0	0.0	4.5	0.0	0.0	4.5
1/11/03 19:00	1.3	0.1	0.0	0.0	4.5	0.0	0.0	4.5
1/11/03 20:00	1.4	0.1	0.0	0.0	4.6	0.0	0.0	4.6
1/11/03 21:00	4.0	0.1	0.0	0.0	4.6	0.0	0.0	4.6
1/11/03 22:00	5.1	0.1	0.0	0.0	4.6	0.0	0.0	4.6
1/11/03 23:00	1.3	0.1	0.0	0.0	4.6	0.0	0.0	4.6
1/12/03 0:00	0.5	0.1	0.0	0.0	4.6	0.0	0.0	4.6
1/12/03 1:00	0.5	0.1	0.0	0.0	4.7	0.0	0.0	4.7
1/12/03 2:00	0.5	0.1	0.0	0.0	4.7	0.0	0.0	4.7
1/12/03 3:00	0.5	0.1	0.0	0.0	4.7	0.0	0.0	4.7
1/12/03 4:00	0.6	0.1	0.0	0.0	4.7	0.0	0.0	4.7
1/12/03 5:00	0.6	0.1	0.0	0.0	4.7	0.0	0.0	4.7
1/12/03 6:00	0.6	0.1	0.0	0.0	4.8	0.0	0.0	4.8
1/12/03 7:00	0.6	0.1	0.0	0.0	4.8	0.0	0.0	4.8
1/12/03 8:00	0.6	0.1	0.0	0.0	4.8	0.0	0.0	4.8
1/12/03 9:00	0.6	0.1	0.0	0.0	4.8	0.0	0.0	4.8
1/12/03 10:00	0.6	0.1	0.0	0.0	4.8	0.0	0.0	4.8
1/12/03 11:00	0.6	0.1	0.0	0.0	4.9	0.0	0.0	4.9
1/12/03 12:00	0.6	0.1	0.0	0.0	4.9	0.0	0.0	4.9
1/12/03 13:00	1.1	0.1	0.0	0.0	4.9	0.0	0.0	4.9
1/12/03 14:00	1.6	0.1	0.0	0.0	4.9	0.0	0.0	4.9
1/12/03 15:00	2.0	0.1	0.0	0.0	4.9	0.0	0.0	4.9
1/12/03 16:00	2.5	0.1	0.0	0.0	5.0	0.0	0.0	5.0
1/12/03 17:00	3.0	0.1	0.0	0.0	5.0	0.0	0.0	5.0
1/12/03 18:00	3.6	0.1	0.0	0.0	5.0	0.0	0.0	5.0
1/12/03 19:00	4.0	0.1	0.0	0.0	5.0	0.0	0.0	5.0
1/12/03 20:00	4.7	0.1	0.0	0.0	5.0	0.0	0.0	5.0
1/12/03 21:00	5.4	0.1	0.0	0.0	5.1	0.0	0.0	5.1
1/12/03 22:00	3.1	0.1	0.0	0.0	5.1	0.0	0.0	5.1
1/12/03 23:00	4.1	0.1	0.0	0.0	5.1	0.0	0.0	5.1
1/13/03 0:00	3.4	0.1	0.0	0.0	5.1	0.0	0.0	5.1
1/13/03 1:00	2.6	0.1	0.0	0.0	5.1	0.0	0.0	5.1
1/13/03 2:00	2.8	0.1	0.0	0.0	5.2	0.0	0.0	5.2
1/13/03 3:00	1.7	0.1	0.0	0.0	5.2	0.0	0.0	5.2
1/13/03 4:00	2.1	0.1	0.0	0.0	5.2	0.0	0.0	5.2
1/13/03 5:00	2.2	0.1	0.0	0.0	5.2	0.0	0.0	5.2
1/13/03 6:00	6.3	0.1	0.0	0.0	5.2	0.0	0.0	5.2
1/13/03 7:00	5.1	0.1	0.0	0.0	5.3	0.0	0.0	5.3
1/13/03 8:00	3.6	0.1	0.0	0.0	5.3	0.0	0.0	5.3
1/13/03 9:00	2.2	0.1	0.0	0.0	5.3	0.0	0.0	5.3
1/13/03 10:00	1.2	0.1	0.0	0.0	5.3	0.0	0.0	5.3
1/13/03 11:00	1.5	0.1	0.0	0.0	5.3	0.0	0.0	5.3
1/13/03 12:00	1.9	0.1	0.0	0.0	5.4	0.0	0.0	5.4
1/13/03 13:00	2.2	0.1	0.0	0.0	5.4	0.0	0.0	5.4
1/13/03 14:00	2.6	0.1	0.0	0.0	5.4	0.0	0.0	5.4
1/13/03 15:00	2.9	0.1	0.0	0.0	5.4	0.0	0.0	5.4
1/13/03 16:00	3.3	0.1	0.0	0.0	5.4	0.0	0.0	5.4
1/13/03 17:00	3.7	0.1	0.0	0.0	5.5	0.0	0.0	5.5

1/13/03 18:00	4.0	0.1	0.0	0.0	5.5	0.0	0.0	5.5
1/13/03 19:00	0.5	0.1	0.0	0.0	5.5	0.0	0.0	5.5
1/13/03 20:00	0.8	0.1	0.0	0.0	5.5	0.0	0.0	5.5
1/13/03 21:00	0.9	0.1	0.0	0.0	5.5	0.0	0.0	5.5
1/13/03 22:00	4.3	0.1	0.0	0.0	5.6	0.0	0.0	5.6
1/13/03 23:00	8.3	0.1	0.0	0.0	5.6	0.0	0.0	5.6
1/14/03 0:00	6.1	0.1	0.0	0.0	5.6	0.0	0.0	5.6
1/14/03 1:00	5.6	0.1	0.0	0.0	5.6	0.0	0.0	5.6
1/14/03 2:00	4.0	0.1	0.0	0.0	5.6	0.0	0.0	5.6
1/14/03 3:00	3.1	0.1	0.0	0.0	5.7	0.0	0.0	5.7
1/14/03 4:00	2.5	0.1	0.0	0.0	5.7	0.0	0.0	5.7
1/14/03 5:00	6.5	0.1	0.0	0.0	5.7	0.0	0.0	5.7
1/14/03 6:00	7.5	0.1	0.0	0.0	5.7	0.0	0.0	5.7
1/14/03 7:00	8.4	0.1	0.0	0.0	5.7	0.0	0.0	5.7
1/14/03 8:00	3.2	0.1	0.0	0.0	5.8	0.0	0.0	5.8
1/14/03 9:00	2.3	0.1	0.0	0.0	5.8	0.0	0.0	5.8
1/14/03 10:00	1.3	0.1	0.0	0.0	5.8	0.0	0.0	5.8
1/14/03 11:00	0.4	0.1	0.0	0.0	5.8	0.0	0.0	5.8
1/14/03 12:00	0.4	0.1	0.0	0.0	5.8	0.0	0.0	5.8
1/14/03 13:00	0.5	0.1	0.0	0.0	5.9	0.0	0.0	5.9
1/14/03 14:00	0.6	0.1	0.0	0.0	5.9	0.0	0.0	5.9
1/14/03 15:00	0.6	0.1	0.0	0.0	5.9	0.0	0.0	5.9
1/14/03 16:00	0.7	0.1	0.0	0.0	5.9	0.0	0.0	5.9
1/14/03 17:00	0.8	0.1	0.0	0.0	5.9	0.0	0.0	5.9
1/14/03 18:00	3.5	0.1	0.0	0.0	6.0	0.0	0.0	6.0
1/14/03 19:00	1.9	0.1	0.0	0.0	6.0	0.0	0.0	6.0
1/14/03 20:00	0.9	0.1	0.0	0.0	6.0	0.0	0.0	6.0
1/14/03 21:00	2.5	0.1	0.0	0.0	6.0	0.0	0.0	6.0
1/14/03 22:00	2.3	0.1	0.0	0.0	6.0	0.0	0.0	6.0
1/14/03 23:00	1.2	0.1	0.0	0.0	6.1	0.0	0.0	6.1
1/15/03 0:00	3.8	0.1	0.0	0.0	6.1	0.0	0.0	6.1
1/15/03 1:00	5.6	0.1	0.0	0.0	6.1	0.0	0.0	6.1
1/15/03 2:00	3.0	0.1	0.0	0.0	6.1	0.0	0.0	6.1
1/15/03 3:00	1.9	0.1	0.0	0.0	6.1	0.0	0.0	6.1
1/15/03 4:00	1.2	0.1	0.0	0.0	6.2	0.0	0.0	6.2
1/15/03 5:00	6.3	0.1	0.0	0.0	6.2	0.0	0.0	6.2
1/15/03 6:00	7.4	0.1	0.0	0.0	6.2	0.0	0.0	6.2
1/15/03 7:00	3.5	0.1	0.0	0.0	6.2	0.0	0.0	6.2
1/15/03 8:00	2.4	0.1	0.0	0.0	6.2	0.0	0.0	6.2
1/15/03 9:00	1.3	0.1	0.0	0.0	6.3	0.0	0.0	6.3
1/15/03 10:00	2.2	0.1	0.0	0.0	6.3	0.0	0.0	6.3
1/15/03 11:00	1.6	0.1	0.0	0.0	6.3	0.0	0.0	6.3
1/15/03 12:00	0.9	0.1	0.0	0.0	6.3	0.0	0.0	6.3
1/15/03 13:00	0.3	0.1	0.0	0.0	6.3	0.0	0.0	6.3
1/15/03 14:00	0.7	0.1	0.0	0.0	6.4	0.0	0.0	6.4
1/15/03 15:00	1.2	0.1	0.0	0.0	6.4	0.0	0.0	6.4
1/15/03 16:00	1.7	0.1	0.0	0.0	6.4	0.0	0.0	6.4
1/15/03 17:00	2.1	0.1	0.0	0.0	6.4	0.0	0.0	6.4
1/15/03 18:00	2.6	0.1	0.0	0.0	6.4	0.0	0.0	6.4
1/15/03 19:00	2.5	0.1	0.0	0.0	6.5	0.0	0.0	6.5
1/15/03 20:00	4.1	0.1	0.0	0.0	6.5	0.0	0.0	6.5
1/15/03 21:00	5.7	0.1	0.0	0.0	6.5	0.0	0.0	6.5

1/15/03 22:00	7.4	0.1	0.0	0.0	6.5	0.0	0.0	6.5
1/15/03 23:00	2.2	0.1	0.0	0.0	6.5	0.0	0.0	6.5
1/16/03 0:00	4.1	0.1	0.0	0.0	6.6	0.0	0.0	6.6
1/16/03 1:00	1.4	0.1	0.0	0.0	6.6	0.0	0.0	6.6
1/16/03 2:00	1.4	0.1	0.0	0.0	6.6	0.0	0.0	6.6
1/16/03 3:00	1.3	0.1	0.0	0.0	6.6	0.0	0.0	6.6
1/16/03 4:00	1.2	0.1	0.0	0.0	6.6	0.0	0.0	6.6
1/16/03 5:00	1.2	0.1	0.0	0.0	6.7	0.0	0.0	6.7
1/16/03 6:00	4.0	0.1	0.0	0.0	6.7	0.0	0.0	6.7
1/16/03 7:00	4.8	0.1	0.0	0.0	6.7	0.0	0.0	6.7
1/16/03 8:00	2.7	0.1	0.0	0.0	6.7	0.0	0.0	6.7
1/16/03 9:00	5.3	0.1	0.0	0.0	6.7	0.0	0.0	6.7
1/16/03 10:00	6.2	0.1	0.0	0.0	6.8	0.0	0.0	6.8
1/16/03 11:00	7.3	0.1	0.0	0.0	6.8	0.0	0.0	6.8
1/16/03 12:00	7.3	0.1	0.0	0.0	6.8	0.0	0.0	6.8
1/16/03 13:00	12.6	0.1	0.0	0.0	6.8	0.0	0.0	6.8
1/16/03 14:00	8.6	0.1	0.0	0.0	6.8	0.0	0.0	6.8
1/16/03 15:00	2.8	0.1	0.0	0.0	6.9	0.0	0.0	6.9
1/16/03 16:00	0.5	0.1	0.0	0.0	6.9	0.0	0.0	6.9
1/16/03 17:00	1.8	0.1	0.0	0.0	6.9	0.0	0.0	6.9
1/16/03 18:00	10.2	0.1	0.0	0.0	6.9	0.0	0.0	6.9
1/16/03 19:00	4.1	0.1	0.0	0.0	6.9	0.0	0.0	6.9
1/16/03 20:00	1.2	0.1	0.0	0.0	7.0	0.0	0.0	7.0
1/16/03 21:00	4.8	0.1	0.0	0.0	7.0	0.0	0.0	7.0
1/16/03 22:00	1.5	0.1	0.0	0.0	7.0	0.0	0.0	7.0
1/16/03 23:00	4.3	0.1	0.0	0.0	7.0	0.0	0.0	7.0
1/17/03 0:00	3.8	0.1	0.0	0.0	7.0	0.0	0.0	7.0
1/17/03 1:00	2.5	0.1	0.0	0.0	7.1	0.0	0.0	7.1
1/17/03 2:00	0.8	0.1	0.0	0.0	7.1	0.0	0.0	7.1
1/17/03 3:00	0.7	0.1	0.0	0.0	7.1	0.0	0.0	7.1
1/17/03 4:00	0.6	0.1	0.0	0.0	7.1	0.0	0.0	7.1
1/17/03 5:00	4.8	0.1	0.0	0.0	7.1	0.0	0.0	7.1
1/17/03 6:00	3.1	0.1	0.0	0.0	7.2	0.0	0.0	7.2
1/17/03 7:00	2.6	0.1	0.0	0.0	7.2	0.0	0.0	7.2
1/17/03 8:00	2.2	0.1	0.0	0.0	7.2	0.0	0.0	7.2
1/17/03 9:00	1.8	0.1	0.0	0.0	7.2	0.0	0.0	7.2
1/17/03 10:00	5.8	0.1	0.0	0.0	7.2	0.0	0.0	7.2
1/17/03 11:00	5.6	0.1	0.0	0.0	7.3	0.0	0.0	7.3
1/17/03 12:00	6.3	0.1	0.0	0.0	7.3	0.0	0.0	7.3
1/17/03 13:00	7.1	0.1	0.0	0.0	7.3	0.0	0.0	7.3
1/17/03 14:00	7.3	0.1	0.0	0.0	7.3	0.0	0.0	7.3
1/17/03 15:00	3.4	0.1	0.0	0.0	7.3	0.0	0.0	7.3
1/17/03 16:00	2.1	0.1	0.0	0.0	7.4	0.0	0.0	7.4
1/17/03 17:00	2.5	0.1	0.0	0.0	7.4	0.0	0.0	7.4
1/17/03 18:00	1.5	0.1	0.0	0.0	7.4	0.0	0.0	7.4
1/17/03 19:00	1.4	0.1	0.0	0.0	7.4	0.0	0.0	7.4
1/17/03 20:00	1.2	0.1	0.0	0.0	7.4	0.0	0.0	7.4
1/17/03 21:00	1.0	0.1	0.0	0.0	7.5	0.0	0.0	7.5
1/17/03 22:00	0.8	0.1	0.0	0.0	7.5	0.0	0.0	7.5
1/17/03 23:00	4.0	0.1	0.0	0.0	7.5	0.0	0.0	7.5
1/18/03 0:00	3.9	0.1	0.0	0.0	7.5	0.0	0.0	7.5
1/18/03 1:00	3.7	0.1	0.0	0.0	7.5	0.0	0.0	7.5

1/18/03 2:00	3.6	0.1	0.0	0.0	7.6	0.0	0.0	7.6
1/18/03 3:00	3.4	0.1	0.0	0.0	7.6	0.0	0.0	7.6
1/18/03 4:00	3.3	0.1	0.0	0.0	7.6	0.0	0.0	7.6
1/18/03 5:00	3.1	0.1	0.0	0.0	7.6	0.0	0.0	7.6
1/18/03 6:00	3.0	0.1	0.0	0.0	7.6	0.0	0.0	7.6
1/18/03 7:00	2.8	0.1	0.0	0.0	7.7	0.0	0.0	7.7
1/18/03 8:00	2.7	0.1	0.0	0.0	7.7	0.0	0.0	7.7
1/18/03 9:00	2.5	0.1	0.0	0.0	7.6	0.0	0.0	7.6
1/18/03 10:00	2.4	0.1	0.0	0.0	7.4	0.0	0.0	7.4
1/18/03 11:00	2.3	0.1	0.0	0.0	7.3	0.0	0.0	7.3
1/18/03 12:00	2.1	0.1	0.0	0.0	7.2	0.0	0.0	7.2
1/18/03 13:00	2.0	0.1	0.0	0.0	7.1	0.0	0.0	7.1
1/18/03 14:00	1.8	0.1	0.0	0.0	7.0	0.0	0.0	7.0
1/18/03 15:00	1.7	0.1	0.0	0.0	6.9	0.0	0.0	6.9
1/18/03 16:00	1.5	0.1	0.0	0.0	6.8	0.0	0.0	6.8
1/18/03 17:00	1.4	0.1	0.0	0.0	6.6	0.0	0.0	6.6
1/18/03 18:00	1.2	0.1	0.0	0.0	6.5	0.0	0.0	6.5
1/18/03 19:00	1.1	0.1	0.0	0.0	6.4	0.0	0.0	6.4
1/18/03 20:00	0.9	0.1	0.0	0.0	6.3	0.0	0.0	6.3
1/18/03 21:00	0.8	0.1	0.0	0.0	6.2	0.0	0.0	6.2
1/18/03 22:00	0.6	0.1	0.0	0.0	6.1	0.0	0.0	6.1
1/18/03 23:00	0.3	0.1	0.0	0.0	6.0	0.0	0.0	6.0
1/19/03 0:00	0.5	0.1	0.0	0.0	5.8	0.0	0.0	5.8
1/19/03 1:00	0.7	0.1	0.0	0.0	5.7	0.0	0.0	5.7
1/19/03 2:00	0.9	0.1	0.0	0.0	5.6	0.0	0.0	5.6
1/19/03 3:00	1.1	0.1	0.0	0.0	5.5	0.0	0.0	5.5
1/19/03 4:00	1.3	0.1	0.0	0.0	5.4	0.0	0.0	5.4
1/19/03 5:00	1.5	0.1	0.0	0.0	5.3	0.0	0.0	5.3
1/19/03 6:00	1.7	0.1	0.0	0.0	5.2	0.0	0.0	5.2
1/19/03 7:00	1.9	0.1	0.0	0.0	5.0	0.0	0.0	5.0
1/19/03 8:00	2.2	0.1	0.0	0.0	4.9	0.0	0.0	4.9
1/19/03 9:00	2.4	0.1	0.0	0.0	4.8	0.0	0.0	4.8
1/19/03 10:00	2.6	0.1	0.0	0.0	4.7	0.0	0.0	4.7
1/19/03 11:00	2.8	0.1	0.0	0.0	4.6	0.0	0.0	4.6
1/19/03 12:00	3.0	0.1	0.0	0.0	4.5	0.0	0.0	4.5
1/19/03 13:00	3.2	0.1	0.0	0.0	4.4	0.0	0.0	4.4
1/19/03 14:00	3.4	0.1	0.0	0.0	4.2	0.0	0.0	4.2
1/19/03 15:00	3.6	0.1	0.0	0.0	4.1	0.0	0.0	4.1
1/19/03 16:00	3.8	0.1	0.0	0.0	4.0	0.0	0.0	4.0
1/19/03 17:00	4.1	0.1	0.0	0.0	3.9	0.0	0.0	3.9
1/19/03 18:00	4.3	0.1	0.0	0.0	3.8	0.0	0.0	3.8
1/19/03 19:00	0.4	0.1	0.0	0.0	3.7	0.0	0.0	3.7
1/19/03 20:00	0.3	0.1	0.0	0.0	3.5	0.0	0.0	3.5
1/19/03 21:00	1.2	0.1	0.0	0.0	3.4	0.0	0.0	3.4
1/19/03 22:00	0.9	0.1	0.0	0.0	3.3	0.0	0.0	3.3
1/19/03 23:00	2.3	0.1	0.0	0.0	3.2	0.0	0.0	3.2
1/20/03 0:00	3.8	0.1	0.0	0.0	3.1	0.0	0.0	3.1
1/20/03 1:00	3.6	0.1	0.0	0.0	3.0	0.0	0.0	3.0
1/20/03 2:00	3.5	0.1	0.0	0.0	2.9	0.0	0.0	2.9
1/20/03 3:00	3.4	0.1	0.0	0.0	2.7	0.0	0.0	2.7
1/20/03 4:00	3.2	0.1	0.0	0.0	2.6	0.0	0.0	2.6
1/20/03 5:00	3.1	0.1	0.0	0.0	2.5	0.0	0.0	2.5

1/20/03 6:00	3.0	0.1	0.0	0.0	2.4	0.0	0.0	2.4
1/20/03 7:00	2.8	0.1	0.0	0.0	2.3	0.0	0.0	2.3
1/20/03 8:00	2.7	0.1	0.0	0.0	2.2	0.0	0.0	2.2
1/20/03 9:00	6.1	0.1	0.0	0.0	2.1	0.0	0.0	2.1
1/20/03 10:00	8.7	0.1	0.0	0.0	1.9	0.0	0.0	1.9
1/20/03 11:00	7.1	0.1	0.0	0.0	1.8	0.0	0.0	1.8
1/20/03 12:00	6.6	0.1	0.0	0.0	1.7	0.0	0.0	1.7
1/20/03 13:00	8.7	0.1	0.0	0.0	1.6	0.0	0.0	1.6
1/20/03 14:00	7.3	0.1	0.0	0.0	1.5	0.0	0.0	1.5
1/20/03 15:00	6.0	0.1	0.0	0.0	1.4	0.0	0.0	1.4
1/20/03 16:00	1.0	0.1	0.0	0.0	1.3	0.0	0.0	1.3
1/20/03 17:00	2.7	0.1	0.0	0.0	1.1	0.0	0.0	1.1
1/20/03 18:00	11.0	0.1	0.0	0.0	1.0	0.0	0.0	1.0
1/20/03 19:00	8.6	0.1	0.0	0.0	0.9	0.0	0.0	0.9
1/20/03 20:00	4.7	0.1	0.0	0.0	0.8	0.0	0.0	0.8
1/20/03 21:00	1.8	0.1	0.0	0.0	0.7	0.0	0.0	0.7
1/20/03 22:00	5.2	0.1	0.0	0.0	0.6	0.0	0.0	0.6
1/20/03 23:00	3.5	0.1	0.0	0.0	0.5	0.0	0.0	0.5
1/21/03 0:00	2.3	0.1	0.0	0.0	0.3	0.0	0.0	0.3
1/21/03 1:00	1.5	0.1	0.0	0.0	0.2	0.0	0.0	0.2
1/21/03 2:00	0.6	0.1	0.0	0.0	0.1	0.0	0.0	0.1
1/21/03 3:00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1/21/03 4:00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1/21/03 5:00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1/21/03 6:00	3.5	0.1	0.1	0.0	0.0	0.1	0.1	0.4
1/21/03 7:00	2.1	0.1	0.2	0.1	0.1	0.2	0.2	0.7
1/21/03 8:00	0.8	0.1	0.3	0.1	0.1	0.3	0.3	1.1
1/21/03 9:00	1.8	0.1	0.4	0.1	0.2	0.4	0.4	1.4
1/21/03 10:00	3.8	0.1	0.5	0.1	0.2	0.5	0.5	1.8
1/21/03 11:00	5.2	0.1	0.5	0.2	0.2	0.6	0.6	2.2
1/21/03 12:00	4.1	0.1	0.6	0.2	0.3	0.7	0.7	2.5
1/21/03 13:00	5.3	0.1	0.7	0.2	0.3	0.8	0.8	2.9
1/21/03 14:00	4.0	0.1	0.8	0.2	0.3	0.9	0.9	3.3
1/21/03 15:00	1.3	0.1	0.9	0.3	0.4	1.0	1.0	3.6
1/21/03 16:00	1.5	0.1	1.0	0.3	0.4	1.1	1.1	4.0
1/21/03 17:00	1.8	0.1	1.1	0.3	0.5	1.2	1.2	4.3
1/21/03 18:00	2.1	0.1	1.2	0.4	0.5	1.3	1.3	4.7
1/21/03 19:00	1.8	0.1	1.3	0.4	0.5	1.4	1.4	5.1
1/21/03 20:00	1.5	0.1	1.4	0.4	0.6	1.5	1.5	5.4
1/21/03 21:00	1.2	0.1	1.5	0.4	0.6	1.6	1.6	5.8
1/21/03 22:00	0.9	0.1	1.6	0.5	0.7	1.7	1.7	6.1
1/21/03 23:00	3.2	0.1	1.6	0.5	0.7	1.8	1.8	6.5
1/22/03 0:00	3.0	0.1	1.7	0.5	0.7	1.9	2.0	6.9
1/22/03 1:00	2.8	0.1	1.8	0.5	0.8	2.0	2.1	7.2
1/22/03 2:00	2.5	0.1	1.9	0.6	0.8	2.1	2.2	7.6
1/22/03 3:00	2.3	0.1	2.0	0.6	0.8	2.2	2.3	8.0
1/22/03 4:00	2.0	0.1	2.1	0.6	0.9	2.3	2.4	8.3
1/22/03 5:00	1.8	0.1	2.2	0.7	0.9	2.4	2.5	8.7
1/22/03 6:00	1.9	0.1	2.3	0.7	1.0	2.5	2.6	9.0
1/22/03 7:00	1.8	0.1	2.4	0.7	1.0	2.6	2.7	9.4
1/22/03 8:00	1.6	0.1	2.5	0.7	1.0	2.7	2.8	9.8
1/22/03 9:00	1.4	0.1	2.6	0.8	1.1	2.8	2.9	10.1

1/22/03 10:00	3.5	0.1	2.6	0.8	1.1	2.9	3.0		10.5
1/22/03 11:00	4.4	0.1	2.7	0.8	1.1	3.0	3.1		10.8
1/22/03 12:00	3.4	0.1	2.8	0.8	1.2	3.2	3.2		11.2
1/22/03 13:00	4.3	0.1	2.9	0.9	1.2	3.3	3.3		11.6
1/22/03 14:00	1.5	0.1	3.0	0.9	1.3	3.4	3.4		11.9
1/22/03 15:00	0.1	0.1	3.1	0.9	1.3	3.5	3.5		12.3
1/22/03 16:00	2.9	0.1	3.2	1.0	1.3	3.6	3.6		12.6
1/22/03 17:00	5.7	0.1	3.3	1.0	1.4	3.7	3.7		13.0
1/22/03 18:00	6.2	0.1	3.4	1.0	1.4	3.8	3.8		13.4
1/22/03 19:00	4.3	0.1	3.5	1.0	1.5	3.9	3.9		13.7
1/22/03 20:00	1.3	0.1	3.6	1.1	1.5	4.0	4.0		14.1
1/22/03 21:00	3.0	0.1	3.7	1.1	1.5	4.1	4.1		14.5
1/22/03 22:00	6.0	0.1	3.7	1.1	1.6	4.2	4.2		14.8
1/22/03 23:00	3.8	0.1	3.8	1.1	1.6	4.3	4.3		15.2
1/23/03 0:00	7.5	0.1	3.9	1.2	1.6	4.4	4.4		15.5
1/23/03 1:00	6.2	0.1	4.0	1.2	1.7	4.5	4.5		15.9
1/23/03 2:00	1.9	0.1	4.1	1.2	1.7	4.6	4.6		16.3
1/23/03 3:00	1.7	0.1	4.2	1.3	1.8	4.7	4.7		16.6
1/23/03 4:00	1.9	0.1	4.3	1.3	1.8	4.8	4.8		17.0
1/23/03 5:00	4.1	0.1	4.4	1.3	1.8	4.9	4.9		17.3
1/23/03 6:00	2.7	0.1	4.5	1.3	1.9	5.0	5.0		17.7
1/23/03 7:00	3.6	0.1	4.6	1.4	1.9	5.1	5.1		18.1
1/23/03 8:00	1.9	0.1	4.7	1.4	2.0	5.2	5.2		18.4
1/23/03 9:00	1.5	0.1	4.8	1.4	2.0	5.3	5.3		18.8
1/23/03 10:00	1.2	0.1	4.8	1.5	2.0	5.4	5.4		19.2
1/23/03 11:00	0.9	0.1	4.9	1.4	2.1	5.5	5.5		19.5
1/23/03 12:00	1.7	0.1	5.0	1.4	2.1	5.6	5.6		19.8
1/23/03 13:00	0.1	0.1	5.1	1.4	2.1	5.7	5.8		20.1
1/23/03 14:00	0.4	0.1	5.2	1.4	2.2	5.8	5.9		20.5
1/23/03 15:00	0.6	0.1	5.3	1.4	2.2	5.9	6.0		20.8
1/23/03 16:00	0.9	0.1	5.4	1.4	2.3	6.0	6.1		21.1
1/23/03 17:00	1.2	0.1	5.5	1.4	2.3	6.1	6.2		21.5
1/23/03 18:00	1.4	0.1	5.6	1.4	2.3	6.2	6.3		21.8
1/23/03 19:00	0.9	0.1	5.7	1.4	2.4	6.3	6.4		22.1
1/23/03 20:00	1.0	0.1	5.8	1.4	2.4	6.4	6.5		22.5
1/23/03 21:00	1.3	0.1	5.8	1.4	2.5	6.5	6.6		22.8
1/23/03 22:00	6.9	0.1	5.9	1.4	2.5	6.6	6.7		23.1
1/23/03 23:00	6.5	0.1	6.0	1.4	2.5	6.7	6.8		23.5
1/24/03 0:00	7.5	0.1	6.1	1.4	2.6	6.8	6.9		23.8
1/24/03 1:00	6.0	0.1	6.2	1.4	2.6	6.9	7.0		24.1
1/24/03 2:00	4.9	0.1	6.3	1.4	2.6	7.0	7.1		24.4
1/24/03 3:00	4.8	0.1	6.4	1.4	2.7	7.1	7.2		24.8
1/24/03 4:00	4.9	0.1	6.5	1.4	2.7	7.2	7.3		25.1
1/24/03 5:00	8.8	0.1	6.6	1.4	2.8	7.3	7.4		25.4
1/24/03 6:00	7.9	0.1	6.7	1.4	2.8	7.4	7.5		25.8
1/24/03 7:00	1.9	0.1	6.8	1.4	2.8	7.5	7.6		26.1
1/24/03 8:00	2.3	0.1	6.9	1.4	2.9	7.6	7.7		26.4
1/24/03 9:00	2.6	0.1	6.9	1.4	2.9	7.7	7.8		26.8
1/24/03 10:00	3.0	0.1	7.0	1.4	2.9	7.8	7.9		27.1
1/24/03 11:00	1.3	0.1	7.1	1.4	3.0	7.9	8.0		27.4
1/24/03 12:00	0.4	0.1	7.2	1.4	3.0	8.0	8.1		27.7
1/24/03 13:00	4.3	0.1	7.3	1.4	3.1	8.1	8.2		28.1

1/24/03 14:00	3.2	0.1	7.4	1.4	3.1	8.2	8.3		28.4
1/24/03 15:00	2.3	0.1	7.5	1.3	3.1	8.3	8.4		28.7
1/24/03 16:00	1.3	0.1	7.6	1.3	3.2	8.4	8.5		29.1
1/24/03 17:00	0.3	0.1	7.7	1.3	3.2	8.5	8.6		29.4
1/24/03 18:00	8.3	0.1	7.8	1.3	3.3	8.6	8.7		29.7
1/24/03 19:00	2.1	0.1	7.9	1.3	3.3	8.7	8.8		30.1
1/24/03 20:00	0.9	0.1	7.9	1.3	3.3	8.8	8.9		30.4
1/24/03 21:00	0.5	0.1	8.0	1.3	3.4	8.9	9.0		30.7
1/24/03 22:00	7.4	0.1	8.1	1.3	3.4	9.0	9.1		31.1
1/24/03 23:00	6.3	0.1	8.2	1.3	3.4	9.1	9.2		31.4
1/25/03 0:00	7.3	0.1	8.3	1.3	3.5	9.2	9.3		31.7
1/25/03 1:00	6.3	0.1	8.4	1.3	3.5	9.4	9.4		32.0
1/25/03 2:00	3.6	0.1	8.5	1.3	3.6	9.5	9.6		32.4
1/25/03 3:00	4.9	0.1	8.6	1.3	3.6	9.6	9.7		32.7
1/25/03 4:00	4.7	0.1	8.7	1.3	3.6	9.7	9.8		33.0
1/25/03 5:00	3.9	0.1	8.8	1.3	3.7	9.8	9.9		33.4
1/25/03 6:00	5.6	0.1	8.9	1.3	3.7	9.9	10.0		33.7
1/25/03 7:00	4.0	0.1	9.0	1.3	3.8	10.0	10.1		34.0
1/25/03 8:00	2.4	0.1	9.0	1.3	3.8	10.1	10.2		34.4
1/25/03 9:00	0.8	0.1	9.1	1.3	3.8	10.2	10.3		34.7
1/25/03 10:00	3.6	0.1	9.2	1.3	3.9	10.3	10.4		35.0
1/25/03 11:00	5.6	0.1	9.3	1.3	3.9	10.4	10.5		35.4
1/25/03 12:00	6.1	0.1	9.4	1.3	3.9	10.5	10.6		35.7
1/25/03 13:00	3.1	0.1	9.5	1.3	4.0	10.6	10.7		36.0
1/25/03 14:00	1.9	0.1	9.6	1.3	4.0	10.7	10.8		36.3
1/25/03 15:00	1.5	0.1	9.7	1.3	4.1	10.8	10.9		36.7
1/25/03 16:00	1.0	0.1	9.8	1.3	4.1	10.9	11.0		37.0
1/25/03 17:00	0.5	0.1	9.9	1.3	4.1	11.0	11.1		37.3
1/25/03 18:00	7.9	0.1	10.0	1.3	4.2	11.1	11.2		37.7
1/25/03 19:00	5.6	0.1	9.9	1.3	4.2	11.2	11.3		37.9
1/25/03 20:00	1.2	0.1	9.9	1.2	4.3	11.3	11.4		38.1
1/25/03 21:00	7.1	0.1	9.9	1.2	4.3	11.4	11.5		38.3
1/25/03 22:00	4.8	0.1	9.8	1.2	4.3	11.5	11.6		38.5
1/25/03 23:00	7.5	0.1	9.8	1.2	4.4	11.6	11.7		38.7
1/26/03 0:00	7.0	0.1	9.8	1.2	4.4	11.7	11.8		38.9
1/26/03 1:00	1.5	0.1	9.8	1.2	4.4	11.8	11.9		39.1
1/26/03 2:00	1.5	0.1	9.7	1.2	4.5	11.9	12.0		39.4
1/26/03 3:00	1.5	0.1	9.7	1.2	4.5	12.0	12.1		39.6
1/26/03 4:00	1.5	0.1	9.7	1.2	4.6	12.1	12.2		39.8
1/26/03 5:00	1.5	0.1	9.7	1.2	4.6	12.2	12.3		40.0
1/26/03 6:00	1.4	0.1	9.6	1.2	4.6	12.3	12.4		40.2
1/26/03 7:00	1.4	0.1	9.6	1.2	4.7	12.4	12.5		40.4
1/26/03 8:00	1.4	0.1	9.6	1.2	4.7	12.5	12.6		40.6
1/26/03 9:00	1.4	0.1	9.5	1.2	4.8	12.6	12.7		40.8
1/26/03 10:00	1.3	0.1	9.5	1.2	4.8	12.7	12.8		41.1
1/26/03 11:00	1.3	0.1	9.5	1.2	4.8	12.8	12.9		41.3
1/26/03 12:00	1.3	0.1	9.5	1.2	4.9	12.9	13.0		41.5
1/26/03 13:00	2.2	0.1	9.4	1.2	4.9	13.0	13.1		41.7
1/26/03 14:00	3.1	0.1	9.4	1.2	4.9	13.1	13.2		41.9
1/26/03 15:00	1.8	0.1	9.4	1.2	5.0	13.2	13.4		42.1
1/26/03 16:00	2.7	0.1	9.4	1.2	5.0	13.3	13.5		42.3
1/26/03 17:00	4.5	0.1	9.3	1.2	5.1	13.4	13.6		42.5

1/26/03 18:00	7.4	0.1	9.3	1.2	5.1	13.5	13.7	42.7
1/26/03 19:00	8.0	0.1	9.3	1.2	5.1	13.6	13.8	43.0
1/26/03 20:00	7.1	0.1	9.2	1.2	5.2	13.7	13.9	43.2
1/26/03 21:00	5.2	0.1	9.2	1.2	5.2	13.8	14.0	43.4
1/26/03 22:00	3.6	0.1	9.2	1.2	5.2	13.9	14.1	43.6
1/26/03 23:00	2.5	0.1	9.2	1.2	5.3	14.0	14.2	43.8
1/27/03 0:00	2.6	0.1	9.1	1.2	5.3	14.1	14.3	44.0
1/27/03 1:00	0.9	0.1	9.1	1.1	5.4	14.2	14.4	44.2
1/27/03 2:00	0.7	0.1	9.1	1.1	5.4	14.3	14.5	44.4
1/27/03 3:00	0.5	0.1	9.1	1.1	5.4	14.4	14.6	44.6
1/27/03 4:00	0.3	0.1	9.0	1.1	5.5	14.5	14.7	44.9
1/27/03 5:00	0.8	0.1	9.0	1.1	5.5	14.6	14.8	45.1
1/27/03 6:00	1.2	0.1	9.0	1.1	5.6	14.7	14.9	45.3
1/27/03 7:00	1.7	0.1	8.9	1.1	5.6	14.8	15.0	45.5
1/27/03 8:00	2.3	0.1	8.9	1.1	5.6	14.9	15.1	45.7
1/27/03 9:00	2.8	0.1	8.9	1.1	5.7	15.0	15.2	45.9
1/27/03 10:00	3.4	0.1	8.9	1.1	5.7	15.1	15.3	46.1
1/27/03 11:00	3.2	0.1	8.8	1.1	5.7	15.2	15.4	46.3
1/27/03 12:00	5.1	0.1	8.8	1.1	5.8	15.3	15.5	46.6
1/27/03 13:00	6.1	0.1	8.8	1.1	5.8	15.4	15.6	46.8
1/27/03 14:00	5.4	0.1	8.7	1.1	5.9	15.5	15.7	47.0
1/27/03 15:00	5.4	0.1	8.7	1.1	5.9	15.7	15.8	47.2
1/27/03 16:00	5.4	0.1	8.7	1.1	5.9	15.8	15.9	47.4
1/27/03 17:00	5.4	0.1	8.7	1.1	6.0	15.9	16.0	47.6
1/27/03 18:00	5.4	0.1	8.6	1.1	6.0	16.0	16.1	47.8
1/27/03 19:00	2.1	0.1	8.6	1.1	6.1	16.1	16.2	48.0
1/27/03 20:00	0.6	0.1	8.6	1.1	6.1	16.2	16.3	48.2
1/27/03 21:00	0.3	0.1	8.6	1.1	6.1	16.3	16.4	48.5
1/27/03 22:00	0.5	0.1	8.5	1.1	6.2	16.4	16.5	48.7
1/27/03 23:00	3.2	0.1	8.5	1.1	6.2	16.5	16.6	48.9
1/28/03 0:00	3.6	0.1	8.5	1.1	6.2	16.6	16.7	49.1
1/28/03 1:00	1.9	0.1	8.4	1.1	6.3	16.7	16.8	49.3
1/28/03 2:00	0.1	0.1	8.4	1.1	6.3	16.8	16.9	49.5
1/28/03 3:00	0.5	0.1	8.4	1.1	6.4	16.9	17.0	49.7
1/28/03 4:00	0.8	0.1	8.4	1.1	6.4	17.0	17.2	49.9
1/28/03 5:00	1.2	0.1	8.3	1.1	6.4	17.1	17.3	50.2
1/28/03 6:00	1.5	0.1	8.3	1.0	6.5	17.2	17.4	50.4
1/28/03 7:00	1.2	0.1	8.3	1.0	6.5	17.3	17.5	50.6
1/28/03 8:00	0.9	0.1	8.3	1.0	6.6	17.4	17.6	50.8
1/28/03 9:00	0.6	0.1	8.2	1.0	6.6	17.5	17.7	51.0
1/28/03 10:00	1.2	0.1	8.2	1.0	6.6	17.6	17.8	51.2
1/28/03 11:00	3.9	0.1	8.2	1.0	6.7	17.7	17.9	51.4
1/28/03 12:00	0.4	0.1	8.1	1.0	6.7	17.8	18.0	51.6
1/28/03 13:00	1.4	0.1	8.1	1.0	6.7	17.9	18.1	51.8
1/28/03 14:00	1.8	0.1	8.1	1.0	6.8	18.0	18.2	52.1
1/28/03 15:00	2.1	0.1	8.1	1.0	6.8	18.1	18.3	52.3
1/28/03 16:00	2.5	0.1	8.0	1.0	6.9	18.2	18.4	52.5
1/28/03 17:00	2.9	0.1	8.0	1.0	6.9	18.3	18.5	52.7
1/28/03 18:00	3.2	0.1	8.0	1.0	6.9	18.4	18.6	52.9
1/28/03 19:00	0.8	0.1	8.0	1.0	7.0	18.5	18.7	53.1
1/28/03 20:00	0.4	0.1	7.9	1.0	7.0	18.6	18.8	53.3
1/28/03 21:00	0.3	0.1	7.9	1.0	7.0	18.7	18.9	53.5

1/28/03 22:00	0.3	0.1	7.9	1.0	7.1	18.8	19.0	53.8
1/28/03 23:00	0.3	0.1	7.8	1.0	7.1	18.9	19.1	54.0
1/29/03 0:00	0.3	0.1	7.8	1.0	7.2	19.0	19.2	54.2
1/29/03 1:00	0.7	0.1	7.8	1.0	7.2	19.1	19.3	54.4
1/29/03 2:00	1.2	0.1	7.8	1.0	7.2	19.2	19.4	54.6
1/29/03 3:00	1.7	0.1	7.7	1.0	7.3	19.3	19.5	54.8
1/29/03 4:00	2.2	0.1	7.7	1.0	7.3	19.4	19.6	55.0
1/29/03 5:00	2.7	0.1	7.7	1.0	7.4	19.5	19.7	55.2
1/29/03 6:00	3.2	0.1	7.6	1.0	7.4	19.6	19.8	55.4
1/29/03 7:00	2.7	0.1	7.6	1.0	7.4	19.7	19.9	55.7
1/29/03 8:00	2.1	0.1	7.6	1.0	7.5	19.8	20.0	55.9
1/29/03 9:00	1.6	0.1	7.6	1.0	0.2	19.9	20.1	48.8
1/29/03 10:00	1.0	0.1	7.5	1.0	0.2	20.0	20.2	48.9
1/29/03 11:00	2.7	0.1	7.5	0.9	0.2	20.1	20.3	49.1
1/29/03 12:00	4.9	0.1	7.5	0.9	0.2	20.2	20.4	49.3
1/29/03 13:00	5.6	0.1	7.5	0.9	0.2	20.3	20.5	49.5
1/29/03 14:00	4.3	0.1	7.4	0.9	0.2	20.4	20.6	49.6
1/29/03 15:00	5.1	0.1	7.4	0.9	0.2	20.5	20.7	49.8
1/29/03 16:00	6.0	0.1	7.4	0.9	0.2	20.6	20.8	50.0
1/29/03 17:00	6.9	0.1	7.3	0.9	0.2	20.7	21.0	50.2
1/29/03 18:00	7.8	0.1	7.3	0.9	0.2	20.8	21.1	50.3
1/29/03 19:00	2.3	0.1	7.3	0.9	0.2	20.9	21.2	50.5
1/29/03 20:00	1.7	0.1	7.3	0.9	0.2	21.0	21.3	50.7
1/29/03 21:00	0.9	0.1	7.2	0.9	0.2	21.1	21.4	50.9
1/29/03 22:00	3.6	0.1	7.2	0.9	0.2	21.2	21.5	51.0
1/29/03 23:00	6.3	0.1	7.2	0.9	0.2	21.3	21.6	51.2
1/30/03 0:00	1.4	0.1	7.2	0.9	0.2	21.4	21.7	51.4
1/30/03 1:00	0.4	0.1	7.1	0.9	0.2	21.5	21.8	51.5
1/30/03 2:00	0.3	0.1	7.1	0.9	0.2	21.6	21.9	51.7
1/30/03 3:00	0.3	0.1	7.1	0.9	0.2	21.7	22.0	51.9
1/30/03 4:00	0.3	0.1	7.0	0.9	0.2	21.9	22.1	52.1
1/30/03 5:00	0.3	0.1	7.0	0.9	0.2	22.0	22.2	52.2
1/30/03 6:00	2.2	0.1	7.0	0.9	0.2	22.1	22.3	52.4
1/30/03 7:00	2.2	0.1	7.0	0.9	0.2	22.2	22.4	52.6
1/30/03 8:00	2.2	0.1	6.9	0.9	0.2	22.3	22.5	52.8
1/30/03 9:00	2.2	0.1	6.9	0.9	0.2	22.4	22.6	52.9
1/30/03 10:00	2.2	0.1	6.9	0.9	0.2	22.5	22.7	53.1
1/30/03 11:00	4.1	0.1	6.9	0.9	0.2	22.6	22.8	53.3
1/30/03 12:00	2.2	0.1	6.8	0.9	0.2	22.7	22.9	53.5
1/30/03 13:00	5.1	0.1	6.8	0.9	0.2	22.8	23.0	53.6
1/30/03 14:00	6.3	0.1	6.8	0.9	0.2	22.9	23.1	53.8
1/30/03 15:00	6.6	0.1	6.7	0.8	0.2	23.0	23.2	54.0
1/30/03 16:00	0.8	0.1	6.7	0.8	0.2	23.1	23.3	54.1
1/30/03 17:00	2.4	0.1	6.7	0.8	0.2	23.2	23.4	54.3
1/30/03 18:00	4.0	0.1	6.7	0.8	0.2	23.3	23.5	54.5
1/30/03 19:00	0.5	0.1	6.6	0.8	0.2	23.4	23.6	54.7
1/30/03 20:00	5.8	0.1	6.6	0.8	0.2	23.5	23.7	54.8
1/30/03 21:00	3.0	0.1	6.6	0.8	0.2	23.6	23.8	55.0
1/30/03 22:00	5.3	0.1	6.5	0.8	0.2	23.7	23.9	55.2
1/30/03 23:00	8.7	0.1	6.5	0.8	0.2	23.8	24.0	55.4
1/31/03 0:00	4.8	0.1	6.5	0.8	0.2	23.9	24.1	55.5
1/31/03 1:00	4.4	0.1	6.5	0.8	0.2	24.0	24.2	55.7

1/31/03 2:00	4.7	0.1	6.4	0.8	0.2	24.1	24.3	55.9
1/31/03 3:00	2.3	0.1	6.4	0.8	0.2	24.2	24.4	56.1
1/31/03 4:00	2.3	0.1	6.4	0.8	0.2	24.3	24.5	56.2
1/31/03 5:00	2.2	0.1	6.4	0.8	0.2	24.4	24.7	56.4
1/31/03 6:00	1.9	0.1	6.3	0.8	0.2	24.5	24.8	56.6
1/31/03 7:00	1.8	0.2	6.3	0.8	0.2	24.6	24.9	56.7
1/31/03 8:00	1.6	0.2	6.3	0.8	0.2	24.7	25.0	56.9
1/31/03 9:00	1.4	0.2	6.2	0.8	0.2	24.8	25.1	57.1
1/31/03 10:00	5.4	0.3	6.2	0.8	0.2	24.9	25.2	57.3
1/31/03 11:00	11.0	0.3	6.2	0.8	0.2	25.0	25.3	57.4
1/31/03 12:00	11.7	0.3	6.2	0.8	0.2	25.1	25.4	57.6
1/31/03 13:00	14.8	0.4	6.1	0.8	16.6	25.2	25.5	74.2
1/31/03 14:00	13.6	0.4	6.1	0.8	16.5	25.3	25.6	74.3
1/31/03 15:00	8.2	0.4	6.1	0.8	16.5	25.4	25.7	74.4
1/31/03 16:00	12.3	0.4	6.1	0.8	16.4	25.5	25.8	74.5
1/31/03 17:00	10.9	0.1	6.0	0.8	16.3	25.4	25.7	74.1
1/31/03 18:00	9.4	0.1	6.0	0.8	16.2	25.3	25.5	73.8
1/31/03 19:00	7.9	0.1	6.0	0.8	16.2	25.2	25.4	73.5
1/31/03 20:00	6.5	0.1	5.9	0.7	16.1	25.0	25.3	73.1
1/31/03 21:00	5.0	0.1	5.9	0.7	16.0	24.9	25.2	72.8
1/31/03 22:00	3.6	0.1	5.9	0.7	15.9	24.8	25.1	72.5
1/31/03 23:00	2.1	0.1	5.9	0.7	15.9	24.7	25.0	72.1
2/1/03 0:00	0.6	0.1	5.8	0.7	15.8	24.6	24.8	71.8
2/1/03 1:00	0.5	0.1	5.8	0.7	15.7	24.5	24.7	71.4
2/1/03 2:00	0.4	0.1	5.8	0.7	15.6	24.4	24.6	71.1
2/1/03 3:00	0.3	0.1	5.8	0.7	15.6	24.2	24.5	70.8
2/1/03 4:00	0.1	0.1	5.7	0.7	15.5	24.1	24.4	70.4
2/1/03 5:00	0.1	0.1	5.7	0.7	15.4	24.0	24.3	70.1
2/1/03 6:00	0.1	0.1	5.7	0.7	15.3	23.9	24.1	69.7
2/1/03 7:00	0.1	0.1	5.6	0.7	15.3	23.8	24.0	69.4
2/1/03 8:00	0.1	0.1	5.6	0.7	15.2	23.7	23.9	69.1
2/1/03 9:00	0.1	0.1	5.6	0.7	15.1	23.5	23.8	68.7
2/1/03 10:00	0.1	0.1	5.6	0.7	15.0	23.4	23.7	68.4
2/1/03 11:00	0.1	0.2	5.5	0.7	15.0	23.3	23.6	68.1
2/1/03 12:00	0.1	0.2	5.5	0.7	14.9	23.2	23.4	67.7
2/1/03 13:00	0.1	0.2	5.5	0.7	14.8	23.1	23.3	67.4
2/1/03 14:00	0.1	0.3	5.4	0.7	14.7	23.0	23.2	67.0
2/1/03 15:00	0.1	0.3	5.4	0.7	14.7	22.8	23.1	66.7
2/1/03 16:00	0.1	0.3	5.4	0.7	14.6	22.7	23.0	66.4
2/1/03 17:00	0.1	0.3	5.4	0.7	14.5	22.6	22.9	66.0
2/1/03 18:00	0.1	0.3	5.3	0.7	14.4	22.5	22.7	65.7
2/1/03 19:00	0.1	0.3	5.3	0.7	14.4	22.4	22.6	65.3
2/1/03 20:00	0.1	0.3	5.3	0.7	14.3	22.3	22.5	65.0
2/1/03 21:00	0.1	0.3	5.3	0.7	14.2	22.1	22.4	64.7
2/1/03 22:00	0.1	0.3	5.2	0.7	14.1	22.0	22.3	64.3
2/1/03 23:00	0.1	0.3	5.2	0.7	14.1	21.9	22.1	64.0
2/2/03 0:00	0.1	0.3	5.2	0.7	14.0	21.8	22.0	63.6
2/2/03 1:00	0.1	0.3	5.1	0.6	13.9	21.7	21.9	63.3
2/2/03 2:00	0.1	0.3	5.1	0.6	13.8	21.6	21.8	63.0
2/2/03 3:00	0.1	0.3	5.1	0.6	13.8	21.5	21.7	62.6
2/2/03 4:00	0.1	0.3	5.1	0.6	13.7	21.3	21.6	62.3
2/2/03 5:00	0.1	0.3	5.0	0.6	13.6	21.2	21.4	62.0

2/2/03 6:00	0.1	0.3	5.0	0.6	13.5	21.1	21.3	61.6
2/2/03 7:00	0.1	0.3	5.0	0.6	13.5	21.0	21.2	61.3
2/2/03 8:00	0.1	0.3	5.0	0.6	13.4	20.9	21.1	60.9
2/2/03 9:00	0.1	0.3	4.9	0.6	13.3	20.8	21.0	60.6
2/2/03 10:00	0.1	0.3	4.9	0.6	13.3	20.6	20.9	60.3
2/2/03 11:00	0.1	0.3	4.9	0.6	13.2	20.5	20.7	59.9
2/2/03 12:00	0.1	0.3	4.8	0.6	13.1	20.4	20.6	59.6
2/2/03 13:00	0.1	0.3	4.8	0.6	13.0	20.3	20.5	59.2
2/2/03 14:00	0.1	0.3	4.8	0.6	13.0	20.2	20.4	58.9
2/2/03 15:00	0.1	0.3	4.8	0.6	12.9	20.1	20.3	58.6
2/2/03 16:00	0.1	0.3	4.7	0.6	12.8	19.9	20.2	58.2
2/2/03 17:00	15.8	0.3	4.7	0.6	12.7	19.8	20.0	57.9
2/2/03 18:00	25.0	0.3	4.7	0.6	12.7	19.7	19.9	57.6
2/2/03 19:00	20.0	0.3	4.6	0.6	12.6	19.6	19.8	57.2
2/2/03 20:00	19.7	0.3	4.6	0.6	12.5	19.5	19.7	56.9
2/2/03 21:00	16.3	0.3	4.6	0.6	12.4	19.4	19.6	56.5
2/2/03 22:00	7.6	0.3	4.6	0.6	12.4	19.2	19.5	56.2
2/2/03 23:00	6.7	0.3	4.5	0.6	12.3	19.1	19.3	55.9
2/3/03 0:00	3.2	0.3	4.5	0.6	12.2	19.0	19.2	55.5
2/3/03 1:00	1.5	0.3	4.5	0.6	12.1	18.9	19.1	55.2
2/3/03 2:00	1.5	0.3	4.5	0.6	12.1	18.8	19.0	54.8
2/3/03 3:00	1.4	0.3	4.4	0.6	12.0	18.7	18.9	54.5
2/3/03 4:00	1.3	0.3	4.4	0.6	11.9	18.6	18.7	54.2
2/3/03 5:00	1.2	0.3	4.4	0.6	11.8	18.4	18.6	53.8
2/3/03 6:00	0.5	0.3	4.3	0.5	11.8	18.3	18.5	53.5
2/3/03 7:00	1.1	0.3	4.3	0.5	11.7	18.2	18.4	53.2
2/3/03 8:00	1.7	0.3	4.3	0.5	11.6	18.1	18.3	52.8
2/3/03 9:00	2.4	0.4	4.3	0.5	11.5	18.0	18.2	52.5
2/3/03 10:00	3.0	0.4	4.2	0.5	11.5	17.9	18.0	52.1
2/3/03 11:00	4.1	0.1	4.2	0.5	11.4	17.7	17.9	51.8
2/3/03 12:00	4.7	0.1	4.2	0.5	11.3	17.6	17.8	51.5
2/3/03 13:00	4.8	0.1	4.2	0.5	11.2	17.5	17.7	51.1
2/3/03 14:00	4.3	0.1	4.1	0.5	11.2	17.4	17.6	50.8
2/3/03 15:00	1.3	0.1	4.1	0.5	11.1	17.3	17.5	50.4
2/3/03 16:00	4.1	0.3	4.1	0.5	11.0	17.2	17.3	50.1
2/3/03 17:00	6.8	0.3	4.0	0.5	10.9	17.0	17.2	49.8
2/3/03 18:00	9.6	0.2	4.0	0.5	10.9	16.9	17.1	49.4
2/3/03 19:00	4.0	0.2	4.0	0.5	10.8	16.8	17.0	49.1
2/3/03 20:00	4.3	0.2	4.0	0.5	10.7	16.7	16.9	48.8
2/3/03 21:00	4.7	0.2	3.9	0.5	10.6	16.6	16.8	48.4
2/3/03 22:00	4.9	0.2	3.9	0.5	10.6	16.5	16.6	48.1
2/3/03 23:00	5.3	0.2	3.9	0.5	10.5	16.3	16.5	47.7
2/4/03 0:00	6.2	0.2	3.9	0.5	10.4	16.2	16.4	47.4
2/4/03 1:00	4.3	0.2	3.8	0.5	10.3	16.1	16.3	47.1
2/4/03 2:00	2.6	0.2	3.8	0.5	10.3	16.0	16.2	46.7
2/4/03 3:00	2.8	0.1	3.8	0.5	10.2	15.9	16.1	46.4
2/4/03 4:00	2.2	0.1	3.7	0.5	10.1	15.8	15.9	46.0
2/4/03 5:00	6.7	0.1	3.7	0.5	10.0	15.7	15.8	45.7
2/4/03 6:00	3.6	0.1	3.7	0.5	10.0	15.5	15.7	45.4
2/4/03 7:00	3.3	0.1	3.7	0.5	9.9	15.4	15.6	45.0
2/4/03 8:00	2.9	0.1	3.6	0.5	9.8	15.3	15.5	44.7
2/4/03 9:00	2.6	0.1	3.6	0.5	9.8	15.2	15.4	44.4

2/4/03 10:00	3.2	0.1	3.6	0.5	9.7	15.1	15.2		44.0
2/4/03 11:00	1.8	0.1	3.5	0.4	9.6	15.0	15.1		43.7
2/4/03 12:00	2.8	0.1	3.5	0.4	9.5	14.8	15.0		43.3
2/4/03 13:00	2.7	0.1	3.5	0.4	9.5	14.7	14.9		43.0
2/4/03 14:00	1.4	0.1	3.5	0.4	9.4	14.6	14.8		42.7
2/4/03 15:00	2.3	0.1	3.4	0.4	9.3	14.5	14.6		42.3
2/4/03 16:00	3.2	0.1	3.4	0.4	9.2	14.4	14.5		42.0
2/4/03 17:00	4.1	0.3	3.4	0.4	9.2	14.3	14.4		41.6
2/4/03 18:00	5.1	0.3	3.4	0.4	9.1	14.1	14.3		41.3
2/4/03 19:00	3.6	0.3	3.3	0.4	9.0	14.0	14.2		41.0
2/4/03 20:00	6.0	0.3	3.3	0.4	8.9	13.9	14.1		40.6
2/4/03 21:00	4.1	0.3	3.3	0.4	8.9	13.8	13.9		40.3
2/4/03 22:00	8.3	0.3	3.2	0.4	8.8	13.7	13.8		39.9
2/4/03 23:00	8.9	0.3	3.2	0.4	8.7	13.6	13.7		39.6
2/5/03 0:00	7.3	0.3	3.2	0.4	8.6	13.5	13.6		39.3
2/5/03 1:00	5.6	0.3	3.2	0.4	8.6	13.3	13.5		38.9
2/5/03 2:00	4.3	0.3	3.1	0.4	8.5	13.2	13.4		38.6
2/5/03 3:00	2.7	0.3	3.1	0.4	8.4	13.1	13.2		38.3
2/5/03 4:00	2.5	0.4	3.1	0.4	8.3	13.0	13.1		37.9
2/5/03 5:00	3.8	0.4	3.1	0.4	8.3	12.9	13.0		37.6
2/5/03 6:00	1.2	0.4	3.0	0.4	8.2	12.8	12.9		37.2
2/5/03 7:00	1.1	0.4	3.0	0.4	8.1	12.6	12.8		36.9
2/5/03 8:00	1.0	0.4	3.0	0.4	8.0	12.5	12.7		36.6
2/5/03 9:00	0.9	0.4	2.9	0.4	8.0	12.4	12.5		36.2
2/5/03 10:00	4.5	0.4	2.9	0.4	7.9	12.3	12.4		35.9
2/5/03 11:00	4.0	0.4	2.9	0.4	7.8	12.2	12.3		35.5
2/5/03 12:00	3.6	0.4	2.9	0.4	7.7	12.1	12.2		35.2
2/5/03 13:00	3.8	0.4	2.8	0.4	7.7	11.9	12.1		34.9
2/5/03 14:00	3.1	0.4	2.8	0.4	7.6	11.8	12.0		34.5
2/5/03 15:00	3.3	0.4	2.8	0.4	7.5	11.7	11.8		34.2
2/5/03 16:00	3.5	0.4	2.8	0.3	7.4	11.6	11.7		33.9
2/5/03 17:00	3.7	0.4	2.7	0.3	7.4	11.5	11.6		33.5
2/5/03 18:00	3.9	0.4	2.7	0.3	7.3	11.4	11.5		33.2
2/5/03 19:00	4.1	0.4	2.7	0.3	7.2	11.2	11.4		32.8
2/5/03 20:00	4.3	0.4	2.6	0.3	7.1	11.1	11.2		32.5
2/5/03 21:00	7.4	0.4	2.6	0.3	7.1	11.0	11.1		32.2
2/5/03 22:00	8.4	0.3	2.6	0.3	7.0	10.9	11.0		31.8
2/5/03 23:00	8.9	0.3	2.6	0.3	6.9	10.8	10.9		31.5
2/6/03 0:00	3.6	0.3	2.5	0.3	6.8	10.7	10.8		31.1
2/6/03 1:00	3.9	0.3	2.5	0.3	6.8	10.6	10.7		30.8
2/6/03 2:00	2.5	0.2	2.5	0.3	6.7	10.4	10.5		30.5
2/6/03 3:00	0.6	0.2	2.4	0.3	6.6	10.3	10.4		30.1
2/6/03 4:00	0.4	0.2	2.4	0.3	6.6	10.2	10.3		29.8
2/6/03 5:00	5.3	0.1	2.4	0.3	6.5	10.1	10.2		29.5
2/6/03 6:00	6.0	0.1	2.4	0.3	6.4	10.0	10.1		29.1
2/6/03 7:00	4.5	0.1	2.3	0.3	6.3	9.9	10.0		28.8
2/6/03 8:00	3.0	0.1	2.3	0.3	6.3	9.7	9.8		28.4
2/6/03 9:00	2.8	0.1	2.3	0.3	6.2	9.6	9.7		28.1
2/6/03 10:00	4.7	0.1	2.3	0.3	6.1	9.5	9.6		27.8
2/6/03 11:00	3.3	0.1	2.2	0.3	6.0	9.4	9.5		27.4
2/6/03 12:00	2.0	0.1	2.2	0.3	6.0	9.3	9.4		27.1
2/6/03 13:00	0.6	0.1	2.2	0.3	5.9	9.2	9.3		26.7

2/6/03 14:00	0.7	0.1	2.1	0.3	5.8	9.0	9.1	26.4
2/6/03 15:00	0.7	0.1	2.1	0.3	5.7	8.9	9.0	26.1
2/6/03 16:00	0.7	0.1	2.1	0.3	5.7	8.8	8.9	25.7
2/6/03 17:00	0.8	0.1	2.1	0.3	5.6	8.7	8.8	25.4
2/6/03 18:00	6.3	0.1	2.0	0.3	5.5	8.6	8.7	25.1
2/6/03 19:00	3.9	0.1	2.0	0.3	5.4	8.5	8.6	24.7
2/6/03 20:00	6.1	0.1	2.0	0.2	5.4	8.3	8.4	24.4
2/6/03 21:00	6.5	0.1	2.0	0.2	5.3	8.2	8.3	24.0
2/6/03 22:00	6.7	0.1	1.9	0.2	5.2	8.1	8.2	23.7
2/6/03 23:00	6.3	0.1	1.9	0.2	5.1	8.0	8.1	23.4
2/7/03 0:00	6.9	0.1	1.9	0.2	5.1	7.9	8.0	23.0
2/7/03 1:00	6.0	0.1	1.8	0.2	5.0	7.8	7.9	22.7
2/7/03 2:00	4.3	0.1	1.8	0.2	4.9	7.7	7.7	22.3
2/7/03 3:00	3.1	0.1	1.8	0.2	4.8	7.5	7.6	22.0
2/7/03 4:00	4.1	0.1	1.8	0.2	4.8	7.4	7.5	21.7
2/7/03 5:00	5.2	0.1	1.7	0.2	4.7	7.3	7.4	21.3
2/7/03 6:00	9.5	0.1	1.7	0.2	4.6	7.2	7.3	21.0
2/7/03 7:00	5.3	0.1	1.7	0.2	4.5	7.1	7.1	20.7
2/7/03 8:00	4.5	0.1	1.7	0.2	4.5	7.0	7.0	20.3
2/7/03 9:00	4.8	0.1	1.6	0.2	4.4	6.8	6.9	20.0
2/7/03 10:00	4.8	0.1	1.6	0.2	4.3	6.7	6.8	19.6
2/7/03 11:00	7.0	0.1	1.6	0.2	4.2	6.6	6.7	19.3
2/7/03 12:00	3.5	0.1	1.5	0.2	4.2	6.5	6.6	19.0
2/7/03 13:00	3.1	0.1	1.5	0.2	4.1	6.4	6.4	18.6
2/7/03 14:00	1.9	0.1	1.5	0.2	4.0	6.3	6.3	18.3
2/7/03 15:00	1.3	0.1	1.5	0.2	3.9	6.1	6.2	17.9
2/7/03 16:00	1.9	0.1	1.4	0.2	3.9	6.0	6.1	17.6
2/7/03 17:00	2.4	0.1	1.4	0.2	3.8	5.9	6.0	17.3
2/7/03 18:00	3.0	0.1	1.4	0.2	3.7	5.8	5.9	16.9
2/7/03 19:00	1.9	0.1	1.3	0.2	3.6	5.7	5.7	16.6
2/7/03 20:00	5.2	0.1	1.3	0.2	3.6	5.6	5.6	16.3
2/7/03 21:00	3.6	0.1	1.3	0.2	3.5	5.4	5.5	15.9
2/7/03 22:00	7.5	0.1	1.3	0.2	3.4	5.3	5.4	15.6
2/7/03 23:00	5.2	0.1	1.2	0.2	3.3	5.2	5.3	15.2
2/8/03 0:00	7.6	0.1	1.2	0.2	3.3	5.1	5.2	14.9
2/8/03 1:00	3.5	0.1	1.2	0.1	3.2	5.0	5.0	14.6
2/8/03 2:00	1.5	0.1	1.2	0.1	3.1	4.9	4.9	14.2
2/8/03 3:00	1.5	0.1	1.1	0.1	3.1	4.8	4.8	13.9
2/8/03 4:00	1.4	0.1	1.1	0.1	3.0	4.6	4.7	13.5
2/8/03 5:00	1.3	0.1	1.1	0.1	2.9	4.5	4.6	13.2
2/8/03 6:00	1.2	0.1	1.0	0.1	2.8	4.4	4.5	12.9
2/8/03 7:00	1.1	0.1	1.0	0.1	2.8	4.3	4.3	12.5
2/8/03 8:00	1.1	0.1	1.0	0.1	2.7	4.2	4.2	12.2
2/8/03 9:00	1.0	0.1	1.0	0.1	2.6	4.1	4.1	11.8
2/8/03 10:00	0.9	0.1	0.9	0.1	2.5	3.9	4.0	11.5
2/8/03 11:00	0.8	0.1	0.9	0.1	2.5	3.8	3.9	11.2
2/8/03 12:00	0.7	0.1	0.9	0.1	2.4	3.7	3.7	10.8
2/8/03 13:00	0.7	0.1	0.9	0.1	2.3	3.6	3.6	10.5
2/8/03 14:00	0.6	0.1	0.8	0.1	2.2	3.5	3.5	10.2
2/8/03 15:00	0.5	0.1	0.8	0.1	2.2	3.4	3.4	9.8
2/8/03 16:00	0.4	0.1	0.8	0.1	2.1	3.2	3.3	9.5
2/8/03 17:00	0.3	0.1	0.7	0.1	2.0	3.1	3.2	9.1

2/8/03 18:00	0.3	0.1	0.7	0.1	1.9	3.0	3.0	8.8
2/8/03 19:00	0.5	0.1	0.7	0.1	1.9	2.9	2.9	8.5
2/8/03 20:00	0.5	0.1	0.7	0.1	1.8	2.8	2.8	8.1
2/8/03 21:00	0.5	0.1	0.6	0.1	1.7	2.7	2.7	7.8
2/8/03 22:00	3.0	0.1	0.6	0.1	1.6	2.6	2.6	7.4
2/8/03 23:00	2.1	0.1	0.6	0.1	1.6	2.4	2.5	7.1
2/9/03 0:00	2.3	0.1	0.6	0.1	1.5	2.3	2.3	6.8
2/9/03 1:00	0.1	0.1	0.5	0.1	1.4	2.2	2.2	6.4
2/9/03 2:00	0.2	0.1	0.5	0.1	1.3	2.1	2.1	6.1
2/9/03 3:00	0.3	0.1	0.5	0.1	1.3	2.0	2.0	5.8
2/9/03 4:00	0.4	0.1	0.4	0.1	1.2	1.9	1.9	5.4
2/9/03 5:00	0.4	0.1	0.4	0.1	1.1	1.7	1.8	5.1
2/9/03 6:00	0.5	0.1	0.4	0.0	1.0	1.6	1.6	4.7
2/9/03 7:00	0.6	0.1	0.4	0.0	1.0	1.5	1.5	4.4
2/9/03 8:00	0.7	0.1	0.3	0.0	0.9	1.4	1.4	4.1
2/9/03 9:00	0.8	0.1	0.3	0.0	0.8	1.3	1.3	3.7
2/9/03 10:00	0.9	0.1	0.3	0.0	0.7	1.2	1.2	3.4
2/9/03 11:00	0.9	0.1	0.2	0.0	0.7	1.0	1.1	3.0
2/9/03 12:00	1.0	0.1	0.2	0.0	0.6	0.9	0.9	2.7
2/9/03 13:00	1.1	0.1	0.2	0.0	0.5	0.8	0.8	2.4
2/9/03 14:00	1.2	0.1	0.2	0.0	0.4	0.7	0.7	2.0
2/9/03 15:00	1.3	0.1	0.1	0.0	0.4	0.6	0.6	1.7
2/9/03 16:00	1.3	0.1	0.1	0.0	0.3	0.5	0.5	1.4
2/9/03 17:00	1.4	0.1	0.1	0.0	0.2	0.3	0.4	1.0
2/9/03 18:00	5.7	0.1	0.1	0.0	0.1	0.2	0.2	0.7
2/9/03 19:00	6.1	0.1	0.0	0.0	0.1	0.1	0.1	0.3
2/9/03 20:00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2/9/03 21:00	7.3	0.1	0.0	0.0	0.0	0.0	0.0	0.0
2/9/03 22:00	5.8	0.1	0.0	0.0	0.0	0.0	0.0	0.0
2/9/03 23:00	2.6	0.1	0.0	0.0	0.0	0.0	0.0	0.0
2/10/03 0:00	1.3	0.1	0.0	0.0	0.0	0.0	0.0	0.0
2/10/03 1:00	0.9	0.1	0.0	0.0	0.0	0.0	0.0	0.0
2/10/03 2:00	1.3	0.1	0.0	0.0	0.0	0.0	0.0	0.0
2/10/03 3:00	1.6	0.1	0.0	0.0	0.0	0.0	0.0	0.0
2/10/03 4:00	2.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0
2/10/03 5:00	2.3	0.1	0.0	0.0	0.0	0.0	0.0	0.0
2/10/03 6:00	6.5	0.1	0.0	0.0	0.0	0.0	0.0	0.0
2/10/03 7:00	4.4	0.1	0.0	0.0	0.0	0.0	0.0	0.0
2/10/03 8:00	2.4	0.1	0.0	0.0	0.0	0.0	0.0	0.0
2/10/03 9:00	0.4	0.1	0.0	0.0	0.0	0.0	0.0	0.0
2/10/03 10:00	2.5	0.1	0.0	0.0	0.0	0.0	0.0	0.0
2/10/03 11:00	1.4	0.1	0.0	0.0	0.0	0.0	0.0	0.0
2/10/03 12:00	0.3	0.1	0.0	0.0	0.0	0.0	0.0	0.0
2/10/03 13:00	1.7	0.1	0.0	0.0	0.0	0.0	0.0	0.0
2/10/03 14:00	2.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0
2/10/03 15:00	2.8	0.1	0.0	0.0	0.0	0.0	0.0	0.0
2/10/03 16:00	3.3	0.1	0.0	0.0	0.0	0.0	0.0	0.0
2/10/03 17:00	3.9	0.1	0.0	0.0	0.0	0.0	0.0	0.0
2/10/03 18:00	4.4	0.1	0.0	0.0	0.0	0.0	0.0	0.0
2/10/03 19:00	3.4	0.1	0.0	0.0	0.0	0.0	0.0	0.0
2/10/03 20:00	3.3	0.1	0.0	0.0	0.0	0.0	0.0	0.0
2/10/03 21:00	3.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0

2/10/03 22:00	4.9	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2/10/03 23:00	5.3	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2/11/03 0:00	5.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2/11/03 1:00	3.4	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2/11/03 2:00	2.3	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2/11/03 3:00	2.7	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2/11/03 4:00	3.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2/11/03 5:00	3.5	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2/11/03 6:00	8.4	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2/11/03 7:00	0.5	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2/11/03 8:00	1.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2/11/03 9:00	1.8	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2/11/03 10:00	5.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2/11/03 11:00	3.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2/11/03 12:00	0.4	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2/11/03 13:00	1.7	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2/11/03 14:00	2.6	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2/11/03 15:00	1.5	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2/11/03 16:00	1.5	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2/11/03 17:00	1.4	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2/11/03 18:00	6.3	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2/11/03 19:00	4.8	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2/11/03 20:00	2.3	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2/11/03 21:00	2.4	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2/11/03 22:00	2.5	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2/11/03 23:00	4.3	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2/12/03 0:00	1.4	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2/12/03 1:00	2.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2/12/03 2:00	2.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2/12/03 3:00	1.7	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2/12/03 4:00	1.5	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2/12/03 5:00	1.3	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2/12/03 6:00	5.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2/12/03 7:00	2.6	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2/12/03 8:00	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2/12/03 9:00	3.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2/12/03 10:00	8.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2/12/03 11:00	6.7	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2/12/03 12:00	2.6	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2/12/03 13:00	2.6	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2/12/03 14:00	1.7	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2/12/03 15:00	1.8	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2/12/03 16:00	1.9	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2/12/03 17:00	1.9	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2/12/03 18:00	5.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2/12/03 19:00	1.4	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2/12/03 20:00	2.5	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2/12/03 21:00	3.5	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2/12/03 22:00	4.5	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2/12/03 23:00	5.6	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2/13/03 0:00	2.6	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2/13/03 1:00	2.3	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0

2/13/03 2:00	1.6	0.1	0.0	0.0	0.0	0.0	0.0	0.0
2/13/03 3:00	0.9	0.1	0.0	0.0	0.0	0.0	0.0	0.0
2/13/03 4:00	0.3	0.1	0.0	0.0	0.0	0.0	0.0	0.0
2/13/03 5:00	3.8	0.1	0.0	0.0	0.0	0.0	0.0	0.0
2/13/03 6:00	4.9	0.1	0.0	0.0	0.0	0.0	0.0	0.0
2/13/03 7:00	4.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
2/13/03 8:00	3.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0
2/13/03 9:00	2.3	0.1	0.0	0.0	0.0	0.0	0.0	0.0
2/13/03 10:00	5.7	0.1	0.0	0.0	0.0	0.0	0.0	0.0
2/13/03 11:00	2.6	0.1	0.0	0.0	0.0	0.0	0.0	0.0
2/13/03 12:00	0.9	0.1	0.0	0.0	0.0	0.0	0.0	0.0
2/13/03 13:00	1.3	0.1	0.0	0.0	0.0	0.0	0.0	0.0
2/13/03 14:00	1.5	0.1	0.0	0.0	0.0	0.0	0.0	0.0
2/13/03 15:00	1.8	0.1	0.0	0.0	0.0	0.0	0.0	0.0
2/13/03 16:00	2.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
2/13/03 17:00	2.3	0.1	0.0	0.0	0.0	0.0	0.0	0.0
2/13/03 18:00	3.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0
2/13/03 19:00	0.5	0.1	0.0	0.0	0.0	0.0	0.0	0.0
2/13/03 20:00	2.8	0.1	0.0	0.0	0.0	0.0	0.0	0.0
2/13/03 21:00	0.8	0.1	0.0	0.0	0.0	0.0	0.0	0.0
2/13/03 22:00	2.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
2/13/03 23:00	2.3	0.1	0.0	0.0	0.0	0.0	0.0	0.0
2/14/03 0:00	4.4	0.1	0.0	0.0	0.0	0.0	0.0	0.0
2/14/03 1:00	4.7	0.1	0.0	0.0	0.0	0.0	0.0	0.0
2/14/03 2:00	2.7	0.1	0.0	0.0	0.0	0.0	0.0	0.0
2/14/03 3:00	0.9	0.1	0.0	0.0	0.0	0.0	0.0	0.0
2/14/03 4:00	1.9	0.1	0.0	0.0	0.0	0.0	0.0	0.0
2/14/03 5:00	3.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0
2/14/03 6:00	3.8	0.1	0.0	0.0	0.0	0.0	0.0	0.0
2/14/03 7:00	3.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
2/14/03 8:00	2.5	0.1	0.0	0.0	0.0	0.0	0.0	0.0
2/14/03 9:00	1.9	0.1	0.0	0.0	0.0	0.0	0.0	0.0
2/14/03 10:00	1.3	0.1	0.0	0.0	0.0	0.0	0.0	0.0
2/14/03 11:00	0.6	0.1	0.0	0.0	0.0	0.0	0.0	0.0
2/14/03 12:00	0.6	0.1	0.0	0.0	0.0	0.0	0.0	0.0
2/14/03 13:00	0.6	0.1	0.0	0.0	0.0	0.0	0.0	0.0
2/14/03 14:00	0.4	0.1	0.0	0.0	0.0	0.0	0.0	0.0
2/14/03 15:00	0.3	0.1	0.0	0.0	0.0	0.0	0.0	0.0
2/14/03 16:00	0.7	0.1	0.0	0.0	0.0	0.0	0.0	0.0
2/14/03 17:00	1.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
2/14/03 18:00	1.5	0.1	0.0	0.0	0.0	0.0	0.0	0.0
2/14/03 19:00	1.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0
2/14/03 20:00	0.5	0.1	0.0	0.0	0.0	0.0	0.0	0.0
2/14/03 21:00	0.5	0.1	0.0	0.0	0.0	0.0	0.0	0.0
2/14/03 22:00	2.7	0.1	0.0	0.0	0.0	0.0	0.0	0.0
2/14/03 23:00	5.4	0.1	0.0	0.0	0.0	0.0	0.0	0.0
2/15/03 0:00	3.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
2/15/03 1:00	2.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0
2/15/03 2:00	2.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0
2/15/03 3:00	1.8	0.1	0.0	0.0	0.0	0.0	0.0	0.0
2/15/03 4:00	1.6	0.1	0.0	0.0	0.0	0.0	0.0	0.0
2/15/03 5:00	1.4	0.1	0.0	0.0	0.0	0.0	0.0	0.0

2/15/03 6:00	1.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0
2/15/03 7:00	1.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0
2/15/03 8:00	0.8	0.1	0.0	0.0	0.0	0.0	0.0	0.0
2/15/03 9:00	0.6	0.1	0.0	0.0	0.0	0.0	0.0	0.0
2/15/03 10:00	0.4	0.1	0.0	0.0	0.0	0.0	0.0	0.0
2/15/03 11:00	1.3	0.1	0.0	0.0	0.0	0.0	0.0	0.0
2/15/03 12:00	2.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0
2/15/03 13:00	3.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
2/15/03 14:00	4.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0
2/15/03 15:00	4.9	0.1	0.0	0.0	0.0	0.0	0.0	0.0
2/15/03 16:00	5.8	0.1	0.0	0.0	0.0	0.0	0.0	0.0
2/15/03 17:00	6.7	0.1	0.0	0.0	0.0	0.0	0.0	0.0
2/15/03 18:00	7.6	0.1	0.0	0.0	0.0	0.0	0.0	0.0
2/15/03 19:00	2.3	0.1	0.0	0.0	0.0	0.0	0.0	0.0
2/15/03 20:00	2.9	0.1	0.0	0.0	0.0	0.0	0.0	0.0
2/15/03 21:00	3.5	0.1	0.0	0.0	0.0	0.0	0.0	0.0
2/15/03 22:00	4.3	0.1	0.0	0.0	0.0	0.0	0.0	0.0
2/15/03 23:00	3.5	0.1	0.0	0.0	0.0	0.0	0.0	0.0
2/16/03 0:00	3.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
2/16/03 1:00	2.6	0.1	0.0	0.0	0.0	0.0	0.0	0.0
2/16/03 2:00	2.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0
2/16/03 3:00	1.7	0.1	0.0	0.0	0.0	0.0	0.0	0.0
2/16/03 4:00	1.3	0.1	0.0	0.0	0.0	0.0	0.0	0.0
2/16/03 5:00	0.9	0.1	0.0	0.0	0.0	0.0	0.0	0.0
2/16/03 6:00	0.4	0.1	0.0	0.0	0.0	0.0	0.0	0.0
2/16/03 7:00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2/16/03 8:00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2/16/03 9:00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2/16/03 10:00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2/16/03 11:00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2/16/03 12:00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2/16/03 13:00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2/16/03 14:00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2/16/03 15:00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2/16/03 16:00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2/16/03 17:00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2/16/03 18:00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2/16/03 19:00	4.5	0.1	0.0	0.0	0.0	0.0	0.0	0.0
2/16/03 20:00	0.9	0.1	0.0	0.0	0.0	0.0	0.0	0.0
2/16/03 21:00	2.6	0.1	0.0	0.0	0.0	0.0	0.0	0.0
2/16/03 22:00	0.9	0.1	0.0	0.0	0.0	0.0	0.0	0.0
2/16/03 23:00	1.3	0.1	0.0	0.0	0.0	0.0	0.0	0.0
2/17/03 0:00	1.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0
2/17/03 1:00	1.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
2/17/03 2:00	1.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
2/17/03 3:00	1.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0
2/17/03 4:00	0.9	0.1	0.0	0.0	0.0	0.0	0.0	0.0
2/17/03 5:00	0.9	0.1	0.0	0.0	0.0	0.0	0.0	0.0
2/17/03 6:00	0.8	0.1	0.0	0.0	0.0	0.0	0.0	0.0
2/17/03 7:00	0.7	0.1	0.0	0.0	0.0	0.0	0.0	0.0
2/17/03 8:00	0.6	0.1	0.0	0.0	0.0	0.0	0.0	0.0
2/17/03 9:00	0.5	0.1	0.0	0.0	0.0	0.0	0.0	0.0

2/17/03 10:00	1.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0
2/17/03 11:00	2.7	0.1	0.0	0.0	0.0	0.0	0.0	0.0
2/17/03 12:00	3.8	0.1	0.0	0.0	0.0	0.0	0.0	0.0
2/17/03 13:00	4.9	2.9	0.0	0.0	0.0	0.0	0.0	0.0
2/17/03 14:00	6.0	5.8	0.0	0.0	0.0	0.0	0.0	0.0
2/17/03 15:00	7.1	8.6	0.0	0.0	0.0	0.0	0.0	0.0
2/17/03 16:00	8.2	11.4	0.0	0.0	0.0	0.0	0.0	0.0
2/17/03 17:00	9.3	14.3	0.0	0.0	0.0	0.0	0.0	0.0
2/17/03 18:00	10.4	17.1	0.0	0.0	0.0	0.0	0.0	0.0
2/17/03 19:00	7.9	19.9	0.0	0.0	0.0	0.0	0.0	0.0
2/17/03 20:00	5.1	22.7	0.0	0.0	0.0	0.0	0.0	0.0
2/17/03 21:00	4.5	25.6	0.0	0.0	0.0	0.0	0.0	0.0
2/17/03 22:00	4.5	28.4	0.0	0.0	0.0	0.0	0.0	0.0
2/17/03 23:00	4.4	26.7	0.0	0.0	0.0	0.0	0.0	0.0
2/18/03 0:00	4.3	26.8	0.0	0.0	0.0	0.0	0.0	0.0
2/18/03 1:00	4.3	24.8	0.0	0.0	0.0	0.0	0.0	0.0
2/18/03 2:00	4.2	23.7	0.0	0.0	0.0	0.0	0.0	0.0
2/18/03 3:00	4.1	23.2	0.0	0.0	0.0	0.0	0.0	0.0
2/18/03 4:00	4.0	23.5	0.0	0.0	0.0	0.0	0.0	0.0
2/18/03 5:00	4.0	25.0	0.0	0.0	0.0	0.0	0.0	0.0
2/18/03 6:00	3.9	28.0	0.0	0.0	0.0	0.0	0.0	0.0
2/18/03 7:00	3.8	21.6	0.0	0.0	0.0	0.0	0.0	0.0
2/18/03 8:00	3.8	23.2	0.0	0.0	0.0	0.0	0.0	0.0
2/18/03 9:00	3.7	24.0	0.0	0.0	0.0	0.0	0.0	0.0
2/18/03 10:00	3.6	26.4	0.0	0.0	0.0	0.0	0.0	0.0
2/18/03 11:00	3.6	27.1	0.0	0.0	0.0	0.0	0.0	0.0
2/18/03 12:00	3.5	25.4	0.0	0.0	0.0	0.0	0.0	0.0
2/18/03 13:00	3.4	25.3	0.0	0.0	0.0	0.0	0.0	0.0
2/18/03 14:00	3.4	23.6	0.0	0.0	0.0	0.0	0.0	0.0
2/18/03 15:00	3.3	21.6	0.0	0.0	0.0	0.0	0.0	0.0
2/18/03 16:00	3.2	18.4	0.0	0.0	0.0	0.0	0.0	0.0
2/18/03 17:00	3.2	16.1	0.0	0.0	0.0	0.0	0.0	0.0
2/18/03 18:00	3.1	23.7	0.0	0.0	0.0	0.0	0.0	0.0
2/18/03 19:00	3.0	21.5	0.0	0.0	0.0	0.0	0.0	0.0
2/18/03 20:00	3.0	18.5	0.0	0.0	0.0	0.0	0.0	0.0
2/18/03 21:00	2.9	19.2	0.0	0.0	0.0	0.0	0.0	0.0
2/18/03 22:00	2.8	18.3	0.0	0.0	0.0	0.0	0.0	0.0
2/18/03 23:00	2.7	18.8	0.0	0.0	0.0	0.0	0.0	0.0
2/19/03 0:00	2.7	18.3	0.0	0.0	0.0	0.0	0.0	0.0
2/19/03 1:00	2.6	16.3	0.0	0.0	0.0	0.0	0.0	0.0
2/19/03 2:00	2.5	14.3	0.0	0.0	0.0	0.0	0.0	0.0
2/19/03 3:00	2.5	12.6	0.0	0.0	0.0	0.0	0.0	0.0
2/19/03 4:00	2.4	12.2	0.0	0.0	0.0	0.0	0.0	0.0
2/19/03 5:00	2.3	15.6	0.0	0.0	0.0	0.0	0.0	0.0
2/19/03 6:00	2.3	17.1	0.0	0.0	0.0	0.0	0.0	0.0
2/19/03 7:00	2.2	12.7	0.0	0.0	0.0	0.0	0.0	0.0
2/19/03 8:00	2.1	15.9	0.0	0.0	0.0	0.0	0.0	0.0
2/19/03 9:00	2.1	17.2	0.0	0.0	0.0	0.0	0.0	0.0
2/19/03 10:00	2.0	18.0	0.0	0.0	0.0	0.0	0.0	0.0
2/19/03 11:00	1.9	19.2	0.0	0.0	0.0	0.0	0.0	0.0
2/19/03 12:00	1.9	18.1	0.0	0.0	0.0	0.0	0.0	0.0
2/19/03 13:00	1.8	18.5	0.0	0.0	0.0	0.0	0.0	0.0

2/19/03 14:00	1.7	17.0	0.0	0.0	0.0	0.0	0.0	0.0
2/19/03 15:00	1.6	15.9	0.0	0.0	0.0	0.0	0.0	0.0
2/19/03 16:00	1.6	14.0	0.0	0.0	0.0	0.0	0.0	0.0
2/19/03 17:00	1.5	13.5	0.0	0.0	0.0	0.0	0.0	0.0
2/19/03 18:00	1.4	18.1	0.0	0.0	0.0	0.0	0.0	0.0
2/19/03 19:00	1.4	16.2	0.0	0.0	0.0	0.0	0.0	0.0
2/19/03 20:00	1.3	14.9	0.0	0.0	0.0	0.0	0.0	0.0
2/19/03 21:00	1.2	15.0	0.0	0.0	0.0	0.0	0.0	0.0
2/19/03 22:00	1.2	16.6	0.0	0.0	0.0	0.0	0.0	0.0
2/19/03 23:00	1.1	16.6	0.0	0.0	0.0	0.0	0.0	0.0
2/20/03 0:00	1.0	15.9	0.0	0.0	0.0	0.0	0.0	0.0
2/20/03 1:00	1.0	15.2	0.0	0.0	0.0	0.0	0.0	0.0
2/20/03 2:00	0.9	12.7	0.0	0.0	0.0	0.0	0.0	0.0
2/20/03 3:00	0.8	12.8	0.0	0.0	0.0	0.0	0.0	0.0
2/20/03 4:00	0.8	13.2	0.0	0.0	0.0	0.0	0.0	0.0
2/20/03 5:00	0.7	15.7	0.0	0.0	0.0	0.0	0.0	0.0
2/20/03 6:00	0.6	20.1	0.0	0.0	0.0	0.0	0.0	0.0
2/20/03 7:00	0.5	11.1	0.0	0.0	0.0	0.0	0.0	0.0
2/20/03 8:00	0.5	11.0	0.0	0.0	0.0	0.0	0.0	0.0
2/20/03 9:00	0.4	13.0	0.0	0.0	0.0	0.0	0.0	0.0
2/20/03 10:00	0.3	15.9	0.0	0.0	0.0	0.0	0.0	0.0
2/20/03 11:00	0.3	15.9	0.0	0.0	0.0	0.0	0.0	0.0
2/20/03 12:00	0.2	13.7	0.0	0.0	0.0	0.0	0.0	0.0
2/20/03 13:00	0.1	16.1	0.0	0.0	0.0	0.0	0.0	0.0
2/20/03 14:00	0.1	15.0	0.0	0.0	0.0	0.0	0.0	0.0
2/20/03 15:00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2/20/03 16:00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2/20/03 17:00	0.0	9.7	0.0	0.0	0.0	0.0	0.0	0.0
2/20/03 18:00	0.0	19.7	0.0	0.0	0.0	0.0	0.0	0.0
2/20/03 19:00	0.0	13.5	0.0	0.0	0.0	0.0	0.0	0.0
2/20/03 20:00	0.0	11.1	0.0	0.0	0.0	0.0	0.0	0.0
2/20/03 21:00	0.0	12.7	0.0	0.0	0.0	0.0	0.0	0.0
2/20/03 22:00	0.0	14.6	0.0	0.0	0.0	0.0	0.0	0.0
2/20/03 23:00	0.0	15.3	0.0	0.0	0.0	0.0	0.0	0.0
2/21/03 0:00	0.0	15.8	0.0	0.0	0.0	0.0	0.0	0.0
2/21/03 1:00	0.0	16.3	0.0	0.0	0.0	0.0	0.0	0.0
2/21/03 2:00	0.0	16.3	0.0	0.0	0.0	0.0	0.0	0.0
2/21/03 3:00	0.0	14.9	0.0	0.0	0.0	0.0	0.0	0.0
2/21/03 4:00	0.0	15.2	0.0	0.0	0.0	0.0	0.0	0.0
2/21/03 5:00	0.1	17.1	0.0	0.0	0.0	0.0	0.0	0.0
2/21/03 6:00	0.1	20.0	0.0	0.0	0.0	0.0	0.0	0.0
2/21/03 7:00	0.1	13.6	0.0	0.0	0.0	0.0	0.0	0.0
2/21/03 8:00	0.1	15.8	0.0	0.0	0.0	0.0	0.0	0.0
2/21/03 9:00	0.1	15.0	0.0	0.0	0.0	0.0	0.0	0.0
2/21/03 10:00	0.1	17.2	0.0	0.0	0.0	0.0	0.0	0.0
2/21/03 11:00	0.1	18.1	0.0	0.0	0.0	0.0	0.0	0.0
2/21/03 12:00	0.1	17.5	0.0	0.0	0.0	0.0	0.0	0.0
2/21/03 13:00	0.1	18.8	0.0	0.0	0.0	0.0	0.0	0.0
2/21/03 14:00	0.1	14.4	0.0	0.0	0.0	0.0	0.0	0.0
2/21/03 15:00	0.1	15.6	0.0	0.0	0.0	0.0	0.0	0.0
2/21/03 16:00	0.1	11.0	0.0	0.0	0.0	0.0	0.0	0.0
2/21/03 17:00	0.1	8.7	0.0	0.0	0.0	0.0	0.0	0.0

2/21/03 18:00	0.1	17.1	0.0	0.0	0.0	0.0	0.0	0.0
2/21/03 19:00	0.1	14.5	0.0	0.0	0.0	0.0	0.0	0.0
2/21/03 20:00	0.1	12.7	0.0	0.0	0.0	0.0	0.0	0.0
2/21/03 21:00	0.1	17.8	0.0	0.0	0.0	0.0	0.0	0.0
2/21/03 22:00	0.1	17.8	0.0	0.0	0.0	0.0	0.0	0.0
2/21/03 23:00	0.1	21.6	0.0	0.0	0.0	0.0	0.0	0.0
2/22/03 0:00	0.1	18.8	0.0	0.0	0.0	0.0	0.0	0.0
2/22/03 1:00	0.1	17.4	0.0	0.0	0.0	0.0	0.0	0.0
2/22/03 2:00	0.1	14.0	0.0	0.0	0.0	0.0	0.0	0.0
2/22/03 3:00	0.1	13.7	0.0	0.0	0.0	0.0	0.0	0.0
2/22/03 4:00	0.1	13.0	0.0	0.0	0.0	0.0	0.0	0.0
2/22/03 5:00	0.0	13.9	0.0	0.0	0.0	0.0	0.0	0.0
2/22/03 6:00	0.0	13.5	0.0	0.0	0.0	0.0	0.0	0.0
2/22/03 7:00	0.0	8.6	0.0	0.0	0.0	0.0	0.0	0.0
2/22/03 8:00	0.0	12.3	0.0	0.0	0.0	0.0	0.0	0.0
2/22/03 9:00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2/22/03 10:00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2/22/03 11:00	0.0	19.6	0.0	0.0	0.0	0.0	0.0	0.0
2/22/03 12:00	0.0	19.6	0.0	0.0	0.0	0.0	0.0	0.0
2/22/03 13:00	0.0	17.8	0.0	0.0	0.0	0.0	0.0	0.0
2/22/03 14:00	0.0	15.6	0.0	0.0	0.0	0.0	0.0	0.0
2/22/03 15:00	0.0	10.8	0.0	0.0	0.0	0.0	0.0	0.0
2/22/03 16:00	0.0	10.6	0.0	0.0	0.0	0.0	0.0	0.0
2/22/03 17:00	0.0	7.9	0.0	0.0	0.0	0.0	0.0	0.0
2/22/03 18:00	0.0	16.8	0.0	0.0	0.0	0.0	0.0	0.0
2/22/03 19:00	0.0	17.1	0.0	0.0	0.0	0.0	0.0	0.0
2/22/03 20:00	0.0	16.6	0.0	0.0	0.0	0.0	0.0	0.0
2/22/03 21:00	0.0	18.8	0.0	0.0	0.0	0.0	0.0	0.0
2/22/03 22:00	0.0	20.7	0.0	0.0	0.0	0.0	0.0	0.0
2/22/03 23:00	0.0	19.2	0.0	0.0	0.0	0.0	0.0	0.0
2/23/03 0:00	0.0	18.0	0.0	0.0	0.0	0.0	0.0	0.0
2/23/03 1:00	0.0	17.1	0.0	0.0	0.0	0.0	0.0	0.0
2/23/03 2:00	0.0	14.3	0.0	0.0	0.0	0.0	0.0	0.0
2/23/03 3:00	0.0	14.6	0.0	0.0	0.0	0.0	0.0	0.0
2/23/03 4:00	0.0	12.3	0.0	0.0	0.0	0.0	0.0	0.0
2/23/03 5:00	0.0	11.5	0.0	0.0	0.0	0.0	0.0	0.0
2/23/03 6:00	0.0	12.2	0.0	0.0	0.0	0.0	0.0	0.0
2/23/03 7:00	0.0	3.1	0.0	0.0	0.0	0.0	0.0	0.0
2/23/03 8:00	0.0	4.1	0.0	0.0	0.0	0.0	0.0	0.0
2/23/03 9:00	0.0	8.7	0.0	0.0	0.0	0.0	0.0	0.0
2/23/03 10:00	0.0	12.7	0.0	0.0	0.0	0.0	0.0	0.0
2/23/03 11:00	0.0	12.4	0.0	0.0	0.0	0.0	0.0	0.0
2/23/03 12:00	0.0	13.0	0.0	0.0	0.0	0.0	0.0	0.0
2/23/03 13:00	0.0	13.3	0.0	0.0	0.0	0.0	0.0	0.0
2/23/03 14:00	0.0	11.8	0.0	0.0	0.0	0.0	0.0	0.0
2/23/03 15:00	0.0	10.9	0.0	0.0	0.0	0.0	0.0	0.0
2/23/03 16:00	0.0	8.6	0.0	0.0	0.0	0.0	0.0	0.0
2/23/03 17:00	0.0	11.0	0.0	0.0	0.0	0.0	0.0	0.0
2/23/03 18:00	0.0	17.8	0.0	0.0	0.0	0.0	0.0	0.0
2/23/03 19:00	0.0	15.7	0.0	0.0	0.0	0.0	0.0	0.0
2/23/03 20:00	0.0	18.1	0.0	0.0	0.0	0.0	0.0	0.0
2/23/03 21:00	0.0	16.6	0.0	0.0	0.0	0.0	0.0	0.0

2/23/03 22:00	0.0	17.1	0.0	0.0	0.0	0.0	0.0	0.0
2/23/03 23:00	0.0	17.4	0.0	0.0	0.0	0.0	0.0	0.0
2/24/03 0:00	0.0	15.9	0.0	0.0	0.0	0.0	0.0	0.0
2/24/03 1:00	0.0	15.3	0.0	0.0	0.0	0.0	0.0	0.0
2/24/03 2:00	0.0	14.0	0.0	0.0	0.0	0.0	0.0	0.0
2/24/03 3:00	0.0	13.2	0.0	0.0	0.0	0.0	0.0	0.0
2/24/03 4:00	0.0	13.1	0.0	0.0	0.0	0.0	0.0	0.0
2/24/03 5:00	0.0	13.5	0.0	0.0	0.0	0.0	0.0	0.0
2/24/03 6:00	0.0	18.8	0.0	0.0	0.0	0.0	0.0	0.0
2/24/03 7:00	0.0	12.7	0.0	0.0	0.0	0.0	0.0	0.0
2/24/03 8:00	0.0	12.7	0.0	0.0	0.0	0.0	0.0	0.0
2/24/03 9:00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2/24/03 10:00	0.2	15.0	0.0	0.0	0.0	0.0	0.0	0.0
2/24/03 11:00	0.4	14.9	0.0	0.0	0.0	0.0	0.0	0.0
2/24/03 12:00	0.5	14.0	0.0	0.0	0.0	0.0	0.0	0.0
2/24/03 13:00	0.7	13.3	0.0	0.0	0.0	0.0	0.0	0.0
2/24/03 14:00	0.9	12.3	0.0	0.0	0.0	0.0	0.0	0.0
2/24/03 15:00	1.1	11.1	0.0	0.0	0.0	0.0	0.0	0.0
2/24/03 16:00	1.2	11.1	0.0	0.0	0.0	0.0	0.0	0.0
2/24/03 17:00	1.4	12.4	0.0	0.0	0.0	0.0	0.0	0.0
2/24/03 18:00	1.6	17.6	0.0	0.0	0.0	0.0	0.0	0.0
2/24/03 19:00	1.8	12.7	0.0	0.0	0.0	0.0	0.0	0.0
2/24/03 20:00	1.9	14.5	0.0	0.0	0.0	0.0	0.0	0.0
2/24/03 21:00	2.1	14.0	0.0	0.0	0.0	0.0	0.0	0.0
2/24/03 22:00	2.3	6.1	0.0	0.0	0.0	0.0	0.0	0.0
2/24/03 23:00	2.5	7.9	0.0	0.0	0.0	0.0	0.0	0.0
2/25/03 0:00	7.3	13.1	0.0	0.0	0.0	0.0	0.0	0.0
2/25/03 1:00	6.1	11.8	0.0	0.0	0.0	0.0	0.0	0.0
2/25/03 2:00	5.2	11.0	0.0	0.0	0.0	0.0	0.0	0.0
2/25/03 3:00	5.1	10.6	0.0	0.0	0.0	0.0	0.0	0.0
2/25/03 4:00	4.5	10.4	0.0	0.0	0.0	0.0	0.0	0.0
2/25/03 5:00	6.1	12.1	0.0	0.0	0.0	0.0	0.0	0.0
2/25/03 6:00	6.1	11.9	0.0	0.0	0.0	0.0	0.0	0.0
2/25/03 7:00	1.7	7.1	0.0	0.0	0.0	0.0	0.0	0.0
2/25/03 8:00	1.9	6.1	0.0	0.0	0.0	0.0	0.0	0.0
2/25/03 9:00	2.1	7.4	0.0	0.0	0.0	0.0	0.0	0.0
2/25/03 10:00	3.6	9.5	0.0	0.0	0.0	0.0	0.0	0.0
2/25/03 11:00	4.4	10.1	0.0	0.0	0.0	0.0	0.0	0.0
2/25/03 12:00	2.9	6.1	0.0	0.0	0.0	0.0	0.0	0.0
2/25/03 13:00	1.4	6.6	0.0	0.0	0.0	0.0	0.0	0.0
2/25/03 14:00	1.8	5.4	0.0	0.0	0.0	0.0	0.0	0.0
2/25/03 15:00	2.2	5.1	0.0	0.0	0.0	0.0	0.0	0.0
2/25/03 16:00	2.6	4.0	0.0	0.0	0.0	0.0	0.0	0.0
2/25/03 17:00	3.0	5.7	0.0	0.0	0.0	0.0	0.0	0.0
2/25/03 18:00	3.4	9.2	0.0	0.0	0.0	0.0	0.0	0.0
2/25/03 19:00	2.8	8.6	0.0	0.0	0.0	0.0	0.0	0.0
2/25/03 20:00	2.6	8.4	0.0	0.0	0.0	0.0	0.0	0.0
2/25/03 21:00	2.7	8.3	0.0	0.0	0.0	0.0	0.0	0.0
2/25/03 22:00	3.6	9.2	0.0	0.0	0.0	0.0	0.0	0.0
2/25/03 23:00	5.6	11.4	0.0	0.0	0.0	0.0	0.0	0.0
2/26/03 0:00	6.5	12.1	0.0	0.0	0.0	0.0	0.0	0.0
2/26/03 1:00	3.8	9.6	0.0	0.0	0.0	0.0	0.0	0.0

2/26/03 2:00	3.8	9.5	0.0	0.0	0.0	0.0	0.0	0.0
2/26/03 3:00	3.1	8.9	0.0	0.0	0.0	0.0	0.0	0.0
2/26/03 4:00	2.6	7.9	0.0	0.0	0.0	0.0	0.0	0.0
2/26/03 5:00	5.8	11.4	0.0	0.0	0.0	0.0	0.0	0.0
2/26/03 6:00	7.5	13.1	0.0	0.0	0.0	0.0	0.0	0.0
2/26/03 7:00	3.9	9.5	0.0	0.0	0.0	0.0	0.0	0.0
2/26/03 8:00	3.8	9.1	0.0	0.0	0.0	0.0	0.0	0.0
2/26/03 9:00	4.3	9.7	0.0	0.0	0.0	0.0	0.0	0.0
2/26/03 10:00	4.9	10.4	0.0	0.0	0.0	0.0	0.0	0.0
2/26/03 11:00	3.2	8.7	0.0	0.0	0.0	0.0	0.0	0.0
2/26/03 12:00	2.8	8.4	0.0	0.0	0.0	0.0	0.0	0.0
2/26/03 13:00	2.2	7.5	0.0	0.0	0.0	0.0	0.0	0.0
2/26/03 14:00	1.5	6.7	0.0	0.0	0.0	0.0	0.0	0.0
2/26/03 15:00	1.8	7.0	0.0	0.0	0.0	0.0	0.0	0.0
2/26/03 16:00	3.1	5.3	0.0	0.0	0.0	0.0	0.0	0.0
2/26/03 17:00	4.3	3.8	0.0	0.0	0.0	0.0	0.0	0.0
2/26/03 18:00	5.6	11.4	0.0	0.0	0.0	0.0	0.0	0.0
2/26/03 19:00	3.0	8.9	0.0	0.0	0.0	0.0	0.0	0.0
2/26/03 20:00	2.7	8.4	0.0	0.0	0.0	0.0	0.0	0.0
2/26/03 21:00	2.5	8.3	0.0	0.0	0.0	0.0	0.0	0.0
2/26/03 22:00	3.6	9.3	0.0	0.0	0.0	0.0	0.0	0.0
2/26/03 23:00	2.8	8.2	0.0	0.0	0.0	0.0	0.0	0.0
2/27/03 0:00	6.1	11.7	0.0	0.0	0.0	0.0	0.0	0.0
2/27/03 1:00	4.9	10.5	0.0	0.0	0.0	0.0	0.0	0.0
2/27/03 2:00	4.7	10.1	0.0	0.0	0.0	0.0	0.0	0.0
2/27/03 3:00	5.7	11.1	0.0	0.0	0.0	0.0	0.0	0.0
2/27/03 4:00	5.1	10.5	0.0	0.0	0.0	0.0	0.0	0.0
2/27/03 5:00	5.7	11.4	0.0	0.0	0.0	0.0	0.0	0.0
2/27/03 6:00	7.3	13.1	0.0	0.0	0.0	0.0	0.0	0.0
2/27/03 7:00	4.0	9.6	0.0	0.0	0.0	0.0	0.0	0.0
2/27/03 8:00	2.6	8.2	0.0	0.0	0.0	0.0	0.0	0.0
2/27/03 9:00	3.1	8.7	0.0	0.0	0.0	0.0	0.0	0.0
2/27/03 10:00	1.4	6.9	0.0	0.0	0.0	0.0	0.0	0.0
2/27/03 11:00	2.1	7.5	0.0	0.0	0.0	0.0	0.0	0.0
2/27/03 12:00	2.6	5.7	0.0	0.0	0.0	0.0	0.0	0.0
2/27/03 13:00	3.1	8.8	0.0	0.0	0.0	0.0	0.0	0.0
2/27/03 14:00	0.5	6.0	0.0	0.0	0.0	0.0	0.0	0.0
2/27/03 15:00	0.8	6.1	0.0	0.0	0.0	0.0	0.0	0.0
2/27/03 16:00	1.8	7.6	0.0	0.0	0.0	0.0	0.0	0.0
2/27/03 17:00	2.5	4.9	0.0	0.0	0.0	0.0	0.0	0.0
2/27/03 18:00	3.1	8.9	0.0	0.0	0.0	0.0	0.0	0.0
2/27/03 19:00	2.7	8.2	0.0	0.0	0.0	0.0	0.0	0.0
2/27/03 20:00	3.1	8.8	0.0	0.0	0.0	0.0	0.0	0.0
2/27/03 21:00	3.5	8.8	0.0	0.0	0.0	0.0	0.0	0.0
2/27/03 22:00	3.4	8.9	0.0	0.0	0.0	0.0	0.0	0.0
2/27/03 23:00	4.7	10.5	0.0	0.0	0.0	0.0	0.0	0.0
2/28/03 0:00	3.9	9.5	0.0	0.0	0.0	0.0	0.0	0.0
2/28/03 1:00	2.3	7.3	0.0	0.0	0.0	0.0	0.0	0.0
2/28/03 2:00	3.9	9.5	0.0	0.0	0.0	0.0	0.0	0.0
2/28/03 3:00	2.7	8.4	0.0	0.0	0.0	0.0	0.0	0.0
2/28/03 4:00	1.7	7.0	0.0	0.0	0.0	0.0	0.0	0.0
2/28/03 5:00	3.1	8.6	0.0	0.0	0.0	0.0	0.0	0.0

2/28/03 6:00	4.8	10.2	0.0	0.0	0.0	0.0	0.0	0.0
2/28/03 7:00	1.7	7.0	0.0	0.0	0.0	0.0	0.0	0.0
2/28/03 8:00	1.4	7.4	0.0	0.0	0.0	0.0	0.0	0.0
2/28/03 9:00	1.7	7.4	0.0	0.0	0.0	0.0	0.0	0.0
2/28/03 10:00	2.3	7.9	0.0	0.0	0.0	0.0	0.0	0.0
2/28/03 11:00	2.8	7.9	0.0	0.0	0.0	0.0	0.0	0.0
2/28/03 12:00	2.6	7.8	0.0	0.0	0.0	0.0	0.0	0.0
2/28/03 13:00	2.7	8.2	0.0	0.0	0.0	0.0	0.0	0.0
2/28/03 14:00	2.6	7.5	0.0	0.0	0.0	0.0	0.0	0.0
2/28/03 15:00	0.6	5.2	0.0	0.0	0.0	0.0	0.0	0.0
2/28/03 16:00	1.8	3.9	0.0	0.0	0.0	0.0	0.0	0.0
2/28/03 17:00	3.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0
2/28/03 18:00	4.1	9.7	0.0	0.0	0.0	0.0	0.0	0.0
2/28/03 19:00	3.2	5.4	0.0	0.0	0.0	0.0	0.0	0.0
2/28/03 20:00	2.3	5.7	0.0	0.0	0.0	0.0	0.0	0.0
2/28/03 21:00	1.4	7.0	0.0	0.0	0.0	0.0	0.0	0.0
2/28/03 22:00	0.9	6.5	0.0	0.0	0.0	0.0	0.0	0.0
2/28/03 23:00	3.8	9.2	0.0	0.0	0.0	0.0	0.0	0.0
3/1/03 0:00	3.1	6.3	0.0	0.0	0.0	0.0	0.0	0.0
3/1/03 1:00	3.4	8.7	0.0	0.0	0.0	0.0	0.0	0.0
3/1/03 2:00	4.5	9.8	0.0	0.0	0.0	0.0	0.0	0.0
3/1/03 3:00	3.4	8.9	0.0	0.0	0.0	0.0	0.0	0.0
3/1/03 4:00	0.8	6.0	0.0	0.0	0.0	0.0	0.0	0.0
3/1/03 5:00	3.8	9.2	0.0	0.0	0.0	0.0	0.0	0.0
3/1/03 6:00	3.1	8.7	0.0	0.0	0.0	0.0	0.0	0.0
3/1/03 7:00	2.5	4.7	0.0	0.0	0.0	0.0	0.0	0.0
3/1/03 8:00	1.8	5.1	0.0	0.0	0.0	0.0	0.0	0.0
3/1/03 9:00	1.2	6.6	0.0	0.0	0.0	0.0	0.0	0.0
3/1/03 10:00	3.4	9.1	0.0	0.0	0.0	0.0	0.0	0.0
3/1/03 11:00	2.3	7.5	0.0	0.0	0.0	0.0	0.0	0.0
3/1/03 12:00	3.0	8.2	0.0	0.0	0.0	0.0	0.0	0.0
3/1/03 13:00	0.8	6.1	0.0	0.0	0.0	0.0	0.0	0.0
3/1/03 14:00	1.7	6.9	0.0	0.0	0.0	0.0	0.0	0.0
3/1/03 15:00	2.4	4.5	0.0	0.0	0.0	0.0	0.0	0.0
3/1/03 16:00	3.0	1.9	0.0	0.0	0.0	0.0	0.0	0.0
3/1/03 17:00	3.7	3.6	0.0	0.0	0.0	0.0	0.0	0.0
3/1/03 18:00	4.4	10.1	0.0	0.0	0.0	0.0	0.0	0.0
3/1/03 19:00	4.1	9.8	0.0	0.0	0.0	0.0	0.0	0.0
3/1/03 20:00	2.7	8.3	0.0	0.0	0.0	0.0	0.0	0.0
3/1/03 21:00	3.8	9.3	0.0	0.0	0.0	0.0	0.0	0.0
3/1/03 22:00	2.7	8.3	0.0	0.0	0.0	0.0	0.0	0.0
3/1/03 23:00	3.2	9.2	0.0	0.0	0.0	0.0	0.0	0.0
3/2/03 0:00	0.5	6.5	0.0	0.0	0.0	0.0	0.0	0.0
3/2/03 1:00	1.3	7.0	0.0	0.0	0.0	0.0	0.0	0.0
3/2/03 2:00	0.1	5.6	0.0	0.0	0.0	0.0	0.0	0.0
3/2/03 3:00	1.4	6.6	0.0	0.0	0.0	0.0	0.0	0.0
3/2/03 4:00	1.3	4.8	0.0	0.0	0.0	0.0	0.0	0.0
3/2/03 5:00	1.2	5.1	0.0	0.0	0.0	0.0	0.0	0.0
3/2/03 6:00	1.1	4.7	0.0	0.0	0.0	0.0	0.0	0.0
3/2/03 7:00	1.0	0.8	0.0	0.0	0.0	0.0	0.0	0.0
3/2/03 8:00	0.9	1.4	0.0	0.0	0.0	0.0	0.0	0.0
3/2/03 9:00	0.7	2.8	0.0	0.0	0.0	0.0	0.0	0.0

3/2/03 10:00	0.6	3.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3/2/03 11:00	0.5	5.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3/2/03 12:00	0.4	5.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3/2/03 13:00	0.3	5.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3/2/03 14:00	0.3	4.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3/2/03 15:00	0.2	5.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3/2/03 16:00	0.1	5.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3/2/03 17:00	0.6	5.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3/2/03 18:00	6.7	12.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3/2/03 19:00	5.8	11.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3/2/03 20:00	4.5	10.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3/2/03 21:00	4.1	9.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3/2/03 22:00	3.6	9.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3/2/03 23:00	4.1	10.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3/3/03 0:00	2.6	8.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3/3/03 1:00	3.1	9.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3/3/03 2:00	2.3	7.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3/3/03 3:00	2.3	8.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3/3/03 4:00	1.8	7.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3/3/03 5:00	5.6	11.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3/3/03 6:00	5.3	11.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3/3/03 7:00	3.0	8.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3/3/03 8:00	4.7	10.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3/3/03 9:00	4.7	10.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3/3/03 10:00	3.8	9.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3/3/03 11:00	2.3	7.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3/3/03 12:00	3.1	8.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3/3/03 13:00	3.6	9.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3/3/03 14:00	2.2	7.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3/3/03 15:00	1.9	7.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3/3/03 16:00	0.4	5.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3/3/03 17:00	5.4	5.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3/3/03 18:00	10.5	16.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3/3/03 19:00	5.4	11.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3/3/03 20:00	4.1	9.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3/3/03 21:00	3.4	9.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3/3/03 22:00	5.4	11.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3/3/03 23:00	5.1	10.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3/4/03 0:00	4.3	10.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3/4/03 1:00	6.1	11.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3/4/03 2:00	6.3	12.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3/4/03 3:00	5.6	11.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3/4/03 4:00	5.1	10.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3/4/03 5:00	6.5	11.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3/4/03 6:00	8.6	14.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3/4/03 7:00	6.3	12.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3/4/03 8:00	3.2	8.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3/4/03 9:00	3.0	8.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3/4/03 10:00	5.2	10.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3/4/03 11:00	4.4	10.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3/4/03 12:00	2.5	8.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3/4/03 13:00	3.0	8.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0

3/4/03 14:00	1.0	6.6	0.0	0.0	0.0	0.0	0.0	0.0
3/4/03 15:00	0.5	6.2	0.0	0.0	0.0	0.0	0.0	0.0
3/4/03 16:00	2.6	5.1	0.0	0.0	0.0	0.0	0.0	0.0
3/4/03 17:00	4.7	3.8	0.0	0.0	0.0	0.0	0.0	0.0
3/4/03 18:00	6.7	12.6	0.0	0.0	0.0	0.0	0.0	0.0
3/4/03 19:00	7.0	12.8	0.0	0.0	0.0	0.0	0.0	0.0
3/4/03 20:00	1.9	7.1	0.0	0.0	0.0	0.0	0.0	0.0
3/4/03 21:00	5.3	11.0	0.0	0.0	0.0	0.0	0.0	0.0
3/4/03 22:00	5.6	11.5	0.0	0.0	0.0	0.0	0.0	0.0
3/4/03 23:00	7.1	12.8	0.0	0.0	0.0	0.0	0.0	0.0
3/5/03 0:00	6.2	11.9	0.0	0.0	0.0	0.0	0.0	0.0
3/5/03 1:00	7.4	12.6	0.0	0.0	0.0	0.0	0.0	0.0
3/5/03 2:00	7.9	13.5	0.0	0.0	0.0	0.0	0.0	0.0
3/5/03 3:00	7.1	12.3	0.0	0.0	0.0	0.0	0.0	0.0
3/5/03 4:00	7.3	12.8	0.0	0.0	0.0	0.0	0.0	0.0
3/5/03 5:00	10.2	15.9	0.0	0.0	0.0	0.0	0.0	0.0
3/5/03 6:00	10.1	15.6	0.0	0.0	0.0	0.0	0.0	0.0
3/5/03 7:00	4.9	10.0	0.0	0.0	0.0	0.0	0.0	0.0
3/5/03 8:00	2.1	7.4	0.0	0.0	0.0	0.0	0.0	0.0
3/5/03 9:00	3.5	8.7	0.0	0.0	0.0	0.0	0.0	0.0
3/5/03 10:00	5.6	10.6	0.0	0.0	0.0	0.0	0.0	0.0
3/5/03 11:00	6.5	11.7	0.0	0.0	0.0	0.0	0.0	0.0
3/5/03 12:00	1.0	6.1	0.0	0.0	0.0	0.0	0.0	0.0
3/5/03 13:00	2.7	7.3	0.0	0.0	0.0	0.0	0.0	0.0
3/5/03 14:00	2.5	7.1	0.0	0.0	0.0	0.0	0.0	0.0
3/5/03 15:00	2.3	4.4	0.0	0.0	0.0	0.0	0.0	0.0
3/5/03 16:00	2.2	2.7	0.0	0.0	0.0	0.0	0.0	0.0
3/5/03 17:00	2.1	2.6	0.0	0.0	0.0	0.0	0.0	0.0
3/5/03 18:00	1.9	6.9	0.0	0.0	0.0	0.0	0.0	0.0
3/5/03 19:00	2.8	7.6	0.0	0.0	0.0	0.0	0.0	0.0
3/5/03 20:00	1.8	6.9	0.0	0.0	0.0	0.0	0.0	0.0
3/5/03 21:00	2.8	8.2	0.0	0.0	0.0	0.0	0.0	0.0
3/5/03 22:00	0.6	6.1	0.0	0.0	0.0	0.0	0.0	0.0
3/5/03 23:00	8.2	13.7	0.0	0.0	0.0	0.0	0.0	0.0
3/6/03 0:00	4.8	10.0	0.0	0.0	0.0	0.0	0.0	0.0
3/6/03 1:00	3.5	8.4	0.0	0.0	0.0	0.0	0.0	0.0
3/6/03 2:00	2.8	7.9	0.0	0.0	0.0	0.0	0.0	0.0
3/6/03 3:00	2.3	7.4	0.0	0.0	0.0	0.0	0.0	0.0
3/6/03 4:00	3.2	8.3	0.0	0.0	0.0	0.0	0.0	0.0
3/6/03 5:00	6.3	11.3	0.0	0.0	0.0	0.0	0.0	0.0
3/6/03 6:00	9.5	14.9	0.0	0.0	0.0	0.0	0.0	0.0
3/6/03 7:00	3.4	8.4	0.0	0.0	0.0	0.0	0.0	0.0
3/6/03 8:00	4.7	10.2	0.0	0.0	0.0	0.0	0.0	0.0
3/6/03 9:00	3.5	8.2	0.0	0.0	0.0	0.0	0.0	0.0
3/6/03 10:00	5.1	10.2	0.0	0.0	0.0	0.0	0.0	0.0
3/6/03 11:00	4.8	9.8	0.0	0.0	0.0	0.0	0.0	0.0
3/6/03 12:00	4.1	9.5	0.0	0.0	0.0	0.0	0.0	0.0
3/6/03 13:00	4.0	9.2	0.0	0.0	0.0	0.0	0.0	0.0
3/6/03 14:00	4.9	10.1	0.0	0.0	0.0	0.0	0.0	0.0
3/6/03 15:00	4.5	9.6	0.0	0.0	0.0	0.0	0.0	0.0
3/6/03 16:00	4.1	4.7	0.0	0.0	0.0	0.0	0.0	0.0
3/6/03 17:00	3.7	3.8	0.0	0.0	0.0	0.0	0.0	0.0

3/6/03 18:00	3.2	8.2	0.0	0.0	0.0	0.0	0.0	0.0
3/6/03 19:00	7.0	12.3	0.0	0.0	0.0	0.0	0.0	0.0
3/6/03 20:00	5.7	11.3	0.0	0.0	0.0	0.0	0.0	0.0
3/6/03 21:00	4.7	10.0	0.0	0.0	0.0	0.0	0.0	0.0
3/6/03 22:00	4.9	9.7	0.0	0.0	0.0	0.0	0.0	0.0
3/6/03 23:00	4.3	9.5	0.0	0.0	0.0	0.0	0.0	0.0
3/7/03 0:00	5.2	10.1	0.0	0.0	0.0	0.0	0.0	0.0
3/7/03 1:00	4.1	4.5	0.0	0.0	0.0	0.0	0.0	0.0
3/7/03 2:00	2.9	3.9	0.0	0.0	0.0	0.0	0.0	0.0
3/7/03 3:00	1.8	6.7	0.0	0.0	0.0	0.0	0.0	0.0
3/7/03 4:00	2.5	7.5	0.0	0.0	0.0	0.0	0.0	0.0
3/7/03 5:00	4.3	9.3	0.0	0.0	0.0	0.0	0.0	0.0
3/7/03 6:00	5.3	10.5	0.0	0.0	0.0	0.0	0.0	0.0
3/7/03 7:00	7.4	12.7	0.0	0.0	0.0	0.0	0.0	0.0
3/7/03 8:00	5.1	10.4	0.0	0.0	0.0	0.0	0.0	0.0
3/7/03 9:00	6.3	11.3	0.0	0.0	0.0	0.0	0.0	0.0
3/7/03 10:00	1.9	7.0	0.0	0.0	0.0	0.0	0.0	0.0
3/7/03 11:00	2.6	7.6	0.0	0.0	0.0	0.0	0.0	0.0
3/7/03 12:00	2.5	7.3	0.0	0.0	0.0	0.0	0.0	0.0
3/7/03 13:00	2.3	6.9	0.0	0.0	0.0	0.0	0.0	0.0
3/7/03 14:00	1.4	6.1	0.0	0.0	0.0	0.0	0.0	0.0
3/7/03 15:00	5.1	10.2	0.0	0.0	0.0	0.0	0.0	0.0
3/7/03 16:00	0.9	5.3	0.0	0.0	0.0	0.0	0.0	0.0
3/7/03 17:00	3.6	1.9	0.0	0.0	0.0	0.0	0.0	0.0
3/7/03 18:00	6.3	11.4	0.0	0.0	0.0	0.0	0.0	0.0
3/7/03 19:00	2.6	7.5	0.0	0.0	0.0	0.0	0.0	0.0
3/7/03 20:00	3.8	8.8	0.0	0.0	0.0	0.0	0.0	0.0
3/7/03 21:00	3.6	8.4	0.0	0.0	0.0	0.0	0.0	0.0
3/7/03 22:00	2.7	7.1	0.0	0.0	0.0	0.0	0.0	0.0
3/7/03 23:00	5.6	10.6	0.0	0.0	0.0	0.0	0.0	0.0
3/8/03 0:00	7.1	14.4	0.0	0.0	0.0	0.0	0.0	0.0
3/8/03 1:00	5.6	12.1	0.0	0.0	0.0	0.0	0.0	0.0
3/8/03 2:00	4.5	9.6	0.0	0.0	0.0	0.0	0.0	0.0
3/8/03 3:00	4.5	9.2	0.0	0.0	0.0	0.0	0.0	0.0
3/8/03 4:00	3.0	7.9	0.0	0.0	0.0	0.0	0.0	0.0
3/8/03 5:00	4.5	9.6	0.0	0.0	0.0	0.0	0.0	0.0
3/8/03 6:00	4.5	9.2	0.0	0.0	0.0	0.0	0.0	0.0
3/8/03 7:00	2.5	7.3	0.0	0.0	0.0	0.0	0.0	0.0
3/8/03 8:00	4.4	9.5	0.0	0.0	0.0	0.0	0.0	0.0
3/8/03 9:00	3.9	8.9	0.0	0.0	0.0	0.0	0.0	0.0
3/8/03 10:00	7.4	12.4	0.0	0.0	0.0	0.0	0.0	0.0
3/8/03 11:00	4.8	9.6	0.0	0.0	0.0	0.0	0.0	0.0
3/8/03 12:00	6.7	11.5	0.0	0.0	0.0	0.0	0.0	0.0
3/8/03 13:00	5.8	10.8	0.0	0.0	0.0	0.0	0.0	0.0
3/8/03 14:00	4.9	9.3	0.0	0.0	0.0	0.0	0.0	0.0
3/8/03 15:00	2.7	7.3	0.0	0.0	0.0	0.0	0.0	0.0
3/8/03 16:00	1.4	6.3	0.0	0.0	0.0	0.0	0.0	0.0
3/8/03 17:00	1.5	6.5	0.0	0.0	0.0	0.0	0.0	0.0
3/8/03 18:00	4.4	9.2	0.0	0.0	0.0	0.0	0.0	0.0
3/8/03 19:00	4.8	10.0	0.0	0.0	0.0	0.0	0.0	0.0
3/8/03 20:00	4.8	9.7	0.0	0.0	0.0	0.0	0.0	0.0
3/8/03 21:00	5.7	10.9	0.0	0.0	0.0	0.0	0.0	0.0

3/8/03 22:00	6.7	11.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3/8/03 23:00	5.3	10.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3/9/03 0:00	3.5	8.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3/9/03 1:00	0.1	5.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3/9/03 2:00	0.3	5.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3/9/03 3:00	0.5	3.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3/9/03 4:00	0.8	2.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3/9/03 5:00	1.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3/9/03 6:00	1.2	3.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3/9/03 7:00	1.4	2.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3/9/03 8:00	1.6	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3/9/03 9:00	1.8	6.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3/9/03 10:00	2.1	7.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3/9/03 11:00	2.7	7.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3/9/03 12:00	2.1	6.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3/9/03 13:00	4.3	8.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3/9/03 14:00	4.0	8.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3/9/03 15:00	3.1	7.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3/9/03 16:00	1.7	6.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3/9/03 17:00	2.2	6.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3/9/03 18:00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3/9/03 19:00	7.1	12.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3/9/03 20:00	5.2	10.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3/9/03 21:00	7.0	11.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3/9/03 22:00	9.6	14.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3/9/03 23:00	6.3	11.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3/10/03 0:00	8.4	13.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3/10/03 1:00	6.2	10.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3/10/03 2:00	4.0	8.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3/10/03 3:00	2.6	7.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3/10/03 4:00	4.5	9.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3/10/03 5:00	7.5	12.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3/10/03 6:00	8.8	14.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3/10/03 7:00	8.4	13.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3/10/03 8:00	5.2	10.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3/10/03 9:00	5.3	10.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3/10/03 10:00	5.4	10.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3/10/03 11:00	6.2	11.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3/10/03 12:00	6.1	10.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3/10/03 13:00	6.1	11.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3/10/03 14:00	2.7	7.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3/10/03 15:00	2.3	7.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3/10/03 16:00	1.5	6.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3/10/03 17:00	1.5	3.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3/10/03 18:00	1.4	6.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3/10/03 19:00	1.0	6.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3/10/03 20:00	0.8	4.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3/10/03 21:00	0.6	5.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3/10/03 22:00	0.5	5.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3/10/03 23:00	7.3	12.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3/11/03 0:00	8.4	13.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3/11/03 1:00	6.9	12.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0

3/11/03 2:00	5.2	10.0	0.0	0.0	0.0	0.0	0.0	0.0
3/11/03 3:00	4.8	9.8	0.0	0.0	0.0	0.0	0.0	0.0
3/11/03 4:00	4.3	9.5	0.0	0.0	0.0	0.0	0.0	0.0
3/11/03 5:00	5.4	10.5	0.0	0.0	0.0	0.0	0.0	0.0
3/11/03 6:00	6.3	11.5	0.0	0.0	0.0	0.0	0.0	0.0
3/11/03 7:00	5.8	10.9	0.0	0.0	0.0	0.0	0.0	0.0
3/11/03 8:00	3.9	9.2	0.0	0.0	0.0	0.0	0.0	0.0
3/11/03 9:00	2.8	7.4	0.0	0.0	0.0	0.0	0.0	0.0
3/11/03 10:00	5.6	9.6	0.0	0.0	0.0	0.0	0.0	0.0
3/11/03 11:00	5.6	9.8	0.0	0.0	0.0	0.0	0.0	0.0
3/11/03 12:00	3.8	7.9	0.0	0.0	0.0	0.0	0.0	0.0
3/11/03 13:00	4.8	9.6	0.0	0.0	0.0	0.0	0.0	0.0
3/11/03 14:00	4.8	9.3	0.0	0.0	0.0	0.0	0.0	0.0
3/11/03 15:00	3.4	8.0	0.0	0.0	0.0	0.0	0.0	0.0
3/11/03 16:00	1.4	5.8	0.0	0.0	0.0	0.0	0.0	0.0
3/11/03 17:00	2.6	4.8	0.0	0.0	0.0	0.0	0.0	0.0
3/11/03 18:00	3.8	8.7	0.0	0.0	0.0	0.0	0.0	0.0
3/11/03 19:00	3.5	7.9	0.0	0.0	0.0	0.0	0.0	0.0
3/11/03 20:00	2.5	7.5	0.0	0.0	0.0	0.0	0.0	0.0
3/11/03 21:00	2.8	7.6	0.0	0.0	0.0	0.0	0.0	0.0
3/11/03 22:00	3.6	8.4	0.0	0.0	0.0	0.0	0.0	0.0
3/11/03 23:00	10.6	15.6	0.0	0.0	0.0	0.0	0.0	0.0
3/12/03 0:00	9.2	13.9	0.0	0.0	0.0	0.0	0.0	0.0
3/12/03 1:00	8.7	13.2	0.0	0.0	0.0	0.0	0.0	0.0
3/12/03 2:00	7.8	12.4	0.0	0.0	0.0	0.0	0.0	0.0
3/12/03 3:00	7.1	11.9	0.0	0.0	0.0	0.0	0.0	0.0
3/12/03 4:00	6.1	10.9	0.0	0.0	0.0	0.0	0.0	0.0
3/12/03 5:00	8.4	13.3	0.0	0.0	0.0	0.0	0.0	0.0
3/12/03 6:00	8.7	13.7	0.0	0.0	0.0	0.0	0.0	0.0
3/12/03 7:00	8.6	13.5	0.0	0.0	0.0	0.0	0.0	0.0
3/12/03 8:00	2.8	7.5	0.0	0.0	0.0	0.0	0.0	0.0
3/12/03 9:00	3.4	8.2	0.0	0.0	0.0	0.0	0.0	0.0
3/12/03 10:00	7.5	12.3	0.0	0.0	0.0	0.0	0.0	0.0
3/12/03 11:00	6.9	11.8	0.0	0.0	0.0	0.0	0.0	0.0
3/12/03 12:00	7.0	11.8	0.0	0.0	0.0	0.0	0.0	0.0
3/12/03 13:00	10.0	15.0	0.0	0.0	0.0	0.0	0.0	0.0
3/12/03 14:00	10.0	14.6	0.0	0.0	0.0	0.0	0.0	0.0
3/12/03 15:00	3.0	6.9	0.0	0.0	0.0	0.0	0.0	0.0
3/12/03 16:00	3.9	8.2	0.0	0.0	0.0	0.0	0.0	0.0
3/12/03 17:00	0.9	4.7	0.0	0.0	0.0	0.0	0.0	0.0
3/12/03 18:00	6.3	10.8	0.0	0.0	0.0	0.0	0.0	0.0
3/12/03 19:00	5.3	9.6	0.0	0.0	0.0	0.0	0.0	0.0
3/12/03 20:00	4.5	8.9	0.0	0.0	0.0	0.0	0.0	0.0
3/12/03 21:00	2.8	6.9	0.0	0.0	0.0	0.0	0.0	0.0
3/12/03 22:00	3.2	7.1	0.0	0.0	0.0	0.0	0.0	0.0
3/12/03 23:00	10.2	14.4	0.0	0.0	0.0	0.0	0.0	0.0
3/13/03 0:00	6.3	10.6	0.0	0.0	0.0	0.0	0.0	0.0
3/13/03 1:00	8.6	13.1	0.0	0.0	0.0	0.0	0.0	0.0
3/13/03 2:00	6.9	11.3	0.0	0.0	0.0	0.0	0.0	0.0
3/13/03 3:00	5.8	10.1	0.0	0.0	0.0	0.0	0.0	0.0
3/13/03 4:00	6.2	10.4	0.0	0.0	0.0	0.0	0.0	0.0
3/13/03 5:00	6.6	11.0	0.0	0.0	0.0	0.0	0.0	0.0

3/13/03 6:00	10.1	14.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3/13/03 7:00	2.7	7.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3/13/03 8:00	3.5	7.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3/13/03 9:00	5.2	9.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3/13/03 10:00	5.8	10.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3/13/03 11:00	6.9	11.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3/13/03 12:00	5.7	9.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3/13/03 13:00	7.4	12.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3/13/03 14:00	7.3	11.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3/13/03 15:00	3.5	7.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3/13/03 16:00	1.7	5.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3/13/03 17:00	2.6	2.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3/13/03 18:00	3.6	7.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3/13/03 19:00	5.7	9.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3/13/03 20:00	5.2	9.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3/13/03 21:00	3.9	7.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3/13/03 22:00	2.6	6.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3/13/03 23:00	4.9	8.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3/14/03 0:00	7.4	11.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3/14/03 1:00	7.8	11.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3/14/03 2:00	5.8	10.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3/14/03 3:00	5.6	10.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3/14/03 4:00	5.6	9.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3/14/03 5:00	8.6	12.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3/14/03 6:00	6.5	10.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3/14/03 7:00	6.0	10.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3/14/03 8:00	2.1	5.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3/14/03 9:00	1.2	5.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3/14/03 10:00	4.0	8.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3/14/03 11:00	3.4	7.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3/14/03 12:00	4.5	8.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3/14/03 13:00	5.2	9.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3/14/03 14:00	4.5	8.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3/14/03 15:00	2.5	6.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3/14/03 16:00	1.2	5.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3/14/03 17:00	1.7	1.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3/14/03 18:00	2.3	6.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3/14/03 19:00	1.7	5.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3/14/03 20:00	2.2	6.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3/14/03 21:00	2.2	6.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3/14/03 22:00	7.5	11.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3/14/03 23:00	9.1	13.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3/15/03 0:00	7.1	11.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3/15/03 1:00	6.3	10.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3/15/03 2:00	4.1	8.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3/15/03 3:00	4.0	8.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3/15/03 4:00	4.1	8.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3/15/03 5:00	4.8	8.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3/15/03 6:00	3.5	7.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3/15/03 7:00	0.9	4.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3/15/03 8:00	1.4	5.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3/15/03 9:00	4.1	8.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0

3/15/03 10:00	1.2	5.3	0.0	0.0	0.0	0.0	0.0	0.0
3/15/03 11:00	0.9	5.1	0.0	0.0	0.0	0.0	0.0	0.0
3/15/03 12:00	0.9	3.5	0.0	0.0	0.0	0.0	0.0	0.0
3/15/03 13:00	0.9	1.2	0.0	0.0	0.0	0.0	0.0	0.0
3/15/03 14:00	0.9	0.9	0.0	0.0	0.0	0.0	0.0	0.0
3/15/03 15:00	0.9	1.9	0.0	0.0	0.0	0.0	0.0	0.0
3/15/03 16:00	0.9	2.8	0.0	0.0	0.0	0.0	0.0	0.0
3/15/03 17:00	0.9	5.1	0.0	0.0	0.0	0.0	0.0	0.0
3/15/03 18:00	4.5	8.8	0.0	0.0	0.0	0.0	0.0	0.0
3/15/03 19:00	4.4	8.6	0.0	0.0	0.0	0.0	0.0	0.0
3/15/03 20:00	3.5	7.8	0.0	0.0	0.0	0.0	0.0	0.0
3/15/03 21:00	3.4	7.5	0.0	0.0	0.0	0.0	0.0	0.0
3/15/03 22:00	3.6	7.6	0.0	0.0	0.0	0.0	0.0	0.0
3/15/03 23:00	8.0	12.2	0.0	0.0	0.0	0.0	0.0	0.0
3/16/03 0:00	5.1	9.3	0.0	0.0	0.0	0.0	0.0	0.0
3/16/03 1:00	4.5	9.1	0.0	0.0	0.0	0.0	0.0	0.0
3/16/03 2:00	2.8	6.9	0.0	0.0	0.0	0.0	0.0	0.0
3/16/03 3:00	2.7	7.3	0.0	0.0	0.0	0.0	0.0	0.0
3/16/03 4:00	1.2	5.2	0.0	0.0	0.0	0.0	0.0	0.0
3/16/03 5:00	1.4	5.4	0.0	0.0	0.0	0.0	0.0	0.0
3/16/03 6:00	1.8	3.0	0.0	0.0	0.0	0.0	0.0	0.0
3/16/03 7:00	2.2	1.6	0.0	0.0	0.0	0.0	0.0	0.0
3/16/03 8:00	2.7	0.3	0.0	0.0	0.0	0.0	0.0	0.0
3/16/03 9:00	3.1	3.5	0.0	0.0	0.0	0.0	0.0	0.0
3/16/03 10:00	3.5	7.4	0.0	0.0	0.0	0.0	0.0	0.0
3/16/03 11:00	5.6	10.1	0.0	0.0	0.0	0.0	0.0	0.0
3/16/03 12:00	6.5	10.9	0.0	0.0	0.0	0.0	0.0	0.0
3/16/03 13:00	6.7	11.0	0.0	0.0	0.0	0.0	0.0	0.0
3/16/03 14:00	4.4	8.8	0.0	0.0	0.0	0.0	0.0	0.0
3/16/03 15:00	3.4	7.5	0.0	0.0	0.0	0.0	0.0	0.0
3/16/03 16:00	3.4	7.9	0.0	0.0	0.0	0.0	0.0	0.0
3/16/03 17:00	3.9	8.0	0.0	0.0	0.0	0.0	0.0	0.0
3/16/03 18:00	8.3	12.6	0.0	0.0	0.0	0.0	0.0	0.0
3/16/03 19:00	11.5	16.1	0.0	0.0	0.0	0.0	0.0	0.0
3/16/03 20:00	11.0	15.4	0.0	0.0	0.0	0.0	0.0	0.0
3/16/03 21:00	8.4	13.0	0.0	0.0	0.0	0.0	0.0	0.0
3/16/03 22:00	8.9	13.3	0.0	0.0	0.0	0.0	0.0	0.0
3/16/03 23:00	7.9	11.9	0.0	0.0	0.0	0.0	0.0	0.0
3/17/03 0:00	7.1	11.3	0.0	0.0	0.0	0.0	0.0	0.0
3/17/03 1:00	6.3	10.5	0.0	0.0	0.0	0.0	0.0	0.0
3/17/03 2:00	5.2	9.8	0.0	0.0	0.0	0.0	0.0	0.0
3/17/03 3:00	4.8	9.1	0.0	0.0	0.0	0.0	0.0	0.0
3/17/03 4:00	5.4	9.8	0.0	0.0	0.0	0.0	0.0	0.0
3/17/03 5:00	7.3	11.4	0.0	0.0	0.0	0.0	0.0	0.0
3/17/03 6:00	7.6	12.2	0.0	0.0	0.0	0.0	0.0	0.0
3/17/03 7:00	5.6	9.8	0.0	0.0	0.0	0.0	0.0	0.0
3/17/03 8:00	2.6	7.0	0.0	0.0	0.0	0.0	0.0	0.0
3/17/03 9:00	4.0	8.2	0.0	0.0	0.0	0.0	0.0	0.0
3/17/03 10:00	6.5	10.9	0.0	0.0	0.0	0.0	0.0	0.0
3/17/03 11:00	6.1	10.4	0.0	0.0	0.0	0.0	0.0	0.0
3/17/03 12:00	4.3	8.6	0.0	0.0	0.0	0.0	0.0	0.0
3/17/03 13:00	4.9	9.2	0.0	0.0	0.0	0.0	0.0	0.0

3/17/03 14:00	4.8	8.8	0.0	0.0	0.0	0.0	0.0	0.0
3/17/03 15:00	3.2	7.4	0.0	0.0	0.0	0.0	0.0	0.0
3/17/03 16:00	1.7	5.8	0.0	0.0	0.0	0.0	0.0	0.0
3/17/03 17:00	2.7	2.5	0.0	0.0	0.0	0.0	0.0	0.0
3/17/03 18:00	3.8	7.6	0.0	0.0	0.0	0.0	0.0	0.0
3/17/03 19:00	6.1	10.4	0.0	0.0	0.0	0.0	0.0	0.0
3/17/03 20:00	5.6	9.8	0.0	0.0	0.0	0.0	0.0	0.0
3/17/03 21:00	6.5	10.8	0.0	0.0	0.0	0.0	0.0	0.0
3/17/03 22:00	8.6	13.1	0.0	0.0	0.0	0.0	0.0	0.0
3/17/03 23:00	8.8	13.3	0.0	0.0	0.0	0.0	0.0	0.0
3/18/03 0:00	8.4	12.8	0.0	0.0	0.0	0.0	0.0	0.0
3/18/03 1:00	8.7	13.2	0.0	0.0	0.0	0.0	0.0	0.0
3/18/03 2:00	8.4	12.8	0.0	0.0	0.0	0.0	0.0	0.0
3/18/03 3:00	7.8	12.1	0.0	0.0	0.0	0.0	0.0	0.0
3/18/03 4:00	6.3	10.5	0.0	0.0	0.0	0.0	0.0	0.0
3/18/03 5:00	8.7	13.3	0.0	0.0	0.0	0.0	0.0	0.0
3/18/03 6:00	8.2	12.7	0.0	0.0	0.0	0.0	0.0	0.0
3/18/03 7:00	3.5	7.8	0.0	0.0	0.0	0.0	0.0	0.0
3/18/03 8:00	4.0	8.4	0.0	0.0	0.0	0.0	0.0	0.0
3/18/03 9:00	5.2	9.3	0.0	0.0	0.0	0.0	0.0	0.0
3/18/03 10:00	6.9	11.3	0.0	0.0	0.0	0.0	0.0	0.0
3/18/03 11:00	8.7	13.0	0.0	0.0	0.0	0.0	0.0	0.0
3/18/03 12:00	6.3	10.5	0.0	0.0	0.0	0.0	0.0	0.0
3/18/03 13:00	8.2	12.6	0.0	0.0	0.0	0.0	0.0	0.0
3/18/03 14:00	5.8	10.5	0.0	0.0	0.0	0.0	0.0	0.0
3/18/03 15:00	5.2	9.2	0.0	0.0	0.0	0.0	0.0	0.0
3/18/03 16:00	2.3	6.6	0.0	0.0	0.0	0.0	0.0	0.0
3/18/03 17:00	3.2	3.5	0.0	0.0	0.0	0.0	0.0	0.0
3/18/03 18:00	4.0	8.4	0.0	0.0	0.0	0.0	0.0	0.0
3/18/03 19:00	8.3	12.7	0.0	0.0	0.0	0.0	0.0	0.0
3/18/03 20:00	7.6	12.1	0.0	0.0	0.0	0.0	0.0	0.0
3/18/03 21:00	6.9	11.3	0.0	0.0	0.0	0.0	0.0	0.0
3/18/03 22:00	6.3	10.8	0.0	0.0	0.0	0.0	0.0	0.0
3/18/03 23:00	4.4	8.4	0.0	0.0	0.0	0.0	0.0	0.0
3/19/03 0:00	3.1	7.1	0.0	0.0	0.0	0.0	0.0	0.0
3/19/03 1:00	3.1	7.5	0.0	0.0	0.0	0.0	0.0	0.0
3/19/03 2:00	2.1	6.0	0.0	0.0	0.0	0.0	0.0	0.0
3/19/03 3:00	1.7	6.0	0.0	0.0	0.0	0.0	0.0	0.0
3/19/03 4:00	2.1	6.0	0.0	0.0	0.0	0.0	0.0	0.0
3/19/03 5:00	3.4	7.6	0.0	0.0	0.0	0.0	0.0	0.0
3/19/03 6:00	3.0	7.6	0.0	0.0	0.0	0.0	0.0	0.0
3/19/03 7:00	3.1	7.3	0.0	0.0	0.0	0.0	0.0	0.0
3/19/03 8:00	3.5	7.8	0.0	0.0	0.0	0.0	0.0	0.0
3/19/03 9:00	5.2	9.6	0.0	0.0	0.0	0.0	0.0	0.0
3/19/03 10:00	6.3	11.0	0.0	0.0	0.0	0.0	0.0	0.0
3/19/03 11:00	6.7	11.3	0.0	0.0	0.0	0.0	0.0	0.0
3/19/03 12:00	6.0	10.4	0.0	0.0	0.0	0.0	0.0	0.0
3/19/03 13:00	6.2	10.6	0.0	0.0	0.0	0.0	0.0	0.0
3/19/03 14:00	4.4	8.7	0.0	0.0	0.0	0.0	0.0	0.0
3/19/03 15:00	0.4	4.5	0.0	0.0	0.0	0.0	0.0	0.0
3/19/03 16:00	1.0	4.1	0.0	0.0	0.0	0.0	0.0	0.0
3/19/03 17:00	1.6	1.9	0.0	0.0	0.0	0.0	0.0	0.0

3/19/03 18:00	2.2	4.0	0.0	0.0	0.0	0.0	0.0	0.0
3/19/03 19:00	2.8	7.0	0.0	0.0	0.0	0.0	0.0	0.0
3/19/03 20:00	3.0	7.1	0.0	0.0	0.0	0.0	0.0	0.0
3/19/03 21:00	2.3	6.7	0.0	0.0	0.0	0.0	0.0	0.0
3/19/03 22:00	6.6	11.0	0.0	0.0	0.0	0.0	0.0	0.0
3/19/03 23:00	5.6	10.0	0.0	0.0	0.0	0.0	0.0	0.0
3/20/03 0:00	8.9	13.5	0.0	0.0	0.0	0.0	0.0	0.0
3/20/03 1:00	5.4	9.7	0.0	0.0	0.0	0.0	0.0	0.0
3/20/03 2:00	4.0	8.0	0.0	0.0	0.0	0.0	0.0	0.0
3/20/03 3:00	3.6	7.6	0.0	0.0	0.0	0.0	0.0	0.0
3/20/03 4:00	4.4	8.7	0.0	0.0	0.0	0.0	0.0	0.0
3/20/03 5:00	6.2	10.6	0.0	0.0	0.0	0.0	0.0	0.0
3/20/03 6:00	7.1	11.5	0.0	0.0	0.0	0.0	0.0	0.0
3/20/03 7:00	5.6	10.2	0.0	0.0	0.0	0.0	0.0	0.0
3/20/03 8:00	6.7	11.3	0.0	0.0	0.0	0.0	0.0	0.0
3/20/03 9:00	2.8	7.1	0.0	0.0	0.0	0.0	0.0	0.0
3/20/03 10:00	5.2	9.7	0.0	0.0	0.0	0.0	0.0	0.0
3/20/03 11:00	6.1	10.6	0.0	0.0	0.0	0.0	0.0	0.0
3/20/03 12:00	5.4	9.6	0.0	0.0	0.0	0.0	0.0	0.0
3/20/03 13:00	5.1	9.5	0.0	0.0	0.0	0.0	0.0	0.0
3/20/03 14:00	2.3	6.5	0.0	0.0	0.0	0.0	0.0	0.0
3/20/03 15:00	1.2	5.3	0.0	0.0	0.0	0.0	0.0	0.0
3/20/03 16:00	1.7	2.7	0.0	0.0	0.0	0.0	0.0	0.0
3/20/03 17:00	2.3	2.6	0.0	0.0	0.0	0.0	0.0	0.0
3/20/03 18:00	2.9	2.5	0.0	0.0	0.0	0.0	0.0	0.0
3/20/03 19:00	3.5	7.8	0.0	0.0	0.0	0.0	0.0	0.0
3/20/03 20:00	1.4	5.4	0.0	0.0	0.0	0.0	0.0	0.0
3/20/03 21:00	1.5	5.6	0.0	0.0	0.0	0.0	0.0	0.0
3/20/03 22:00	3.8	2.6	0.0	0.0	0.0	0.0	0.0	0.0
3/20/03 23:00	6.1	10.5	0.0	0.0	0.0	0.0	0.0	0.0
3/21/03 0:00	7.0	11.5	0.0	0.0	0.0	0.0	0.0	0.0
3/21/03 1:00	7.9	12.3	0.0	0.0	0.0	0.0	0.0	0.0
3/21/03 2:00	6.3	10.8	0.0	0.0	0.0	0.0	0.0	0.0
3/21/03 3:00	4.5	8.8	0.0	0.0	0.0	0.0	0.0	0.0
3/21/03 4:00	6.3	10.6	0.0	0.0	0.0	0.0	0.0	0.0
3/21/03 5:00	8.9	13.2	0.0	0.0	0.0	0.0	0.0	0.0
3/21/03 6:00	6.5	10.8	0.0	0.0	0.0	0.0	0.0	0.0
3/21/03 7:00	2.7	6.9	0.0	0.0	0.0	0.0	0.0	0.0
3/21/03 8:00	2.5	6.6	0.0	0.0	0.0	0.0	0.0	0.0
3/21/03 9:00	2.6	6.9	0.0	0.0	0.0	0.0	0.0	0.0
3/21/03 10:00	4.8	9.2	0.0	0.0	0.0	0.0	0.0	0.0
3/21/03 11:00	7.4	11.7	0.0	0.0	0.0	0.0	0.0	0.0
3/21/03 12:00	6.1	10.5	0.0	0.0	0.0	0.0	0.0	0.0
3/21/03 13:00	7.9	12.2	0.0	0.0	0.0	0.0	0.0	0.0
3/21/03 14:00	5.7	10.1	0.0	0.0	0.0	0.0	0.0	0.0
3/21/03 15:00	2.2	6.2	0.0	0.0	0.0	0.0	0.0	0.0
3/21/03 16:00	0.3	4.1	0.0	0.0	0.0	0.0	0.0	0.0
3/21/03 17:00	2.1	3.6	0.0	0.0	0.0	0.0	0.0	0.0
3/21/03 18:00	4.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0
3/21/03 19:00	5.8	10.1	0.0	0.0	0.0	0.0	0.0	0.0
3/21/03 20:00	7.0	11.3	0.0	0.0	0.0	0.0	0.0	0.0
3/21/03 21:00	5.3	9.2	0.0	0.0	0.0	0.0	0.0	0.0

3/21/03 22:00	6.3	10.5	0.0	0.0	0.0	0.0	0.0	0.0
3/21/03 23:00	5.3	9.6	0.0	0.0	0.0	0.0	0.0	0.0
3/22/03 0:00	6.6	11.0	0.0	0.0	0.0	0.0	0.0	0.0
3/22/03 1:00	7.9	12.2	0.0	0.0	0.0	0.0	0.0	0.0
3/22/03 2:00	7.9	12.3	0.0	0.0	0.0	0.0	0.0	0.0
3/22/03 3:00	4.0	8.2	0.0	0.0	0.0	0.0	0.0	0.0
3/22/03 4:00	3.2	7.3	0.0	0.0	0.0	0.0	0.0	0.0
3/22/03 5:00	6.1	10.5	0.0	0.0	0.0	0.0	0.0	0.0
3/22/03 6:00	5.4	9.6	0.0	0.0	0.0	0.0	0.0	0.0
3/22/03 7:00	3.6	7.8	0.0	0.0	0.0	0.0	0.0	0.0
3/22/03 8:00	6.0	10.2	0.0	0.0	0.0	0.0	0.0	0.0
3/22/03 9:00	6.6	11.1	0.0	0.0	0.0	0.0	0.0	0.0
3/22/03 10:00	8.6	12.8	0.0	0.0	0.0	0.0	0.0	0.0
3/22/03 11:00	9.1	13.5	0.0	0.0	0.0	0.0	0.0	0.0
3/22/03 12:00	8.4	12.7	0.0	0.0	0.0	0.0	0.0	0.0
3/22/03 13:00	6.1	10.1	0.0	0.0	0.0	0.0	0.0	0.0
3/22/03 14:00	4.7	9.1	0.0	0.0	0.0	0.0	0.0	0.0
3/22/03 15:00	5.6	10.0	0.0	0.0	0.0	0.0	0.0	0.0
3/22/03 16:00	3.2	7.5	0.0	0.0	0.0	0.0	0.0	0.0
3/22/03 17:00	1.4	5.8	0.0	0.0	0.0	0.0	0.0	0.0
3/22/03 18:00	3.9	8.2	0.0	0.0	0.0	0.0	0.0	0.0
3/22/03 19:00	6.2	10.5	0.0	0.0	0.0	0.0	0.0	0.0
3/22/03 20:00	2.8	7.3	0.0	0.0	0.0	0.0	0.0	0.0
3/22/03 21:00	5.1	9.6	0.0	0.0	0.0	0.0	0.0	0.0
3/22/03 22:00	4.9	9.3	0.0	0.0	0.0	0.0	0.0	0.0
3/22/03 23:00	6.9	11.4	0.0	0.0	0.0	0.0	0.0	0.0
3/23/03 0:00	9.1	13.5	0.0	0.0	0.0	0.0	0.0	0.0
3/23/03 1:00	4.8	8.9	0.0	0.0	0.0	0.0	0.0	0.0
3/23/03 2:00	1.7	5.7	0.0	0.0	0.0	0.0	0.0	0.0
3/23/03 3:00	0.9	5.3	0.0	0.0	0.0	0.0	0.0	0.0
3/23/03 4:00	0.5	4.0	0.0	0.0	0.0	0.0	0.0	0.0
3/23/03 5:00	0.1	4.0	0.0	0.0	0.0	0.0	0.0	0.0
3/23/03 6:00	0.4	1.3	0.0	0.0	0.0	0.0	0.0	0.0
3/23/03 7:00	0.7	0.6	0.0	0.0	0.0	0.0	0.0	0.0
3/23/03 8:00	1.0	5.1	0.0	0.0	0.0	0.0	0.0	0.0
3/23/03 9:00	2.2	6.5	0.0	0.0	0.0	0.0	0.0	0.0
3/23/03 10:00	3.4	7.4	0.0	0.0	0.0	0.0	0.0	0.0
3/23/03 11:00	3.9	8.0	0.0	0.0	0.0	0.0	0.0	0.0
3/23/03 12:00	3.4	7.5	0.0	0.0	0.0	0.0	0.0	0.0
3/23/03 13:00	3.6	7.6	0.0	0.0	0.0	0.0	0.0	0.0
3/23/03 14:00	2.6	6.7	0.0	0.0	0.0	0.0	0.0	0.0
3/23/03 15:00	2.8	7.0	0.0	0.0	0.0	0.0	0.0	0.0
3/23/03 16:00	2.5	6.6	0.0	0.0	0.0	0.0	0.0	0.0
3/23/03 17:00	1.9	5.8	0.0	0.0	0.0	0.0	0.0	0.0
3/23/03 18:00	3.4	7.6	0.0	0.0	0.0	0.0	0.0	0.0
3/23/03 19:00	5.4	10.0	0.0	0.0	0.0	0.0	0.0	0.0
3/23/03 20:00	6.0	10.1	0.0	0.0	0.0	0.0	0.0	0.0
3/23/03 21:00	8.3	12.7	0.0	0.0	0.0	0.0	0.0	0.0
3/23/03 22:00	7.0	11.5	0.0	0.0	0.0	0.0	0.0	0.0
3/23/03 23:00	5.3	9.6	0.0	0.0	0.0	0.0	0.0	0.0
3/24/03 0:00	7.1	11.5	0.0	0.0	0.0	0.0	0.0	0.0
3/24/03 1:00	5.8	10.1	0.0	0.0	0.0	0.0	0.0	0.0

3/24/03 2:00	5.8	9.7	0.0	0.0	0.0	0.0	0.0	0.0
3/24/03 3:00	4.7	8.7	0.0	0.0	0.0	0.0	0.0	0.0
3/24/03 4:00	5.7	10.0	0.0	0.0	0.0	0.0	0.0	0.0
3/24/03 5:00	8.6	12.8	0.0	0.0	0.0	0.0	0.0	0.0
3/24/03 6:00	9.7	14.1	0.0	0.0	0.0	0.0	0.0	0.0
3/24/03 7:00	8.7	13.1	0.0	0.0	0.0	0.0	0.0	0.0
3/24/03 8:00	10.8	15.0	0.0	0.0	0.0	0.0	0.0	0.0
3/24/03 9:00	13.9	18.4	0.0	0.0	0.0	0.0	0.0	0.0
3/24/03 10:00	10.8	15.3	0.0	0.0	0.0	0.0	0.0	0.0
3/24/03 11:00	12.6	17.4	0.0	0.0	0.0	0.0	0.0	0.0
3/24/03 12:00	11.4	16.3	0.0	0.0	0.0	0.0	0.0	0.0
3/24/03 13:00	11.4	15.9	0.0	0.0	0.0	0.0	0.0	0.0
3/24/03 14:00	9.6	14.4	0.0	0.0	0.0	0.0	0.0	0.0
3/24/03 15:00	4.7	8.9	0.0	0.0	0.0	0.0	0.0	0.0
3/24/03 16:00	7.1	11.7	0.0	0.0	0.0	0.0	0.0	0.0
3/24/03 17:00	3.8	8.2	0.0	0.0	0.0	0.0	0.0	0.0
3/24/03 18:00	4.4	8.8	0.0	0.0	0.0	0.0	0.0	0.0
3/24/03 19:00	5.8	10.0	0.0	0.0	0.0	0.0	0.0	0.0
3/24/03 20:00	6.2	10.6	0.0	0.0	0.0	0.0	0.0	0.0
3/24/03 21:00	4.9	9.2	0.0	0.0	0.0	0.0	0.0	0.0
3/24/03 22:00	6.6	10.9	0.0	0.0	0.0	0.0	0.0	0.0
3/24/03 23:00	5.2	9.6	0.0	0.0	0.0	0.0	0.0	0.0
3/25/03 0:00	7.1	11.7	0.0	0.0	0.0	0.0	0.0	0.0
3/25/03 1:00	6.3	10.8	0.0	0.0	0.0	0.0	0.0	0.0
3/25/03 2:00	4.8	8.7	0.0	0.0	0.0	0.0	0.0	0.0
3/25/03 3:00	3.5	7.6	0.0	0.0	0.0	0.0	0.0	0.0
3/25/03 4:00	3.8	8.3	0.0	0.0	0.0	0.0	0.0	0.0
3/25/03 5:00	5.1	9.3	0.0	0.0	0.0	0.0	0.0	0.0
3/25/03 6:00	7.1	11.7	0.0	0.0	0.0	0.0	0.0	0.0
3/25/03 7:00	3.1	7.1	0.0	0.0	0.0	0.0	0.0	0.0
3/25/03 8:00	5.2	9.6	0.0	0.0	0.0	0.0	0.0	0.0
3/25/03 9:00	4.4	8.3	0.0	0.0	0.0	0.0	0.0	0.0
3/25/03 10:00	9.1	13.7	0.0	0.0	0.0	0.0	0.0	0.0
3/25/03 11:00	7.6	12.2	0.0	0.0	0.0	0.0	0.0	0.0
3/25/03 12:00	7.4	11.8	0.0	0.0	0.0	0.0	0.0	0.0
3/25/03 13:00	10.9	15.2	0.0	0.0	0.0	0.0	0.0	0.0
3/25/03 14:00	11.1	15.4	0.0	0.0	0.0	0.0	0.0	0.0
3/25/03 15:00	9.3	13.3	0.0	0.0	0.0	0.0	0.0	0.0
3/25/03 16:00	5.6	9.5	0.0	0.0	0.0	0.0	0.0	0.0
3/25/03 17:00	2.8	7.1	0.0	0.0	0.0	0.0	0.0	0.0
3/25/03 18:00	4.0	8.3	0.0	0.0	0.0	0.0	0.0	0.0
3/25/03 19:00	5.3	9.2	0.0	0.0	0.0	0.0	0.0	0.0
3/25/03 20:00	3.5	7.5	0.0	0.0	0.0	0.0	0.0	0.0
3/25/03 21:00	3.0	7.4	0.0	0.0	0.0	0.0	0.0	0.0
3/25/03 22:00	3.2	7.6	0.0	0.0	0.0	0.0	0.0	0.0
3/25/03 23:00	5.7	10.2	0.0	0.0	0.0	0.0	0.0	0.0
3/26/03 0:00	8.6	13.2	0.0	0.0	0.0	0.0	0.0	0.0
3/26/03 1:00	7.4	11.8	0.0	0.0	0.0	0.0	0.0	0.0
3/26/03 2:00	6.3	10.8	0.0	0.0	0.0	0.0	0.0	0.0
3/26/03 3:00	4.7	8.9	0.0	0.0	0.0	0.0	0.0	0.0
3/26/03 4:00	5.2	9.1	0.0	0.0	0.0	0.0	0.0	0.0
3/26/03 5:00	5.7	10.1	0.0	0.0	0.0	0.0	0.0	0.0

3/26/03 6:00	6.0	10.5	0.0	0.0	0.0	0.0	0.0	0.0
3/26/03 7:00	6.0	10.4	0.0	0.0	0.0	0.0	0.0	0.0
3/26/03 8:00	4.5	8.8	0.0	0.0	0.0	0.0	0.0	0.0
3/26/03 9:00	6.0	10.1	0.0	0.0	0.0	0.0	0.0	0.0
3/26/03 10:00	8.7	13.1	0.0	0.0	0.0	0.0	0.0	0.0
3/26/03 11:00	9.7	14.4	0.0	0.0	0.0	0.0	0.0	0.0
3/26/03 12:00	9.1	13.7	0.0	0.0	0.0	0.0	0.0	0.0
3/26/03 13:00	9.7	14.3	0.0	0.0	0.0	0.0	0.0	0.0
3/26/03 14:00	10.4	14.5	0.0	0.0	0.0	0.0	0.0	0.0
3/26/03 15:00	6.3	10.9	0.0	0.0	0.0	0.0	0.0	0.0
3/26/03 16:00	3.2	7.4	0.0	0.0	0.0	0.0	0.0	0.0
3/26/03 17:00	1.9	6.0	0.0	0.0	0.0	0.0	0.0	0.0
3/26/03 18:00	1.3	5.4	0.0	0.0	0.0	0.0	0.0	0.0
3/26/03 19:00	4.9	9.3	0.0	0.0	0.0	0.0	0.0	0.0
3/26/03 20:00	3.8	7.9	0.0	0.0	0.0	0.0	0.0	0.0
3/26/03 21:00	4.1	8.4	0.0	0.0	0.0	0.0	0.0	0.0
3/26/03 22:00	5.1	9.2	0.0	0.0	0.0	0.0	0.0	0.0
3/26/03 23:00	5.7	10.1	0.0	0.0	0.0	0.0	0.0	0.0
3/27/03 0:00	9.6	14.3	0.0	0.0	0.0	0.0	0.0	0.0
3/27/03 1:00	8.3	12.4	0.0	0.0	0.0	0.0	0.0	0.0
3/27/03 2:00	7.0	10.6	0.0	0.0	0.0	0.0	0.0	0.0
3/27/03 3:00	5.3	9.5	0.0	0.0	0.0	0.0	0.0	0.0
3/27/03 4:00	6.3	6.3	0.0	0.0	0.0	0.0	0.0	0.0
3/27/03 5:00	10.0	11.3	0.0	0.0	0.0	0.0	0.0	0.0
3/27/03 6:00	8.0	8.0	0.0	0.0	0.0	0.0	0.0	0.0
3/27/03 7:00	4.3	8.9	0.0	0.0	0.0	0.0	0.0	0.0
3/27/03 8:00	8.2	13.1	0.0	0.0	0.0	0.0	0.0	0.0
3/27/03 9:00	4.0	9.1	0.0	0.0	0.0	0.0	0.0	0.0
3/27/03 10:00	8.7	13.6	0.0	0.0	0.0	0.0	0.0	0.0
3/27/03 11:00	9.5	14.3	0.0	0.0	0.0	0.0	0.0	0.0
3/27/03 12:00	8.2	13.2	0.0	0.0	0.0	0.0	0.0	0.0
3/27/03 13:00	10.4	15.6	0.0	0.0	0.0	0.0	0.0	0.0
3/27/03 14:00	11.5	15.8	0.0	0.0	0.0	0.0	0.0	0.0
3/27/03 15:00	7.0	12.1	0.0	0.0	0.0	0.0	0.0	0.0
3/27/03 16:00	2.3	7.0	0.0	0.0	0.0	0.0	0.0	0.0
3/27/03 17:00	2.2	7.0	0.0	0.0	0.0	0.0	0.0	0.0
3/27/03 18:00	2.9	4.4	0.0	0.0	0.0	0.0	0.0	0.0
3/27/03 19:00	3.6	8.6	0.0	0.0	0.0	0.0	0.0	0.0
3/27/03 20:00	2.5	7.3	0.0	0.0	0.0	0.0	0.0	0.0
3/27/03 21:00	2.5	7.4	0.0	0.0	0.0	0.0	0.0	0.0
3/27/03 22:00	4.3	9.2	0.0	0.0	0.0	0.0	0.0	0.0
3/27/03 23:00	3.5	8.7	0.0	0.0	0.0	0.0	0.0	0.0
3/28/03 0:00	5.8	10.8	0.0	0.0	0.0	0.0	0.0	0.0
3/28/03 1:00	3.4	8.3	0.0	0.0	0.0	0.0	0.0	0.0
3/28/03 2:00	2.8	7.3	0.0	0.0	0.0	0.0	0.0	0.0
3/28/03 3:00	1.0	5.3	0.0	0.0	0.0	0.0	0.0	0.0
3/28/03 4:00	0.5	4.8	0.0	0.0	0.0	0.0	0.0	0.0
3/28/03 5:00	4.8	10.0	0.0	0.0	0.0	0.0	0.0	0.0
3/28/03 6:00	3.8	8.7	0.0	0.0	0.0	0.0	0.0	0.0
3/28/03 7:00	1.3	5.7	0.0	0.0	0.0	0.0	0.0	0.0
3/28/03 8:00	4.9	9.6	0.0	0.0	0.0	0.0	0.0	0.0
3/28/03 9:00	6.3	11.0	0.0	0.0	0.0	0.0	0.0	0.0

3/28/03 10:00	3.5	7.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3/28/03 11:00	4.1	9.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3/28/03 12:00	4.3	9.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3/28/03 13:00	5.1	10.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3/28/03 14:00	5.7	10.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3/28/03 15:00	2.3	7.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3/28/03 16:00	0.8	5.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3/28/03 17:00	1.2	2.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3/28/03 18:00	1.6	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3/28/03 19:00	2.1	3.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3/28/03 20:00	2.5	3.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3/28/03 21:00	3.0	5.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3/28/03 22:00	3.4	5.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3/28/03 23:00	3.8	3.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3/29/03 0:00	4.3	7.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3/29/03 1:00	1.3	4.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3/29/03 2:00	1.4	1.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3/29/03 3:00	1.5	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3/29/03 4:00	1.6	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3/29/03 5:00	1.8	1.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3/29/03 6:00	1.9	1.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3/29/03 7:00	2.0	1.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3/29/03 8:00	2.1	1.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3/29/03 9:00	2.2	3.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3/29/03 10:00	2.3	7.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3/29/03 11:00	1.9	7.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3/29/03 12:00	2.7	7.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3/29/03 13:00	2.2	6.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3/29/03 14:00	5.2	9.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3/29/03 15:00	3.6	8.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3/29/03 16:00	4.7	9.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3/29/03 17:00	3.8	8.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3/29/03 18:00	4.4	9.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3/29/03 19:00	6.1	10.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3/29/03 20:00	5.6	10.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3/29/03 21:00	6.1	10.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3/29/03 22:00	4.7	9.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3/29/03 23:00	7.0	11.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3/30/03 0:00	2.8	7.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3/30/03 1:00	2.6	3.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3/30/03 2:00	2.4	3.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3/30/03 3:00	2.1	3.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3/30/03 4:00	1.9	3.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3/30/03 5:00	1.7	3.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3/30/03 6:00	1.4	4.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3/30/03 7:00	1.2	4.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3/30/03 8:00	1.0	4.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3/30/03 9:00	0.7	4.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3/30/03 10:00	0.5	5.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3/30/03 11:00	3.4	8.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3/30/03 12:00	6.1	11.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3/30/03 13:00	6.5	11.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0

3/30/03 14:00	5.1	10.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3/30/03 15:00	6.1	11.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3/30/03 16:00	6.0	10.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3/30/03 17:00	4.3	8.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3/30/03 18:00	4.0	8.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3/30/03 19:00	6.7	11.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3/30/03 20:00	6.0	11.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3/30/03 21:00	6.1	11.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3/30/03 22:00	4.3	9.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3/30/03 23:00	2.7	7.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3/31/03 0:00	1.6	4.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3/31/03 1:00	0.5	4.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3/31/03 2:00	0.8	3.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3/31/03 3:00	1.1	1.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3/31/03 4:00	1.4	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3/31/03 5:00	1.8	4.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3/31/03 6:00	2.1	6.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3/31/03 7:00	6.5	11.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3/31/03 8:00	5.1	10.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3/31/03 9:00	8.4	13.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3/31/03 10:00	14.5	19.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3/31/03 11:00	17.4	21.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3/31/03 12:00	15.6	19.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3/31/03 13:00	8.2	12.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3/31/03 14:00	9.3	13.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3/31/03 15:00	7.4	11.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3/31/03 16:00	5.6	10.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3/31/03 17:00	1.9	5.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3/31/03 18:00	0.3	3.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3/31/03 19:00	5.3	9.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3/31/03 20:00	2.7	7.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3/31/03 21:00	1.8	6.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3/31/03 22:00	7.3	3.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3/31/03 23:00	12.7	17.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/1/03 0:00	9.5	13.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/1/03 1:00	7.4	11.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/1/03 2:00	6.5	10.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/1/03 3:00	6.1	10.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/1/03 4:00	5.6	9.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/1/03 5:00	8.6	13.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/1/03 6:00	7.6	11.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/1/03 7:00	8.0	12.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/1/03 8:00	3.0	7.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/1/03 9:00	4.9	9.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/1/03 10:00	7.5	12.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/1/03 11:00	7.5	12.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/1/03 12:00	8.6	13.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/1/03 13:00	10.0	14.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/1/03 14:00	9.2	13.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/1/03 15:00	8.6	13.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/1/03 16:00	3.6	7.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/1/03 17:00	1.7	5.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0

4/1/03 18:00	2.3	6.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/1/03 19:00	5.7	9.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/1/03 20:00	5.6	9.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/1/03 21:00	9.1	13.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/1/03 22:00	7.6	11.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/1/03 23:00	10.2	14.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/2/03 0:00	9.2	13.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/2/03 1:00	8.2	12.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/2/03 2:00	8.3	12.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/2/03 3:00	7.0	11.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/2/03 4:00	6.7	10.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/2/03 5:00	8.4	12.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/2/03 6:00	8.4	12.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/2/03 7:00	7.8	12.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/2/03 8:00	6.7	10.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/2/03 9:00	7.1	11.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/2/03 10:00	7.5	11.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/2/03 11:00	7.6	11.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/2/03 12:00	8.0	12.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/2/03 13:00	8.2	12.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/2/03 14:00	5.7	10.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/2/03 15:00	4.5	8.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/2/03 16:00	2.5	6.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/2/03 17:00	1.0	4.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/2/03 18:00	0.6	4.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/2/03 19:00	5.4	9.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/2/03 20:00	5.7	10.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/2/03 21:00	5.8	10.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/2/03 22:00	8.9	13.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/2/03 23:00	13.3	17.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/3/03 0:00	10.8	14.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/3/03 1:00	9.5	13.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/3/03 2:00	6.6	10.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/3/03 3:00	6.5	10.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/3/03 4:00	6.5	10.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/3/03 5:00	8.0	12.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/3/03 6:00	6.7	11.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/3/03 7:00	6.1	10.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/3/03 8:00	2.8	7.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/3/03 9:00	6.0	10.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/3/03 10:00	5.8	11.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/3/03 11:00	5.8	10.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/3/03 12:00	3.8	10.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/3/03 13:00	4.0	11.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/3/03 14:00	5.8	9.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/3/03 15:00	3.9	7.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/3/03 16:00	1.4	4.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/3/03 17:00	1.7	5.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/3/03 18:00	3.5	6.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/3/03 19:00	6.6	9.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/3/03 20:00	5.7	9.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/3/03 21:00	7.9	11.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0

4/3/03 22:00	9.7	13.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/3/03 23:00	12.3	16.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/4/03 0:00	9.6	13.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/4/03 1:00	9.2	13.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/4/03 2:00	7.3	11.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/4/03 3:00	7.9	11.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/4/03 4:00	8.4	12.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/4/03 5:00	10.5	14.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/4/03 6:00	8.3	12.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/4/03 7:00	4.8	9.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/4/03 8:00	7.1	11.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/4/03 9:00	7.4	11.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/4/03 10:00	10.1	14.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/4/03 11:00	9.1	13.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/4/03 12:00	8.0	12.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/4/03 13:00	8.4	12.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/4/03 14:00	7.0	11.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/4/03 15:00	6.6	10.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/4/03 16:00	3.8	7.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/4/03 17:00	3.5	7.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/4/03 18:00	2.1	5.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/4/03 19:00	6.7	10.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/4/03 20:00	7.4	11.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/4/03 21:00	10.2	14.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/4/03 22:00	12.8	17.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/4/03 23:00	11.9	16.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/5/03 0:00	9.7	13.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/5/03 1:00	9.5	13.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/5/03 2:00	8.6	12.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/5/03 3:00	7.9	11.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/5/03 4:00	4.9	9.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/5/03 5:00	7.5	11.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/5/03 6:00	1.5	5.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/5/03 7:00	2.8	6.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/5/03 8:00	6.3	10.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/5/03 9:00	7.8	11.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/5/03 10:00	8.3	12.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/5/03 11:00	8.9	13.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/5/03 12:00	8.2	12.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/5/03 13:00	6.3	10.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/5/03 14:00	3.2	7.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/5/03 15:00	0.9	5.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/5/03 16:00	0.8	4.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/5/03 17:00	1.2	1.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/5/03 18:00	1.7	5.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/5/03 19:00	8.3	12.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/5/03 20:00	5.2	9.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/5/03 21:00	6.3	10.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/5/03 22:00	7.8	12.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/5/03 23:00	9.5	13.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/6/03 0:00	6.5	10.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/6/03 1:00	3.4	7.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0

4/6/03 3:00	2.6	6.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/6/03 4:00	1.7	5.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/6/03 5:00	3.1	7.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/6/03 6:00	2.8	7.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/6/03 7:00	3.1	4.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/6/03 8:00	3.5	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/6/03 9:00	3.8	7.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/6/03 10:00	7.1	11.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/6/03 11:00	7.1	11.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/6/03 12:00	8.0	12.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/6/03 13:00	8.6	12.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/6/03 14:00	4.5	8.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/6/03 15:00	3.8	7.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/6/03 16:00	5.7	9.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/6/03 17:00	4.7	8.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/6/03 18:00	2.2	6.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/6/03 19:00	5.4	9.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/6/03 20:00	9.2	13.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/6/03 21:00	7.9	12.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/6/03 22:00	8.3	12.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/6/03 23:00	5.2	9.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/7/03 0:00	5.1	8.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/7/03 1:00	3.4	7.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/7/03 2:00	1.7	5.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/7/03 3:00	2.1	6.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/7/03 4:00	1.4	5.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/7/03 5:00	6.0	10.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/7/03 6:00	11.1	15.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/7/03 7:00	4.1	7.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/7/03 8:00	3.5	7.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/7/03 9:00	3.2	7.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/7/03 10:00	5.1	9.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/7/03 11:00	8.0	11.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/7/03 12:00	8.0	12.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/7/03 13:00	10.5	14.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/7/03 14:00	8.9	12.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/7/03 15:00	6.0	10.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/7/03 16:00	4.4	8.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/7/03 17:00	1.5	5.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/7/03 18:00	1.7	3.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/7/03 19:00	1.9	6.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/7/03 20:00	5.1	8.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/7/03 21:00	4.4	8.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/7/03 22:00	1.4	5.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/7/03 23:00	3.2	7.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/8/03 0:00	4.4	8.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/8/03 1:00	5.1	9.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/8/03 2:00	5.3	8.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/8/03 3:00	2.6	6.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/8/03 4:00	4.5	8.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/8/03 5:00	6.7	10.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/8/03 6:00	8.0	12.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0

4/8/03 7:00	5.1	9.1	0.0	0.0	0.0	0.0	0.0	0.0
4/8/03 8:00	4.1	7.8	0.0	0.0	0.0	0.0	0.0	0.0
4/8/03 9:00	6.2	10.2	0.0	0.0	0.0	0.0	0.0	0.0
4/8/03 10:00	6.6	10.5	0.0	0.0	0.0	0.0	0.0	0.0
4/8/03 11:00	9.5	13.5	0.0	0.0	0.0	0.0	0.0	0.0
4/8/03 12:00	8.6	12.8	0.0	0.0	0.0	0.0	0.0	0.0
4/8/03 13:00	11.7	15.8	0.0	0.0	0.0	0.0	0.0	0.0
4/8/03 14:00	10.6	14.5	0.0	0.0	0.0	0.0	0.0	0.0
4/8/03 15:00	8.8	13.0	0.0	0.0	0.0	0.0	0.0	0.0
4/8/03 16:00	8.6	12.6	0.0	0.0	0.0	0.0	0.0	0.0
4/8/03 17:00	4.5	8.8	0.0	0.0	0.0	0.0	0.0	0.0
4/8/03 18:00	1.0	5.1	0.0	0.0	0.0	0.0	0.0	0.0
4/8/03 19:00	1.9	5.6	0.0	0.0	0.0	0.0	0.0	0.0
4/8/03 20:00	7.6	11.7	0.0	0.0	0.0	0.0	0.0	0.0
4/8/03 21:00	5.1	9.1	0.0	0.0	0.0	0.0	0.0	0.0
4/8/03 22:00	4.0	8.3	0.0	0.0	0.0	0.0	0.0	0.0
4/8/03 23:00	6.6	10.2	0.0	0.0	0.0	0.0	0.0	0.0
4/9/03 0:00	8.3	11.9	0.0	0.0	0.0	0.0	0.0	0.0
4/9/03 1:00	7.8	11.4	0.0	0.0	0.0	0.0	0.0	0.0
4/9/03 2:00	4.4	8.2	0.0	0.0	0.0	0.0	0.0	0.0
4/9/03 3:00	3.0	6.6	0.0	0.0	0.0	0.0	0.0	0.0
4/9/03 4:00	3.8	7.8	0.0	0.0	0.0	0.0	0.0	0.0
4/9/03 5:00	6.1	9.8	0.0	0.0	0.0	0.0	0.0	0.0
4/9/03 6:00	9.5	13.5	0.0	0.0	0.0	0.0	0.0	0.0
4/9/03 7:00	3.5	7.9	0.0	0.0	0.0	0.0	0.0	0.0
4/9/03 8:00	7.3	11.1	0.0	0.0	0.0	0.0	0.0	0.0
4/9/03 9:00	7.5	11.1	0.0	0.0	0.0	0.0	0.0	0.0
4/9/03 10:00	13.7	17.9	0.0	0.0	0.0	0.0	0.0	0.0
4/9/03 11:00	10.8	14.8	0.0	0.0	0.0	0.0	0.0	0.0
4/9/03 12:00	11.4	15.4	0.0	0.0	0.0	0.0	0.0	0.0
4/9/03 13:00	13.0	17.2	0.0	0.0	0.0	0.0	0.0	0.0
4/9/03 14:00	10.1	14.6	0.0	0.0	0.0	0.0	0.0	0.0
4/9/03 15:00	9.7	13.9	0.0	0.0	0.0	0.0	0.0	0.0
4/9/03 16:00	6.2	10.0	0.0	0.0	0.0	0.0	0.0	0.0
4/9/03 17:00	4.4	8.7	0.0	0.0	0.0	0.0	0.0	0.0
4/9/03 18:00	0.1	4.1	0.0	0.0	0.0	0.0	0.0	0.0
4/9/03 19:00	0.9	4.8	0.0	0.0	0.0	0.0	0.0	0.0
4/9/03 20:00	5.8	10.0	0.0	0.0	0.0	0.0	0.0	0.0
4/9/03 21:00	5.8	10.0	0.0	0.0	0.0	0.0	0.0	0.0
4/9/03 22:00	3.1	6.9	0.0	0.0	0.0	0.0	0.0	0.0
4/9/03 23:00	5.4	9.8	0.0	0.0	0.0	0.0	0.0	0.0
4/10/03 0:00	7.3	11.4	0.0	0.0	0.0	0.0	0.0	0.0
4/10/03 1:00	7.8	11.9	0.0	0.0	0.0	0.0	0.0	0.0
4/10/03 2:00	5.6	9.7	0.0	0.0	0.0	0.0	0.0	0.0
4/10/03 3:00	4.5	8.8	0.0	0.0	0.0	0.0	0.0	0.0
4/10/03 4:00	4.5	8.7	0.0	0.0	0.0	0.0	0.0	0.0
4/10/03 5:00	6.6	11.1	0.0	0.0	0.0	0.0	0.0	0.0
4/10/03 6:00	10.5	14.5	0.0	0.0	0.0	0.0	0.0	0.0
4/10/03 7:00	4.8	8.8	0.0	0.0	0.0	0.0	0.0	0.0
4/10/03 8:00	6.7	11.0	0.0	0.0	0.0	0.0	0.0	0.0
4/10/03 9:00	6.5	10.5	0.0	0.0	0.0	0.0	0.0	0.0
4/10/03 10:00	10.4	14.6	0.0	0.0	0.0	0.0	0.0	0.0

4/10/03 11:00	11.8	16.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/10/03 12:00	9.8	14.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/10/03 13:00	10.1	14.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/10/03 14:00	11.8	16.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/10/03 15:00	6.2	10.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/10/03 16:00	3.8	7.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/10/03 17:00	4.3	8.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/10/03 18:00	3.1	3.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/10/03 19:00	1.9	6.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/10/03 20:00	6.5	10.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/10/03 21:00	4.9	8.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/10/03 22:00	6.1	10.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/10/03 23:00	7.4	11.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/11/03 0:00	6.3	10.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/11/03 1:00	8.3	12.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/11/03 2:00	3.6	7.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/11/03 3:00	2.8	6.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/11/03 4:00	3.2	7.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/11/03 5:00	6.1	10.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/11/03 6:00	8.0	12.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/11/03 7:00	4.8	8.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/11/03 8:00	3.0	7.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/11/03 9:00	4.5	8.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/11/03 10:00	4.1	8.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/11/03 11:00	6.6	10.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/11/03 12:00	5.3	9.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/11/03 13:00	8.4	12.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/11/03 14:00	7.9	12.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/11/03 15:00	4.9	8.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/11/03 16:00	1.8	5.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/11/03 17:00	2.3	6.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/11/03 18:00	1.3	3.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/11/03 19:00	0.3	4.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/11/03 20:00	5.3	9.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/11/03 21:00	5.1	8.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/11/03 22:00	5.2	9.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/11/03 23:00	5.3	9.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/12/03 0:00	6.3	13.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/12/03 1:00	5.3	11.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/12/03 2:00	4.7	11.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/12/03 3:00	5.1	11.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/12/03 4:00	3.4	9.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/12/03 5:00	5.7	11.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/12/03 6:00	4.4	8.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/12/03 7:00	0.6	4.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/12/03 8:00	0.6	4.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/12/03 9:00	4.5	8.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/12/03 10:00	5.8	10.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/12/03 11:00	7.1	11.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/12/03 12:00	4.4	8.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/12/03 13:00	5.2	9.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/12/03 14:00	4.0	8.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0

4/12/03 15:00	4.0	7.9	0.0	0.0	0.0	0.0	0.0	0.0
4/12/03 16:00	3.1	7.1	0.0	0.0	0.0	0.0	0.0	0.0
4/12/03 17:00	2.2	6.0	0.0	0.0	0.0	0.0	0.0	0.0
4/12/03 18:00	0.9	4.9	0.0	0.0	0.0	0.0	0.0	0.0
4/12/03 19:00	5.3	9.6	0.0	0.0	0.0	0.0	0.0	0.0
4/12/03 20:00	6.3	10.5	0.0	0.0	0.0	0.0	0.0	0.0
4/12/03 21:00	7.4	11.8	0.0	0.0	0.0	0.0	0.0	0.0
4/12/03 22:00	4.7	9.1	0.0	0.0	0.0	0.0	0.0	0.0
4/12/03 23:00	4.8	8.9	0.0	0.0	0.0	0.0	0.0	0.0
4/13/03 0:00	5.3	9.5	0.0	0.0	0.0	0.0	0.0	0.0
4/13/03 1:00	6.6	10.8	0.0	0.0	0.0	0.0	0.0	0.0
4/13/03 2:00	5.1	9.2	0.0	0.0	0.0	0.0	0.0	0.0
4/13/03 3:00	4.8	8.6	0.0	0.0	0.0	0.0	0.0	0.0
4/13/03 4:00	1.4	5.6	0.0	0.0	0.0	0.0	0.0	0.0
4/13/03 5:00	1.0	4.9	0.0	0.0	0.0	0.0	0.0	0.0
4/13/03 6:00	3.8	7.5	0.0	0.0	0.0	0.0	0.0	0.0
4/13/03 7:00	2.7	6.4	0.0	0.0	0.0	0.0	0.0	0.0
4/13/03 8:00	1.6	5.3	0.0	0.0	0.0	0.0	0.0	0.0
4/13/03 9:00	0.5	4.3	0.0	0.0	0.0	0.0	0.0	0.0
4/13/03 10:00	4.1	8.0	0.0	0.0	0.0	0.0	0.0	0.0
4/13/03 11:00	0.3	4.3	0.0	0.0	0.0	0.0	0.0	0.0
4/13/03 12:00	1.5	5.7	0.0	0.0	0.0	0.0	0.0	0.0
4/13/03 13:00	1.8	5.8	0.0	0.0	0.0	0.0	0.0	0.0
4/13/03 14:00	1.0	5.3	0.0	0.0	0.0	0.0	0.0	0.0
4/13/03 15:00	1.9	6.0	0.0	0.0	0.0	0.0	0.0	0.0
4/13/03 16:00	0.5	4.4	0.0	0.0	0.0	0.0	0.0	0.0
4/13/03 17:00	1.2	4.9	0.0	0.0	0.0	0.0	0.0	0.0
4/13/03 18:00	1.2	5.2	0.0	0.0	0.0	0.0	0.0	0.0
4/13/03 19:00	4.5	9.1	0.0	0.0	0.0	0.0	0.0	0.0
4/13/03 20:00	9.1	13.1	0.0	0.0	0.0	0.0	0.0	0.0
4/13/03 21:00	7.1	11.1	0.0	0.0	0.0	0.0	0.0	0.0
4/13/03 22:00	7.5	11.9	0.0	0.0	0.0	0.0	0.0	0.0
4/13/03 23:00	6.5	10.5	0.0	0.0	0.0	0.0	0.0	0.0
4/14/03 0:00	6.2	10.1	0.0	0.0	0.0	0.0	0.0	0.0
4/14/03 1:00	5.7	9.8	0.0	0.0	0.0	0.0	0.0	0.0
4/14/03 2:00	3.8	7.5	0.0	0.0	0.0	0.0	0.0	0.0
4/14/03 3:00	2.7	6.1	0.0	0.0	0.0	0.0	0.0	0.0
4/14/03 4:00	4.5	8.7	0.0	0.0	0.0	0.0	0.0	0.0
4/14/03 5:00	7.9	11.9	0.0	0.0	0.0	0.0	0.0	0.0
4/14/03 6:00	11.4	15.7	0.0	0.0	0.0	0.0	0.0	0.0
4/14/03 7:00	2.3	6.2	0.0	0.0	0.0	0.0	0.0	0.0
4/14/03 8:00	1.3	5.2	0.0	0.0	0.0	0.0	0.0	0.0
4/14/03 9:00	3.4	7.8	0.0	0.0	0.0	0.0	0.0	0.0
4/14/03 10:00	7.0	11.3	0.0	0.0	0.0	0.0	0.0	0.0
4/14/03 11:00	2.2	6.1	0.0	0.0	0.0	0.0	0.0	0.0
4/14/03 12:00	1.9	6.0	0.0	0.0	0.0	0.0	0.0	0.0
4/14/03 13:00	2.5	6.5	0.0	0.0	0.0	0.0	0.0	0.0
4/14/03 14:00	0.4	4.0	0.0	0.0	0.0	0.0	0.0	0.0
4/14/03 15:00	0.4	3.2	0.0	0.0	0.0	0.0	0.0	0.0
4/14/03 16:00	0.5	3.8	0.0	0.0	0.0	0.0	0.0	0.0
4/14/03 17:00	0.5	1.8	0.0	0.0	0.0	0.0	0.0	0.0
4/14/03 18:00	0.6	3.2	0.0	0.0	0.0	0.0	0.0	0.0

4/14/03 19:00	0.6	5.1	0.0	0.0	0.0	0.0	0.0	0.0
4/14/03 20:00	3.9	8.4	0.0	0.0	0.0	0.0	0.0	0.0
4/14/03 21:00	2.8	8.0	0.0	0.0	0.0	0.0	0.0	0.0
4/14/03 22:00	3.8	3.8	0.0	0.0	0.0	0.0	0.0	0.0
4/14/03 23:00	4.7	8.7	0.0	0.0	0.0	0.0	0.0	0.0
4/15/03 0:00	5.7	10.0	0.0	0.0	0.0	0.0	0.0	0.0
4/15/03 1:00	3.8	8.2	0.0	0.0	0.0	0.0	0.0	0.0
4/15/03 2:00	4.3	8.6	0.0	0.0	0.0	0.0	0.0	0.0
4/15/03 3:00	3.6	7.8	0.0	0.0	0.0	0.0	0.0	0.0
4/15/03 4:00	3.5	7.4	0.0	0.0	0.0	0.0	0.0	0.0
4/15/03 5:00	7.0	11.1	0.0	0.0	0.0	0.0	0.0	0.0
4/15/03 6:00	9.2	13.6	0.0	0.0	0.0	0.0	0.0	0.0
4/15/03 7:00	3.1	7.5	0.0	0.0	0.0	0.0	0.0	0.0
4/15/03 8:00	3.4	7.6	0.0	0.0	0.0	0.0	0.0	0.0
4/15/03 9:00	3.9	7.9	0.0	0.0	0.0	0.0	0.0	0.0
4/15/03 10:00	1.4	6.1	0.0	0.0	0.0	0.0	0.0	0.0
4/15/03 11:00	4.4	8.9	0.0	0.0	0.0	0.0	0.0	0.0
4/15/03 12:00	3.2	7.5	0.0	0.0	0.0	0.0	0.0	0.0
4/15/03 13:00	1.9	5.7	0.0	0.0	0.0	0.0	0.0	0.0
4/15/03 14:00	0.4	4.5	0.0	0.0	0.0	0.0	0.0	0.0
4/15/03 15:00	0.4	1.7	0.0	0.0	0.0	0.0	0.0	0.0
4/15/03 16:00	0.4	0.1	0.0	0.0	0.0	0.0	0.0	0.0
4/15/03 17:00	0.4	1.1	0.0	0.0	0.0	0.0	0.0	0.0
4/15/03 18:00	0.5	2.0	0.0	0.0	0.0	0.0	0.0	0.0
4/15/03 19:00	0.5	2.9	0.0	0.0	0.0	0.0	0.0	0.0
4/15/03 20:00	0.5	3.9	0.0	0.0	0.0	0.0	0.0	0.0
4/15/03 21:00	0.5	4.7	0.0	0.0	0.0	0.0	0.0	0.0
4/15/03 22:00	1.5	2.3	0.0	0.0	0.0	0.0	0.0	0.0
4/15/03 23:00	2.4	2.8	0.0	0.0	0.0	0.0	0.0	0.0
4/16/03 0:00	3.4	7.5	0.0	0.0	0.0	0.0	0.0	0.0
4/16/03 1:00	2.6	6.6	0.0	0.0	0.0	0.0	0.0	0.0
4/16/03 2:00	2.0	3.4	0.0	0.0	0.0	0.0	0.0	0.0
4/16/03 3:00	1.4	3.8	0.0	0.0	0.0	0.0	0.0	0.0
4/16/03 4:00	0.8	4.8	0.0	0.0	0.0	0.0	0.0	0.0
4/16/03 5:00	3.9	7.9	0.0	0.0	0.0	0.0	0.0	0.0
4/16/03 6:00	7.8	11.9	0.0	0.0	0.0	0.0	0.0	0.0
4/16/03 7:00	0.8	4.9	0.0	0.0	0.0	0.0	0.0	0.0
4/16/03 8:00	2.6	6.7	0.0	0.0	0.0	0.0	0.0	0.0
4/16/03 9:00	3.1	7.4	0.0	0.0	0.0	0.0	0.0	0.0
4/16/03 10:00	5.4	9.7	0.0	0.0	0.0	0.0	0.0	0.0
4/16/03 11:00	5.8	10.0	0.0	0.0	0.0	0.0	0.0	0.0
4/16/03 12:00	3.8	7.6	0.0	0.0	0.0	0.0	0.0	0.0
4/16/03 13:00	4.0	8.0	0.0	0.0	0.0	0.0	0.0	0.0
4/16/03 14:00	3.8	7.8	0.0	0.0	0.0	0.0	0.0	0.0
4/16/03 15:00	4.0	7.8	0.0	0.0	0.0	0.0	0.0	0.0
4/16/03 16:00	0.6	4.5	0.0	0.0	0.0	0.0	0.0	0.0
4/16/03 17:00	1.0	1.2	0.0	0.0	0.0	0.0	0.0	0.0
4/16/03 18:00	1.4	0.8	0.0	0.0	0.0	0.0	0.0	0.0
4/16/03 19:00	1.8	0.5	0.0	0.0	0.0	0.0	0.0	0.0
4/16/03 20:00	2.2	6.0	0.0	0.0	0.0	0.0	0.0	0.0
4/16/03 21:00	1.8	5.8	0.0	0.0	0.0	0.0	0.0	0.0
4/16/03 22:00	1.2	1.8	0.0	0.0	0.0	0.0	0.0	0.0

4/16/03 23:00	0.6	4.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/17/03 0:00	6.2	10.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/17/03 1:00	4.5	8.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/17/03 2:00	1.8	6.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/17/03 3:00	0.5	4.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/17/03 4:00	1.5	5.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/17/03 5:00	4.9	9.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/17/03 6:00	7.6	11.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/17/03 7:00	5.6	9.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/17/03 8:00	3.1	7.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/17/03 9:00	4.1	8.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/17/03 10:00	5.8	10.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/17/03 11:00	3.1	7.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/17/03 12:00	1.7	5.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/17/03 13:00	2.3	6.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/17/03 14:00	3.4	7.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/17/03 15:00	1.7	5.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/17/03 16:00	0.6	4.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/17/03 17:00	1.0	3.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/17/03 18:00	1.3	1.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/17/03 19:00	1.6	1.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/17/03 20:00	1.9	6.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/17/03 21:00	1.7	5.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/17/03 22:00	0.5	4.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/17/03 23:00	6.5	10.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/18/03 0:00	4.9	8.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/18/03 1:00	0.6	4.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/18/03 2:00	0.6	3.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/18/03 3:00	0.6	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/18/03 4:00	0.5	1.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/18/03 5:00	0.5	4.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/18/03 6:00	6.3	10.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/18/03 7:00	3.4	3.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/18/03 8:00	0.5	4.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/18/03 9:00	1.5	5.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/18/03 10:00	2.1	6.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/18/03 11:00	2.7	6.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/18/03 12:00	1.4	5.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/18/03 13:00	0.8	4.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/18/03 14:00	0.3	4.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/18/03 15:00	1.0	2.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/18/03 16:00	1.8	2.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/18/03 17:00	2.6	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/18/03 18:00	3.4	3.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/18/03 19:00	4.1	6.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/18/03 20:00	4.9	9.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/18/03 21:00	4.0	8.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/18/03 22:00	4.5	9.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/18/03 23:00	3.0	7.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/19/03 0:00	5.6	10.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/19/03 1:00	0.5	4.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/19/03 2:00	0.5	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0

4/19/03 3:00	0.5	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/19/03 4:00	0.4	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/19/03 5:00	0.4	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/19/03 6:00	0.4	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/19/03 7:00	0.3	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/19/03 8:00	0.3	1.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/19/03 9:00	0.3	2.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/19/03 10:00	0.3	4.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/19/03 11:00	2.8	6.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/19/03 12:00	2.8	7.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/19/03 13:00	1.0	5.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/19/03 14:00	1.6	3.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/19/03 15:00	2.1	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/19/03 16:00	2.7	3.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/19/03 17:00	3.3	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/19/03 18:00	3.8	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/19/03 19:00	4.4	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/19/03 20:00	4.9	9.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/19/03 21:00	4.3	8.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/19/03 22:00	3.1	7.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/19/03 23:00	6.3	10.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/20/03 0:00	5.6	10.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/20/03 1:00	5.2	3.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/20/03 2:00	4.9	3.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/20/03 3:00	4.5	3.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/20/03 4:00	4.2	3.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/20/03 5:00	3.9	3.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/20/03 6:00	3.5	3.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/20/03 7:00	3.2	3.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/20/03 8:00	2.8	3.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/20/03 9:00	2.5	3.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/20/03 10:00	2.1	4.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/20/03 11:00	1.8	3.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/20/03 12:00	1.5	3.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/20/03 13:00	1.1	3.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/20/03 14:00	0.8	4.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/20/03 15:00	1.4	2.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/20/03 16:00	2.0	2.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/20/03 17:00	2.7	3.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/20/03 18:00	3.3	3.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/20/03 19:00	3.9	3.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/20/03 20:00	4.5	9.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/20/03 21:00	4.4	8.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/20/03 22:00	4.0	8.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/20/03 23:00	1.0	5.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/21/03 0:00	3.4	8.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/21/03 1:00	0.8	4.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/21/03 2:00	0.8	4.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/21/03 3:00	0.9	3.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/21/03 4:00	1.0	5.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/21/03 5:00	3.8	7.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/21/03 6:00	9.1	13.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0

4/21/03 7:00	3.9	8.6	0.0	0.0	0.0	0.0	0.0	0.0
4/21/03 8:00	4.5	8.9	0.0	0.0	0.0	0.0	0.0	0.0
4/21/03 9:00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/21/03 10:00	6.2	10.5	0.0	0.0	0.0	0.0	0.0	0.0
4/21/03 11:00	5.7	10.4	0.0	0.0	0.0	0.0	0.0	0.0
4/21/03 12:00	5.3	9.7	0.0	0.0	0.0	0.0	0.0	0.0
4/21/03 13:00	7.1	11.9	0.0	0.0	0.0	0.0	0.0	0.0
4/21/03 14:00	5.6	10.5	0.0	0.0	0.0	0.0	0.0	0.0
4/21/03 15:00	2.5	6.9	0.0	0.0	0.0	0.0	0.0	0.0
4/21/03 16:00	0.6	4.9	0.0	0.0	0.0	0.0	0.0	0.0
4/21/03 17:00	1.7	1.4	0.0	0.0	0.0	0.0	0.0	0.0
4/21/03 18:00	2.8	1.7	0.0	0.0	0.0	0.0	0.0	0.0
4/21/03 19:00	3.9	1.9	0.0	0.0	0.0	0.0	0.0	0.0
4/21/03 20:00	5.1	9.5	0.0	0.0	0.0	0.0	0.0	0.0
4/21/03 21:00	2.2	6.6	0.0	0.0	0.0	0.0	0.0	0.0
4/21/03 22:00	1.0	5.6	0.0	0.0	0.0	0.0	0.0	0.0
4/21/03 23:00	3.9	8.2	0.0	0.0	0.0	0.0	0.0	0.0
4/22/03 0:00	5.8	10.2	0.0	0.0	0.0	0.0	0.0	0.0
4/22/03 1:00	6.3	10.9	0.0	0.0	0.0	0.0	0.0	0.0
4/22/03 2:00	4.0	8.4	0.0	0.0	0.0	0.0	0.0	0.0
4/22/03 3:00	4.0	8.3	0.0	0.0	0.0	0.0	0.0	0.0
4/22/03 4:00	4.3	8.4	0.0	0.0	0.0	0.0	0.0	0.0
4/22/03 5:00	6.9	11.4	0.0	0.0	0.0	0.0	0.0	0.0
4/22/03 6:00	10.9	15.4	0.0	0.0	0.0	0.0	0.0	0.0
4/22/03 7:00	4.4	9.2	0.0	0.0	0.0	0.0	0.0	0.0
4/22/03 8:00	2.7	2.6	0.0	0.0	0.0	0.0	0.0	0.0
4/22/03 9:00	1.0	5.3	0.0	0.0	0.0	0.0	0.0	0.0
4/22/03 10:00	2.5	6.7	0.0	0.0	0.0	0.0	0.0	0.0
4/22/03 11:00	0.6	4.9	0.0	0.0	0.0	0.0	0.0	0.0
4/22/03 12:00	0.1	4.8	0.0	0.0	0.0	0.0	0.0	0.0
4/22/03 13:00	2.3	7.1	0.0	0.0	0.0	0.0	0.0	0.0
4/22/03 14:00	1.8	6.3	0.0	0.0	0.0	0.0	0.0	0.0
4/22/03 15:00	0.9	5.6	0.0	0.0	0.0	0.0	0.0	0.0
4/22/03 16:00	1.5	3.4	0.0	0.0	0.0	0.0	0.0	0.0
4/22/03 17:00	2.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0
4/22/03 18:00	2.6	2.6	0.0	0.0	0.0	0.0	0.0	0.0
4/22/03 19:00	3.2	2.2	0.0	0.0	0.0	0.0	0.0	0.0
4/22/03 20:00	3.8	7.9	0.0	0.0	0.0	0.0	0.0	0.0
4/22/03 21:00	1.7	5.8	0.0	0.0	0.0	0.0	0.0	0.0
4/22/03 22:00	1.8	2.7	0.0	0.0	0.0	0.0	0.0	0.0
4/22/03 23:00	1.9	1.9	0.0	0.0	0.0	0.0	0.0	0.0
4/23/03 0:00	1.9	6.3	0.0	0.0	0.0	0.0	0.0	0.0
4/23/03 1:00	3.4	7.6	0.0	0.0	0.0	0.0	0.0	0.0
4/23/03 2:00	2.8	7.0	0.0	0.0	0.0	0.0	0.0	0.0
4/23/03 3:00	1.4	5.7	0.0	0.0	0.0	0.0	0.0	0.0
4/23/03 4:00	3.2	7.8	0.0	0.0	0.0	0.0	0.0	0.0
4/23/03 5:00	4.5	8.9	0.0	0.0	0.0	0.0	0.0	0.0
4/23/03 6:00	9.6	14.4	0.0	0.0	0.0	0.0	0.0	0.0
4/23/03 7:00	8.0	12.7	0.0	0.0	0.0	0.0	0.0	0.0
4/23/03 8:00	5.7	10.4	0.0	0.0	0.0	0.0	0.0	0.0
4/23/03 9:00	3.9	8.6	0.0	0.0	0.0	0.0	0.0	0.0
4/23/03 10:00	7.0	11.4	0.0	0.0	0.0	0.0	0.0	0.0

4/23/03 11:00	6.0	10.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/23/03 12:00	5.6	10.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/23/03 13:00	7.8	12.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/23/03 14:00	6.6	11.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/23/03 15:00	6.1	10.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/23/03 16:00	1.7	6.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/23/03 17:00	2.0	4.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/23/03 18:00	2.3	1.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/23/03 19:00	2.6	2.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/23/03 20:00	2.8	7.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/23/03 21:00	3.0	7.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/23/03 22:00	1.0	5.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/23/03 23:00	6.5	11.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/24/03 0:00	6.2	10.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/24/03 1:00	4.0	8.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/24/03 2:00	2.6	7.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/24/03 3:00	1.9	6.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/24/03 4:00	3.8	8.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/24/03 5:00	6.2	10.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/24/03 6:00	8.8	13.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/24/03 7:00	7.5	12.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/24/03 8:00	2.8	7.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/24/03 9:00	6.1	10.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/24/03 10:00	7.4	12.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/24/03 11:00	5.4	10.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/24/03 12:00	5.6	10.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/24/03 13:00	5.6	10.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/24/03 14:00	4.7	9.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/24/03 15:00	2.6	7.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/24/03 16:00	3.1	3.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/24/03 17:00	3.6	2.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/24/03 18:00	4.1	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/24/03 19:00	4.7	1.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/24/03 20:00	5.2	9.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/24/03 21:00	4.7	9.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/24/03 22:00	3.8	8.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/24/03 23:00	4.5	9.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/25/03 0:00	5.8	10.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/25/03 1:00	5.3	10.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/25/03 2:00	5.8	10.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/25/03 3:00	5.3	9.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/25/03 4:00	6.1	11.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/25/03 5:00	6.0	10.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/25/03 6:00	8.0	12.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/25/03 7:00	3.9	8.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/25/03 8:00	1.4	6.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/25/03 9:00	4.3	8.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/25/03 10:00	5.3	9.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/25/03 11:00	4.4	8.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/25/03 12:00	0.8	5.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/25/03 13:00	3.4	7.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/25/03 14:00	1.2	5.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0

4/25/03 15:00	1.4	5.7	0.0	0.0	0.0	0.0	0.0	0.0
4/25/03 16:00	1.3	2.5	0.0	0.0	0.0	0.0	0.0	0.0
4/25/03 17:00	1.2	3.1	0.0	0.0	0.0	0.0	0.0	0.0
4/25/03 18:00	1.0	3.8	0.0	0.0	0.0	0.0	0.0	0.0
4/25/03 19:00	0.9	4.4	0.0	0.0	0.0	0.0	0.0	0.0
4/25/03 20:00	0.8	5.1	0.0	0.0	0.0	0.0	0.0	0.0
4/25/03 21:00	1.2	5.7	0.0	0.0	0.0	0.0	0.0	0.0
4/25/03 22:00	1.0	5.3	0.0	0.0	0.0	0.0	0.0	0.0
4/25/03 23:00	1.4	5.2	0.0	0.0	0.0	0.0	0.0	0.0
4/26/03 0:00	6.3	9.2	0.0	0.0	0.0	0.0	0.0	0.0
4/26/03 1:00	6.1	8.7	0.0	0.0	0.0	0.0	0.0	0.0
4/26/03 2:00	6.5	8.9	0.0	0.0	0.0	0.0	0.0	0.0
4/26/03 3:00	5.1	7.5	0.0	0.0	0.0	0.0	0.0	0.0
4/26/03 4:00	3.4	6.2	0.0	0.0	0.0	0.0	0.0	0.0
4/26/03 5:00	5.1	9.3	0.0	0.0	0.0	0.0	0.0	0.0
4/26/03 6:00	4.4	8.7	0.0	0.0	0.0	0.0	0.0	0.0
4/26/03 7:00	3.3	3.6	0.0	0.0	0.0	0.0	0.0	0.0
4/26/03 8:00	2.2	6.7	0.0	0.0	0.0	0.0	0.0	0.0
4/26/03 9:00	5.7	10.5	0.0	0.0	0.0	0.0	0.0	0.0
4/26/03 10:00	5.2	9.6	0.0	0.0	0.0	0.0	0.0	0.0
4/26/03 11:00	5.6	10.2	0.0	0.0	0.0	0.0	0.0	0.0
4/26/03 12:00	5.2	10.0	0.0	0.0	0.0	0.0	0.0	0.0
4/26/03 13:00	4.5	8.8	0.0	0.0	0.0	0.0	0.0	0.0
4/26/03 14:00	3.5	7.9	0.0	0.0	0.0	0.0	0.0	0.0
4/26/03 15:00	1.4	5.6	0.0	0.0	0.0	0.0	0.0	0.0
4/26/03 16:00	2.1	6.2	0.0	0.0	0.0	0.0	0.0	0.0
4/26/03 17:00	1.9	6.3	0.0	0.0	0.0	0.0	0.0	0.0
4/26/03 18:00	2.2	6.1	0.0	0.0	0.0	0.0	0.0	0.0
4/26/03 19:00	1.8	6.3	0.0	0.0	0.0	0.0	0.0	0.0
4/26/03 20:00	5.7	10.2	0.0	0.0	0.0	0.0	0.0	0.0
4/26/03 21:00	7.3	11.9	0.0	0.0	0.0	0.0	0.0	0.0
4/26/03 22:00	4.8	9.7	0.0	0.0	0.0	0.0	0.0	0.0
4/26/03 23:00	4.9	8.9	0.0	0.0	0.0	0.0	0.0	0.0
4/27/03 0:00	4.9	9.3	0.0	0.0	0.0	0.0	0.0	0.0
4/27/03 1:00	3.8	8.3	0.0	0.0	0.0	0.0	0.0	0.0
4/27/03 2:00	1.2	5.6	0.0	0.0	0.0	0.0	0.0	0.0
4/27/03 3:00	0.4	4.8	0.0	0.0	0.0	0.0	0.0	0.0
4/27/03 4:00	0.4	3.6	0.0	0.0	0.0	0.0	0.0	0.0
4/27/03 5:00	0.5	5.2	0.0	0.0	0.0	0.0	0.0	0.0
4/27/03 6:00	0.5	2.3	0.0	0.0	0.0	0.0	0.0	0.0
4/27/03 7:00	0.5	2.1	0.0	0.0	0.0	0.0	0.0	0.0
4/27/03 8:00	0.5	1.8	0.0	0.0	0.0	0.0	0.0	0.0
4/27/03 9:00	0.5	3.4	0.0	0.0	0.0	0.0	0.0	0.0
4/27/03 10:00	0.5	5.1	0.0	0.0	0.0	0.0	0.0	0.0
4/27/03 11:00	3.0	7.5	0.0	0.0	0.0	0.0	0.0	0.0
4/27/03 12:00	4.8	9.5	0.0	0.0	0.0	0.0	0.0	0.0
4/27/03 13:00	5.3	9.6	0.0	0.0	0.0	0.0	0.0	0.0
4/27/03 14:00	3.2	7.5	0.0	0.0	0.0	0.0	0.0	0.0
4/27/03 15:00	1.8	6.2	0.0	0.0	0.0	0.0	0.0	0.0
4/27/03 16:00	3.8	7.9	0.0	0.0	0.0	0.0	0.0	0.0
4/27/03 17:00	1.2	5.2	0.0	0.0	0.0	0.0	0.0	0.0
4/27/03 18:00	0.5	4.8	0.0	0.0	0.0	0.0	0.0	0.0

4/27/03 19:00	1.8	6.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/27/03 20:00	9.2	14.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/27/03 21:00	7.0	11.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/27/03 22:00	4.9	8.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/27/03 23:00	5.7	10.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/28/03 0:00	3.1	7.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/28/03 1:00	0.6	4.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/28/03 2:00	0.5	4.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/28/03 3:00	0.8	5.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/28/03 4:00	1.9	6.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/28/03 5:00	4.8	9.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/28/03 6:00	5.3	9.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/28/03 7:00	4.5	8.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/28/03 8:00	1.9	6.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/28/03 9:00	1.7	6.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/28/03 10:00	6.3	11.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/28/03 11:00	5.1	9.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/28/03 12:00	4.9	9.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/28/03 13:00	6.6	11.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/28/03 14:00	4.9	9.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/28/03 15:00	1.5	5.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/28/03 16:00	2.8	6.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/28/03 17:00	3.8	2.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/28/03 18:00	4.7	5.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/28/03 19:00	5.7	8.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/28/03 20:00	6.6	11.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/28/03 21:00	4.0	8.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/28/03 22:00	5.8	10.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/28/03 23:00	6.5	11.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/29/03 0:00	6.5	11.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/29/03 1:00	6.5	11.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/29/03 2:00	6.5	11.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/29/03 3:00	6.5	11.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/29/03 4:00	6.5	11.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/29/03 5:00	6.5	11.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/29/03 6:00	6.5	11.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/29/03 7:00	6.5	11.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/29/03 8:00	6.5	11.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/29/03 9:00	6.5	11.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/29/03 10:00	6.5	11.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/29/03 11:00	6.5	11.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/29/03 12:00	6.5	11.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/29/03 13:00	6.5	11.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/29/03 14:00	6.5	11.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/29/03 15:00	6.5	11.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/29/03 16:00	6.5	11.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/29/03 17:00	6.5	11.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/29/03 18:00	6.5	11.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/29/03 19:00	6.5	11.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/29/03 20:00	6.5	11.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/29/03 21:00	6.5	11.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4/29/03 22:00	6.5	11.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0

5/2/03 3:00	Not Cor	Not Cor	Not Cor	Not Cor	Not Cor	Not Cor	Not Connect	0.0
5/2/03 4:00	Not Cor	Not Cor	Not Cor	Not Cor	Not Cor	Not Cor	Not Connect	0.0
5/2/03 5:00	Not Cor	Not Cor	Not Cor	Not Cor	Not Cor	Not Cor	Not Connect	0.0
5/2/03 6:00	Not Cor	Not Cor	Not Cor	Not Cor	Not Cor	Not Cor	Not Connect	0.0
5/2/03 7:00	Not Cor	Not Cor	Not Cor	Not Cor	Not Cor	Not Cor	Not Connect	0.0
5/2/03 8:00	Not Cor	Not Cor	Not Cor	Not Cor	Not Cor	Not Cor	Not Connect	0.0
5/2/03 9:00	I/O Time	I/O Time	I/O Time	I/O Time	I/O Time	I/O Time	I/O Timeout	0.0
5/2/03 10:00	I/O Time	I/O Time	I/O Time	I/O Time	I/O Time	I/O Time	I/O Timeout	0.0
5/2/03 11:00	I/O Time	I/O Time	I/O Time	I/O Time	I/O Time	I/O Time	I/O Timeout	0.0
5/2/03 12:00	I/O Time	I/O Time	I/O Time	I/O Time	I/O Time	I/O Time	I/O Timeout	0.0
5/2/03 13:00	I/O Time	I/O Time	I/O Time	I/O Time	I/O Time	I/O Time	I/O Timeout	0.0
5/2/03 14:00	I/O Time	I/O Time	I/O Time	I/O Time	I/O Time	I/O Time	I/O Timeout	0.0
5/2/03 15:00	I/O Time	I/O Time	I/O Time	I/O Time	I/O Time	I/O Time	I/O Timeout	0.0
5/2/03 16:00	-2.2	2.6	I/O Time	-48.5	-33.6	-26.1	I/O Timeout	-108.2
5/2/03 17:00	I/O Time	I/O Time	I/O Time	I/O Time	I/O Time	I/O Time	I/O Timeout	0.0
5/2/03 18:00	-4.8	0.6	-25.5	-51.2	-39.3	-23.1	-22.5	-161.6
5/2/03 19:00	-2.6	2.4	-23.0	-47.9	-33.1	-18.8	-17.8	-140.6
5/2/03 20:00	0.9	6.5	-20.5	-44.7	-26.6	-14.3	-13.2	-119.3
5/2/03 21:00	0.9	5.8	-18.1	-35.2	-23.5	-9.6	-11.4	-97.8
5/2/03 22:00	-0.3	5.3	-18.7	-43.6	-29.7	-9.2	-8.7	-109.9
5/2/03 23:00	4.0	9.0	-22.9	-50.4	-39.0	-10.8	-10.6	-133.7
5/3/03 0:00	5.5	10.0	-23.0	-44.9	-31.8	-12.7	-12.3	-124.7
5/3/03 1:00	4.8	9.4	-23.9	-54.0	-38.0	-14.5	-14.1	-144.5
5/3/03 2:00	4.5	8.0	-25.3	-56.4	-44.2	-16.4	-15.8	-158.2
5/3/03 3:00	4.1	8.4	-26.8	-58.7	-47.9	-18.2	-17.6	-169.3
5/3/03 4:00	3.8	7.8	-28.3	-61.1	-47.2	-20.1	-19.4	-176.1
5/3/03 5:00	4.8	9.0	-29.8	-63.3	-46.5	-22.0	-21.1	-182.7
5/3/03 6:00	2.9	8.3	-29.7	-62.9	-45.9	-23.9	-23.0	-185.3
5/3/03 7:00	-0.9	4.0	-28.1	-61.4	-45.2	-25.8	-24.9	-185.4
5/3/03 8:00	-0.6	4.2	-26.4	-58.7	-44.5	-24.8	-27.3	-181.7
5/3/03 9:00	1.5	5.4	-25.7	-55.6	-41.8	-23.8	-25.2	-172.1
5/3/03 10:00	1.7	6.5	-26.0	-53.0	-39.2	-23.0	-23.2	-164.3
5/3/03 11:00	2.3	5.9	-26.3	-51.1	-37.0	-22.1	-21.1	-157.6
5/3/03 12:00	0.4	4.8	-26.6	-57.3	-42.2	-21.3	-19.7	-167.2
5/3/03 13:00	-0.9	3.7	-28.5	-63.4	-47.0	-21.2	-20.3	-180.4
5/3/03 14:00	-3.7	-0.3	-31.2	-68.8	-50.3	-21.7	-20.9	-193.0
5/3/03 15:00	-8.3	-4.0	-34.0	-74.3	-53.7	-22.3	-21.5	-205.6
5/3/03 16:00	-1.8	2.1	-34.0	-62.3	-45.6	-22.8	-22.1	-186.7
5/3/03 17:00	-3.0	1.5	-31.5	-61.6	-44.5	-23.3	-22.7	-183.5
5/3/03 18:00	-3.7	-1.0	-29.0	-60.8	-43.5	-23.8	-23.2	-180.4
5/3/03 19:00	-2.1	2.0	-26.5	-60.1	-42.4	-21.8	-21.3	-172.1
5/3/03 20:00	3.8	8.4	-24.6	-57.9	-40.8	-18.1	-17.6	-158.9
5/3/03 21:00	4.6	9.0	-25.2	-53.9	-37.5	-14.2	-14.5	-145.4
5/3/03 22:00	2.0	6.7	-25.7	-57.0	-41.0	-11.6	-10.9	-146.3
5/3/03 23:00	5.2	9.0	-26.3	-51.1	-37.9	-12.6	-12.4	-140.3
5/4/03 0:00	5.1	9.4	-27.2	-51.4	-36.6	-14.2	-13.9	-143.3
5/4/03 1:00	2.3	7.3	-28.2	-53.3	-38.6	-15.7	-15.4	-151.1
5/4/03 2:00	0.0	3.3	-29.1	-56.3	-40.6	-17.3	-16.9	-160.1
5/4/03 3:00	-2.3	2.5	-30.1	-60.4	-42.5	-18.8	-18.4	-170.2
5/4/03 4:00	-4.0	-0.4	-30.2	-62.6	-44.5	-20.3	-19.9	-177.6
5/4/03 5:00	-2.8	1.5	-30.1	-64.2	-46.5	-21.9	-21.5	-184.2
5/4/03 6:00	-3.1	1.4	-30.1	-65.8	-47.6	-24.7	-24.1	-192.2

5/6/03 11:00	4.4	10.6	-11.4	-30.3	-18.4	-20.7	-20.0		-100.8
5/6/03 12:00	4.0	10.3	-12.0	-29.8	-18.0	-20.7	-20.0		-100.6
5/6/03 13:00	Shutdov	Shutdov	Shutdov	Shutdov	Shutdov	Shutdov	Shutdown		0.0
5/6/03 14:00	I/O Time	I/O Time	I/O Time	I/O Time	I/O Time	I/O Time	I/O Timeout		0.0
5/6/03 15:00	2.6	Not Cor	-15.9	-36.4	-23.7	-19.1	-18.2		-113.3
5/6/03 16:00	0.6	5.0	-17.4	-38.0	-24.5	-20.7	-20.0		-120.5
5/6/03 17:00	-0.2	3.0	-17.4	-38.1	-24.6	-20.6	-20.0		-120.7
5/6/03 18:00	-0.9	Not Cor	-17.4	-38.2	-24.7	-20.6	-20.0		-120.9
5/6/03 19:00	-1.0	Not Cor	-17.4	-38.3	-24.7	-20.6	-20.0		-121.0
5/6/03 20:00	-1.0	Not Cor	-17.4	-38.4	-24.8	-20.6	-20.0		-121.2
5/6/03 21:00	-1.0	Not Cor	-17.4	-38.5	-24.9	-20.6	-20.0		-121.4
5/6/03 22:00	-1.0	Not Cor	-17.4	-38.6	-25.0	-20.5	-20.0		-121.5
5/6/03 23:00	-1.0	Not Cor	-17.4	-38.7	-25.0	-20.5	-20.0		-121.7
5/7/03 0:00	-1.0	Not Cor	-17.4	-38.8	-25.1	-20.5	-20.0		-121.8
5/7/03 1:00	-1.0	Not Cor	-17.4	-38.8	-25.1	-20.5	-20.0		-121.8
5/7/03 2:00	-1.0	Not Cor	-17.4	-38.8	-25.1	-20.5	-20.0		-121.8
5/7/03 3:00	-1.0	Not Cor	-17.4	-38.8	-25.1	-20.5	-20.0		-121.8
5/7/03 4:00	-1.0	Not Cor	-17.4	-38.8	-25.1	-20.5	-20.0		-121.8
5/7/03 5:00	-1.0	Not Cor	-17.4	-38.8	-25.1	-20.5	-20.0		-121.8
5/7/03 6:00	-1.0	Not Cor	-17.4	-38.8	-25.1	-20.5	-20.0		-121.8
5/7/03 7:00	-1.0	Not Cor	-17.4	-38.8	-25.1	-20.5	-20.0		-121.8
5/7/03 8:00	-1.0	Not Cor	-17.4	-38.8	-25.1	-20.5	-20.0		-121.8
5/7/03 9:00	-2.2	2.9	-20.6	-43.2	-30.1	-20.1	-24.6		-138.6
5/7/03 10:00	I/O Time	I/O Time	I/O Time	I/O Time	I/O Time	I/O Time	I/O Timeout		0.0
5/7/03 11:00	4.1	8.6	-14.7	-34.4	-21.3	-24.6	-24.4		-119.4
5/7/03 12:00	3.6	8.4	-14.5	-33.2	-20.5	-25.0	-24.4		-117.7
5/7/03 13:00	3.4	8.2	-13.9	-31.7	-19.1	-24.7	-23.9		-113.3
5/7/03 14:00	3.3	8.2	-13.9	-31.8	-19.7	-24.7	-24.0		-114.1
5/7/03 15:00	0.3	4.7	-17.6	-39.8	-26.8	-22.5	-22.0		-128.8
5/7/03 16:00	-1.9	2.2	-17.6	-39.1	-26.8	-22.5	-22.2		-128.2
5/7/03 17:00	I/O Time	I/O Time	I/O Time	I/O Time	I/O Time	I/O Time	I/O Timeout		0.0
5/7/03 18:00	-3.4	1.2	-17.7	-39.8	-26.9	-20.0	-21.5		-125.9
5/7/03 19:00	-3.0	1.4	-14.5	-37.4	-23.6	-20.2	-19.2		-115.0
5/7/03 20:00	2.9	7.7	-11.4	-30.7	-19.1	-20.3	-18.2		-99.6
5/7/03 21:00	3.2	8.0	-14.1	-31.0	-16.5	-17.6	-17.3		-96.6
5/7/03 22:00	3.1	7.2	-16.3	-39.5	-25.5	-18.0	-17.1		-116.4
5/7/03 23:00	6.3	10.5	-17.8	-44.9	-30.4	-15.7	-13.8		-122.5
5/8/03 0:00	6.3	11.0	-19.2	-47.7	-31.4	-16.3	-14.2		-128.8
5/8/03 1:00	7.7	12.2	-20.7	-47.3	-33.6	-16.9	-15.1		-133.6
5/8/03 2:00	6.1	10.2	-22.2	-49.6	-36.7	-17.5	-16.0		-141.9
5/8/03 3:00	4.8	9.0	-23.6	-52.2	-39.7	-18.1	-16.9		-150.5
5/8/03 4:00	4.7	8.9	-25.1	-54.8	-42.7	-18.7	-17.8		-159.1
5/8/03 5:00	4.7	8.8	-26.5	-56.6	-42.7	-19.3	-18.7		-163.9
5/8/03 6:00	4.6	8.8	-27.4	-56.6	-42.7	-19.9	-19.6		-166.2
5/8/03 7:00	4.5	8.7	-27.4	-56.6	-42.7	-20.4	-20.3		-167.4
5/8/03 8:00	4.4	8.6	-27.4	-56.6	-42.7	-20.4	-20.3		-167.4
5/8/03 9:00	6.4	11.5	-15.4	-33.1	-22.4	-21.1	-20.0		-111.9
5/8/03 10:00	8.4	13.9	-11.9	-25.4	-14.1	-20.0	-19.6		-91.0
5/8/03 11:00	6.2	10.8	-11.6	-28.6	-16.9	-18.4	-17.7		-93.2
5/8/03 12:00	6.4	10.1	-11.6	-28.6	-17.2	-18.4	-17.7		-93.5
5/8/03 13:00	4.4	9.1	-14.3	-33.2	-20.3	-24.6	-23.8		-116.2
5/8/03 14:00	2.2	9.8	-13.8	-33.0	-19.2	-24.4	-23.7		-114.1

5/8/03 15:00	1.7	9.8	-13.3	-31.3	-18.5	-24.3	-23.6		-111.0
5/8/03 16:00	I/O Time	I/O Time	I/O Time	I/O Time	I/O Time	I/O Time	I/O Timeout		0.0
5/8/03 17:00	I/O Time	I/O Time	I/O Time	I/O Time	I/O Time	I/O Time	I/O Timeout		0.0
5/8/03 18:00	I/O Time	I/O Time	I/O Time	I/O Time	I/O Time	I/O Time	I/O Timeout		0.0
5/8/03 19:00	-4.6	-0.3	-18.2	-43.3	-28.9	-24.4	-25.4		-140.4
5/8/03 20:00	4.5	9.2	-15.0	-33.2	-21.3	-22.4	-23.7		-115.5
5/8/03 21:00	2.7	7.8	-13.8	-29.3	-17.6	-18.4	-17.4		-96.4
5/8/03 22:00	-1.2	3.1	-14.6	-38.3	-23.7	-19.0	-18.3		-113.9
5/8/03 23:00	0.2	4.4	-18.0	-45.6	-32.4	-19.9	-19.4		-135.3
5/9/03 0:00	5.5	10.1	-21.4	-48.9	-37.4	-20.9	-20.3		-148.9
5/9/03 1:00	5.0	9.7	-24.8	-53.0	-40.2	-21.8	-21.3		-161.2
5/9/03 2:00	2.4	6.9	-28.2	-57.2	-43.0	-22.8	-22.2		-173.4
5/9/03 3:00	1.4	5.6	-31.5	-61.4	-45.8	-23.7	-23.2		-185.5
5/9/03 4:00	2.1	6.4	-27.7	-59.9	-45.9	-24.7	-24.1		-182.3
5/9/03 5:00	4.1	9.4	-24.0	-53.6	-39.6	-25.6	-25.1		-167.9
5/9/03 6:00	7.9	12.2	-20.3	-39.6	-26.8	-26.1	-25.4		-138.2
5/9/03 7:00	4.5	9.3	-14.7	-35.8	-21.7	-26.3	-25.1		-123.7
5/9/03 8:00	2.5	6.9	-13.7	-36.0	-23.8	-26.3	-24.2		-124.1
5/9/03 9:00	4.0	8.2	-12.8	-32.0	-21.6	-26.2	-25.8		-118.4
5/9/03 10:00	4.1	8.9	-12.9	-35.3	-19.7	-25.1	-24.5		-117.6
5/9/03 11:00	3.8	9.1	-13.6	-34.8	-20.0	-24.1	-23.1		-115.6
5/9/03 12:00	4.3	8.3	-13.4	-32.1	-19.4	-23.8	-22.9		-111.7
5/9/03 13:00	4.0	7.9	-14.7	-36.0	-21.5	-24.6	-23.6		-120.5
5/9/03 14:00	1.9	6.4	-16.0	-37.8	-23.7	-25.3	-24.4		-127.2
5/9/03 15:00	1.6	6.6	-17.2	-39.6	-25.9	-26.0	-25.1		-133.8
5/9/03 16:00	I/O Time	I/O Time	I/O Time	I/O Time	I/O Time	-25.9	I/O Timeout		-25.9
5/9/03 17:00	-3.0	2.5	-20.0	-43.6	-30.3	-27.0	-26.3		-147.3
5/9/03 18:00	-6.1	-1.4	-20.2	-44.7	-29.4	-26.2	-25.5		-146.1
5/9/03 19:00	-8.2	-4.2	-19.6	-47.5	-31.6	-24.5	-23.9		-147.1
5/9/03 20:00	2.4	6.9	-18.7	-39.0	-24.9	-22.7	-22.0		-127.3
5/9/03 21:00	3.0	8.0	-16.6	-31.7	-17.8	-19.8	-19.4		-105.3
5/9/03 22:00	3.7	8.7	-14.9	-36.1	-21.9	-14.9	-15.0		-102.9
5/9/03 23:00	5.2	9.7	-16.4	-39.5	-27.0	-17.5	-16.7		-117.0
5/10/03 0:00	4.7	12.7	-18.0	-39.4	-30.5	-19.1	-18.3		-125.3
5/10/03 1:00	2.4	9.9	-19.5	-44.0	-33.2	-20.4	-20.0		-137.1
5/10/03 2:00	-0.8	6.5	-21.1	-47.5	-35.4	-21.8	-21.6		-147.3
5/10/03 3:00	-1.3	6.4	-22.6	-50.8	-37.7	-23.1	-23.3		-157.4
5/10/03 4:00	-1.3	5.3	-24.1	-54.2	-39.9	-24.4	-24.9		-167.6
5/10/03 5:00	-0.3	6.2	-25.7	-54.5	-41.4	-25.8	-26.5		-173.8
5/10/03 6:00	-3.7	4.5	-24.3	-51.7	-39.7	-27.1	-28.1		-170.9
5/10/03 7:00	-8.0	-0.5	-21.6	-49.0	-38.1	-28.4	-29.6		-166.7
5/10/03 8:00	-6.3	0.2	-18.9	-45.2	-31.5	-31.6	-31.3		-158.5
5/10/03 9:00	-4.3	0.3	-16.2	-40.5	-24.9	-29.9	-29.4		-140.8
5/10/03 10:00	-0.1	6.1	-14.8	-31.6	-22.1	-28.2	-27.6		-124.2
5/10/03 11:00	2.3	6.9	-15.5	-38.5	-24.3	-26.4	-25.7		-130.5
5/10/03 12:00	-0.2	4.3	-16.3	-40.1	-26.7	-26.1	-25.3		-134.5
5/10/03 13:00	-0.9	3.0	-17.0	-41.8	-29.0	-26.1	-25.4		-139.3
5/10/03 14:00	-2.4	1.5	-17.7	-44.3	-30.3	-26.2	-25.4		-144.0
5/10/03 15:00	-2.5	1.6	-17.7	-36.5	-25.5	-26.2	-25.5		-131.5
5/10/03 16:00	-4.3	-1.2	-17.5	-38.2	-26.1	-26.3	-25.6		-133.7
5/10/03 17:00	-5.3	-1.5	-17.3	-40.0	-26.6	-26.3	-25.6		-135.8
5/10/03 18:00	-7.8	-4.1	-17.1	-41.7	-27.0	-26.4	-25.7		-137.9

5/10/03 19:00	-6.2	-2.5	-16.9	-43.4	-27.4	-26.5	-25.8		-140.0
5/10/03 20:00	6.0	9.5	-15.8	-32.7	-21.0	-23.5	-23.1		-116.1
5/10/03 21:00	5.0	9.0	-14.5	-31.0	-20.2	-20.0	-19.7		-105.5
5/10/03 22:00	1.7	6.0	-16.7	-43.9	-29.6	-17.7	-16.7		-124.5
5/10/03 23:00	2.8	6.4	-19.8	-41.6	-28.5	-19.2	-18.3		-127.4
5/11/03 0:00	2.3	6.8	-21.4	-41.1	-30.2	-20.6	-19.9		-133.2
5/11/03 1:00	2.1	6.3	-22.9	-49.8	-36.7	-22.1	-21.5		-152.9
5/11/03 2:00	1.2	5.3	-24.3	-53.3	-39.3	-23.6	-23.1		-163.7
5/11/03 3:00	-2.5	1.7	-25.8	-56.9	-42.0	-25.1	-24.7		-174.4
5/11/03 4:00	-3.3	0.4	-27.2	-60.5	-44.7	-26.6	-26.3		-185.2
5/11/03 5:00	-3.5	0.0	-28.7	-63.6	-47.3	-28.0	-27.9		-195.6
5/11/03 6:00	-6.3	-2.8	-30.1	-64.5	-47.9	-30.9	-31.3		-204.6
5/11/03 7:00	-8.4	-4.4	-31.6	-65.3	-48.0	-34.0	-34.8		-213.8
5/11/03 8:00	-8.5	-4.6	-29.9	-59.0	-45.7	-34.2	-33.8		-202.5
5/11/03 9:00	-4.9	-1.5	-24.4	-47.6	-34.0	-33.1	-32.7		-171.7
5/11/03 10:00	-1.3	2.5	-18.8	-37.6	-28.3	-32.1	-31.5		-148.3
5/11/03 11:00	1.3	5.6	-14.6	-36.1	-25.6	-31.0	-30.3		-137.6
5/11/03 12:00	2.2	6.3	-15.1	-35.7	-23.8	-29.9	-29.1		-133.7
5/11/03 13:00	2.1	6.1	-15.6	-35.8	-23.8	-28.9	-27.9		-131.9
5/11/03 14:00	3.2	7.0	-16.0	-35.9	-23.7	-27.9	-27.1		-130.6
5/11/03 15:00	1.9	6.1	-16.5	-36.0	-23.6	-27.3	-26.6		-130.1
5/11/03 16:00	1.5	5.5	-17.0	-36.1	-23.5	-26.7	-26.1		-129.5
5/11/03 17:00	1.5	4.7	-17.5	-36.2	-23.4	-26.2	-25.6		-128.9
5/11/03 18:00	0.3	5.1	-17.9	-36.4	-23.4	-25.6	-25.1		-128.4
5/11/03 19:00	-0.1	3.8	-17.4	-36.5	-23.3	-25.0	-24.6		-126.8
5/11/03 20:00	7.9	12.1	-14.6	-28.9	-19.1	-28.6	-26.4		-117.7
5/11/03 21:00	7.5	11.3	-13.4	-30.2	-15.1	-25.2	-24.4		-108.3
5/11/03 22:00	4.1	8.7	-14.7	-35.0	-21.6	-23.0	-22.5		-116.7
5/11/03 23:00	4.4	8.4	-16.0	-37.3	-25.9	-22.7	-22.3		-124.2
5/12/03 0:00	5.7	9.6	-19.8	-40.9	-31.1	-23.0	-22.6		-137.3
5/12/03 1:00	1.5	5.5	-26.8	-54.3	-41.2	-23.6	-23.2		-169.0
5/12/03 2:00	-0.4	3.8	-26.7	-55.8	-42.0	-24.3	-23.9		-172.7
5/12/03 3:00	-2.1	1.9	-26.7	-57.4	-42.8	-24.9	-24.5		-176.3
5/12/03 4:00	-0.9	1.7	-26.6	-58.9	-43.6	-25.6	-25.2		-179.9
5/12/03 5:00	4.0	8.7	-26.6	-60.5	-44.5	-26.2	-25.8		-183.5
5/12/03 6:00	4.3	9.3	-26.5	-54.0	-40.3	-27.1	-26.6		-174.5
5/12/03 7:00	4.4	9.1	-23.2	-46.8	-35.0	-28.6	-27.5		-161.0
5/12/03 8:00	3.4	8.4	-19.9	-38.3	-27.6	-27.5	-28.6		-141.8
5/12/03 9:00	4.5	8.8	-15.7	-31.2	-21.1	-26.3	-26.5		-120.7
5/12/03 10:00	7.8	11.5	-14.3	-31.4	-20.9	-25.1	-24.3		-115.9
5/12/03 11:00	7.2	11.4	-15.3	-31.0	-19.6	-23.9	-22.1		-111.9
5/12/03 12:00	7.5	11.5	-16.3	-30.6	-18.2	-22.7	-19.9		-107.6
5/12/03 13:00	8.3	12.3	-17.1	-35.9	-23.2	-21.5	-19.1		-116.7
5/12/03 14:00	7.5	11.8	-17.3	-37.0	-21.8	-20.3	-19.3		-115.7
5/12/03 15:00	5.8	9.6	-17.6	-39.9	-24.4	-19.9	-19.5		-121.2
5/12/03 16:00	4.4	8.4	-17.8	-42.7	-28.5	-20.2	-19.6		-128.8
5/12/03 17:00	2.2	6.0	-17.9	-38.5	-26.3	-20.5	-19.8		-123.1
5/12/03 18:00	-1.1	3.0	-16.6	-37.5	-25.0	-20.9	-19.9		-119.9
5/12/03 19:00	-1.1	2.6	-15.2	-37.5	-25.7	-21.2	-20.1		-119.7
5/12/03 20:00	7.1	11.8	-14.5	-35.5	-21.9	-15.8	-15.4		-103.1
5/12/03 21:00	6.0	10.0	-16.5	-35.3	-24.6	-13.3	-12.9		-102.5
5/12/03 22:00	6.4	10.9	-18.5	-39.5	-30.0	-13.0	-12.4		-113.5

5/12/03 23:00	6.2	10.1	-20.3	-45.3	-33.8	-15.7	-15.1		-130.2
5/13/03 0:00	5.5	10.2	-21.3	-46.9	-34.7	-18.3	-17.8		-139.0
5/13/03 1:00	5.0	9.6	-22.4	-49.2	-36.7	-20.9	-20.5		-149.7
5/13/03 2:00	3.9	8.7	-23.4	-51.5	-38.8	-23.6	-23.1		-160.4
5/13/03 3:00	2.8	8.2	-24.4	-53.8	-40.9	-25.8	-25.3		-170.2
5/13/03 4:00	1.6	7.3	-25.5	-56.0	-43.0	-25.7	-25.2		-175.4
5/13/03 5:00	6.7	12.2	-26.5	-53.4	-42.4	-25.7	-25.0		-172.9
5/13/03 6:00	7.9	13.6	-23.9	-43.0	-32.4	-25.7	-24.8		-149.7
5/13/03 7:00	4.9	10.2	-21.0	-37.6	-27.2	-25.7	-24.6		-136.1
5/13/03 8:00	0.5	6.2	-18.2	-37.6	-26.2	-28.2	-27.4		-137.7
5/13/03 9:00	2.9	8.3	-16.9	-36.1	-24.5	-26.5	-25.8		-129.8
5/13/03 10:00	5.3	10.6	-15.5	-29.4	-19.1	-24.8	-24.2		-113.1
5/13/03 11:00	6.3	12.2	-14.2	-26.5	-17.0	-23.1	-22.6		-103.4
5/13/03 12:00	6.9	11.8	-13.6	-28.9	-20.3	-21.9	-21.2		-105.9
5/13/03 13:00	5.7	11.2	-14.4	-32.3	-22.3	-21.9	-21.2		-112.1
5/13/03 14:00	4.6	9.8	-15.2	-35.4	-24.3	-22.0	-21.2		-118.0
5/13/03 15:00	3.3	8.6	-16.0	-38.5	-26.2	-22.0	-21.2		-124.0
5/13/03 16:00	1.4	6.7	-16.9	-36.0	-23.0	-22.0	-21.2		-119.0
5/13/03 17:00	1.0	5.2	-16.3	-32.8	-17.7	-22.1	-21.2		-110.1
5/13/03 18:00	0.3	4.7	-15.4	-32.0	-18.3	-22.1	-21.2		-109.0
5/13/03 19:00	1.3	6.7	-14.5	-29.7	-18.9	-22.1	-21.2		-106.4
5/13/03 20:00	5.8	12.0	-13.5	-27.5	-18.1	-17.0	-17.2		-93.4
5/13/03 21:00	4.2	9.7	-15.8	-29.7	-19.0	-15.9	-14.1		-94.6
5/13/03 22:00	4.9	11.0	-19.3	-36.3	-24.8	-14.1	-15.3		-109.8
5/13/03 23:00	6.8	13.1	-20.8	-38.5	-28.6	-17.1	-17.4		-122.3
5/14/03 0:00	5.0	9.7	-21.6	-40.4	-31.3	-20.1	-19.5		-132.9
5/14/03 1:00	6.0	11.2	-22.4	-43.3	-34.0	-23.1	-21.7		-144.5
5/14/03 2:00	5.9	10.1	-22.8	-47.4	-36.7	-26.1	-23.8		-156.7
5/14/03 3:00	5.9	9.8	-22.3	-48.3	-36.8	-25.7	-25.9		-159.0
5/14/03 4:00	6.1	10.1	-20.9	-45.5	-34.6	-25.0	-26.6		-152.6
5/14/03 5:00	8.0	12.4	-19.5	-42.7	-32.4	-24.2	-24.9		-143.7
5/14/03 6:00	10.6	15.6	-16.7	-29.2	-20.3	-23.5	-23.1		-112.9
5/14/03 7:00	5.2	10.5	-15.1	-36.8	-21.7	-25.9	-26.5		-126.0
5/14/03 8:00	3.6	8.7	-15.1	-32.8	-21.2	-28.9	-26.6		-124.6
5/14/03 9:00	3.9	8.4	-15.0	-29.5	-21.0	-28.4	-26.7		-120.5
5/14/03 10:00	4.2	8.1	-15.0	-28.8	-21.5	-28.0	-26.7		-119.9
5/14/03 11:00	4.1	8.3	-14.9	-29.4	-22.0	-27.5	-26.7		-120.6
5/14/03 12:00	3.9	7.8	-14.8	-30.0	-22.6	-27.0	-26.8		-121.3
5/14/03 13:00	4.1	8.7	-14.8	-30.7	-23.1	-26.8	-26.8		-122.2
5/14/03 14:00	3.9	9.3	-14.7	-31.7	-23.7	-27.0	-26.8		-124.0
5/14/03 15:00	2.3	7.6	-15.6	-34.7	-24.2	-27.3	-26.9		-128.7
5/14/03 16:00	-0.7	5.0	-16.8	-37.6	-24.8	-27.5	-27.0		-133.6
5/14/03 17:00	-2.4	3.5	-17.9	-43.2	-26.9	-27.7	-27.1		-142.8
5/14/03 18:00	-3.7	-0.8	-19.0	-43.2	-29.2	-26.6	-25.9		-144.0
5/14/03 19:00	-2.0	1.8	-20.1	-43.2	-28.4	-24.2	-23.4		-139.3
5/14/03 20:00	4.2	8.4	-18.2	-39.7	-21.9	-19.9	-19.2		-118.9
5/14/03 21:00	2.0	6.1	-16.4	-35.2	-23.7	-14.9	-13.5		-103.7
5/14/03 22:00	2.9	7.4	-18.1	-41.0	-28.7	-17.5	-15.5		-120.8
5/14/03 23:00	5.4	10.1	-20.8	-48.7	-34.5	-20.4	-17.8		-142.2
5/15/03 0:00	3.3	7.7	-23.5	-53.5	-40.7	-22.0	-20.2		-159.9
5/15/03 1:00	5.6	9.8	-24.0	-50.2	-39.1	-22.5	-22.5		-158.4
5/15/03 2:00	5.1	9.7	-22.7	-45.0	-36.0	-23.0	-24.4		-151.2

5/15/03 3:00	5.0	9.7	-21.4	-45.0	-34.7	-23.5	-25.0		-149.7
5/15/03 4:00	6.5	10.6	-20.2	-45.0	-33.6	-24.1	-25.6		-148.4
5/15/03 5:00	8.1	12.9	-18.9	-42.8	-32.5	-24.6	-26.1		-144.9
5/15/03 6:00	9.3	13.0	-17.6	-36.7	-30.0	-25.8	-26.7		-136.7
5/15/03 7:00	7.9	12.6	-19.3	-34.8	-26.7	-27.2	-27.2		-135.2
5/15/03 8:00	3.8	7.7	-19.3	-35.6	-26.4	-30.2	-29.8		-141.3
5/15/03 9:00	4.8	8.3	-19.1	-36.6	-26.8	-28.5	-28.2		-139.2
5/15/03 10:00	6.2	10.8	-18.9	-39.6	-27.7	-26.8	-26.6		-139.7
5/15/03 11:00	6.5	11.0	-18.7	-37.3	-26.3	-25.1	-25.1		-132.5
5/15/03 12:00	7.6	11.9	-18.5	-35.2	-24.9	-23.5	-23.5		-125.6
5/15/03 13:00	6.0	10.2	-18.3	-37.4	-25.5	-23.6	-23.0		-127.8
5/15/03 14:00	6.0	10.2	-19.2	-39.6	-26.9	-23.9	-23.2		-132.7
5/15/03 15:00	5.1	9.3	-20.6	-41.7	-28.3	-24.1	-23.5		-138.2
5/15/03 16:00	1.7	6.0	-22.1	-43.8	-29.6	-24.4	-23.8		-143.7
5/15/03 17:00	-0.5	4.2	-23.5	-43.8	-33.3	-24.7	-24.1		-149.4
5/15/03 18:00	-1.2	3.2	-22.3	-53.5	-38.5	-24.9	-24.4		-163.6
5/15/03 19:00	-1.6	2.9	-18.1	-42.2	-28.6	-25.2	-24.6		-138.7
5/15/03 20:00	4.8	9.8	-13.8	-29.7	-19.8	-19.2	-18.2		-100.8
5/15/03 21:00	4.1	8.3	-15.5	-33.7	-19.8	-14.5	-14.5		-98.1
5/15/03 22:00	5.0	9.4	-18.0	-43.4	-26.5	-13.4	-13.1		-114.4
5/15/03 23:00	5.7	10.1	-20.4	-42.6	-30.5	-15.9	-15.4		-124.8
5/16/03 0:00	8.3	12.9	-20.4	-32.8	-25.5	-18.3	-17.7		-114.8
5/16/03 1:00	7.7	12.7	-16.6	-34.2	-26.2	-20.8	-19.9		-117.8
5/16/03 2:00	5.9	9.6	-16.7	-39.4	-26.9	-23.3	-22.2		-128.4
5/16/03 3:00	4.6	11.1	-16.8	-41.1	-27.5	-25.7	-24.5		-135.5
5/16/03 4:00	5.9	11.6	-16.9	-39.9	-28.1	-26.3	-25.5		-136.6
5/16/03 5:00	7.6	14.1	-17.0	-38.8	-28.7	-26.9	-26.0		-137.3
5/16/03 6:00	6.4	12.5	-15.7	-31.8	-22.0	-27.6	-26.5		-123.5
5/16/03 7:00	3.0	9.0	-13.5	-32.8	-20.4	-28.2	-27.0		-121.9
5/16/03 8:00	2.3	8.4	-13.6	-32.5	-21.2	-30.2	-29.7		-127.1
5/16/03 9:00	2.9	8.4	-11.4	-31.5	-19.1	-28.2	-27.8		-118.0
5/16/03 10:00	6.3	12.0	-11.1	-23.1	-13.8	-26.3	-25.9		-100.1
5/16/03 11:00	6.1	11.9	-11.4	-25.2	-16.8	-24.3	-23.9		-101.7
5/16/03 12:00	6.1	10.7	-11.8	-29.0	-16.9	-23.5	-22.7		-103.9
5/16/03 13:00	7.2	12.7	-12.2	-29.6	-16.9	-24.1	-23.3		-106.1
5/16/03 14:00	8.6	14.2	-12.5	-30.3	-17.0	-24.7	-23.9		-108.4
5/16/03 15:00	5.1	10.1	-12.9	-32.0	-19.0	-25.3	-24.5		-113.5
5/16/03 16:00	3.2	8.8	-13.2	-33.7	-20.9	-25.9	-25.1		-118.7
5/16/03 17:00	-0.1	4.7	-13.6	-31.2	-22.0	-26.4	-25.6		-118.9
5/16/03 18:00	-0.7	4.3	-16.0	-31.4	-18.6	-27.0	-26.2		-119.3
5/16/03 19:00	-3.1	1.4	-16.0	-39.3	-25.7	-25.0	-24.4		-130.4
5/16/03 20:00	2.9	7.5	-13.9	-36.5	-22.2	-21.3	-21.0		-115.0
5/16/03 21:00	2.1	5.7	-14.5	-30.2	-15.6	-17.4	-17.4		-95.2
5/16/03 22:00	1.8	5.4	-15.9	-35.5	-22.6	-14.2	-13.9		-102.2
5/16/03 23:00	4.9	9.3	-18.3	-46.4	-31.2	-15.9	-15.5		-127.3
5/17/03 0:00	6.9	11.0	-20.0	-41.9	-30.7	-17.5	-17.0		-127.2
5/17/03 1:00	7.2	11.6	-20.8	-43.8	-32.6	-19.1	-18.6		-134.8
5/17/03 2:00	6.9	11.2	-21.5	-41.6	-31.3	-20.7	-20.1		-135.2
5/17/03 3:00	6.0	10.5	-22.3	-42.4	-31.9	-22.3	-21.6		-140.5
5/17/03 4:00	4.6	8.7	-23.1	-44.0	-33.2	-24.1	-23.2		-147.6
5/17/03 5:00	5.7	10.0	-23.8	-45.7	-34.5	-25.9	-25.5		-155.4
5/17/03 6:00	4.6	8.8	-24.6	-47.4	-35.9	-27.7	-27.7		-163.2

5/17/03 7:00	3.2	7.4	-25.3	-48.9	-35.9	-32.1	-31.1		-173.2
5/17/03 8:00	1.5	6.0	-24.0	-48.6	-34.6	-35.1	-33.9		-176.2
5/17/03 9:00	5.2	9.9	-20.3	-40.8	-29.7	-31.7	-30.8		-153.2
5/17/03 10:00	6.3	10.4	-17.7	-35.7	-22.2	-29.1	-27.8		-132.4
5/17/03 11:00	8.1	12.2	-17.9	-32.9	-22.2	-26.5	-24.7		-124.3
5/17/03 12:00	7.8	12.0	-18.1	-34.3	-23.5	-25.1	-25.6		-126.6
5/17/03 13:00	6.3	11.0	-18.3	-35.7	-24.8	-26.5	-26.6		-131.9
5/17/03 14:00	3.4	7.3	-18.6	-37.0	-26.0	-27.9	-27.7		-137.2
5/17/03 15:00	3.0	6.7	-18.8	-38.4	-27.3	-29.3	-28.8		-142.5
5/17/03 16:00	0.4	3.7	-19.2	-41.0	-29.2	-32.6	-31.2		-153.3
5/17/03 17:00	0.4	5.0	-20.1	-44.3	-31.0	-32.4	-31.7		-159.5
5/17/03 18:00	1.2	5.1	-21.1	-47.6	-32.9	-57.6	-1.8		-161.0
5/17/03 19:00	0.3	5.9	-18.3	-42.1	-28.2	-48.3	-2.1		-139.0
5/17/03 20:00	6.0	10.7	-15.1	-30.0	-20.7	-36.3	-2.4		-104.6
5/17/03 21:00	7.0	12.2	-12.9	-24.4	-12.5	-16.9	-16.3		-83.0
5/17/03 22:00	5.9	11.6	-11.4	-29.0	-19.1	-13.1	-12.1		-84.7
5/17/03 23:00	7.9	14.1	-14.0	-29.2	-18.5	-14.1	-15.3		-91.1
5/18/03 0:00	2.9	11.6	-19.3	-34.6	-23.8	-19.5	-19.0		-116.3
5/18/03 1:00	-0.1	8.0	-21.7	-47.9	-34.8	-21.3	-21.0		-146.8
5/18/03 2:00	-0.4	5.1	-22.9	-50.8	-37.1	-22.9	-22.6		-156.2
5/18/03 3:00	0.1	2.7	-24.0	-53.8	-39.3	-24.4	-24.1		-165.7
5/18/03 4:00	-1.8	2.1	-25.1	-56.2	-41.6	-26.0	-25.6		-174.5
5/18/03 5:00	-2.0	1.2	-26.2	-56.9	-43.0	-27.5	-27.2		-180.8
5/18/03 6:00	-3.3	0.1	-26.9	-57.6	-43.7	-29.1	-28.7		-186.0
5/18/03 7:00	-4.7	0.2	-25.1	-51.4	-38.9	-34.6	-33.7		-183.6
5/18/03 8:00	-3.9	0.3	-23.3	-52.1	-37.5	-35.9	-36.3		-185.1
5/18/03 9:00	-1.9	3.2	-21.5	-48.7	-36.2	-34.6	-34.7		-175.7
5/18/03 10:00	-0.4	5.2	-19.7	-45.4	-33.8	-33.2	-33.1		-165.2
5/18/03 11:00	2.6	8.3	-17.9	-41.3	-30.7	-31.9	-31.5		-153.3
5/18/03 12:00	5.0	10.4	-16.1	-37.1	-27.6	-30.5	-30.0		-141.3
5/18/03 13:00	5.1	10.5	-15.6	-33.0	-24.5	-29.1	-28.4		-130.6
5/18/03 14:00	3.9	10.8	-16.0	-34.6	-23.4	-27.8	-27.0		-128.8
5/18/03 15:00	4.6	9.8	-16.4	-39.2	-26.3	-27.8	-27.0		-136.7
5/18/03 16:00	3.7	8.5	-16.9	-41.1	-29.2	-27.8	-27.0		-142.0
5/18/03 17:00	4.0	8.7	-17.3	-40.2	-30.7	-27.8	-27.0		-143.0
5/18/03 18:00	3.4	8.2	-17.7	-40.0	-30.6	-27.8	-27.0		-143.1
5/18/03 19:00	2.5	7.2	-18.1	-42.5	-30.0	-27.8	-27.0		-145.4
5/18/03 20:00	5.8	10.9	-18.4	-35.3	-24.1	-25.7	-25.2		-128.7
5/18/03 21:00	5.7	11.9	-17.7	-35.5	-22.9	-19.0	-18.1		-113.2
5/18/03 22:00	4.9	9.9	-17.8	-40.0	-28.5	-16.9	-16.0		-119.2
5/18/03 23:00	4.4	9.2	-19.9	-48.3	-35.1	-18.1	-17.2		-138.6
5/19/03 0:00	5.1	10.2	-20.7	-43.1	-30.0	-19.2	-18.4		-131.5
5/19/03 1:00	4.6	9.3	-20.6	-43.7	-31.0	-20.3	-19.7		-135.3
5/19/03 2:00	4.8	8.9	-20.4	-44.3	-31.9	-21.4	-21.0		-139.1
5/19/03 3:00	3.5	9.1	-20.3	-44.9	-32.9	-22.5	-22.3		-142.9
5/19/03 4:00	4.0	8.9	-20.2	-45.5	-33.8	-23.7	-23.6		-146.8
5/19/03 5:00	8.3	12.3	-20.0	-46.2	-34.7	-24.8	-24.9		-150.6
5/19/03 6:00	7.4	13.6	-19.9	-42.3	-31.3	-26.0	-25.6		-145.1
5/19/03 7:00	6.7	11.6	-16.8	-34.8	-26.3	-27.4	-26.3		-131.7
5/19/03 8:00	3.1	7.9	-13.7	-33.9	-25.7	-27.6	-29.6		-130.5
5/19/03 9:00	5.3	9.8	-10.6	-27.6	-18.6	-28.2	-28.4		-113.3
5/19/03 10:00	6.1	11.9	-11.4	-27.6	-15.8	-27.4	-27.2		-109.5

5/19/03 11:00	9.5	14.0	-12.3	-24.4	-15.5	-35.2	-34.4		-121.8
5/19/03 12:00	6.0	11.3	-13.2	-25.1	-16.7	-35.3	-34.5		-124.8
5/19/03 13:00	7.5	13.3	-14.0	-26.8	-18.9	-35.3	-34.5		-129.6
5/19/03 14:00	6.6	11.8	-14.9	-28.5	-21.2	-35.3	-34.5		-134.4
5/19/03 15:00	3.7	9.0	-15.7	-34.2	-23.4	-35.4	-34.6		-143.2
5/19/03 16:00	2.1	7.3	-18.2	-38.3	-26.9	-35.6	-34.9		-153.9
5/19/03 17:00	0.0	4.1	-20.0	-39.1	-28.1	-33.8	-33.3		-154.3
5/19/03 18:00	-1.9	3.8	-21.8	-40.0	-29.2	-32.1	-31.6		-154.8
5/19/03 19:00	-6.6	-1.3	-23.4	-52.4	-36.9	-30.4	-29.9		-173.1
5/19/03 20:00	1.6	5.8	-20.9	-39.9	-28.3	-27.6	-27.1		-143.8
5/19/03 21:00	0.1	5.5	-18.3	-41.0	-25.8	-23.7	-22.3		-131.0
5/19/03 22:00	-1.4	3.7	-18.9	-47.0	-32.1	-21.2	-19.9		-139.1
5/19/03 23:00	2.3	7.8	-17.1	-33.1	-22.0	-15.9	-16.7		-104.7
5/20/03 0:00	5.0	9.8	-16.9	-36.1	-25.2	-16.8	-17.0		-112.0
5/20/03 1:00	5.1	10.3	-17.0	-36.4	-26.1	-18.1	-18.0		-115.6
5/20/03 2:00	4.4	9.6	-17.1	-38.0	-27.0	-19.4	-18.9		-120.4
5/20/03 3:00	3.9	8.8	-17.3	-39.6	-27.9	-20.7	-19.8		-125.2
5/20/03 4:00	3.4	8.1	-17.4	-41.2	-28.7	-22.0	-20.8		-130.1
5/20/03 5:00	6.6	11.6	-17.5	-42.8	-29.6	-23.3	-21.7		-134.9
5/20/03 6:00	5.6	10.1	-17.6	-40.0	-28.5	-24.5	-22.4		-133.1
5/20/03 7:00	5.5	11.0	-15.9	-35.9	-26.6	-25.6	-23.9		-127.9
5/20/03 8:00	4.2	9.0	-13.8	-33.7	-23.1	-30.4	-30.4		-131.4
5/20/03 9:00	6.3	11.1	-11.7	-28.6	-19.2	-32.5	-33.3		-125.3
5/20/03 10:00	7.8	12.8	-9.8	-18.9	-13.2	-30.8	-30.9		-103.6
5/20/03 11:00	10.0	15.5	-7.9	-18.5	-10.4	-29.0	-28.6		-94.4
5/20/03 12:00	12.6	18.5	-6.0	-17.2	-7.6	-27.3	-26.3		-84.3
5/20/03 13:00	9.4	15.1	-18.1	-38.9	-28.3	-26.5	-25.5		-137.3
5/20/03 14:00	8.2	13.6	-22.3	-55.0	-37.0	-30.3	-29.9		-174.5
5/20/03 15:00	4.8	9.7	-25.1	-56.9	-46.0	-29.8	-29.3		-187.0
5/20/03 16:00	10.9	14.2	-20.7	-37.6	-27.5	-25.5	-24.9		-136.3
5/20/03 17:00	6.4	10.6	-17.5	-38.2	-27.3	-25.1	-24.2		-132.2
5/20/03 18:00	3.2	7.2	-15.7	-37.4	-26.8	-25.0	-24.2		-129.1
5/20/03 19:00	-0.5	3.5	-14.0	-38.5	-24.7	-24.9	-24.3		-126.4
5/20/03 20:00	5.6	9.0	-12.3	-26.5	-21.0	-24.8	-24.2		-108.7
5/20/03 21:00	0.7	4.8	-15.5	-34.3	-19.7	-24.2	-23.5		-117.2
5/20/03 22:00	2.2	5.7	-18.7	-35.6	-28.0	-21.3	-20.9		-124.4
5/20/03 23:00	4.7	8.6	-16.3	-39.3	-31.1	-13.2	-14.3		-114.2
5/21/03 0:00	10.3	14.3	-14.9	-30.5	-25.7	-14.6	-15.5		-101.2
5/21/03 1:00	9.4	13.4	-14.3	-32.0	-26.4	-16.0	-16.6		-105.4
5/21/03 2:00	8.0	12.8	-13.7	-33.1	-25.0	-17.4	-17.8		-107.0
5/21/03 3:00	8.6	12.5	-13.0	-32.4	-23.7	-18.8	-19.0		-107.0
5/21/03 4:00	8.1	12.2	-12.4	-31.7	-22.3	-20.3	-20.2		-106.9
5/21/03 5:00	7.8	12.1	-11.8	-31.0	-21.0	-21.5	-21.4		-106.7
5/21/03 6:00	8.9	13.0	-11.2	-29.2	-19.6	-22.5	-22.6		-105.1
5/21/03 7:00	6.1	10.5	-12.4	-30.2	-21.6	-23.5	-22.1		-109.9
5/21/03 8:00	5.7	10.0	-12.2	-26.4	-17.6	-32.2	-31.7		-120.1
5/21/03 9:00	I/O Time	I/O Time	I/O Time	I/O Time	I/O Time	I/O Time	I/O Time	I/O Timeout	0.0
5/21/03 10:00	6.4	11.1	-9.5	-14.0	-7.5	-27.0	-26.5		-84.5
5/21/03 11:00	5.8	9.9	-11.5	-26.0	-17.7	-25.9	-24.6		-105.7
5/21/03 12:00	9.0	13.3	-11.5	-30.2	-21.6	-18.8	-18.0		-100.1
5/21/03 13:00	10.5	15.1	-12.2	-29.1	-21.7	-18.3	-17.6		-98.8
5/21/03 14:00	8.3	12.7	-11.8	-26.4	-18.9	-16.9	-16.2		-90.1

5/21/03 15:00	8.3	12.7	-11.8	-26.4	-18.9	-16.9	-16.2		-90.1
5/21/03 16:00	5.9	10.3	-17.3	-40.8	-25.8	-19.0	-18.1		-121.1
5/21/03 17:00	5.0	9.5	-19.1	-41.5	-28.8	-18.8	-18.3		-126.5
5/21/03 18:00	1.8	6.7	-19.2	-43.7	-30.6	-19.3	-18.6		-131.4
5/21/03 19:00	-0.9	3.8	-21.4	-50.8	-36.8	-21.1	-20.2		-150.3
5/21/03 20:00	3.0	7.8	-22.4	-44.6	-30.4	-21.5	-21.0		-139.8
5/21/03 21:00	2.8	6.8	-16.7	-37.2	-25.9	-22.6	-20.9		-123.2
5/21/03 22:00	2.6	6.9	-18.5	-45.0	-31.2	-17.1	-13.7		-125.5
5/21/03 23:00	8.7	13.4	-15.3	-37.9	-26.1	-14.3	-16.7		-110.3
5/22/03 0:00	9.7	14.2	-16.7	-41.6	-31.1	-17.8	-17.8		-124.9
5/22/03 1:00	10.5	15.7	-18.0	-40.1	-29.3	-19.0	-18.9		-125.4
5/22/03 2:00	9.4	13.9	-17.9	-40.8	-28.9	-20.3	-20.0		-127.9
5/22/03 3:00	8.2	13.0	-17.4	-41.5	-28.4	-21.6	-21.1		-130.0
5/22/03 4:00	9.2	13.5	-17.0	-42.1	-27.9	-22.9	-22.2		-132.0
5/22/03 5:00	10.5	14.9	-16.5	-42.7	-27.4	-24.1	-23.3		-134.1
5/22/03 6:00	9.4	13.9	-16.0	-36.1	-26.5	-24.5	-23.8		-126.9
5/22/03 7:00	5.8	10.2	-17.5	-29.2	-21.2	-26.7	-25.4		-120.0
5/22/03 8:00	1.9	5.0	-17.2	-41.0	-27.8	-29.7	-29.5		-145.1
5/22/03 9:00	3.5	7.7	-16.7	-39.5	-28.2	-29.3	-28.9		-142.7
5/22/03 10:00	9.9	15.1	-14.8	-30.3	-23.1	-32.8	-31.0		-132.1
5/22/03 11:00	8.3	12.3	-12.8	-29.4	-18.5	-38.3	-37.7		-136.6
5/22/03 12:00	7.8	12.3	-14.1	-35.7	-22.6	-37.7	-37.0		-147.1
5/22/03 13:00	1.3	5.9	-14.6	-32.2	-20.8	-37.1	-36.3		-141.0
5/22/03 14:00	4.2	8.0	-13.0	-34.9	-25.1	-36.8	-36.0		-145.8
5/22/03 15:00	2.8	7.4	-12.3	-28.9	-18.8	-37.1	-36.5		-133.5
5/22/03 16:00	1.2	4.8	-11.7	-28.8	-18.4	-38.1	-37.6		-134.7
5/22/03 17:00	0.3	4.3	-11.2	-32.2	-20.5	-39.8	-40.0		-143.6
5/22/03 18:00	1.2	5.2	-10.6	-28.4	-17.5	-28.2	-27.6		-112.3
5/22/03 19:00	0.3	4.3	-11.8	-30.6	-19.2	-22.6	-22.0		-106.2
5/22/03 20:00	4.1	8.2	-13.4	-28.4	-17.7	-18.5	-20.0		-98.1
5/22/03 21:00	1.3	4.8	-15.8	-31.6	-20.0	-15.6	-15.6		-98.6
5/22/03 22:00	-0.5	3.8	-17.2	-40.4	-26.8	-15.1	-14.2		-113.8
5/22/03 23:00	3.6	7.8	-17.1	-35.0	-22.7	-14.1	-13.9		-102.8
5/23/03 0:00	5.3	8.1	-17.0	-38.3	-24.5	-19.0	-18.9		-117.6
5/23/03 1:00	5.4	9.4	-16.8	-40.3	-25.9	-20.4	-20.3		-123.7
5/23/03 2:00	4.9	8.4	-16.6	-39.7	-25.9	-20.8	-20.8		-124.0
5/23/03 3:00	4.3	8.1	-16.5	-39.2	-25.9	-21.3	-21.3		-124.2
5/23/03 4:00	3.7	7.9	-16.3	-38.7	-25.9	-21.8	-21.7		-124.5
5/23/03 5:00	5.6	9.7	-16.1	-38.1	-25.9	-22.3	-22.2		-124.7
5/23/03 6:00	7.3	11.4	-15.8	-36.0	-25.6	-22.8	-22.7		-123.0
5/23/03 7:00	5.9	10.2	-14.3	-30.8	-21.5	-26.5	-25.7		-118.7
5/23/03 8:00	4.0	8.2	-12.8	-28.9	-18.5	-27.0	-28.4		-115.6
5/23/03 9:00	6.6	11.8	-11.3	-22.4	-15.7	-24.5	-23.5		-97.3
5/23/03 10:00	7.9	11.7	-9.8	-21.3	-14.6	-25.6	-24.9		-96.2
5/23/03 11:00	9.1	13.3	-10.9	-22.7	-16.2	-26.7	-25.8		-102.3
5/23/03 12:00	9.5	13.8	-11.8	-24.0	-17.0	-27.3	-26.1		-106.2
5/23/03 13:00	8.8	13.2	-12.7	-25.4	-17.8	-27.9	-26.4		-110.2
5/23/03 14:00	5.3	9.9	-13.7	-26.7	-18.6	-26.7	-26.6		-112.3
5/23/03 15:00	5.0	8.1	-14.6	-28.1	-19.3	-25.3	-26.8		-114.2
5/23/03 16:00	1.8	7.4	-15.5	-29.4	-20.1	-25.3	-27.0		-117.5
5/23/03 17:00	-0.4	4.1	-16.5	-30.8	-20.9	-25.5	-25.9		-119.5
5/23/03 18:00	-2.7	1.3	-17.2	-37.6	-25.0	-23.7	-22.2		-125.8

5/23/03 19:00	-0.6	3.3	-17.1	-35.5	-25.4	-19.5	-16.8		-114.4
5/23/03 20:00	3.5	7.7	-17.0	-32.2	-21.9	-15.3	-11.5		-97.8
5/23/03 21:00	3.6	8.7	-16.9	-33.6	-20.7	-8.5	-8.4		-88.1
5/23/03 22:00	3.7	7.3	-16.7	-35.7	-21.8	-5.7	-5.0		-84.9
5/23/03 23:00	9.1	12.8	-16.6	-37.6	-23.0	-7.6	-7.0		-91.9
5/24/03 0:00	10.0	12.0	-17.2	-37.5	-24.1	-9.8	-9.5		-98.2
5/24/03 1:00	9.9	11.8	-18.1	-36.1	-25.3	-12.0	-11.9		-103.5
5/24/03 2:00	9.4	11.4	-19.1	-36.1	-26.5	-14.1	-14.4		-110.2
5/24/03 3:00	8.4	10.4	-20.0	-36.1	-27.7	-16.3	-16.1		-116.2
5/24/03 4:00	7.0	9.1	-20.9	-37.3	-28.9	-17.6	-17.7		-122.3
5/24/03 5:00	6.3	8.5	-21.8	-39.9	-30.1	-18.9	-19.3		-129.9
5/24/03 6:00	6.3	8.5	-22.7	-42.8	-31.3	-20.2	-20.9		-137.9
5/24/03 7:00	4.6	6.4	-23.6	-48.2	-36.5	-26.5	-25.5		-160.2
5/24/03 8:00	3.1	5.0	-24.3	-49.4	-38.1	-29.0	-28.5		-169.3
5/24/03 9:00	4.0	6.2	-25.0	-47.8	-36.4	-28.5	-27.6		-165.3
5/24/03 10:00	4.5	6.1	-25.7	-50.7	-36.7	-27.3	-26.7		-167.2
5/24/03 11:00	4.5	7.5	-26.4	-52.5	-37.5	-26.2	-25.8		-168.4
5/24/03 12:00	2.6	5.5	-27.1	-53.8	-38.3	-25.0	-25.0		-169.2
5/24/03 13:00	1.5	5.7	-27.8	-55.1	-39.0	-24.3	-24.2		-170.4
5/24/03 14:00	-0.7	3.0	-28.5	-56.4	-39.8	-24.3	-24.1		-173.2
5/24/03 15:00	-2.2	0.4	-29.2	-57.8	-40.6	-24.4	-24.1		-176.0
5/24/03 16:00	-5.0	-1.0	-27.4	-59.1	-41.3	-24.4	-24.1		-176.3
5/24/03 17:00	-3.3	0.8	-25.4	-57.5	-39.9	-24.4	-24.1		-171.3
5/24/03 18:00	-0.4	3.8	-24.7	-46.9	-33.0	-24.4	-24.0		-153.1
5/24/03 19:00	1.0	5.4	-24.2	-46.6	-32.7	-21.8	-21.3		-146.6
5/24/03 20:00	5.4	9.6	-23.8	-46.3	-32.4	-17.7	-17.4		-137.4
5/24/03 21:00	4.5	9.6	-23.3	-43.8	-29.3	-13.6	-13.4		-123.4
5/24/03 22:00	5.2	9.6	-22.8	-47.1	-32.4	-10.1	-9.7		-122.1
5/24/03 23:00	3.2	8.6	-23.0	-51.2	-34.6	-13.0	-12.4		-134.1
5/25/03 0:00	3.2	8.8	-23.1	-46.9	-33.9	-18.5	-18.2		-140.6
5/25/03 1:00	4.5	8.6	-23.2	-47.2	-34.7	-19.3	-18.9		-143.3
5/25/03 2:00	3.0	6.5	-23.4	-48.0	-35.5	-20.0	-19.7		-146.4
5/25/03 3:00	1.2	5.8	-23.5	-48.7	-36.3	-20.7	-20.4		-149.5
5/25/03 4:00	1.1	5.2	-23.6	-49.5	-37.0	-21.5	-21.1		-152.7
5/25/03 5:00	0.6	4.5	-23.8	-50.2	-37.8	-22.2	-21.8		-155.8
5/25/03 6:00	-0.5	3.0	-23.9	-51.0	-38.6	-22.9	-22.5		-158.9
5/25/03 7:00	-4.9	-0.8	-24.1	-52.0	-39.4	-28.3	-28.5		-172.2
5/25/03 8:00	-4.9	-0.9	-24.2	-54.4	-40.0	-30.8	-28.3		-177.7
5/25/03 9:00	-3.6	0.5	-24.4	-54.0	-40.5	-30.0	-27.8		-176.6
5/25/03 10:00	-2.0	1.6	-24.2	-52.3	-40.0	-29.2	-27.2		-172.8
5/25/03 11:00	0.0	4.1	-23.7	-49.6	-36.2	-28.3	-26.7		-164.6
5/25/03 12:00	0.8	6.1	-23.3	-46.4	-33.1	-27.5	-26.2		-156.6
5/25/03 13:00	1.2	6.1	-22.8	-43.2	-30.1	-26.7	-25.7		-148.5
5/25/03 14:00	0.2	5.5	-22.3	-43.0	-29.7	-25.9	-25.2		-146.1
5/25/03 15:00	-0.4	4.9	-21.9	-42.7	-29.3	-25.1	-24.7		-143.7
5/25/03 16:00	-0.6	5.0	-21.4	-42.5	-29.0	-24.3	-23.8		-141.0
5/25/03 17:00	1.2	5.3	-20.9	-42.3	-28.6	-23.5	-23.0		-138.3
5/25/03 18:00	0.5	4.8	-20.3	-42.1	-28.2	-22.6	-22.2		-135.4
5/25/03 19:00	1.1	5.3	-19.5	-37.2	-27.8	-21.8	-21.3		-127.6
5/25/03 20:00	4.6	8.6	-18.7	-41.4	-27.9	-19.6	-18.8		-126.4
5/25/03 21:00	6.5	10.2	-19.1	-46.5	-31.1	-15.0	-13.7		-125.5
5/25/03 22:00	4.8	8.1	-19.5	-47.4	-32.2	-8.5	-8.2		-115.8

5/25/03 23:00	3.8	8.3	-19.9	-49.6	-33.5	-9.6	-9.3		-121.9
5/26/03 0:00	2.5	6.6	-20.3	-48.8	-34.5	-10.8	-10.5		-124.8
5/26/03 1:00	-1.3	5.4	-20.7	-47.6	-34.5	-12.0	-11.7		-126.5
5/26/03 2:00	0.0	4.2	-20.6	-44.2	-34.5	-13.1	-12.9		-125.3
5/26/03 3:00	-1.2	3.0	-20.4	-44.1	-34.6	-14.3	-14.1		-127.5
5/26/03 4:00	-2.5	1.8	-20.2	-44.0	-34.6	-15.5	-15.3		-129.6
5/26/03 5:00	-2.9	1.3	-20.0	-43.8	-34.2	-16.7	-16.5		-131.3
5/26/03 6:00	-1.8	1.8	-19.8	-43.8	-33.5	-15.0	-14.7		-126.9
5/26/03 7:00	-0.9	2.9	-19.7	-43.7	-33.2	-13.2	-12.8		-122.5
5/26/03 8:00	-0.1	3.8	-19.5	-44.6	-33.9	-11.4	-10.8		-120.1
5/26/03 9:00	1.9	6.0	-19.3	-40.6	-30.5	-9.5	-8.8		-108.8
5/26/03 10:00	3.6	7.6	-19.6	-40.2	-28.1	-8.5	-8.4		-104.8
5/26/03 11:00	5.0	9.1	-19.8	-37.7	-28.4	-7.6	-8.7		-102.2
5/26/03 12:00	5.6	9.8	-20.1	-37.3	-28.7	-7.2	-9.0		-102.2
5/26/03 13:00	4.8	9.0	-20.4	-38.6	-28.9	-7.7	-9.1		-104.6
5/26/03 14:00	4.3	8.5	-20.6	-39.5	-29.0	-8.1	-9.3		-106.5
5/26/03 15:00	3.8	8.2	-20.9	-40.0	-29.2	-8.6	-9.4		-108.1
5/26/03 16:00	3.4	7.8	-21.1	-40.6	-29.3	-9.0	-9.6		-109.7
5/26/03 17:00	2.9	7.5	-21.3	-41.1	-29.5	-9.5	-9.7		-111.1
5/26/03 18:00	2.4	6.9	-20.6	-41.7	-29.6	-10.0	-9.9		-111.7
5/26/03 19:00	0.5	5.0	-19.9	-42.2	-29.8	-10.4	-10.0		-112.3
5/26/03 20:00	5.9	9.9	-19.2	-41.5	-29.5	-9.3	-8.7		-108.3
5/26/03 21:00	7.8	12.5	-18.5	-44.3	-29.5	-6.3	-5.8		-104.3
5/26/03 22:00	6.1	10.5	-17.8	-42.7	-29.7	-9.2	-8.5		-107.9
5/26/03 23:00	4.6	9.2	-17.4	-37.2	-26.5	-12.5	-11.9		-105.6
5/27/03 0:00	5.7	9.8	-17.4	-42.5	-29.9	-15.1	-14.8		-119.6
5/27/03 1:00	5.8	10.0	-17.4	-42.7	-30.0	-17.2	-17.1		-124.4
5/27/03 2:00	5.7	10.0	-17.3	-42.7	-29.8	-18.1	-17.9		-126.0
5/27/03 3:00	5.6	10.0	-17.3	-42.7	-29.7	-19.0	-18.8		-127.5
5/27/03 4:00	5.5	10.0	-17.3	-42.7	-29.5	-19.9	-19.6		-129.1
5/27/03 5:00	8.7	14.1	-17.3	-42.7	-29.4	-20.8	-20.5		-130.7
5/27/03 6:00	9.3	13.6	-17.2	-35.2	-29.3	-21.7	-21.3		-124.7
5/27/03 7:00	7.1	10.9	-18.2	-32.7	-25.6	-22.9	-23.3		-122.6
5/27/03 8:00	6.1	9.3	-16.9	-41.3	-27.7	-24.3	-24.5		-134.6
5/27/03 9:00	8.5	12.8	-13.2	-31.7	-22.1	-22.0	-21.4		-110.5
5/27/03 10:00	I/O Time	I/O Time	I/O Time	I/O Time	I/O Time	I/O Time	I/O Time	I/O Timeout	0.0
5/27/03 11:00	9.5	14.0	-13.6	-34.3	-23.9	-17.1	-16.6		-105.5
5/27/03 12:00	10.2	14.8	-12.3	-32.1	-22.3	-16.8	-16.2		-99.8
5/27/03 13:00	6.6	10.7	-11.0	-26.9	-20.7	-16.5	-15.9		-91.0
5/27/03 14:00	7.3	11.3	-9.8	-26.5	-19.0	-16.2	-15.5		-87.1
5/27/03 15:00	8.9	13.5	-8.5	-26.2	-17.5	-15.9	-15.2		-83.2
5/27/03 16:00	10.3	14.7	-7.6	-20.5	-16.9	-10.3	-10.3		-65.6
5/27/03 17:00	9.3	13.9	-8.4	-22.9	-17.8	-10.8	-10.4		-70.4
5/27/03 18:00	5.3	9.7	-9.2	-25.4	-18.7	-11.3	-10.7		-75.4
5/27/03 19:00	2.9	7.7	-10.0	-28.0	-19.6	-11.8	-11.0		-80.5
5/27/03 20:00	6.0	10.5	-10.7	-24.6	-15.9	-12.0	-11.2		-74.3
5/27/03 21:00	6.4	10.6	-8.8	-25.3	-16.5	-6.7	-5.7		-63.0
5/27/03 22:00	9.1	14.0	-13.4	-35.0	-24.0	-6.7	-5.9		-85.0
5/27/03 23:00	9.7	13.3	-19.3	-36.6	-25.6	-9.8	-9.0		-100.3
5/28/03 0:00	10.9	15.1	-20.9	-39.2	-31.8	-11.8	-12.0		-115.6
5/28/03 1:00	11.5	16.0	-20.8	-39.6	-31.5	-12.6	-14.9		-119.5
5/28/03 2:00	11.0	15.4	-20.7	-40.0	-31.2	-13.5	-15.8		-121.2

5/28/03 3:00	10.2	14.3	-20.6	-40.3	-31.0	-14.4	-16.6		-123.0
5/28/03 4:00	10.6	14.9	-20.5	-40.7	-30.8	-15.3	-17.3		-124.7
5/28/03 5:00	12.7	17.2	-20.4	-41.0	-30.7	-16.2	-18.1		-126.4
5/28/03 6:00	13.9	18.0	-20.1	-40.6	-30.7	-18.0	-18.9		-128.3
5/28/03 7:00	13.3	17.6	-17.4	-42.8	-33.0	-20.3	-19.4		-132.8
5/28/03 8:00	10.6	14.0	-11.9	-30.5	-19.5	-20.8	-20.5		-103.3
5/28/03 9:00	9.4	13.7	-11.2	-26.0	-16.8	-22.5	-21.8		-98.3
5/28/03 10:00	9.5	14.4	-16.0	-36.9	-20.9	-19.6	-19.2		-112.7
5/28/03 11:00	11.0	15.2	-17.1	-36.5	-25.2	-31.6	-30.5		-141.0
5/28/03 12:00	12.6	16.7	-18.3	-38.0	-26.5	-30.6	-29.8		-143.2
5/28/03 13:00	15.4	19.4	-19.4	-42.5	-31.2	-29.5	-29.1		-151.8
5/28/03 14:00	18.1	22.9	-20.1	-36.5	-26.8	-23.8	-23.2		-130.4
5/28/03 15:00	18.9	24.5	-13.9	-29.3	-21.3	-22.9	-21.1		-108.5
5/28/03 16:00	12.1	17.6	-12.3	-28.8	-20.9	-21.9	-19.0		-103.0
5/28/03 17:00	10.2	15.8	-10.7	-28.5	-20.8	-12.7	-12.2		-84.9
5/28/03 18:00	7.0	11.4	-9.2	-25.9	-20.0	-10.6	-10.0		-75.6
5/28/03 19:00	3.5	7.9	-7.6	-25.0	-19.0	-8.3	-7.6		-67.5
5/28/03 20:00	4.6	9.3	-6.0	-23.8	-11.1	-6.0	-5.1		-52.0
5/28/03 21:00	2.5	6.4	-10.3	-30.3	-18.4	-4.7	-3.3		-67.0
5/28/03 22:00	7.0	12.0	-15.3	-39.2	-27.5	-4.9	-4.5		-91.4
5/28/03 23:00	12.2	16.0	-17.3	-39.1	-26.8	-8.4	-8.0		-99.6
5/29/03 0:00	13.4	17.8	-15.6	-39.9	-27.9	-11.8	-11.4		-106.6
5/29/03 1:00	15.2	19.0	-15.3	-32.5	-22.3	-13.5	-13.1		-96.7
5/29/03 2:00	14.8	19.4	-15.3	-33.8	-23.1	-15.0	-14.5		-101.6
5/29/03 3:00	14.5	18.9	-15.3	-35.0	-23.8	-16.5	-15.9		-106.5
5/29/03 4:00	14.6	19.0	-15.2	-36.3	-24.6	-17.9	-17.3		-111.4
5/29/03 5:00	17.0	21.2	-15.2	-37.4	-25.3	-19.4	-18.8		-116.1
5/29/03 6:00	12.2	16.3	-15.2	-38.3	-25.7	-20.8	-20.2		-120.1
5/29/03 7:00	5.8	10.1	-12.8	-25.0	-14.4	-18.3	-18.8		-89.4
5/29/03 8:00	1.5	5.1	-9.1	-18.6	-12.2	-20.5	-19.0		-79.4
5/29/03 9:00	1.9	5.9	-8.7	-20.7	-12.1	-19.2	-19.2		-79.9
5/29/03 10:00	1.2	5.7	-10.0	-24.7	-13.9	-22.8	-19.2		-90.5
5/29/03 11:00	3.3	7.9	-11.2	-22.4	-14.9	-23.0	-19.3		-90.8
5/29/03 12:00	2.8	6.8	-12.5	-28.7	-17.2	-24.5	-24.3		-107.2
5/29/03 13:00	3.3	7.4	-12.3	-30.4	-18.4	-24.6	-24.2		-109.9
5/29/03 14:00	5.7	9.7	-12.4	-30.3	-18.8	-22.6	-22.4		-106.5
5/29/03 15:00	3.5	8.0	-12.4	-30.1	-19.2	-20.6	-20.6		-103.0
5/29/03 16:00	3.9	8.2	-13.5	-31.2	-19.5	-17.5	-16.9		-98.6
5/29/03 17:00	-2.3	1.9	-16.9	-37.0	-21.7	-17.8	-17.5		-110.9
5/29/03 18:00	0.6	4.1	-17.8	-45.1	-33.8	-15.8	-15.5		-128.1
5/29/03 19:00	-0.7	2.9	-17.1	-41.8	-25.9	-13.4	-13.1		-111.2
5/29/03 20:00	2.3	7.0	-17.2	-36.6	-24.4	-10.9	-10.6		-99.7
5/29/03 21:00	4.6	9.2	-17.3	-35.0	-20.8	-7.7	-7.2		-88.1
5/29/03 22:00	4.8	8.9	-16.8	-38.6	-24.6	-6.8	-5.9		-92.6
5/29/03 23:00	7.3	11.5	-14.6	-34.9	-23.8	-8.6	-7.8		-89.7
5/30/03 0:00	10.0	14.1	-12.5	-32.3	-21.1	-10.2	-9.7		-85.7
5/30/03 1:00	12.1	16.5	-13.3	-24.8	-14.0	-11.8	-11.5		-75.5
5/30/03 2:00	10.5	15.0	-14.2	-27.8	-16.3	-13.4	-13.4		-85.1
5/30/03 3:00	10.3	14.6	-15.0	-30.7	-18.7	-15.0	-15.2		-94.7
5/30/03 4:00	10.1	14.3	-16.1	-33.6	-21.0	-16.7	-17.1		-104.5
5/30/03 5:00	12.2	15.0	-17.6	-35.6	-23.1	-18.0	-18.8		-113.0
5/30/03 6:00	8.6	13.3	-18.2	-43.7	-31.1	-19.3	-20.4		-132.7

5/30/03 7:00	5.6	9.5	-17.3	-39.2	-26.4	-20.0	-20.8		-123.7
5/30/03 8:00	4.5	8.7	-16.5	-39.7	-23.1	-23.8	-22.1		-125.3
5/30/03 9:00	4.4	7.8	-15.6	-37.2	-19.5	-23.1	-22.9		-118.4
5/30/03 10:00	5.6	10.6	-14.8	-30.7	-18.1	-22.3	-21.5		-107.4
5/30/03 11:00	6.4	11.3	-14.1	-35.2	-20.1	-20.9	-20.1		-110.5
5/30/03 12:00	6.9	11.2	-13.8	-37.2	-23.7	-19.6	-18.7		-113.0
5/30/03 13:00	7.2	11.5	-13.4	-35.9	-23.3	-18.2	-17.4		-108.2
5/30/03 14:00	7.3	11.6	-13.0	-34.4	-22.5	-16.8	-16.0		-102.7
5/30/03 15:00	7.5	11.7	-12.6	-32.9	-21.7	-15.4	-14.6		-97.3
5/30/03 16:00	5.5	9.6	-12.8	-28.8	-20.1	-15.4	-14.8		-91.9
5/30/03 17:00	2.7	6.5	-13.6	-33.8	-22.5	-15.8	-15.4		-101.1
5/30/03 18:00	-0.3	3.2	-14.4	-39.7	-27.1	-16.2	-15.9		-113.2
5/30/03 19:00	-1.1	3.3	-15.0	-33.1	-24.2	-13.9	-13.5		-99.7
5/30/03 20:00	1.1	5.2	-15.4	-29.9	-21.8	-11.4	-10.3		-88.8
5/30/03 21:00	3.3	7.3	-15.7	-32.4	-20.9	-9.0	-7.0		-85.1
5/30/03 22:00	6.0	9.7	-16.2	-37.0	-24.3	-4.9	-4.4		-86.7
5/30/03 23:00	8.3	12.8	-17.2	-42.9	-29.3	-7.4	-6.9		-103.8
5/31/03 0:00	8.6	12.7	-18.2	-42.7	-29.3	-10.0	-9.6		-109.8
5/31/03 1:00	11.3	15.4	-15.2	-33.9	-23.5	-12.6	-12.2		-97.4
5/31/03 2:00	9.1	13.3	-15.7	-38.0	-26.4	-15.1	-14.8		-110.1
5/31/03 3:00	8.1	13.1	-16.2	-42.1	-29.2	-16.9	-16.9		-121.4
5/31/03 4:00	9.1	13.4	-16.7	-41.2	-28.8	-17.9	-18.2		-122.7
5/31/03 5:00	10.1	14.1	-17.2	-37.5	-26.4	-17.0	-19.4		-117.5
5/31/03 6:00	8.0	11.6	-16.8	-37.2	-26.0	-20.5	-20.6		-121.1
5/31/03 7:00	Not Cor	Not Cor	Not Cor	Not Cor	Not Cor	Not Cor	Not Connect		0.0
5/31/03 8:00	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0
5/31/03 9:00	Not Cor	Not Cor	Not Cor	Not Cor	Not Cor	Not Cor	Not Connect		0.0
5/31/03 10:00	Not Cor	Not Cor	Not Cor	Not Cor	Not Cor	Not Cor	Not Connect		0.0
5/31/03 11:00	9.2	13.2	-18.5	-38.7	-28.3	-20.0	-19.7		-125.3
5/31/03 12:00	9.6	13.7	-18.3	-39.1	-28.7	-19.8	-19.5		-125.4
5/31/03 13:00	8.8	12.3	-18.1	-40.6	-28.4	-19.5	-19.3		-125.9
5/31/03 14:00	8.5	12.4	-17.9	-39.2	-27.9	-19.2	-19.1		-123.3
5/31/03 15:00	8.2	13.0	-17.7	-37.8	-27.3	-18.9	-18.9		-120.6
5/31/03 16:00	7.8	11.5	-17.5	-36.3	-26.8	-18.7	-18.8		-118.0
5/31/03 17:00	6.4	9.3	-17.2	-34.9	-26.2	-18.4	-18.6		-115.3
5/31/03 18:00	3.3	8.0	-16.8	-37.0	-26.4	-18.5	-17.7		-116.5
5/31/03 19:00	2.2	6.0	-16.0	-39.3	-27.2	-17.1	-16.7		-116.3
5/31/03 20:00	5.1	9.2	-15.8	-34.8	-23.2	-15.6	-15.0		-104.4
5/31/03 21:00	5.0	9.1	-18.6	-34.1	-21.4	-9.4	-9.1		-92.6
5/31/03 22:00	4.1	9.0	-21.4	-46.9	-29.7	-6.5	-5.9		-110.3
5/31/03 23:00	7.2	11.2	-21.7	-42.3	-29.8	-9.2	-8.7		-111.7
6/1/03 0:00	5.3	9.9	-22.9	-47.5	-33.3	-12.1	-11.6		-127.4
6/1/03 1:00	5.1	9.5	-24.1	-51.0	-37.2	-14.9	-14.5		-141.8
6/1/03 2:00	5.8	9.7	-24.5	-41.5	-30.3	-16.8	-16.7		-129.9
6/1/03 3:00	4.6	8.7	-24.2	-42.4	-31.2	-17.8	-18.3		-133.8
6/1/03 4:00	3.3	7.6	-23.9	-43.3	-32.1	-18.7	-19.8		-137.7
6/1/03 5:00	1.6	5.9	-23.5	-44.2	-33.0	-19.6	-21.3		-141.6
6/1/03 6:00	-0.1	3.3	-23.2	-44.2	-33.8	-22.8	-22.9		-147.0
6/1/03 7:00	-0.3	3.3	-22.9	-46.1	-34.7	-27.0	-27.3		-158.0
6/1/03 8:00	-0.1	3.4	-22.3	-44.1	-32.7	-26.1	-26.4		-151.6
6/1/03 9:00	2.8	6.0	-21.6	-41.1	-30.0	-25.1	-25.2		-143.0
6/1/03 10:00	4.8	8.3	-20.9	-37.2	-28.0	-24.0	-24.0		-134.1

6/1/03 11:00	6.8	10.5	-20.3	-35.8	-27.0	-23.0	-22.8		-128.9
6/1/03 12:00	8.3	13.2	-19.6	-34.5	-26.0	-21.9	-21.6		-123.6
6/1/03 13:00	8.4	13.2	-18.9	-35.4	-26.0	-20.9	-20.4		-121.6
6/1/03 14:00	8.4	12.9	-18.3	-36.8	-26.3	-19.9	-19.2		-120.4
6/1/03 15:00	8.3	12.3	-17.6	-38.2	-26.6	-18.8	-18.1		-119.4
6/1/03 16:00	7.6	11.7	-17.4	-39.6	-26.9	-18.9	-18.4		-121.3
6/1/03 17:00	6.3	11.2	-17.2	-41.0	-27.2	-19.1	-18.7		-123.3
6/1/03 18:00	5.0	10.1	-17.0	-42.4	-27.6	-19.2	-17.6		-123.8
6/1/03 19:00	4.9	9.2	-16.8	-42.4	-27.9	-16.0	-15.6		-118.7
6/1/03 20:00	7.9	13.4	-17.3	-36.5	-25.1	-12.7	-13.5		-105.1
6/1/03 21:00	7.8	12.4	-19.9	-41.3	-29.4	-9.6	-8.7		-109.0
6/1/03 22:00	7.6	11.8	-20.2	-41.8	-30.9	-7.5	-6.6		-107.0
6/1/03 23:00	6.9	11.5	-20.5	-42.5	-31.5	-8.7	-7.3		-110.5
6/2/03 0:00	11.3	16.8	-9.6	-22.6	-17.3	-10.0	-9.0		-68.5
6/2/03 1:00	10.7	15.1	-10.5	-26.6	-19.0	-11.3	-10.6		-78.0
6/2/03 2:00	8.8	12.4	-11.4	-30.6	-20.7	-12.7	-12.3		-87.6
6/2/03 3:00	7.9	12.6	-12.3	-32.1	-22.4	-14.0	-13.9		-94.7
6/2/03 4:00	8.6	12.8	-13.2	-32.6	-24.1	-15.3	-15.6		-100.7
6/2/03 5:00	10.0	14.3	-14.1	-33.1	-25.4	-16.6	-16.8		-106.1
6/2/03 6:00	9.8	15.3	-14.3	-34.5	-24.0	-18.5	-17.9		-109.2
6/2/03 7:00	5.9	10.8	-15.7	-35.3	-24.9	-19.7	-20.2		-115.7
6/2/03 8:00	3.1	6.7	-17.4	-41.0	-28.1	-23.5	-21.7		-131.7
6/2/03 9:00	3.4	7.2	-17.5	-38.5	-26.6	-21.5	-20.4		-124.6
6/2/03 10:00	3.7	8.5	-17.1	-36.1	-25.2	-19.6	-19.1		-117.0
6/2/03 11:00	3.9	8.3	-16.6	-35.7	-24.8	-17.6	-17.8		-112.6
6/2/03 12:00	4.0	7.8	-16.2	-35.4	-25.5	-16.2	-16.5		-109.8
6/2/03 13:00	4.1	7.3	-15.8	-35.0	-26.2	-16.2	-15.9		-109.1
6/2/03 14:00	3.2	7.6	-15.3	-34.7	-26.8	-16.3	-15.9		-109.0
6/2/03 15:00	2.4	6.9	-14.9	-37.4	-26.4	-16.3	-15.8		-110.9
6/2/03 16:00	2.3	6.4	-14.5	-29.9	-22.4	-16.4	-15.8		-99.0
6/2/03 17:00	0.2	4.2	-14.2	-31.8	-19.7	-16.4	-15.8		-97.8
6/2/03 18:00	-0.7	2.8	-13.9	-34.9	-24.3	-16.4	-15.7		-105.2
6/2/03 19:00	-2.2	1.4	-13.6	-34.0	-23.1	-16.5	-15.7		-102.8
6/2/03 20:00	1.1	4.9	-13.3	-31.0	-19.1	-15.4	-15.0		-93.7
6/2/03 21:00	4.2	7.9	-13.9	-25.8	-18.7	-12.6	-12.3		-83.3
6/2/03 22:00	1.3	5.1	-15.0	-37.5	-22.4	-11.1	-10.7		-96.8
6/2/03 23:00	7.5	11.8	-19.9	-40.8	-29.5	-10.7	-10.3		-111.2
6/3/03 0:00	7.4	12.5	-19.9	-42.3	-31.2	-12.5	-12.4		-118.3
6/3/03 1:00	7.6	11.4	-19.9	-44.7	-32.8	-14.3	-14.4		-126.2
6/3/03 2:00	7.6	10.8	-19.6	-39.3	-33.0	-15.5	-15.6		-123.1
6/3/03 3:00	7.5	11.2	-18.4	-40.1	-31.1	-15.8	-15.7		-121.2
6/3/03 4:00	7.4	11.4	-17.2	-41.0	-29.3	-16.0	-15.8		-119.3
6/3/03 5:00	9.9	14.9	-16.0	-41.8	-27.4	-16.3	-16.0		-117.4
6/3/03 6:00	9.7	13.9	-14.8	-32.7	-22.7	-16.5	-16.1		-102.9
6/3/03 7:00	7.7	12.7	-15.2	-26.7	-19.8	-18.0	-18.3		-98.0
6/3/03 8:00	3.9	8.1	-16.7	-35.0	-22.1	-22.4	-21.2		-117.4
6/3/03 9:00	2.1	5.9	-19.5	-47.6	-35.4	-21.4	-20.5		-144.4
6/3/03 10:00	2.9	6.7	-20.3	-45.8	-34.2	-20.4	-19.7		-140.5
6/3/03 11:00	3.7	7.0	-21.1	-44.4	-33.0	-19.5	-19.0		-136.9
6/3/03 12:00	2.3	5.5	-21.7	-48.4	-33.7	-19.3	-18.9		-142.0
6/3/03 13:00	3.0	6.9	-22.4	-44.6	-34.6	-19.8	-19.4		-140.8
6/3/03 14:00	3.8	7.8	-23.0	-47.1	-35.5	-20.4	-20.0		-145.9

6/3/03 15:00	2.6	6.4	-22.0	-44.5	-32.0	-20.1	-19.3		-137.9
6/3/03 16:00	1.0	5.0	-20.6	-45.4	-30.8	-19.3	-18.5		-134.5
6/3/03 17:00	-0.5	3.4	-19.3	-47.3	-30.9	-18.4	-17.7		-133.6
6/3/03 18:00	-1.1	2.8	-17.9	-44.2	-31.0	-17.6	-16.9		-127.5
6/3/03 19:00	-0.6	3.0	-16.6	-41.1	-31.1	-16.7	-16.1		-121.5
6/3/03 20:00	2.4	6.4	-15.2	-37.2	-26.7	-15.2	-14.7		-109.0
6/3/03 21:00	5.5	9.2	-14.9	-31.8	-19.9	-11.4	-11.0		-89.0
6/3/03 22:00	3.0	7.0	-14.6	-35.9	-22.2	-14.8	-14.1		-101.6
6/3/03 23:00	4.0	7.9	-14.4	-40.6	-29.3	-12.6	-12.0		-108.9
6/4/03 0:00	7.7	11.2	-14.1	-34.2	-24.1	-13.4	-12.9		-98.6
6/4/03 1:00	9.6	13.8	-14.8	-30.2	-25.5	-14.1	-13.7		-98.4
6/4/03 2:00	8.6	11.7	-15.5	-33.6	-26.7	-14.9	-14.5		-105.3
6/4/03 3:00	8.0	11.0	-16.3	-36.9	-27.7	-15.7	-15.3		-112.0
6/4/03 4:00	7.1	11.6	-17.1	-40.3	-28.8	-16.5	-16.2		-118.8
6/4/03 5:00	8.3	12.9	-17.8	-39.3	-29.8	-17.3	-17.0		-121.2
6/4/03 6:00	8.0	12.1	-18.7	-36.8	-28.3	-18.1	-17.8		-119.7
6/4/03 7:00	7.8	12.1	-19.7	-36.2	-26.3	-19.5	-19.6		-121.3
6/4/03 8:00	1.8	6.0	-19.9	-44.1	-33.3	-23.7	-22.4		-143.3
6/4/03 9:00	4.0	7.8	-20.1	-45.2	-33.4	-17.4	-19.5		-135.6
6/4/03 10:00	4.5	8.6	-20.3	-46.6	-32.3	-12.5	-12.5		-124.2
6/4/03 11:00	4.0	7.8	-20.4	-43.9	-30.1	-11.5	-11.4		-117.4
6/4/03 12:00	4.6	8.5	-20.6	-41.2	-27.9	-19.3	-19.6		-128.7
6/4/03 13:00	5.6	9.7	-20.8	-42.0	-25.8	-19.3	-20.4		-128.3
6/4/03 14:00	5.2	9.5	-21.0	-41.0	-30.8	-19.0	-20.5		-132.4
6/4/03 15:00	4.9	8.9	-21.0	-39.9	-27.3	-18.7	-20.4		-127.4
6/4/03 16:00	4.0	8.3	-19.7	-38.7	-23.9	-18.4	-20.2		-120.9
6/4/03 17:00	0.7	5.8	-18.4	-36.7	-27.5	-18.0	-20.1		-120.7
6/4/03 18:00	-1.3	2.7	-16.8	-41.6	-27.8	-17.7	-19.9		-123.7
6/4/03 19:00	-0.9	2.4	-15.0	-39.0	-24.3	-17.3	-19.7		-115.4
6/4/03 20:00	2.5	5.8	-13.2	-29.1	-21.2	-20.4	-19.6		-103.5
6/4/03 21:00	1.1	5.5	-13.6	-29.5	-18.4	-16.9	-15.9		-94.3
6/4/03 22:00	0.7	4.3	-14.3	-33.8	-21.0	-13.7	-13.3		-96.1
6/4/03 23:00	4.6	8.5	-16.1	-31.2	-20.1	-8.9	-8.0		-84.3
6/5/03 0:00	9.3	13.7	-17.5	-36.9	-25.7	-10.9	-10.7		-101.7
6/5/03 1:00	9.5	13.7	-18.3	-38.6	-27.0	-12.9	-13.4		-110.3
6/5/03 2:00	9.0	13.3	-19.1	-40.3	-28.4	-14.9	-16.1		-118.8
6/5/03 3:00	8.2	13.3	-19.9	-39.5	-29.2	-16.8	-17.4		-122.8
6/5/03 4:00	8.4	12.7	-20.7	-38.5	-29.5	-18.2	-18.4		-125.3
6/5/03 5:00	9.9	14.3	-21.5	-37.4	-29.7	-19.6	-19.4		-127.7
6/5/03 6:00	7.0	10.6	-21.3	-49.4	-38.6	-21.0	-20.5		-150.8
6/5/03 7:00	6.3	10.8	-20.8	-38.2	-28.6	-22.2	-21.2		-130.9
6/5/03 8:00	3.2	7.2	-20.8	-42.4	-32.1	-27.2	-26.1		-148.5
6/5/03 9:00	3.8	8.4	-20.8	-42.2	-30.9	-26.5	-25.5		-145.8
6/5/03 10:00	4.1	8.2	-20.8	-47.1	-30.5	-25.8	-24.9		-149.0
6/5/03 11:00	3.9	8.2	-20.8	-45.6	-30.8	-25.1	-24.3		-146.6
6/5/03 12:00	2.9	7.0	-20.8	-44.2	-31.2	-24.4	-23.7		-144.2
6/5/03 13:00	3.3	6.5	-20.8	-43.9	-31.5	-23.7	-23.1		-142.9
6/5/03 14:00	3.9	6.2	-20.8	-44.1	-31.8	-23.0	-22.5		-142.1
6/5/03 15:00	1.3	4.4	-21.9	-45.5	-32.9	-23.2	-22.7		-146.2
6/5/03 16:00	-0.6	3.3	-21.7	-46.8	-33.6	-28.1	-27.4		-157.6
6/5/03 17:00	-0.9	2.0	-21.1	-40.8	-29.5	-27.7	-27.2		-146.3
6/5/03 18:00	-2.7	1.9	-19.7	-40.0	-29.7	-25.7	-25.1		-140.2

6/5/03 19:00	-2.3	1.5	-18.2	-42.9	-29.9	-23.6	-23.1		-137.7
6/5/03 20:00	-0.1	3.4	-16.7	-41.1	-26.8	-21.8	-21.2		-127.7
6/5/03 21:00	0.3	4.0	-17.0	-38.2	-24.5	-22.1	-21.8		-123.7
6/5/03 22:00	2.6	7.2	-17.8	-39.0	-26.7	-12.9	-11.5		-108.0
6/5/03 23:00	5.4	8.9	-18.7	-41.6	-30.9	-15.6	-14.4		-121.1
6/6/03 0:00	7.1	11.3	-20.0	-45.7	-34.4	-18.9	-18.2		-137.3
6/6/03 1:00	8.1	12.4	-20.2	-41.1	-29.8	-21.3	-20.9		-133.2
6/6/03 2:00	7.9	12.1	-19.6	-43.1	-30.6	-21.8	-21.4		-136.5
6/6/03 3:00	7.6	11.8	-19.1	-43.2	-31.3	-22.3	-21.9		-137.8
6/6/03 4:00	8.5	12.7	-18.5	-41.9	-32.0	-22.9	-22.5		-137.7
6/6/03 5:00	9.9	12.6	-17.9	-40.7	-31.9	-23.4	-23.0		-136.9
6/6/03 6:00	8.7	12.9	-17.4	-40.7	-28.6	-23.9	-23.5		-134.2
6/6/03 7:00	6.6	10.4	-17.3	-37.4	-23.7	-26.8	-26.1		-131.3
6/6/03 8:00	3.1	7.1	-17.4	-34.5	-23.7	-30.2	-30.2		-136.1
6/6/03 9:00	5.4	9.6	-19.4	-41.7	-30.0	-29.1	-29.0		-149.3
6/6/03 10:00	5.5	9.2	-19.3	-39.0	-28.0	-28.0	-27.8		-142.1
6/6/03 11:00	4.0	8.2	-19.8	-43.5	-28.5	-26.9	-26.6		-145.3
6/6/03 12:00	3.3	7.3	-19.9	-42.5	-30.5	-25.8	-25.4		-144.1
6/6/03 13:00	3.1	6.9	-20.1	-42.3	-30.8	-24.9	-24.5		-142.7
6/6/03 14:00	2.7	6.5	-20.2	-42.3	-30.4	-25.6	-25.0		-143.5
6/6/03 15:00	1.6	5.0	-20.3	-42.3	-30.5	-26.3	-25.5		-144.9
6/6/03 16:00	0.4	4.3	-19.1	-41.1	-30.3	-26.0	-25.1		-141.7
6/6/03 17:00	-0.3	2.2	-18.8	-40.3	-29.8	-25.9	-24.9		-139.7
6/6/03 18:00	-2.5	0.9	-18.4	-42.2	-29.3	-25.8	-24.7		-140.4
6/6/03 19:00	-2.8	0.5	-18.0	-41.5	-28.8	-25.7	-24.5		-138.5
6/6/03 20:00	2.4	6.5	-17.7	-38.6	-22.7	-22.4	-22.4		-123.7
6/6/03 21:00	5.3	9.4	-17.0	-32.2	-22.7	-20.1	-18.8		-110.8
6/6/03 22:00	5.0	9.7	-17.2	-35.3	-24.2	-20.2	-18.9		-115.7
6/6/03 23:00	6.9	10.8	-18.5	-41.9	-31.7	-16.7	-15.9		-124.6
6/7/03 0:00	5.4	11.8	-19.7	-42.6	-30.5	-19.3	-19.0		-131.1
6/7/03 1:00	9.2	14.5	-20.3	-43.2	-30.6	10.9	11.4		-71.8
6/7/03 2:00	9.0	13.5	-20.8	-44.4	-31.7	11.5	12.6		-72.9
6/7/03 3:00	7.8	12.4	-21.4	-45.6	-32.8	11.6	12.0		-76.2
6/7/03 4:00	8.1	12.5	-22.0	-46.8	-33.9	11.7	11.4		-79.5
6/7/03 5:00	9.0	12.9	-22.5	-47.9	-34.9	10.3	10.7		-84.4
6/7/03 6:00	8.5	12.4	-23.1	-46.5	-36.0	10.2	10.2		-85.3
6/7/03 7:00	7.8	13.1	-23.6	-47.1	-38.6	8.2	8.9		-92.2
6/7/03 8:00	1.0	4.8	-25.5	-51.5	-38.9	-16.9	-17.1		-149.9
6/7/03 9:00	3.0	6.1	-25.8	-48.5	-37.6	-18.1	-18.0		-148.1
6/7/03 10:00	3.0	6.7	-26.2	-49.5	-37.8	-19.3	-18.9		-151.6
6/7/03 11:00	2.8	6.5	-26.5	-51.1	-38.1	-19.0	-18.0		-152.8
6/7/03 12:00	3.0	6.2	-26.8	-51.6	-38.5	-17.5	-16.1		-150.5
6/7/03 13:00	1.4	5.0	-27.2	-52.0	-38.9	-16.3	-13.9		-148.3
6/7/03 14:00	1.3	5.0	-27.5	-52.5	-39.2	-16.0	-14.2		-149.4
6/7/03 15:00	0.7	4.5	-27.9	-52.9	-39.6	-15.2	-14.6		-150.2
6/7/03 16:00	-0.5	4.4	-28.0	-53.4	-40.0	-14.1	-13.6		-149.1
6/7/03 17:00	-0.3	2.7	-28.1	-54.7	-40.4	-12.6	-12.5		-148.3
6/7/03 18:00	-2.4	1.7	-28.2	-59.3	-41.3	-12.0	-12.8		-153.6
6/7/03 19:00	-0.8	2.1	-23.6	-58.6	-41.4	-12.8	-12.5		-149.0
6/7/03 20:00	6.1	10.6	-27.4	-49.9	-38.1	-21.3	-18.3		-155.1
6/7/03 21:00	5.6	9.9	-26.8	-51.2	-38.6	-21.2	-20.1		-158.0
6/7/03 22:00	6.3	7.8	-24.9	-49.6	-35.5	-17.4	-17.2		-144.5

6/7/03 23:00	12.5	14.6	-19.5	-41.5	-28.6	9.9	10.2		-69.4
6/8/03 0:00	10.9	12.5	-19.4	-47.3	-34.2	11.8	11.3		-77.8
6/8/03 1:00	11.7	13.4	-19.7	-43.9	-32.3	13.0	11.3		-71.6
6/8/03 2:00	11.2	12.4	-21.0	-46.3	-34.1	10.7	10.9		-79.7
6/8/03 3:00	9.6	12.4	-22.3	-48.7	-35.9	11.0	11.1		-84.8
6/8/03 4:00	7.6	11.7	-23.6	-51.1	-37.7	12.2	11.4		-88.7
6/8/03 5:00	8.3	12.6	-24.9	-53.5	-39.4	11.4	11.6		-94.9
6/8/03 6:00	6.1	9.9	-26.2	-55.6	-43.0	14.6	13.2		-97.0
6/8/03 7:00	3.4	7.3	-27.5	-60.0	-45.4	14.1	14.5		-104.2
6/8/03 8:00	0.5	3.6	-28.8	-60.3	-45.6	-17.6	-15.8		-168.0
6/8/03 9:00	1.5	5.4	-30.6	-57.9	-44.0	-19.3	-17.9		-169.7
6/8/03 10:00	1.1	4.2	-30.7	-60.0	-46.0	-19.1	-16.8		-172.6
6/8/03 11:00	1.4	4.8	-30.8	-57.6	-44.8	-18.9	-17.1		-169.2
6/8/03 12:00	2.0	5.5	-30.8	-57.4	-44.6	-18.9	-17.5		-169.3
6/8/03 13:00	2.5	6.1	-30.8	-57.2	-44.5	-18.9	-17.9		-169.3
6/8/03 14:00	2.3	5.7	-30.9	-57.0	-44.3	-18.9	-18.3		-169.4
6/8/03 15:00	2.4	5.7	-30.9	-59.3	-45.3	-19.3	-17.8		-172.5
6/8/03 16:00	2.4	6.2	-25.3	-51.0	-39.2	-19.4	-16.5		-151.3
6/8/03 17:00	3.1	7.3	-23.8	-46.0	-33.5	-20.1	-17.8		-141.1
6/8/03 18:00	3.8	7.9	-22.3	-47.1	-32.8	-20.8	-19.4		-142.4
6/8/03 19:00	4.4	8.5	-20.8	-48.1	-32.2	-21.6	-21.1		-143.8
6/8/03 20:00	6.6	10.9	-19.3	-48.5	-31.4	-22.3	-22.8		-144.3
6/8/03 21:00	7.5	11.9	-21.7	-41.4	-29.9	-20.2	-21.0		-134.3
6/8/03 22:00	4.7	9.9	-25.7	-47.9	-35.7	-17.4	-16.8		-143.6
6/8/03 23:00	7.1	12.6	-22.6	-40.4	-28.7	10.0	8.8		-72.8
6/9/03 0:00	7.8	11.8	-23.1	-44.3	-31.5	-4.7	-2.9		-106.4
6/9/03 1:00	7.6	11.7	-23.5	-48.3	-34.3	-5.6	-2.9		-114.7
6/9/03 2:00	6.5	10.5	-24.0	-52.4	-37.1	-4.7	-3.2		-121.4
6/9/03 3:00	5.3	10.0	-24.4	-56.5	-39.9	-3.9	-3.9		-128.6
6/9/03 4:00	6.8	11.2	-24.8	-55.4	-42.7	-5.5	-4.6		-133.0
6/9/03 5:00	8.6	12.9	-25.3	-53.6	-39.5	-8.1	-6.5		-133.0
6/9/03 6:00	11.9	16.2	-24.1	-46.5	-33.5	-12.9	-12.6		-129.6
6/9/03 7:00	7.2	11.1	-21.1	-41.9	-29.3	-4.7	-4.4		-101.5
6/9/03 8:00	4.1	8.0	-19.6	-41.5	-26.3	-28.4	-29.2		-145.0
6/9/03 9:00	4.4	8.9	-18.1	-42.4	-28.5	-29.9	-30.0		-149.0
6/9/03 10:00	5.5	9.6	-16.7	-39.6	-27.7	-31.4	-30.8		-146.1
6/9/03 11:00	6.1	9.7	-16.8	-38.9	-25.8	-31.4	-30.6		-143.4
6/9/03 12:00	4.7	8.3	-17.4	-41.0	-27.5	-30.3	-29.5		-145.7
6/9/03 13:00	3.3	6.9	-17.9	-42.7	-29.2	-29.2	-28.4		-147.4
6/9/03 14:00	1.3	5.2	-18.4	-43.5	-30.7	-32.9	-32.1		-157.7
6/9/03 15:00	-0.9	3.7	-19.0	-41.4	-31.1	-32.4	-31.7		-155.6
6/9/03 16:00	2.3	6.0	-18.2	-41.4	-30.3	-31.0	-30.4		-151.3
6/9/03 17:00	1.5	5.3	-17.1	-41.5	-28.3	-28.4	-27.8		-143.2
6/9/03 18:00	-2.6	0.7	-15.9	-39.9	-26.3	-25.8	-25.3		-133.3
6/9/03 19:00	-1.1	2.3	-14.8	-38.3	-24.3	-23.2	-22.8		-123.4
6/9/03 20:00	3.4	7.4	-13.6	-33.7	-22.3	-20.7	-20.3		-110.6
6/9/03 21:00	3.5	7.5	-15.8	-30.7	-19.9	-22.4	-21.4		-110.2
6/9/03 22:00	5.8	9.4	-18.4	-33.4	-22.1	-16.6	-15.9		-106.4
6/9/03 23:00	6.8	10.8	-21.1	-41.4	-27.9	-14.9	-14.7		-120.0
6/10/03 0:00	6.8	10.9	-22.2	-48.4	-34.8	-18.0	-17.6		-140.9
6/10/03 1:00	5.6	9.4	-23.2	-53.1	-37.6	-21.0	-20.4		-155.4
6/10/03 2:00	3.2	6.9	-24.2	-54.3	-40.5	-24.1	-23.3		-166.3

6/10/03 3:00	2.0	6.1	-25.2	-54.1	-40.5	-25.9	-25.4		-171.1
6/10/03 4:00	3.7	7.3	-26.2	-54.0	-40.1	-26.4	-26.1		-172.8
6/10/03 5:00	6.5	10.4	-27.1	-53.8	-39.7	-27.0	-26.8		-174.4
6/10/03 6:00	8.0	12.5	-26.1	-49.8	-37.7	-27.5	-27.5		-168.6
6/10/03 7:00	6.4	11.1	-23.3	-42.8	-33.0	-28.8	-28.1		-156.0
6/10/03 8:00	3.9	8.2	-20.5	-39.4	-29.2	-33.2	-32.7		-155.0
6/10/03 9:00	6.3	10.5	-19.1	-42.4	-28.7	-31.2	-30.7		-152.1
6/10/03 10:00	5.1	9.2	-18.0	-39.9	-28.0	-29.2	-28.6		-143.7
6/10/03 11:00	7.4	12.1	-17.0	-36.3	-25.3	-27.2	-26.6		-132.4
6/10/03 12:00	4.7	8.8	-16.2	-35.0	-23.4	-26.9	-26.4		-128.0
6/10/03 13:00	3.8	8.1	-16.0	-34.2	-23.0	-27.2	-26.5		-126.9
6/10/03 14:00	3.9	7.9	-15.8	-33.1	-22.5	-27.4	-26.7		-125.5
6/10/03 15:00	1.7	6.2	-15.5	-32.0	-22.0	-27.7	-26.9		-124.1
6/10/03 16:00	2.7	7.4	-15.3	-30.8	-21.6	-27.9	-27.1		-122.7
6/10/03 17:00	0.9	4.9	-15.1	-34.3	-21.3	-27.9	-27.5		-126.2
6/10/03 18:00	-0.1	3.6	-14.8	-36.1	-22.4	-26.9	-26.4		-126.6
6/10/03 19:00	-1.4	2.4	-14.6	-38.0	-23.4	-25.8	-25.2		-127.0
6/10/03 20:00	4.5	8.7	-14.3	-39.8	-24.5	-24.2	-23.6		-126.3
6/10/03 21:00	3.6	7.4	-15.1	-33.8	-22.7	-17.4	-16.4		-105.4
6/10/03 22:00	2.1	7.2	-17.5	-39.1	-25.2	-15.1	-14.5		-111.4
6/10/03 23:00	4.4	8.1	-19.9	-45.2	-33.5	-16.8	-16.3		-131.6
6/11/03 0:00	3.0	7.6	-22.3	-49.7	-38.8	-18.4	-17.9		-147.2
6/11/03 1:00	5.9	9.6	-24.7	-54.7	-41.7	-20.1	-19.6		-160.9
6/11/03 2:00	3.6	8.2	-27.1	-57.5	-42.7	-21.7	-21.3		-170.3
6/11/03 3:00	2.6	7.0	-29.5	-59.9	-43.6	-23.4	-22.9		-179.2
6/11/03 4:00	4.0	7.5	-28.8	-62.2	-44.5	-25.0	-24.6		-185.0
6/11/03 5:00	6.3	10.5	-27.0	-58.8	-45.4	-25.5	-25.0		-181.6
6/11/03 6:00	9.5	13.5	-22.7	-45.2	-32.5	-25.3	-24.5		-150.0
6/11/03 7:00	6.7	10.7	-17.6	-38.7	-26.3	-27.7	-27.6		-138.0
6/11/03 8:00	4.6	8.2	-20.2	-36.9	-27.1	-31.0	-30.5		-145.6
6/11/03 9:00	6.9	10.4	-18.8	-35.4	-24.8	-28.9	-28.4		-136.3
6/11/03 10:00	9.0	12.9	-16.5	-34.8	-21.0	-26.8	-26.3		-125.4
6/11/03 11:00	8.3	13.4	-14.1	-31.9	-19.8	-24.7	-24.2		-114.7
6/11/03 12:00	8.2	12.0	-13.2	-30.3	-18.6	-23.8	-23.0		-108.8
6/11/03 13:00	8.5	13.3	-13.5	-30.3	-18.8	-24.5	-23.7		-110.7
6/11/03 14:00	9.5	12.9	-13.7	-30.3	-19.0	-25.2	-24.5		-112.6
6/11/03 15:00	6.7	10.4	-14.0	-29.2	-19.2	-25.9	-25.2		-113.4
6/11/03 16:00	4.0	8.2	-14.2	-28.3	-19.4	-26.6	-25.9		-114.5
6/11/03 17:00	3.0	7.0	-14.5	-29.8	-19.9	-27.3	-26.7		-118.1
6/11/03 18:00	0.8	4.7	-14.7	-33.6	-20.8	-28.0	-27.4		-124.6
6/11/03 19:00	-3.0	1.1	-16.0	-41.5	-29.4	-24.1	-23.6		-134.5
6/11/03 20:00	2.3	6.4	-17.6	-43.2	-25.4	-19.2	-18.6		-124.1
6/11/03 21:00	5.5	9.9	-18.7	-34.8	-25.1	-14.3	-13.7		-106.6
6/11/03 22:00	3.4	7.6	-19.7	-39.9	-26.4	-11.4	-11.1		-108.5
6/11/03 23:00	7.2	11.5	-20.2	-40.0	-29.5	-14.0	-13.7		-117.4
6/12/03 0:00	7.8	11.2	-20.8	-46.6	-31.4	-16.6	-16.2		-131.6
6/12/03 1:00	6.5	11.4	-21.3	-47.9	-33.4	-19.2	-18.7		-140.4
6/12/03 2:00	6.3	10.1	-21.9	-48.7	-35.3	-21.7	-21.2		-148.8
6/12/03 3:00	4.7	9.0	-22.4	-49.4	-37.3	-24.3	-23.7		-157.1
6/12/03 4:00	6.8	11.4	-23.0	-50.2	-39.2	-24.9	-24.4		-161.8
6/12/03 5:00	11.1	15.6	-23.6	-47.7	-35.4	-25.3	-24.5		-156.5
6/12/03 6:00	7.1	10.8	-21.5	-40.9	-30.2	-25.8	-24.7		-143.1

6/12/03 7:00	6.6	10.0	-18.9	-41.5	-28.0	-26.2	-24.8		-139.4
6/12/03 8:00	3.5	6.6	-16.0	-41.4	-27.5	-30.7	-30.6		-146.1
6/12/03 9:00	6.2	10.2	-13.0	-37.0	-22.5	-29.5	-29.7		-131.7
6/12/03 10:00	8.6	12.7	-10.5	-24.3	-16.8	-28.0	-28.8		-108.4
6/12/03 11:00	8.5	11.7	-10.9	-31.5	-17.2	-27.4	-28.1		-115.0
6/12/03 12:00	6.4	10.9	-11.7	-27.5	-13.8	-27.1	-27.4		-107.5
6/12/03 13:00	8.3	11.4	-12.6	-26.9	-14.3	-26.9	-26.7		-107.4
6/12/03 14:00	7.5	11.5	-13.4	-28.5	-14.7	-26.6	-26.1		-109.3
6/12/03 15:00	5.7	9.1	-14.3	-30.8	-15.2	-26.4	-25.4		-112.0
6/12/03 16:00	5.6	9.4	-15.1	-30.3	-16.6	-25.5	-24.8		-112.4
6/12/03 17:00	2.1	5.1	-16.0	-33.8	-21.3	-24.6	-24.3		-120.0
6/12/03 18:00	-1.0	3.4	-16.8	-37.2	-22.2	-23.7	-23.8		-123.8
6/12/03 19:00	-1.5	2.2	-17.4	-42.3	-26.9	-23.2	-22.6		-132.4
6/12/03 20:00	2.2	6.0	-17.9	-44.7	-30.6	-22.6	-21.1		-137.0
6/12/03 21:00	4.4	8.0	-18.1	-41.7	-26.2	-15.6	-15.2		-116.8
6/12/03 22:00	3.5	6.7	-17.5	-36.2	-23.5	-11.3	-10.8		-99.2
6/12/03 23:00	4.0	8.0	-16.9	-38.6	-26.1	-13.1	-12.7		-107.3
6/13/03 0:00	4.8	8.6	-16.3	-40.1	-28.6	-14.9	-14.6		-114.3
6/13/03 1:00	5.6	8.5	-16.9	-36.6	-25.7	-16.7	-16.4		-112.3
6/13/03 2:00	3.1	6.9	-17.6	-39.5	-27.9	-18.5	-18.3		-121.8
6/13/03 3:00	0.8	5.5	-18.4	-42.3	-30.1	-20.3	-20.2		-131.3
6/13/03 4:00	2.3	7.0	-19.2	-45.2	-32.4	-22.1	-22.1		-140.9
6/13/03 5:00	5.9	10.0	-20.0	-47.5	-34.4	-23.9	-23.7		-149.5
6/13/03 6:00	5.5	9.4	-20.7	-44.7	-33.9	-25.6	-25.1		-150.1
6/13/03 7:00	5.1	10.0	-20.6	-50.4	-33.7	-27.3	-26.5		-158.6
6/13/03 8:00	3.6	7.5	-20.3	-41.8	-30.4	-30.4	-29.9		-152.8
6/13/03 9:00	4.1	8.3	-17.8	-32.8	-25.0	-27.8	-27.2		-130.7
6/13/03 10:00	7.4	11.5	-14.0	-30.6	-19.0	-25.2	-24.5		-113.3
6/13/03 11:00	8.1	12.4	-10.8	-30.7	-19.7	-22.5	-21.9		-105.5
6/13/03 12:00	6.6	10.7	-11.4	-30.6	-18.4	-19.9	-19.2		-99.5
6/13/03 13:00	7.5	12.8	-12.1	-30.1	-17.1	-20.0	-19.3		-98.6
6/13/03 14:00	8.0	12.9	-12.7	-27.7	-15.8	-20.2	-19.5		-95.8
6/13/03 15:00	7.6	12.3	-13.3	-25.3	-14.4	-20.4	-19.6		-93.1
6/13/03 16:00	6.4	11.1	-14.0	-26.5	-16.0	-20.5	-19.8		-96.9
6/13/03 17:00	3.5	8.9	-14.6	-29.7	-18.0	-20.7	-19.9		-103.0
6/13/03 18:00	-0.1	3.6	-15.5	-39.7	-22.6	-20.9	-20.1		-118.7
6/13/03 19:00	-0.7	3.5	-16.4	-37.3	-25.2	-21.0	-20.2		-120.2
6/13/03 20:00	0.2	4.0	-17.3	-38.0	-26.7	-20.8	-19.9		-122.6
6/13/03 21:00	4.1	8.3	-18.2	-34.2	-23.3	-13.7	-12.6		-102.0
6/13/03 22:00	4.1	8.4	-19.1	-36.4	-24.3	-9.7	-9.1		-98.6
6/13/03 23:00	5.4	9.9	-19.9	-40.2	-28.9	-12.8	-12.1		-113.9
6/14/03 0:00	8.6	12.7	-20.1	-44.0	-31.2	-16.1	-15.5		-127.0
6/14/03 1:00	8.8	13.5	-20.3	-42.9	-31.5	-19.4	-18.9		-133.1
6/14/03 2:00	8.8	13.6	-20.4	-39.8	-30.9	-22.3	-21.9		-135.3
6/14/03 3:00	8.8	12.7	-20.6	-39.2	-30.1	-23.8	-23.3		-137.1
6/14/03 4:00	9.5	13.8	-20.8	-40.3	-31.2	-25.2	-24.7		-142.2
6/14/03 5:00	10.8	14.8	-21.0	-41.3	-32.3	-26.7	-26.1		-147.3
6/14/03 6:00	5.5	9.5	-21.1	-42.7	-33.5	-28.1	-27.5		-152.9
6/14/03 7:00	3.5	8.1	-20.3	-44.2	-35.8	-33.0	-32.2		-165.6
6/14/03 8:00	2.6	5.6	-19.1	-42.7	-34.3	-35.9	-35.2		-167.2
6/14/03 9:00	5.3	8.4	-17.9	-39.8	-32.6	-32.9	-32.1		-155.3
6/14/03 10:00	7.4	11.6	-16.6	-37.7	-28.5	-29.9	-29.1		-141.8

6/14/03 11:00	8.0	11.9	-16.1	-33.3	-23.5	-26.9	-26.0		-125.9
6/14/03 12:00	9.0	13.4	-15.8	-31.3	-23.1	-23.9	-23.0		-117.0
6/14/03 13:00	7.9	12.4	-15.5	-30.4	-22.7	-21.9	-22.0		-112.4
6/14/03 14:00	5.2	10.6	-15.2	-30.5	-22.3	-22.1	-22.1		-112.0
6/14/03 15:00	6.1	10.7	-14.8	-30.7	-21.8	-22.2	-22.1		-111.6
6/14/03 16:00	4.8	9.4	-14.5	-30.8	-21.4	-22.3	-22.1		-111.2
6/14/03 17:00	3.9	9.2	-14.6	-30.1	-20.8	-22.7	-22.1		-110.4
6/14/03 18:00	3.2	7.6	-15.4	-29.9	-20.4	-21.5	-20.3		-107.5
6/14/03 19:00	1.2	5.3	-16.2	-31.5	-22.3	-19.3	-18.7		-108.0
6/14/03 20:00	3.2	7.1	-17.1	-35.0	-24.1	-17.2	-17.1		-110.4
6/14/03 21:00	4.8	8.8	-17.9	-36.5	-24.8	-13.5	-13.2		-105.9
6/14/03 22:00	3.8	7.0	-18.7	-36.9	-26.2	-9.6	-9.2		-100.6
6/14/03 23:00	12.4	14.6	-15.8	-28.4	-17.6	-12.2	-11.8		-85.8
6/15/03 0:00	9.9	11.7	-17.6	-38.4	-27.8	-14.8	-14.4		-113.1
6/15/03 1:00	8.2	9.8	-19.4	-44.6	-31.9	-17.4	-17.0		-130.3
6/15/03 2:00	4.9	7.7	-21.2	-50.0	-35.6	-19.9	-19.6		-146.4
6/15/03 3:00	2.6	6.5	-23.0	-54.3	-38.5	-22.5	-22.3		-160.7
6/15/03 4:00	0.7	6.3	-24.8	-55.7	-39.7	-25.1	-24.9		-170.2
6/15/03 5:00	0.8	5.4	-26.6	-57.1	-40.9	-24.2	-27.4		-176.2
6/15/03 6:00	-3.4	2.1	-27.8	-58.5	-42.1	-27.5	-29.8		-185.7
6/15/03 7:00	-5.6	0.0	-26.2	-57.0	-43.2	-34.0	-34.1		-194.5
6/15/03 8:00	-2.8	2.4	-24.8	-48.3	-39.1	-37.4	-36.9		-186.5
6/15/03 9:00	-0.6	5.2	-23.7	-43.2	-31.8	-35.0	-34.5		-168.2
6/15/03 10:00	1.6	7.1	-22.6	-42.0	-29.9	-32.6	-32.1		-159.2
6/15/03 11:00	6.5	11.1	-21.5	-40.1	-28.1	-30.1	-29.7		-149.4
6/15/03 12:00	6.4	11.4	-20.3	-40.1	-27.0	-27.7	-27.3		-142.5
6/15/03 13:00	5.5	12.0	-19.2	-38.4	-27.1	-25.3	-24.9		-135.0
6/15/03 14:00	7.5	12.5	-18.5	-37.4	-27.2	-25.0	-24.3		-132.3
6/15/03 15:00	7.9	12.5	-18.9	-36.2	-26.7	-25.3	-22.7		-129.9
6/15/03 16:00	7.7	13.2	-19.3	-35.1	-26.2	-24.5	-22.4		-127.6
6/15/03 17:00	6.5	11.6	-19.8	-34.0	-25.7	-23.7	-22.1		-125.3
6/15/03 18:00	5.4	11.0	-20.2	-33.6	-25.2	-22.9	-21.9		-123.7
6/15/03 19:00	3.6	8.3	-20.6	-38.6	-25.7	-22.1	-21.6		-128.6
6/15/03 20:00	5.6	10.6	-21.0	-38.4	-28.0	-21.2	-21.3		-130.0
6/15/03 21:00	5.9	12.7	-20.6	-44.7	-29.6	-15.8	-14.2		-124.9
6/15/03 22:00	6.5	11.7	-19.8	-43.5	-29.8	-12.2	-11.9		-117.2
6/15/03 23:00	6.4	12.0	-19.0	-47.0	-34.1	-14.5	-14.1		-128.7
6/16/03 0:00	6.7	11.7	-21.0	-43.1	-31.9	-16.8	-16.3		-129.1
6/16/03 1:00	2.6	7.5	-23.4	-55.9	-42.6	-19.1	-18.5		-159.6
6/16/03 2:00	0.8	5.5	-25.8	-57.3	-43.4	-21.5	-20.8		-168.7
6/16/03 3:00	1.5	6.9	-28.3	-57.5	-43.5	-23.8	-23.0		-176.0
6/16/03 4:00	2.5	7.5	-30.7	-57.7	-43.5	-25.3	-24.7		-181.9
6/16/03 5:00	5.9	11.5	-29.7	-57.9	-43.6	-26.1	-25.6		-182.8
6/16/03 6:00	6.9	12.9	-28.3	-52.7	-39.0	-26.8	-26.6		-173.3
6/16/03 7:00	5.2	10.6	-27.3	-54.8	-42.9	-27.5	-27.5		-180.0
6/16/03 8:00	0.8	6.9	-29.3	-59.3	-46.9	-31.9	-31.7		-199.1
6/16/03 9:00	2.7	8.5	-24.4	-49.1	-38.3	-29.0	-29.2		-170.0
6/16/03 10:00	7.0	11.7	-19.5	-36.5	-26.3	-26.0	-26.7		-135.1
6/16/03 11:00	8.3	13.4	-16.3	-35.8	-23.9	-25.2	-25.6		-126.8
6/16/03 12:00	9.7	15.0	-15.9	-35.5	-22.4	-24.8	-24.8		-123.4
6/16/03 13:00	10.6	15.7	-15.5	-35.1	-20.9	-24.4	-24.1		-120.0
6/16/03 14:00	8.3	13.1	-15.1	-29.0	-19.4	-24.1	-23.3		-110.9

6/16/03 15:00	3.0	7.9	-14.9	-34.1	-23.7	-23.7	-22.6		-119.0
6/16/03 16:00	4.0	8.4	-14.9	-26.7	-18.8	-23.3	-21.9		-105.6
6/16/03 17:00	0.5	5.7	-14.9	-24.5	-18.2	-22.9	-21.0		-101.6
6/16/03 18:00	-3.4	1.7	-14.8	-32.5	-20.1	-22.5	-19.9		-109.8
6/16/03 19:00	-3.1	0.7	-14.2	-34.7	-24.6	-21.1	-18.8		-113.4
6/16/03 20:00	-0.6	3.9	-13.6	-36.9	-24.9	-19.7	-18.5		-113.7
6/16/03 21:00	-0.5	5.2	-13.2	-30.8	-21.3	-19.4	-19.3		-104.0
6/16/03 22:00	-1.2	3.5	-15.5	-34.7	-23.7	-17.1	-16.3		-107.3
6/16/03 23:00	4.0	8.9	-17.8	-42.5	-29.7	-17.0	-17.8		-124.8
6/17/03 0:00	5.0	10.1	-20.1	-48.3	-32.0	-17.8	-19.1		-137.3
6/17/03 1:00	5.5	9.9	-22.4	-46.9	-32.5	-18.5	-19.9		-140.2
6/17/03 2:00	3.9	8.8	-24.0	-46.9	-32.9	-19.3	-20.1		-143.2
6/17/03 3:00	3.6	8.5	-22.7	-46.9	-33.4	-20.0	-20.3		-143.3
6/17/03 4:00	4.1	9.1	-21.4	-46.9	-33.9	-20.7	-20.5		-143.4
6/17/03 5:00	5.1	10.1	-20.0	-46.9	-34.4	-21.5	-20.7		-143.5
6/17/03 6:00	7.0	12.0	-18.7	-44.8	-32.6	-21.5	-20.9		-138.5
6/17/03 7:00	4.3	9.3	-16.9	-37.5	-27.0	-22.8	-23.1		-127.3
6/17/03 8:00	0.2	5.7	-14.8	-37.4	-23.8	-25.7	-25.9		-127.7
6/17/03 9:00	2.6	7.7	-12.8	-34.9	-21.8	-23.6	-23.4		-116.4
6/17/03 10:00	4.7	9.6	-10.0	-22.9	-13.5	-21.4	-20.8		-88.7
6/17/03 11:00	4.1	8.9	-9.1	-30.3	-18.7	-24.5	-24.1		-106.7
6/17/03 12:00	4.6	9.4	-10.8	-27.5	-16.6	-24.3	-23.8		-103.1
6/17/03 13:00	5.5	10.4	-12.5	-24.7	-14.5	-24.1	-23.6		-99.4
6/17/03 14:00	6.6	11.7	-14.2	-32.7	-21.0	-23.9	-23.3		-115.1
6/17/03 15:00	5.2	10.1	-15.7	-33.6	-22.7	-23.7	-23.1		-118.9
6/17/03 16:00	3.3	8.0	-17.3	-33.9	-22.6	-23.5	-22.8		-120.2
6/17/03 17:00	-1.7	3.1	-18.9	-37.1	-23.4	-23.4	-22.8		-125.5
6/17/03 18:00	-3.6	1.1	-20.4	-39.6	-24.6	-23.3	-22.7		-130.7
6/17/03 19:00	-5.3	-0.8	-19.9	-43.6	-29.6	-23.2	-22.7		-139.0
6/17/03 20:00	-0.9	3.8	-16.3	-36.2	-23.0	-20.7	-19.2		-115.4
6/17/03 21:00	-0.1	4.8	-14.8	-30.3	-17.6	-21.6	-20.8		-105.1
6/17/03 22:00	0.1	5.6	-15.3	-31.0	-19.7	-16.7	-16.5		-99.2
6/17/03 23:00	5.6	10.9	-16.7	-32.1	-21.0	-10.7	-10.3		-90.7
6/18/03 0:00	7.1	12.8	-18.4	-37.1	-24.1	-13.8	-13.4		-106.7
6/18/03 1:00	4.8	9.9	-20.2	-44.1	-29.1	-16.9	-16.5		-126.7
6/18/03 2:00	2.8	8.2	-22.1	-49.6	-34.2	-20.0	-19.6		-145.5
6/18/03 3:00	0.8	5.8	-23.9	-55.2	-39.3	-23.1	-22.7		-164.2
6/18/03 4:00	1.5	7.5	-25.8	-55.5	-40.0	-24.0	-23.5		-168.8
6/18/03 5:00	4.2	9.5	-27.1	-52.0	-37.4	-24.8	-24.1		-165.4
6/18/03 6:00	4.6	9.6	-25.1	-46.0	-32.2	-25.5	-24.7		-153.6
6/18/03 7:00	1.2	6.1	-23.2	-49.9	-34.3	-26.3	-25.4		-159.0
6/18/03 8:00	-0.9	3.7	-21.7	-48.8	-37.0	-30.3	-29.7		-167.4
6/18/03 9:00	0.2	4.9	-20.3	-47.2	-33.0	-28.8	-28.2		-157.5
6/18/03 10:00	3.2	8.1	-18.7	-39.2	-26.4	-27.3	-26.6		-138.2
6/18/03 11:00	4.2	9.5	-16.8	-33.4	-21.3	-25.8	-25.1		-122.4
6/18/03 12:00	3.6	7.5	-14.8	-32.3	-18.8	-24.4	-23.6		-114.0
6/18/03 13:00	4.3	9.3	-23.1	-51.6	-32.4	-23.3	-22.5		-152.9
6/18/03 14:00	3.9	8.6	-22.0	-52.2	-34.6	-23.2	-22.4		-154.3
6/18/03 15:00	-0.4	5.8	-20.8	-52.9	-36.7	-23.1	-22.3		-155.8
6/18/03 16:00	-2.7	4.1	-20.3	-43.4	-30.7	-22.9	-22.2		-139.5
6/18/03 17:00	-5.0	1.5	-19.8	-46.8	-30.9	-22.8	-22.1		-142.3
6/18/03 18:00	-5.1	0.6	-14.8	-38.6	-23.9	-22.7	-22.0		-121.9

6/18/03 19:00	-3.1	3.1	-13.6	-33.5	-22.9	-22.5	-21.7		-114.4
6/18/03 20:00	-0.4	4.7	-13.1	-32.8	-18.3	-19.1	-18.1		-101.4
6/18/03 21:00	-0.4	5.7	-15.4	-31.6	-18.6	-13.4	-12.5		-91.5
6/18/03 22:00	1.4	6.1	-17.4	-33.1	-21.5	-10.6	-10.3		-93.0
6/18/03 23:00	4.4	10.1	-18.2	-40.1	-25.6	-13.1	-12.7		-109.7
6/19/03 0:00	7.4	13.2	-18.5	-40.5	-28.1	-15.5	-15.0		-117.6
6/19/03 1:00	5.8	11.7	-18.7	-42.1	-29.6	-17.9	-17.4		-125.7
6/19/03 2:00	5.3	10.2	-18.9	-43.7	-31.1	-20.3	-19.7		-133.8
6/19/03 3:00	3.9	10.2	-19.2	-45.4	-32.6	-22.7	-22.0		-141.9
6/19/03 4:00	4.5	9.3	-19.4	-47.0	-34.1	-23.8	-23.2		-147.4
6/19/03 5:00	6.9	12.8	-19.6	-45.5	-33.5	-24.5	-23.8		-147.0
6/19/03 6:00	8.7	15.2	-17.9	-37.3	-25.2	-25.3	-24.5		-130.3
6/19/03 7:00	6.9	12.7	-15.0	-31.9	-20.9	-26.9	-25.9		-120.5
6/19/03 8:00	2.2	7.8	-19.2	-40.1	-29.6	-28.5	-27.3		-144.8
6/19/03 9:00	5.0	10.3	-15.5	-34.3	-23.7	-27.0	-26.2		-126.7
6/19/03 10:00	6.4	12.0	-13.4	-28.5	-17.7	-31.6	-31.0		-122.3
6/19/03 11:00	8.0	13.0	-12.7	-25.4	-15.8	-29.5	-28.8		-112.3
6/19/03 12:00	3.7	10.3	-12.4	-27.0	-16.1	-29.4	-28.6		-113.6
6/19/03 13:00	4.9	10.8	-13.0	-32.0	-17.0	-31.2	-30.5		-123.7
6/19/03 14:00	3.7	9.2	-13.0	-31.6	-17.8	-33.0	-32.4		-127.9
6/19/03 15:00	3.1	9.8	-13.0	-31.5	-18.7	-33.7	-33.1		-129.9
6/19/03 16:00	3.1	9.5	-12.9	-34.4	-19.5	-24.4	-22.7		-113.9
6/19/03 17:00	0.5	7.1	-12.8	-34.4	-20.3	-22.2	-21.3		-111.0
6/19/03 18:00	-0.8	3.7	-12.8	-34.3	-21.2	-22.3	-21.3		-111.8
6/19/03 19:00	-0.7	4.7	-12.7	-34.3	-22.0	-22.3	-21.4		-112.7
6/19/03 20:00	3.9	9.7	-12.7	-32.3	-21.6	-22.4	-21.5		-110.5
6/19/03 21:00	4.0	10.1	-14.0	-28.9	-18.7	-21.0	-20.6		-103.2
6/19/03 22:00	2.0	8.4	-15.5	-30.1	-19.8	-16.1	-15.6		-97.2
6/19/03 23:00	3.9	9.7	-17.0	-34.0	-23.2	-13.6	-13.0		-100.8
6/20/03 0:00	8.5	13.6	-18.5	-37.0	-25.4	-15.8	-15.3		-112.0
6/20/03 1:00	5.6	11.6	-19.1	-40.0	-27.6	-18.1	-17.6		-122.4
6/20/03 2:00	3.8	10.7	-19.8	-43.0	-29.7	-20.4	-19.9		-132.7
6/20/03 3:00	3.9	9.8	-20.5	-46.0	-31.9	-22.6	-22.1		-143.1
6/20/03 4:00	4.2	9.5	-21.1	-48.9	-34.1	-24.2	-23.6		-151.8
6/20/03 5:00	6.9	12.3	-21.8	-51.1	-36.2	-25.2	-24.6		-158.9
6/20/03 6:00	6.6	12.3	-20.5	-47.6	-33.8	-26.3	-25.6		-153.8
6/20/03 7:00	2.7	8.3	-19.8	-39.4	-27.5	-27.4	-26.7		-140.7
6/20/03 8:00	-1.0	4.9	-19.4	-42.6	-30.9	-32.2	-31.6		-156.6
6/20/03 9:00	0.6	6.9	-18.9	-40.2	-28.9	-31.1	-30.4		-149.6
6/20/03 10:00	2.1	8.1	-18.5	-38.0	-26.8	-30.0	-29.3		-142.6
6/20/03 11:00	3.4	9.1	-18.1	-37.7	-24.8	-28.9	-28.1		-137.6
6/20/03 12:00	1.9	7.5	-17.7	-37.5	-23.5	-27.8	-26.9		-133.4
6/20/03 13:00	2.0	7.8	-17.3	-37.2	-22.8	-26.7	-25.8		-129.8
6/20/03 14:00	1.4	6.1	-16.9	-37.0	-22.2	-26.2	-25.0		-127.2
6/20/03 15:00	-0.4	4.8	-17.9	-36.9	-21.8	-25.9	-24.3		-126.7
6/20/03 16:00	-1.5	4.8	-19.2	-34.8	-24.0	-25.5	-23.5		-127.1
6/20/03 17:00	-2.2	3.3	-20.5	-40.0	-26.3	-25.2	-22.8		-134.7
6/20/03 18:00	-7.5	-2.3	-21.8	-46.6	-30.0	-24.6	-22.1		-145.1
6/20/03 19:00	-5.5	-0.8	-20.6	-41.7	-26.5	-22.5	-21.4		-132.6
6/20/03 20:00	-2.7	2.6	-19.3	-39.0	-25.1	-20.3	-20.6		-124.3
6/20/03 21:00	-1.0	4.3	-18.1	-36.3	-23.7	-18.2	-16.8		-113.1
6/20/03 22:00	4.4	9.1	-17.2	-38.8	-24.7	-15.4	-14.8		-110.9

6/20/03 23:00	4.3	9.3	-19.6	-46.4	-32.7	-17.8	-16.6		-133.2
6/21/03 0:00	6.4	10.6	-21.3	-43.4	-29.0	-19.7	-19.1		-132.5
6/21/03 1:00	4.7	8.6	-21.8	-46.8	-33.5	-20.7	-20.2		-143.0
6/21/03 2:00	4.4	8.0	-22.3	-49.9	-35.8	-21.7	-21.2		-151.0
6/21/03 3:00	3.4	7.2	-22.7	-53.0	-38.2	-22.8	-22.3		-159.0
6/21/03 4:00	5.5	4.4	-23.2	-50.6	-39.4	-23.8	-23.3		-160.4
6/21/03 5:00	8.9	2.9	-23.6	-47.0	-36.4	-24.8	-24.4		-156.3
6/21/03 6:00	11.4	0.4	-22.6	-43.5	-33.3	-25.9	-25.5		-150.7
6/21/03 7:00	0.2	5.9	-22.1	-46.2	-34.1	-30.0	-29.2		-161.7
6/21/03 8:00	0.2	5.8	-22.5	-50.7	-38.6	-34.4	-33.7		-179.9
6/21/03 9:00	0.2	6.7	-22.8	-53.0	-40.6	-32.9	-32.2		-181.5
6/21/03 10:00	0.2	12.3	-23.1	-54.9	-41.9	-31.4	-30.7		-182.0
6/21/03 11:00	0.2	8.6	-23.5	-55.5	-41.8	-29.8	-29.2		-179.8
6/21/03 12:00	0.2	8.5	-23.8	-56.3	-41.6	-28.3	-27.7		-177.7
6/21/03 13:00	0.2	6.6	-24.2	-56.0	-41.3	-27.3	-26.6		-175.4
6/21/03 14:00	0.1	3.2	-24.5	-54.5	-40.1	-26.9	-26.2		-172.3
6/21/03 15:00	0.1	2.6	-24.3	-53.1	-38.9	-26.5	-25.9		-168.7
6/21/03 16:00	0.1	1.5	-23.3	-51.7	-37.8	-26.1	-25.5		-164.3
6/21/03 17:00	0.1	1.6	-22.3	-50.3	-36.6	-25.6	-25.2		-159.9
6/21/03 18:00	0.1	0.0	-21.3	-48.9	-35.4	-25.2	-24.8		-155.5
6/21/03 19:00	0.1	2.6	-20.3	-47.4	-34.2	-24.8	-24.5		-151.1
6/21/03 20:00	0.1	8.4	-19.3	-46.0	-33.0	-24.2	-23.7		-146.2
6/21/03 21:00	0.1	10.7	-18.8	-33.6	-27.7	-19.2	-18.3		-117.6
6/21/03 22:00	0.1	7.9	-18.5	-36.5	-26.0	-14.5	-13.7		-109.2
6/21/03 23:00	0.1	9.4	-19.0	-35.7	-30.2	-14.4	-14.8		-114.1
6/22/03 0:00	0.1	7.3	-19.6	-44.5	-33.3	-15.8	-16.3		-129.5
6/22/03 1:00	0.1	4.5	-20.2	-47.8	-35.7	-17.1	-17.9		-138.7
6/22/03 2:00	0.1	3.7	-20.8	-47.7	-37.6	-18.4	-19.4		-144.0
6/22/03 3:00	0.1	3.4	-21.4	-46.6	-37.9	-19.7	-21.0		-146.6
6/22/03 4:00	0.1	3.5	-22.0	-45.4	-38.2	-21.1	-22.5		-149.2
6/22/03 5:00	0.1	5.6	-22.6	-44.3	-38.4	-22.4	-24.0		-151.8
6/22/03 6:00	0.1	-2.5	-22.6	-49.8	-39.1	-26.5	-25.6		-163.6
6/22/03 7:00	0.1	-4.4	-22.6	-51.0	-40.5	-31.5	-30.9		-176.5
6/22/03 8:00	0.1	-2.8	-22.6	-48.5	-39.3	-36.9	-36.5		-183.8
6/22/03 9:00	0.1	0.6	-22.5	-44.6	-35.0	-35.6	-35.4		-173.2
6/22/03 10:00	0.1	1.6	-22.5	-44.5	-33.9	-34.4	-34.2		-169.5
6/22/03 11:00	0.1	3.6	-22.4	-45.5	-33.7	-33.2	-33.1		-167.8
6/22/03 12:00	0.1	2.3	-22.3	-46.4	-33.5	-32.0	-31.9		-166.1
6/22/03 13:00	0.1	3.5	-22.2	-47.4	-33.4	-30.7	-30.7		-164.4
6/22/03 14:00	0.1	2.3	-22.1	-46.8	-33.2	-30.3	-29.9		-162.4
6/22/03 15:00	0.1	3.0	-22.1	-45.3	-33.0	-30.8	-30.4		-161.7
6/22/03 16:00	0.1	2.1	-21.9	-43.9	-32.8	-31.3	-30.9		-160.8
6/22/03 17:00	0.1	2.9	-21.3	-42.4	-31.7	-31.8	-31.3		-158.6
6/22/03 18:00	0.1	3.4	-20.7	-40.9	-30.1	-32.3	-31.8		-155.8
6/22/03 19:00	0.1	5.8	-20.1	-39.5	-28.4	-30.3	-29.7		-148.0
6/22/03 20:00	0.1	13.0	-19.5	-38.0	-26.8	-27.7	-27.1		-139.1
6/22/03 21:00	0.1	11.4	-18.9	-36.5	-23.1	-28.9	-28.5		-135.8
6/22/03 22:00	0.1	11.0	-18.3	-35.0	-24.2	-26.1	-25.0		-128.6
6/22/03 23:00	0.1	12.8	-18.2	-36.8	-26.3	-21.7	-21.7		-124.7
6/23/03 0:00	0.1	8.6	-19.4	-43.2	-31.4	-21.5	-19.2		-134.7
6/23/03 1:00	0.1	7.6	-20.6	-48.8	-36.3	-22.3	-21.2		-149.1
6/23/03 2:00	0.1	3.6	-21.8	-52.4	-38.0	-23.2	-23.0		-158.4

6/23/03 3:00	0.1	2.3	-23.0	-53.5	-39.8	-24.0	-23.7		-164.0
6/23/03 4:00	0.1	3.6	-24.2	-54.5	-41.6	-24.9	-24.4		-169.6
6/23/03 5:00	0.1	10.0	-25.4	-55.6	-43.3	-25.7	-25.2		-175.2
6/23/03 6:00	0.1	13.9	-24.5	-43.0	-35.3	-26.6	-25.9		-155.3
6/23/03 7:00	0.1	11.4	-23.7	-48.1	-35.4	-31.0	-30.3		-168.5
6/23/03 8:00	0.1	11.6	-24.4	-47.8	-36.7	-30.8	-29.2		-168.9
6/23/03 9:00	0.1	13.6	-25.1	-51.0	-38.6	-27.2	-26.2		-168.1
6/23/03 10:00	0.1	13.0	-25.8	-52.8	-39.8	-23.7	-23.1		-165.2
6/23/03 11:00	43.4	-4.4	-12.7	-27.4	-19.3	-22.3	-21.9		-103.7
6/23/03 12:00	42.9	-3.9	-13.1	-28.3	-19.3	-22.4	-22.0		-105.0
6/23/03 13:00	42.6	-4.9	-13.4	-29.1	-19.3	-22.5	-22.0		-106.4
6/23/03 14:00	41.6	-3.7	-13.7	-30.0	-19.3	-22.6	-22.1		-107.7
6/23/03 15:00	39.6	-4.6	-14.0	-30.9	-19.3	-22.7	-22.2		-109.2
6/23/03 16:00	35.5	-6.8	-14.3	-32.3	-19.6	-22.8	-22.2		-111.3
6/23/03 17:00	32.2	-8.3	-14.6	-32.7	-19.9	-22.9	-22.3		-112.5
6/23/03 18:00	27.7	-10.5	-14.9	-33.0	-20.2	-23.0	-22.4		-113.6
6/23/03 19:00	26.7	-9.2	-13.9	-32.4	-20.5	-19.7	-19.2		-105.6
6/23/03 20:00	30.6	-4.4	-10.4	-29.9	-17.2	-14.4	-14.1		-86.0
6/23/03 21:00	29.6	-4.0	-11.1	-27.9	-17.9	-19.0	-16.6		-92.5
6/23/03 22:00	31.9	-2.2	-12.9	-24.9	-13.6	-7.3	-7.1		-65.8
6/23/03 23:00	32.3	-2.0	-13.7	-28.6	-17.9	-9.7	-9.5		-79.4
6/24/03 0:00	32.4	-1.3	-14.7	-33.2	-20.9	-13.1	-12.7		-94.6
6/24/03 1:00	31.6	-2.2	-15.6	-37.0	-24.1	-16.5	-16.0		-109.2
6/24/03 2:00	17.8	2.6	-16.6	-41.1	-27.5	-20.0	-19.2		-124.4
6/24/03 3:00	18.5	3.2	-17.6	-40.6	-31.0	-22.0	-21.5		-132.6
6/24/03 4:00	19.2	3.9	-18.5	-40.1	-30.9	-23.0	-22.5		-135.0
6/24/03 5:00	20.6	6.0	-19.5	-39.6	-27.2	-24.0	-23.5		-133.8
6/24/03 6:00	23.5	8.9	-17.9	-33.4	-23.3	-25.1	-24.5		-124.1
6/24/03 7:00	20.5	5.8	-16.8	-40.4	-30.2	-28.7	-27.9		-144.0
6/24/03 8:00	18.2	3.2	-15.8	-31.2	-20.6	-30.6	-30.0		-128.2
6/24/03 9:00	17.8	2.8	-11.8	-23.9	-15.0	-27.6	-27.2		-105.5
6/24/03 10:00	19.8	4.7	-17.9	-30.8	0.2	-24.6	-24.5		-97.6
6/24/03 11:00	19.4	4.3	-20.4	-35.9	0.2	-21.6	-21.8		-99.6
6/24/03 12:00	19.3	4.2	-21.5	-43.7	0.2	-20.3	-20.6		-105.9
6/24/03 13:00	19.3	4.0	-21.0	-40.9	0.2	-20.3	-20.4		-102.3
6/24/03 14:00	20.3	4.4	-20.5	-40.0	5.6	-20.2	-20.2		-95.2
6/24/03 15:00	18.6	2.4	-19.9	-39.1	-0.2	-20.1	-20.0		-99.4
6/24/03 16:00	16.6	1.3	-19.4	-31.9	16.4	-20.1	-19.9		-74.9
6/24/03 17:00	14.4	-0.4	-5.0	-38.1	-19.2	-20.0	-19.7		-102.0
6/24/03 18:00	14.5	-1.0	-11.4	-22.2	-11.3	-19.9	-19.5		-84.5
6/24/03 19:00	11.1	-3.9	-16.7	-33.0	-20.9	-19.9	-19.4		-109.9
6/24/03 20:00	13.5	-0.6	-13.9	-36.5	-22.8	-16.4	-15.7		-105.3
6/24/03 21:00	18.8	3.5	-15.0	-31.0	-19.2	-10.8	-9.8		-85.9
6/24/03 22:00	13.9	-1.1	-19.7	-49.0	-35.0	-13.3	-12.2		-129.2
6/24/03 23:00	17.7	3.0	-21.7	-49.3	-34.8	-11.5	-11.1		-128.4
6/25/03 0:00	21.0	5.6	-21.5	-38.0	-28.9	-13.6	-13.2		-115.3
6/25/03 1:00	20.5	5.8	-21.3	-38.4	-30.3	-15.7	-15.3		-121.0
6/25/03 2:00	21.0	6.0	-21.0	-39.7	-30.4	-17.9	-17.4		-126.4
6/25/03 3:00	20.9	5.7	-20.7	-40.9	-30.6	-20.0	-19.4		-131.6
6/25/03 4:00	21.0	7.2	-20.2	-42.1	-30.7	-22.0	-21.5		-136.5
6/25/03 5:00	22.4	8.2	-19.8	-43.4	-30.9	-23.7	-23.4		-141.2
6/25/03 6:00	21.4	6.9	-19.4	-46.0	-34.6	-25.4	-25.4		-150.7

6/25/03 7:00	21.9	7.1	-19.3	-36.9	-27.2	-27.6	-26.7		-137.7
6/25/03 8:00	18.3	3.7	-16.8	-34.1	-23.7	-29.2	-28.6		-132.3
6/25/03 9:00	16.8	1.7	-13.3	-31.9	-21.0	-25.2	-24.6		-116.0
6/25/03 10:00	19.9	5.1	-8.5	-26.8	-15.3	-21.2	-20.6		-92.4
6/25/03 11:00	22.8	8.1	-8.4	-26.8	-15.9	-21.2	-21.6		-93.9
6/25/03 12:00	26.1	7.1	-10.9	-25.7	-15.2	-22.8	-22.3		-96.9
6/25/03 13:00	27.4	8.9	-15.0	-35.0	-21.8	-23.7	-22.8		-118.3
6/25/03 14:00	25.8	7.3	-17.6	-45.0	-30.5	-24.6	-23.4		-141.0
6/25/03 15:00	28.3	11.0	-12.3	-35.5	-22.7	-24.4	-23.9		-118.6
6/25/03 16:00	26.9	8.8	-11.9	-33.3	-20.5	-23.6	-23.2		-112.5
6/25/03 17:00	19.8	6.3	-11.8	-29.6	-17.2	-22.9	-22.4		-104.0
6/25/03 18:00	16.7	2.1	-11.6	-30.3	-19.7	-22.2	-21.7		-105.6
6/25/03 19:00	14.2	1.0	-11.4	-33.1	-19.1	-21.5	-21.0		-106.1
6/25/03 20:00	16.8	2.6	-11.2	-28.5	-18.1	-20.8	-20.3		-99.0
6/25/03 21:00	18.5	3.9	-12.7	-26.1	-14.5	-18.0	-17.1		-88.4
6/25/03 22:00	21.1	7.3	-14.2	-33.7	-21.1	-16.9	-15.6		-101.5
6/25/03 23:00	21.2	6.7	-15.3	-37.8	-24.4	-11.1	-10.1		-98.8
6/26/03 0:00	22.9	9.3	-18.6	-40.3	-28.2	-14.9	-14.6		-116.6
6/26/03 1:00	21.2	7.3	-21.6	-43.7	-30.5	-18.7	-19.0		-133.5
6/26/03 2:00	20.7	6.9	-21.5	-44.1	-32.9	-22.2	-21.7		-142.5
6/26/03 3:00	19.4	5.3	-21.4	-44.4	-34.3	-23.8	-22.5		-146.4
6/26/03 4:00	19.5	6.6	-21.4	-44.8	-35.1	-25.3	-23.3		-149.9
6/26/03 5:00	20.9	8.6	-21.3	-45.1	-36.0	-26.9	-24.1		-153.4
6/26/03 6:00	21.1	5.9	-21.2	-48.8	-35.9	-28.4	-24.9		-159.2
6/26/03 7:00	20.5	7.5	-21.2	-47.1	-34.4	-27.6	-26.5		-156.8
6/26/03 8:00	17.4	3.5	-18.3	-41.1	-30.3	-29.9	-28.8		-148.3
6/26/03 9:00	19.6	5.8	-14.5	-35.9	-24.1	-24.4	-25.4		-124.3
6/26/03 10:00	21.0	7.1	-10.8	-31.5	-18.0	-25.5	-25.2		-111.0
6/26/03 11:00	23.6	10.1	-11.1	-33.3	-18.9	-18.0	-18.8		-100.1
6/26/03 12:00	20.9	8.2	-13.8	-30.5	-18.6	-22.6	-22.0		-107.5
6/26/03 13:00	20.3	20.4	-13.3	-27.4	-15.0	-22.6	-22.3		-100.4
6/26/03 14:00	22.2	22.7	-12.0	-24.2	-11.4	-21.8	-21.4		-90.7
6/26/03 15:00	23.0	23.4	-10.7	-20.9	-13.9	-21.0	-20.4		-87.0
6/26/03 16:00	20.7	20.4	-12.8	-29.4	-19.5	-20.3	-19.5		-101.4
6/26/03 17:00	16.7	15.6	-17.4	-38.5	-25.7	-19.5	-18.6		-119.7
6/26/03 18:00	8.0	7.5	-22.0	-49.4	-36.1	-20.4	-19.5		-147.4
6/26/03 19:00	5.0	5.3	-25.3	-53.6	-36.1	-20.9	-20.7		-156.6
6/26/03 20:00	6.8	6.0	-15.7	-40.6	-26.2	-14.6	-14.0		-111.1
6/26/03 21:00	12.7	12.1	-11.3	-29.8	-19.0	-10.4	-9.5		-79.9
6/26/03 22:00	12.8	12.1	-13.3	-32.8	-21.8	-9.2	-7.6		-84.7
6/26/03 23:00	16.2	16.0	-14.2	-24.6	-16.9	-9.3	-8.5		-73.4
6/27/03 0:00	17.2	17.2	-15.0	-27.8	-19.8	-14.0	-13.6		-90.2
6/27/03 1:00	17.4	17.8	-15.8	-30.3	-22.7	-15.4	-15.0		-99.1
6/27/03 2:00	17.0	17.4	-16.6	-31.2	-23.5	-16.9	-16.3		-104.5
6/27/03 3:00	16.6	17.0	-17.4	-32.1	-24.0	-18.3	-17.7		-109.5
6/27/03 4:00	17.8	16.8	-18.2	-33.0	-24.5	-19.7	-19.1		-114.5
6/27/03 5:00	18.4	17.0	-19.0	-37.0	-26.4	-21.2	-20.4		-124.0
6/27/03 6:00	11.9	11.0	-18.7	-44.7	-35.3	-22.6	-21.8		-143.0
6/27/03 7:00	13.6	12.1	-17.8	-45.8	-33.4	-24.0	-23.8		-144.6
6/27/03 8:00	13.7	11.8	-13.8	-30.7	-20.4	-23.8	-22.6		-111.3
6/27/03 9:00	15.2	14.8	-7.9	-14.7	-9.9	-20.7	-18.8		-72.0
6/27/03 10:00	16.4	16.2	-4.7	-11.9	-3.7	-21.3	-21.2		-62.8

6/27/03 11:00	15.8	16.1	-4.9	-14.7	-3.0	-19.6	-19.9		-62.1
6/27/03 12:00	14.7	14.4	-4.9	-15.0	-5.8	-19.1	-19.2		-63.9
6/27/03 13:00	14.8	14.7	-4.8	-15.1	-6.1	-18.6	-18.4		-63.0
6/27/03 14:00	13.5	13.0	-0.8	-13.6	-1.9	-19.8	-20.1		-56.2
6/27/03 15:00	13.4	12.2	-2.0	-16.5	-5.1	-21.6	-21.2		-66.5
6/27/03 16:00	11.2	11.2	-3.3	-18.6	-8.3	-22.9	-22.1		-75.3
6/27/03 17:00	9.8	9.1	-4.6	-21.6	-11.5	-23.9	-23.0		-84.7
6/27/03 18:00	6.3	7.0	-5.8	-18.8	-9.4	-24.9	-23.9		-82.9
6/27/03 19:00	6.9	5.6	-6.9	-20.8	-10.4	-17.2	-17.0		-72.3
6/27/03 20:00	6.6	6.3	-8.0	-25.1	-14.5	-16.3	-15.3		-79.1
6/27/03 21:00	10.6	9.8	-9.0	-26.0	-15.8	-14.1	-13.6		-78.5
6/27/03 22:00	11.4	10.5	-10.1	-23.8	-16.9	-10.5	-10.2		-71.4
6/27/03 23:00	17.8	13.9	-11.1	-29.8	-20.5	-8.8	-8.2		-78.4
6/28/03 0:00	16.4	14.2	-12.1	-30.8	-22.9	-13.6	-13.1		-92.4
6/28/03 1:00	17.0	16.2	-12.9	-24.6	-17.3	-17.8	-17.3		-89.8
6/28/03 2:00	17.2	16.6	-13.5	-25.2	-18.2	-18.7	-18.4		-93.9
6/28/03 3:00	16.6	16.6	-14.0	-26.4	-19.9	-19.7	-19.5		-99.4
6/28/03 4:00	15.9	16.3	-14.6	-27.6	-21.7	-20.6	-20.6		-105.0
6/28/03 5:00	16.8	16.6	-15.1	-28.8	-23.5	-21.5	-21.7		-110.6
6/28/03 6:00	17.2	16.9	-15.7	-32.5	-25.3	-22.5	-22.8		-118.7
6/28/03 7:00	16.7	16.2	-22.6	-0.2	-33.9	-28.0	-27.9		-112.6
6/28/03 8:00	15.7	15.3	-20.3	-0.1	-33.1	-31.0	-29.6		-114.1
6/28/03 9:00	16.6	16.0	-18.0	-0.1	-26.3	-27.1	-24.8		-96.3
6/28/03 10:00	18.1	18.2	-16.0	0.0	-23.7	-25.4	-25.0		-90.0
6/28/03 11:00	18.3	18.5	-13.9	0.0	-14.9	-26.4	-24.6		-79.7
6/28/03 12:00	17.8	17.3	-11.9	0.1	-12.4	-26.3	-24.6		-75.1
6/28/03 13:00	18.1	17.7	-11.6	0.1	-12.9	-26.0	-24.7		-75.0
6/28/03 14:00	17.2	17.7	-12.6	0.2	-13.4	-25.7	-24.7		-76.2
6/28/03 15:00	17.5	17.3	-13.6	0.2	-14.4	-25.4	-24.7		-78.0
6/28/03 16:00	17.6	16.7	-14.6	0.2	-16.3	-25.2	-24.8		-80.6
6/28/03 17:00	16.2	15.5	-15.6	0.2	-18.1	-24.9	-24.8		-83.2
6/28/03 18:00	14.6	14.0	-13.6	0.2	-23.8	-25.1	-24.8		-87.2
6/28/03 19:00	11.4	10.9	-14.8	-31.7	-21.2	-25.4	-24.8		-117.8
6/28/03 20:00	9.8	9.4	-11.1	-31.0	-18.8	-28.8	-31.2		-120.9
6/28/03 21:00	12.9	15.0	-8.5	-18.3	-6.8	-19.1	-20.7		-73.4
6/28/03 22:00	15.0	14.2	-7.6	-19.5	-11.8	-13.8	-12.9		-65.6
6/28/03 23:00	14.7	18.0	-10.0	-26.3	-16.8	-10.4	-10.9		-74.4
6/29/03 0:00	15.6	14.6	-12.3	-31.9	-21.1	-13.7	-12.9		-92.0
6/29/03 1:00	15.2	15.1	-13.4	-29.5	-20.9	-15.3	-14.9		-94.1
6/29/03 2:00	14.8	12.6	-14.2	-31.4	-20.8	-16.9	-16.8		-100.1
6/29/03 3:00	13.6	11.7	-14.9	-33.3	-22.5	-18.6	-18.8		-108.0
6/29/03 4:00	14.0	12.2	-15.6	-35.1	-24.2	-20.2	-20.8		-116.0
6/29/03 5:00	12.3	10.1	-16.4	-37.5	-26.0	-22.5	-23.1		-125.5
6/29/03 6:00	10.7	9.6	-17.1	-39.9	-27.8	-25.7	-25.4		-135.8
6/29/03 7:00	8.4	7.2	-17.8	-40.1	-29.5	-30.8	-30.0		-148.2
6/29/03 8:00	9.5	8.3	-18.6	-39.3	-28.3	-34.0	-33.3		-153.5
6/29/03 9:00	10.6	10.1	-16.2	-33.5	-21.1	-30.3	-29.6		-130.8
6/29/03 10:00	13.8	12.8	-13.3	-24.8	-13.9	-26.7	-25.9		-104.6
6/29/03 11:00	13.2	12.5	-10.9	-26.4	-16.8	-27.4	-27.6		-109.0
6/29/03 12:00	14.2	12.1	-10.3	-26.7	-15.5	-26.6	-26.2		-105.2
6/29/03 13:00	14.7	13.3	-9.7	-26.2	-14.2	-25.1	-24.8		-100.1
6/29/03 14:00	15.6	14.8	-9.1	-25.8	-12.9	-23.6	-23.4		-94.9

6/29/03 15:00	13.9	13.1	-8.5	-24.5	-12.9	-22.2	-22.0		-90.1
6/29/03 16:00	16.4	15.7	-7.9	-22.6	-13.2	-19.6	-20.6		-83.9
6/29/03 17:00	15.6	15.1	-8.3	-19.1	-9.7	-18.7	-19.2		-75.0
6/29/03 18:00	18.6	18.1	-9.2	-21.2	-14.5	-17.6	-17.0		-79.5
6/29/03 19:00	18.0	16.8	-10.1	-24.8	-17.2	-20.3	-20.2		-92.5
6/29/03 20:00	16.9	16.1	-10.9	-28.5	-19.8	-17.9	-18.4		-95.6
6/29/03 21:00	19.2	18.6	-11.7	-22.9	-14.4	-16.3	-15.2		-80.5
6/29/03 22:00	17.5	17.2	-12.5	-25.4	-17.2	-12.6	-12.0		-79.8
6/29/03 23:00	14.9	13.9	-13.2	-32.4	-20.1	-14.7	-14.6		-95.0
6/30/03 0:00	13.9	13.1	-14.0	-35.9	-22.0	-19.3	-19.4		-110.6
6/30/03 1:00	13.8	14.1	-14.4	-31.8	-22.6	-19.4	-19.9		-108.2
6/30/03 2:00	14.1	13.6	-14.0	-32.7	-23.1	-19.7	-20.3		-109.9
6/30/03 3:00	14.0	12.8	-13.6	-33.6	-23.6	-20.4	-20.8		-112.1
6/30/03 4:00	15.1	14.3	-13.3	-34.6	-24.2	-21.0	-21.3		-114.3
6/30/03 5:00	16.0	16.3	-12.9	-35.3	-24.7	-21.7	-21.8		-116.3
6/30/03 6:00	15.8	16.1	-12.5	-28.7	-20.9	-22.4	-22.4		-106.8
6/30/03 7:00	14.8	13.8	-10.7	-27.7	-17.3	-24.0	-23.6		-103.3
6/30/03 8:00	13.4	12.5	-8.9	-25.0	-14.9	-24.6	-23.3		-96.6
6/30/03 9:00	16.1	15.4	-7.5	-19.2	-8.7	-21.5	-20.6		-77.5
6/30/03 10:00	14.3	13.1	-6.1	-20.8	-7.6	-22.3	-20.4		-77.2
6/30/03 11:00	16.9	15.8	-4.8	-15.3	-5.8	-20.8	-20.7		-67.3
6/30/03 12:00	16.3	15.3	-5.8	-23.8	-11.9	-19.0	-18.9		-79.4
6/30/03 13:00	18.6	18.8	-6.6	-20.4	-9.3	-17.2	-17.1		-70.6
6/30/03 14:00	20.6	20.3	-6.6	-18.1	-6.8	-15.4	-15.3		-62.2
6/30/03 15:00	19.2	19.3	-6.6	-16.6	-4.4	-13.5	-13.5		-54.7
6/30/03 16:00	19.2	18.6	-6.6	-21.0	-6.3	-12.7	-11.7		-58.3
6/30/03 17:00	17.4	17.2	-7.3	-23.7	-8.2	-12.1	-11.2		-62.4
6/30/03 18:00	12.7	11.3	-8.0	-23.2	-10.2	-11.5	-11.3		-64.2
6/30/03 19:00	11.7	11.0	-3.8	-17.2	-4.9	-10.9	-11.4		-48.2
6/30/03 20:00	11.7	10.3	-2.0	-14.8	-5.1	-10.4	-9.7		-42.1
6/30/03 21:00	12.3	11.8	-4.9	-17.9	-5.9	-7.1	-6.4		-42.1
6/30/03 22:00	12.1	11.4	-5.4	-14.5	-7.4	-6.0	-4.6		-37.8
6/30/03 23:00	12.6	12.0	-5.9	-22.5	-10.8	-12.6	-11.1		-62.9
7/1/03 0:00	17.6	17.4	-6.7	-17.9	-12.9	-9.5	-9.0		-56.0
7/1/03 1:00	18.6	17.7	-7.5	-21.4	-14.2	-11.4	-11.0		-65.5
7/1/03 2:00	17.5	16.9	-8.4	-24.9	-15.4	-13.4	-12.9		-75.0
7/1/03 3:00	17.3	15.4	-9.3	-28.1	-16.7	-15.3	-14.8		-84.2
7/1/03 4:00	17.1	16.8	-10.2	-25.8	-17.9	-17.2	-16.8		-87.8
7/1/03 5:00	19.1	18.7	-10.9	-23.5	-17.9	-18.4	-18.3		-89.0
7/1/03 6:00	19.8	18.7	-9.1	-21.2	-15.7	-19.6	-19.8		-85.5
7/1/03 7:00	17.0	16.8	-7.3	-23.4	-13.7	-20.5	-20.7		-85.6
7/1/03 8:00	15.9	14.9	-5.5	-16.8	-11.0	-24.5	-24.0		-81.8
7/1/03 9:00	17.1	16.8	-4.3	-17.8	-7.5	-23.1	-22.6		-75.2
7/1/03 10:00	18.1	18.4	-3.0	-13.6	-4.1	-18.0	-17.6		-56.3
7/1/03 11:00	19.9	19.7	-2.1	-18.7	-7.6	-11.7	-12.6		-52.7
7/1/03 12:00	17.2	17.8	-2.7	-15.9	-7.2	-16.0	-14.2		-56.0
7/1/03 13:00	17.9	17.7	-3.3	-20.8	-7.4	-16.2	-13.8		-61.5
7/1/03 14:00	19.1	18.9	-3.9	-21.0	-8.0	-16.4	-13.3		-62.7
7/1/03 15:00	20.3	20.1	-4.4	-21.3	-8.6	-16.7	-12.8		-63.8
7/1/03 16:00	17.3	16.8	-5.0	-21.5	-9.2	-12.7	-13.0		-61.5
7/1/03 17:00	13.7	12.8	-5.6	-21.7	-9.8	-14.1	-13.1		-64.4
7/1/03 18:00	12.1	12.1	-2.5	-11.1	-0.9	-14.2	-13.2		-41.9

7/1/03 19:00	12.7	11.7	-3.3	-12.6	-2.7	-5.2	-4.3		-28.1
7/1/03 20:00	11.9	10.8	-3.2	-19.4	-9.7	-6.3	-5.8		-44.3
7/1/03 21:00	14.1	13.2	-5.4	-14.2	-4.5	-1.7	-1.0		-26.9
7/1/03 22:00	12.1	10.7	-8.8	-22.4	-11.1	-0.5	0.4		-42.4
7/1/03 23:00	15.9	15.7	-11.9	-30.5	-18.5	-6.6	-5.4		-72.9
7/2/03 0:00	16.1	16.8	-12.7	-33.4	-22.1	-11.6	-11.0		-90.8
7/2/03 1:00	15.8	15.7	-13.5	-33.7	-24.2	-18.7	-16.7		-106.9
7/2/03 2:00	17.1	16.3	-14.3	-30.4	-24.1	-18.7	-17.7		-105.1
7/2/03 3:00	17.5	17.0	-14.2	-29.7	-24.0	-18.6	-18.7		-105.2
7/2/03 4:00	18.0	17.7	-13.8	-32.0	-23.8	-18.5	-19.7		-107.9
7/2/03 5:00	18.6	19.4	-13.4	-34.4	-23.7	-19.0	-20.7		-111.1
7/2/03 6:00	17.6	16.8	-13.0	-35.4	-25.0	-22.0	-21.7		-117.1
7/2/03 7:00	15.5	14.8	-12.6	-33.1	-23.6	-23.7	-23.0		-115.9
7/2/03 8:00	15.2	13.7	-8.9	-26.5	-18.3	-22.0	-21.0		-96.6
7/2/03 9:00	18.3	17.0	-3.5	-17.0	-9.3	-17.2	-17.6		-64.7
7/2/03 10:00	Not Cor	Not Cor	Not Cor	Not Cor	Not Cor	Not Cor	Not Connect		0.0
7/2/03 11:00	22.2	21.3	-0.4	-6.9	0.4	-18.9	-18.4		-44.3
7/2/03 12:00	23.3	22.0	-1.6	-7.1	1.4	-17.0	-16.6		-40.9
7/2/03 13:00	24.0	22.7	-2.7	-10.3	1.2	-16.0	-15.7		-43.5
7/2/03 14:00	24.4	23.8	-3.7	-12.0	-0.9	-15.7	-15.4		-47.7
7/2/03 15:00	22.0	22.2	-4.6	-10.6	-1.0	-15.5	-15.1		-46.8
7/2/03 16:00	17.6	17.6	-5.8	-23.7	-8.3	-15.2	-14.9		-67.9
7/2/03 17:00	16.3	16.2	-1.2	-11.8	-1.9	-14.9	-14.6		-44.4
7/2/03 18:00	13.5	11.9	-2.0	-15.9	-5.5	-14.6	-14.4		-52.4
7/2/03 19:00	11.4	10.5	-2.7	-17.5	-4.0	-15.0	-14.6		-53.9
7/2/03 20:00	9.8	8.9	-3.5	-11.6	-1.2	-15.5	-15.0		-46.8
7/2/03 21:00	12.3	11.0	-3.0	-12.3	-2.0	-12.9	-11.9		-42.1
7/2/03 22:00	10.2	9.4	-9.8	-20.2	-10.7	-11.5	-10.7		-63.0
7/2/03 23:00	15.3	14.9	-11.8	-30.7	-17.4	-16.2	-15.7		-91.8
7/3/03 0:00	16.0	15.1	-11.6	-26.9	-18.4	-19.5	-18.5		-94.9
7/3/03 1:00	16.1	15.1	-11.4	-28.6	-16.4	-15.6	-16.5		-88.5
7/3/03 2:00	17.0	16.5	-11.2	-25.7	-16.4	-15.5	-16.7		-85.5
7/3/03 3:00	17.1	17.3	-11.0	-25.2	-17.8	-16.7	-17.3		-88.0
7/3/03 4:00	17.1	17.0	-10.8	-24.7	-19.2	-17.9	-17.8		-90.4
7/3/03 5:00	19.5	19.1	-10.7	-24.1	-20.5	-19.2	-18.4		-92.9
7/3/03 6:00	17.2	16.5	-10.5	-29.7	-18.5	-22.1	-21.2		-102.0
7/3/03 7:00	17.2	16.9	-9.6	-24.8	-14.0	-25.0	-24.8		-98.1
7/3/03 8:00	16.3	16.1	-7.4	-19.5	-10.6	-25.9	-26.4		-89.8
7/3/03 9:00	15.8	15.4	-5.1	-14.0	-5.6	-24.8	-22.6		-72.1
7/3/03 10:00	17.5	17.1	-2.9	-8.9	-0.6	-21.2	-18.3		-52.0
7/3/03 11:00	15.5	14.8	-8.6	-22.9	-11.5	-21.8	-21.6		-86.5
7/3/03 12:00	17.6	18.0	-9.3	-23.2	-11.9	-19.9	-19.2		-83.5
7/3/03 13:00	19.8	19.0	-9.8	-22.6	-11.1	-19.5	-18.8		-81.7
7/3/03 14:00	20.9	20.7	-10.3	-24.8	-16.2	-16.8	-16.2		-84.2
7/3/03 15:00	20.2	20.5	-10.8	-26.9	-14.3	-14.0	-13.5		-79.6
7/3/03 16:00	18.9	18.6	-10.1	-27.3	-14.8	-12.8	-12.0		-77.1
7/3/03 17:00	16.3	16.4	-10.5	-24.3	-16.8	-13.1	-12.4		-77.2
7/3/03 18:00	15.0	15.8	-11.0	-32.9	-15.5	-13.5	-12.7		-85.5
7/3/03 19:00	15.1	14.8	-7.6	-17.2	-6.8	-14.9	-14.0		-60.5
7/3/03 20:00	12.1	11.3	-3.4	-18.5	-7.2	-17.7	-16.4		-63.3
7/3/03 21:00	12.7	12.1	0.4	-10.9	-0.8	-14.3	-13.8		-39.5
7/3/03 22:00	11.5	10.4	-1.3	-16.3	-3.7	-14.9	-14.1		-50.3

7/3/03 23:00	13.3	12.9	-4.4	-16.5	-5.7	-17.4	-15.9		-59.9
7/4/03 0:00	16.5	16.7	-9.0	-26.2	-14.8	-18.7	-18.1		-87.0
7/4/03 1:00	17.1	16.9	-12.6	-23.5	-15.0	-14.5	-14.5		-80.1
7/4/03 2:00	18.4	18.3	-13.2	-25.3	-14.6	-12.9	-12.0		-77.8
7/4/03 3:00	16.8	16.2	-13.7	-26.1	-16.2	-13.8	-13.0		-82.8
7/4/03 4:00	15.8	14.9	-14.3	-26.9	-17.8	-14.8	-14.1		-87.9
7/4/03 5:00	15.7	14.6	-14.8	-27.8	-19.4	-15.7	-15.2		-92.9
7/4/03 6:00	14.7	14.2	-15.4	-28.6	-21.1	-16.6	-16.2		-97.9
7/4/03 7:00	11.9	11.1	-15.9	-29.4	-23.0	-14.7	-14.1		-97.2
7/4/03 8:00	10.8	10.3	-15.9	-36.0	-24.1	-11.9	-11.1		-99.1
7/4/03 9:00	13.2	12.9	-13.2	-27.8	-19.1	-12.5	-12.0		-84.5
7/4/03 10:00	11.4	9.5	-10.8	-27.9	-16.8	-29.5	-30.0		-115.0
7/4/03 11:00	13.3	11.9	-10.1	-19.5	-9.1	-26.6	-26.3		-91.6
7/4/03 12:00	13.9	13.9	-9.3	-22.9	-11.5	-23.2	-22.5		-89.4
7/4/03 13:00	16.3	14.9	-8.6	-20.1	-9.3	-20.6	-20.1		-78.8
7/4/03 14:00	16.3	15.8	-9.1	-28.7	-17.3	-19.1	-19.2		-93.4
7/4/03 15:00	16.6	16.7	-10.3	-25.8	-16.5	-17.6	-18.2		-88.4
7/4/03 16:00	16.3	15.7	-9.7	-27.5	-15.7	-16.6	-17.3		-86.7
7/4/03 17:00	13.6	13.0	-9.1	-29.2	-15.0	-16.9	-16.4		-86.5
7/4/03 18:00	12.4	12.5	-8.4	-30.9	-14.8	-18.1	-17.8		-90.0
7/4/03 19:00	10.5	8.7	-8.5	-21.5	-10.7	-23.7	-23.1		-87.4
7/4/03 20:00	8.0	7.4	-8.8	-22.4	-11.4	-26.3	-26.2		-95.1
7/4/03 21:00	12.6	11.5	-9.1	-25.6	-14.2	4.6	4.6		-39.6
7/4/03 22:00	13.6	13.0	-9.3	-28.7	-16.5	1.1	1.5		-52.0
7/4/03 23:00	17.5	17.2	-9.4	-17.4	-8.8	-10.7	-9.5		-55.9
7/5/03 0:00	13.6	15.4	-8.7	-18.1	-7.5	-18.8	-18.6		-71.7
7/5/03 1:00	16.2	15.7	-8.2	-18.5	-8.6	-14.9	-13.7		-63.9
7/5/03 2:00	15.3	15.8	-9.3	-20.3	-11.5	-15.6	-14.9		-71.5
7/5/03 3:00	13.8	14.4	-10.5	-22.0	-13.2	-17.2	-16.9		-79.8
7/5/03 4:00	12.4	12.1	-11.6	-23.7	-14.8	-18.9	-19.0		-87.9
7/5/03 5:00	13.5	12.5	-12.7	-25.4	-16.4	-20.5	-21.0		-96.1
7/5/03 6:00	13.7	11.9	-13.9	-27.2	-18.0	-22.2	-23.1		-104.3
7/5/03 7:00	13.3	12.4	-15.0	-28.8	-18.8	-25.8	-25.3		-113.7
7/5/03 8:00	11.9	11.3	-16.1	-30.3	-19.3	-29.0	-29.9		-124.6
7/5/03 9:00	11.2	10.1	-14.4	-37.8	-24.3	-32.7	-31.8		-140.9
7/5/03 10:00	15.9	15.5	-10.3	-20.4	-12.9	-27.1	-26.7		-97.5
7/5/03 11:00	15.2	14.0	-14.1	-33.1	-21.0	-32.4	-31.6		-132.2
7/5/03 12:00	16.7	17.6	-11.2	-25.4	-13.7	-27.8	-27.2		-105.2
7/5/03 13:00	16.7	16.3	-16.5	-33.3	-20.7	-24.6	-23.9		-119.0
7/5/03 14:00	19.2	19.2	-13.6	-26.0	-13.9	-23.3	-22.7		-99.5
7/5/03 15:00	14.0	13.3	-10.7	-22.8	-10.6	-22.3	-21.4		-87.8
7/5/03 16:00	13.4	12.8	-7.8	-21.2	-10.8	-21.5	-20.1		-81.4
7/5/03 17:00	13.1	12.5	-5.9	-20.5	-10.5	-20.7	-18.8		-76.4
7/5/03 18:00	8.4	7.1	-4.3	-20.1	-10.2	-20.5	-20.4		-75.4
7/5/03 19:00	7.7	7.2	-3.5	-11.3	-2.1	-23.4	-22.7		-63.0
7/5/03 20:00	8.6	7.7	-4.0	-12.1	-1.9	-25.7	-24.6		-68.3
7/5/03 21:00	11.0	9.9	-4.5	-7.8	-2.6	-22.2	-21.5		-58.6
7/5/03 22:00	11.3	9.8	-5.8	-16.7	-4.3	-21.8	-21.8		-70.3
7/5/03 23:00	15.0	14.3	-8.0	-20.5	-10.2	-11.4	-10.1		-60.1
7/6/03 0:00	19.0	19.0	-9.1	-24.6	-15.6	-12.4	-12.3		-74.1
7/6/03 1:00	18.1	18.3	-10.3	-26.9	-16.5	-11.4	-10.8		-75.9
7/6/03 2:00	17.0	17.8	-11.4	-28.3	-17.6	-13.2	-12.8		-83.3

7/6/03 3:00	16.6	15.7	-12.5	-29.8	-18.8	-15.0	-14.7		-90.8
7/6/03 4:00	15.8	15.1	-13.6	-31.2	-19.9	-16.8	-16.7		-98.2
7/6/03 5:00	15.1	14.3	-14.8	-32.6	-21.0	-18.6	-18.7		-105.7
7/6/03 6:00	14.4	14.9	-15.9	-34.1	-22.1	-20.4	-20.7		-113.1
7/6/03 7:00	12.1	10.8	-17.0	-33.5	-23.2	-26.6	-26.0		-126.4
7/6/03 8:00	11.3	10.6	-15.7	-28.5	-23.4	-30.4	-29.9		-128.0
7/6/03 9:00	13.6	12.9	-13.8	-26.3	-18.1	-28.5	-27.8		-114.4
7/6/03 10:00	13.9	13.2	-11.9	-24.7	-15.2	-27.6	-26.7		-106.2
7/6/03 11:00	15.0	15.3	-10.6	-24.7	-13.4	-27.3	-26.2		-102.1
7/6/03 12:00	16.8	16.6	-10.0	-21.3	-12.1	-25.4	-24.4		-93.2
7/6/03 13:00	17.1	17.3	-9.5	-17.6	-11.1	-23.5	-22.5		-84.2
7/6/03 14:00	14.6	14.1	-9.3	-28.1	-18.2	-32.6	-32.1		-120.4
7/6/03 15:00	18.3	18.6	-9.3	-27.0	-18.0	-18.4	-17.2		-89.9
7/6/03 16:00	18.6	18.6	-9.3	-25.9	-17.8	-13.1	-14.1		-80.3
7/6/03 17:00	17.8	17.4	-9.3	-26.0	-17.6	-15.0	-15.4		-83.3
7/6/03 18:00	17.0	16.5	-9.3	-27.6	-17.4	-16.9	-16.6		-87.9
7/6/03 19:00	16.4	15.8	-9.3	-27.2	-16.9	-18.4	-17.6		-89.4
7/6/03 20:00	17.1	16.5	-10.0	-22.8	-13.5	-16.1	-15.2		-77.6
7/6/03 21:00	19.8	19.5	-10.9	-21.6	-13.9	-12.4	-11.6		-70.4
7/6/03 22:00	18.3	19.3	-11.5	-25.4	-19.1	-8.6	-8.2		-72.9
7/6/03 23:00	17.6	18.4	-11.9	-30.2	-19.1	-8.7	-8.8		-78.7
7/7/03 0:00	18.0	18.8	-12.2	-29.1	-19.4	-14.2	-11.7		-86.6
7/7/03 1:00	18.5	18.3	-12.6	-29.5	-19.4	-15.2	-13.1		-89.7
7/7/03 2:00	17.4	17.3	-12.9	-29.5	-19.3	-16.3	-14.5		-92.4
7/7/03 3:00	16.1	16.3	-13.2	-29.5	-19.2	-17.4	-15.9		-95.1
7/7/03 4:00	17.6	17.0	-13.6	-29.5	-19.1	-18.4	-17.3		-97.8
7/7/03 5:00	18.8	19.1	-13.9	-29.5	-19.0	-19.5	-18.7		-100.6
7/7/03 6:00	17.5	17.4	-13.8	-29.5	-18.9	-21.0	-20.5		-103.7
7/7/03 7:00	14.5	13.5	-12.9	-24.3	-16.0	-24.2	-24.6		-102.0
7/7/03 8:00	11.4	11.3	-12.4	-28.8	-18.0	-30.7	-29.8		-119.6
7/7/03 9:00	11.8	10.4	-12.0	-28.3	-15.6	-30.3	-29.5		-115.7
7/7/03 10:00	13.5	12.7	-11.5	-24.6	-12.3	-28.5	-28.0		-104.9
7/7/03 11:00	15.3	14.9	-11.1	-27.4	-14.3	-26.7	-26.4		-105.9
7/7/03 12:00	16.9	17.6	-12.6	-26.8	16.4	-20.3	-19.9		-63.2
7/7/03 13:00	17.5	18.4	-12.5	-33.6	16.9	-19.6	-19.3		-68.1
7/7/03 14:00	18.3	18.5	-12.5	-34.3	-8.6	-17.4	-17.8		-90.7
7/7/03 15:00	17.3	17.1	-14.0	-31.0	-19.4	-15.0	-16.1		-95.5
7/7/03 16:00	16.4	16.2	-16.5	-29.7	-19.2	-12.9	-14.4		-92.6
7/7/03 17:00	13.5	12.9	-17.3	-35.2	0.4	-10.0	-10.6		-72.7
7/7/03 18:00	9.5	8.8	-17.0	-35.1	0.2	-4.8	-5.3		-62.0
7/7/03 19:00	10.1	9.4	-13.4	-37.7	0.1	-5.5	-6.0		-62.4
7/7/03 20:00	11.9	11.2	-11.6	-23.9	-0.1	-6.7	-7.4		-49.8
7/7/03 21:00	12.5	12.7	-10.7	-20.9	14.2	-6.4	-5.8		-29.6
7/7/03 22:00	11.0	10.2	-11.2	-25.8	-14.4	-4.9	-4.2		-60.5
7/7/03 23:00	19.7	19.2	-12.3	-32.2	-20.0	9.2	9.8		-45.6
7/8/03 0:00	20.9	21.1	-12.8	-30.9	-21.5	6.8	7.6		-50.9
7/8/03 1:00	17.9	18.1	-13.2	-30.8	-20.8	-18.0	-17.6		-100.5
7/8/03 2:00	17.1	16.9	-13.6	-30.8	-19.9	-18.0	-17.8		-100.2
7/8/03 3:00	16.9	16.6	-14.1	-28.4	-19.9	-18.0	-18.0		-98.5
7/8/03 4:00	17.9	16.6	-14.5	-28.8	-19.9	-18.1	-18.2		-99.6
7/8/03 5:00	20.5	19.0	-14.9	-29.2	-19.9	-18.5	-18.1		-100.7
7/8/03 6:00	18.1	19.0	-15.2	-32.4	-23.4	0.1	12.8		-58.1

7/8/03 7:00	17.2	16.8	-12.1	-24.1	-15.7	0.1	16.5		-35.3
7/8/03 8:00	11.8	11.3	-10.6	-24.8	-13.4	0.1	-21.1		-69.7
7/8/03 9:00	14.1	13.4	-9.5	-20.0	-11.7	0.1	-45.7		-86.9
7/8/03 10:00	13.7	13.0	-8.5	-19.0	-12.0	0.1	-41.5		-80.8
7/8/03 11:00	14.7	14.3	-7.4	-19.5	-12.0	0.1	-37.3		-76.0
7/8/03 12:00	15.9	15.6	-6.4	-19.4	-9.9	0.1	-33.8		-69.4
7/8/03 13:00	17.5	17.1	-5.7	-25.6	-14.7	0.1	-32.9		-78.8
7/8/03 14:00	17.8	17.8	-6.2	-23.3	-14.8	0.1	-31.8		-75.9
7/8/03 15:00	18.1	18.3	-6.6	-21.3	-14.8	0.1	-30.7		-73.3
7/8/03 16:00	17.4	17.3	-7.1	-20.6	-14.9	24.8	-29.6		-47.3
7/8/03 17:00	14.9	14.0	-7.5	-20.0	-14.9	-16.4	-15.9		-74.7
7/8/03 18:00	12.0	10.9	-8.0	-24.8	-15.4	-11.9	-11.5		-71.5
7/8/03 19:00	11.1	10.2	-8.4	-22.9	-11.0	-10.9	-9.8		-63.0
7/8/03 20:00	12.3	11.3	-8.9	-21.5	-12.8	-10.0	-8.4		-61.6
7/8/03 21:00	12.9	13.0	-9.2	-19.6	-13.9	-6.5	-5.4		-54.5
7/8/03 22:00	14.0	12.9	-9.5	-25.7	-14.9	-4.3	-2.7		-57.0
7/8/03 23:00	18.0	17.9	-9.4	-28.6	-14.6	-4.8	-7.7		-65.1
7/9/03 0:00	18.1	17.7	-9.3	-30.1	-14.5	-5.5	-10.2		-69.7
7/9/03 1:00	18.3	17.9	-9.3	-28.6	-14.5	-5.5	-10.4		-68.4
7/9/03 2:00	18.5	18.0	-9.3	-27.2	-14.5	-5.5	-10.6		-67.2
7/9/03 3:00	18.6	18.2	-9.3	-26.6	-14.5	-5.5	-10.9		-66.8
7/9/03 4:00	18.8	18.3	-9.3	-26.6	-14.5	-5.5	-11.1		-67.1
7/9/03 5:00	18.9	18.5	-9.3	-26.6	-14.5	-5.5	-11.3		-67.3
7/9/03 6:00	19.1	18.6	-9.3	-26.6	-14.5	-5.5	-11.6		-67.5
7/9/03 7:00	19.3	18.8	-9.3	-26.6	-14.5	-5.5	-11.8		-67.8
7/9/03 8:00	19.3	18.8	-9.3	-26.6	-14.5	-5.5	-11.9		-67.8
7/9/03 9:00	19.3	18.8	-9.3	-26.6	-14.5	-5.5	-11.9		-67.8
7/9/03 10:00	19.3	18.8	-9.3	-26.6	-14.5	-5.5	-11.9		-67.8
7/9/03 11:00	19.3	18.8	-9.3	-26.6	-14.5	-5.5	-11.9		-67.8
7/9/03 12:00	19.3	18.8	-9.3	-26.6	-14.5	-5.5	-11.9		-67.8
7/9/03 13:00	19.3	18.8	-9.3	-26.6	-14.5	-5.5	-11.9		-67.8
7/9/03 14:00	18.6	18.4	-11.9	-27.0	-18.0	-0.1	-23.3		-80.4
7/9/03 15:00	19.1	19.1	-11.2	-27.1	-17.7	-0.1	-21.1		-77.2
7/9/03 16:00	18.2	18.1	-10.4	-27.2	-17.3	-11.1	-11.3		-77.3
7/9/03 17:00	15.8	15.1	-9.6	-27.4	-17.0	-11.0	-10.7		-75.7
7/9/03 18:00	11.1	11.5	-8.8	-24.6	-16.6	-10.9	-10.2		-71.2
7/9/03 19:00	11.8	11.7	-7.4	-18.5	-12.1	-10.9	-10.0		-58.9
7/9/03 20:00	11.0	9.8	-5.9	-18.1	-10.3	-9.3	-8.2		-51.8
7/9/03 21:00	15.9	15.1	-5.9	-10.5	-3.8	-5.0	-4.2		-29.4
7/9/03 22:00	11.0	10.8	-6.6	-15.0	-4.2	-1.6	-0.5		-27.8
7/9/03 23:00	17.9	17.3	-8.3	-25.8	-14.7	-7.8	-5.0		-61.5
7/10/03 0:00	20.6	20.6	-4.0	-8.7	-3.4	-9.8	-9.9		-35.8
7/10/03 1:00	23.3	23.9	2.4	-4.9	1.0	-8.7	-9.0		-19.3
7/10/03 2:00	23.0	23.1	3.0	-6.6	0.2	-10.2	-10.8		-24.5
7/10/03 3:00	22.1	22.0	3.7	-3.2	-0.6	-12.4	-12.5		-25.1
7/10/03 4:00	28.3	28.7	4.3	-0.9	1.3	-0.8	-0.3		3.6
7/10/03 5:00	29.4	30.0	4.9	3.0	4.2	0.1	0.1		12.4
7/10/03 6:00	26.5	26.7	-9.5	-25.6	0.2	-0.4	0.9		-34.3
7/10/03 7:00	21.6	20.3	-9.6	-22.2	0.2	5.0	5.4		-21.2
7/10/03 8:00	17.0	18.0	-12.1	-28.3	0.2	-17.0	-17.3		-74.5
7/10/03 9:00	17.5	17.4	-9.9	-28.1	0.2	-17.0	-16.0		-70.7
7/10/03 10:00	18.0	17.1	-15.4	-33.8	0.2	-17.4	-16.5		-82.8

7/10/03 11:00	17.0	16.7	-7.6	-14.0	0.2	-15.9	-15.5		-52.7
7/10/03 12:00	16.4	16.4	-14.2	-25.5	0.2	-17.1	-16.6		-73.2
7/10/03 13:00	21.2	20.7	-12.2	-18.7	0.2	-19.4	-20.4		-70.5
7/10/03 14:00	20.3	19.7	-10.2	-22.6	0.2	-18.0	-17.6		-68.3
7/10/03 15:00	22.3	20.9	-8.5	-19.7	0.2	-18.6	-17.4		-64.0
7/10/03 16:00	21.7	21.6	-6.8	-16.8	0.2	-18.5	-17.5		-59.4
7/10/03 17:00	19.4	19.5	-5.6	-15.0	-8.1	-11.9	-10.3		-50.9
7/10/03 18:00	14.5	13.9	-3.8	-13.9	-5.6	-9.2	-8.6		-41.2
7/10/03 19:00	13.4	13.0	-2.0	-13.0	-5.1	-5.1	-5.3		-30.5
7/10/03 20:00	13.7	13.9	-0.2	-9.5	-4.8	-3.7	-4.8		-23.1
7/10/03 21:00	14.5	15.5	1.6	-6.1	-0.9	-2.6	-2.1		-10.1
7/10/03 22:00	14.9	14.6	-2.2	-8.6	-1.3	-0.3	1.5		-10.8
7/10/03 23:00	22.1	21.1	-5.3	-19.2	-10.0	-4.3	-3.7		-42.4
7/11/03 0:00	21.7	21.2	-6.2	-18.1	-10.1	-9.9	-8.8		-53.0
7/11/03 1:00	24.6	24.7	1.2	-4.0	-0.3	-9.2	-10.3		-22.6
7/11/03 2:00	23.0	23.5	1.1	-5.5	-1.5	-9.9	-10.8		-26.7
7/11/03 3:00	22.6	23.6	0.6	-7.0	-2.8	-11.1	-11.2		-31.5
7/11/03 4:00	23.9	23.7	0.0	-8.5	-4.0	-12.2	-11.5		-36.3
7/11/03 5:00	25.2	25.3	-0.6	-10.0	-5.3	-13.4	-11.9		-41.2
7/11/03 6:00	26.6	27.3	2.3	0.9	0.2	-15.8	-13.4		-25.7
7/11/03 7:00	23.1	22.7	4.0	3.2	0.2	-17.9	-18.0		-28.4
7/11/03 8:00	15.6	14.4	-11.6	-23.2	0.2	-28.0	-28.5		-91.1
7/11/03 9:00	17.4	17.0	-9.5	-30.6	0.2	-22.8	-23.7		-86.3
7/11/03 10:00	19.9	20.2	-8.0	-21.6	0.2	-20.4	-20.7		-70.5
7/11/03 11:00	19.1	19.5	-6.7	-17.7	0.2	-29.4	-29.1		-82.7
7/11/03 12:00	19.7	19.8	-5.4	-15.2	0.2	-28.1	-27.8		-76.1
7/11/03 13:00	19.3	18.9	-4.1	-12.7	0.2	-27.1	-26.5		-70.1
7/11/03 14:00	19.9	19.3	-2.8	-7.2	0.2	-26.2	-25.3		-61.2
7/11/03 15:00	18.7	18.5	-1.9	-6.9	14.5	-25.5	-24.1		-43.9
7/11/03 16:00	16.3	15.7	-2.6	-6.7	-2.3	-25.2	-22.9		-59.6
7/11/03 17:00	14.7	13.9	-3.3	-6.6	-3.5	-11.6	-11.1		-36.0
7/11/03 18:00	11.8	11.2	-4.0	-7.3	-4.8	-7.2	-7.0		-30.3
7/11/03 19:00	13.1	12.6	-4.7	-12.6	-5.2	-7.8	-8.3		-38.7
7/11/03 20:00	12.6	11.9	-5.4	-11.9	-3.7	-9.6	-9.6		-40.2
7/11/03 21:00	14.1	14.0	-6.1	-14.0	-6.0	-4.9	-4.3		-35.3
7/11/03 22:00	14.4	13.9	-6.8	-18.7	-9.6	-1.2	-1.2		-37.4
7/11/03 23:00	13.7	13.1	-7.8	-27.6	-13.7	-5.6	-7.7		-62.4
7/12/03 0:00	24.7	24.9	-1.7	-6.0	0.2	-8.8	-7.1		-23.5
7/12/03 1:00	23.2	23.8	0.5	-4.2	-1.6	-10.6	-8.9		-24.8
7/12/03 2:00	22.6	22.9	-1.1	-6.9	-3.4	-12.3	-10.8		-34.6
7/12/03 3:00	22.7	22.1	-2.8	-9.6	-5.2	-14.1	-12.6		-44.5
7/12/03 4:00	22.8	22.1	-4.5	-12.4	-7.0	-15.9	-14.5		-54.3
7/12/03 5:00	20.9	20.1	-6.2	-15.1	-8.9	-18.0	-16.4		-64.4
7/12/03 6:00	20.4	18.6	-7.9	-17.8	-10.7	-20.3	-21.6		-78.2
7/12/03 7:00	17.8	18.2	-8.7	-19.3	-12.6	-23.5	-24.1		-88.1
7/12/03 8:00	18.4	17.0	-9.6	-22.3	-17.0	-29.7	-29.3		-108.0
7/12/03 9:00	17.9	17.4	-10.5	-28.6	-18.3	-27.1	-25.4		-109.9
7/12/03 10:00	19.5	18.8	-11.3	-26.1	-16.9	-23.6	-23.5		-101.4
7/12/03 11:00	23.3	22.7	-13.3	-24.9	-17.9	-20.0	-20.1		-96.3
7/12/03 12:00	21.8	21.0	-13.4	-26.6	-18.2	-18.3	-18.1		-94.6
7/12/03 13:00	24.0	24.0	-12.5	-22.9	-17.0	-16.7	-16.3		-85.4
7/12/03 14:00	26.8	26.5	-11.6	-19.2	-15.7	-15.0	-14.6		-76.2

7/12/03 15:00	24.9	24.9	-10.7	-21.3	-14.5	-13.4	-12.9		-72.7
7/12/03 16:00	24.8	24.3	-9.7	-21.3	-13.3	-11.7	-11.2		-67.2
7/12/03 17:00	21.8	22.1	-8.8	-21.3	-12.2	-13.0	-10.7		-66.0
7/12/03 18:00	20.1	19.2	-8.4	-21.3	-12.1	-15.7	-13.7		-71.1
7/12/03 19:00	16.2	14.4	-9.7	-20.4	-12.1	-17.8	-16.7		-76.6
7/12/03 20:00	15.6	14.9	-10.9	-25.5	-14.1	-18.4	-16.8		-85.8
7/12/03 21:00	18.7	18.0	-12.2	-24.2	-13.9	-13.6	-12.8		-76.6
7/12/03 22:00	17.4	16.9	-13.4	-28.5	-17.6	-10.9	-10.0		-80.5
7/12/03 23:00	18.0	17.1	-13.9	-32.7	-21.2	-15.1	-14.3		-97.2
7/13/03 0:00	16.1	15.3	-14.1	-36.5	-24.6	-18.9	-18.6		-112.8
7/13/03 1:00	21.1	21.0	-5.8	-15.3	-8.6	-12.0	-11.8		-53.6
7/13/03 2:00	20.1	19.6	-6.3	-17.8	-10.6	-13.9	-13.9		-62.4
7/13/03 3:00	19.2	18.3	-7.3	-20.3	-12.5	-15.8	-15.9		-71.9
7/13/03 4:00	18.4	18.3	-8.4	-22.9	-14.5	-17.7	-17.9		-81.4
7/13/03 5:00	17.9	17.7	-9.4	-25.4	-16.4	-19.6	-20.0		-90.9
7/13/03 6:00	15.8	14.7	-10.5	-27.6	-18.4	-21.5	-22.0		-100.0
7/13/03 7:00	14.6	14.3	-11.6	-29.3	-20.3	-27.3	-27.2		-115.7
7/13/03 8:00	14.3	13.4	-12.6	-30.2	-21.9	-31.3	-31.3		-127.3
7/13/03 9:00	16.2	15.7	-13.5	-28.9	-21.5	-26.8	-26.0		-116.7
7/13/03 10:00	20.3	20.7	-14.3	-27.3	-20.1	-22.3	-20.4		-104.5
7/13/03 11:00	21.3	20.4	-13.3	-29.5	-20.2	-24.6	-23.3		-110.9
7/13/03 12:00	24.3	24.2	-11.1	-22.2	-15.9	-20.0	-19.3		-88.5
7/13/03 13:00	22.9	24.1	-8.9	-14.9	-11.5	-15.7	-15.3		-66.3
7/13/03 14:00	23.7	23.3	-6.7	-15.5	-10.8	-13.2	-12.2		-58.4
7/13/03 15:00	24.4	24.4	-6.0	-17.0	-12.6	-10.6	-9.6		-55.8
7/13/03 16:00	23.9	23.7	-6.5	-17.8	-14.2	-7.9	-7.0		-53.4
7/13/03 17:00	26.7	26.8	-7.0	-18.4	-15.8	-4.8	-4.9		-50.9
7/13/03 18:00	20.2	19.7	-7.6	-20.7	-17.3	-7.5	-8.2		-61.2
7/13/03 19:00	18.7	18.2	-8.1	-23.7	-17.9	-10.2	-10.6		-70.5
7/13/03 20:00	17.5	16.3	-8.6	-26.7	-16.6	-12.9	-11.2		-76.0
7/13/03 21:00	19.3	18.4	-9.4	-23.7	-15.2	-8.9	-7.4		-64.7
7/13/03 22:00	19.3	18.4	-10.6	-23.2	-14.7	-7.5	-5.8		-61.7
7/13/03 23:00	21.0	21.6	-11.7	-29.1	-18.3	-11.9	-11.5		-82.5
7/14/03 0:00	21.4	21.4	-12.6	-28.7	-19.1	-18.8	-16.9		-96.1
7/14/03 1:00	22.4	22.2	-12.5	-24.9	-17.9	-16.2	-15.9		-87.4
7/14/03 2:00	21.7	21.8	-12.4	-22.2	-16.7	-17.4	-16.6		-85.2
7/14/03 3:00	22.5	22.5	-12.3	-23.2	-16.0	-18.5	-17.3		-87.3
7/14/03 4:00	23.1	23.4	-12.2	-24.3	-15.5	-19.7	-18.0		-89.6
7/14/03 5:00	24.2	24.0	-12.1	-25.3	-15.0	-19.6	-18.7		-90.6
7/14/03 6:00	23.9	23.9	-11.9	-24.6	-17.6	-19.1	-20.4		-93.6
7/14/03 7:00	16.9	17.1	-12.6	-32.4	-23.5	-23.7	-22.9		-115.1
7/14/03 8:00	14.5	14.7	-13.3	-29.4	-21.8	-25.9	-24.8		-115.2
7/14/03 9:00	18.3	17.7	-14.1	-27.2	-21.2	-23.6	-23.5		-109.5
7/14/03 10:00	18.6	18.1	-14.7	-33.2	-22.8	-23.6	-23.0		-117.3
7/14/03 11:00	21.2	21.4	-10.3	-25.7	-17.4	-18.1	-15.9		-87.5
7/14/03 12:00	I/O Time	I/O Time	I/O Time	I/O Time	I/O Time	I/O Time	I/O Time	I/O Timeout	0.0
7/14/03 13:00	20.9	20.9	-7.7	-22.3	-12.5	-13.3	-12.8		-68.7
7/14/03 14:00	22.1	22.4	-7.6	-23.1	-13.4	-12.6	-12.1		-68.7
7/14/03 15:00	22.8	23.1	-7.4	-20.1	-13.5	-11.8	-11.5		-64.2
7/14/03 16:00	20.4	19.4	-7.3	-22.1	-12.7	-12.6	-11.4		-66.1
7/14/03 17:00	17.6	16.5	-7.1	-22.3	-11.5	-13.8	-11.6		-66.3
7/14/03 18:00	15.3	15.6	-6.9	-19.8	-9.8	-14.8	-11.7		-63.1

7/14/03 19:00	14.6	13.2	-7.0	-17.8	-9.3	-15.5	-14.0		-63.5
7/14/03 20:00	14.6	13.1	-7.0	-13.9	-9.5	-17.9	-16.4		-64.8
7/14/03 21:00	17.4	17.2	-7.1	-13.4	-5.7	-12.9	-11.7		-50.9
7/14/03 22:00	15.8	15.1	-7.0	-16.8	-8.3	-12.6	-11.3		-56.0
7/14/03 23:00	16.2	15.6	-6.4	-18.6	-11.3	-12.3	-11.7		-60.4
7/15/03 0:00	23.5	23.3	-5.8	-19.6	-12.6	-8.2	-7.6		-53.7
7/15/03 1:00	22.4	21.9	-7.1	-17.9	-10.9	-13.4	-12.6		-62.0
7/15/03 2:00	22.2	22.8	-8.5	-18.6	-12.0	-13.8	-13.0		-66.0
7/15/03 3:00	22.7	23.2	-9.9	-19.3	-13.4	-14.2	-13.4		-70.3
7/15/03 4:00	23.2	23.6	-11.3	-20.0	-14.9	-14.6	-13.8		-74.7
7/15/03 5:00	25.2	25.4	-12.7	-20.7	-16.3	-15.1	-14.2		-79.0
7/15/03 6:00	21.4	20.8	-13.7	-35.0	-23.3	-24.8	-24.7		-121.5
7/15/03 7:00	17.0	17.8	-13.6	-31.6	-23.9	-28.6	-28.4		-126.2
7/15/03 8:00	17.5	16.8	-10.2	-23.8	-15.6	-27.7	-27.2		-104.5
7/15/03 9:00	17.3	16.9	-7.2	-19.0	-9.4	-24.5	-24.0		-84.2
7/15/03 10:00	16.4	16.0	-7.3	-25.3	-11.1	-25.0	-22.6		-91.3
7/15/03 11:00	17.5	16.1	-7.5	-22.9	-12.5	-27.8	-26.5		-97.0
7/15/03 12:00	19.2	18.2	-7.6	-18.1	-11.3	-23.6	-23.6		-84.2
7/15/03 13:00	20.2	19.7	-7.8	-20.1	-11.8	-23.5	-23.7		-86.8
7/15/03 14:00	22.0	21.6	-7.9	-20.9	-13.0	-23.9	-24.3		-90.0
7/15/03 15:00	23.4	23.5	-8.1	-19.5	-13.1	-23.5	-23.4		-87.6
7/15/03 16:00	20.6	21.3	-8.2	-18.2	-12.8	-22.8	-22.0		-84.0
7/15/03 17:00	17.1	16.7	-8.4	-16.8	-12.4	-22.2	-20.6		-80.4
7/15/03 18:00	14.8	13.8	-8.9	-18.2	-13.7	-18.8	-18.5		-78.0
7/15/03 19:00	8.3	6.6	-9.4	-25.8	-20.0	-22.1	-21.6		-98.9
7/15/03 20:00	11.6	11.4	-10.0	-24.6	-13.9	-19.7	-19.3		-87.5
7/15/03 21:00	14.8	15.2	-8.0	-17.4	-9.9	-12.5	-11.2		-59.0
7/15/03 22:00	15.4	15.1	-8.6	-23.8	-12.8	-10.5	-9.6		-65.3
7/15/03 23:00	16.8	16.4	-11.8	-34.9	-19.5	-16.6	-16.2		-98.9
7/16/03 0:00	19.0	19.2	-8.1	-23.6	-13.9	-10.4	-10.2		-66.3
7/16/03 1:00	21.6	21.5	-5.2	-13.3	-4.2	-11.5	-10.7		-44.9
7/16/03 2:00	21.7	21.2	-5.9	-14.4	-5.3	-12.6	-11.9		-50.0
7/16/03 3:00	21.3	21.0	-6.5	-15.6	-6.3	-13.7	-13.0		-55.1
7/16/03 4:00	20.5	20.7	-7.2	-16.7	-7.4	-14.8	-14.2		-60.3
7/16/03 5:00	22.1	22.2	-7.8	-17.9	-8.5	-15.9	-15.4		-65.4
7/16/03 6:00	20.2	19.8	-8.5	-16.3	-7.1	-16.9	-16.5		-65.4
7/16/03 7:00	14.5	14.8	-9.2	-18.5	-11.0	-25.0	-24.2		-87.9
7/16/03 8:00	8.8	8.1	-14.7	-36.9	-24.7	-32.2	-33.6		-142.2
7/16/03 9:00	10.7	10.2	-15.9	-36.8	-24.1	-30.0	-28.9		-135.6
7/16/03 10:00	15.1	15.2	-12.6	-32.1	-18.5	-24.3	-23.3		-110.8
7/16/03 11:00	14.0	13.6	-11.6	-29.9	-20.9	-20.8	-20.3		-103.5
7/16/03 12:00	17.3	15.8	-10.7	-29.3	-21.8	-18.0	-17.6		-97.4
7/16/03 13:00	18.7	18.2	-9.7	-25.9	-16.9	-17.8	-16.7		-87.0
7/16/03 14:00	16.3	15.3	-7.5	-17.7	-11.6	-17.6	-16.7		-71.1
7/16/03 15:00	I/O Time	I/O Time	I/O Time	I/O Time	I/O Time	I/O Time	I/O Timeout		0.0
7/16/03 16:00	I/O Time	I/O Time	I/O Time	I/O Time	I/O Time	I/O Time	I/O Timeout		0.0
7/16/03 17:00	I/O Time	I/O Time	I/O Time	I/O Time	I/O Time	I/O Time	I/O Timeout		0.0
7/16/03 18:00	I/O Time	I/O Time	I/O Time	I/O Time	I/O Time	I/O Time	I/O Timeout		0.0
7/16/03 19:00	I/O Time	I/O Time	I/O Time	I/O Time	I/O Time	I/O Time	I/O Timeout		0.0
7/16/03 20:00	I/O Time	I/O Time	I/O Time	I/O Time	I/O Time	I/O Time	I/O Timeout		0.0
7/16/03 21:00	I/O Time	I/O Time	I/O Time	I/O Time	I/O Time	I/O Time	I/O Timeout		0.0
7/16/03 22:00	I/O Time	I/O Time	I/O Time	I/O Time	I/O Time	I/O Time	I/O Timeout		0.0

7/16/03 23:00	I/O Time	I/O Time	I/O Time	I/O Time	I/O Time	I/O Time	I/O Timeout	0.0
7/17/03 0:00	I/O Time	I/O Time	I/O Time	I/O Time	I/O Time	I/O Time	I/O Timeout	0.0
7/17/03 1:00	I/O Time	I/O Time	I/O Time	I/O Time	I/O Time	I/O Time	I/O Timeout	0.0
7/17/03 2:00	I/O Time	I/O Time	I/O Time	I/O Time	I/O Time	I/O Time	I/O Timeout	0.0
7/17/03 3:00	I/O Time	I/O Time	I/O Time	I/O Time	I/O Time	I/O Time	I/O Timeout	0.0
7/17/03 4:00	I/O Time	I/O Time	I/O Time	I/O Time	I/O Time	I/O Time	I/O Timeout	0.0
7/17/03 5:00	I/O Time	I/O Time	I/O Time	I/O Time	I/O Time	I/O Time	I/O Timeout	0.0
7/17/03 6:00	I/O Time	I/O Time	I/O Time	I/O Time	I/O Time	I/O Time	I/O Timeout	0.0
7/17/03 7:00	I/O Time	I/O Time	I/O Time	I/O Time	I/O Time	I/O Time	I/O Timeout	0.0
7/17/03 8:00	I/O Time	I/O Time	I/O Time	I/O Time	I/O Time	I/O Time	I/O Timeout	0.0
7/17/03 9:00	I/O Time	I/O Time	I/O Time	I/O Time	I/O Time	I/O Time	I/O Timeout	0.0
7/17/03 10:00	I/O Time	I/O Time	I/O Time	I/O Time	I/O Time	I/O Time	I/O Timeout	0.0
7/17/03 11:00	I/O Time	I/O Time	I/O Time	I/O Time	I/O Time	I/O Time	I/O Timeout	0.0
7/17/03 12:00	18.9	18.6	-7.0	-20.0	-11.1	-10.8	-9.9	-58.9
7/17/03 13:00	19.3	18.2	-8.1	-21.5	-12.9	-10.4	-9.7	-62.5
7/17/03 14:00	20.2	19.6	-9.1	-22.9	-14.3	-10.0	-9.5	-65.8
7/17/03 15:00	17.8	17.7	-8.1	-19.7	-11.1	-12.1	-11.6	-62.7
7/17/03 16:00	14.8	14.6	-7.0	-14.3	-5.9	-8.7	-10.7	-46.6
7/17/03 17:00	14.0	12.9	-6.0	-13.2	-5.0	-9.9	-10.2	-44.2
7/17/03 18:00	13.0	13.4	-5.2	-17.3	-9.7	-12.1	-11.3	-55.5
7/17/03 19:00	11.6	11.4	-4.6	-19.0	-10.2	-14.3	-13.5	-61.6
7/17/03 20:00	12.8	12.4	-4.0	-14.7	-7.7	-15.6	-15.0	-56.9
7/17/03 21:00	15.0	15.1	-3.8	-7.9	-2.4	-11.0	-10.2	-35.3
7/17/03 22:00	12.7	12.9	-4.8	-17.2	-9.6	-9.0	-8.4	-49.0
7/17/03 23:00	15.2	15.9	-6.2	-19.4	-11.2	-15.0	-13.7	-65.4
7/18/03 0:00	18.3	18.5	-6.2	-21.4	-12.7	-14.3	-14.2	-68.7
7/18/03 1:00	19.1	19.6	-6.2	-16.1	-8.6	-9.6	-6.3	-46.9
7/18/03 2:00	17.9	18.1	-6.2	-24.5	-13.7	-10.1	-6.3	-60.9
7/18/03 3:00	16.8	16.8	-6.2	-24.8	-18.8	-10.1	-6.3	-66.3
7/18/03 4:00	16.3	16.2	-6.2	-24.8	-19.1	-10.1	-6.3	-66.6
7/18/03 5:00	16.3	16.2	-6.2	-24.8	-19.1	-10.1	-6.3	-66.6
7/18/03 6:00	16.3	16.2	-6.2	-24.8	-19.1	-10.1	-6.3	-66.6
7/18/03 7:00	16.3	16.2	-6.2	-24.8	-19.1	-10.1	-6.3	-66.6
7/18/03 8:00	16.3	16.2	-6.2	-24.8	-19.1	-10.1	-6.3	-66.6
7/18/03 9:00	16.3	16.2	-6.2	-24.8	-19.1	-10.1	-6.3	-66.6
7/18/03 10:00	16.3	16.2	-6.2	-24.8	-19.1	-10.1	-6.3	-66.6
7/18/03 11:00	16.3	16.2	-6.2	-24.8	-19.1	-10.1	-6.3	-66.6
7/18/03 12:00	16.3	16.2	-6.2	-24.8	-19.1	-10.1	-6.3	-66.6
7/18/03 13:00	Shutdown	Shutdown	Shutdown	Shutdown	Shutdown	Shutdown	Shutdown	0.0
7/18/03 14:00	Shutdown	Shutdown	Shutdown	Shutdown	Shutdown	Shutdown	Shutdown	0.0
7/18/03 15:00	10.2	10.1	-10.8	-22.0	-14.2	-28.4	-27.9	-103.4
7/18/03 16:00	10.0	10.0	-10.6	-21.2	-11.8	-28.6	-28.1	-100.3
7/18/03 17:00	9.8	9.9	-10.3	-24.3	-14.5	-28.8	-28.3	-106.2
7/18/03 18:00	6.9	6.6	-10.0	-27.4	-17.8	-29.0	-28.6	-112.8
7/18/03 19:00	5.9	5.5	-10.6	-30.9	-18.0	-19.9	-20.7	-100.2
7/18/03 20:00	9.7	10.0	-11.1	-26.9	-16.3	-17.7	-19.3	-91.3
7/18/03 21:00	11.1	11.4	-9.6	-19.8	-10.4	-14.9	-13.9	-68.5
7/18/03 22:00	12.9	12.8	-9.1	-24.7	-13.1	-18.4	-18.1	-83.4
7/18/03 23:00	14.4	14.1	-10.6	-32.4	-17.8	-17.1	-16.8	-94.7
7/19/03 0:00	19.7	17.8	-4.3	-13.1	-8.0	-6.9	-6.9	-39.2
7/19/03 1:00	19.0	18.7	-6.7	-19.1	-10.6	-8.9	-8.5	-53.8
7/19/03 2:00	15.7	15.2	-9.1	-25.1	-15.6	-11.9	-11.4	-73.1

7/19/03 3:00	13.7	15.1	-11.5	-31.1	-20.6	-15.0	-14.2		-92.4
7/19/03 4:00	13.6	15.0	-13.9	-36.4	-25.6	-18.0	-17.1		-111.0
7/19/03 5:00	14.3	14.7	-16.4	-38.8	-27.8	-20.8	-20.4		-124.1
7/19/03 6:00	9.1	9.3	-21.3	-47.8	-34.3	-34.4	-32.7		-170.5
7/19/03 7:00	8.2	8.3	-23.6	-48.1	-33.4	-39.1	-39.0		-183.3
7/19/03 8:00	11.2	11.3	-21.7	-42.4	-28.3	-39.7	-38.8		-170.8
7/19/03 9:00	13.1	13.3	-19.7	-38.2	-27.7	-34.2	-33.9		-153.7
7/19/03 10:00	14.1	14.8	-17.2	-38.7	-25.5	-28.8	-29.0		-139.2
7/19/03 11:00	16.9	17.0	-14.7	-29.2	-17.4	-25.5	-24.6		-111.5
7/19/03 12:00	17.1	17.9	-14.1	-36.0	-22.5	-17.9	-19.0		-109.5
7/19/03 13:00	16.9	18.1	-14.1	-34.2	-22.6	-17.3	-17.7		-106.0
7/19/03 14:00	17.9	19.4	-14.2	-33.1	-20.4	-16.8	-16.5		-100.9
7/19/03 15:00	18.4	19.4	-14.2	-32.2	-18.1	-17.4	-16.2		-98.1
7/19/03 16:00	17.6	18.1	-14.2	-31.2	-15.9	-19.8	-18.5		-99.7
7/19/03 17:00	15.5	16.2	-14.3	-28.6	-13.6	-20.1	-19.1		-95.7
7/19/03 18:00	13.3	13.9	-14.3	-31.0	-16.2	-22.5	-22.0		-106.0
7/19/03 19:00	10.7	11.8	-14.5	-33.1	-20.6	-24.2	-23.8		-116.1
7/19/03 20:00	12.1	13.0	-14.5	-28.9	-21.3	-25.9	-25.5		-116.1
7/19/03 21:00	14.8	15.7	-13.0	-25.2	-16.6	-21.6	-20.6		-97.1
7/19/03 22:00	16.4	17.3	-12.4	-33.8	-18.6	-18.6	-17.9		-101.3
7/19/03 23:00	15.2	16.0	-15.7	-34.2	-21.3	-20.9	-19.6		-111.7
7/20/03 0:00	13.4	15.0	-13.9	-35.1	-22.6	-24.1	-23.5		-119.2
7/20/03 1:00	16.8	18.0	-12.6	-27.1	-16.1	-16.6	-16.0		-88.3
7/20/03 2:00	17.8	19.3	-13.4	-28.0	-17.7	-18.5	-18.0		-95.5
7/20/03 3:00	17.1	18.0	-14.3	-28.6	-19.3	-20.4	-19.9		-102.5
7/20/03 4:00	16.2	17.3	-15.1	-28.8	-20.9	-22.4	-21.9		-109.1
7/20/03 5:00	15.6	16.8	-16.0	-29.1	-22.6	-24.3	-23.8		-115.7
7/20/03 6:00	14.1	15.5	-16.8	-31.7	-24.2	-26.2	-25.8		-124.6
7/20/03 7:00	12.6	13.2	-17.6	-34.4	-25.8	-30.3	-30.6		-138.7
7/20/03 8:00	10.0	10.6	-16.0	-40.5	-30.8	-32.8	-34.3		-154.5
7/20/03 9:00	12.0	12.5	-13.2	-35.0	-27.4	-29.2	-28.6		-133.4
7/20/03 10:00	15.3	16.3	-10.5	-29.5	-20.0	-24.6	-23.0		-107.6
7/20/03 11:00	16.9	18.9	-10.3	-23.9	-12.7	-17.9	-18.0		-82.6
7/20/03 12:00	18.7	19.6	-10.9	-25.0	-15.3	-14.0	-13.0		-78.1
7/20/03 13:00	19.2	20.5	-11.5	-27.5	-18.2	-10.4	-9.6		-77.2
7/20/03 14:00	22.3	22.5	-12.2	-30.3	-18.9	-6.8	-6.5		-74.7
7/20/03 15:00	22.2	23.7	-12.5	-25.5	-16.7	-5.4	-5.1		-65.3
7/20/03 16:00	22.6	24.2	-12.0	-27.7	-16.8	-7.0	-5.3		-68.9
7/20/03 17:00	23.0	24.7	-11.6	-29.6	-16.8	-6.0	-5.5		-69.4
7/20/03 18:00	21.2	21.6	-11.1	-30.9	-16.9	-5.4	-5.7		-69.9
7/20/03 19:00	17.9	19.1	-10.6	-26.8	-16.9	-9.0	-7.5		-70.8
7/20/03 20:00	17.3	18.7	-10.1	-27.6	-16.9	-12.6	-10.9		-78.1
7/20/03 21:00	18.7	20.1	-13.7	-35.3	-21.3	-8.8	-10.8		-89.9
7/20/03 22:00	17.3	18.3	-14.6	-34.1	-26.7	-7.2	-6.9		-89.6
7/20/03 23:00	19.8	20.9	-11.2	-25.9	-16.1	-9.8	-8.0		-70.9
7/21/03 0:00	17.5	18.1	-11.2	-31.8	-21.0	-15.0	-13.1		-92.0
7/21/03 1:00	18.7	18.7	-11.2	-26.5	-19.8	-12.6	-10.2		-80.2
7/21/03 2:00	18.3	18.8	-11.3	-28.1	-19.6	-11.1	-10.4		-80.4
7/21/03 3:00	18.2	18.9	-11.4	-29.6	-20.0	-13.3	-12.1		-86.4
7/21/03 4:00	18.8	19.5	-11.4	-30.9	-20.4	-14.6	-13.9		-91.2
7/21/03 5:00	21.5	22.6	-11.5	-29.4	-21.5	-15.3	-15.7		-93.3
7/21/03 6:00	18.8	20.1	-13.6	-35.5	-24.9	-15.9	-17.4		-107.4

7/21/03 7:00	18.2	19.5	-13.6	-33.5	-21.0	-18.6	-18.2		-104.9
7/21/03 8:00	14.1	14.4	-13.1	-30.3	-17.8	-20.7	-19.2		-101.1
7/21/03 9:00	14.2	15.4	-12.5	-22.9	-14.9	-15.2	-15.4		-80.9
7/21/03 10:00	15.8	17.4	-12.4	-32.2	-17.0	-10.9	-8.0		-80.6
7/21/03 11:00	19.4	19.6	-12.5	-26.6	-15.6	-4.7	-4.0		-63.4
7/21/03 12:00	21.0	21.9	-12.7	-29.5	-18.1	-1.7	-1.5		-63.6
7/21/03 13:00	21.7	23.0	-13.0	-31.6	-20.7	-14.3	-12.8		-92.4
7/21/03 14:00	22.4	23.8	-13.3	-33.7	-23.3	-14.6	-13.0		-97.9
7/21/03 15:00	21.0	22.3	-13.6	-35.8	-25.6	-14.7	-13.2		-102.8
7/21/03 16:00	18.9	20.0	-14.3	-28.3	-21.4	-14.2	-13.3		-91.5
7/21/03 17:00	18.5	19.4	-15.1	-29.8	-20.1	-13.9	-13.5		-92.4
7/21/03 18:00	15.1	15.9	-15.9	-31.0	-20.1	-15.9	-15.1		-98.0
7/21/03 19:00	12.3	13.8	-14.2	-29.2	-18.7	-14.2	-12.6		-88.9
7/21/03 20:00	13.9	14.5	-12.2	-23.5	-13.8	-10.1	-9.2		-68.8
7/21/03 21:00	15.5	16.5	-10.2	-21.5	-13.4	-7.4	-6.0		-58.5
7/21/03 22:00	16.9	17.8	-12.0	-31.8	-19.7	-8.7	-7.4		-79.6
7/21/03 23:00	18.3	19.5	-16.5	-37.2	-24.5	-14.4	-14.0		-106.5
7/22/03 0:00	20.0	20.9	-12.2	-32.8	-22.3	-17.3	-17.2		-101.7
7/22/03 1:00	21.0	22.0	-12.3	-26.5	-16.8	-19.2	-19.2		-93.8
7/22/03 2:00	22.0	23.1	-12.9	-26.3	-16.7	-13.2	-12.7		-81.8
7/22/03 3:00	21.5	21.3	-13.6	-27.0	-18.0	-14.8	-14.4		-87.8
7/22/03 4:00	21.2	22.7	-14.3	-27.6	-19.3	-16.4	-16.2		-93.8
7/22/03 5:00	24.2	25.1	-14.9	-28.3	-20.6	-18.1	-17.9		-99.8
7/22/03 6:00	19.7	19.9	-15.0	-37.5	-28.1	-26.9	-25.8		-133.3
7/22/03 7:00	15.2	15.3	-15.4	-33.0	-21.4	-27.0	-26.9		-123.7
7/22/03 8:00	12.1	12.2	-16.3	-32.6	-21.0	-38.3	-36.1		-144.3
7/22/03 9:00	11.6	11.9	-17.3	-32.8	-21.8	-38.9	-37.1		-147.9
7/22/03 10:00	13.2	13.0	-18.2	-34.7	-23.6	-39.4	-37.5		-153.4
7/22/03 11:00	14.6	15.1	-19.1	-37.2	-25.4	-38.7	-37.8		-158.2
7/22/03 12:00	12.2	10.9	-20.1	-39.6	-27.2	-38.1	-38.2		-163.1
7/22/03 13:00	10.2	10.6	-21.0	-41.4	-29.0	-38.6	-38.5		-168.5
7/22/03 14:00	11.0	10.5	-21.9	-42.2	-30.5	-39.5	-38.8		-173.1
7/22/03 15:00	8.8	9.0	-19.4	-43.9	-31.3	-40.4	-38.9		-174.0
7/22/03 16:00	10.7	11.3	-16.9	-36.7	-27.3	-20.6	-19.6		-121.1
7/22/03 17:00	8.3	9.5	-16.0	-29.8	-20.5	-20.2	-19.0		-105.5
7/22/03 18:00	5.0	4.9	-15.1	-29.6	-19.4	-18.7	-17.7		-100.6
7/22/03 19:00	5.4	5.2	-14.2	-30.3	-17.6	-13.2	-13.0		-88.5
7/22/03 20:00	8.1	8.3	-13.3	-26.0	-15.6	-10.3	-8.7		-74.0
7/22/03 21:00	11.0	10.6	-12.4	-24.8	-18.5	-4.8	-4.3		-64.9
7/22/03 22:00	8.7	8.9	-12.1	-32.4	-22.7	-3.2	-2.5		-72.9
7/22/03 23:00	10.1	9.6	-12.4	-30.7	-21.4	-9.0	-6.9		-80.3
7/23/03 0:00	18.0	18.7	-12.6	-28.6	-20.0	-12.9	-10.8		-84.9
7/23/03 1:00	17.9	18.1	-12.4	-25.5	-17.4	-14.1	-12.2		-81.5
7/23/03 2:00	17.6	17.4	-12.2	-26.9	-18.0	-15.3	-13.5		-85.9
7/23/03 3:00	17.3	17.2	-11.9	-28.3	-18.7	-16.3	-14.8		-90.0
7/23/03 4:00	18.3	18.6	-11.7	-29.6	-19.4	-16.9	-16.2		-93.8
7/23/03 5:00	20.4	20.6	-11.5	-32.2	-20.1	-13.1	-13.0		-89.9
7/23/03 6:00	17.9	19.4	-11.2	-23.0	-15.3	-23.0	-21.8		-94.4
7/23/03 7:00	13.1	12.7	-5.6	-16.1	-9.6	-22.5	-21.9		-75.7
7/23/03 8:00	10.9	10.9	-12.3	-29.3	-18.9	-24.8	-24.2		-109.5
7/23/03 9:00	12.2	12.2	-8.9	-22.9	-13.5	-17.8	-18.7		-81.8
7/23/03 10:00	15.5	16.1	-5.5	-16.4	-8.1	-14.2	-13.4		-57.7

7/23/03 11:00	Not Cor	Not Cor	Not Cor	Not Cor	Not Cor	Not Cor	Not Connect	0.0
7/23/03 12:00	Not Cor	Not Cor	Not Cor	Not Cor	Not Cor	Not Cor	Not Connect	0.0
7/23/03 13:00	Not Cor	Not Cor	Not Cor	Not Cor	Not Cor	Not Cor	Not Connect	0.0
7/23/03 14:00	19.6	20.9	-4.7	-15.5	-6.8	-23.5	-22.4	-73.0
7/23/03 15:00	21.5	21.6	-4.1	-15.4	-7.4	-20.3	-19.0	-66.1
7/23/03 16:00	21.6	22.6	-3.4	-15.4	-7.9	-12.1	-11.5	-50.3
7/23/03 17:00	15.5	16.9	-2.8	-15.3	-8.4	-11.9	-11.1	-49.4
7/23/03 18:00	13.8	13.7	-2.3	-11.4	-3.3	-10.9	-9.9	-37.8
7/23/03 19:00	9.8	10.9	-2.3	-11.0	-6.7	-11.3	-9.5	-40.8
7/23/03 20:00	13.3	13.7	-2.2	-16.6	-7.4	-5.1	-4.7	-35.9
7/23/03 21:00	13.9	14.2	-5.4	-14.4	-6.1	-2.2	-0.9	-29.0
7/23/03 22:00	11.0	11.1	-9.2	-19.7	-10.6	-2.1	-0.8	-42.4
7/23/03 23:00	19.1	19.4	-13.6	-30.7	-19.4	-7.9	-6.8	-78.4
7/24/03 0:00	17.6	18.3	-17.7	-41.9	-30.3	-13.8	-13.0	-116.6
7/24/03 1:00	16.5	16.7	-17.8	-40.0	-29.7	-19.6	-19.1	-126.3
7/24/03 2:00	17.1	17.4	-18.0	-38.1	-29.1	-18.8	-17.5	-121.6
7/24/03 3:00	16.8	17.3	-18.2	-36.2	-28.5	-19.4	-18.4	-120.6
7/24/03 4:00	17.9	18.3	-18.3	-34.3	-27.9	-19.9	-19.3	-119.7
7/24/03 5:00	20.2	20.4	-18.5	-32.5	-27.2	-20.5	-20.1	-118.8
7/24/03 6:00	18.2	18.4	-18.3	-40.0	-28.8	-21.0	-21.0	-129.1
7/24/03 7:00	I/O Time	I/O Time	I/O Time	I/O Time	I/O Time	I/O Time	I/O Timeout	0.0
7/24/03 8:00	I/O Time	I/O Time	I/O Time	I/O Time	I/O Time	I/O Time	I/O Timeout	0.0
7/24/03 9:00	I/O Time	I/O Time	I/O Time	I/O Time	I/O Time	I/O Time	I/O Timeout	0.0
7/24/03 10:00	I/O Time	I/O Time	I/O Time	I/O Time	I/O Time	I/O Time	I/O Timeout	0.0
7/24/03 11:00	I/O Time	I/O Time	I/O Time	I/O Time	I/O Time	I/O Time	I/O Timeout	0.0
7/24/03 12:00	I/O Time	I/O Time	I/O Time	I/O Time	I/O Time	I/O Time	I/O Timeout	0.0
7/24/03 13:00	18.2	18.4	-4.3	-13.4	-5.3	-17.3	-16.3	-56.6
7/24/03 14:00	18.1	18.3	-4.5	-15.5	-6.1	-16.2	-14.8	-57.1
7/24/03 15:00	18.1	18.4	-4.6	-17.6	-6.9	-15.1	-13.3	-57.5
7/24/03 16:00	16.1	16.2	-4.7	-18.5	-7.7	-13.0	-12.2	-56.2
7/24/03 17:00	14.0	13.8	-4.9	-17.3	-8.1	-13.3	-11.4	-55.0
7/24/03 18:00	10.9	11.3	-5.3	-14.2	-8.5	-10.9	-10.4	-49.2
7/24/03 19:00	8.6	7.9	-6.5	-19.6	-10.5	-7.1	-6.2	-49.9
7/24/03 20:00	7.4	7.3	-7.7	-21.0	-13.4	-8.9	-7.8	-58.7
7/24/03 21:00	9.3	9.1	-8.9	-21.4	-13.6	-3.8	-3.1	-50.9
7/24/03 22:00	13.0	12.7	-10.0	-24.3	-14.3	-2.1	-1.5	-52.1
7/24/03 23:00	16.4	16.4	-11.1	-30.1	-19.4	-7.1	-6.4	-74.1
7/25/03 0:00	16.3	16.6	-12.3	-31.4	-22.1	-12.1	-11.3	-89.3
7/25/03 1:00	16.4	16.3	-12.5	-27.6	-18.7	-15.3	-14.5	-88.6
7/25/03 2:00	15.2	15.6	-11.6	-27.4	-18.3	-15.9	-15.0	-88.4
7/25/03 3:00	15.8	15.9	-10.8	-26.7	-18.0	-16.6	-15.5	-87.6
7/25/03 4:00	16.4	16.1	-9.9	-25.9	-17.6	-17.3	-16.0	-86.8
7/25/03 5:00	19.5	19.7	-9.0	-25.2	-17.2	-18.0	-16.5	-86.0
7/25/03 6:00	20.6	20.3	-8.2	-23.8	-14.3	-18.5	-17.2	-81.9
7/25/03 7:00	16.0	16.0	-7.3	-23.5	-14.2	-20.1	-19.8	-84.8
7/25/03 8:00	14.7	14.4	-6.4	-21.0	-12.7	-25.2	-24.6	-90.0
7/25/03 9:00	13.3	13.4	-5.7	-16.7	-8.0	-24.0	-21.9	-76.3
7/25/03 10:00	15.1	15.2	-5.0	-13.7	-4.2	-19.4	-19.1	-61.4
7/25/03 11:00	16.1	16.1	-4.5	-11.4	-3.5	-17.6	-16.6	-53.7
7/25/03 12:00	16.4	16.7	-4.0	-10.2	-2.1	-14.2	-14.2	-44.7
7/25/03 13:00	17.4	16.1	-3.6	-11.5	-3.2	-10.7	-11.8	-40.8
7/25/03 14:00	16.5	17.4	-3.4	-15.2	-6.5	-11.5	-11.3	-47.9

7/25/03 15:00	17.0	17.2	-6.5	-17.2	-7.7	-8.9	-10.0		-50.2
7/25/03 16:00	17.0	16.5	-7.1	-17.2	-6.1	-8.2	-8.3		-46.9
7/25/03 17:00	13.1	12.8	-7.7	-16.3	-7.7	-8.6	-8.1		-48.5
7/25/03 18:00	11.2	11.0	-8.4	-23.3	-14.1	-8.2	-8.2		-62.2
7/25/03 19:00	9.2	8.3	-9.1	-21.2	-13.1	-7.7	-6.4		-57.5
7/25/03 20:00	7.9	7.4	-9.8	-21.4	-12.1	-5.1	-4.2		-52.6
7/25/03 21:00	10.0	9.5	-10.5	-21.5	-11.3	-1.1	-0.7		-45.0
7/25/03 22:00	10.0	10.0	-11.2	-28.3	-16.7	1.1	1.5		-53.4
7/25/03 23:00	11.9	12.2	-15.8	-41.0	-27.8	-5.5	-5.2		-95.3
7/26/03 0:00	16.8	17.2	-17.1	-37.3	-22.5	-8.9	-8.4		-94.1
7/26/03 1:00	17.3	17.4	-14.4	-35.2	-23.8	-12.0	-11.5		-96.9
7/26/03 2:00	17.3	16.9	-12.8	-29.2	-19.9	-14.0	-13.8		-89.7
7/26/03 3:00	15.8	15.7	-12.7	-29.6	-19.8	-14.9	-15.0		-92.0
7/26/03 4:00	15.2	14.8	-12.6	-30.1	-20.0	-15.8	-16.3		-94.7
7/26/03 5:00	16.6	15.9	-12.4	-30.5	-20.2	-16.7	-17.6		-97.3
7/26/03 6:00	17.2	17.3	-12.3	-31.7	-20.5	-19.5	-18.8		-102.8
7/26/03 7:00	12.8	13.2	-12.1	-33.1	-20.7	-24.0	-23.2		-113.2
7/26/03 8:00	11.2	11.0	-12.0	-30.4	-21.0	-27.3	-26.6		-117.2
7/26/03 9:00	11.4	11.1	-16.1	-35.4	-23.8	-25.6	-24.8		-125.8
7/26/03 10:00	13.5	13.9	-14.2	-29.8	-18.4	-23.0	-22.1		-107.4
7/26/03 11:00	16.6	16.7	-12.3	-27.3	-16.6	-18.7	-18.4		-93.2
7/26/03 12:00	17.2	17.2	-10.4	-24.5	-14.8	-14.3	-14.6		-78.6
7/26/03 13:00	17.0	17.1	-8.6	-21.5	-13.0	-11.8	-11.3		-66.2
7/26/03 14:00	15.9	17.0	-6.7	-18.4	-11.2	-11.0	-10.2		-57.4
7/26/03 15:00	16.9	17.7	-4.8	-15.1	-7.3	-10.2	-9.0		-46.5
7/26/03 16:00	16.9	17.4	-2.9	-9.9	-3.5	-9.5	-8.5		-34.2
7/26/03 17:00	17.1	17.5	-2.2	-11.7	-2.0	-8.8	-8.4		-33.1
7/26/03 18:00	15.6	15.7	-3.7	-15.8	-4.2	-9.0	-8.3		-40.9
7/26/03 19:00	12.7	12.6	-5.1	-18.0	-6.4	-9.9	-9.7		-49.1
7/26/03 20:00	14.4	12.8	-6.6	-17.7	-8.4	-10.3	-9.5		-52.6
7/26/03 21:00	16.6	16.4	-8.1	-19.0	-10.5	-11.3	-10.8		-59.6
7/26/03 22:00	15.8	15.6	-9.6	-19.9	-12.5	-8.8	-7.2		-58.0
7/26/03 23:00	15.3	15.2	-11.0	-24.1	-13.9	-7.8	-7.5		-64.4
7/27/03 0:00	16.5	16.4	-15.4	-34.1	-24.0	-11.4	-10.3		-95.1
7/27/03 1:00	18.6	19.3	-13.1	-26.2	-17.9	-13.7	-12.5		-83.4
7/27/03 2:00	19.0	19.3	-13.4	-28.4	-19.4	-12.2	-12.4		-85.7
7/27/03 3:00	14.9	15.4	-14.8	-30.5	-20.8	-16.8	-14.1		-97.0
7/27/03 4:00	14.6	15.1	-16.2	-32.7	-22.3	-18.4	-15.9		-105.4
7/27/03 5:00	15.6	16.0	-17.6	-34.9	-23.7	-19.8	-17.6		-113.6
7/27/03 6:00	14.1	14.3	-19.0	-36.5	-25.5	-21.2	-21.7		-123.9
7/27/03 7:00	13.7	13.7	-20.3	-38.1	-31.9	-24.5	-25.6		-140.4
7/27/03 8:00	8.8	8.7	-20.5	-46.9	-35.4	-34.5	-34.7		-171.8
7/27/03 9:00	10.6	10.3	-19.5	-40.8	-28.5	-29.7	-30.3		-148.8
7/27/03 10:00	15.9	15.7	-16.1	-29.2	-19.3	-24.6	-24.2		-113.3
7/27/03 11:00	17.4	17.7	-12.7	-26.5	-16.7	-22.4	-20.7		-99.0
7/27/03 12:00	18.9	19.1	-11.0	-24.2	-15.1	-20.1	-19.1		-89.5
7/27/03 13:00	19.3	19.2	-10.6	-21.9	-13.5	-17.1	-16.9		-80.1
7/27/03 14:00	19.1	20.1	-10.3	-19.7	-11.9	-14.4	-14.7		-70.9
7/27/03 15:00	18.9	19.7	-9.9	-17.4	-10.2	-13.9	-12.6		-63.9
7/27/03 16:00	18.7	19.6	-9.5	-18.6	-10.3	-13.3	-10.4		-62.3
7/27/03 17:00	18.9	19.6	-9.5	-23.4	-14.7	-12.8	-11.6		-72.1
7/27/03 18:00	17.3	17.0	-10.1	-30.4	-19.0	-12.3	-12.8		-84.6

7/27/03 19:00	16.9	16.5	-10.7	-23.5	-13.5	-7.3	-7.7		-62.7
7/27/03 20:00	18.9	19.4	-11.3	-22.3	-11.9	-7.4	-5.2		-58.1
7/27/03 21:00	20.3	20.9	-11.8	-25.3	-14.7	-6.1	-5.3		-63.3
7/27/03 22:00	19.2	19.8	-12.4	-29.9	-19.3	-3.8	-3.2		-68.7
7/27/03 23:00	18.4	19.1	-14.1	-33.4	-23.7	-6.9	-5.1		-83.3
7/28/03 0:00	21.3	21.7	-13.2	-21.4	-15.2	-9.5	-9.4		-68.7
7/28/03 1:00	20.0	20.8	-9.4	-23.3	-14.9	-11.9	-11.2		-70.7
7/28/03 2:00	19.4	19.1	-10.0	-25.2	-16.1	-14.3	-13.0		-78.5
7/28/03 3:00	18.9	19.6	-10.5	-27.1	-17.2	-16.0	-14.8		-85.6
7/28/03 4:00	18.3	18.7	-11.1	-28.9	-18.3	-17.3	-16.6		-92.1
7/28/03 5:00	21.2	21.4	-11.6	-30.5	-20.0	-18.5	-18.3		-98.9
7/28/03 6:00	20.4	21.0	-12.2	-29.3	-22.3	-19.6	-19.7		-103.0
7/28/03 7:00	14.3	14.9	-11.9	-32.1	-24.7	-21.8	-22.4		-112.9
7/28/03 8:00	12.6	13.8	-11.7	-27.1	-19.5	-29.5	-27.9		-115.7
7/28/03 9:00	14.4	14.0	-10.1	-24.3	-14.2	-24.3	-21.2		-94.1
7/28/03 10:00	15.4	16.0	-8.5	-21.0	-10.8	-23.6	-23.2		-87.2
7/28/03 11:00	18.4	20.1	-6.9	-14.1	-7.5	-18.7	-19.3		-66.5
7/28/03 12:00	17.3	17.7	-6.0	-18.3	-12.3	-21.6	-19.4		-77.5
7/28/03 13:00	17.0	17.5	-8.2	-20.0	-13.0	-21.0	-20.2		-82.4
7/28/03 14:00	18.3	18.5	-9.8	-22.5	-15.2	-21.0	-20.3		-88.9
7/28/03 15:00	18.1	18.6	-9.5	-23.6	-12.7	-18.7	-17.7		-82.3
7/28/03 16:00	17.5	17.3	-9.3	-18.6	-10.2	-16.4	-15.1		-69.7
7/28/03 17:00	15.0	14.4	-9.1	-15.8	-12.5	-17.5	-16.1		-71.0
7/28/03 18:00	10.4	10.5	-8.7	-23.1	-15.1	-19.0	-17.6		-83.6
7/28/03 19:00	7.4	7.1	-7.4	-24.5	-16.6	-0.5	-0.3		-49.3
7/28/03 20:00	10.8	10.8	-6.1	-19.6	-8.6	-6.7	-3.8		-44.8
7/28/03 21:00	13.2	13.1	-2.9	-7.3	0.6	-5.5	-4.4		-19.5
7/28/03 22:00	12.1	13.4	-2.7	-16.4	-5.6	18.1	15.0		8.3
7/28/03 23:00	21.0	21.6	-7.3	-22.9	-13.1	7.7	8.8		-26.8
7/29/03 0:00	19.3	20.0	-13.4	-30.3	-21.6	7.9	7.5		-49.9
7/29/03 1:00	19.3	20.8	-12.4	-25.8	-17.5	7.3	8.7		-39.8
7/29/03 2:00	19.4	21.0	-12.0	-27.6	-18.7	7.1	7.7		-43.4
7/29/03 3:00	19.4	21.4	-12.1	-29.4	-19.8	7.0	6.8		-47.6
7/29/03 4:00	19.6	21.3	-12.3	-31.2	-21.0	6.2	5.8		-52.3
7/29/03 5:00	22.9	23.7	-12.4	-33.2	-22.1	5.2	4.6		-57.9
7/29/03 6:00	23.0	23.6	-12.5	-35.5	-22.8	2.9	0.6		-67.3
7/29/03 7:00	19.4	21.8	-12.6	-30.0	-21.8	-2.7	-1.4		-68.5
7/29/03 8:00	17.4	17.4	-10.4	-22.7	-13.8	-14.7	-15.9		-77.5
7/29/03 9:00	17.5	18.1	-8.2	-19.1	-8.7	-18.0	-16.4		-70.4
7/29/03 10:00	17.6	17.7	-5.9	-19.1	-8.1	-18.8	-17.5		-69.3
7/29/03 11:00	16.9	18.5	-7.9	-18.8	-9.6	-19.6	-18.5		-74.3
7/29/03 12:00	17.3	18.7	-2.6	-13.4	-3.4	-18.2	-15.9		-53.6
7/29/03 13:00	17.6	18.2	-7.2	-18.7	-12.5	-17.3	-15.8		-71.5
7/29/03 14:00	17.7	16.5	-10.2	-35.4	-22.2	-17.8	-16.8		-102.4
7/29/03 15:00	18.7	19.4	-12.2	-25.8	-16.3	-20.2	-19.3		-93.8
7/29/03 16:00	17.2	17.2	-13.0	-31.3	-17.9	-17.7	-18.1		-98.0
7/29/03 17:00	15.9	15.6	-12.9	-26.1	-17.8	-14.1	-13.2		-84.1
7/29/03 18:00	9.5	9.3	-11.5	-28.2	-19.6	-7.6	-7.2		-74.1
7/29/03 19:00	8.2	8.1	-10.1	-25.2	-15.2	-4.6	-2.2		-57.3
7/29/03 20:00	10.6	10.2	-5.2	-12.5	-3.3	-4.1	-4.9		-30.0
7/29/03 21:00	12.3	11.6	-2.8	-16.2	-9.1	-3.9	-4.3		-36.3
7/29/03 22:00	14.7	16.3	-5.6	-13.1	-8.7	8.1	-1.5		-20.9

7/29/03 23:00	18.6	18.5	-10.6	-31.3	-20.3	8.2	8.2		-45.8
7/30/03 0:00	20.8	20.8	-6.3	-17.2	-8.8	7.2	7.0		-18.2
7/30/03 1:00	20.8	21.3	-7.3	-23.2	-13.1	6.8	6.6		-30.2
7/30/03 2:00	20.9	21.3	-8.4	-25.4	-15.2	6.4	6.2		-36.4
7/30/03 3:00	21.0	21.4	-9.5	-27.6	-17.2	5.9	5.8		-42.5
7/30/03 4:00	22.0	22.7	-10.6	-29.7	-19.3	4.3	5.8		-49.5
7/30/03 5:00	23.0	23.9	-11.7	-30.9	-19.6	2.7	5.8		-53.8
7/30/03 6:00	22.3	22.4	-11.6	-24.5	-15.5	3.4	5.8		-42.4
7/30/03 7:00	21.3	21.8	-11.2	-24.5	-15.5	4.6	5.8		-40.8
7/30/03 8:00	13.7	13.8	-21.3	-45.2	-31.7	-17.6	-17.3		-133.0
7/30/03 9:00	13.4	14.0	-16.0	-35.6	-22.7	-19.4	-19.1		-112.8
7/30/03 10:00	15.8	16.0	-12.0	-28.0	-14.9	-21.3	-21.0		-97.1
7/30/03 11:00	17.1	16.9	-8.2	-24.2	-10.8	-22.5	-21.2		-86.9
7/30/03 12:00	15.2	15.5	-5.1	-22.0	-6.0	-21.6	-19.8		-74.5
7/30/03 13:00	16.6	16.1	-5.3	-19.3	-6.3	-20.4	-19.4		-70.7
7/30/03 14:00	16.3	16.4	-6.4	-17.4	-6.8	-21.0	-20.2		-71.8
7/30/03 15:00	17.1	17.7	-8.5	-17.8	-9.4	-23.3	-22.3		-81.4
7/30/03 16:00	14.4	15.6	-10.6	-23.3	-12.0	-17.3	-18.4		-81.5
7/30/03 17:00	12.4	12.5	-7.9	-19.6	-9.4	-12.8	-11.9		-61.7
7/30/03 18:00	9.3	9.4	-8.6	-30.4	-18.6	-5.9	-7.4		-70.9
7/30/03 19:00	9.0	8.7	-6.5	-23.5	-11.9	-6.5	-6.4		-54.9
7/30/03 20:00	11.8	11.8	-4.4	-16.5	-6.7	-8.9	-8.1		-44.5
7/30/03 21:00	13.7	13.6	-3.3	-14.3	-5.4	-8.5	-7.8		-39.3
7/30/03 22:00	11.9	10.3	-8.3	-30.2	-14.8	13.9	7.8		-31.7
7/30/03 23:00	13.9	14.1	-9.5	-23.0	-11.5	13.2	14.1		-16.7
7/31/03 0:00	24.3	20.4	-10.1	-23.0	-10.3	6.2	7.5		-29.6
7/31/03 1:00	24.4	21.1	-10.5	-20.4	-11.1	8.3	9.1		-24.7
7/31/03 2:00	19.2	17.6	-11.0	-21.3	-12.2	-17.1	-15.8		-77.4
7/31/03 3:00	19.0	18.7	-11.5	-22.1	-13.3	-18.1	-17.3		-82.3
7/31/03 4:00	19.1	20.0	-12.0	-23.0	-14.4	-19.1	-18.7		-87.1
7/31/03 5:00	19.1	21.2	-12.4	-23.7	-16.1	-20.1	-20.1		-92.5
7/31/03 6:00	18.9	19.8	-12.4	-26.5	-18.0	-21.0	-21.4		-99.3
7/31/03 7:00	19.9	21.2	-12.0	-20.1	-16.3	-16.2	-11.3		-75.8
7/31/03 8:00	13.5	14.7	-11.6	-33.1	-23.0	-18.3	-18.9		-104.9
7/31/03 9:00	14.5	15.6	-11.2	-31.0	-20.1	-21.7	-21.6		-105.5
7/31/03 10:00	16.4	17.4	-10.4	-25.4	-12.7	-24.1	-22.9		-95.4
7/31/03 11:00	20.2	22.0	-8.8	-23.0	-12.7	2.0	2.0		-40.6
7/31/03 12:00	22.4	22.1	-8.7	-20.3	-11.6	1.0	2.1		-37.4
7/31/03 13:00	21.3	21.4	-8.7	-16.9	-10.9	0.6	1.5		-34.3
7/31/03 14:00	18.4	18.9	-8.6	-23.5	-12.2	6.2	5.7		-32.4
7/31/03 15:00	18.9	19.3	-9.6	-19.6	-12.2	-23.3	-21.4		-86.0
7/31/03 16:00	17.4	17.9	-10.5	-21.9	-9.5	-20.1	-18.9		-80.9
7/31/03 17:00	13.1	13.5	-13.2	-31.7	-19.8	-14.4	-14.1		-93.2
7/31/03 18:00	9.8	9.6	-13.6	-24.9	-15.4	-11.7	-10.0		-75.6
7/31/03 19:00	9.1	9.0	-8.6	-27.2	-14.8	-6.1	-4.5		-61.2
7/31/03 20:00	11.2	11.5	-9.2	-18.3	-7.4	-6.3	-5.6		-46.8
7/31/03 21:00	13.3	13.6	-6.6	-18.4	-10.5	-11.7	-10.3		-57.5
7/31/03 22:00	9.9	11.0	-10.2	-26.9	-16.9	16.6	13.4		-24.0
7/31/03 23:00	15.5	15.4	-12.5	-26.0	-15.8	12.9	13.4		-28.0
8/1/03 0:00	19.9	21.6	-11.9	-20.7	-11.9	9.2	10.3		-25.1
8/1/03 1:00	18.3	19.5	-6.7	-21.5	-13.1	-17.4	-16.3		-75.1
8/1/03 2:00	17.8	17.8	-7.4	-23.7	-15.3	-17.6	-16.8		-80.8

8/1/03 3:00	17.8	18.1	-8.1	-24.6	-15.6	-17.8	-17.3	-83.4
8/1/03 4:00	17.8	18.6	-8.8	-25.5	-15.8	-18.0	-17.9	-86.0
8/1/03 5:00	20.2	21.2	-9.4	-28.4	-18.0	5.1	5.0	-45.8
8/1/03 6:00	22.0	22.3	-9.9	-24.0	-14.8	-2.4	0.6	-50.5
8/1/03 7:00	13.5	13.3	-12.3	-27.3	-18.6	-13.1	-9.9	-81.3
8/1/03 8:00	12.7	12.5	-15.6	-32.1	-18.7	-16.1	-15.2	-97.6
8/1/03 9:00	15.7	15.0	-9.6	-19.1	-10.5	-18.0	-18.1	-75.2
8/1/03 10:00	16.0	15.9	-4.0	-18.1	-5.2	-18.0	-19.1	-64.3
8/1/03 11:00	17.8	18.9	0.3	-6.1	0.3	-17.5	-17.0	-39.9
8/1/03 12:00	16.3	17.2	0.6	-9.3	-1.9	-17.5	-16.9	-44.9
8/1/03 13:00	16.6	17.4	-2.9	-9.1	-1.7	-18.2	-17.3	-49.2
8/1/03 14:00	17.5	18.2	-3.0	-8.8	-1.5	-18.0	-16.8	-48.0
8/1/03 15:00	16.6	17.1	-3.0	-8.6	-1.3	-17.5	-16.0	-46.4
8/1/03 16:00	15.2	15.8	-3.1	-8.6	-1.1	-12.9	-10.8	-36.5
8/1/03 17:00	13.5	13.4	-3.3	-16.8	-7.1	-9.1	-8.4	-44.7
8/1/03 18:00	10.7	10.9	-3.7	-20.4	-11.5	-7.4	-7.0	-50.0
8/1/03 19:00	8.6	8.9	-4.1	-17.4	-7.5	-5.8	-5.6	-40.4
8/1/03 20:00	10.1	10.2	-4.5	-17.0	-6.4	-7.4	-5.7	-40.9
8/1/03 21:00	12.6	12.8	-6.2	-15.2	-7.5	-9.5	-8.3	-46.7
8/1/03 22:00	13.0	13.5	-8.2	-16.9	-9.0	16.2	14.9	-3.1
8/1/03 23:00	14.2	14.4	-10.3	-27.1	-17.5	15.1	16.2	-23.6
8/2/03 0:00	19.7	22.3	-16.1	-40.1	-26.7	5.4	5.6	-72.0
8/2/03 1:00	19.2	21.0	-15.7	-30.1	-19.6	8.2	8.1	-49.0
8/2/03 2:00	16.4	16.9	-14.6	-31.9	-21.4	-16.3	-18.0	-102.1
8/2/03 3:00	17.1	17.3	-14.0	-30.7	-21.1	-17.3	-16.1	-99.3
8/2/03 4:00	17.5	18.2	-13.4	-29.5	-20.8	-17.8	-17.1	-98.7
8/2/03 5:00	18.8	19.4	-12.8	-28.4	-20.6	-18.4	-18.1	-98.2
8/2/03 6:00	21.4	21.2	-12.3	-27.2	-20.3	5.9	4.3	-49.5
8/2/03 7:00	18.8	21.1	16.3	-34.7	-22.8	-9.9	-7.2	-58.3
8/2/03 8:00	18.9	18.7	0.2	-38.6	-22.4	-10.1	-9.6	-80.5
8/2/03 9:00	18.7	19.8	0.2	-33.9	-17.5	-9.6	-8.7	-69.5
8/2/03 10:00	20.0	20.8	0.2	-35.0	-20.1	-9.0	-8.3	-72.3
8/2/03 11:00	19.0	19.7	0.2	-31.3	-16.4	-8.0	-8.4	-63.8
8/2/03 12:00	19.4	20.3	0.2	-30.9	-16.2	-7.9	-8.0	-62.7
8/2/03 13:00	20.0	20.8	0.2	-30.5	-16.2	-7.7	-7.7	-61.8
8/2/03 14:00	20.5	21.4	0.2	-30.1	-16.1	-7.5	-7.3	-60.8
8/2/03 15:00	19.8	20.6	18.6	-29.7	-16.1	-7.3	-7.0	-41.4
8/2/03 16:00	18.4	19.0	18.6	-31.8	-16.0	-6.5	-5.7	-41.4
8/2/03 17:00	18.2	18.6	-10.3	-19.3	-12.0	-4.3	-4.4	-50.2
8/2/03 18:00	14.1	14.4	-9.1	-22.1	-12.4	-1.8	-1.4	-46.8
8/2/03 19:00	14.1	14.1	-8.0	-25.0	-12.9	-2.4	-2.2	-50.5
8/2/03 20:00	14.3	14.5	-6.9	-23.3	-13.3	-2.6	-1.3	-47.4
8/2/03 21:00	16.0	16.5	-5.8	-18.0	-11.1	-3.9	-5.4	-44.1
8/2/03 22:00	15.2	15.4	-9.4	-26.1	-15.4	10.9	9.1	-30.9
8/2/03 23:00	19.1	19.9	-13.3	-33.5	-22.5	8.9	8.6	-51.9
8/3/03 0:00	18.0	18.7	-11.5	-23.4	-15.1	-15.6	-14.7	-80.2
8/3/03 1:00	18.1	19.0	-6.9	-18.6	-12.6	-15.6	-14.6	-68.3
8/3/03 2:00	17.3	18.2	-9.0	-22.2	-14.9	-15.5	-14.5	-76.1
8/3/03 3:00	16.5	17.5	-11.1	-25.9	-18.2	-15.5	-14.4	-85.1
8/3/03 4:00	15.6	16.2	-13.2	-29.6	-21.5	-15.4	-14.3	-94.0
8/3/03 5:00	16.0	16.1	-8.0	-33.7	-24.8	-15.4	-14.6	-96.6
8/3/03 6:00	16.0	16.6	0.2	-42.5	-28.2	-15.5	-14.9	-100.8

8/3/03 7:00	12.5	11.7	0.2	-42.0	-28.7	-28.5	-23.8		-122.7
8/3/03 8:00	12.1	12.3	0.2	-36.9	-26.3	-31.7	-30.4		-125.0
8/3/03 9:00	13.7	13.6	0.2	-38.4	-24.0	-33.2	-32.4		-127.8
8/3/03 10:00	15.8	15.1	0.2	-34.4	-22.0	-34.8	-31.8		-122.7
8/3/03 11:00	16.4	16.7	0.2	-24.3	-14.6	-35.1	-32.8		-106.6
8/3/03 12:00	18.6	19.2	0.2	-20.9	-11.5	-36.7	-34.7		-103.5
8/3/03 13:00	18.7	19.4	0.2	-19.5	-13.9	-36.6	-36.5		-106.3
8/3/03 14:00	17.3	18.2	0.2	-33.0	-24.6	-36.5	-35.6		-129.5
8/3/03 15:00	18.7	19.5	0.2	-30.4	-23.2	-36.5	-34.4		-124.2
8/3/03 16:00	18.5	19.2	4.2	-40.4	-23.1	-35.9	-33.1		-128.4
8/3/03 17:00	17.7	18.4	-14.5	-32.8	-24.8	-33.3	-31.8		-137.1
8/3/03 18:00	16.4	17.0	-14.2	-34.3	-26.4	-30.8	-30.5		-136.1
8/3/03 19:00	13.0	13.2	-13.9	-36.8	-28.0	-28.6	-28.7		-136.1
8/3/03 20:00	14.6	14.9	-13.7	-34.1	-22.7	-29.3	-28.8		-128.5
8/3/03 21:00	14.8	15.0	-15.1	-36.0	-22.2	-32.1	-32.0		-137.4
8/3/03 22:00	16.1	14.5	-16.5	-37.5	-29.7	-14.6	-17.8		-116.0
8/3/03 23:00	14.7	14.2	-17.9	-44.4	-31.8	-13.2	-13.5		-120.7
8/4/03 0:00	18.0	18.3	-11.7	-26.1	-19.3	-17.8	-15.1		-90.1
8/4/03 1:00	17.2	17.8	-12.1	-29.6	-22.5	-17.3	-17.0		-98.5
8/4/03 2:00	17.1	17.4	-12.5	-32.7	-22.8	-16.8	-17.7		-102.6
8/4/03 3:00	17.7	18.0	-13.0	-32.7	-23.1	-18.0	-18.5		-105.3
8/4/03 4:00	18.3	18.6	-13.4	-32.7	-23.4	-19.5	-19.4		-108.5
8/4/03 5:00	21.6	22.7	-13.8	-32.0	-23.8	2.5	4.1		-63.0
8/4/03 6:00	21.1	22.2	-12.7	-33.9	-23.1	2.1	3.6		-63.9
8/4/03 7:00	16.7	17.2	-9.4	-24.3	-19.3	-17.0	-14.7		-84.7
8/4/03 8:00	16.5	17.5	-5.0	-22.2	-11.7	-18.0	-17.8		-74.7
8/4/03 9:00	18.3	19.2	-0.7	-10.4	-3.7	-18.6	-17.8		-51.3
8/4/03 10:00	20.0	20.2	-2.0	-16.2	-9.0	-19.1	-17.8		-64.1
8/4/03 11:00	20.1	22.0	-2.8	-5.1	-1.8	-18.2	-17.8		-45.6
8/4/03 12:00	20.6	21.2	-0.9	-2.5	1.1	-18.6	-18.3		-39.2
8/4/03 13:00	21.3	22.0	0.5	-7.4	-0.3	-18.9	-18.7		-44.9
8/4/03 14:00	21.9	22.9	0.6	-6.4	-1.9	-19.0	-18.0		-44.7
8/4/03 15:00	22.0	22.8	0.7	-3.9	0.4	-19.1	-17.3		-39.3
8/4/03 16:00	19.4	20.2	0.8	-5.3	0.5	-14.8	-13.9		-32.7
8/4/03 17:00	17.7	18.5	0.9	-9.5	-2.9	-13.3	-12.6		-37.3
8/4/03 18:00	16.7	16.7	-0.3	-3.2	-0.7	-10.7	-10.3		-25.3
8/4/03 19:00	14.3	14.5	-1.6	-16.7	-9.4	-9.2	-8.5		-45.4
8/4/03 20:00	17.5	18.4	7.0	5.8	11.7	-10.0	-8.5		6.2
8/4/03 21:00	14.1	14.4	4.6	-3.5	2.3	-6.0	-6.3		-8.8
8/4/03 22:00	18.2	20.5	-0.6	-12.2	-4.9	8.8	7.7		-1.1
8/4/03 23:00	18.5	18.9	-9.6	-24.0	-14.5	12.7	13.2		-22.2
8/5/03 0:00	18.5	18.9	-9.6	-23.3	-14.8	9.4	10.1		-28.2
8/5/03 1:00	21.9	22.6	-9.4	-23.9	-15.6	4.3	5.8		-38.8
8/5/03 2:00	18.9	19.6	-9.7	-19.1	-15.6	-18.7	-18.5		-81.5
8/5/03 3:00	18.9	19.6	-10.2	-22.5	-17.7	-19.3	-19.4		-89.1
8/5/03 4:00	18.8	19.8	-10.6	-25.1	-19.8	-20.0	-20.3		-95.8
8/5/03 5:00	20.4	20.5	-11.1	-27.7	-21.9	-21.8	-21.7		-104.2
8/5/03 6:00	24.1	25.3	-10.7	-26.8	-20.6	0.0	1.7		-56.4
8/5/03 7:00	19.4	18.6	-7.1	-21.6	-14.3	-18.9	-17.9		-79.7
8/5/03 8:00	17.2	18.2	-3.5	-15.4	-6.1	-20.0	-19.1		-64.0
8/5/03 9:00	18.7	20.4	0.2	-7.1	-1.7	-20.5	-19.7		-48.9
8/5/03 10:00	20.5	21.8	-1.2	-7.2	-2.8	-21.0	-20.4		-52.5

8/5/03 11:00	22.5	23.5	1.8	-0.1	3.4	-21.4	-21.0		-37.4
8/5/03 12:00	17.8	18.6	1.9	-7.9	-3.6	-15.6	-15.4		-40.6
8/5/03 13:00	17.3	17.7	1.4	-8.2	-3.6	-14.0	-13.7		-38.1
8/5/03 14:00	17.8	17.8	0.8	-8.5	-3.6	-14.3	-14.0		-39.6
8/5/03 15:00	17.8	18.0	0.2	-8.8	-3.7	-14.6	-14.2		-41.1
8/5/03 16:00	17.8	18.1	-0.3	-9.0	-3.7	-14.9	-14.5		-42.5
8/5/03 17:00	17.8	18.2	-0.9	-9.3	-3.7	-15.2	-14.8		-44.0
8/5/03 18:00	17.8	18.3	-1.5	-9.6	-3.8	-15.5	-15.1		-45.4
8/5/03 19:00	17.8	18.5	-2.1	-9.8	-3.8	-15.8	-15.3		-46.9
8/5/03 20:00	17.8	18.6	-2.1	-10.0	-3.8	-16.1	-15.6		-47.7
8/5/03 21:00	17.8	18.7	-2.1	-10.0	-3.8	-16.2	-15.7		-47.9
8/5/03 22:00	17.8	18.7	-2.1	-10.0	-3.8	-16.2	-15.7		-47.9
8/5/03 23:00	17.8	18.7	-2.1	-10.0	-3.8	-16.2	-15.7		-47.9
8/6/03 0:00	17.8	18.7	-2.1	-10.0	-3.8	-16.2	-15.7		-47.9
8/6/03 1:00	17.8	18.7	-2.1	-10.0	-3.8	-16.2	-15.7		-47.9
8/6/03 2:00	17.8	18.7	-2.1	-10.0	-3.8	-16.2	-15.7		-47.9
8/6/03 3:00	17.8	18.7	-2.1	-10.0	-3.8	-16.2	-15.7		-47.9
8/6/03 4:00	17.8	18.7	-2.1	-10.0	-3.8	-16.2	-15.7		-47.9
8/6/03 5:00	17.8	18.7	-2.1	-10.0	-3.8	-16.2	-15.7		-47.9
8/6/03 6:00	17.8	18.7	-2.1	-10.0	-3.8	-16.2	-15.7		-47.9
8/6/03 7:00	17.8	17.0	-7.4	-16.6	-11.2	-15.4	-12.4		-63.0
8/6/03 8:00	17.2	17.9	-6.8	-12.7	-10.6	-17.3	-16.4		-63.8
8/6/03 9:00	15.9	16.2	-6.1	-12.6	-6.4	-15.8	-17.7		-58.6
8/6/03 10:00	16.5	17.0	0.4	-9.1	-1.7	-14.8	-13.5		-38.7
8/6/03 11:00	17.0	16.5	-2.7	-16.3	-7.9	-15.3	-12.9		-55.1
8/6/03 12:00	16.0	15.3	-4.8	-16.7	-8.6	-14.6	-12.4		-56.9
8/6/03 13:00	16.1	16.8	-4.8	-18.8	-9.2	-14.2	-12.9		-59.9
8/6/03 14:00	18.8	19.9	-4.8	-19.0	-9.2	-14.7	-13.7		-61.4
8/6/03 15:00	19.4	20.5	-4.8	-17.5	-8.4	-15.3	-14.4		-60.4
8/6/03 16:00	19.8	20.9	-4.8	-16.0	-7.6	-15.8	-14.6		-58.8
8/6/03 17:00	17.5	18.2	-7.0	-16.9	-10.7	-12.9	-12.1		-59.6
8/6/03 18:00	12.1	12.4	-7.4	-20.9	-12.5	-7.6	-7.2		-55.6
8/6/03 19:00	12.3	12.6	-6.2	-17.5	-7.9	-7.7	-6.3		-45.5
8/6/03 20:00	14.1	14.2	-4.8	-8.0	-3.9	-7.6	-7.7		-31.9
8/6/03 21:00	15.4	16.0	-3.4	-8.9	-2.3	-10.4	-9.9		-34.8
8/6/03 22:00	18.6	19.0	-4.4	-16.2	-10.2	10.3	8.8		-11.7
8/6/03 23:00	19.8	20.4	-7.1	-21.2	-13.1	10.3	9.7		-21.4
8/7/03 0:00	19.9	21.8	-9.9	-24.0	-16.9	9.8	8.6		-32.4
8/7/03 1:00	21.1	21.4	-12.8	-30.0	-22.1	9.2	6.9		-48.8
8/7/03 2:00	21.2	22.4	-10.9	-22.0	-17.2	7.7	7.0		-35.3
8/7/03 3:00	22.0	22.8	-8.8	-14.9	-11.6	7.3	7.5		-20.5
8/7/03 4:00	19.9	20.3	-6.8	-13.1	-9.1	-14.9	-13.6		-57.5
8/7/03 5:00	22.8	23.0	-5.2	-15.1	-11.7	-16.5	-15.3		-63.8
8/7/03 6:00	22.2	22.9	-5.0	-14.4	-11.0	-18.1	-17.0		-65.4
8/7/03 7:00	17.0	18.4	-3.1	-14.9	-8.5	-19.6	-18.7		-64.8
8/7/03 8:00	18.0	18.4	-5.1	-19.3	-12.7	-23.2	-24.1		-84.4
8/7/03 9:00	16.8	17.8	-3.8	-18.2	-7.0	-20.6	-20.9		-70.5
8/7/03 10:00	20.1	21.1	-2.5	-12.0	-4.9	-17.9	-17.1		-54.4
8/7/03 11:00	17.6	18.4	-1.5	-10.8	-4.2	-14.0	-13.3		-43.9
8/7/03 12:00	16.4	17.1	-1.9	-12.7	-2.9	-19.7	-19.0		-56.4
8/7/03 13:00	21.2	21.8	-2.4	-10.8	-1.2	-16.8	-16.0		-47.3
8/7/03 14:00	23.3	23.9	-2.2	-11.5	-4.5	-13.8	-12.8		-44.8

8/7/03 15:00	24.0	25.0	-3.2	-12.0	-4.8	-13.4	-11.6		-45.0
8/7/03 16:00	22.9	24.0	-4.2	-16.0	-4.1	-13.0	-10.4		-47.8
8/7/03 17:00	20.8	21.7	-5.2	-17.2	-9.5	-12.6	-9.3		-53.8
8/7/03 18:00	15.3	16.2	-6.2	-25.0	-15.5	-3.7	-3.1		-53.4
8/7/03 19:00	13.5	13.5	-5.1	-16.4	-7.7	-5.9	-5.6		-40.7
8/7/03 20:00	18.1	18.9	-3.9	-16.3	-8.6	-5.7	-4.1		-38.5
8/7/03 21:00	20.8	22.0	-4.5	-9.3	-1.8	4.5	5.2		-5.8
8/7/03 22:00	22.5	23.5	-5.1	-13.1	-8.3	2.8	3.2		-20.6
8/7/03 23:00	23.6	25.1	-5.6	-17.6	-10.9	-3.1	-2.8		-40.1
8/8/03 0:00	22.3	23.1	-6.0	-19.8	-12.6	-9.1	-8.8		-56.3
8/8/03 1:00	24.3	25.3	-6.5	-20.3	-13.8	-10.6	-11.0		-62.2
8/8/03 2:00	21.7	23.2	-6.7	-14.4	-10.9	-11.5	-12.5		-55.9
8/8/03 3:00	21.4	22.4	-6.7	-17.5	-10.4	-12.8	-13.9		-61.3
8/8/03 4:00	21.8	22.7	-6.7	-20.6	-11.7	-14.1	-15.4		-68.6
8/8/03 5:00	23.3	24.2	-6.7	-23.8	-13.1	-15.4	-16.9		-75.9
8/8/03 6:00	22.7	23.6	-6.6	-17.9	-13.7	-16.7	-18.4		-73.3
8/8/03 7:00	16.1	16.9	-6.0	-17.4	-12.4	-25.0	-24.3		-85.2
8/8/03 8:00	14.9	16.2	-5.5	-19.5	-13.2	-25.6	-25.1		-88.9
8/8/03 9:00	18.0	18.4	-3.8	-11.8	-5.3	-26.8	-26.0		-73.7
8/8/03 10:00	16.6	17.4	-7.0	-16.8	-10.0	-20.9	-20.1		-74.7
8/8/03 11:00	16.2	16.6	-4.2	-14.8	-6.7	-16.5	-15.7		-58.0
8/8/03 12:00	19.2	18.9	-4.0	-13.5	-6.1	-14.6	-13.4		-51.6
8/8/03 13:00	23.0	23.5	-3.7	-12.0	-2.7	-10.1	-10.4		-39.0
8/8/03 14:00	22.5	23.7	-5.2	-19.5	-11.9	-12.4	-12.0		-61.0
8/8/03 15:00	21.4	22.7	-8.6	-22.2	-14.2	-21.2	-22.1		-88.3
8/8/03 16:00	20.4	21.5	-8.6	-23.6	-16.4	-19.4	-18.2		-86.2
8/8/03 17:00	17.6	17.9	-8.6	-25.0	-18.7	-16.9	-14.3		-83.5
8/8/03 18:00	14.5	14.9	-7.8	-23.2	-14.8	-10.7	-9.9		-66.3
8/8/03 19:00	12.6	12.2	-6.9	-23.7	-16.5	-6.8	-7.7		-61.6
8/8/03 20:00	13.6	13.9	-6.6	-14.0	-8.2	-5.7	-6.2		-40.7
8/8/03 21:00	13.5	13.4	-7.8	-15.1	-6.1	-5.4	-5.2		-39.7
8/8/03 22:00	14.4	14.4	-9.0	-16.7	-9.1	18.2	18.1		1.5
8/8/03 23:00	14.9	16.0	-9.8	-21.6	-13.7	12.7	13.0		-19.3
8/9/03 0:00	22.1	23.3	-10.0	-28.3	-19.4	6.5	5.4		-45.7
8/9/03 1:00	20.4	20.7	-10.1	-23.6	-17.6	-19.4	-17.6		-88.4
8/9/03 2:00	20.9	20.7	-10.3	-21.3	-14.1	-19.0	-17.8		-82.5
8/9/03 3:00	21.2	22.1	-10.4	-16.3	-14.4	-19.1	-18.3		-78.4
8/9/03 4:00	20.8	21.6	-10.5	-19.7	-16.1	-20.0	-19.4		-85.8
8/9/03 5:00	20.5	21.1	-10.7	-23.2	-17.8	-20.9	-20.6		-93.2
8/9/03 6:00	20.3	20.6	-10.5	-25.4	-19.3	-21.8	-21.7		-98.7
8/9/03 7:00	19.6	19.2	-10.0	-25.6	-20.5	-34.3	-34.5		-124.9
8/9/03 8:00	20.4	21.2	-9.5	-23.8	-14.4	-11.8	-12.8		-72.3
8/9/03 9:00	21.8	23.3	-8.1	-17.5	-9.4	-13.5	-13.9		-62.4
8/9/03 10:00	20.2	21.1	-6.5	-11.4	-5.6	-10.2	-9.6		-43.2
8/9/03 11:00	23.1	24.1	-4.8	-8.6	-2.6	-12.0	-11.6		-39.6
8/9/03 12:00	22.2	23.2	-4.2	-19.4	-12.1	-14.4	-12.6		-62.7
8/9/03 13:00	23.4	24.4	-4.2	-15.6	-10.9	-13.6	-12.9		-57.2
8/9/03 14:00	21.3	22.8	-4.1	-13.4	-9.7	-7.9	-9.9		-44.9
8/9/03 15:00	20.2	22.3	-4.0	-13.4	-8.5	-7.2	-8.7		-41.8
8/9/03 16:00	19.1	21.5	-3.9	-13.3	-7.3	-6.3	-7.8		-38.5
8/9/03 17:00	18.0	20.2	-3.8	-13.2	-6.0	-4.9	-6.9		-34.9
8/9/03 18:00	18.3	18.9	-3.0	-7.9	0.0	-4.7	-4.0		-19.6

8/9/03 19:00	15.9	16.5	-2.0	-6.0	-0.6	-0.8	0.9		-8.5
8/9/03 20:00	16.4	17.4	-1.0	-0.3	5.8	0.1	2.2		6.7
8/9/03 21:00	13.8	14.0	-3.1	-12.8	-7.6	-0.1	0.5		-23.1
8/9/03 22:00	19.9	20.4	0.4	-8.2	-0.5	11.6	11.9		15.2
8/9/03 23:00	21.4	23.0	-4.9	-20.1	-13.4	8.8	9.7		-19.9
8/10/03 0:00	22.4	22.8	-10.2	-24.4	-15.6	7.3	7.6		-35.2
8/10/03 1:00	22.9	23.6	-8.3	-22.4	-14.3	8.3	7.0		-29.7
8/10/03 2:00	22.8	23.3	-6.3	-20.2	-12.8	7.3	6.4		-25.6
8/10/03 3:00	23.1	24.0	-5.9	-12.3	-11.2	6.3	5.7		-17.3
8/10/03 4:00	23.4	24.5	-6.5	-11.2	-9.5	5.3	5.1		-16.7
8/10/03 5:00	23.8	25.0	-7.1	-10.0	-9.1	4.3	4.5		-17.4
8/10/03 6:00	21.4	22.5	-7.7	-13.0	-8.9	-18.1	-17.8		-65.6
8/10/03 7:00	20.0	20.7	-7.9	-22.0	-15.5	-8.0	-7.4		-60.8
8/10/03 8:00	18.4	19.3	-7.9	-21.8	-16.7	-8.0	-7.4		-61.8
8/10/03 9:00	19.1	19.9	-7.6	-17.9	-13.2	-8.1	-7.3		-54.1
8/10/03 10:00	17.8	18.3	-5.4	-12.3	-6.2	-6.2	-7.0		-37.2
8/10/03 11:00	18.4	18.3	-3.2	-6.7	1.0	-9.0	-7.4		-25.3
8/10/03 12:00	18.7	18.9	-1.3	-6.0	2.9	-7.0	-6.8		-18.2
8/10/03 13:00	20.3	21.6	-3.7	-8.1	-0.4	-7.8	-6.9		-26.9
8/10/03 14:00	19.8	21.1	-4.1	-13.5	-6.3	-9.1	-7.7		-40.7
8/10/03 15:00	20.5	22.7	-4.1	-11.3	-3.4	-8.7	-7.4		-34.9
8/10/03 16:00	21.0	22.7	-4.2	-10.4	-3.5	-8.2	-7.2		-33.5
8/10/03 17:00	20.2	21.4	-4.2	-9.6	-3.7	-7.5	-6.9		-31.9
8/10/03 18:00	17.3	17.9	-4.3	-13.7	-4.4	-4.6	-4.1		-31.1
8/10/03 19:00	13.0	13.0	-4.2	-22.1	-12.9	-1.9	-1.1		-42.1
8/10/03 20:00	15.3	15.7	-4.0	-11.0	-3.3	-5.3	-1.3		-24.9
8/10/03 21:00	14.9	15.6	-3.6	-6.5	-0.8	-2.7	-1.5		-15.0
8/10/03 22:00	14.8	16.3	-4.7	-17.2	-12.0	14.1	15.7		-4.1
8/10/03 23:00	15.2	16.1	-3.9	-14.6	-6.4	14.4	14.6		4.1
8/11/03 0:00	19.1	20.2	-11.7	-25.5	-17.4	10.8	11.0		-32.9
8/11/03 1:00	19.9	20.5	-10.8	-24.7	-15.3	12.0	11.1		-27.7
8/11/03 2:00	19.4	20.7	-9.8	-26.8	-17.3	12.9	10.5		-30.6
8/11/03 3:00	20.8	21.7	-9.4	-22.7	-17.2	10.4	9.1		-29.7
8/11/03 4:00	21.6	23.0	-9.5	-22.3	-15.5	7.9	6.8		-32.4
8/11/03 5:00	22.3	24.0	-9.6	-25.3	-18.0	5.5	4.6		-42.8
8/11/03 6:00	22.5	24.1	-9.7	-26.8	-21.0	3.3	2.3		-51.9
8/11/03 7:00	12.8	13.1	-9.8	-28.5	-18.0	-8.5	-8.0		-72.8
8/11/03 8:00	13.2	13.5	-6.6	-12.0	-5.5	-9.9	-10.1		-44.0
8/11/03 9:00	12.2	12.8	-8.3	-21.4	-11.4	-10.1	-9.5		-60.6
8/11/03 10:00	15.1	15.8	-5.1	-12.2	-3.2	-12.3	-11.2		-44.0
8/11/03 11:00	17.5	18.3	-1.9	-12.6	-5.1	-15.0	-14.0		-48.6
8/11/03 12:00	16.6	17.3	-5.2	-16.1	-9.5	-16.7	-15.2		-62.7
8/11/03 13:00	20.3	21.7	-4.5	-13.1	-7.4	-17.5	-19.0		-61.5
8/11/03 14:00	21.6	23.2	-3.7	-8.5	-1.9	-46.2	-44.8		-105.2
8/11/03 15:00	19.3	20.0	-4.5	-16.5	-8.4	-41.5	-40.2		-111.0
8/11/03 16:00	16.4	17.3	-7.1	-17.0	-10.7	-37.3	-37.6		-109.7
8/11/03 17:00	12.0	11.9	-11.1	-32.2	-21.2	-35.6	-35.1		-135.2
8/11/03 18:00	8.5	7.7	-8.2	-25.5	-16.5	-9.3	-8.5		-67.9
8/11/03 19:00	8.8	9.2	-13.1	-30.2	-15.9	-6.5	-5.4		-71.2
8/11/03 20:00	11.7	11.7	-9.8	-20.0	-10.3	-8.7	-9.3		-58.0
8/11/03 21:00	11.1	11.5	-6.5	-18.7	-10.6	-8.3	-7.4		-51.4
8/11/03 22:00	8.4	8.4	-10.9	-25.4	-15.9	-4.1	-3.4		-59.7

8/11/03 23:00	15.7	16.1	-13.7	-33.6	-23.2	11.5	10.9		-48.1
8/12/03 0:00	21.2	20.8	-16.8	-42.7	-26.7	7.2	7.5		-71.6
8/12/03 1:00	19.7	20.1	-18.9	-42.9	-31.3	6.4	7.0		-79.7
8/12/03 2:00	21.9	22.4	-12.4	-28.6	-24.4	5.4	5.4		-54.5
8/12/03 3:00	24.6	25.4	-10.9	-18.2	-13.4	5.1	4.6		-32.9
8/12/03 4:00	25.7	26.8	-10.2	-17.0	-14.0	3.7	3.8		-33.7
8/12/03 5:00	26.0	27.7	-9.5	-21.5	-14.6	2.4	3.1		-40.1
8/12/03 6:00	23.3	23.7	-10.1	-27.6	-19.6	4.8	6.4		-46.1
8/12/03 7:00	19.3	20.4	-9.8	-19.6	-14.7	8.2	7.1		-28.7
8/12/03 8:00	15.9	16.5	-9.3	-20.2	-11.5	-11.1	-11.3		-63.4
8/12/03 9:00	16.7	16.8	-7.3	-19.2	-9.4	-12.1	-11.8		-59.7
8/12/03 10:00	15.6	17.2	-7.8	-24.8	-15.4	-13.4	-12.3		-73.7
8/12/03 11:00	18.4	18.8	-6.5	-13.4	-8.7	-35.3	-34.6		-98.4
8/12/03 12:00	19.1	19.9	-5.7	-8.4	-5.1	-57.8	-56.6		-133.6
8/12/03 13:00	20.9	21.8	-5.9	-12.3	-5.8	-59.3	-58.5		-141.8
8/12/03 14:00	19.4	19.5	-6.1	-14.4	-6.3	-79.1	-78.4		-184.2
8/12/03 15:00	18.3	18.6	-6.3	-14.6	-8.6	-78.0	-77.7		-185.2
8/12/03 16:00	17.1	18.5	-6.5	-14.8	-10.0	-76.8	-77.0		-185.2
8/12/03 17:00	14.5	15.2	-5.9	-19.1	-13.1	-73.5	-73.4		-185.0
8/12/03 18:00	13.9	13.1	-3.5	-17.6	-10.3	-50.4	-50.2		-132.0
8/12/03 19:00	16.4	17.4	-7.5	-25.1	-16.7	1.2	0.2		-47.9
8/12/03 20:00	18.0	18.9	-11.0	-23.1	-15.6	-2.0	-1.2		-52.9
8/12/03 21:00	17.5	18.2	-13.5	-25.8	-17.0	-3.5	-2.6		-62.4
8/12/03 22:00	15.1	15.8	-15.4	-33.9	-22.7	-10.4	-9.8		-92.3
8/12/03 23:00	17.2	17.6	-15.8	-40.9	-29.5	-8.8	-5.1		-100.1
8/13/03 0:00	23.3	24.4	-15.7	-35.2	-23.9	-8.6	-9.3		-92.7
8/13/03 1:00	22.6	23.3	-15.3	-32.5	-22.3	-10.2	-11.0		-91.3
8/13/03 2:00	22.3	23.8	-14.8	-28.7	-21.4	-11.8	-12.7		-89.4
8/13/03 3:00	21.9	23.8	-14.4	-26.2	-20.6	-13.4	-14.4		-89.0
8/13/03 4:00	22.3	23.4	-13.9	-25.9	-19.9	-15.0	-16.1		-90.8
8/13/03 5:00	24.9	26.6	-13.5	-25.6	-19.1	-16.6	-17.8		-92.7
8/13/03 6:00	25.6	26.3	-13.1	-26.2	-19.5	-19.1	-19.5		-97.3
8/13/03 7:00	16.3	16.7	-14.2	-32.9	-22.5	-24.3	-24.2		-118.1
8/13/03 8:00	14.1	14.4	-15.2	-33.7	-25.0	-28.5	-28.0		-130.3
8/13/03 9:00	17.0	17.4	-8.8	-18.3	-12.1	-31.5	-31.2		-101.9
8/13/03 10:00	19.9	20.2	-3.5	-8.9	-3.3	-26.1	-25.9		-67.8
8/13/03 11:00	15.8	16.1	-18.7	-37.7	-25.9	-33.9	-33.3		-149.5
8/13/03 12:00	15.9	16.1	-16.4	-36.7	-24.4	-30.0	-29.3		-136.8
8/13/03 13:00	15.5	16.0	-13.9	-31.6	-20.9	-26.1	-25.2		-117.6
8/13/03 14:00	19.7	20.4	-11.4	-23.1	-14.5	-21.8	-21.1		-91.9
8/13/03 15:00	18.9	20.2	-11.7	-27.9	-20.6	-17.6	-17.1		-94.8
8/13/03 16:00	19.1	19.9	-12.1	-31.0	-21.9	-13.3	-13.0		-91.4
8/13/03 17:00	16.3	15.6	-12.6	-32.4	-23.4	-14.3	-13.2		-95.9
8/13/03 18:00	9.9	10.1	-8.5	-29.1	-20.7	-18.4	-17.7		-94.3
8/13/03 19:00	9.6	9.2	-8.0	-20.3	-13.6	-16.0	-15.2		-73.1
8/13/03 20:00	11.7	12.2	-8.7	-24.3	-17.2	-18.7	-17.8		-86.7
8/13/03 21:00	13.6	14.4	-10.4	-17.9	-14.3	-18.2	-17.0		-77.9
8/13/03 22:00	13.8	13.7	-12.3	-21.0	-17.7	-23.6	-22.8		-97.3
8/13/03 23:00	13.4	13.8	-15.6	-34.8	-24.9	-25.7	-24.7		-125.7
8/14/03 0:00	14.5	14.9	-19.2	-37.6	-26.6	-30.9	-30.1		-144.3
8/14/03 1:00	17.2	19.0	-14.1	-37.2	-24.6	-20.5	-19.9		-116.4
8/14/03 2:00	19.8	20.7	-10.8	-22.8	-15.2	-17.2	-16.2		-82.1

8/14/03 3:00	20.8	21.3	-9.4	-22.1	-14.8	-15.8	-14.6	-76.7
8/14/03 4:00	21.8	22.5	-8.0	-20.1	-14.4	-15.5	-15.5	-73.5
8/14/03 5:00	22.7	23.6	-6.6	-18.1	-14.1	-15.3	-16.3	-70.3
8/14/03 6:00	22.0	22.7	-5.2	-16.9	-10.8	-24.5	-23.9	-81.3
8/14/03 7:00	17.6	17.9	-5.6	-15.3	-10.0	-26.2	-25.3	-82.4
8/14/03 8:00	16.5	17.3	-6.2	-16.0	-8.9	-25.7	-25.2	-82.1
8/14/03 9:00	15.0	15.1	-9.9	-27.4	-18.0	-20.9	-20.1	-96.4
8/14/03 10:00	19.7	20.8	-5.3	-12.2	-5.9	-14.7	-14.2	-52.4
8/14/03 11:00	21.4	21.8	-8.9	-25.5	-14.1	-10.7	-11.0	-70.2
8/14/03 12:00	23.3	23.5	-9.7	-25.4	-17.9	-7.0	-6.0	-66.0
8/14/03 13:00	26.6	28.1	-10.6	-27.4	-20.6	-2.2	-0.9	-61.8
8/14/03 14:00	24.0	25.6	-11.5	-31.1	-21.4	-10.4	-11.3	-85.7
8/14/03 15:00	25.2	26.3	-12.4	-30.9	-22.3	-7.8	-7.4	-80.8
8/14/03 16:00	24.0	24.7	-16.0	-32.3	-24.5	-5.3	-3.5	-81.7
8/14/03 17:00	20.1	20.9	-19.7	-42.0	-32.1	-6.4	-5.7	-105.9
8/14/03 18:00	15.9	16.5	-11.0	-21.3	-16.2	-10.7	-9.9	-69.0
8/14/03 19:00	16.4	16.5	-8.5	-16.5	-11.5	-14.2	-13.4	-64.1
8/14/03 20:00	19.2	21.3	-7.4	-16.0	-10.8	-15.5	-14.9	-64.7
8/14/03 21:00	20.6	21.7	-6.2	-10.8	-8.5	-13.8	-13.4	-52.7
8/14/03 22:00	17.8	18.3	-4.5	-15.6	-14.1	-21.0	-20.5	-75.7
8/14/03 23:00	21.4	22.3	-4.5	-14.1	-11.1	-20.1	-19.0	-68.8
8/15/03 0:00	24.6	25.4	-7.7	-18.5	-17.0	-26.8	-23.9	-94.0
8/15/03 1:00	20.5	21.7	-8.4	-23.5	-15.4	-17.6	-16.9	-81.9
8/15/03 2:00	24.1	26.6	-9.0	-19.8	-14.4	-10.7	-10.4	-64.3
8/15/03 3:00	25.6	25.5	-8.6	-14.2	-11.6	-9.9	-10.0	-54.3
8/15/03 4:00	25.2	24.8	-8.2	-15.3	-11.4	-9.8	-9.7	-54.4
8/15/03 5:00	25.9	27.5	-7.7	-16.5	-11.3	-12.4	-12.7	-60.5
8/15/03 6:00	23.5	23.9	-6.6	-15.2	-7.4	-22.7	-22.0	-73.9
8/15/03 7:00	17.9	18.8	-8.8	-20.7	-13.6	-26.5	-25.4	-95.0
8/15/03 8:00	15.2	16.8	-12.7	-33.6	-24.5	-32.4	-31.6	-134.9
8/15/03 9:00	19.3	20.7	-11.6	-22.2	-16.8	-28.6	-27.7	-106.8
8/15/03 10:00	26.0	27.0	-9.8	-16.1	-12.2	-20.3	-18.5	-76.9
8/15/03 11:00	27.3	28.2	-8.0	-18.5	-16.8	-17.2	-16.3	-76.9
8/15/03 12:00	17.6	17.9	-12.6	-22.3	-14.1	-17.7	-17.2	-83.9
8/15/03 13:00	21.2	21.9	-11.1	-21.6	-14.4	-12.2	-11.5	-70.8
8/15/03 14:00	24.4	24.3	-7.8	-19.4	-11.8	-6.6	-5.7	-51.4
8/15/03 15:00	26.5	26.4	-12.2	-31.2	-23.3	-2.1	-1.4	-70.3
8/15/03 16:00	24.5	25.6	-14.9	-32.8	-26.0	-1.1	-0.5	-75.3
8/15/03 17:00	17.8	17.2	-15.3	-37.0	-25.0	-1.3	-0.4	-79.0
8/15/03 18:00	10.7	11.1	-11.3	-29.1	-21.5	-7.7	-6.7	-76.3
8/15/03 19:00	12.7	12.0	-9.0	-18.9	-12.8	-13.8	-12.5	-67.1
8/15/03 20:00	13.0	12.6	-6.7	-22.8	-17.3	-16.0	-15.2	-78.1
8/15/03 21:00	14.8	14.0	-4.5	-16.7	-9.7	-15.4	-15.1	-61.3
8/15/03 22:00	15.3	14.1	-9.5	-15.8	-11.0	-10.9	-10.6	-57.8
8/15/03 23:00	22.8	19.9	-11.6	-22.8	-16.5	-16.5	-15.7	-83.2
8/16/03 0:00	20.0	19.8	-10.4	-29.8	-17.2	-20.1	-18.9	-96.5
8/16/03 1:00	19.8	19.3	-9.2	-26.8	-17.9	-13.4	-13.1	-80.3
8/16/03 2:00	21.0	20.8	-9.8	-24.0	-18.5	-10.1	-9.8	-72.1
8/16/03 3:00	20.4	20.7	-10.7	-25.1	-19.1	-11.9	-11.6	-78.4
8/16/03 4:00	21.3	21.1	-11.5	-26.3	-19.7	-13.7	-13.4	-84.6
8/16/03 5:00	21.2	21.6	-12.4	-27.5	-20.3	-15.6	-15.2	-90.8
8/16/03 6:00	21.4	22.3	-17.7	-0.2	-26.1	-17.4	-17.0	-78.4

8/16/03 7:00	18.5	18.3	-18.0	-0.2	-23.8	-22.2	-21.3		-85.6
8/16/03 8:00	16.6	16.8	-18.1	-0.2	-26.9	-28.6	-27.8		-101.8
8/16/03 9:00	18.4	18.6	-12.8	-0.2	-17.7	-22.8	-22.3		-75.8
8/16/03 10:00	19.7	20.3	-8.4	-0.2	-19.4	-27.7	-26.9		-82.7
8/16/03 11:00	25.2	25.5	-9.9	-0.2	-15.7	-21.1	-19.5		-66.5
8/16/03 12:00	18.2	17.8	-8.8	-0.2	-14.3	-27.8	-27.1		-78.2
8/16/03 13:00	20.9	20.3	-8.2	-0.2	-14.4	-22.9	-22.2		-68.0
8/16/03 14:00	21.4	22.3	-7.6	-0.1	-15.0	-20.7	-19.7		-63.2
8/16/03 15:00	22.9	23.0	-7.0	0.2	-15.7	-18.5	-17.7		-58.7
8/16/03 16:00	20.4	20.9	-8.0	0.5	-12.0	-16.3	-15.7		-51.4
8/16/03 17:00	18.3	19.2	-9.3	-16.3	-11.8	-18.7	-17.6		-73.6
8/16/03 18:00	14.7	15.3	-10.6	-19.3	-15.2	-22.3	-21.0		-88.4
8/16/03 19:00	11.4	11.8	-11.4	-28.6	-21.5	-27.5	-24.5		-113.5
8/16/03 20:00	19.5	19.7	-9.3	-22.6	-16.9	-23.3	-22.6		-94.7
8/16/03 21:00	23.4	24.5	-9.5	-25.8	-20.4	-24.9	-23.6		-104.1
8/16/03 22:00	21.0	22.6	-9.7	-27.5	-22.7	-24.8	-24.1		-108.8
8/16/03 23:00	21.0	22.3	-12.7	-27.6	-20.1	-19.0	-17.5		-96.9
8/17/03 0:00	20.5	24.2	-16.6	-29.9	-20.5	-10.1	-9.4		-86.5
8/17/03 1:00	19.4	23.4	-12.8	-28.6	-19.6	-13.8	-13.4		-88.3
8/17/03 2:00	21.2	21.8	-13.8	-28.5	-19.8	-10.3	-10.0		-82.5
8/17/03 3:00	21.8	21.8	-14.8	-29.8	-21.3	-12.5	-12.4		-90.8
8/17/03 4:00	21.8	21.3	-15.8	-31.0	-22.9	-14.7	-14.8		-99.2
8/17/03 5:00	20.7	20.4	-16.9	-32.2	-24.4	-16.9	-17.2		-107.6
8/17/03 6:00	19.6	20.6	-17.9	-33.4	-25.9	-19.2	-19.6		-116.0
8/17/03 7:00	12.6	13.2	-18.9	-35.2	-27.6	-24.0	-23.4		-129.1
8/17/03 8:00	11.7	11.0	-17.6	-43.2	-32.6	-33.1	-31.1		-157.6
8/17/03 9:00	12.1	10.4	-14.5	-33.3	-25.5	-33.3	-33.4		-140.1
8/17/03 10:00	13.2	12.8	-12.2	-27.4	-18.2	-30.2	-30.8		-118.7
8/17/03 11:00	13.7	12.6	-10.6	-28.2	-19.7	-32.4	-29.2		-119.9
8/17/03 12:00	16.5	15.1	-10.2	-26.9	-16.9	-29.3	-30.1		-113.5
8/17/03 13:00	15.7	15.1	-10.5	-30.6	-19.0	-27.6	-26.2		-113.9
8/17/03 14:00	19.6	19.8	-11.5	-26.5	-15.5	-23.9	-22.7		-100.1
8/17/03 15:00	21.4	21.4	-12.6	-26.2	-15.9	-20.2	-19.3		-94.1
8/17/03 16:00	21.4	21.8	-13.6	-27.1	-18.3	-16.5	-15.8		-91.3
8/17/03 17:00	21.2	21.2	-14.6	-28.0	-20.8	-15.9	-13.8		-93.1
8/17/03 18:00	17.5	16.1	-15.6	-31.1	-23.2	-19.9	-16.8		-106.6
8/17/03 19:00	15.6	15.1	-15.4	-29.4	-20.2	-18.8	-19.2		-103.1
8/17/03 20:00	18.4	18.6	-14.4	-30.1	-21.5	-21.0	-20.5		-107.5
8/17/03 21:00	20.6	21.6	-14.5	-31.9	-24.1	-23.1	-21.9		-115.5
8/17/03 22:00	20.7	20.5	-17.9	-32.4	-26.4	-23.4	-23.2		-123.3
8/17/03 23:00	21.8	21.4	-19.0	-40.3	-28.9	-32.5	-29.9		-150.5
8/18/03 0:00	20.7	20.5	-17.8	-35.0	-27.3	-24.0	-23.1		-127.3
8/18/03 1:00	21.5	21.4	-16.7	-38.7	-28.6	-15.9	-16.7		-116.5
8/18/03 2:00	22.1	22.3	-15.4	-28.2	-23.5	-13.7	-11.9		-92.7
8/18/03 3:00	21.5	21.2	-14.2	-28.5	-21.9	-14.6	-13.3		-92.5
8/18/03 4:00	24.0	24.1	-12.9	-28.7	-22.3	-15.5	-14.8		-94.2
8/18/03 5:00	23.2	23.5	-11.6	-28.9	-22.6	-16.7	-16.5		-96.4
8/18/03 6:00	22.7	23.4	-10.4	-27.5	-17.2	-25.9	-25.6		-106.5
8/18/03 7:00	15.2	14.9	-9.4	-21.9	-15.4	-29.3	-29.2		-105.2
8/18/03 8:00	I/O Time	I/O Time	I/O Time	I/O Time	I/O Time	I/O Time	I/O Time	I/O Timeout	0.0
8/18/03 9:00	17.0	17.5	-7.7	-20.2	-14.2	-22.6	-22.0		-86.8
8/18/03 10:00	18.5	19.0	-7.3	-14.5	-11.2	-16.0	-15.3		-64.2

8/18/03 11:00	21.4	21.4	-6.8	-7.8	-4.9	-9.5	-8.6		-37.6
8/18/03 12:00	19.3	19.2	-6.3	-15.5	-9.8	-19.1	-18.8		-69.6
8/18/03 13:00	20.4	21.6	-5.9	-17.1	-10.3	-18.1	-17.7		-69.2
8/18/03 14:00	24.1	24.4	-5.7	-18.7	-10.8	-17.1	-16.6		-69.0
8/18/03 15:00	22.6	22.9	-5.5	-19.7	-11.3	-16.2	-15.5		-68.2
8/18/03 16:00	20.1	20.1	-5.2	-20.2	-12.1	-15.2	-14.5		-67.2
8/18/03 17:00	16.0	17.1	-5.0	-20.8	-13.9	-14.2	-13.4		-67.3
8/18/03 18:00	13.1	13.3	-4.8	-16.2	-8.2	-17.1	-16.3		-62.5
8/18/03 19:00	10.8	10.6	-5.3	-12.5	-7.2	-20.0	-19.3		-64.4
8/18/03 20:00	13.3	12.9	-5.9	-10.1	-6.3	-21.0	-20.4		-63.8
8/18/03 21:00	13.8	13.7	-6.5	-11.4	-7.5	-18.1	-17.6		-61.1
8/18/03 22:00	14.7	14.1	-7.5	-17.2	-12.5	-18.8	-18.8		-74.8
8/18/03 23:00	18.0	17.6	-9.6	-25.6	-18.1	-16.3	-15.5		-85.2
8/19/03 0:00	17.2	16.7	-11.6	-31.6	-22.9	-16.8	-14.7		-97.6
8/19/03 1:00	17.9	17.0	-13.7	-29.8	-23.0	-15.6	-14.1		-96.1
8/19/03 2:00	19.0	18.7	-13.8	-29.9	-23.1	-12.8	-14.1		-93.8
8/19/03 3:00	19.0	18.4	-13.6	-30.7	-23.2	-12.7	-14.2		-94.3
8/19/03 4:00	19.1	18.6	-13.3	-31.4	-23.3	-13.7	-14.2		-95.9
8/19/03 5:00	19.8	20.2	-13.0	-32.1	-23.4	-14.7	-14.3		-97.4
8/19/03 6:00	22.2	20.8	-12.7	-26.8	-20.1	-21.1	-21.1		-101.7
8/19/03 7:00	11.8	12.5	-13.0	-26.5	-18.3	-29.1	-29.0		-115.8
8/19/03 8:00	12.3	11.4	-13.3	-27.6	-18.6	-29.8	-29.3		-118.7
8/19/03 9:00	14.7	14.6	-8.7	-26.4	-15.5	-24.8	-23.7		-99.0
8/19/03 10:00	20.3	20.0	-3.3	-14.5	-10.1	-19.7	-18.1		-65.7
8/19/03 11:00	20.8	20.7	0.8	-9.4	-1.3	-14.7	-16.0		-40.6
8/19/03 12:00	19.4	18.8	-6.0	-14.6	-8.6	-15.9	-13.7		-58.7
8/19/03 13:00	21.2	20.9	-6.2	-12.1	-6.4	-17.3	-15.6		-57.5
8/19/03 14:00	18.8	18.5	-4.6	-8.6	-5.3	-34.1	-34.2		-86.8
8/19/03 15:00	17.3	16.9	-3.4	-10.7	-6.0	-32.2	-31.9		-84.2
8/19/03 16:00	15.7	15.3	-3.9	-12.4	-6.8	-30.2	-29.5		-82.9
8/19/03 17:00	13.8	14.4	-4.3	-14.1	-7.6	-28.0	-27.2		-81.3
8/19/03 18:00	11.7	10.9	-4.8	-11.2	-6.7	-25.5	-24.8		-73.1
8/19/03 19:00	11.2	11.0	-5.2	-7.9	-8.1	-23.8	-26.0		-71.1
8/19/03 20:00	13.2	12.9	-5.7	-9.8	-5.9	-26.1	-26.8		-74.3
8/19/03 21:00	13.4	15.1	-6.1	-12.5	-9.3	-24.1	-25.0		-77.0
8/19/03 22:00	17.3	16.8	-7.0	-20.1	-13.1	16.0	15.4		-8.8
8/19/03 23:00	24.7	25.1	-9.8	-26.1	-20.9	3.1	5.2		-48.5
8/20/03 0:00	24.7	25.0	-10.8	-26.3	-18.8	3.7	4.8		-47.4
8/20/03 1:00	23.7	23.9	-10.2	-23.8	-16.5	4.5	4.4		-41.6
8/20/03 2:00	23.0	23.3	-9.9	-17.0	-13.4	-12.8	-12.1		-65.2
8/20/03 3:00	23.3	23.8	-9.6	-18.1	-14.1	-13.9	-13.0		-68.8
8/20/03 4:00	24.4	24.7	-9.4	-19.3	-14.8	-14.9	-14.0		-72.4
8/20/03 5:00	23.0	23.7	-9.1	-20.1	-15.2	-17.2	-17.3		-78.8
8/20/03 6:00	23.5	24.0	-8.8	-17.4	-10.1	-21.7	-22.8		-80.8
8/20/03 7:00	17.1	16.8	-9.0	-24.4	-17.0	-27.6	-26.1		-104.1
8/20/03 8:00	16.1	15.5	-12.0	-34.1	-22.0	-29.8	-28.9		-126.8
8/20/03 9:00	16.4	16.2	-13.5	-29.8	-21.4	-25.6	-25.0		-115.4
8/20/03 10:00	15.1	15.0	-6.5	-14.3	-7.1	-39.9	-39.5		-107.3
8/20/03 11:00	16.3	15.5	-2.5	-9.6	-3.1	-33.5	-33.4		-82.2
8/20/03 12:00	19.3	19.3	-2.9	-5.1	-4.1	-29.2	-26.3		-67.6
8/20/03 13:00	22.4	23.3	-3.3	-11.2	-4.0	-21.9	-20.9		-61.4
8/20/03 14:00	22.9	23.2	-3.7	-12.0	-5.5	-23.4	-22.4		-67.1

8/20/03 15:00	22.1	22.8	-4.1	-12.6	-7.1	-23.0	-21.4		-68.1
8/20/03 16:00	22.5	22.9	-4.5	-13.2	-8.6	-22.5	-20.3		-69.1
8/20/03 17:00	20.2	18.8	-4.9	-12.5	-8.5	-18.2	-18.1		-62.2
8/20/03 18:00	16.3	15.1	-4.6	-8.7	-5.1	-12.8	-15.1		-46.4
8/20/03 19:00	16.6	16.0	-4.1	-4.8	-4.2	-12.0	-12.2		-37.3
8/20/03 20:00	16.2	16.3	-3.5	-6.8	-3.9	-11.2	-10.4		-36.0
8/20/03 21:00	16.3	15.8	-3.0	-9.6	-7.2	-9.9	-6.0		-35.6
8/20/03 22:00	20.4	20.1	-6.0	-17.4	-11.8	8.2	10.7		-16.3
8/20/03 23:00	19.2	18.7	-8.4	-24.1	-17.6	11.4	10.9		-27.8
8/21/03 0:00	24.2	24.7	-7.9	-18.4	-12.9	5.0	4.8		-29.4
8/21/03 1:00	26.2	26.7	-7.3	-14.0	-9.0	5.1	4.5		-20.7
8/21/03 2:00	25.7	26.6	-6.8	-11.8	-7.2	4.6	4.1		-17.0
8/21/03 3:00	25.4	26.5	-6.3	-11.1	-6.8	4.0	3.8		-16.3
8/21/03 4:00	25.2	26.3	-5.8	-10.3	-6.3	3.4	3.5		-15.5
8/21/03 5:00	26.4	27.0	-5.3	-9.6	-5.9	1.2	1.2		-18.3
8/21/03 6:00	27.0	27.7	-10.9	-25.8	-18.8	-6.5	-6.3		-68.3
8/21/03 7:00	19.3	18.8	-5.9	-14.6	-9.7	-20.1	-19.7		-70.1
8/21/03 8:00	17.0	16.5	-11.1	-28.8	-21.8	-20.1	-18.7		-100.6
8/21/03 9:00	17.2	16.5	-10.5	-29.5	-19.6	-20.8	-19.7		-100.1
8/21/03 10:00	16.5	16.2	-9.9	-26.9	-17.3	-21.5	-20.7		-96.3
8/21/03 11:00	18.4	18.7	-9.6	-20.6	-14.5	4.0	5.7		-35.0
8/21/03 12:00	19.3	17.8	-9.3	-18.7	-11.6	4.6	4.8		-30.2
8/21/03 13:00	21.4	20.4	-9.0	-24.2	-15.2	5.8	4.1		-38.6
8/21/03 14:00	21.1	21.3	-8.7	-20.3	-12.6	6.0	7.1		-28.5
8/21/03 15:00	20.7	21.0	-8.4	-16.4	-9.9	7.4	9.1		-18.2
8/21/03 16:00	20.3	20.2	-8.2	-12.5	-7.2	9.6	10.3		-7.8
8/21/03 17:00	17.8	18.5	-7.9	-20.3	-13.3	11.9	12.1		-17.6
8/21/03 18:00	14.5	15.0	0.7	0.6	2.5	-9.7	-9.4		-15.2
8/21/03 19:00	13.7	13.1	-1.9	-4.9	-0.7	-8.9	-8.7		-25.2
8/21/03 20:00	14.8	15.1	-4.6	-12.1	-4.6	-8.3	-7.1		-36.8
8/21/03 21:00	13.0	13.2	-7.2	-14.0	-9.4	-5.4	-4.7		-40.8
8/21/03 22:00	15.1	15.2	-9.7	-23.9	-14.5	18.5	17.6		-12.0
8/21/03 23:00	23.3	22.7	-6.9	-13.6	-10.7	9.0	9.2		-12.9
8/22/03 0:00	24.1	24.5	-1.6	-5.4	0.6	4.9	6.0		4.5
8/22/03 1:00	25.5	25.9	-0.8	0.3	1.5	3.4	3.7		8.1
8/22/03 2:00	26.2	27.4	0.1	2.0	2.0	2.4	2.3		8.8
8/22/03 3:00	26.4	26.8	1.0	2.8	2.6	1.8	2.0		10.3
8/22/03 4:00	26.5	27.6	1.9	3.7	3.1	1.3	1.8		11.6
8/22/03 5:00	28.7	29.1	2.7	4.5	3.5	0.7	2.0		13.4
8/22/03 6:00	22.1	23.0	-3.0	-6.6	-2.1	4.3	5.0		-2.4
8/22/03 7:00	16.1	16.0	-0.8	-9.3	-2.9	-14.4	-14.4		-41.9
8/22/03 8:00	13.6	14.0	-7.3	-23.6	-14.7	-14.2	-13.2		-73.1
8/22/03 9:00	11.8	11.9	-13.4	-32.9	-21.1	-14.1	-12.0		-93.5
8/22/03 10:00	12.2	13.1	-13.3	-33.7	-23.2	-15.7	-13.2		-99.1
8/22/03 11:00	13.8	13.7	-13.2	-33.2	-24.5	-15.5	-14.8		-101.3
8/22/03 12:00	12.5	12.7	-13.2	-31.1	-24.1	-15.2	-15.1		-98.6
8/22/03 13:00	13.8	14.4	-13.1	-28.9	-23.7	-15.3	-14.9		-95.9
8/22/03 14:00	15.2	16.3	-13.1	-27.6	-23.3	-15.5	-14.5		-94.0
8/22/03 15:00	15.5	16.5	-13.0	-27.2	-22.9	-15.8	-14.2		-93.0
8/22/03 16:00	15.3	15.7	-13.0	-26.9	-22.5	-15.0	-13.8		-91.1
8/22/03 17:00	13.5	13.7	-12.8	-27.9	-22.1	-11.2	-11.7		-85.7
8/22/03 18:00	13.1	13.5	-11.5	-25.3	-22.1	-10.7	-10.1		-79.7

8/22/03 19:00	13.8	13.7	-10.1	-25.3	-22.2	-11.8	-11.4	-80.8
8/22/03 20:00	15.6	15.4	-8.8	-24.8	-18.7	-12.4	-11.9	-76.5
8/22/03 21:00	15.0	15.2	-7.4	-24.4	-17.7	-9.5	-8.9	-67.9
8/22/03 22:00	17.8	18.9	-10.3	-21.3	-14.5	13.1	11.7	-21.2
8/22/03 23:00	21.1	21.4	-13.2	-28.1	-18.8	8.5	8.8	-42.8
8/23/03 0:00	19.3	20.7	-16.2	-37.8	-26.5	8.5	7.6	-64.2
8/23/03 1:00	22.1	23.1	-11.0	-25.0	-17.6	5.8	6.5	-41.3
8/23/03 2:00	23.5	24.7	-11.1	-16.8	-13.0	5.7	5.7	-29.5
8/23/03 3:00	23.2	24.7	-11.2	-17.4	-12.6	5.1	5.0	-31.2
8/23/03 4:00	23.7	24.4	-11.3	-18.0	-13.4	4.4	4.2	-34.1
8/23/03 5:00	24.4	24.9	-11.5	-18.6	-14.2	3.7	3.5	-37.1
8/23/03 6:00	24.6	25.8	-11.6	-19.1	-15.1	2.4	3.0	-40.4
8/23/03 7:00	19.1	18.5	-11.7	-26.6	-19.1	-6.7	-5.8	-69.8
8/23/03 8:00	16.5	16.2	-11.4	-28.1	-21.2	-6.6	-6.4	-73.7
8/23/03 9:00	16.9	17.3	-11.2	-23.9	-16.7	-5.9	-6.0	-63.7
8/23/03 10:00	17.0	17.9	-10.9	-22.3	-15.7	-5.9	-5.6	-60.5
8/23/03 11:00	20.1	21.0	-10.6	-22.6	-16.0	-6.2	-5.2	-60.6
8/23/03 12:00	17.9	18.5	-10.7	-27.2	-16.9	-4.9	-4.6	-64.3
8/23/03 13:00	18.5	18.7	-11.0	-24.4	-17.4	-2.9	-5.2	-61.0
8/23/03 14:00	19.6	19.8	-11.4	-21.6	-17.9	-4.2	-5.8	-60.9
8/23/03 15:00	20.2	20.5	-11.7	-23.3	-18.4	-5.4	-5.8	-64.6
8/23/03 16:00	20.0	21.0	-12.0	-25.1	-18.9	-4.0	-4.5	-64.6
8/23/03 17:00	18.9	19.1	-12.4	-27.0	-19.4	-2.3	-1.8	-62.9
8/23/03 18:00	16.9	17.9	-12.7	-27.6	-19.4	-2.1	-1.5	-63.2
8/23/03 19:00	17.8	18.2	-13.0	-25.9	-17.3	-4.6	-2.9	-63.8
8/23/03 20:00	19.9	19.9	-11.4	-22.0	-15.4	-4.3	-3.7	-56.7
8/23/03 21:00	19.1	20.9	-8.7	-21.7	-13.5	-3.6	-2.7	-50.2
8/23/03 22:00	21.2	22.3	-10.2	-27.8	-19.1	8.7	10.7	-37.8
8/23/03 23:00	21.2	21.4	-12.0	-30.2	-20.8	7.1	9.8	-46.0
8/24/03 0:00	24.9	25.9	-3.0	-9.4	-4.4	5.6	7.8	-3.3
8/24/03 1:00	24.9	26.0	-3.5	-11.8	-5.3	5.5	5.7	-9.4
8/24/03 2:00	25.1	26.6	-5.2	-13.3	-6.9	5.3	5.0	-15.2
8/24/03 3:00	24.8	25.9	-7.0	-14.8	-8.6	5.2	4.3	-20.8
8/24/03 4:00	24.6	25.2	-8.7	-16.3	-10.2	5.0	3.6	-26.5
8/24/03 5:00	24.8	26.1	-10.4	-18.7	-11.8	4.7	2.9	-33.3
8/24/03 6:00	23.4	24.5	-12.1	-21.3	-13.4	4.3	-2.1	-44.5
8/24/03 7:00	17.6	17.8	-13.3	-28.5	-21.4	-7.2	-7.0	-77.4
8/24/03 8:00	18.8	18.4	-11.0	-30.0	-18.9	-10.3	-10.1	-80.3
8/24/03 9:00	19.8	20.4	-8.6	-26.7	-16.4	-8.9	-10.1	-70.7
8/24/03 10:00	19.3	19.5	-7.5	-25.9	-14.1	-8.7	-6.0	-62.2
8/24/03 11:00	22.1	21.2	-6.9	-25.8	-17.2	-7.8	-6.4	-64.1
8/24/03 12:00	21.4	21.7	-5.2	-19.0	-12.5	-6.8	-6.7	-50.2
8/24/03 13:00	21.8	22.4	-5.3	-15.1	-7.8	-4.0	-3.2	-35.3
8/24/03 14:00	24.2	24.8	-6.5	-19.0	-11.3	-7.8	-6.9	-51.6
8/24/03 15:00	23.3	24.2	-7.8	-15.6	-9.4	-5.1	-6.3	-44.1
8/24/03 16:00	20.5	21.1	-7.7	-23.2	-14.9	-8.5	-6.7	-61.1
8/24/03 17:00	18.4	18.5	-7.2	-24.5	-14.0	-7.4	-3.9	-57.0
8/24/03 18:00	16.5	16.3	-6.7	-19.9	-13.4	-4.6	-4.1	-48.6
8/24/03 19:00	15.0	14.1	-8.3	-26.0	-16.2	-4.6	-3.9	-59.1
8/24/03 20:00	18.3	18.5	-10.3	-24.3	-13.8	-7.3	-5.9	-61.6
8/24/03 21:00	18.0	16.5	-12.7	-25.4	-17.4	-1.8	-1.7	-59.0
8/24/03 22:00	20.0	19.9	-15.2	-30.9	-22.2	8.8	9.8	-49.8

8/24/03 23:00	25.5	26.3	-13.2	-30.1	-22.5	3.5	3.8		-58.5
8/25/03 0:00	26.8	27.6	-9.3	-23.8	-16.9	2.9	4.0		-43.0
8/25/03 1:00	24.7	25.0	-9.4	-23.5	-20.0	3.5	4.2		-45.3
8/25/03 2:00	24.7	25.4	-9.6	-25.3	-19.5	4.1	4.3		-46.0
8/25/03 3:00	25.0	26.2	-9.7	-23.2	-17.9	3.1	2.9		-44.8
8/25/03 4:00	26.1	26.6	-9.8	-20.7	-16.3	2.1	1.5		-43.3
8/25/03 5:00	29.2	29.9	-10.0	-18.1	-14.9	-1.7	-0.3		-45.0
8/25/03 6:00	28.1	27.2	-13.0	-34.9	-24.3	-6.1	-5.5		-83.8
8/25/03 7:00	19.4	19.2	-9.1	-20.1	-15.3	-19.3	-16.8		-80.6
8/25/03 8:00	19.3	19.4	-9.7	-25.8	-19.7	-18.8	-17.4		-91.5
8/25/03 9:00	20.8	19.8	-10.3	-28.0	-20.1	-18.0	-18.1		-94.5
8/25/03 10:00	18.9	19.1	-10.1	-23.3	-17.2	-15.5	-14.7		-80.9
8/25/03 11:00	18.9	19.2	-9.5	-20.8	-14.7	-11.0	-12.3		-68.3
8/25/03 12:00	20.5	20.5	-8.9	-20.6	-13.3	-11.8	-11.1		-65.7
8/25/03 13:00	20.3	18.8	-9.7	-29.4	-18.0	-12.9	-11.9		-81.8
8/25/03 14:00	Not Cor	Not Cor	Not Cor	Not Cor	Not Cor	Not Cor	Not Connect		0.0
8/25/03 15:00	20.1	20.3	-10.0	-23.1	-14.6	-11.8	-10.9		-70.5
8/25/03 16:00	18.6	18.6	-10.0	-21.4	-13.8	-8.2	-10.9		-64.4
8/25/03 17:00	Shutdov	Shutdov	-11.6	Shutdov	Shutdov	Shutdov	Shutdown		-11.6
8/25/03 18:00	10.7	10.8	-12.7	-30.5	-21.3	-0.5	0.1		-64.9
8/25/03 19:00	13.7	14.2	-14.2	-31.0	-21.0	-7.8	-5.3		-79.3
8/25/03 20:00	17.2	17.6	-14.0	-25.6	-18.8	-11.5	-10.9		-80.8
8/25/03 21:00	14.4	14.9	-13.7	-26.8	-16.7	-7.8	-5.3		-70.3
8/25/03 22:00	16.8	17.5	-13.5	-30.3	-19.8	15.9	15.8		-31.9
8/25/03 23:00	17.4	17.8	-14.8	-31.2	-22.6	13.8	14.3		-40.4
8/26/03 0:00	22.3	22.4	-16.9	-40.1	-26.1	4.7	5.4		-73.1
8/26/03 1:00	24.5	25.2	-13.8	-24.1	-16.3	3.3	3.6		-47.3
8/26/03 2:00	27.4	28.2	-6.6	-12.8	-11.4	2.1	2.0		-26.7
8/26/03 3:00	28.1	28.7	-6.3	-15.0	-10.4	1.2	0.6		-29.9
8/26/03 4:00	28.0	28.8	-8.3	-17.3	-12.4	0.2	-0.8		-38.6
8/26/03 5:00	27.3	28.3	-10.2	-19.7	-14.3	-0.8	-2.2		-47.3
8/26/03 6:00	26.8	28.8	-13.4	-27.8	-18.1	-6.7	-7.4		-73.4
8/26/03 7:00	21.7	21.9	-7.8	-20.0	-13.1	-22.8	-23.8		-87.4
8/26/03 8:00	19.2	18.8	-10.1	-23.4	-19.4	-19.8	-20.9		-93.6
8/26/03 9:00	19.8	19.9	-9.0	-27.5	-20.4	-20.4	-21.0		-98.2
8/26/03 10:00	21.1	21.3	-7.9	-16.8	-13.0	-18.5	-17.5		-73.8
8/26/03 11:00	19.0	19.2	-8.3	-22.1	-12.8	-15.1	-14.7		-72.9
8/26/03 12:00	21.2	21.0	-8.7	-16.5	-9.4	-14.8	-13.0		-62.3
8/26/03 13:00	21.4	22.1	-9.0	-16.0	-11.2	-15.1	-16.4		-67.8
8/26/03 14:00	21.2	21.5	-9.4	-18.6	-11.9	-14.5	-14.3		-68.7
8/26/03 15:00	20.4	20.4	-9.8	-20.4	-11.9	-11.8	-10.5		-64.4
8/26/03 16:00	18.6	18.8	-10.2	-17.4	-11.9	-7.6	-6.0		-53.1
8/26/03 17:00	15.0	15.7	-10.5	-18.3	-13.8	-4.3	-1.5		-48.5
8/26/03 18:00	13.0	13.4	-9.8	-17.0	-12.0	-3.3	-2.9		-45.1
8/26/03 19:00	16.0	16.5	-7.7	-13.8	-8.0	-6.6	-6.4		-42.5
8/26/03 20:00	20.1	20.7	-5.6	-9.1	-8.4	-12.0	-11.6		-46.7
8/26/03 21:00	20.2	19.1	-3.5	-9.5	-8.0	-5.3	-2.7		-29.0
8/26/03 22:00	18.8	19.1	-10.5	-28.7	-19.4	14.4	15.1		-29.0
8/26/03 23:00	22.7	23.9	-15.1	-37.3	-26.7	5.9	6.2		-67.0
8/27/03 0:00	21.6	22.6	-18.8	-43.8	-33.5	4.9	5.2		-86.0
8/27/03 1:00	24.0	25.0	-15.1	-28.2	-19.0	4.2	4.4		-53.7
8/27/03 2:00	26.3	27.9	-8.1	-18.2	-11.0	3.8	4.2		-29.4

8/27/03 3:00	26.0	27.4	-8.5	-17.4	-10.1	3.1	3.9		-29.0
8/27/03 4:00	25.8	26.9	-8.8	-16.5	-9.3	0.4	0.8		-33.4
8/27/03 5:00	28.1	29.3	-9.2	-15.6	-8.5	-1.4	-2.4		-37.1
8/27/03 6:00	26.7	26.6	-8.7	-17.2	-12.0	-1.6	-4.4		-43.9
8/27/03 7:00	20.1	20.2	-7.7	-15.1	-10.4	-20.1	-19.3		-72.5
8/27/03 8:00	18.5	17.7	-6.6	-14.1	-8.8	-18.2	-17.8		-65.5
8/27/03 9:00	Not Cor	Not Cor	Not Cor	Not Cor	Not Cor	Not Cor	Not Connect		0.0
8/27/03 10:00	I/O Time	I/O Time	I/O Time	I/O Time	I/O Time	I/O Time	I/O Timeout		0.0
8/27/03 11:00	22.4	23.0	-8.0	-17.6	-12.2	-17.7	-17.0		-72.5
8/27/03 12:00	22.8	23.7	-8.1	-21.5	-15.3	-19.3	-18.8		-83.0
8/27/03 13:00	24.8	25.9	-8.3	-22.3	-15.0	-21.3	-21.0		-87.9
8/27/03 14:00	24.0	24.7	-8.4	-23.2	-14.5	-19.6	-18.6		-84.3
8/27/03 15:00	24.3	25.4	-8.5	-24.2	-15.8	-19.0	-17.7		-85.3
8/27/03 16:00	21.9	22.3	-8.7	-25.2	-18.0	-15.6	-16.8		-84.3
8/27/03 17:00	17.2	17.7	-8.8	-26.2	-20.2	-9.2	-10.9		-75.2
8/27/03 18:00	16.6	17.0	-8.0	-13.0	-12.4	-9.8	-9.4		-52.5
8/27/03 19:00	18.7	19.1	-7.0	-11.3	-10.7	-10.3	-10.1		-49.4
8/27/03 20:00	19.5	20.5	-6.0	-7.8	-7.0	-11.6	-11.3		-43.7
8/27/03 21:00	19.2	18.9	-5.0	-9.9	-8.0	-10.0	-9.5		-42.3
8/27/03 22:00	21.7	22.5	-6.1	-16.4	-15.0	9.6	9.8		-18.0
8/27/03 23:00	27.7	29.0	-8.8	-22.7	-16.6	-2.6	-0.8		-51.5
8/28/03 0:00	26.6	27.8	-10.6	-23.1	-16.2	1.6	0.8		-47.6
8/28/03 1:00	26.9	28.2	-10.3	-21.3	-16.3	0.6	1.4		-45.9
8/28/03 2:00	26.4	27.8	-10.0	-21.3	-16.4	0.6	0.6		-46.5
8/28/03 3:00	25.8	27.2	-9.6	-22.8	-16.5	0.6	-0.1		-48.4
8/28/03 4:00	26.4	27.3	-9.3	-24.2	-16.6	0.4	-0.9		-50.5
8/28/03 5:00	26.3	27.8	-8.9	-24.9	-16.6	-0.4	-1.7		-52.5
8/28/03 6:00	29.3	30.8	-8.6	-22.9	-16.5	-5.7	-5.1		-58.8
8/28/03 7:00	20.6	20.8	-10.1	-18.5	-13.5	-17.3	-17.2		-76.7
8/28/03 8:00	20.1	21.0	-8.0	-23.5	-16.9	-18.2	-17.9		-84.5
8/28/03 9:00	24.3	24.5	-4.7	-12.7	-7.8	-21.7	-18.5		-65.4
8/28/03 10:00	22.4	23.7	-7.7	-20.7	-14.4	-20.1	-19.7		-82.6
8/28/03 11:00	20.4	21.6	-7.1	-17.6	-13.1	-22.0	-21.2		-81.1
8/28/03 12:00	22.0	23.6	-8.7	-20.2	-14.2	6.5	7.3		-29.3
8/28/03 13:00	22.9	25.0	-8.3	-22.0	-14.5	5.7	6.7		-32.4
8/28/03 14:00	24.5	25.4	-7.8	-23.8	-14.9	3.5	4.3		-38.7
8/28/03 15:00	25.6	26.2	-7.3	-25.6	-15.2	1.8	2.8		-43.6
8/28/03 16:00	24.5	25.1	-6.8	-17.8	-12.1	3.7	4.9		-28.1
8/28/03 17:00	20.2	21.4	-5.9	-19.8	-13.5	8.5	10.0		-20.6
8/28/03 18:00	18.4	18.4	-4.2	-14.1	-9.8	12.6	11.9		-3.6
8/28/03 19:00	17.0	17.5	-4.9	-14.0	-10.0	14.7	15.2		0.9
8/28/03 20:00	18.8	20.0	-6.2	-17.4	-10.4	14.0	15.2		-4.7
8/28/03 21:00	19.9	20.3	-5.4	-8.4	-5.5	13.9	14.3		9.0
8/28/03 22:00	20.7	21.2	-7.9	-24.9	-15.3	5.7	6.2		-36.1
8/28/03 23:00	22.5	23.6	-11.7	-29.3	-18.8	2.6	2.8		-54.4
8/29/03 0:00	21.7	23.2	-12.4	-33.4	-22.6	3.3	3.8		-61.3
8/29/03 1:00	24.3	25.2	-13.1	-34.0	-23.8	1.9	2.7		-66.4
8/29/03 2:00	23.1	24.6	-13.8	-33.9	-24.4	1.8	2.1		-68.2
8/29/03 3:00	23.4	25.0	-14.6	-34.3	-24.6	1.8	1.5		-70.1
8/29/03 4:00	24.6	25.4	-15.3	-34.6	-24.8	1.8	1.0		-72.0
8/29/03 5:00	25.8	25.6	-16.0	-34.4	-25.0	0.5	0.5		-74.4
8/29/03 6:00	25.4	26.4	-13.5	-28.4	-19.6	-5.5	-1.6		-68.6

8/29/03 7:00	20.6	20.8	-11.0	-26.9	-20.4	-18.5	-20.4		-97.2
8/29/03 8:00	20.7	21.4	-10.5	-25.3	-19.9	-20.0	-19.1		-94.8
8/29/03 9:00	19.0	19.9	-10.0	-23.6	-19.3	-16.2	-16.5		-85.6
8/29/03 10:00	20.1	20.9	-9.5	-21.5	-17.1	-25.5	-23.9		-97.5
8/29/03 11:00	21.2	21.8	-9.4	-27.6	-20.8	-24.8	-24.1		-106.6
8/29/03 12:00	17.8	18.1	-10.8	-26.8	-20.8	-22.5	-22.1		-103.0
8/29/03 13:00	20.5	20.7	-12.2	-26.0	-20.9	-22.5	-21.6		-103.2
8/29/03 14:00	20.7	21.7	-11.4	-25.6	-20.9	-23.1	-21.7		-102.8
8/29/03 15:00	21.1	21.5	-10.2	-26.9	-21.0	-22.2	-21.9		-102.2
8/29/03 16:00	19.8	18.5	-9.0	-28.3	-21.0	-21.6	-21.1		-101.0
8/29/03 17:00	19.0	18.6	-10.7	-20.3	-12.5	-17.5	-18.4		-79.4
8/29/03 18:00	15.8	16.3	-13.0	-21.2	-15.6	-16.5	-15.1		-81.5
8/29/03 19:00	12.9	12.7	-13.9	-28.6	-21.2	-11.9	-11.0		-86.7
8/29/03 20:00	16.7	17.6	-10.2	-18.8	-14.1	-13.1	-12.8		-69.0
8/29/03 21:00	18.1	17.8	-6.6	-19.8	-14.3	-10.3	-7.8		-58.8
8/29/03 22:00	21.1	21.3	-12.0	-31.2	-22.4	6.9	5.8		-52.9
8/29/03 23:00	22.3	23.5	-17.3	-39.9	-28.4	4.2	4.8		-76.6
8/30/03 0:00	Not Cor	Not Cor	Not Cor	Not Cor	Not Cor	Not Cor	Not Connect		0.0
8/30/03 1:00	21.7	23.8	-14.7	-32.2	-24.0	6.2	6.4		-58.4
8/30/03 2:00	21.5	21.8	-14.5	-32.6	-25.9	5.8	6.3		-60.9
8/30/03 3:00	21.0	21.4	-14.4	-34.0	-24.9	6.2	6.2		-60.9
8/30/03 4:00	20.3	21.1	-14.2	-35.5	-23.1	6.8	6.1		-59.9
8/30/03 5:00	21.4	21.9	-14.0	-31.6	-21.4	7.4	5.9		-53.6
8/30/03 6:00	21.1	20.0	-13.7	-27.3	-19.6	-2.2	1.2		-61.6
8/30/03 7:00	17.5	17.8	-11.9	-28.0	-20.8	-6.9	-7.7		-75.3
8/30/03 8:00	17.5	17.8	-10.1	-28.2	-17.6	-8.4	-7.8		-72.1
8/30/03 9:00	15.9	16.3	-8.0	-26.0	-14.1	-5.0	-3.8		-56.8
8/30/03 10:00	17.7	18.7	-5.3	-21.3	-12.7	-5.7	-4.5		-49.5
8/30/03 11:00	22.6	22.8	-2.9	-14.5	-8.0	-7.0	-6.0		-38.4
8/30/03 12:00	21.3	21.3	-11.8	-27.6	-16.8	-7.1	-5.8		-69.0
8/30/03 13:00	18.4	18.9	-11.7	-28.6	-17.5	-4.9	-4.6		-67.3
8/30/03 14:00	19.2	19.4	-11.5	-29.6	-18.2	-4.3	-4.3		-67.9
8/30/03 15:00	19.2	19.4	-11.4	-30.6	-18.9	-6.1	-4.1		-71.1
8/30/03 16:00	19.0	19.3	-11.2	-31.7	-19.6	-4.2	-4.2		-70.8
8/30/03 17:00	14.9	15.8	-11.0	-32.7	-20.3	-1.7	-1.4		-67.1
8/30/03 18:00	14.5	14.5	-12.6	-29.4	-20.3	-1.6	0.0		-64.0
8/30/03 19:00	11.4	11.3	-14.9	-40.5	-28.8	0.9	0.6		-82.7
8/30/03 20:00	15.7	16.7	-15.7	-30.1	-21.5	-3.5	-1.4		-72.2
8/30/03 21:00	16.6	16.4	-15.6	-26.6	-21.8	0.1	-1.2		-65.0
8/30/03 22:00	20.5	21.0	-15.2	-36.0	-25.8	7.9	9.2		-60.0
8/30/03 23:00	20.9	21.3	-14.3	-35.0	-24.0	5.9	6.8		-60.6
8/31/03 0:00	21.9	22.2	-13.4	-31.5	-23.0	7.7	7.0		-53.2
8/31/03 1:00	20.6	21.5	-13.5	-31.8	-23.1	8.6	7.6		-52.2
8/31/03 2:00	21.0	21.5	-13.7	-33.7	-23.3	7.7	8.2		-54.8
8/31/03 3:00	19.8	20.8	-13.9	-35.6	-23.4	7.7	7.5		-57.7
8/31/03 4:00	19.9	20.4	-14.0	-33.9	-23.7	7.7	6.8		-57.0
8/31/03 5:00	20.3	20.9	-14.2	-33.7	-23.9	7.7	6.2		-57.9
8/31/03 6:00	20.7	22.5	-14.3	-33.6	-24.1	5.1	-2.3		-69.1
8/31/03 7:00	17.0	17.1	-13.3	-33.1	-22.7	-7.1	-7.4		-83.6
8/31/03 8:00	17.3	18.7	-12.2	-29.6	-21.4	-7.5	-7.1		-77.8
8/31/03 9:00	17.5	18.1	-14.6	-28.3	-20.4	-6.4	-6.1		-75.8
8/31/03 10:00	17.2	17.9	-14.3	-35.6	-24.1	-7.7	-7.2		-88.8

8/31/03 11:00	20.5	21.7	-12.4	-27.1	-17.8	-9.4	-9.0		-75.7
8/31/03 12:00	19.9	19.9	-10.5	-25.8	-13.2	-5.3	-3.5		-58.4
8/31/03 13:00	20.3	21.5	-10.3	-24.1	-12.1	-7.7	-4.5		-58.8
8/31/03 14:00	21.7	22.2	-10.1	-20.9	-11.0	-7.2	-6.6		-55.9
8/31/03 15:00	21.8	22.3	-10.0	-17.9	-10.4	-9.4	-8.9		-56.5
8/31/03 16:00	21.6	22.1	-9.9	-25.1	-13.4	-9.2	-8.4		-66.0
8/31/03 17:00	18.5	19.2	-10.7	-29.9	-16.4	-5.3	-6.6		-68.9
8/31/03 18:00	15.9	15.8	-11.5	-30.7	-19.4	-4.0	-1.0		-66.6
8/31/03 19:00	14.9	14.9	-12.3	-32.6	-20.9	-4.7	-4.1		-74.6
8/31/03 20:00	17.4	17.8	-13.5	-23.1	-15.9	-6.1	-5.7		-64.4
8/31/03 21:00	17.5	17.0	-15.0	-33.5	-20.2	-4.5	-1.4		-74.6
8/31/03 22:00	20.6	21.1	-14.5	-24.6	-15.0	8.6	7.9		-37.5
8/31/03 23:00	20.8	21.0	-14.8	-34.6	-21.0	7.6	7.3		-55.5
9/1/03 0:00	21.9	22.7	-13.6	-27.5	-19.9	6.9	6.7		-47.4
9/1/03 1:00	22.2	22.8	-12.4	-24.5	-18.2	6.3	6.1		-42.7
9/1/03 2:00	22.5	23.1	-11.2	-20.0	-12.9	5.6	5.5		-33.0
9/1/03 3:00	22.9	23.7	-10.0	-20.9	-13.3	4.9	4.9		-34.5
9/1/03 4:00	23.2	24.2	-8.3	-21.9	-13.7	4.3	4.3		-35.3
9/1/03 5:00	23.6	24.7	-6.6	-22.8	-14.1	3.6	3.6		-36.2
9/1/03 6:00	25.0	26.2	-4.9	-13.4	-11.4	-6.7	0.2		-36.2
9/1/03 7:00	19.5	20.1	-5.2	-17.6	-10.4	-15.2	-14.8		-63.2
9/1/03 8:00	18.3	18.6	-5.7	-20.3	-13.9	-12.0	-12.2		-64.1
9/1/03 9:00	17.6	18.4	-6.2	-20.8	-13.9	-11.8	-9.7		-62.4
9/1/03 10:00	18.7	19.0	-6.7	-16.7	-12.1	-11.5	-9.3		-56.3
9/1/03 11:00	19.7	20.6	-6.9	-25.0	-13.8	-11.2	-9.0		-65.8
9/1/03 12:00	20.0	20.0	-7.1	-20.2	-13.9	-7.7	-7.0		-55.9
9/1/03 13:00	18.3	19.5	-6.9	-15.9	-12.5	-6.9	-6.2		-48.5
9/1/03 14:00	19.1	19.9	-6.5	-15.2	-11.1	-6.6	-6.1		-45.5
9/1/03 15:00	20.0	20.3	-6.1	-14.8	-10.1	-5.9	-5.0		-41.9
9/1/03 16:00	20.1	20.6	-5.7	-15.8	-9.8	-5.2	-3.9		-40.4
9/1/03 17:00	17.9	19.4	-5.3	-16.1	-9.7	-4.3	-2.8		-38.2
9/1/03 18:00	15.3	16.7	-4.9	-16.2	-9.6	-2.6	-2.1		-35.5
9/1/03 19:00	15.2	15.4	-4.6	-17.6	-9.6	-2.3	-1.4		-35.5
9/1/03 20:00	16.9	17.1	-4.2	-12.9	-7.6	-1.7	-1.6		-27.9
9/1/03 21:00	16.3	16.6	-7.7	-23.1	-11.4	12.3	4.2		-25.7
9/1/03 22:00	19.3	19.9	-12.6	-32.1	-20.9	14.0	15.1		-36.5
9/1/03 23:00	20.5	20.8	-14.3	-34.3	-22.4	12.0	12.7		-46.3
9/2/03 0:00	21.3	22.6	-13.0	-24.2	-13.8	10.0	10.3		-30.7
9/2/03 1:00	21.6	22.5	-10.1	-21.0	-13.6	8.0	8.1		-28.5
9/2/03 2:00	22.2	22.1	-8.7	-21.8	-13.3	6.6	6.5		-30.8
9/2/03 3:00	22.7	23.3	-7.8	-22.6	-13.0	5.1	4.9		-33.3
9/2/03 4:00	23.3	24.4	-6.8	-23.3	-12.8	3.6	3.3		-35.9
9/2/03 5:00	25.0	25.6	-5.8	-18.1	-12.5	2.2	1.7		-32.5
9/2/03 6:00	28.8	30.4	-1.6	-8.5	-1.0	21.3	-22.1		-11.8
9/2/03 7:00	19.0	19.5	-2.0	-13.0	-5.0	0.4	-26.4		-46.2
9/2/03 8:00	16.9	17.4	-9.9	-25.4	-16.8	0.2	-28.6		-80.5
9/2/03 9:00	17.8	17.9	-9.3	-15.9	-10.9	0.1	-26.4		-62.4
9/2/03 10:00	19.5	19.9	-4.8	-8.9	-0.5	0.0	-29.4		-43.6
9/2/03 11:00	I/O Time	I/O Time	I/O Time	I/O Time	I/O Time	I/O Time	I/O Timeout		0.0
9/2/03 12:00	18.0	18.2	-1.5	-8.2	-1.7	-0.1	-21.2		-32.7
9/2/03 13:00	19.2	19.4	-2.7	-8.9	-3.4	-0.1	-22.8		-38.0
9/2/03 14:00	19.4	19.3	-4.0	-13.5	-5.6	-0.1	-22.8		-46.0

9/2/03 15:00	19.8	20.2	-4.2	-13.3	-6.1	-0.1	-23.3		-47.0
9/2/03 16:00	17.1	17.6	-7.5	-18.9	-11.2	-10.9	-10.1		-58.6
9/2/03 17:00	13.3	13.5	-12.3	-26.9	-18.0	-6.4	-5.8		-69.3
9/2/03 18:00	12.4	13.0	-6.7	-17.3	-10.4	-6.8	-6.0		-47.1
9/2/03 19:00	11.5	11.8	-7.4	-19.1	-12.1	-7.5	-6.3		-52.4
9/2/03 20:00	14.0	14.4	-2.7	-12.1	-4.9	-8.2	-7.4		-35.2
9/2/03 21:00	18.7	18.8	-3.8	-11.8	-6.1	5.6	-2.8		-18.9
9/2/03 22:00	16.7	16.9	-9.3	-21.7	-14.5	15.0	16.3		-14.1
9/2/03 23:00	23.7	24.9	-11.6	-26.5	-19.2	4.0	3.9		-49.4
9/3/03 0:00	24.7	26.0	-4.2	-12.8	-6.8	3.8	3.7		-16.3
9/3/03 1:00	24.9	25.5	-3.5	-11.8	-5.9	3.9	4.6		-12.7
9/3/03 2:00	24.0	25.1	-5.4	-14.8	-9.7	4.7	5.1		-20.1
9/3/03 3:00	24.0	25.1	-7.2	-17.6	-11.4	4.5	4.5		-27.1
9/3/03 4:00	23.8	24.8	-6.5	-16.8	-10.4	5.3	4.6		-23.9
9/3/03 5:00	25.2	25.9	-5.7	-14.3	-8.5	2.6	2.8		-23.0
9/3/03 6:00	25.5	26.6	-3.1	-10.7	-5.4	0.1	-22.8		-41.9
9/3/03 7:00	16.9	17.4	-7.0	-17.1	-10.7	0.1	-23.4		-58.2
9/3/03 8:00	17.8	18.6	-5.0	-12.7	-7.1	0.1	-25.4		-50.0
9/3/03 9:00	18.9	19.1	-5.5	-15.4	-8.8	0.1	-26.7		-56.3
9/3/03 10:00	20.0	20.4	-5.1	-14.2	-7.5	0.1	-24.8		-51.5
9/3/03 11:00	19.4	20.2	-9.2	-22.7	-14.0	0.1	-23.0		-68.8
9/3/03 12:00	19.6	19.8	-6.5	-18.7	-10.4	0.1	-22.1		-57.5
9/3/03 13:00	21.5	22.0	-5.3	-15.3	-8.9	0.1	-30.2		-59.6
9/3/03 14:00	23.3	24.1	-3.9	-11.7	-5.6	0.1	-34.1		-55.1
9/3/03 15:00	23.3	24.1	-5.3	-15.1	-8.1	0.1	-33.7		-62.1
9/3/03 16:00	23.0	23.0	-5.5	-14.3	-7.4	-18.1	-17.2		-62.5
9/3/03 17:00	17.6	17.7	-3.9	-12.1	-5.1	-9.5	-8.5		-39.1
9/3/03 18:00	13.7	14.1	-6.7	-17.2	-10.2	-5.2	-4.4		-43.8
9/3/03 19:00	13.7	13.5	-4.0	-11.8	-6.4	-5.4	-5.0		-32.5
9/3/03 20:00	16.2	16.6	-2.1	-9.9	-3.5	-8.4	-7.6		-31.6
9/3/03 21:00	17.5	17.2	-3.1	-11.2	-3.8	13.7	6.5		2.1
9/3/03 22:00	17.9	18.0	-12.0	-26.4	-17.9	17.6	18.2		-20.5
9/3/03 23:00	20.3	20.6	-14.2	-32.8	-22.2	11.6	12.3		-45.3
9/4/03 0:00	23.2	23.7	-12.2	-28.1	-19.3	7.6	7.3		-44.6
9/4/03 1:00	21.6	21.9	-13.7	-29.6	-21.2	8.3	8.8		-47.4
9/4/03 2:00	21.5	22.2	-15.2	-32.6	-24.0	6.8	7.4		-57.6
9/4/03 3:00	21.3	22.2	-16.1	-35.1	-26.1	5.6	6.1		-65.6
9/4/03 4:00	20.8	22.0	-16.7	-35.1	-26.2	6.2	6.7		-65.2
9/4/03 5:00	24.0	25.0	-14.4	-30.9	-22.1	2.5	3.0		-61.9
9/4/03 6:00	24.7	25.6	-13.6	-31.0	-22.2	22.1	-23.4		-68.0
9/4/03 7:00	17.5	17.8	-9.0	-20.7	-14.1	0.1	-24.3		-68.0
9/4/03 8:00	18.2	18.1	-5.9	-16.1	-9.4	0.1	-24.7		-56.0
9/4/03 9:00	20.2	20.3	-5.8	-16.4	-9.2	0.1	-30.1		-61.4
9/4/03 10:00	21.5	22.0	-5.3	-15.4	-8.3	0.1	-29.1		-58.0
9/4/03 11:00	21.8	22.9	-8.6	-22.4	-13.8	0.1	-34.2		-78.9
9/4/03 12:00	24.5	24.9	-6.4	-17.6	-10.1	0.1	-35.7		-69.7
9/4/03 13:00	23.0	24.1	-3.4	-11.2	-5.7	0.1	-32.5		-52.6
9/4/03 14:00	23.5	24.0	-9.4	-21.5	-14.0	0.1	-37.7		-82.4
9/4/03 15:00	23.4	24.3	-8.3	-19.5	-12.2	0.1	-36.5		-76.4
9/4/03 16:00	23.3	24.4	-7.3	-18.3	-11.2	-21.5	-20.4		-78.7
9/4/03 17:00	20.2	20.9	-7.3	-18.8	-11.1	-13.3	-12.5		-63.0
9/4/03 18:00	16.9	16.7	-5.7	-15.7	-9.8	-9.1	-8.2		-48.6

9/4/03 19:00	17.5	17.9	-2.2	-8.5	-3.8	-7.9	-6.9		-29.3
9/4/03 20:00	18.3	18.0	-5.0	-13.0	-8.0	-9.3	-7.7		-42.9
9/4/03 21:00	20.1	20.5	-8.4	-18.4	-13.1	10.7	7.7		-21.4
9/4/03 22:00	19.2	19.7	-9.6	-23.6	-15.7	12.6	13.1		-23.2
9/4/03 23:00	22.9	24.3	-13.9	-32.2	-22.3	3.8	4.6		-60.1
9/5/03 0:00	23.4	24.1	-14.7	-32.4	-23.3	1.0	1.2		-68.3
9/5/03 1:00	23.5	24.0	-11.7	-26.0	-18.2	5.3	4.6		-46.0
9/5/03 2:00	23.8	24.8	-11.2	-25.0	-17.7	3.1	4.0		-46.8
9/5/03 3:00	24.7	25.2	-10.9	-25.0	-17.6	1.9	2.5		-49.1
9/5/03 4:00	24.8	25.9	-11.6	-25.4	-18.5	1.8	2.0		-51.8
9/5/03 5:00	27.7	29.1	-10.5	-22.8	-15.9	-2.9	-3.4		-55.4
9/5/03 6:00	25.2	26.0	-10.7	-26.0	-18.0	-20.8	-20.5		-96.0
9/5/03 7:00	19.7	20.3	-9.5	-22.8	-14.3	-18.1	-16.2		-80.8
9/5/03 8:00	20.4	20.7	-6.8	-17.9	-11.0	-20.0	-19.2		-74.9
9/5/03 9:00	23.3	24.5	-9.5	-23.1	-15.1	-17.5	-16.8		-82.0
9/5/03 10:00	24.1	25.3	-6.4	-16.7	-10.7	-11.4	-10.6		-55.9
9/5/03 11:00	22.8	23.1	-6.9	-18.5	-11.4	-11.1	-10.5		-58.4
9/5/03 12:00	23.5	25.2	-4.0	-9.1	-4.5	-2.0	-1.2		-20.8
9/5/03 13:00	24.6	25.7	-3.1	-11.2	-4.9	-23.2	-21.9		-64.3
9/5/03 14:00	26.3	27.1	-6.0	-15.5	-9.3	-23.3	-23.2		-77.2
9/5/03 15:00	25.0	26.0	-4.9	-13.0	-8.2	-20.8	-19.6		-66.5
9/5/03 16:00	24.0	24.5	-3.2	-9.7	-5.5	-16.7	-16.7		-51.8
9/5/03 17:00	21.5	22.2	-3.7	-12.5	-6.9	-14.1	-13.4		-50.6
9/5/03 18:00	18.1	18.0	-4.9	-14.4	-8.4	-10.7	-9.8		-48.1
9/5/03 19:00	14.2	13.8	-1.4	-9.3	-4.4	-6.6	-5.8		-27.4
9/5/03 20:00	16.0	16.5	-1.1	-6.7	-2.9	-7.6	-6.9		-25.2
9/5/03 21:00	18.5	18.9	1.6	-3.9	0.6	8.9	8.6		15.8
9/5/03 22:00	19.4	19.6	-3.4	-11.5	-5.9	14.2	15.1		8.5
9/5/03 23:00	22.5	23.0	-5.4	-15.6	-8.7	8.9	9.6		-11.1
9/6/03 0:00	21.1	21.4	-11.1	-25.8	-16.9	7.1	7.3		-39.4
9/6/03 1:00	22.9	23.5	-10.3	-24.2	-15.4	7.5	7.3		-35.2
9/6/03 2:00	23.1	24.6	-6.5	-17.9	-10.3	6.2	6.6		-21.9
9/6/03 3:00	23.2	24.4	-8.4	-21.3	-14.3	5.2	5.3		-33.4
9/6/03 4:00	21.3	22.1	-9.6	-23.6	-16.0	7.7	8.8		-32.7
9/6/03 5:00	21.8	22.6	-10.5	-24.1	-16.4	6.4	6.9		-37.7
9/6/03 6:00	21.9	22.2	-10.7	-24.0	-16.9	-5.1	-6.8		-63.4
9/6/03 7:00	13.6	14.0	-12.8	-27.2	-18.6	-3.2	-2.5		-64.3
9/6/03 8:00	14.8	15.0	-9.4	-22.9	-14.0	-5.3	-5.2		-56.7
9/6/03 9:00	16.0	16.7	-3.8	-15.0	-6.6	-6.8	-6.1		-38.3
9/6/03 10:00	17.8	18.2	-4.8	-16.3	-7.4	-7.6	-7.2		-43.3
9/6/03 11:00	19.8	20.4	-1.3	-10.3	-1.4	-7.7	-7.2		-27.9
9/6/03 12:00	18.6	19.0	1.3	-7.1	2.8	-3.8	-2.8		-9.6
9/6/03 13:00	19.9	20.1	-1.7	-12.3	-2.8	-6.3	-5.7		-28.7
9/6/03 14:00	19.3	19.8	2.3	-4.1	5.3	-2.8	-2.0		-1.3
9/6/03 15:00	21.0	21.2	-0.7	-8.7	0.3	-4.9	-3.9		-18.0
9/6/03 16:00	19.2	19.1	-7.1	-20.4	-9.8	-2.6	-1.3		-41.2
9/6/03 17:00	18.5	17.8	-7.7	-21.7	-11.5	-1.0	-0.1		-42.1
9/6/03 18:00	13.8	14.4	-6.5	-19.0	-8.6	1.2	2.0		-30.9
9/6/03 19:00	12.9	13.2	-8.1	-22.7	-12.5	2.7	3.1		-37.6
9/6/03 20:00	15.3	14.2	-6.7	-18.1	-9.0	1.1	2.0		-30.6
9/6/03 21:00	17.8	16.6	-7.4	-20.8	-12.3	12.1	9.5		-18.9
9/6/03 22:00	19.5	18.3	-9.7	-21.3	-14.2	14.4	15.4		-15.5

9/6/03 23:00	18.8	17.6	-11.4	-27.3	-17.0	14.7	14.6		-26.4
9/7/03 0:00	21.4	20.0	-9.7	-23.1	-14.6	9.2	10.2		-27.9
9/7/03 1:00	21.8	20.5	-13.8	-31.0	-21.3	6.9	7.3		-52.0
9/7/03 2:00	20.2	18.1	-18.1	-38.3	-27.3	7.6	8.0		-68.1
9/7/03 3:00	19.9	19.2	-14.4	-31.7	-22.3	10.1	10.0		-48.3
9/7/03 4:00	18.7	20.2	-15.8	-34.1	-24.6	8.0	8.1		-58.5
9/7/03 5:00	18.2	18.9	-16.0	-33.7	-24.3	9.1	9.6		-55.3
9/7/03 6:00	19.1	19.4	-16.7	-33.8	-25.7	-7.0	-4.2		-87.5
9/7/03 7:00	14.9	15.2	-18.2	-37.2	-28.5	-5.7	-5.1		-94.6
9/7/03 8:00	14.6	15.5	-18.5	-36.5	-27.5	-7.1	-6.4		-96.0
9/7/03 9:00	16.0	16.7	-12.9	-27.4	-19.0	-6.0	-5.7		-71.0
9/7/03 10:00	17.6	18.8	-9.2	-20.9	-12.7	-8.2	-7.9		-58.9
9/7/03 11:00	19.4	20.2	-9.4	-21.1	-12.0	-10.5	-9.4		-62.3
9/7/03 12:00	16.4	17.1	-6.1	-16.3	-7.2	-5.2	-4.7		-39.4
9/7/03 13:00	17.9	18.4	-0.8	-9.0	-1.0	-4.1	-4.2		-19.1
9/7/03 14:00	21.4	22.2	2.5	-1.1	5.8	-8.8	-7.7		-9.3
9/7/03 15:00	23.4	24.3	4.0	2.6	7.5	-9.9	-8.3		-4.2
9/7/03 16:00	22.1	22.5	-0.6	-6.6	0.4	-5.7	-5.1		-17.7
9/7/03 17:00	22.1	20.9	-2.6	-10.0	-3.3	-4.8	-4.5		-25.3
9/7/03 18:00	18.1	18.5	-4.4	-13.5	-5.9	-3.1	-2.2		-29.2
9/7/03 19:00	18.5	19.2	-3.5	-11.7	-4.9	-3.9	-3.2		-27.1
9/7/03 20:00	19.8	20.4	-0.5	-7.6	-1.2	-5.0	-3.5		-17.7
9/7/03 21:00	22.2	19.1	-3.3	-11.8	-5.0	13.3	12.3		5.6
9/7/03 22:00	21.0	18.2	-6.2	-17.3	-9.7	16.0	16.6		-0.6
9/7/03 23:00	23.6	22.6	-5.4	-15.5	-7.8	8.4	9.0		-11.3
9/8/03 0:00	20.2	21.7	-11.9	-27.7	-18.3	6.2	7.3		-44.4
9/8/03 1:00	21.6	23.1	-12.8	-27.7	-19.2	6.2	6.2		-47.3
9/8/03 2:00	21.9	23.2	-14.3	-31.2	-21.5	4.9	5.6		-56.6
9/8/03 3:00	21.6	23.1	-16.4	-33.7	-24.9	3.5	4.2		-67.4
9/8/03 4:00	21.1	22.7	-16.3	-34.3	-25.5	4.8	5.6		-65.6
9/8/03 5:00	23.8	25.7	-14.3	-31.1	-22.5	1.6	1.8		-64.4
9/8/03 6:00	24.3	25.8	-15.7	-33.8	-24.5	22.8	-35.6		-86.9
9/8/03 7:00	21.3	22.7	-14.3	-29.5	-22.4	0.4	-33.7		-99.5
9/8/03 8:00	15.4	17.2	-18.7	-39.3	-29.5	0.3	-26.6		-113.8
9/8/03 9:00	17.2	18.6	-12.7	-28.7	-20.2	0.2	-28.4		-89.8
9/8/03 10:00	18.7	20.1	-6.9	-18.8	-12.4	0.1	-30.4		-68.2
9/8/03 11:00	19.5	20.8	-6.3	-17.7	-11.0	0.0	-29.7		-64.7
9/8/03 12:00	19.3	20.8	-3.6	-12.1	-5.3	0.0	-29.0		-50.0
9/8/03 13:00	20.4	21.9	-5.3	-16.2	-8.1	-0.1	-29.6		-59.3
9/8/03 14:00	20.1	22.0	-3.0	-13.3	-5.9	-0.1	-28.7		-51.1
9/8/03 15:00	19.2	20.7	-5.7	-16.3	-8.4	-0.1	-27.8		-58.4
9/8/03 16:00	18.6	20.0	-7.6	-19.1	-11.8	-0.1	-27.5		-66.1
9/8/03 17:00	15.9	17.1	-5.9	-16.2	-9.4	-13.4	-12.8		-57.8
9/8/03 18:00	12.5	13.5	-8.1	-18.2	-11.7	-8.1	-8.6		-54.6
9/8/03 19:00	14.2	14.9	-6.9	-17.2	-11.5	-6.1	-6.4		-48.0
9/8/03 20:00	15.5	16.2	-5.6	-16.0	-9.8	-9.6	-9.2		-50.2
9/8/03 21:00	15.6	17.0	-6.9	-18.9	-11.5	15.1	13.8		-8.3
9/8/03 22:00	16.8	18.2	-9.7	-23.4	-15.3	13.5	14.1		-20.8
9/8/03 23:00	17.7	19.2	-21.4	-44.4	-32.0	8.4	9.2		-80.2
9/9/03 0:00	22.1	23.6	-12.6	-27.2	-18.8	6.5	6.9		-45.1
9/9/03 1:00	21.0	22.6	-13.5	-29.5	-20.7	8.6	8.2		-46.9
9/9/03 2:00	19.1	20.7	-16.6	-36.0	-25.5	10.9	10.1		-57.1

9/9/03 3:00	19.2	20.5	-17.3	-37.7	-27.0	9.2	9.8	-63.1
9/9/03 4:00	19.8	20.9	-18.4	-39.7	-29.0	9.2	9.1	-68.7
9/9/03 5:00	21.8	23.4	-17.0	-35.9	-26.5	6.1	6.4	-66.9
9/9/03 6:00	23.5	25.6	-15.5	-33.3	-23.4	22.5	-34.4	-84.0
9/9/03 7:00	19.0	20.3	-13.5	-29.9	-21.9	0.1	-24.9	-90.1
9/9/03 8:00	16.2	17.4	-9.7	-24.1	-16.6	0.1	-21.2	-71.4
9/9/03 9:00	14.9	16.5	-8.0	-20.7	-13.8	0.1	-18.4	-60.8
9/9/03 10:00	16.0	17.4	-9.0	-22.6	-14.6	0.1	-18.7	-64.7
9/9/03 11:00	18.2	19.5	-9.2	-22.4	-14.5	0.1	-21.7	-67.6
9/9/03 12:00	16.6	17.7	-7.9	-21.0	-13.4	0.1	-17.5	-59.7
9/9/03 13:00	15.7	16.1	-7.9	-21.0	-12.8	0.1	-15.2	-56.8
9/9/03 14:00	16.2	17.7	-7.7	-20.0	-12.0	0.1	-17.5	-57.2
9/9/03 15:00	15.9	16.6	-7.4	-20.5	-12.6	0.1	-14.5	-54.9
9/9/03 16:00	13.4	14.3	-5.8	-15.1	-9.7	0.1	-15.5	-46.0
9/9/03 17:00	12.5	13.6	-3.8	-11.5	-7.3	7.1	-15.3	-30.8
9/9/03 18:00	12.9	13.9	-7.5	-18.6	-14.0	-9.8	-9.5	-59.3
9/9/03 19:00	13.5	14.5	-9.1	-21.5	-16.3	-9.3	-9.0	-65.2
9/9/03 20:00	17.2	18.3	-2.0	-8.4	-4.5	-13.0	-13.2	-41.1
9/9/03 21:00	16.5	17.6	-3.3	-13.0	-7.9	12.0	11.5	-0.7
9/9/03 22:00	15.7	16.7	-8.3	-20.3	-13.3	17.1	17.3	-7.5
9/9/03 23:00	20.1	20.8	-14.9	-32.5	-23.3	8.5	8.3	-54.0
9/10/03 0:00	22.2	23.6	-10.7	-25.4	-17.3	6.2	6.8	-40.4
9/10/03 1:00	21.9	24.2	-12.2	-26.8	-19.3	4.9	5.5	-47.8
9/10/03 2:00	21.0	22.2	-14.4	-30.4	-23.2	6.6	7.1	-54.4
9/10/03 3:00	18.8	19.8	-18.7	-39.7	-29.2	8.8	9.1	-69.7
9/10/03 4:00	21.1	22.3	-15.9	-32.3	-24.6	5.5	6.1	-61.1
9/10/03 5:00	23.3	24.8	-14.2	-31.0	-22.9	3.3	4.0	-60.9
9/10/03 6:00	26.9	27.9	-6.0	-15.5	-10.8	21.9	-36.0	-46.4
9/10/03 7:00	17.8	18.7	-9.5	-21.0	-15.9	0.3	-21.7	-67.8
9/10/03 8:00	17.7	18.4	-8.8	-18.5	-14.3	0.2	-24.2	-65.5
9/10/03 9:00	19.5	20.5	-5.8	-12.4	-9.2	0.2	-27.3	-54.5
9/10/03 10:00	17.7	18.4	-10.2	-20.4	-16.1	0.1	-23.1	-69.8
9/10/03 11:00	16.2	16.8	-7.5	-16.7	-12.4	0.1	-24.3	-60.9
9/10/03 12:00	16.9	17.6	-7.1	-14.9	-10.4	0.0	-27.3	-59.6
9/10/03 13:00	18.1	19.4	-6.5	-16.6	-12.1	0.0	-32.0	-67.3
9/10/03 14:00	19.1	20.0	-5.3	-13.6	-8.9	-0.1	-32.2	-60.0
9/10/03 15:00	18.2	18.3	-6.9	-16.4	-10.9	-0.1	-30.3	-64.7
9/10/03 16:00	15.2	15.8	-8.6	-20.1	-13.3	-14.9	-13.9	-70.7
9/10/03 17:00	12.8	12.9	-8.1	-19.1	-13.6	-11.2	-10.2	-62.2
9/10/03 18:00	11.1	11.3	-8.5	-19.4	-13.2	-7.0	-6.4	-54.6
9/10/03 19:00	10.6	11.8	-10.2	-24.3	-16.8	-5.5	-5.8	-62.5
9/10/03 20:00	13.2	13.4	-6.8	-18.6	-11.8	-7.7	-6.5	-51.5
9/10/03 21:00	14.2	14.7	-8.3	-21.4	-14.2	15.9	16.2	-11.8
9/10/03 22:00	16.3	17.3	-12.7	-26.3	-18.6	14.5	14.9	-28.3
9/10/03 23:00	16.9	17.9	-10.9	-24.7	-16.0	12.6	12.8	-26.2
9/11/03 0:00	20.3	21.6	-9.5	-22.6	-14.7	9.2	9.5	-28.1
9/11/03 1:00	23.1	24.6	-7.2	-17.5	-11.4	6.7	6.8	-22.6
9/11/03 2:00	21.5	22.3	-8.2	-19.7	-13.6	-20.4	-20.2	-82.2
9/11/03 3:00	20.2	21.3	-7.5	-18.2	-12.6	-18.8	-18.5	-75.7
9/11/03 4:00	21.3	22.6	-7.4	-18.4	-13.0	-18.9	-19.0	-76.6
9/11/03 5:00	26.2	27.9	-5.6	-14.4	-9.8	1.5	0.6	-27.8
9/11/03 6:00	22.3	23.6	-9.6	-22.0	-15.5	21.9	-31.8	-57.1

9/11/03 7:00	16.8	18.0	-10.6	-23.7	-16.5	0.2	-23.5		-74.1
9/11/03 8:00	16.7	17.4	-8.1	-19.7	-13.1	0.2	-25.7		-66.4
9/11/03 9:00	19.0	19.7	-3.9	-12.0	-7.7	0.1	-26.2		-49.7
9/11/03 10:00	19.5	21.3	-6.8	-17.9	-11.5	0.1	-30.1		-66.2
9/11/03 11:00	20.3	21.7	-6.0	-13.9	-8.9	0.0	-29.7		-58.4
9/11/03 12:00	19.7	20.6	-6.4	-16.6	-11.2	0.0	-29.1		-63.4
9/11/03 13:00	22.6	24.1	-9.3	-22.1	-15.6	-0.1	-34.8		-81.8
9/11/03 14:00	21.4	23.0	-7.4	-19.2	-12.3	-0.1	-30.5		-69.5
9/11/03 15:00	22.4	23.6	-10.6	-25.0	-16.2	-0.1	-31.2		-83.2
9/11/03 16:00	20.3	21.4	-11.1	-25.0	-17.5	23.4	-27.5		-57.7
9/11/03 17:00	17.3	18.0	-7.7	-17.4	-11.3	-12.7	-11.8		-60.9
9/11/03 18:00	13.1	14.0	-3.9	-9.9	-6.3	-5.7	-5.2		-31.0
9/11/03 19:00	13.1	13.6	-8.6	-19.4	-12.7	-8.7	-8.3		-57.7
9/11/03 20:00	14.1	14.8	-5.8	-15.4	-8.9	-8.2	-8.0		-46.3
9/11/03 21:00	13.7	15.4	-8.4	-21.1	-14.7	17.9	18.0		-8.4
9/11/03 22:00	15.0	16.5	-9.1	-18.8	-14.2	16.8	17.0		-8.3
9/11/03 23:00	20.3	21.4	-17.0	-35.3	-27.0	6.7	7.0		-65.6
9/12/03 0:00	23.5	22.7	-4.0	-11.5	-7.5	-19.5	-18.7		-61.2
9/12/03 1:00	24.0	23.5	-2.2	-9.5	-5.1	-20.2	-19.4		-56.5
9/12/03 2:00	22.8	21.1	-3.7	-11.6	-7.4	-18.5	-18.0		-59.1
9/12/03 3:00	22.3	21.1	-5.2	-13.8	-9.5	-19.5	-18.6		-66.5
9/12/03 4:00	22.6	23.3	-3.7	-11.9	-8.1	-20.9	-19.8		-64.5
9/12/03 5:00	24.9	27.1	-6.7	-16.5	-11.7	3.2	3.9		-27.8
9/12/03 6:00	22.7	24.3	-11.0	-25.3	-18.2	-23.2	-22.4		-100.2
9/12/03 7:00	16.2	17.1	-11.5	-26.0	-18.8	22.8	-22.3		-55.7
9/12/03 8:00	18.1	20.1	-7.2	-16.6	-10.8	0.1	-29.2		-63.6
9/12/03 9:00	15.8	17.1	-11.2	-24.7	-17.9	0.1	-26.5		-80.1
9/12/03 10:00	16.3	17.5	-7.3	-17.2	-10.3	0.1	-25.5		-60.3
9/12/03 11:00	17.4	18.7	-3.6	-12.3	-6.0	0.1	-26.9		-48.6
9/12/03 12:00	Shutdov	Shutdov	Shutdov	Shutdov	Shutdov	Shutdov	Shutdown		0.0
9/12/03 13:00	20.1	21.2	-7.8	-18.6	-11.7	0.1	-31.5		-69.5
9/12/03 14:00	21.5	22.8	-6.8	-16.6	-9.6	0.1	-32.5		-65.4
9/12/03 15:00	20.6	21.3	-8.0	-18.6	-12.1	0.1	-28.9		-67.5
9/12/03 16:00	18.4	19.5	-11.7	-25.6	-18.4	0.1	-26.8		-82.4
9/12/03 17:00	15.6	16.5	-6.9	-16.5	-10.4	0.1	-19.3		-53.0
9/12/03 18:00	12.6	12.6	-7.3	-18.5	-13.1	0.1	-13.5		-52.2
9/12/03 19:00	13.9	14.2	-7.4	-17.7	-12.2	0.1	-18.2		-55.4
9/12/03 20:00	13.8	15.1	-5.6	-14.7	-12.0	0.1	-18.7		-50.8
9/12/03 21:00	17.1	18.2	-4.2	-11.9	-8.6	0.1	18.1		-6.4
9/12/03 22:00	14.4	15.1	-8.1	-20.0	-13.9	0.1	26.8		-15.1
9/12/03 23:00	15.8	17.3	-7.5	-17.6	-12.7	0.1	22.0		-15.6
9/13/03 0:00	22.7	24.2	-11.6	-26.3	-18.6	0.1	6.3		-50.1
9/13/03 1:00	22.3	23.8	-11.2	-23.7	-16.8	0.1	-35.3		-86.9
9/13/03 2:00	22.7	23.0	-9.9	-22.2	-16.1	0.1	-34.3		-82.4
9/13/03 3:00	20.7	22.0	-11.9	-27.0	-19.2	0.1	-32.0		-90.0
9/13/03 4:00	19.0	20.4	-12.9	-28.8	-21.4	0.1	-27.8		-90.7
9/13/03 5:00	19.7	21.3	-12.6	-27.0	-20.7	0.1	-29.7		-89.8
9/13/03 6:00	24.8	26.2	-9.5	-21.9	-16.3	0.1	-22.0		-69.6
9/13/03 7:00	21.2	22.3	-14.0	-29.6	-22.3	0.1	-22.6		-88.3
9/13/03 8:00	19.8	20.5	-16.2	-34.7	-26.1	0.1	-19.4		-96.2
9/13/03 9:00	21.3	22.6	-16.6	-34.3	-26.8	0.1	-22.7		-100.2
9/13/03 10:00	17.6	18.8	-15.1	-32.3	-24.1	0.1	-13.3		-84.6

9/13/03 11:00	18.6	19.7	-13.4	-30.1	-21.9	0.1	-14.2	-79.4
9/13/03 12:00	17.5	18.6	-14.7	-32.5	-24.1	0.1	-13.2	-84.4
9/13/03 13:00	19.8	20.5	-13.1	-28.8	-22.0	0.1	-23.3	-87.0
9/13/03 14:00	20.9	21.9	-12.3	-25.9	-19.7	0.1	-22.5	-80.3
9/13/03 15:00	20.7	21.4	-15.9	-33.0	-26.2	0.1	-22.2	-97.1
9/13/03 16:00	25.0	25.7	-11.2	-23.9	-18.4	0.1	-27.7	-81.0
9/13/03 17:00	21.0	22.0	-11.7	-25.1	-19.3	0.1	-20.1	-76.0
9/13/03 18:00	15.0	16.2	-14.4	-30.2	-23.0	0.1	-8.3	-75.7
9/13/03 19:00	16.1	16.1	-16.7	-35.5	-27.1	0.1	-8.3	-87.5
9/13/03 20:00	17.0	17.9	-16.2	-35.4	-26.5	0.1	-10.8	-88.7
9/13/03 21:00	15.9	16.6	-12.5	-28.9	-20.0	0.1	18.7	-42.5
9/13/03 22:00	15.9	16.4	-15.8	-36.1	-25.3	0.1	19.1	-57.9
9/13/03 23:00	16.9	17.4	-18.8	-39.4	-29.7	0.1	19.9	-67.8
9/14/03 0:00	17.8	18.6	-21.2	-44.3	-32.1	0.1	16.0	-81.5
9/14/03 1:00	18.1	19.3	-17.4	-37.3	-27.5	0.1	-30.5	-112.5
9/14/03 2:00	19.8	20.7	-15.5	-31.8	-24.4	0.1	-31.5	-103.0
9/14/03 3:00	18.9	20.2	-16.3	-33.2	-25.6	0.1	-30.5	-105.4
9/14/03 4:00	18.0	18.8	-17.8	-36.2	-27.8	0.1	-26.5	-108.3
9/14/03 5:00	18.1	18.8	-16.4	-34.6	-26.0	0.1	-27.8	-104.7
9/14/03 6:00	18.9	19.3	-15.2	-32.6	-24.9	0.1	-53.5	-126.1
9/14/03 7:00	15.4	16.5	-15.8	-31.2	-24.1	0.1	-52.7	-123.6
9/14/03 8:00	15.6	16.3	-15.1	-31.5	-24.1	0.1	-55.3	-125.8
9/14/03 9:00	17.4	18.6	-8.7	-19.1	-14.3	0.1	-58.8	-100.8
9/14/03 10:00	15.6	16.7	-13.8	-28.8	-22.1	0.1	-56.2	-120.7
9/14/03 11:00	15.2	16.0	-10.9	-25.8	-19.1	0.1	-52.0	-107.7
9/14/03 12:00	15.0	16.0	-10.0	-23.1	-16.5	0.1	-53.5	-103.0
9/14/03 13:00	14.5	15.6	-10.4	-23.2	-16.6	0.1	-55.8	-106.0
9/14/03 14:00	15.9	16.6	-7.4	-17.9	-11.8	0.1	-56.3	-93.2
9/14/03 15:00	14.8	15.8	-6.0	-14.7	-9.7	0.1	-52.0	-82.3
9/14/03 16:00	15.7	16.6	-5.8	-13.8	-8.5	0.1	-50.9	-78.9
9/14/03 17:00	14.5	14.8	-6.4	-16.4	-10.8	0.1	-48.5	-82.0
9/14/03 18:00	14.2	14.3	-5.6	-14.6	-9.5	0.1	-46.6	-76.1
9/14/03 19:00	14.0	14.5	-6.2	-15.7	-9.6	0.1	-45.9	-77.2
9/14/03 20:00	14.2	15.6	-6.2	-16.2	-10.1	0.1	-47.5	-79.9
9/14/03 21:00	16.4	16.5	-5.0	-14.4	-9.1	0.1	-23.8	-52.1
9/14/03 22:00	16.7	17.8	-6.6	-16.4	-11.4	0.1	-23.5	-57.7
9/14/03 23:00	18.6	20.1	-9.4	-20.9	-15.3	0.1	-28.1	-73.4
9/15/03 0:00	19.7	21.4	-6.3	-15.6	-11.2	0.1	-28.1	-61.0
9/15/03 1:00	19.7	20.7	-8.6	-20.2	-14.3	0.1	-30.5	-73.4
9/15/03 2:00	18.8	19.7	-12.2	-26.6	-19.6	0.1	-28.2	-86.6
9/15/03 3:00	19.0	19.8	-13.4	-28.3	-21.4	0.1	-27.9	-90.9
9/15/03 4:00	19.6	21.0	-14.9	-31.0	-23.3	0.1	-31.7	-100.7
9/15/03 5:00	23.1	24.2	-12.7	-26.7	-19.8	0.1	4.1	-55.0
9/15/03 6:00	23.0	24.4	-11.8	-25.7	-18.7	0.1	-36.3	-92.4
9/15/03 7:00	21.2	22.4	-11.1	-25.3	-18.3	0.1	-36.1	-90.6
9/15/03 8:00	20.9	22.0	-10.7	-24.6	-16.2	0.1	-35.1	-86.6
9/15/03 9:00	22.4	23.4	-6.4	-15.9	-10.8	0.1	-35.5	-68.4
9/15/03 10:00	24.6	25.8	-5.0	-11.9	-8.6	0.1	-38.9	-64.3
9/15/03 11:00	23.6	24.8	-8.1	-19.5	-14.1	0.1	-36.5	-78.1
9/15/03 12:00	22.0	23.2	-5.8	-15.6	-10.4	0.1	-30.8	-62.4
9/15/03 13:00	23.0	24.4	-6.7	-17.1	-10.8	0.1	-30.4	-64.9
9/15/03 14:00	23.2	24.8	-6.3	-16.2	-10.3	0.1	-33.0	-65.6

9/15/03 15:00	24.0	24.9	-7.5	-18.3	-12.0	0.1	-32.5	-70.2
9/15/03 16:00	19.9	20.6	-6.7	-16.8	-10.3	0.1	-23.9	-57.6
9/15/03 17:00	16.7	17.2	-4.2	-12.0	-6.9	0.1	-14.1	-37.0
9/15/03 18:00	14.2	14.9	-7.5	-17.0	-11.9	0.1	-12.1	-48.4
9/15/03 19:00	14.4	15.1	-8.2	-18.5	-14.4	0.1	-13.1	-54.0
9/15/03 20:00	15.9	16.4	-2.3	-6.6	-4.3	0.1	-11.8	-24.8
9/15/03 21:00	16.3	17.8	-5.6	-14.3	-10.2	0.1	22.3	-7.8
9/15/03 22:00	12.2	12.8	-8.0	-20.5	-12.9	0.1	33.6	-7.7
9/15/03 23:00	21.7	22.6	-12.5	-27.3	-19.3	0.1	8.7	-50.3
9/16/03 0:00	20.6	21.4	-8.5	-20.2	-13.3	0.1	-30.8	-72.7
9/16/03 1:00	20.6	21.9	-12.3	-27.4	-19.8	0.1	-33.5	-92.8
9/16/03 2:00	18.4	19.8	-15.8	-31.9	-22.9	0.1	-28.6	-99.1
9/16/03 3:00	18.2	19.1	-16.7	-34.5	-25.6	0.1	-28.0	-104.5
9/16/03 4:00	19.0	19.9	-17.0	-35.7	-26.4	0.1	-29.9	-108.9
9/16/03 5:00	22.0	23.1	-20.0	-41.9	-31.4	0.1	6.4	-86.8
9/16/03 6:00	19.7	20.9	-20.4	-43.1	-32.5	0.1	-34.1	-130.0
9/16/03 7:00	20.0	20.7	-16.7	-35.5	-25.1	0.1	-37.1	-114.3
9/16/03 8:00	18.6	19.7	-11.2	-25.6	-17.5	0.1	-33.9	-88.0
9/16/03 9:00	18.5	19.5	-8.6	-18.4	-12.5	0.1	-32.0	-71.3
9/16/03 10:00	20.6	21.6	-3.6	-11.6	-6.9	0.1	-34.1	-55.9
9/16/03 11:00	19.7	21.1	-5.4	-15.6	-9.6	0.1	-30.7	-61.1
9/16/03 12:00	19.7	21.0	-6.8	-16.5	-10.0	0.0	-30.2	-63.6
9/16/03 13:00	18.4	19.4	-7.6	-19.9	-12.2	0.0	-30.1	-69.8
9/16/03 14:00	19.7	20.6	-6.5	-17.7	-10.2	0.0	-30.4	-64.7
9/16/03 15:00	18.7	19.5	-7.0	-19.3	-11.4	0.1	-30.0	-67.6
9/16/03 16:00	17.9	18.6	-6.1	-16.6	-10.3	0.1	-22.7	-55.5
9/16/03 17:00	11.9	12.9	-10.6	-23.4	-15.1	0.1	-14.2	-63.2
9/16/03 18:00	10.2	10.2	-13.6	-31.1	-22.6	0.1	-11.8	-79.0
9/16/03 19:00	12.1	13.0	-5.7	-15.8	-8.5	0.1	-12.5	-42.5
9/16/03 20:00	14.3	15.0	-5.5	-14.1	-8.7	0.1	-15.7	-43.8
9/16/03 21:00	16.1	16.5	-9.0	-20.5	-14.9	0.1	17.5	-26.8
9/16/03 22:00	16.3	17.4	-7.7	-19.3	-12.7	0.1	21.0	-18.5
9/16/03 23:00	17.5	18.6	-12.7	-28.9	-20.0	0.1	15.2	-46.2
9/17/03 0:00	20.9	21.7	-9.6	-22.7	-14.6	0.1	11.8	-34.9
9/17/03 1:00	23.0	24.4	-8.2	-18.1	-11.9	0.1	8.2	-29.8
9/17/03 2:00	22.4	23.3	-9.7	-22.4	-15.9	0.1	8.4	-39.4
9/17/03 3:00	20.4	21.8	-11.1	-24.3	-17.3	0.1	10.4	-42.3
9/17/03 4:00	22.0	23.0	-12.3	-27.3	-19.8	0.1	9.0	-50.3
9/17/03 5:00	23.4	24.6	-10.7	-24.0	-17.4	0.1	4.9	-47.2
9/17/03 6:00	23.5	25.0	-10.6	-23.9	-16.9	0.1	-34.6	-85.9
9/17/03 7:00	15.9	16.4	-11.5	-23.6	-17.5	0.1	-19.8	-72.1
9/17/03 8:00	14.7	14.9	-11.8	-24.7	-17.2	0.1	-18.9	-72.4
9/17/03 9:00	16.4	17.6	-9.0	-21.2	-14.4	0.1	-21.1	-65.5
9/17/03 10:00	18.7	20.9	-7.3	-17.9	-10.6	0.1	-27.0	-62.6
9/17/03 11:00	19.2	20.1	-8.0	-20.4	-13.2	0.1	-24.9	-66.5
9/17/03 12:00	17.5	18.3	-12.2	-27.0	-19.3	0.1	-24.9	-83.2
9/17/03 13:00	19.9	20.9	-10.7	-24.8	-16.7	0.1	-30.7	-82.8
9/17/03 14:00	21.3	22.0	-8.7	-20.6	-13.8	0.1	-35.4	-78.5
9/17/03 15:00	22.1	23.6	-8.0	-21.0	-14.1	0.1	-38.3	-81.2
9/17/03 16:00	19.4	20.1	-8.3	-19.8	-13.0	0.1	-29.3	-70.3
9/17/03 17:00	12.8	13.6	-15.9	-32.0	-24.1	0.1	-18.7	-90.5
9/17/03 18:00	11.2	11.3	-12.6	-26.3	-19.8	0.1	-15.2	-73.7

9/17/03 19:00	16.1	16.8	-9.7	-22.1	-15.7	0.1	-25.9	-73.3
9/17/03 20:00	16.1	16.6	-13.3	-28.9	-21.2	0.1	-23.8	-87.1
9/17/03 21:00	18.2	19.2	-12.8	-27.5	-20.9	0.1	11.3	-49.7
9/17/03 22:00	16.5	17.1	-17.0	-35.4	-26.4	0.1	15.9	-62.7
9/17/03 23:00	17.8	18.6	-13.4	-30.4	-21.5	0.1	14.0	-51.1
9/18/03 0:00	18.8	19.9	-11.2	-24.9	-17.7	0.1	19.6	-34.2
9/18/03 1:00	21.0	22.4	-11.7	-25.9	-19.3	0.1	12.0	-44.8
9/18/03 2:00	21.2	22.5	-13.4	-28.4	-21.6	0.1	10.7	-52.5
9/18/03 3:00	19.2	20.2	-15.0	-31.9	-23.9	0.1	15.2	-55.5
9/18/03 4:00	20.3	21.3	-15.0	-32.4	-24.0	0.1	13.0	-58.3
9/18/03 5:00	21.4	22.9	-12.9	-27.4	-20.9	0.1	10.2	-50.9
9/18/03 6:00	22.7	24.1	-11.5	-25.1	-17.7	0.1	-30.4	-84.6
9/18/03 7:00	21.6	22.5	-14.2	-29.4	-23.0	0.1	-32.7	-99.2
9/18/03 8:00	14.4	15.5	-14.3	-32.2	-23.8	0.1	-21.3	-91.5
9/18/03 9:00	18.3	18.7	-10.1	-22.8	-17.4	0.1	-27.7	-77.9
9/18/03 10:00	23.7	24.5	-6.1	-15.5	-11.6	0.1	-39.0	-72.0
9/18/03 11:00	21.4	22.7	-6.9	-17.0	-11.6	0.1	-33.5	-68.9
9/18/03 12:00	23.1	24.5	-5.8	-14.2	-9.5	0.1	-35.3	-64.7
9/18/03 13:00	26.5	28.1	-8.8	-20.7	-15.0	0.1	-47.9	-92.3
9/18/03 14:00	26.9	28.5	-10.8	-24.8	-17.9	0.1	-47.4	-100.8
9/18/03 15:00	26.2	26.6	-7.9	-17.9	-12.4	0.1	-43.1	-81.1
9/18/03 16:00	24.4	26.1	-8.9	-20.6	-14.2	0.1	-40.9	-84.5
9/18/03 17:00	16.8	18.4	-12.3	-27.5	-19.0	0.1	-24.4	-83.1
9/18/03 18:00	14.5	15.6	-6.8	-14.0	-9.1	0.1	-20.2	-49.9
9/18/03 19:00	15.4	16.3	-6.3	-16.1	-9.7	0.1	-19.1	-51.1
9/18/03 20:00	17.7	18.2	-3.9	-11.7	-6.7	0.1	-18.8	-41.0
9/18/03 21:00	20.4	21.9	-4.2	-12.8	-8.3	0.1	11.2	-13.9
9/18/03 22:00	21.6	23.3	-11.7	-24.8	-17.9	0.1	7.7	-46.6
9/18/03 23:00	19.8	20.9	-11.9	-27.1	-18.7	0.1	15.3	-42.3
9/19/03 0:00	21.9	23.3	-6.1	-15.8	-9.1	0.1	10.2	-20.6
9/19/03 1:00	21.6	22.9	-9.0	-21.3	-14.0	0.1	10.2	-33.9
9/19/03 2:00	21.3	22.1	-11.6	-25.1	-17.9	0.1	11.2	-43.3
9/19/03 3:00	18.8	19.8	-16.7	-34.8	-25.6	0.1	15.4	-61.5
9/19/03 4:00	19.4	20.5	-15.3	-32.2	-23.7	0.1	13.5	-57.6
9/19/03 5:00	21.2	22.4	-14.4	-30.8	-22.0	0.1	9.9	-57.3
9/19/03 6:00	22.7	23.7	-12.5	-29.0	-21.2	0.1	-34.7	-97.2
9/19/03 7:00	19.0	19.9	-14.3	-29.4	-23.0	0.1	-25.8	-92.4
9/19/03 8:00	20.2	21.0	-10.3	-20.5	-16.6	0.1	-31.1	-78.3
9/19/03 9:00	21.6	22.9	-7.2	-15.8	-12.4	0.1	-31.5	-66.8
9/19/03 10:00	21.1	22.1	-12.2	-25.6	-19.5	0.1	-30.3	-87.4
9/19/03 11:00	21.2	22.4	-11.0	-23.9	-17.4	0.1	-30.9	-83.1
9/19/03 12:00	20.9	21.5	-9.6	-22.0	-15.1	0.1	-27.9	-74.4
9/19/03 13:00	25.7	26.8	-11.4	-23.7	-16.8	0.1	-37.5	-89.3
9/19/03 14:00	26.0	27.5	-12.2	-27.6	-19.8	0.1	-39.1	-98.6
9/19/03 15:00	22.4	23.9	-8.9	-20.0	-13.3	0.1	-30.5	-72.6
9/19/03 16:00	23.5	24.4	-6.5	-16.7	-10.2	0.1	-30.5	-63.7
9/19/03 17:00	16.7	17.5	-6.6	-16.8	-10.1	0.1	-15.7	-49.1
9/19/03 18:00	14.7	15.3	-4.4	-10.0	-5.7	0.1	-11.1	-31.1
9/19/03 19:00	15.1	16.1	-6.8	-15.1	-9.5	0.1	-12.5	-43.7
9/19/03 20:00	13.9	14.6	-5.3	-14.4	-9.2	0.1	-6.7	-35.4
9/19/03 21:00	18.7	20.0	-10.5	-23.9	-16.4	0.1	16.7	-34.0
9/19/03 22:00	19.0	21.0	-15.9	-33.0	-23.6	0.1	15.3	-57.0

9/19/03 23:00	18.1	19.9	-14.6	-32.7	-21.6	0.1	17.5		-51.4
9/20/03 0:00	19.4	21.3	-14.9	-32.3	-22.4	0.1	15.1		-54.4
9/20/03 1:00	20.5	21.5	-12.9	-28.2	-19.5	0.1	11.8		-48.6
9/20/03 2:00	21.3	22.4	-14.6	-32.0	-23.6	0.1	10.8		-59.2
9/20/03 3:00	21.8	23.2	-16.6	-33.7	-25.9	0.1	8.8		-67.2
9/20/03 4:00	20.3	22.4	-16.4	-34.8	-26.0	0.1	12.6		-64.5
9/20/03 5:00	23.0	24.4	-16.1	-33.8	-25.6	0.1	5.9		-69.4
9/20/03 6:00	23.2	24.6	-14.7	-29.7	-23.0	0.1	-21.0		-88.3
9/20/03 7:00	20.5	22.1	-14.4	-28.8	-23.0	0.1	-19.0		-85.0
9/20/03 8:00	21.0	22.9	-13.4	-25.8	-20.7	0.1	-22.0		-81.9
9/20/03 9:00	22.0	23.3	-13.6	-27.1	-21.7	0.1	-19.9		-82.0
9/20/03 10:00	22.2	24.8	-10.3	-20.4	-15.5	-11.9	-11.4		-69.4
9/20/03 11:00	20.4	22.2	-12.9	-26.3	-20.1	-9.6	-8.7		-77.5
9/20/03 12:00	22.6	24.5	-12.3	-25.9	-19.8	-11.3	-10.4		-79.7
9/20/03 13:00	23.0	24.6	-14.3	-28.9	-22.4	-10.9	-10.0		-86.5
9/20/03 14:00	22.1	24.2	-14.1	-28.7	-22.1	-10.9	-9.8		-85.6
9/20/03 15:00	23.0	24.4	-15.9	-32.8	-25.2	-11.3	-10.4		-95.6
9/20/03 16:00	22.4	23.9	-14.8	-31.5	-24.0	-10.8	-9.6		-90.6
9/20/03 17:00	20.4	21.5	-14.1	-29.4	-22.4	-7.3	-6.5		-79.7
9/20/03 18:00	18.4	19.3	-14.6	-32.1	-24.1	-5.5	-4.5		-80.8
9/20/03 19:00	22.5	24.2	-9.2	-20.8	-14.1	-10.7	-9.9		-64.7
9/20/03 20:00	21.9	23.2	-8.7	-20.6	-13.8	-8.8	-8.1		-60.0
9/20/03 21:00	23.1	24.2	-6.9	-16.6	-11.2	7.0	7.4		-20.4
9/20/03 22:00	20.2	21.4	-11.8	-27.3	-19.3	9.7	10.3		-38.3
9/20/03 23:00	20.1	21.1	-10.0	-23.2	-14.7	10.6	11.1		-26.2
9/21/03 0:00	19.5	20.9	-10.7	-25.5	-17.2	8.9	10.2		-34.3
9/21/03 1:00	Bad	Bad	Bad	Bad	Bad	Bad	Bad		0.0
9/21/03 2:00	Bad	Bad	Bad	Bad	Bad	Bad	Bad		0.0
9/21/03 3:00	Bad	Bad	Bad	Bad	Bad	Bad	Bad		0.0
9/21/03 4:00	Bad	Bad	Bad	Bad	Bad	Bad	Bad		0.0
9/21/03 5:00	Bad	Bad	Bad	Bad	Bad	Bad	Bad		0.0
9/21/03 6:00	Bad	Bad	Bad	Bad	Bad	Bad	Bad		0.0
9/21/03 7:00	Bad	Bad	Bad	Bad	Bad	Bad	Bad		0.0
9/21/03 8:00	Not Cor	Not Cor	Not Cor	Not Cor	Not Cor	Not Cor	Not Connect		0.0
9/21/03 9:00	17.0	17.9	-14.3	-30.4	-22.3	-7.6	-7.5		-82.1
9/21/03 10:00	17.7	18.4	-12.7	-28.0	-19.5	-8.1	-7.4		-75.8
9/21/03 11:00	19.7	20.9	-10.7	-23.4	-16.9	-8.7	-8.3		-68.1
9/21/03 12:00	23.1	24.5	-11.1	-24.4	-18.3	-12.9	-12.0		-78.7
9/21/03 13:00	23.3	24.6	-8.2	-17.7	-13.2	-11.2	-10.4		-60.8
9/21/03 14:00	27.1	28.6	-10.4	-22.6	-16.8	-15.6	-15.6		-80.9
9/21/03 15:00	21.3	22.3	-10.1	-22.3	-17.1	-5.7	-5.5		-60.6
9/21/03 16:00	19.6	20.6	-7.4	-18.6	-13.0	-2.5	-1.2		-42.7
9/21/03 17:00	18.3	19.4	-5.6	-16.8	-10.0	-1.6	-0.7		-34.7
9/21/03 18:00	15.2	15.9	-6.8	-18.5	-11.5	2.1	2.7		-31.9
9/21/03 19:00	17.0	18.4	-1.9	-10.9	-4.8	-0.4	-0.3		-18.3
9/21/03 20:00	17.2	18.1	-3.4	-12.8	-6.5	-0.4	0.2		-22.9
9/21/03 21:00	22.5	23.7	-8.2	-20.5	-13.9	6.4	6.7		-29.5
9/21/03 22:00	20.2	21.4	-9.7	-22.9	-15.7	10.5	10.7		-27.2
9/21/03 23:00	21.5	23.3	-10.6	-24.8	-16.9	7.9	8.2		-36.2
9/22/03 0:00	23.3	24.8	-8.6	-20.8	-15.5	4.9	4.6		-35.3
9/22/03 1:00	23.1	24.7	-9.8	-21.9	-16.5	5.8	5.8		-36.6
9/22/03 2:00	23.3	24.5	-11.0	-24.1	-17.7	3.7	4.5		-44.7

9/22/03 3:00	22.5	23.8	-11.0	-25.1	-18.3	4.9	4.8	-44.6
9/22/03 4:00	22.0	23.3	-11.0	-25.6	-19.1	6.5	6.2	-43.0
9/22/03 5:00	24.2	25.5	-9.6	-22.3	-15.9	2.8	3.7	-41.3
9/22/03 6:00	23.7	24.7	-8.0	-18.4	-12.7	-22.1	-20.8	-82.0
9/22/03 7:00	18.5	19.3	-5.0	-13.7	-8.9	-13.9	-13.5	-55.0
9/22/03 8:00	16.1	17.5	-3.9	-13.4	-7.6	-12.3	-11.3	-48.4
9/22/03 9:00	17.8	19.0	-2.7	-8.3	-4.2	-13.3	-12.9	-41.5
9/22/03 10:00	18.7	19.5	-4.2	-13.8	-8.4	-13.7	-13.7	-53.8
9/22/03 11:00	19.2	20.2	-4.9	-13.4	-8.0	-15.3	-14.2	-55.8
9/22/03 12:00	20.2	21.1	-6.0	-16.0	-10.0	-15.2	-14.0	-61.3
9/22/03 13:00	21.2	23.0	-3.2	-10.3	-5.1	-15.3	-14.6	-48.4
9/22/03 14:00	22.9	24.1	-2.1	-8.2	-4.3	-15.2	-14.9	-44.6
9/22/03 15:00	18.2	19.5	-5.3	-13.8	-8.5	-7.3	-6.9	-41.8
9/22/03 16:00	17.0	17.8	-1.0	-6.1	-2.6	-5.1	-5.0	-19.9
9/22/03 17:00	13.4	13.8	-3.3	-11.4	-6.0	-3.5	-2.9	-27.0
9/22/03 18:00	11.2	11.9	-6.5	-14.6	-9.9	-4.6	-4.0	-39.5
9/22/03 19:00	10.7	11.0	-7.9	-19.6	-12.9	-4.3	-3.5	-48.2
9/22/03 20:00	9.3	10.2	-7.5	-18.3	-11.6	-3.8	-3.2	-44.4
9/22/03 21:00	14.1	14.6	-3.1	-9.3	-5.1	20.0	19.7	22.1
9/22/03 22:00	13.4	14.4	-11.2	-26.0	-17.2	20.0	20.1	-14.4
9/22/03 23:00	19.5	20.6	-17.2	-37.4	-25.5	8.5	9.3	-62.4
9/23/03 0:00	21.7	23.5	-12.2	-26.8	-18.4	7.8	7.6	-41.9
9/23/03 1:00	24.1	25.4	-9.5	-21.0	-14.9	4.1	4.2	-37.1
9/23/03 2:00	23.9	25.0	-10.7	-22.8	-16.8	4.6	4.9	-40.9
9/23/03 3:00	23.7	25.2	-8.3	-19.0	-13.7	4.7	5.1	-31.3
9/23/03 4:00	24.1	25.3	-7.9	-18.9	-13.3	5.1	4.9	-30.3
9/23/03 5:00	24.9	25.9	-8.1	-19.2	-12.3	2.9	3.3	-33.4
9/23/03 6:00	22.2	23.2	-8.7	-19.5	-13.3	-18.0	-17.5	-77.0
9/23/03 7:00	18.5	19.6	-7.1	-15.0	-9.6	-13.4	-13.9	-59.0
9/23/03 8:00	15.4	16.2	-11.4	-25.8	-17.3	-12.6	-12.1	-79.3
9/23/03 9:00	16.6	16.8	-13.4	-27.7	-19.9	-13.2	-12.6	-86.8
9/23/03 10:00	18.0	18.7	-9.5	-21.8	-15.6	-15.1	-14.5	-76.4
9/23/03 11:00	20.1	21.2	-11.0	-24.9	-17.6	-18.1	-18.2	-89.8
9/23/03 12:00	20.1	21.0	-7.7	-18.6	-12.7	-17.8	-16.9	-73.7
9/23/03 13:00	21.2	22.2	-10.4	-23.9	-16.5	-19.8	-19.3	-89.9
9/23/03 14:00	21.4	22.2	-11.3	-24.1	-17.5	-18.9	-18.4	-90.3
9/23/03 15:00	18.6	19.3	-10.4	-21.1	-15.1	-15.1	-14.4	-76.1
9/23/03 16:00	16.4	17.2	-12.0	-25.9	-18.8	-13.4	-13.1	-83.2
9/23/03 17:00	15.9	16.8	-13.8	-29.0	-22.0	-14.0	-12.8	-91.6
9/23/03 18:00	13.7	14.8	-9.6	-21.9	-15.7	-8.9	-8.5	-64.5
9/23/03 19:00	17.7	18.6	-4.0	-10.7	-6.1	-11.4	-11.1	-43.3
9/23/03 20:00	15.6	16.3	-8.8	-19.4	-13.5	-7.8	-7.7	-57.2
9/23/03 21:00	16.5	17.5	-12.2	-27.1	-19.9	15.1	15.0	-29.1
9/23/03 22:00	15.4	16.4	-13.4	-29.3	-21.4	16.4	17.7	-30.1
9/23/03 23:00	20.2	21.4	-16.2	-34.1	-24.9	10.8	10.8	-53.7
9/24/03 0:00	21.4	22.8	-14.2	-30.0	-22.2	7.4	7.8	-51.2
9/24/03 1:00	21.2	22.4	-12.9	-27.9	-19.6	8.0	8.9	-43.4
9/24/03 2:00	21.6	22.5	-11.8	-26.0	-18.1	7.6	7.9	-40.4
9/24/03 3:00	21.5	22.8	-11.7	-26.3	-18.9	7.6	7.6	-41.6
9/24/03 4:00	21.8	23.1	-11.0	-25.5	-18.4	7.0	7.0	-41.0
9/24/03 5:00	23.0	24.4	-10.7	-24.4	-17.0	5.2	5.0	-41.9
9/24/03 6:00	23.1	24.4	-6.8	-18.0	-12.2	-19.5	-18.7	-75.2

9/24/03 7:00	19.0	19.7	-4.8	-12.2	-6.6	-14.4	-13.9	-51.9
9/24/03 8:00	16.3	17.4	-7.8	-20.0	-12.2	-13.4	-12.7	-66.1
9/24/03 9:00	17.3	18.5	-6.7	-18.1	-11.2	-14.4	-13.3	-63.8
9/24/03 10:00	18.1	19.3	-5.3	-16.4	-8.7	-14.6	-13.9	-58.8
9/24/03 11:00	18.2	19.1	-4.8	-14.7	-7.4	-14.3	-13.4	-54.6
9/24/03 12:00	17.2	17.9	-6.9	-19.3	-11.5	-12.7	-11.8	-62.3
9/24/03 13:00	18.8	19.7	-6.1	-15.8	-8.9	-14.6	-13.8	-59.1
9/24/03 14:00	19.9	21.0	-6.2	-15.8	-9.3	-16.2	-15.6	-63.2
9/24/03 15:00	18.4	19.0	-9.2	-21.1	-14.1	-14.8	-14.0	-73.1
9/24/03 16:00	16.1	16.8	-10.5	-22.7	-15.1	-11.4	-10.6	-70.3
9/24/03 17:00	14.9	15.8	-7.7	-19.1	-11.7	-9.0	-8.6	-56.0
9/24/03 18:00	14.4	15.5	-5.6	-13.4	-8.1	-7.4	-6.6	-41.2
9/24/03 19:00	18.1	19.0	-3.7	-10.0	-4.5	-11.6	-10.8	-40.6
9/24/03 20:00	17.8	18.6	-4.5	-12.2	-7.2	-11.4	-11.0	-46.3
9/24/03 21:00	16.9	17.4	-3.5	-11.2	-6.3	-13.9	-13.9	-48.9
9/24/03 22:00	13.6	14.4	-7.3	-18.4	-11.7	-9.1	-8.7	-55.2
9/24/03 23:00	20.2	21.2	-11.1	-24.5	-16.7	-19.0	-18.0	-89.3
9/25/03 0:00	21.3	22.3	-8.6	-19.4	-12.8	-21.6	-21.5	-83.8
9/25/03 1:00	20.0	21.0	-10.1	-23.0	-15.4	-19.6	-19.3	-87.4
9/25/03 2:00	18.8	19.7	-12.6	-27.7	-19.2	-18.7	-17.8	-96.0
9/25/03 3:00	18.7	19.9	-12.9	-27.5	-19.7	-18.4	-17.8	-96.2
9/25/03 4:00	18.6	19.5	-13.1	-28.7	-20.5	-19.3	-18.7	-100.3
9/25/03 5:00	19.7	20.9	-13.9	-30.8	-21.4	-22.0	-21.4	-109.4
9/25/03 6:00	18.8	19.6	-8.7	-20.2	-13.1	-45.0	-43.9	-130.9
9/25/03 7:00	17.2	17.9	-8.5	-20.0	-14.1	-42.7	-42.3	-127.6
9/25/03 8:00	9.1	10.0	-19.3	-42.9	-30.8	-38.1	-37.2	-168.3
9/25/03 9:00	11.0	12.2	-18.1	-40.1	-28.8	-40.0	-39.0	-165.9
9/25/03 10:00	15.4	16.3	-14.3	-31.9	-23.3	-44.4	-43.3	-157.2
9/25/03 11:00	16.1	17.5	-13.1	-27.8	-19.4	-43.9	-43.5	-147.7
9/25/03 12:00	17.0	18.2	-9.8	-22.2	-14.3	-43.4	-42.9	-132.6
9/25/03 13:00	19.2	20.7	-8.3	-19.7	-12.5	-45.7	-44.7	-130.9
9/25/03 14:00	18.0	19.2	-12.9	-28.2	-19.0	-48.9	-48.0	-156.9
9/25/03 15:00	17.1	18.7	-12.9	-29.8	-21.0	-47.9	-46.8	-158.4
9/25/03 16:00	14.7	15.6	-12.1	-27.4	-18.6	-43.3	-42.7	-144.1
9/25/03 17:00	10.6	11.6	-15.6	-33.1	-23.7	-39.1	-38.6	-150.2
9/25/03 18:00	8.6	9.5	-12.2	-26.8	-18.9	-35.0	-34.3	-127.2
9/25/03 19:00	13.7	14.7	-6.7	-17.4	-10.4	-35.0	-34.2	-103.7
9/25/03 20:00	13.2	14.1	-10.5	-24.2	-15.9	-36.3	-35.2	-122.0
9/25/03 21:00	15.0	15.9	-9.2	-21.7	-15.0	-10.3	-9.9	-66.0
9/25/03 22:00	14.8	15.2	-12.9	-26.5	-18.7	-9.8	-8.7	-76.6
9/25/03 23:00	17.9	18.2	-14.8	-30.3	-21.0	-15.1	-14.4	-95.7
9/26/03 0:00	16.5	17.1	-15.5	-34.1	-23.9	-16.2	-15.2	-105.0
9/26/03 1:00	19.3	20.3	-7.2	-16.5	-9.9	-19.3	-19.7	-72.6
9/26/03 2:00	19.1	20.2	-7.9	-19.1	-12.4	-18.8	-18.2	-76.4
9/26/03 3:00	18.6	19.3	-9.7	-22.7	-15.0	-19.0	-17.8	-84.3
9/26/03 4:00	18.8	19.9	-10.2	-22.4	-14.6	-18.1	-17.6	-83.0
9/26/03 5:00	20.3	21.6	-11.7	-25.6	-17.0	-20.9	-21.3	-96.5
9/26/03 6:00	18.8	19.1	-9.6	-22.8	-14.1	-43.9	-43.8	-134.2
9/26/03 7:00	16.7	16.9	-3.1	-8.5	-5.0	-41.6	-40.9	-99.0
9/26/03 8:00	12.9	13.3	-8.9	-20.6	-14.3	-38.5	-37.9	-120.2
9/26/03 9:00	14.5	15.9	-4.7	-11.0	-6.8	-40.1	-39.6	-102.1
9/26/03 10:00	15.0	15.6	-5.3	-13.9	-8.5	-39.3	-39.3	-106.4

9/26/03 11:00	12.4	12.9	-2.6	-9.6	-5.2	-82.9	-82.0		-182.4
9/26/03 12:00	10.5	10.9	1.1	-1.8	1.0	-102.8	-102.1		-204.5
9/26/03 13:00	12.4	13.1	2.9	2.3	5.4	-104.0	-103.0		-196.4
9/26/03 14:00	9.7	10.3	-5.2	-13.8	-7.6	-105.2	-105.0		-236.8
9/26/03 15:00	9.5	10.8	-0.6	-5.3	-1.0	-104.9	-104.3		-216.1
9/26/03 16:00	17.7	18.7	-9.7	-22.0	-14.8	-11.7	-11.4		-69.5
9/26/03 17:00	15.2	15.7	-12.8	-28.5	-19.7	-10.1	-9.6		-80.6
9/26/03 18:00	13.4	14.1	-11.9	-26.1	-19.1	-8.0	-7.4		-72.5
9/26/03 19:00	16.3	17.4	-9.1	-23.8	-15.4	-11.3	-10.7		-70.4
9/26/03 20:00	15.2	16.0	-9.1	-22.0	-14.8	-7.6	-6.9		-60.4
9/26/03 21:00	14.9	15.5	-10.2	-24.4	-15.6	18.2	18.2		-13.8
9/26/03 22:00	15.6	16.6	-13.9	-30.9	-21.9	15.7	16.3		-34.7
9/26/03 23:00	20.5	21.7	-15.1	-30.5	-21.7	9.0	9.5		-48.7
9/27/03 0:00	22.9	26.6	-5.0	-12.4	-6.7	6.4	7.2		-10.5
9/27/03 1:00	21.8	25.6	-4.7	-11.7	-6.6	8.4	8.4		-6.2
9/27/03 2:00	21.8	25.3	-7.2	-14.4	-10.0	6.5	7.0		-18.2
9/27/03 3:00	20.0	23.3	-9.0	-20.1	-14.3	8.6	9.0		-25.9
9/27/03 4:00	20.1	22.0	-11.4	-24.4	-16.5	8.2	8.5		-35.5
9/27/03 5:00	21.2	22.1	-10.7	-23.0	-16.2	7.4	7.7		-34.8
9/27/03 6:00	20.8	21.2	-10.8	-24.1	-16.9	-9.6	-8.8		-70.1
9/27/03 7:00	17.3	18.4	-9.2	-21.7	-13.7	-7.2	-6.7		-58.6
9/27/03 8:00	17.4	18.4	-9.6	-21.5	-14.1	-7.9	-7.2		-60.3
9/27/03 9:00	15.9	16.6	-17.4	-37.3	-26.3	-10.5	-9.6		-101.1
9/27/03 10:00	17.9	18.8	-12.1	-26.6	-17.8	-11.5	-10.6		-78.6
9/27/03 11:00	18.1	18.9	-11.4	-24.7	-16.5	-12.5	-11.9		-77.0
9/27/03 12:00	17.9	19.3	-9.1	-21.1	-13.6	-11.0	-10.0		-64.7
9/27/03 13:00	20.5	21.2	-7.8	-19.3	-12.4	-12.8	-13.0		-65.3
9/27/03 14:00	19.7	20.5	-10.8	-24.9	-15.8	-14.7	-13.8		-79.9
9/27/03 15:00	20.5	21.3	-8.1	-21.3	-13.2	-16.0	-15.6		-74.2
9/27/03 16:00	18.8	20.3	-11.8	-26.3	-17.8	-8.4	-8.1		-72.3
9/27/03 17:00	18.5	19.3	-11.9	-26.5	-18.2	-8.3	-7.4		-72.3
9/27/03 18:00	16.2	17.0	-14.2	-30.8	-21.2	-5.4	-5.1		-76.8
9/27/03 19:00	20.2	21.4	-8.4	-20.5	-12.3	-9.0	-9.0		-59.3
9/27/03 20:00	17.5	18.9	-11.1	-26.7	-17.9	-5.8	-5.4		-66.9
9/27/03 21:00	19.4	20.6	-10.9	-24.9	-16.3	8.4	9.3		-34.4
9/27/03 22:00	20.8	23.4	-8.1	-17.3	-11.3	10.1	10.8		-15.8
9/27/03 23:00	19.2	24.0	-11.1	-26.5	-17.6	11.7	11.8		-31.7
9/28/03 0:00	21.2	25.1	-10.8	-23.9	-16.9	9.1	9.5		-32.9
9/28/03 1:00	19.9	20.7	-15.8	-33.1	-24.3	8.7	9.5		-54.9
9/28/03 2:00	20.0	20.4	-11.9	-25.5	-17.8	10.0	10.4		-34.8
9/28/03 3:00	19.6	20.1	-11.1	-21.9	-15.6	10.5	11.1		-27.1
9/28/03 4:00	18.6	20.0	-10.4	-23.9	-17.4	11.0	11.9		-29.0
9/28/03 5:00	18.9	19.4	-10.7	-23.9	-17.3	11.3	11.7		-28.9
9/28/03 6:00	20.0	20.2	-10.7	-23.1	-17.0	-8.6	-8.0		-67.5
9/28/03 7:00	17.4	17.2	-11.6	-25.5	-18.4	-7.6	-6.8		-69.7
9/28/03 8:00	17.1	17.6	-9.3	-21.6	-14.7	-8.5	-8.2		-62.2
9/28/03 9:00	15.0	15.0	-18.1	-37.0	-27.1	-8.7	-7.9		-98.7
9/28/03 10:00	15.0	14.3	-21.3	-44.6	-33.0	-9.6	-9.0		-117.6
9/28/03 11:00	15.4	15.2	-17.1	-35.9	-25.6	-8.3	-8.0		-95.0
9/28/03 12:00	16.0	15.6	-15.3	-33.7	-23.3	-7.9	-8.2		-88.4
9/28/03 13:00	15.0	15.2	-15.3	-32.2	-22.4	-7.6	-7.2		-84.8
9/28/03 14:00	15.0	14.1	-17.6	-38.0	-26.3	-11.2	-10.3		-103.4

9/28/03 15:00	16.7	16.5	-11.0	-26.5	-16.4	-6.3	-5.5		-65.8
9/28/03 16:00	17.6	17.6	-10.9	-25.1	-16.7	-7.7	-7.1		-67.5
9/28/03 17:00	16.7	17.0	-9.8	-23.9	-15.8	-5.4	-5.0		-59.8
9/28/03 18:00	15.4	16.0	-11.0	-25.6	-16.5	-4.6	-3.8		-61.4
9/28/03 19:00	20.1	20.5	-8.6	-22.1	-13.0	-8.7	-8.0		-60.4
9/28/03 20:00	20.0	20.4	-8.6	-20.7	-13.4	-7.4	-6.6		-56.7
9/28/03 21:00	19.4	19.7	-10.6	-23.9	-16.2	9.7	10.5		-30.4
9/28/03 22:00	19.3	20.6	-10.7	-24.4	-16.8	10.9	10.9		-30.2
9/28/03 23:00	19.4	20.2	-11.5	-25.4	-16.8	10.3	10.8		-32.6
9/29/03 0:00	20.5	21.1	-12.6	-29.1	-20.6	9.2	9.2		-44.0
9/29/03 1:00	19.5	20.5	-11.9	-26.7	-18.9	9.7	10.0		-37.8
9/29/03 2:00	19.4	19.8	-11.7	-25.8	-18.1	10.7	10.3		-34.7
9/29/03 3:00	18.4	18.9	-14.7	-31.9	-22.8	11.0	11.5		-46.9
9/29/03 4:00	19.7	19.6	-14.2	-30.8	-21.7	9.7	9.9		-47.0
9/29/03 5:00	22.8	23.5	-11.9	-28.7	-20.5	4.7	5.7		-50.5
9/29/03 6:00	19.5	19.6	-8.1	-20.5	-13.2	-14.1	-14.6		-70.4
9/29/03 7:00	16.2	16.0	-11.7	-26.2	-17.5	-12.8	-11.8		-80.0
9/29/03 8:00	13.6	13.7	-17.1	-35.2	-25.2	-10.0	-9.7		-97.2
9/29/03 9:00	14.0	14.1	-15.0	-34.0	-23.0	-10.3	-10.3		-92.7
9/29/03 10:00	16.8	17.1	-9.9	-24.5	-15.8	-13.0	-11.8		-75.1
9/29/03 11:00	18.4	18.7	-8.6	-23.1	-13.1	-16.3	-15.5		-76.6
9/29/03 12:00	17.0	17.2	-13.2	-29.1	-18.9	-14.3	-13.5		-89.0
9/29/03 13:00	17.5	18.3	-11.8	-28.3	-17.9	-16.7	-15.8		-90.4
9/29/03 14:00	17.4	18.0	-11.5	-26.8	-17.7	-15.0	-14.4		-85.3
9/29/03 15:00	17.9	18.1	-11.5	-27.1	-17.3	-16.3	-14.7		-86.9
9/29/03 16:00	15.6	15.8	-13.3	-29.5	-18.6	-13.0	-11.9		-86.3
9/29/03 17:00	12.6	12.9	-7.9	-19.6	-11.7	-9.2	-8.9		-57.3
9/29/03 18:00	11.1	11.4	-7.2	-17.7	-10.9	-4.6	-3.9		-44.3
9/29/03 19:00	15.2	15.6	-1.1	-6.9	-0.6	-27.0	-28.6		-64.2
9/29/03 20:00	21.8	23.0	-5.4	-15.3	-7.4	45.9	46.2		64.1
9/29/03 21:00	19.5	20.8	-4.0	-13.5	-5.9	44.6	45.0		66.1
9/29/03 22:00	19.0	19.7	-9.5	-23.0	-13.2	45.2	45.6		45.0
9/29/03 23:00	21.9	22.6	-18.7	-40.6	-28.6	38.2	38.5		-11.2
9/30/03 0:00	23.1	24.2	-14.1	-30.5	-21.7	35.1	35.4		4.2
9/30/03 1:00	20.2	20.7	-12.1	-25.8	-17.9	10.0	10.1		-35.7
9/30/03 2:00	19.9	21.3	-11.3	-25.4	-17.6	9.4	9.7		-35.2
9/30/03 3:00	20.7	21.1	-11.6	-25.9	-18.5	8.8	8.9		-38.4
9/30/03 4:00	20.2	20.9	-11.9	-25.6	-18.2	8.8	9.2		-37.7
9/30/03 5:00	21.9	22.7	-11.3	-25.1	-18.0	6.7	6.7		-41.0
9/30/03 6:00	19.5	20.4	-13.4	-30.3	-20.5	-16.4	-15.7		-96.3
9/30/03 7:00	17.9	18.3	-6.9	-18.1	-10.2	-18.3	-17.3		-70.8
9/30/03 8:00	17.8	18.5	-7.4	-18.2	-12.4	-19.0	-18.5		-75.4
9/30/03 9:00	18.4	19.0	-6.5	-17.2	-11.7	-17.9	-17.8		-71.0
9/30/03 10:00	18.9	19.7	-3.8	-11.8	-5.8	-18.5	-18.1		-58.0
9/30/03 11:00	20.0	20.3	-5.9	-14.5	-9.4	-18.1	-17.7		-65.7
9/30/03 12:00	19.2	19.7	-7.0	-16.0	-9.9	-16.9	-16.4		-66.2
9/30/03 13:00	19.4	19.9	-8.2	-19.3	-12.5	-17.4	-16.4		-73.8
9/30/03 14:00	19.5	20.4	-8.8	-20.9	-13.2	-16.5	-16.3		-75.7
9/30/03 15:00	18.8	19.3	-8.3	-19.8	-12.4	-16.1	-15.2		-71.8
9/30/03 16:00	15.3	15.6	-10.1	-23.4	-15.7	-11.3	-11.0		-71.5
9/30/03 17:00	14.4	13.4	-4.7	-14.1	-7.5	-8.9	-8.5		-43.6
9/30/03 18:00	11.8	12.1	-5.4	-15.0	-9.0	-5.9	-5.8		-41.1

9/30/03 19:00	21.9	22.4	-0.3	-4.5	-0.2	8.1	8.7		11.9
9/30/03 20:00	19.4	20.4	-1.9	-8.4	-2.3	12.4	12.6		12.3
9/30/03 21:00	18.5	19.8	-4.3	-13.6	-6.8	28.8	29.0		33.1
9/30/03 22:00	18.4	19.2	-5.5	-15.6	-7.7	36.1	36.2		43.5
9/30/03 23:00	23.2	24.5	-16.0	-35.5	-25.0	30.4	32.0		-14.0
10/1/03 0:00	21.9	22.4	-11.7	-25.8	-17.1	7.7	7.6		-39.3
10/1/03 1:00	22.4	22.6	-10.6	-25.2	-17.8	6.2	6.9		-40.5
10/1/03 2:00	22.4	23.4	-11.0	-23.3	-16.1	6.3	6.6		-37.6
10/1/03 3:00	21.7	22.8	-9.5	-20.5	-14.1	7.2	7.7		-29.3
10/1/03 4:00	22.8	23.8	-10.3	-23.4	-16.0	4.9	4.8		-39.9
10/1/03 5:00	24.2	25.0	-12.2	-28.2	-19.7	2.0	1.7		-56.4
10/1/03 6:00	21.0	22.2	-11.0	-24.1	-16.3	-26.4	-33.0		-110.8
10/1/03 7:00	15.5	15.2	-7.0	-17.7	-10.0	-33.6	-33.8		-102.1
10/1/03 8:00	16.2	16.5	-6.2	-18.6	-10.1	-15.4	-14.1		-64.3
10/1/03 9:00	16.1	16.6	-4.8	-15.7	-7.5	-14.7	-14.5		-57.2
10/1/03 10:00	16.2	16.7	-5.6	-17.0	-9.1	-15.4	-13.9		-61.0
10/1/03 11:00	15.8	16.2	-7.8	-21.3	-11.9	-15.9	-15.7		-72.5
10/1/03 12:00	14.9	14.9	-9.2	-23.6	-14.0	-14.0	-13.2		-74.0
10/1/03 13:00	13.1	12.9	-14.8	-32.7	-20.9	-11.7	-11.5		-91.7
10/1/03 14:00	16.4	16.7	-10.1	-24.0	-14.4	-15.1	-14.4		-78.1
10/1/03 15:00	16.2	16.7	-10.6	-25.3	-14.9	-15.9	-15.1		-81.8
10/1/03 16:00	12.9	12.8	-13.3	-30.5	-18.8	-11.2	-10.5		-84.3
10/1/03 17:00	10.3	10.3	-12.6	-28.1	-18.1	-7.8	-6.9		-73.5
10/1/03 18:00	7.4	7.9	-15.5	-33.5	-22.2	-5.4	-4.7		-81.3
10/1/03 19:00	12.6	12.6	-5.4	-15.9	-7.3	-12.0	-11.2		-51.8
10/1/03 20:00	11.8	11.7	-8.8	-22.5	-13.4	-10.7	-9.7		-65.0
10/1/03 21:00	13.3	13.5	-10.7	-27.7	-17.4	12.2	12.0		-31.7
10/1/03 22:00	18.6	19.4	-12.8	-30.2	-20.4	5.1	5.4		-52.9
10/1/03 23:00	16.0	15.8	-20.6	-42.8	-31.3	7.9	8.1		-78.8
10/2/03 0:00	20.9	21.2	-15.8	-34.5	-24.5	4.4	4.7		-65.7
10/2/03 1:00	24.2	25.0	-9.0	-21.9	-14.7	4.2	4.5		-37.0
10/2/03 2:00	23.8	24.3	-11.1	-25.5	-18.0	4.5	4.9		-45.2
10/2/03 3:00	23.6	24.3	-12.0	-26.9	-19.8	5.2	4.7		-48.8
10/2/03 4:00	24.8	26.0	-9.3	-21.8	-15.5	1.9	3.4		-41.2
10/2/03 5:00	24.4	24.7	-9.8	-22.1	-14.9	2.3	2.8		-41.7
10/2/03 6:00	23.8	24.9	3.1	1.6	4.0	-22.4	-22.6		-36.2
10/2/03 7:00	17.0	17.0	-10.8	-24.1	-17.0	-11.5	-10.7		-74.1
10/2/03 8:00	15.9	16.5	-12.1	-26.2	-18.8	-12.9	-12.3		-82.3
10/2/03 9:00	16.9	17.4	-11.9	-26.8	-19.1	-14.6	-14.4		-86.8
10/2/03 10:00	16.3	16.8	-5.4	-14.0	-8.3	-12.6	-11.7		-52.1
10/2/03 11:00	17.6	18.4	-7.6	-16.9	-10.4	-13.5	-12.5		-60.9
10/2/03 12:00	17.4	17.7	-9.1	-23.0	-15.2	-12.0	-11.7		-70.9
10/2/03 13:00	18.2	18.5	-9.2	-23.2	-15.5	-13.1	-13.0		-74.1
10/2/03 14:00	18.4	19.2	-6.6	-17.9	-11.1	-13.1	-12.4		-61.1
10/2/03 15:00	18.3	18.7	-10.7	-25.5	-17.1	-13.2	-12.8		-79.2
10/2/03 16:00	16.4	16.9	-9.9	-22.4	-14.9	-10.7	-10.5		-68.3
10/2/03 17:00	12.6	13.4	-14.6	-32.0	-23.0	-8.5	-8.1		-86.2
10/2/03 18:00	12.3	12.9	-9.9	-24.4	-15.7	-6.5	-6.0		-62.5
10/2/03 19:00	17.1	17.6	-9.6	-23.5	-14.9	-11.0	-10.5		-69.5
10/2/03 20:00	13.7	14.2	-10.2	-22.9	-14.7	-7.3	-6.0		-61.0
10/2/03 21:00	16.4	17.1	-11.2	-26.0	-17.6	16.0	16.3		-22.5
10/2/03 22:00	16.7	17.4	-12.4	-28.8	-19.0	17.1	17.3		-25.8

10/2/03 23:00	17.9	17.7	-18.4	-40.4	-29.0	13.7	14.4		-59.8
10/3/03 0:00	21.9	22.7	-11.3	-24.8	-17.4	7.6	7.9		-38.0
10/3/03 1:00	21.9	23.0	-11.0	-23.2	-16.6	8.5	8.3		-34.0
10/3/03 2:00	21.1	21.5	-13.0	-28.9	-20.7	9.4	9.3		-43.8
10/3/03 3:00	21.7	22.6	-14.8	-29.7	-22.8	9.1	8.9		-49.4
10/3/03 4:00	20.7	21.1	-14.8	-32.0	-23.8	10.2	9.1		-51.2
10/3/03 5:00	24.2	25.1	-11.9	-24.6	-18.6	3.5	4.0		-47.6
10/3/03 6:00	23.2	24.6	-9.6	-21.5	-15.3	-40.7	-37.3		-124.5
10/3/03 7:00	22.7	23.6	-7.9	-16.8	-13.3	-22.9	-21.9		-82.9
10/3/03 8:00	17.9	18.4	-9.0	-20.3	-14.2	-16.0	-15.9		-75.5
10/3/03 9:00	17.7	17.7	-7.3	-18.1	-11.1	-15.0	-14.6		-66.2
10/3/03 10:00	18.0	18.4	-8.9	-20.1	-13.3	-15.2	-15.3		-72.8
10/3/03 11:00	18.6	18.9	-9.0	-21.6	-14.8	-15.6	-15.4		-76.3
10/3/03 12:00	16.9	17.1	-9.1	-21.6	-14.2	-13.8	-13.0		-71.7
10/3/03 13:00	17.8	18.3	-6.9	-17.4	-11.0	-14.3	-13.8		-63.3
10/3/03 14:00	16.4	16.6	-8.9	-21.5	-13.9	-12.2	-11.5		-68.0
10/3/03 15:00	13.9	14.6	-8.7	-20.6	-13.2	-10.7	-9.3		-62.4
10/3/03 16:00	12.1	12.5	-10.6	-25.0	-16.7	-8.1	-7.6		-68.0
10/3/03 17:00	10.8	11.2	-12.4	-28.8	-19.5	-7.2	-6.6		-74.4
10/3/03 18:00	8.7	8.4	-17.2	-36.7	-26.5	-3.3	-3.2		-86.9
10/3/03 19:00	14.7	15.0	-3.9	-13.1	-5.8	-8.2	-7.9		-38.9
10/3/03 20:00	10.4	10.5	-11.9	-29.1	-19.9	-3.3	-2.6		-66.8
10/3/03 21:00	16.8	17.3	-10.1	-24.4	-16.4	14.0	14.4		-22.4
10/3/03 22:00	15.6	15.6	-14.8	-32.3	-22.9	17.5	17.5		-35.0
10/3/03 23:00	16.1	16.3	-21.5	-42.7	-32.6	14.6	14.4		-67.8
10/4/03 0:00	17.7	17.8	-17.9	-36.8	-27.2	11.9	12.4		-57.6
10/4/03 1:00	20.5	21.1	-13.9	-29.2	-21.7	10.5	10.4		-43.9
10/4/03 2:00	21.0	21.4	-17.4	-35.4	-27.4	8.4	8.7		-63.1
10/4/03 3:00	19.7	20.5	-19.0	-36.8	-28.4	9.7	10.1		-64.3
10/4/03 4:00	19.6	20.2	-20.3	-39.4	-30.8	10.4	10.9		-69.3
10/4/03 5:00	19.0	19.2	-20.3	-40.6	-31.1	10.8	11.0		-70.2
10/4/03 6:00	19.1	19.3	-17.8	-36.6	-28.5	-9.8	-8.8		-101.4
10/4/03 7:00	12.2	12.4	-19.3	-38.7	-26.9	-1.4	-1.5		-87.8
10/4/03 8:00	11.5	12.1	-17.2	-36.8	-25.3	-0.8	-0.1		-80.1
10/4/03 9:00	14.0	14.6	-12.2	-26.0	-16.5	-4.2	-3.7		-62.6
10/4/03 10:00	16.4	16.4	-7.6	-16.9	-9.8	-4.5	-3.8		-42.6
10/4/03 11:00	13.4	13.9	-11.7	-25.0	-15.3	-1.6	-1.3		-55.0
10/4/03 12:00	14.0	14.3	-10.7	-24.6	-15.0	-2.0	-1.7		-54.1
10/4/03 13:00	14.8	14.8	-10.4	-23.8	-14.4	-2.2	-1.7		-52.5
10/4/03 14:00	13.8	14.4	-10.0	-21.5	-12.9	0.3	0.5		-43.6
10/4/03 15:00	13.7	14.2	-10.0	-23.2	-13.9	-1.9	-0.3		-49.3
10/4/03 16:00	12.4	13.3	-10.0	-22.3	-13.6	0.8	1.0		-44.1
10/4/03 17:00	11.5	12.0	-7.9	-19.0	-10.0	2.9	3.3		-30.6
10/4/03 18:00	11.8	12.3	-9.8	-21.4	-14.0	2.3	3.0		-39.9
10/4/03 19:00	17.5	18.7	-4.3	-12.1	-6.0	-4.0	-3.0		-29.3
10/4/03 20:00	15.8	16.6	-9.2	-21.3	-15.0	-1.5	-1.5		-48.5
10/4/03 21:00	19.3	19.8	-7.9	-18.1	-12.4	11.3	11.8		-15.3
10/4/03 22:00	18.5	19.1	-9.6	-19.3	-15.1	13.5	13.7		-16.6
10/4/03 23:00	21.4	22.6	-11.3	-23.7	-17.9	9.1	9.2		-34.6
10/5/03 0:00	22.7	24.4	-5.2	-12.2	-8.4	5.6	5.8		-14.3
10/5/03 1:00	20.8	21.9	-10.7	-24.1	-16.9	9.7	10.3		-31.7
10/5/03 2:00	20.9	21.9	-12.4	-26.9	-19.7	9.7	9.8		-39.5

10/5/03 3:00	21.0	22.2	-12.9	-28.9	-21.1	8.3	9.2		-45.5
10/5/03 4:00	19.9	21.1	-13.7	-29.1	-21.7	10.2	11.0		-43.2
10/5/03 5:00	20.1	20.5	-13.9	-29.0	-21.9	9.6	9.7		-45.4
10/5/03 6:00	20.3	20.6	-12.6	-26.7	-20.3	-7.8	-7.6		-75.1
10/5/03 7:00	16.5	17.2	-15.2	-31.2	-23.9	-5.1	-5.3		-80.6
10/5/03 8:00	14.4	14.7	-13.6	-26.7	-19.6	-4.2	-3.4		-67.4
10/5/03 9:00	15.0	15.7	-10.4	-24.3	-16.2	-4.4	-4.4		-59.8
10/5/03 10:00	17.3	18.1	-6.4	-16.8	-10.2	-5.9	-5.2		-44.3
10/5/03 11:00	17.3	18.0	-9.7	-22.9	-14.9	-7.7	-6.6		-61.7
10/5/03 12:00	18.3	19.2	-7.7	-18.9	-11.5	-7.4	-7.8		-53.2
10/5/03 13:00	18.7	19.2	-6.0	-16.7	-9.8	-7.8	-7.3		-47.6
10/5/03 14:00	19.2	20.1	-6.7	-16.3	-10.1	-8.2	-7.9		-49.2
10/5/03 15:00	20.8	21.1	-6.7	-16.7	-10.5	-10.0	-9.4		-53.3
10/5/03 16:00	19.4	20.1	-6.7	-17.8	-10.5	-8.3	-8.6		-51.9
10/5/03 17:00	18.6	19.1	-6.3	-15.8	-9.0	-7.3	-6.6		-45.0
10/5/03 18:00	19.5	20.3	-3.4	-11.5	-5.3	-7.8	-6.9		-35.0
10/5/03 19:00	21.0	21.0	-4.0	-13.6	-6.7	-7.1	-6.9		-38.4
10/5/03 20:00	20.8	21.8	-5.1	-14.3	-8.1	-8.3	-7.4		-43.2
10/5/03 21:00	20.3	21.1	-9.2	-22.6	-14.7	8.5	9.2		-28.8
10/5/03 22:00	20.7	22.1	-7.0	-17.6	-11.4	9.6	9.4		-16.9
10/5/03 23:00	21.7	22.4	-9.0	-22.4	-14.1	8.0	9.2		-28.2
10/6/03 0:00	21.4	22.7	-8.7	-19.1	-12.9	8.8	8.4		-23.5
10/6/03 1:00	20.7	21.2	-12.6	-27.2	-19.4	9.4	10.2		-39.5
10/6/03 2:00	20.8	21.3	-14.0	-30.1	-22.0	9.4	9.6		-47.1
10/6/03 3:00	20.5	21.3	-14.7	-32.5	-24.1	9.6	10.0		-51.7
10/6/03 4:00	21.3	22.1	-14.3	-31.3	-23.3	8.0	8.7		-52.2
10/6/03 5:00	23.2	24.3	-13.1	-28.8	-21.0	3.9	4.2		-54.8
10/6/03 6:00	20.3	20.8	-13.4	-28.1	-20.1	-22.0	-21.3		-105.0
10/6/03 7:00	16.6	17.3	-8.9	-20.1	-13.0	-15.8	-15.1		-73.0
10/6/03 8:00	16.9	17.7	-7.0	-16.9	-10.4	-16.6	-16.5		-67.4
10/6/03 9:00	17.8	18.8	-6.5	-15.9	-9.3	-30.9	0.1		-62.5
10/6/03 10:00	19.0	19.5	-2.5	-9.4	-4.4	-30.4	0.1		-46.5
10/6/03 11:00	18.4	19.1	-4.6	-12.8	-6.6	-28.3	0.1		-52.2
10/6/03 12:00	Bad	Bad	Bad	Bad	Bad	Bad	Bad		0.0
10/6/03 13:00	21.8	22.8	-6.4	-17.7	-10.8	-36.7	0.1		-71.4
10/6/03 14:00	20.4	21.1	-6.9	-16.8	-10.7	-64.3	0.1		-98.6
10/6/03 15:00	19.0	19.9	-1.9	-7.2	-2.9	-58.8	0.1		-70.6
10/6/03 16:00	16.5	17.1	-2.5	-8.1	-3.7	-33.7	-33.1		-81.0
10/6/03 17:00	12.8	12.9	-7.5	-19.6	-13.1	-29.6	-28.7		-98.5
10/6/03 18:00	11.1	11.1	-6.9	-17.6	-11.2	-26.9	-26.4		-89.0
10/6/03 19:00	12.6	12.5	-6.2	-16.5	-9.5	-26.7	-27.1		-86.0
10/6/03 20:00	11.4	12.1	-6.2	-15.3	-9.4	-25.7	-24.8		-81.4
10/6/03 21:00	17.0	17.6	-8.0	-18.3	-12.0	15.7	15.8		-6.9
10/6/03 22:00	14.2	13.7	-10.9	-25.2	-16.9	20.4	21.0		-11.7
10/6/03 23:00	17.1	17.2	-16.7	-36.8	-26.6	14.7	15.5		-49.9
10/7/03 0:00	20.3	21.0	-15.5	-32.2	-22.6	8.7	9.5		-52.1
10/7/03 1:00	23.8	25.0	-11.5	-26.1	-18.4	4.0	4.4		-47.5
10/7/03 2:00	22.4	23.8	-11.0	-23.8	-17.1	7.0	7.4		-37.5
10/7/03 3:00	21.7	22.8	-10.7	-24.8	-17.6	7.6	7.7		-37.9
10/7/03 4:00	20.9	22.1	-10.7	-24.6	-17.0	8.3	9.0		-35.0
10/7/03 5:00	24.4	25.2	-9.4	-21.6	-14.6	4.3	5.0		-36.3
10/7/03 6:00	23.0	24.1	-3.9	-10.6	-5.6	-64.8	1.2		-83.7

10/7/03 7:00	18.2	18.5	-8.9	-19.3	-12.9	-69.0	1.0		-109.2
10/7/03 8:00	17.4	17.9	-8.8	-22.3	-15.1	-30.0	0.8		-75.4
10/7/03 9:00	19.9	20.8	-7.8	-19.7	-13.9	-35.7	0.5		-76.5
10/7/03 10:00	21.4	22.1	-8.3	-18.0	-12.7	-36.9	0.3		-75.6
10/7/03 11:00	23.3	24.2	-5.8	-15.0	-9.8	-45.0	0.3		-75.4
10/7/03 12:00	21.8	22.0	-9.4	-22.4	-15.9	-48.4	0.3		-95.8
10/7/03 13:00	I/O Time	I/O Time	I/O Time	I/O Time	I/O Time	I/O Time	I/O Timeout		0.0
10/7/03 14:00	22.0	22.9	-12.2	-25.8	-18.2	-44.8	0.1		-100.9
10/7/03 15:00	20.4	21.0	-11.9	-25.3	-17.3	-48.0	-0.1		-102.6
10/7/03 16:00	18.3	18.2	-10.5	-23.3	-16.4	-19.8	-19.8		-89.7
10/7/03 17:00	13.6	14.3	-12.6	-25.6	-18.0	-21.6	-21.1		-98.8
10/7/03 18:00	11.5	11.6	-14.8	-29.9	-21.3	-23.5	-22.9		-112.4
10/7/03 19:00	15.5	15.7	-11.1	-25.3	-17.0	-15.7	-14.8		-84.0
10/7/03 20:00	14.1	14.5	-12.3	-26.1	-18.6	-15.5	-14.6		-87.0
10/7/03 21:00	15.8	16.1	-11.7	-24.8	-17.7	-16.5	-16.1		-86.9
10/7/03 22:00	14.6	15.3	-13.8	-25.9	-19.0	-3.0	-2.3		-64.0
10/7/03 23:00	15.6	16.2	-15.7	-31.3	-22.8	-4.8	-4.4		-79.0
10/8/03 0:00	18.2	18.3	-11.4	-24.3	-16.1	-6.9	-7.0		-65.6
10/8/03 1:00	19.6	19.9	-10.0	-21.2	-13.5	-8.3	-8.1		-61.0
10/8/03 2:00	19.7	19.9	-9.9	-21.5	-14.5	-9.6	-8.7		-64.2
10/8/03 3:00	19.5	19.9	-8.3	-18.8	-12.9	-10.5	-9.4		-59.8
10/8/03 4:00	19.2	20.1	-8.8	-19.4	-13.6	-10.3	-10.1		-62.2
10/8/03 5:00	23.5	24.6	-5.5	-14.7	-9.5	-13.5	-12.5		-55.7
10/8/03 6:00	27.6	29.2	0.5	-5.4	-0.5	-17.6	0.1		-23.0
10/8/03 7:00	20.3	20.7	-6.9	-17.4	-11.2	-44.4	0.1		-79.8
10/8/03 8:00	19.2	19.5	-2.5	-10.6	-5.2	-53.8	0.1		-71.9
10/8/03 9:00	21.8	23.5	4.5	2.7	5.8	-45.3	0.1		-32.3
10/8/03 10:00	24.8	25.7	-3.3	-10.3	-6.4	-40.1	0.1		-60.0
10/8/03 11:00	24.0	25.2	-2.5	-8.9	-5.0	-61.7	0.1		-77.9
10/8/03 12:00	23.4	24.9	-9.2	-21.2	-14.7	-58.9	0.1		-103.8
10/8/03 13:00	24.4	25.9	-7.1	-17.5	-11.2	-55.1	0.1		-90.7
10/8/03 14:00	26.2	27.3	-7.2	-18.1	-12.9	-50.5	0.1		-88.5
10/8/03 15:00	26.9	28.2	-6.7	-15.7	-10.0	-48.6	0.1		-80.9
10/8/03 16:00	24.7	25.2	-8.5	-18.5	-12.9	-28.9	-27.8		-96.6
10/8/03 17:00	18.4	17.9	-12.5	-27.1	-20.0	-31.3	-30.9		-121.8
10/8/03 18:00	13.2	13.3	-8.4	-20.2	-13.6	-24.3	-23.8		-90.2
10/8/03 19:00	19.3	19.7	-7.8	-18.6	-12.6	-19.6	-19.6		-78.2
10/8/03 20:00	17.4	17.1	-8.0	-20.8	-14.0	-14.2	-13.5		-70.6
10/8/03 21:00	15.4	15.6	-4.6	-13.8	-7.6	-15.0	-13.8		-54.8
10/8/03 22:00	16.5	16.6	-8.7	-20.3	-13.7	-8.2	-7.3		-58.2
10/8/03 23:00	18.3	19.4	-9.4	-22.0	-14.4	-3.4	-3.1		-52.3
10/9/03 0:00	19.1	19.8	-11.4	-26.3	-17.6	-7.8	-7.6		-70.7
10/9/03 1:00	20.2	21.1	-7.2	-17.4	-11.2	-8.4	-7.8		-52.0
10/9/03 2:00	21.7	22.4	-6.7	-15.5	-10.2	-9.2	-8.5		-50.2
10/9/03 3:00	20.4	21.1	-8.3	-20.8	-13.8	-9.8	-9.1		-61.8
10/9/03 4:00	19.0	20.0	-10.5	-23.1	-16.7	-10.1	-9.8		-70.3
10/9/03 5:00	22.3	23.1	-11.6	-25.9	-18.5	-10.7	-10.3		-77.0
10/9/03 6:00	22.4	23.4	-8.5	-22.8	-14.0	-14.5	0.1		-59.6
10/9/03 7:00	13.1	14.3	-16.5	-35.4	-25.1	-20.0	0.1		-96.8
10/9/03 8:00	15.8	16.4	-12.2	-30.2	-20.4	-29.6	0.1		-92.2
10/9/03 9:00	19.4	19.2	-9.0	-22.0	-14.7	-23.5	0.1		-69.1
10/9/03 10:00	21.0	21.4	-7.5	-18.5	-12.1	-39.1	0.1		-77.1

10/9/03 11:00	17.7	17.8	-13.4	-28.5	-21.0	-70.6	0.1	-133.3
10/9/03 12:00	16.2	15.9	-14.3	-30.5	-22.2	-70.5	0.1	-137.4
10/9/03 13:00	16.1	16.2	-14.1	-29.4	-22.6	-71.4	0.1	-137.4
10/9/03 14:00	13.2	13.5	-14.5	-31.1	-22.4	-74.5	0.1	-142.5
10/9/03 15:00	12.7	13.2	-11.5	-25.7	-18.9	-72.5	0.1	-128.5
10/9/03 16:00	12.0	12.2	-9.1	-20.7	-14.3	-41.9	-41.9	-127.8
10/9/03 17:00	12.8	12.9	-8.0	-18.3	-12.4	-38.4	-38.4	-115.5
10/9/03 18:00	8.9	9.7	-12.1	-28.9	-20.8	-34.3	-33.8	-129.9
10/9/03 19:00	13.1	13.9	-6.0	-15.5	-9.1	-37.3	-36.5	-104.4
10/9/03 20:00	12.7	13.0	-6.6	-17.1	-10.7	-36.2	-35.7	-106.3
10/9/03 21:00	14.9	14.8	-6.9	-17.0	-11.2	-13.9	-12.9	-61.9
10/9/03 22:00	14.1	14.7	-10.0	-21.4	-14.9	-11.7	-11.5	-69.4
10/9/03 23:00	20.8	21.6	-6.9	-16.9	-10.3	-20.0	-19.8	-73.9
10/10/03 0:00	22.1	22.3	-5.4	-15.0	-8.5	-19.6	-19.4	-68.0
10/10/03 1:00	22.5	23.5	-6.6	-14.2	-9.6	-22.3	-22.4	-75.0
10/10/03 2:00	20.9	21.4	-6.7	-15.3	-10.0	-19.1	-18.7	-69.8
10/10/03 3:00	19.8	21.0	-6.7	-16.0	-11.0	-18.6	-18.1	-70.4
10/10/03 4:00	21.0	22.1	-6.1	-15.2	-10.0	-18.6	-18.9	-68.8
10/10/03 5:00	22.0	22.4	-8.5	-21.7	-15.0	-21.2	-20.8	-87.3
10/10/03 6:00	21.1	22.0	-4.7	-13.0	-7.4	-45.3	-45.1	-115.6
10/10/03 7:00	20.0	21.0	-6.3	-14.6	-9.2	-44.0	-45.0	-119.0
10/10/03 8:00	15.6	16.7	-11.4	-26.4	-17.0	-69.4	-0.3	-124.4
10/10/03 9:00	18.3	18.8	-8.2	-19.1	-12.9	-72.0	0.4	-111.8
10/10/03 10:00	21.5	22.6	-2.6	-8.8	-3.8	-77.5	0.4	-92.4
10/10/03 11:00	20.2	20.8	-7.7	-17.1	-11.9	-73.0	0.4	-109.4
10/10/03 12:00	20.0	20.5	-7.5	-17.8	-11.8	-73.6	0.4	-110.3
10/10/03 13:00	20.9	21.3	-7.6	-18.1	-12.9	-73.7	0.4	-111.9
10/10/03 14:00	21.7	22.0	-7.6	-17.2	-12.0	-76.5	0.4	-113.0
10/10/03 15:00	15.1	15.7	-5.2	-12.7	-8.5	-136.5	0.4	-162.5
10/10/03 16:00	13.5	14.0	-2.3	-6.2	-3.3	-132.5	0.4	-144.0
10/10/03 17:00	11.6	12.5	-6.9	-16.7	-11.3	-148.6	0.3	-183.3
10/10/03 18:00	19.5	20.1	-1.5	-6.3	-2.7	-22.5	0.1	-32.9
10/10/03 19:00	20.4	21.2	-8.2	-18.8	-13.5	-31.7	0.0	-72.2
10/10/03 20:00	17.3	17.9	-9.3	-21.3	-15.3	-30.2	-0.1	-76.2
10/10/03 21:00	17.2	17.0	-7.6	-17.3	-12.4	-19.5	-19.4	-76.2
10/10/03 22:00	16.7	17.2	-13.6	-27.2	-20.0	-14.1	-14.0	-88.9
10/10/03 23:00	19.9	20.3	-12.7	-27.9	-20.0	-11.7	-10.9	-83.2
10/11/03 0:00	22.5	22.1	-9.7	-22.9	-15.4	-10.6	-10.5	-69.1
10/11/03 1:00	19.5	18.2	-8.2	-18.9	-11.9	-12.7	-12.3	-64.1
10/11/03 2:00	19.5	17.9	-8.9	-20.4	-13.1	-14.6	-14.0	-71.1
10/11/03 3:00	19.4	17.7	-8.1	-18.3	-12.4	-14.6	-14.3	-67.7
10/11/03 4:00	18.4	16.7	-9.6	-21.6	-14.9	-16.3	-15.3	-77.7
10/11/03 5:00	18.6	19.2	-9.5	-21.1	-14.3	-16.3	-16.4	-77.6
10/11/03 6:00	20.5	21.3	-11.8	-24.8	-17.4	-17.7	-17.6	-89.4
10/11/03 7:00	16.6	17.3	-11.6	-24.3	-16.9	-20.8	-19.8	-93.4
10/11/03 8:00	10.8	11.4	-18.1	-38.3	-28.0	-28.2	-27.4	-139.9
10/11/03 9:00	12.5	13.2	-12.6	-28.7	-19.3	-24.3	-23.5	-108.4
10/11/03 10:00	16.8	17.0	-9.8	-23.6	-14.6	-19.8	-19.3	-87.2
10/11/03 11:00	16.9	18.0	-13.0	-30.2	-20.1	-18.4	-18.2	-99.9
10/11/03 12:00	18.2	18.3	-11.0	-24.8	-15.9	-15.2	-14.3	-81.2
10/11/03 13:00	18.5	18.7	-11.5	-25.6	-17.0	-13.2	-12.9	-80.2
10/11/03 14:00	16.0	16.1	-9.6	-22.5	-14.9	-21.9	-21.0	-89.9

10/11/03 15:00	15.3	16.3	-11.9	-26.4	-18.0	-22.7	-21.5		-100.5
10/11/03 16:00	15.0	15.0	-13.0	-28.2	-18.6	-22.5	-22.0		-104.4
10/11/03 17:00	16.7	17.0	-5.1	-15.8	-9.1	-15.5	-14.2		-59.8
10/11/03 18:00	16.4	17.0	2.8	-0.3	3.9	-19.3	-19.0		-32.0
10/11/03 19:00	19.6	20.2	-0.5	-5.8	0.0	-17.1	-16.2		-39.6
10/11/03 20:00	17.8	18.1	-3.9	-13.1	-6.7	-18.0	-17.0		-58.8
10/11/03 21:00	17.7	17.7	-3.0	-9.7	-4.2	-20.7	-18.7		-56.4
10/11/03 22:00	17.4	16.7	-7.1	-17.9	-11.0	-16.9	-16.1		-68.9
10/11/03 23:00	19.0	17.9	-5.1	-15.0	-8.4	-16.8	-16.0		-61.4
10/12/03 0:00	19.8	18.7	-8.4	-19.2	-12.0	-10.5	-10.9		-61.0
10/12/03 1:00	19.6	18.7	-9.0	-19.1	-12.4	-13.4	-13.1		-67.1
10/12/03 2:00	19.6	18.8	-7.9	-16.7	-12.2	-14.6	-14.2		-65.7
10/12/03 3:00	17.3	17.8	-12.0	-25.0	-18.9	-16.9	-16.9		-89.7
10/12/03 4:00	16.1	16.7	-12.8	-26.8	-19.8	-17.2	-16.9		-93.4
10/12/03 5:00	15.7	16.5	-13.6	-29.1	-20.5	-18.0	-17.9		-99.1
10/12/03 6:00	17.5	17.4	-11.6	-25.8	-18.3	-18.5	-18.3		-92.3
10/12/03 7:00	13.4	13.8	-10.2	-22.0	-16.2	-24.1	-24.3		-96.8
10/12/03 8:00	7.3	7.4	-14.3	-31.3	-22.1	-33.6	-33.0		-134.3
10/12/03 9:00	8.9	9.6	-14.0	-31.6	-22.4	-36.9	-36.2		-141.1
10/12/03 10:00	10.7	11.2	-16.9	-38.5	-26.6	-38.9	-37.8		-158.6
10/12/03 11:00	15.0	14.8	-9.6	-25.1	-14.9	-31.7	-30.6		-111.9
10/12/03 12:00	14.2	15.0	-16.7	-36.6	-25.7	-37.6	-37.5		-154.1
10/12/03 13:00	17.6	18.3	-14.9	-30.7	-21.8	-34.3	-33.6		-135.3
10/12/03 14:00	18.0	18.2	-14.8	-33.1	-22.3	-31.3	-30.3		-131.8
10/12/03 15:00	19.4	19.5	-11.5	-25.7	-17.6	-29.4	-29.3		-113.3
10/12/03 16:00	19.9	20.8	-9.1	-21.4	-14.3	-29.0	-28.1		-101.9
10/12/03 17:00	17.0	17.9	-8.7	-21.3	-13.5	-28.6	-28.3		-100.3
10/12/03 18:00	18.6	19.4	-7.7	-19.2	-11.4	-26.0	-25.9		-90.3
10/12/03 19:00	24.2	24.9	-6.0	-16.3	-9.3	-20.9	-20.3		-72.9
10/12/03 20:00	20.4	21.3	-7.6	-17.3	-11.0	-21.9	-21.2		-78.9
10/12/03 21:00	17.0	18.1	-10.3	-24.4	-15.9	-27.2	-26.2		-103.9
10/12/03 22:00	18.0	18.2	-9.5	-21.7	-15.1	-24.2	-23.5		-94.0
10/12/03 23:00	19.2	20.2	-10.4	-23.7	-15.1	-16.5	-15.5		-81.1
10/13/03 0:00	17.6	18.7	-11.4	-24.9	-16.9	-13.9	-13.9		-81.0
10/13/03 1:00	17.9	18.7	-13.6	-28.8	-21.1	-16.2	-15.9		-95.6
10/13/03 2:00	18.0	19.0	-12.9	-28.9	-20.5	-17.0	-16.7		-96.0
10/13/03 3:00	15.8	16.6	-13.0	-28.5	-20.9	-17.8	-17.5		-97.7
10/13/03 4:00	17.4	17.7	-12.4	-27.0	-20.1	-17.5	-17.3		-94.3
10/13/03 5:00	19.7	20.8	-14.5	-31.7	-23.5	-17.5	-17.6		-104.7
10/13/03 6:00	25.2	26.5	-13.4	-29.9	-20.8	-25.1	0.1		-89.1
10/13/03 7:00	24.0	25.2	-12.4	-27.4	-19.8	-36.1	0.1		-95.6
10/13/03 8:00	17.6	18.1	-8.1	-19.4	-12.0	-34.4	0.1		-73.8
10/13/03 9:00	20.5	21.2	-3.9	-13.7	-6.8	-22.5	0.1		-46.7
10/13/03 10:00	25.8	27.2	-1.3	-7.8	-3.2	-12.3	0.1		-24.4
10/13/03 11:00	25.9	27.7	-4.5	-13.3	-7.1	-7.3	0.1		-32.1
10/13/03 12:00	26.6	27.9	-5.2	-13.7	-7.5	-8.3	0.1		-34.6
10/13/03 13:00	26.0	27.1	-5.4	-15.9	-8.3	-14.9	0.1		-44.4
10/13/03 14:00	26.4	26.9	-3.5	-11.7	-5.5	-11.6	0.1		-32.1
10/13/03 15:00	24.5	25.5	-6.4	-15.0	-8.8	-8.3	-7.3		-45.8
10/13/03 16:00	25.1	26.1	-1.5	-7.1	-3.2	-7.9	-7.3		-27.1
10/13/03 17:00	20.0	20.4	-1.7	-6.6	-2.6	-9.1	-7.8		-27.8
10/13/03 18:00	14.8	15.2	-3.0	-7.9	-4.2	-12.2	-11.8		-39.0

10/13/03 19:00	18.9	18.8	-4.0	-13.6	-7.1	-9.6	-9.3		-43.6
10/13/03 20:00	20.0	20.8	1.0	-2.2	0.5	-9.6	-10.0		-20.4
10/13/03 21:00	16.5	17.1	-3.8	-10.7	-5.9	-15.0	-15.2		-50.6
10/13/03 22:00	18.6	19.3	-6.8	-16.2	-10.2	-8.6	-8.8		-50.6
10/13/03 23:00	21.0	22.0	-6.7	-17.2	-10.2	-8.1	-8.2		-50.4
10/14/03 0:00	22.0	22.7	-9.3	-20.3	-14.1	-11.8	-11.3		-66.7
10/14/03 1:00	21.2	21.7	-11.5	-25.3	-18.0	-14.6	-14.7		-84.1
10/14/03 2:00	21.8	22.4	-8.5	-19.7	-13.3	-15.9	-15.3		-72.6
10/14/03 3:00	19.8	20.6	-9.9	-22.8	-15.5	-17.0	-16.9		-82.1
10/14/03 4:00	21.0	22.0	-8.8	-19.7	-14.0	-16.3	-16.1		-74.8
10/14/03 5:00	23.4	24.8	-7.4	-17.5	-12.1	-16.1	-14.6		-67.7
10/14/03 6:00	28.6	29.9	-8.7	-18.5	-12.1	-24.8	0.1		-63.9
10/14/03 7:00	26.5	28.0	-10.2	-21.3	-15.1	-43.3	0.1		-89.8
10/14/03 8:00	20.4	21.3	-15.7	-32.9	-24.1	-58.9	0.1		-131.5
10/14/03 9:00	18.5	20.1	-10.6	-24.5	-16.9	-54.0	0.1		-105.9
10/14/03 10:00	19.1	20.3	-6.8	-17.5	-11.1	-46.3	0.1		-81.6
10/14/03 11:00	21.4	22.4	-4.7	-13.4	-7.9	-44.8	0.0		-70.7
10/14/03 12:00	22.7	24.4	-6.2	-16.0	-9.3	-39.1	0.0		-70.6
10/14/03 13:00	23.4	24.8	-6.2	-16.2	-9.3	-37.8	0.0		-69.6
10/14/03 14:00	22.0	23.6	-6.0	-15.8	-8.9	-38.3	0.0		-69.0
10/14/03 15:00	21.1	22.2	-5.2	-14.5	-7.5	-22.3	-21.4		-70.9
10/14/03 16:00	20.0	21.5	-3.8	-11.6	-5.6	-18.3	-17.3		-56.6
10/14/03 17:00	16.2	16.5	-5.4	-14.3	-7.3	-19.8	-19.5		-66.3
10/14/03 18:00	12.0	13.1	-5.8	-15.9	-9.0	-22.0	-20.5		-73.1
10/14/03 19:00	17.7	18.2	-4.4	-13.5	-6.5	-13.7	-12.5		-50.6
10/14/03 20:00	15.2	16.3	-3.4	-12.3	-5.2	-13.2	-12.5		-46.5
10/14/03 21:00	16.4	17.6	-1.6	-8.1	-2.2	-14.0	-12.4		-38.2
10/14/03 22:00	15.4	16.2	-4.0	-11.6	-6.1	-12.5	-12.0		-46.1
10/14/03 23:00	16.3	17.0	-10.7	-24.2	-15.6	-16.2	-15.7		-82.5
10/15/03 0:00	21.9	24.1	-4.3	-12.4	-7.0	-11.3	-10.9		-45.9
10/15/03 1:00	21.8	23.9	-7.6	-18.9	-13.2	-15.3	-14.9		-69.9
10/15/03 2:00	23.8	26.0	-5.5	-13.1	-9.5	-14.6	-14.3		-57.0
10/15/03 3:00	21.9	24.1	-6.0	-15.2	-11.1	-15.0	-15.2		-62.5
10/15/03 4:00	20.9	23.6	-6.4	-16.9	-11.5	-15.9	-15.3		-66.0
10/15/03 5:00	26.0	29.3	-7.1	-15.3	-10.8	2.0	2.5		-28.7
10/15/03 6:00	28.0	30.9	-7.8	-19.1	-12.3	-12.7	0.4		-51.5
10/15/03 7:00	22.9	25.1	0.4	-4.0	-0.3	-58.1	0.4		-61.6
10/15/03 8:00	17.7	19.8	-3.1	-12.1	-6.4	-68.5	0.4		-89.7
10/15/03 9:00	20.8	23.6	-1.6	-9.7	-3.8	-64.3	0.4		-79.0
10/15/03 10:00	20.0	22.5	-0.4	-4.3	0.6	-55.8	0.4		-59.5
10/15/03 11:00	19.4	22.2	3.3	-0.2	5.0	-50.8	0.4		-42.3
10/15/03 12:00	20.5	23.4	1.6	-3.3	1.2	-49.1	0.4		-49.2
10/15/03 13:00	22.0	25.8	1.8	-3.3	1.4	-46.5	0.4		-46.2
10/15/03 14:00	22.6	25.4	1.2	-4.1	1.1	-43.4	0.4		-44.8
10/15/03 15:00	19.9	22.0	-0.3	-5.6	-0.9	-26.2	-25.5		-58.5
10/15/03 16:00	17.8	20.4	1.6	-1.5	2.9	-20.1	-19.6		-36.7
10/15/03 17:00	16.0	17.9	-0.2	-4.8	-0.2	-18.0	-17.8		-41.1
10/15/03 18:00	12.1	14.1	-9.2	-24.7	-16.0	-21.2	-20.3		-91.3
10/15/03 19:00	16.8	18.7	-4.9	-14.3	-8.1	-10.8	-10.8		-48.9
10/15/03 20:00	15.8	18.5	-5.2	-14.8	-7.6	-8.0	-7.5		-43.0
10/15/03 21:00	16.5	18.2	-4.2	-13.9	-7.3	-10.7	-9.6		-45.7
10/15/03 22:00	12.9	15.2	-8.7	-22.0	-14.5	-8.7	-7.8		-61.7

10/15/03 23:00	17.1	19.4	-10.6	-23.6	-16.5	-9.8	-9.8		-70.3
10/16/03 0:00	19.1	21.2	-9.2	-21.4	-14.1	-13.3	-12.4		-70.5
10/16/03 1:00	21.6	24.0	-8.5	-19.3	-13.2	-14.6	-14.7		-70.4
10/16/03 2:00	19.1	21.3	-9.6	-22.0	-15.0	-17.4	-16.4		-80.4
10/16/03 3:00	17.4	19.6	-11.0	-24.7	-17.6	-18.0	-17.7		-89.0
10/16/03 4:00	19.5	20.8	-11.4	-24.6	-18.3	-18.6	-17.6		-90.6
10/16/03 5:00	23.7	25.0	-10.4	-23.3	-16.7	-17.9	-17.6		-86.0
10/16/03 6:00	24.6	25.9	-11.7	-28.0	-19.7	-21.5	-20.9		-101.8
10/16/03 7:00	22.3	24.2	-9.1	-20.6	-13.3	-25.4	-24.7		-93.2
10/16/03 8:00	16.0	16.2	-9.7	-21.1	-15.3	-32.8	-32.3		-111.2
10/16/03 9:00	17.2	18.3	-7.3	-19.0	-13.0	-29.7	-29.3		-98.3
10/16/03 10:00	20.5	20.7	-2.9	-8.8	-4.0	-26.5	-26.1		-68.2
10/16/03 11:00	20.8	21.8	-6.0	-16.1	-9.2	-22.7	-22.3		-76.3
10/16/03 12:00	18.9	20.1	-9.1	-21.6	-13.8	-20.5	-19.9		-84.9
10/16/03 13:00	23.0	23.8	-9.6	-23.6	-15.1	-18.7	-18.3		-85.2
10/16/03 14:00	21.8	23.0	-5.3	-15.0	-8.3	-20.4	-19.9		-68.9
10/16/03 15:00	24.2	25.2	-4.7	-13.6	-7.4	-19.0	-18.4		-63.0
10/16/03 16:00	21.0	21.6	-5.0	-13.9	-7.7	-18.3	-17.5		-62.5
10/16/03 17:00	15.8	15.6	-8.7	-20.7	-13.5	-21.6	-21.0		-85.5
10/16/03 18:00	17.1	17.8	-7.2	-16.9	-11.0	-24.9	-24.1		-84.2
10/16/03 19:00	19.1	19.9	-6.1	-15.8	-9.2	-18.2	-17.1		-66.2
10/16/03 20:00	17.4	17.3	-3.4	-10.3	-5.5	-17.8	-16.9		-53.9
10/16/03 21:00	14.4	15.2	-6.5	-15.5	-9.1	-20.9	-20.2		-72.3
10/16/03 22:00	17.4	18.0	-9.1	-19.6	-12.2	-9.0	-8.8		-58.7
10/16/03 23:00	15.2	15.6	-12.9	-30.6	-19.2	-13.0	-12.8		-88.5
10/17/03 0:00	17.6	18.4	-9.9	-22.6	-14.6	-11.8	-11.7		-70.7
10/17/03 1:00	20.0	20.3	-8.3	-19.3	-12.9	-14.9	-14.5		-70.0
10/17/03 2:00	20.5	21.1	-9.7	-19.4	-14.6	-16.3	-15.7		-75.7
10/17/03 3:00	19.5	20.2	-11.2	-22.4	-16.8	-17.1	-17.1		-84.7
10/17/03 4:00	22.2	23.1	-15.2	-30.2	-23.5	6.7	6.6		-55.5
10/17/03 5:00	24.2	24.9	-10.7	-24.6	-17.8	4.7	4.7		-43.7
10/17/03 6:00	25.6	27.0	-10.3	-23.9	-16.7	0.7	1.0		-49.3
10/17/03 7:00	22.0	22.8	-5.5	-11.9	-8.3	-22.1	-21.6		-69.4
10/17/03 8:00	16.8	17.3	-7.4	-17.4	-10.0	-16.9	-15.7		-67.4
10/17/03 9:00	19.1	19.3	-4.5	-12.1	-6.8	-18.7	-18.3		-60.4
10/17/03 10:00	22.6	23.0	-0.7	-5.0	-0.3	-20.5	-20.3		-46.8
10/17/03 11:00	23.8	24.9	-0.2	-4.1	0.2	-23.1	-22.7		-49.9
10/17/03 12:00	25.5	26.9	5.0	5.1	7.4	-25.5	-24.9		-32.9
10/17/03 13:00	23.5	24.7	-6.2	-15.0	-7.6	-22.7	-22.1		-73.7
10/17/03 14:00	23.3	24.0	-3.5	-10.5	-4.1	-20.3	-19.5		-57.8
10/17/03 15:00	22.6	24.1	-7.2	-19.4	-11.4	-22.0	-21.0		-81.1
10/17/03 16:00	21.8	22.8	-8.1	-21.2	-12.9	-19.9	-19.3		-81.4
10/17/03 17:00	19.7	20.2	-4.6	-13.6	-6.6	-17.4	-16.0		-58.2
10/17/03 18:00	16.8	17.5	-9.8	-21.7	-15.4	-12.0	-11.0		-69.8
10/17/03 19:00	18.7	19.3	-6.8	-16.2	-9.8	-13.0	-12.3		-58.0
10/17/03 20:00	16.5	16.7	-7.8	-18.4	-11.5	-10.6	-10.0		-58.3
10/17/03 21:00	17.7	18.0	-6.4	-15.7	-10.1	-11.0	-10.3		-53.5
10/17/03 22:00	19.4	20.0	-8.3	-18.9	-12.1	13.0	13.6		-12.5
10/17/03 23:00	18.7	20.2	-12.2	-27.9	-20.3	11.0	11.8		-37.8
10/18/03 0:00	23.4	24.3	-9.1	-20.8	-14.4	6.1	6.1		-32.2
10/18/03 1:00	22.2	23.4	-12.8	-27.2	-20.2	6.7	6.7		-46.9
10/18/03 2:00	22.0	22.6	-15.1	-31.0	-24.1	7.3	7.4		-55.5

10/18/03 3:00	22.4	23.5	-15.5	-32.1	-24.9	5.5	5.7	-61.4
10/18/03 4:00	21.3	22.0	-16.4	-33.7	-26.6	7.4	8.1	-61.2
10/18/03 5:00	23.0	23.6	-17.7	-35.9	-28.3	3.8	4.2	-73.9
10/18/03 6:00	23.7	24.6	-12.0	-33.0	-26.0	2.3	2.5	-66.2
10/18/03 7:00	20.5	20.6	-16.9	-33.1	-26.4	-12.2	-11.2	-99.8
10/18/03 8:00	20.7	21.1	-13.5	-27.6	-21.6	-11.8	-11.8	-86.2
10/18/03 9:00	22.1	22.7	-11.2	-23.5	-19.3	-14.0	-13.4	-81.4
10/18/03 10:00	26.7	27.5	-7.1	-16.5	-12.3	9.0	11.0	-15.9
10/18/03 11:00	26.5	27.6	-6.3	-12.9	-9.9	10.3	10.4	-8.5
10/18/03 12:00	27.5	28.2	-5.5	-12.7	-9.5	9.8	10.8	-7.0
10/18/03 13:00	28.3	29.4	-7.9	-17.9	-13.6	8.3	9.4	-21.6
10/18/03 14:00	28.9	29.7	-6.0	-13.9	-10.3	10.8	11.6	-7.8
10/18/03 15:00	32.6	32.9	-3.1	-8.5	-6.4	8.2	8.0	-1.8
10/18/03 16:00	31.1	30.5	-3.5	-9.8	-7.2	11.7	12.3	3.4
10/18/03 17:00	25.4	25.0	-1.3	-5.5	-4.3	-10.0	-8.8	-29.9
10/18/03 18:00	23.0	22.5	-3.7	-11.1	-8.0	-8.3	-7.8	-38.9
10/18/03 19:00	27.6	27.6	1.3	-1.7	-0.5	-13.8	-13.0	-27.7
10/18/03 20:00	27.2	27.2	-1.0	-4.4	-2.9	-12.8	-12.0	-33.0
10/18/03 21:00	22.9	23.3	0.4	-2.2	-0.5	-7.4	-7.2	-16.9
10/18/03 22:00	23.1	23.1	-3.6	-10.0	-6.4	9.1	9.9	-1.1
10/18/03 23:00	22.1	22.6	-7.3	-18.0	-12.0	10.0	10.1	-17.1
10/19/03 0:00	23.8	23.7	-8.1	-18.3	-13.0	7.8	8.1	-23.5
10/19/03 1:00	23.5	23.3	-12.4	-27.3	-20.8	5.8	5.7	-49.1
10/19/03 2:00	22.5	22.2	-14.2	-29.4	-23.1	6.2	7.2	-53.4
10/19/03 3:00	22.0	21.7	-15.4	-32.9	-25.4	6.7	6.4	-60.7
10/19/03 4:00	21.0	21.1	-16.1	-33.5	-26.1	7.0	7.7	-61.0
10/19/03 5:00	22.1	21.7	-13.7	-26.7	-21.0	6.7	7.2	-47.4
10/19/03 6:00	22.1	22.1	-12.9	-28.1	-21.1	5.5	5.9	-50.7
10/19/03 7:00	21.7	22.1	-11.1	-23.0	-18.4	-11.6	-12.1	-76.2
10/19/03 8:00	19.8	19.9	-9.0	-20.5	-15.6	-8.8	-8.5	-62.4
10/19/03 9:00	21.7	21.9	-5.3	-10.7	-7.7	-11.7	-11.6	-47.0
10/19/03 10:00	21.1	20.9	-7.2	-17.0	-11.5	-9.8	-9.7	-55.3
10/19/03 11:00	22.3	21.6	-2.6	-7.1	-3.7	-12.7	-12.3	-38.3
10/19/03 12:00	24.3	24.2	-1.9	-4.7	-1.6	-14.7	-13.9	-36.9
10/19/03 13:00	23.8	23.3	-0.5	-4.4	-0.9	-12.7	-11.9	-30.3
10/19/03 14:00	25.0	23.9	-0.9	-4.5	-0.7	-11.9	-10.9	-28.9
10/19/03 15:00	27.4	26.6	-0.5	-4.0	-0.8	-14.9	-13.8	-33.8
10/19/03 16:00	27.7	26.8	1.1	-0.7	2.5	-13.0	-12.4	-22.6
10/19/03 17:00	27.5	25.4	2.7	1.0	3.0	-10.1	-9.7	-13.1
10/19/03 18:00	24.9	23.3	0.9	-3.0	0.0	-6.4	-6.8	-15.4
10/19/03 19:00	26.0	26.7	-4.0	-11.5	-5.7	-12.9	-12.5	-46.5
10/19/03 20:00	23.1	24.2	-2.7	-8.1	-3.7	-8.9	-8.3	-31.7
10/19/03 21:00	22.4	23.4	-2.2	-5.5	-3.2	-8.3	-8.1	-27.3
10/19/03 22:00	23.2	24.4	-8.4	-18.8	-13.6	5.7	6.7	-28.4
10/19/03 23:00	21.7	23.1	-11.3	-24.2	-17.7	8.7	9.8	-34.6
10/20/03 0:00	22.3	23.9	-10.8	-23.0	-16.6	7.3	7.9	-35.1
10/20/03 1:00	20.5	21.7	-14.0	-30.4	-23.3	9.6	10.1	-48.1
10/20/03 2:00	21.9	22.8	-15.0	-31.4	-24.5	6.6	6.5	-57.8
10/20/03 3:00	22.3	24.0	-16.3	-32.5	-25.6	5.4	5.1	-63.8
10/20/03 4:00	21.5	23.0	-16.0	-32.0	-25.3	6.2	6.2	-60.8
10/20/03 5:00	23.8	25.5	-14.4	-30.6	-23.7	2.7	3.4	-62.6
10/20/03 6:00	26.3	27.8	-12.5	-27.0	-21.0	-0.2	0.2	-60.5

10/20/03 7:00	19.9	21.8	-8.8	-18.3	-14.2	-17.5	-17.4		-76.3
10/20/03 8:00	19.7	20.8	-9.7	-21.6	-15.8	-19.8	-19.3		-86.1
10/20/03 9:00	20.3	21.5	-6.0	-14.8	-9.5	-18.5	-18.6		-67.4
10/20/03 10:00	24.3	25.6	-2.1	-6.9	-3.4	-23.0	-23.1		-58.5
10/20/03 11:00	25.3	27.1	-2.9	-8.6	-4.9	-24.4	-23.7		-64.6
10/20/03 12:00	22.9	24.7	-5.9	-15.5	-10.3	-23.2	-22.1		-77.0
10/20/03 13:00	25.8	26.9	-4.0	-12.4	-7.2	-24.6	-23.9		-72.1
10/20/03 14:00	25.5	26.7	-5.5	-14.9	-9.4	-23.3	-22.7		-75.8
10/20/03 15:00	24.1	25.9	-6.7	-17.2	-11.4	-21.3	-20.7		-77.4
10/20/03 16:00	23.7	24.8	-6.1	-15.1	-9.1	-18.4	-17.9		-66.6
10/20/03 17:00	20.5	21.4	-6.7	-15.9	-11.4	-9.0	-8.2		-51.2
10/20/03 18:00	18.7	20.0	-4.3	-14.1	-8.6	-7.5	-6.2		-40.7
10/20/03 19:00	15.5	17.0	-5.0	-12.6	-7.1	-49.2	-48.5		-122.4
10/20/03 20:00	19.9	21.7	-8.5	-20.5	-14.3	8.0	9.2		-26.2
10/20/03 21:00	19.5	20.5	-4.8	-12.2	-8.0	4.8	5.3		-14.8
10/20/03 22:00	16.5	18.2	-6.8	-17.3	-11.7	2.5	2.9		-30.3
10/20/03 23:00	19.1	19.9	-6.1	-15.4	-9.4	-2.3	-1.8		-35.0
10/21/03 0:00	21.5	22.6	-7.9	-18.8	-13.0	-7.8	-7.7		-55.2
10/21/03 1:00	21.9	23.8	-7.0	-16.5	-11.5	-11.8	-11.3		-58.2
10/21/03 2:00	20.9	22.6	-9.5	-20.2	-15.2	-13.5	-13.4		-71.8
10/21/03 3:00	20.2	21.5	-9.4	-20.2	-15.2	-14.6	-14.1		-73.6
10/21/03 4:00	20.3	21.5	-8.6	-20.0	-14.8	-15.3	-14.7		-73.4
10/21/03 5:00	22.0	23.3	-8.6	-19.3	-14.2	-14.9	-14.1		-71.2
10/21/03 6:00	23.9	25.4	-4.4	-13.2	-8.4	-14.9	-15.0		-56.0
10/21/03 7:00	14.3	15.8	-12.0	-26.0	-19.7	-28.5	-28.9		-115.3
10/21/03 8:00	16.8	18.1	-10.5	-22.9	-16.2	-33.5	-33.5		-116.6
10/21/03 9:00	18.7	20.0	-7.2	-18.3	-12.2	-27.6	-26.7		-91.9
10/21/03 10:00	19.8	21.3	-5.7	-14.8	-8.8	-20.9	-20.2		-70.4
10/21/03 11:00	20.6	22.0	-7.0	-17.4	-11.1	-18.5	-18.4		-72.5
10/21/03 12:00	22.1	23.5	-5.5	-15.7	-9.6	-19.9	-19.5		-70.2
10/21/03 13:00	25.8	26.8	-2.1	-8.1	-4.1	-16.2	-15.6		-46.1
10/21/03 14:00	28.0	30.7	-7.3	-17.2	-11.9	-16.0	-15.5		-67.8
10/21/03 15:00	32.6	33.9	-10.9	-23.7	-17.9	15.8	16.6		-20.1
10/21/03 16:00	30.7	32.3	-10.7	-24.8	-18.1	19.2	19.6		-14.8
10/21/03 17:00	24.1	24.9	-13.5	-28.5	-20.9	15.4	16.1		-31.4
10/21/03 18:00	21.7	22.3	-10.2	-23.2	-15.9	8.9	9.7		-30.6
10/21/03 19:00	24.5	25.5	-8.4	-19.6	-13.3	15.8	16.2		-9.2
10/21/03 20:00	23.8	24.5	-8.1	-19.6	-14.7	11.6	12.0		-18.8
10/21/03 21:00	23.5	24.5	-6.0	-17.6	-13.0	4.0	4.3		-28.3
10/21/03 22:00	22.0	22.7	-10.0	-21.3	-15.7	3.5	3.9		-39.7
10/21/03 23:00	30.2	31.5	-1.8	-8.9	-3.2	-1.7	-0.9		-16.5
10/22/03 0:00	29.5	31.1	-5.6	-14.2	-7.9	-7.7	-7.6		-42.9
10/22/03 1:00	29.0	30.5	-5.7	-14.4	-9.0	-12.0	-11.3		-52.3
10/22/03 2:00	30.3	31.8	-4.7	-12.1	-7.9	-12.9	-12.2		-49.8
10/22/03 3:00	28.5	29.7	-5.6	-14.6	-10.5	-11.7	-10.9		-53.3
10/22/03 4:00	29.1	31.2	-6.5	-15.8	-11.3	-13.0	-12.1		-58.7
10/22/03 5:00	30.5	32.0	-5.0	-11.5	-8.7	-12.1	-11.6		-49.0
10/22/03 6:00	30.1	31.8	-9.0	-22.2	-15.8	-13.8	-13.5		-74.2
10/22/03 7:00	20.2	20.6	-16.3	-30.8	-25.0	-31.9	-31.1		-135.2
10/22/03 8:00	18.9	19.7	-16.2	-34.3	-25.6	-33.1	-32.3		-141.5
10/22/03 9:00	22.9	24.1	-9.1	-21.1	-15.5	-25.2	-25.3		-96.2
10/22/03 10:00	26.9	28.8	-10.1	-23.0	-17.8	-20.7	-19.2		-90.9

10/22/03 11:00	26.2	27.8	-4.9	-14.0	-9.1	-12.7	-12.5		-53.2
10/22/03 12:00	26.2	28.1	-7.1	-18.4	-12.0	-10.4	-9.4		-57.2
10/22/03 13:00	20.2	21.4	-9.8	-23.3	-15.7	-63.8	-63.0		-175.5
10/22/03 14:00	26.4	28.1	-12.6	-28.7	-19.4	-4.7	-4.6		-70.0
10/22/03 15:00	26.4	28.0	-13.2	-28.0	-19.9	-2.1	-2.3		-65.5
10/22/03 16:00	24.1	25.2	-14.2	-32.2	-21.8	-0.2	0.7		-67.7
10/22/03 17:00	15.7	16.2	-10.3	-23.4	-15.0	-2.5	-2.4		-53.6
10/22/03 18:00	14.7	15.5	-4.5	-12.4	-6.1	-9.0	-8.3		-40.4
10/22/03 19:00	14.4	15.1	-4.4	-13.9	-6.7	-5.6	-5.2		-35.8
10/22/03 20:00	13.4	14.6	-3.5	-10.5	-5.0	-9.4	-9.0		-37.3
10/22/03 21:00	13.1	14.1	-4.2	-13.3	-8.1	-14.2	-14.0		-53.7
10/22/03 22:00	13.8	14.7	-9.3	-20.2	-15.2	-12.6	-12.4		-69.8
10/22/03 23:00	21.6	22.3	-10.8	-25.2	-18.7	-17.8	-17.6		-90.0
10/23/03 0:00	26.2	27.5	-2.1	-7.7	-4.3	-7.8	-8.2		-30.2
10/23/03 1:00	26.2	27.5	1.9	0.3	2.1	-9.6	-9.4		-14.7
10/23/03 2:00	26.1	27.4	0.6	-3.6	-1.3	-8.6	-8.0		-20.8
10/23/03 3:00	25.5	26.6	1.7	-1.3	0.4	-10.1	-9.7		-19.0
10/23/03 4:00	26.5	28.0	0.4	-3.6	-2.0	-10.6	-10.7		-26.5
10/23/03 5:00	28.3	29.9	2.2	0.4	2.2	-11.7	-11.0		-17.9
10/23/03 6:00	31.5	33.3	0.3	-3.6	-1.6	-9.9	-10.9		-25.7
10/23/03 7:00	26.2	27.3	5.2	10.0	7.4	-12.1	-11.2		-0.7
10/23/03 8:00	23.3	24.6	1.4	1.8	1.0	-17.8	-18.4		-32.1
10/23/03 9:00	25.6	27.5	3.2	4.7	4.5	-15.2	-14.9		-17.7
10/23/03 10:00	25.1	26.8	-0.6	-5.1	-2.9	-9.1	-9.3		-26.9
10/23/03 11:00	22.2	23.2	-0.9	-4.2	-1.8	-26.6	-25.7		-59.1
10/23/03 12:00	24.6	26.2	0.9	-2.3	0.2	-21.7	-21.1		-44.1
10/23/03 13:00	27.3	28.9	0.8	-1.7	1.2	-18.0	-17.2		-34.9
10/23/03 14:00	31.9	33.1	-3.6	-8.8	-5.2	-10.4	-9.8		-37.7
10/23/03 15:00	31.8	33.0	-8.6	-20.2	-13.1	-6.4	-6.1		-54.4
10/23/03 16:00	Bad	Bad	Bad	Bad	Bad	Bad	Bad		0.0
10/23/03 17:00	Bad	Bad	Bad	Bad	Bad	Bad	Bad		0.0
10/23/03 18:00	Bad	Bad	Bad	Bad	Bad	Bad	Bad		0.0
10/23/03 19:00	Bad	Bad	Bad	Bad	Bad	Bad	Bad		0.0
10/23/03 20:00	Bad	Bad	Bad	Bad	Bad	Bad	Bad		0.0
10/23/03 21:00	Bad	Bad	Bad	Bad	Bad	Bad	Bad		0.0
10/23/03 22:00	Bad	Bad	Bad	Bad	Bad	Bad	Bad		0.0
10/23/03 23:00	Bad	Bad	Bad	Bad	Bad	Bad	Bad		0.0
10/24/03 0:00	Bad	Bad	Bad	Bad	Bad	Bad	Bad		0.0
10/24/03 1:00	Bad	Bad	Bad	Bad	Bad	Bad	Bad		0.0
10/24/03 2:00	Bad	Bad	Bad	Bad	Bad	Bad	Bad		0.0
10/24/03 3:00	Bad	Bad	Bad	Bad	Bad	Bad	Bad		0.0
10/24/03 4:00	Bad	Bad	Bad	Bad	Bad	Bad	Bad		0.0
10/24/03 5:00	Bad	Bad	Bad	Bad	Bad	Bad	Bad		0.0
10/24/03 6:00	Bad	Bad	Bad	Bad	Bad	Bad	Bad		0.0
10/24/03 7:00	Bad	Bad	Bad	Bad	Bad	Bad	Bad		0.0
10/24/03 8:00	Bad	Bad	Bad	Bad	Bad	Bad	Bad		0.0
10/24/03 9:00	Bad	Bad	Bad	Bad	Bad	Bad	Bad		0.0
10/24/03 10:00	Bad	Bad	Bad	Bad	Bad	Bad	Bad		0.0
10/24/03 11:00	19.3	20.1	-3.1	-9.1	-5.7	-35.5	-34.3		-87.7
10/24/03 12:00	14.9	15.3	-6.2	-14.8	-10.5	-30.2	-30.5		-92.2
10/24/03 13:00	17.0	17.0	-11.5	-25.6	-18.0	-34.1	-33.0		-122.1
10/24/03 14:00	16.9	17.3	-7.4	-16.5	-10.8	-31.9	-31.1		-97.6

10/24/03 15:00	16.8	17.1	-10.1	-22.4	-16.1	-31.6	-30.8		-111.0
10/24/03 16:00	15.0	15.7	-6.7	-15.3	-10.0	-28.1	-28.5		-88.7
10/24/03 17:00	12.3	13.1	-3.4	-9.2	-5.6	-25.7	-25.1		-69.0
10/24/03 18:00	13.0	13.0	-6.6	-13.3	-10.5	-26.7	-26.3		-83.3
10/24/03 19:00	13.0	13.5	-3.8	-11.5	-7.4	-26.2	-25.5		-74.4
10/24/03 20:00	11.0	11.7	-1.3	-8.1	-3.3	-25.0	-24.5		-62.2
10/24/03 21:00	11.1	11.3	-3.4	-12.7	-6.2	-24.5	-24.4		-71.2
10/24/03 22:00	16.0	16.4	-13.6	-31.0	-20.8	21.6	21.4		-22.5
10/24/03 23:00	18.5	18.2	-0.9	-6.9	-1.4	-34.2	-33.9		-77.3
10/25/03 0:00	17.5	18.3	-3.1	-11.0	-4.8	-35.0	-34.8		-88.7
10/25/03 1:00	16.3	16.9	-5.5	-15.0	-8.8	-33.9	-33.9		-97.1
10/25/03 2:00	15.0	15.0	-6.6	-17.1	-10.1	-32.4	-32.0		-98.2
10/25/03 3:00	14.5	14.9	-8.8	-20.7	-13.3	-31.9	-32.0		-106.8
10/25/03 4:00	14.5	14.6	-10.7	-23.5	-16.3	-32.0	-31.5		-113.9
10/25/03 5:00	14.0	14.4	-10.3	-23.9	-15.7	-30.7	-31.2		-111.8
10/25/03 6:00	15.9	16.0	-8.9	-20.6	-13.2	-33.5	-33.8		-110.0
10/25/03 7:00	14.3	15.1	-6.1	-16.1	-9.2	-52.1	-52.3		-135.8
10/25/03 8:00	13.4	13.9	-6.6	-17.2	-9.5	-52.5	-52.1		-137.9
10/25/03 9:00	15.2	15.2	-1.5	-8.3	-3.1	-54.3	-54.4		-121.5
10/25/03 10:00	15.4	15.0	-2.2	-9.1	-2.6	-52.5	-52.4		-118.9
10/25/03 11:00	13.8	13.9	-4.8	-12.9	-5.1	-50.7	-50.2		-123.7
10/25/03 12:00	13.3	13.9	-3.6	-10.3	-4.6	-49.4	-49.6		-117.5
10/25/03 13:00	12.7	12.5	-5.3	-13.5	-7.0	-48.6	-49.1		-123.6
10/25/03 14:00	13.5	13.6	-2.9	-9.7	-4.0	-50.9	-50.7		-118.1
10/25/03 15:00	17.0	17.2	-2.7	-9.3	-3.5	-24.0	-24.7		-64.2
10/25/03 16:00	15.6	15.8	-9.6	-21.6	-14.2	-3.9	-3.1		-52.4
10/25/03 17:00	14.3	14.5	-9.3	-21.3	-13.5	-2.6	-2.0		-48.6
10/25/03 18:00	15.2	15.4	-11.1	-26.1	-17.1	-3.6	-3.1		-61.0
10/25/03 19:00	17.1	17.5	-9.7	-22.9	-13.8	-6.2	-5.9		-58.5
10/25/03 20:00	14.2	14.4	-12.4	-27.6	-17.6	-1.3	-0.4		-59.3
10/25/03 21:00	12.9	13.3	-10.4	-26.5	-17.9	0.0	0.6		-54.1
10/25/03 22:00	16.1	15.8	-18.6	-40.4	-29.4	13.2	14.0		-61.1
10/25/03 23:00	18.1	17.9	-15.2	-32.1	-22.6	12.6	12.7		-44.7
10/26/03 0:00	14.5	14.2	-5.9	-14.6	-8.8	-30.9	-30.8		-91.1
10/26/03 1:00	13.9	13.5	-9.0	-20.4	-13.5	-33.0	-33.2		-109.1
10/26/03 1:00	12.7	12.2	-12.4	-25.6	-18.7	-32.3	-31.5		-120.5
10/26/03 2:00	12.2	13.1	-14.1	-30.1	-22.0	-33.1	-32.5		-131.7
10/26/03 3:00	12.7	12.7	-13.9	-30.1	-21.5	-33.5	-33.4		-132.4
10/26/03 4:00	16.4	16.1	-13.7	-28.1	-21.9	-37.9	-37.8		-139.3
10/26/03 5:00	16.9	16.8	-11.9	-23.9	-19.0	-37.6	-37.9		-130.3
10/26/03 6:00	14.7	15.1	-10.2	-22.5	-16.9	-51.8	-51.9		-153.2
10/26/03 7:00	12.5	12.5	-8.5	-18.7	-14.4	-49.9	-49.7		-141.2
10/26/03 8:00	12.0	11.7	-11.1	-25.3	-18.5	-54.7	-54.6		-164.2
10/26/03 9:00	13.2	12.9	-6.1	-16.5	-9.6	-53.0	-52.7		-137.9
10/26/03 10:00	11.3	11.7	-1.8	-7.2	-2.7	-49.3	-48.5		-109.3
10/26/03 11:00	11.3	11.1	-2.4	-9.3	-3.4	-71.0	-70.3		-156.4
10/26/03 12:00	11.4	11.1	-4.0	-11.0	-4.5	-69.5	-69.9		-158.9
10/26/03 13:00	8.3	7.6	-11.0	-21.5	-15.1	-69.7	-69.4		-186.7
10/26/03 14:00	12.4	11.9	-11.6	-24.0	-16.7	-70.3	-70.1		-192.5
10/26/03 15:00	14.6	14.2	-9.1	-18.9	-15.3	-71.6	-72.0		-186.9
10/26/03 16:00	17.5	17.8	-11.8	-22.4	-18.9	-48.7	-48.8		-150.6
10/26/03 17:00	16.9	16.3	-10.2	-19.6	-16.0	-46.4	-46.8		-139.1

10/26/03 18:00	20.3	20.2	-6.5	-12.4	-9.6	-48.9	-48.3		-125.8
10/26/03 19:00	15.2	15.2	-8.4	-17.2	-12.5	-45.3	-44.8		-128.2
10/26/03 20:00	15.7	15.9	-15.0	-28.2	-23.0	-24.9	-24.8		-115.8
10/26/03 21:00	20.4	20.6	-17.1	-33.9	-28.0	8.2	8.5		-62.3
10/26/03 22:00	24.2	25.1	-17.8	-32.5	-27.7	2.7	2.8		-72.5
10/26/03 23:00	23.9	25.2	-20.1	-38.4	-31.4	2.8	3.1		-84.0
10/27/03 0:00	20.2	20.6	-19.3	-36.8	-29.8	8.4	9.0		-68.5
10/27/03 1:00	21.3	22.0	-21.3	-40.3	-32.5	5.7	5.9		-82.5
10/27/03 2:00	22.8	23.4	-20.0	-36.5	-30.6	4.6	4.4		-77.9
10/27/03 3:00	22.8	23.6	-19.8	-36.8	-30.8	3.4	3.9		-80.1
10/27/03 4:00	23.7	24.3	-19.8	-37.4	-31.0	2.3	2.6		-83.5
10/27/03 5:00	24.8	25.6	-18.5	-35.1	-28.6	1.4	1.2		-79.5
10/27/03 6:00	22.6	24.0	-15.0	-28.8	-23.5	-20.6	-20.5		-108.4
10/27/03 7:00	21.7	22.0	-13.0	-26.3	-21.3	-18.6	-18.4		-97.7
10/27/03 8:00	22.3	23.2	-8.0	-16.2	-13.3	-20.4	-19.4		-77.2
10/27/03 9:00	21.1	21.3	-6.1	-12.8	-11.1	-39.2	-38.3		-107.5
10/27/03 10:00	26.0	26.8	-5.4	-9.1	-9.3	-44.5	-43.8		-112.2
10/27/03 11:00	19.3	20.2	-7.0	-13.7	-10.7	-35.2	-34.9		-101.6
10/27/03 12:00	19.4	19.7	-5.7	-11.9	-8.4	-33.2	-33.0		-92.3
10/27/03 13:00	19.8	19.9	-3.8	-7.4	-5.0	-55.9	-55.5		-127.6
10/27/03 14:00	20.1	20.3	-5.7	-12.1	-9.8	-54.2	-53.7		-135.6
10/27/03 15:00	17.4	18.2	-6.9	-14.1	-10.7	-53.4	-52.9		-138.0
10/27/03 16:00	15.1	15.6	-4.5	-10.3	-7.3	-49.1	-48.7		-119.8
10/27/03 17:00	17.5	17.6	-3.1	-6.8	-5.8	-52.6	-52.1		-120.4
10/27/03 18:00	17.4	17.7	0.5	-0.5	-0.5	-51.3	-50.0		-101.7
10/27/03 19:00	13.9	14.8	-0.5	-1.4	-1.7	-47.3	-46.9		-97.8
10/27/03 20:00	11.9	12.4	-1.3	-3.4	-3.5	-45.2	-45.7		-99.2
10/27/03 21:00	20.7	21.3	-9.1	-18.4	-14.7	11.1	11.5		-19.5
10/27/03 22:00	23.0	24.4	-12.9	-25.7	-21.2	6.1	6.8		-47.0
10/27/03 23:00	25.9	27.4	-13.6	-25.2	-21.1	1.9	2.4		-55.6
10/28/03 0:00	24.7	25.8	-20.0	-36.1	-30.6	1.4	1.1		-84.1
10/28/03 1:00	24.8	25.7	-16.5	-32.8	-25.8	2.3	2.0		-70.9
10/28/03 2:00	20.1	20.5	-18.4	-37.3	-29.7	-19.6	-19.2		-124.1
10/28/03 3:00	18.2	18.9	-18.5	-35.3	-28.8	-18.3	-18.1		-119.1
10/28/03 4:00	17.0	17.6	-18.4	-35.5	-28.2	-16.3	-15.9		-114.3
10/28/03 5:00	17.8	18.0	-17.7	-35.7	-27.5	-15.5	-15.4		-111.8
10/28/03 6:00	19.7	20.0	-17.9	-35.7	-27.8	-16.0	-15.5		-113.0
10/28/03 7:00	19.5	20.2	-14.3	-27.5	-22.2	-16.3	-15.4		-95.7
10/28/03 8:00	17.4	17.5	-8.7	-18.9	-14.5	-12.5	-12.3		-66.9
10/28/03 9:00	18.0	18.5	-6.7	-15.5	-10.0	-13.7	-13.0		-58.8
10/28/03 10:00	19.1	19.7	-6.0	-15.1	-9.3	-13.7	-12.7		-56.8
10/28/03 11:00	19.5	20.2	-6.9	-17.0	-11.3	-12.7	-11.7		-59.7
10/28/03 12:00	17.9	18.2	-5.7	-14.1	-8.4	-31.9	-31.8		-91.8
10/28/03 13:00	21.2	21.4	-7.1	-14.1	-11.2	-36.4	-35.6		-104.4
10/28/03 14:00	20.0	20.1	-4.8	-10.6	-7.9	-57.9	-57.8		-139.0
10/28/03 15:00	17.7	18.6	-5.8	-12.7	-9.8	-54.8	-54.4		-137.6
10/28/03 16:00	15.4	16.0	-6.2	-12.2	-9.5	-52.7	-52.3		-132.9
10/28/03 17:00	15.0	15.8	-3.3	-7.5	-5.6	-53.0	-52.0		-121.4
10/28/03 18:00	16.3	17.3	-4.1	-8.5	-6.9	-52.4	-52.2		-124.1
10/28/03 19:00	15.4	15.4	-2.0	-3.8	-3.3	-51.2	-50.8		-111.1
10/28/03 20:00	13.9	14.6	-3.0	-7.8	-5.3	-51.1	-50.4		-117.6
10/28/03 21:00	21.0	21.6	5.8	10.0	8.0	-38.0	-37.2		-51.5

10/28/03 22:00	23.4	23.9	1.0	0.3	0.4	-37.0	-36.7		-72.0
10/28/03 23:00	20.4	21.0	-7.1	-15.2	-11.4	-40.3	-40.0		-114.0
10/29/03 0:00	18.0	18.5	-10.0	-19.9	-15.8	-41.8	-42.1		-129.4
10/29/03 1:00	18.6	18.3	-11.2	-22.8	-18.0	-44.7	-44.6		-141.2
10/29/03 2:00	16.7	17.0	-12.6	-25.9	-20.1	-46.3	-46.0		-150.9
10/29/03 3:00	14.2	14.7	-16.0	-33.7	-26.2	-48.3	-48.0		-172.2
10/29/03 4:00	15.0	15.2	-17.1	-36.0	-27.9	-48.5	-48.3		-177.8
10/29/03 5:00	17.5	17.3	-15.4	-30.6	-23.7	-47.1	-47.5		-164.3
10/29/03 6:00	14.8	15.4	-13.3	-28.0	-21.6	-60.9	-60.0		-183.8
10/29/03 7:00	11.2	11.2	-12.8	-26.3	-20.0	-56.6	-56.2		-172.0
10/29/03 8:00	8.5	8.4	-15.3	-34.3	-24.4	-56.7	-56.4		-187.1
10/29/03 9:00	8.6	8.7	-12.1	-25.9	-16.8	-57.0	-56.7		-168.5
10/29/03 10:00	13.8	14.1	-6.6	-17.5	-7.9	-34.0	-33.6		-99.5
10/29/03 11:00	14.6	14.5	-3.3	-13.5	-6.2	-33.6	-33.3		-89.9
10/29/03 12:00	17.5	17.5	-2.0	-7.4	-1.0	-36.7	-36.5		-83.6
10/29/03 13:00	16.4	15.9	-3.8	-14.1	-6.6	-34.9	-34.9		-94.3
10/29/03 14:00	17.7	17.6	-1.1	-7.2	-1.4	-36.3	-35.8		-81.8
10/29/03 15:00	16.6	16.6	-2.8	-8.1	-4.7	-34.8	-34.3		-84.6
10/29/03 16:00	14.2	14.0	-7.5	-17.3	-11.7	-33.4	-33.5		-103.5
10/29/03 17:00	15.6	15.5	-3.8	-10.7	-6.9	-34.8	-34.6		-90.8
10/29/03 18:00	18.9	18.6	-5.3	-12.1	-7.4	-38.4	-38.0		-101.2
10/29/03 19:00	16.8	16.7	-2.3	-6.8	-4.1	-36.1	-34.5		-83.8
10/29/03 20:00	15.5	15.2	-6.4	-14.3	-10.5	-33.2	-32.8		-97.4
10/29/03 21:00	20.6	21.4	-1.6	-7.0	-3.1	-15.0	-13.7		-40.4
10/29/03 22:00	20.5	20.6	-5.1	-12.6	-8.7	-13.5	-13.2		-53.0
10/29/03 23:00	20.8	21.2	-7.6	-17.0	-11.2	-14.3	-14.0		-64.2
10/30/03 0:00	20.4	21.4	-7.7	-17.1	-11.6	-13.9	-13.4		-63.8
10/30/03 1:00	20.7	21.4	-8.0	-18.0	-12.6	-13.6	-13.4		-65.5
10/30/03 2:00	19.7	19.8	-9.3	-20.4	-14.8	-11.4	-11.1		-67.0
10/30/03 3:00	19.9	20.3	-9.6	-21.2	-15.2	-11.7	-11.7		-69.5
10/30/03 4:00	19.9	20.8	-9.6	-21.0	-15.5	-11.7	-11.8		-69.5
10/30/03 5:00	21.7	22.0	-7.8	-17.3	-12.9	-14.6	-13.7		-66.3
10/30/03 6:00	18.8	18.8	-8.7	-19.2	-13.8	-35.9	-36.0		-113.6
10/30/03 7:00	17.3	17.2	-10.3	-22.4	-16.1	-34.2	-34.6		-117.6
10/30/03 8:00	17.8	18.0	-5.3	-15.2	-9.4	-36.8	-36.2		-102.9
10/30/03 9:00	17.6	17.6	-2.8	-7.4	-4.7	-35.3	-34.9		-85.1
10/30/03 10:00	16.8	16.6	-3.1	-10.3	-5.5	-34.0	-33.3		-86.2
10/30/03 11:00	17.5	17.6	-2.2	-7.8	-3.5	-33.6	-33.3		-80.4
10/30/03 12:00	15.6	15.3	-5.5	-13.9	-9.6	-31.3	-30.9		-91.1
10/30/03 13:00	15.7	15.8	-3.8	-10.9	-6.0	-31.7	-31.0		-83.3
10/30/03 14:00	15.0	14.8	-2.5	-7.5	-4.1	-30.4	-30.3		-74.7
10/30/03 15:00	15.3	15.2	-1.9	-6.0	-2.5	-32.0	-31.6		-74.0
10/30/03 16:00	13.4	13.8	-1.9	-8.7	-4.5	-29.7	-29.0		-73.9
10/30/03 17:00	14.9	14.7	-0.5	-5.1	-1.0	-31.1	-30.9		-68.5
10/30/03 18:00	13.7	14.0	-2.2	-8.6	-4.4	-28.5	-28.1		-71.8
10/30/03 19:00	16.8	16.9	1.9	0.5	2.1	-32.2	-31.6		-59.3
10/30/03 20:00	15.1	15.0	-0.2	-5.2	-1.3	-29.1	-28.7		-64.6
10/30/03 21:00	18.2	18.2	-2.2	-9.1	-3.4	-7.0	-6.8		-28.6
10/30/03 22:00	19.1	19.3	-8.8	-20.0	-13.4	-9.6	-9.5		-61.3
10/30/03 23:00	18.3	17.7	-12.9	-27.6	-19.4	-8.8	-8.9		-77.6
10/31/03 0:00	23.8	24.1	-7.7	-20.0	-13.6	6.1	6.6		-28.7
10/31/03 1:00	22.7	24.1	-9.0	-19.7	-14.2	7.6	7.0		-28.3

10/31/03 2:00	23.5	24.2	-10.3	-22.3	-16.5	5.8	6.3	-37.0
10/31/03 3:00	23.0	23.7	-10.2	-22.4	-16.6	6.2	6.8	-36.4
10/31/03 4:00	23.1	24.2	-9.9	-21.8	-16.7	5.6	6.1	-36.7
10/31/03 5:00	23.1	23.9	-8.6	-18.9	-13.6	6.6	6.9	-27.6
10/31/03 6:00	20.9	21.9	-8.1	-18.5	-13.0	-17.1	-16.5	-73.2
10/31/03 7:00	19.4	19.7	-5.7	-14.1	-9.9	-16.2	-15.9	-61.8
10/31/03 8:00	19.0	19.2	-4.3	-10.9	-6.8	-15.5	-15.2	-52.7
10/31/03 9:00	18.5	18.9	-6.2	-14.5	-10.5	-14.4	-13.9	-59.5
10/31/03 10:00	20.6	20.7	-2.8	-8.3	-4.6	-16.7	-15.5	-47.8
10/31/03 11:00	18.9	19.2	-2.7	-8.0	-4.6	-13.5	-13.2	-42.0
10/31/03 12:00	17.9	18.6	-1.9	-7.7	-4.1	-12.6	-12.3	-38.5
10/31/03 13:00	18.0	18.4	-5.2	-13.0	-7.6	-12.9	-12.8	-51.5
10/31/03 14:00	17.5	17.8	-4.3	-12.7	-7.6	-12.1	-11.5	-48.3
10/31/03 15:00	15.6	16.1	-7.5	-18.1	-12.1	-9.9	-9.5	-57.0
10/31/03 16:00	13.5	13.7	-12.6	-27.2	-19.8	-8.6	-8.4	-76.5
10/31/03 17:00	15.0	15.6	-11.6	-26.3	-18.3	-10.2	-10.0	-76.3
10/31/03 18:00	14.0	13.7	-13.8	-29.1	-21.4	-6.4	-6.6	-77.2
10/31/03 19:00	11.9	12.0	-11.9	-26.9	-18.9	-3.9	-3.5	-65.1
10/31/03 20:00	11.5	11.5	-14.3	-30.8	-22.4	-4.8	-4.3	-76.6
10/31/03 21:00	16.5	16.8	-11.7	-26.6	-19.3	14.7	15.7	-27.1
10/31/03 22:00	17.9	18.1	-17.0	-36.2	-26.4	13.5	13.9	-52.3
10/31/03 23:00	17.7	17.2	-20.5	-42.7	-31.8	13.3	13.8	-67.8
11/1/03 0:00	20.8	21.1	-13.0	-26.7	-19.7	9.3	9.2	-41.0
11/1/03 1:00	19.6	19.6	-15.0	-30.1	-22.2	10.5	10.5	-46.2
11/1/03 2:00	19.4	19.5	-14.6	-29.6	-22.4	11.3	11.0	-44.4
11/1/03 3:00	19.9	20.0	-15.0	-30.3	-23.1	9.8	10.8	-47.8
11/1/03 4:00	19.8	19.6	-16.7	-34.6	-26.3	10.8	11.0	-55.7
11/1/03 5:00	19.6	20.3	-15.1	-32.4	-24.2	11.2	10.4	-50.1
11/1/03 6:00	19.3	18.9	-12.6	-25.9	-19.7	-6.0	-5.8	-70.0
11/1/03 7:00	16.0	16.0	-13.8	-28.2	-21.4	-3.7	-3.1	-70.2
11/1/03 8:00	19.1	19.2	-12.1	-25.6	-20.1	-8.9	-8.7	-75.3
11/1/03 9:00	19.0	18.9	-11.9	-26.2	-19.5	-8.5	-8.2	-74.2
11/1/03 10:00	21.1	21.6	-9.6	-20.5	-15.3	-11.6	-11.0	-68.0
11/1/03 11:00	21.5	21.7	-7.6	-16.5	-11.9	-12.1	-11.7	-59.9
11/1/03 12:00	20.4	20.9	-10.3	-22.8	-16.9	-11.5	-10.8	-72.3
11/1/03 13:00	19.1	20.9	-8.8	-20.1	-14.3	-8.6	-8.3	-60.1
11/1/03 14:00	18.2	18.1	-7.5	-17.9	-13.1	-7.6	-7.2	-53.3
11/1/03 15:00	16.6	19.8	-8.1	-18.3	-12.5	-4.8	-3.7	-47.4
11/1/03 16:00	15.5	18.5	-8.9	-19.9	-13.9	-3.2	-3.0	-48.9
11/1/03 17:00	19.2	20.6	-5.3	-13.8	-8.9	-7.5	-7.2	-42.7
11/1/03 18:00	20.4	20.6	-9.2	-21.9	-15.0	-9.2	-8.8	-64.1
11/1/03 19:00	20.8	20.8	-8.9	-19.7	-13.4	-9.2	-9.0	-60.3
11/1/03 20:00	18.5	18.8	-9.3	-20.6	-14.6	-7.3	-6.7	-58.6
11/1/03 21:00	20.6	20.7	-10.3	-23.8	-16.7	6.9	7.7	-36.1
11/1/03 22:00	21.2	21.7	-11.3	-23.3	-17.6	7.4	7.8	-37.0
11/1/03 23:00	20.1	20.0	-13.3	-27.9	-19.5	9.9	9.7	-41.1
11/2/03 0:00	21.2	21.0	-9.4	-21.4	-16.1	9.1	9.3	-28.6
11/2/03 1:00	21.2	20.9	-8.5	-19.0	-13.7	9.9	10.6	-20.6
11/2/03 2:00	21.5	21.8	-10.7	-23.3	-17.1	9.2	9.1	-32.8
11/2/03 3:00	21.2	21.4	-12.7	-27.8	-20.7	9.0	9.3	-42.9
11/2/03 4:00	20.9	20.2	-13.6	-28.8	-22.0	10.6	10.0	-43.8
11/2/03 5:00	20.6	20.7	-13.6	-29.2	-22.0	9.9	10.3	-44.7

11/2/03 6:00	18.4	18.0	-12.9	-26.7	-20.0	-4.1	-4.3	-68.0
11/2/03 7:00	14.5	14.0	-16.2	-32.7	-25.2	-1.5	-1.2	-76.8
11/2/03 8:00	17.0	16.3	-8.9	-20.7	-14.6	-6.1	-5.2	-55.4
11/2/03 9:00	17.2	16.2	-10.7	-23.5	-17.0	-5.9	-6.0	-63.3
11/2/03 10:00	16.8	16.6	-10.9	-23.7	-17.6	-6.8	-6.3	-65.3
11/2/03 11:00	17.4	17.2	-11.7	-26.3	-18.1	-7.5	-7.0	-70.5
11/2/03 12:00	18.3	17.5	-10.4	-22.8	-17.2	-8.7	-7.9	-67.0
11/2/03 13:00	16.5	16.0	-11.0	-23.9	-17.0	-6.1	-5.4	-63.4
11/2/03 14:00	16.0	15.8	-11.6	-25.6	-18.6	-5.7	-5.3	-66.8
11/2/03 15:00	16.4	16.0	-6.2	-14.6	-8.8	-5.2	-4.8	-39.6
11/2/03 16:00	16.4	16.0	-5.3	-14.7	-8.7	-5.0	-4.7	-38.4
11/2/03 17:00	20.9	21.2	-0.2	-5.4	-1.1	-10.5	-9.0	-26.3
11/2/03 18:00	22.4	22.6	-5.1	-13.4	-8.8	-9.9	-8.9	-46.0
11/2/03 19:00	22.5	22.7	-3.8	-10.8	-6.5	-9.9	-9.1	-40.0
11/2/03 20:00	19.7	20.4	-7.5	-17.9	-12.3	-7.1	-6.2	-51.0
11/2/03 21:00	21.6	22.1	-8.5	-19.6	-13.6	6.2	7.1	-28.4
11/2/03 22:00	21.6	22.1	-10.0	-24.2	-17.4	8.7	9.0	-34.0
11/2/03 23:00	22.3	23.5	-11.4	-26.6	-20.0	6.8	7.5	-43.6
11/3/03 0:00	22.1	22.0	-11.5	-26.4	-19.2	8.1	8.7	-40.2
11/3/03 1:00	24.3	24.8	-9.9	-22.2	-17.2	5.3	5.7	-38.4
11/3/03 2:00	23.4	23.7	-12.2	-26.7	-21.0	5.4	5.7	-48.9
11/3/03 3:00	21.9	22.2	-12.9	-27.8	-21.6	7.4	7.6	-47.3
11/3/03 4:00	21.8	22.3	-12.8	-26.9	-20.4	8.5	8.6	-43.0
11/3/03 5:00	23.8	23.7	-12.9	-29.7	-22.3	4.8	5.2	-54.9
11/3/03 6:00	22.0	22.5	-6.1	-16.3	-11.1	-17.3	-16.8	-67.7
11/3/03 7:00	16.9	17.0	-10.5	-23.7	-17.0	-14.6	-14.3	-80.1
11/3/03 8:00	15.9	15.6	-9.8	-23.7	-15.9	-15.0	-14.3	-78.7
11/3/03 9:00	15.4	15.3	-7.2	-19.6	-12.2	-12.7	-12.7	-64.3
11/3/03 10:00	17.2	17.3	-5.4	-15.8	-8.5	-14.8	-14.8	-59.4
11/3/03 11:00	14.6	14.8	-8.9	-22.1	-13.9	-12.6	-12.3	-69.8
11/3/03 12:00	14.3	14.1	-9.1	-23.2	-14.6	-12.2	-12.1	-71.1
11/3/03 13:00	14.7	15.0	-9.1	-24.4	-14.7	-13.9	-13.1	-75.3
11/3/03 14:00	14.0	13.5	-9.3	-22.8	-14.2	-11.5	-11.1	-69.0
11/3/03 15:00	13.7	13.4	-9.4	-23.5	-15.1	-10.5	-9.8	-68.3
11/3/03 16:00	12.8	12.4	-11.1	-27.7	-18.4	-10.5	-10.1	-77.8
11/3/03 17:00	17.1	16.6	-6.0	-17.4	-8.9	-12.5	-11.9	-56.8
11/3/03 18:00	17.8	17.8	-7.3	-18.7	-11.5	-10.3	-10.1	-57.7
11/3/03 19:00	18.3	18.3	-6.0	-17.3	-9.3	-10.5	-9.7	-52.8
11/3/03 20:00	15.7	15.6	-7.1	-18.6	-11.5	-6.9	-6.4	-50.6
11/3/03 21:00	18.7	18.4	-4.6	-13.0	-7.7	14.9	14.6	4.3
11/3/03 22:00	19.0	18.8	-9.7	-24.4	-16.2	13.4	13.7	-23.2
11/3/03 23:00	21.9	21.8	-8.9	-19.7	-13.1	9.7	10.4	-21.7
11/4/03 0:00	21.7	22.0	-6.5	-17.9	-11.9	9.7	9.2	-17.4
11/4/03 1:00	22.8	23.0	-8.3	-18.9	-12.9	7.6	7.6	-24.9
11/4/03 2:00	22.5	22.3	-6.9	-15.8	-11.3	8.2	8.2	-17.7
11/4/03 3:00	23.9	24.2	-7.4	-18.0	-13.1	5.1	5.3	-28.0
11/4/03 4:00	21.7	21.9	-7.1	-16.6	-10.9	9.2	9.3	-16.1
11/4/03 5:00	24.8	25.2	-6.7	-15.6	-10.5	4.3	4.9	-23.6
11/4/03 6:00	21.7	22.0	1.7	-1.0	1.7	-40.4	-39.3	-77.5
11/4/03 7:00	13.5	13.5	-6.8	-15.6	-10.8	-51.3	-51.2	-135.7
11/4/03 8:00	10.1	10.2	-5.2	-13.5	-8.4	-57.9	-58.1	-143.2
11/4/03 9:00	13.5	13.8	-2.6	-7.9	-5.1	-54.6	-54.5	-124.6

11/4/03 10:00	15.4	14.9	-5.1	-13.5	-8.8	-54.0	-53.1		-134.5
11/4/03 11:00	15.7	15.6	-4.7	-13.4	-7.9	-53.8	-53.3		-133.2
11/4/03 12:00	13.7	13.6	-4.5	-13.2	-8.2	-53.3	-53.1		-132.3
11/4/03 13:00	14.7	14.7	-4.5	-13.7	-8.4	-53.5	-53.1		-133.1
11/4/03 14:00	13.7	13.7	-4.5	-13.5	-8.2	-52.8	-53.3		-132.4
11/4/03 15:00	11.0	10.7	-5.7	-15.4	-10.0	-53.7	-53.2		-138.1
11/4/03 16:00	9.9	9.7	-4.3	-11.9	-7.4	-50.2	-49.9		-123.6
11/4/03 17:00	13.8	13.1	-3.5	-11.7	-6.0	-47.5	-46.5		-115.2
11/4/03 18:00	14.1	13.6	-8.6	-21.9	-14.0	-40.9	-40.7		-126.1
11/4/03 19:00	11.5	11.0	-8.6	-21.1	-14.7	-41.0	-40.4		-125.9
11/4/03 20:00	12.2	11.9	-2.7	-9.2	-5.0	-39.6	-39.4		-95.9
11/4/03 21:00	12.2	11.8	-2.0	-7.5	-2.8	-41.4	-40.8		-94.4
11/4/03 22:00	13.3	13.0	-1.7	-7.8	-4.1	-38.5	-38.1		-90.2
11/4/03 23:00	13.7	13.6	-3.2	-10.7	-6.3	-32.0	-31.8		-84.1
11/5/03 0:00	14.2	13.8	-5.4	-13.2	-9.1	-32.4	-32.2		-92.3
11/5/03 1:00	17.6	17.4	-5.4	-15.0	-10.7	-37.1	-36.8		-105.0
11/5/03 2:00	17.9	18.2	-7.6	-18.2	-13.3	-38.5	-38.2		-115.8
11/5/03 3:00	17.4	17.5	-9.1	-21.0	-16.0	-37.2	-36.9		-120.3
11/5/03 4:00	18.2	18.3	-9.0	-21.0	-16.0	-38.7	-38.1		-122.7
11/5/03 5:00	18.3	17.4	-9.5	-22.0	-15.7	-38.0	-38.1		-123.3
11/5/03 6:00	14.9	14.4	-2.9	-9.9	-6.0	-77.8	-77.9		-174.4
11/5/03 7:00	15.5	16.3	-7.1	-15.7	-10.9	-33.7	-33.4		-100.8
11/5/03 8:00	14.4	13.8	-8.9	-19.2	-14.8	-33.3	-32.8		-108.9
11/5/03 9:00	15.8	15.8	-6.4	-15.9	-10.6	-35.9	-35.4		-104.2
11/5/03 10:00	16.8	16.5	-8.0	-17.9	-13.4	-36.0	-35.5		-110.8
11/5/03 11:00	16.9	16.7	-8.3	-18.4	-13.6	-38.1	-37.9		-116.2
11/5/03 12:00	15.4	15.1	-11.5	-24.7	-18.7	-35.1	-34.8		-124.8
11/5/03 13:00	18.2	18.4	-11.5	-23.9	-18.6	-26.0	-25.6		-105.5
11/5/03 14:00	16.3	15.2	-11.7	-24.8	-18.6	-12.4	-12.0		-79.5
11/5/03 15:00	16.8	16.6	-10.3	-20.8	-15.9	-12.7	-13.4		-73.1
11/5/03 16:00	16.8	16.9	-7.3	-16.2	-11.9	-12.3	-11.5		-59.3
11/5/03 17:00	16.1	15.3	-8.6	-21.0	-13.9	-10.6	-9.5		-63.7
11/5/03 18:00	17.1	17.2	-10.2	-22.5	-15.5	-9.9	-9.1		-67.2
11/5/03 19:00	15.1	14.9	-8.2	-19.8	-12.9	-7.8	-6.5		-55.1
11/5/03 20:00	16.1	15.8	-6.3	-15.4	-11.2	-7.7	-7.4		-48.0
11/5/03 21:00	17.9	17.8	-8.8	-21.1	-13.4	15.4	15.8		-12.1
11/5/03 22:00	18.5	18.4	-4.3	-12.4	-8.0	15.4	16.3		7.1
11/5/03 23:00	22.3	21.7	-10.7	-26.8	-18.3	9.6	9.9		-36.3
11/6/03 0:00	23.0	23.5	-8.1	-19.8	-13.6	8.2	8.1		-25.2
11/6/03 1:00	23.4	23.1	-10.0	-23.1	-16.8	8.0	8.4		-33.5
11/6/03 2:00	22.6	23.0	-10.7	-23.8	-17.6	9.4	9.3		-33.5
11/6/03 3:00	23.0	23.1	-11.6	-25.6	-19.6	6.9	7.7		-42.2
11/6/03 4:00	24.0	24.5	-11.3	-25.1	-19.1	6.1	6.0		-43.3
11/6/03 5:00	25.9	27.0	-6.1	-15.2	-10.3	4.0	3.7		-23.9
11/6/03 6:00	22.1	22.8	-6.1	-14.7	-10.1	-16.9	-16.7		-64.5
11/6/03 7:00	19.1	18.9	-6.4	-15.0	-9.8	-15.1	-15.2		-61.5
11/6/03 8:00	18.8	19.6	-7.4	-18.6	-12.7	-16.7	-16.9		-72.3
11/6/03 9:00	20.4	20.0	-5.0	-13.1	-8.4	-17.4	-17.2		-61.1
11/6/03 10:00	18.2	18.1	-11.5	-24.6	-17.1	-18.1	-17.6		-88.9
11/6/03 11:00	17.3	17.0	-12.7	-26.1	-18.8	-16.1	-15.8		-89.4
11/6/03 12:00	15.9	15.8	-12.9	-27.0	-20.2	-13.6	-13.1		-86.9
11/6/03 13:00	17.4	17.0	-13.6	-28.6	-20.9	-15.9	-15.3		-94.4

11/6/03 14:00	17.4	17.7	-13.8	-27.8	-20.7	-17.3	-16.4		-95.9
11/6/03 15:00	15.2	15.3	-10.8	-23.4	-17.1	-9.4	-9.6		-70.3
11/6/03 16:00	16.1	15.9	-7.4	-17.1	-12.0	-9.6	-9.4		-55.5
11/6/03 17:00	17.4	17.7	-10.0	-23.7	-15.8	-12.2	-11.5		-73.1
11/6/03 18:00	19.9	19.4	-8.1	-18.3	-11.7	-15.9	-14.7		-68.8
11/6/03 19:00	17.9	17.7	-6.8	-16.0	-10.0	-13.1	-11.8		-57.6
11/6/03 20:00	17.6	16.9	-6.2	-14.3	-9.2	-11.0	-10.5		-51.3
11/6/03 21:00	20.1	20.0	-8.8	-19.9	-13.9	11.9	12.4		-18.3
11/6/03 22:00	19.8	19.9	-9.3	-21.5	-15.1	13.1	13.5		-19.3
11/6/03 23:00	22.3	23.1	-8.9	-20.1	-13.9	9.3	9.4		-24.1
11/7/03 0:00	20.3	19.9	-13.9	-30.5	-21.5	11.1	11.4		-43.3
11/7/03 1:00	21.6	21.9	-11.9	-25.1	-17.9	9.4	9.5		-36.1
11/7/03 2:00	20.9	20.8	-11.2	-24.9	-17.9	10.6	10.6		-32.8
11/7/03 3:00	20.4	20.5	-11.7	-26.2	-18.6	10.8	11.3		-34.5
11/7/03 4:00	21.0	21.1	-11.4	-25.9	-18.6	10.0	10.6		-35.4
11/7/03 5:00	21.0	21.3	-10.8	-24.7	-17.1	9.8	10.1		-32.6
11/7/03 6:00	20.2	19.7	-10.5	-24.2	-15.3	-15.9	-15.4		-81.2
11/7/03 7:00	16.3	15.9	-9.7	-22.1	-14.5	-13.3	-13.0		-72.5
11/7/03 8:00	16.2	15.9	-13.1	-29.5	-20.6	-14.6	-14.7		-92.6
11/7/03 9:00	16.7	16.6	-7.9	-18.8	-11.9	-14.6	-14.3		-67.5
11/7/03 10:00	17.6	17.8	-5.2	-15.5	-8.6	-14.7	-14.1		-58.2
11/7/03 11:00	18.1	18.1	-9.8	-24.6	-15.8	-17.0	-16.1		-83.3
11/7/03 12:00	17.6	17.7	-10.0	-24.4	-15.4	-16.2	-15.4		-81.3
11/7/03 13:00	18.2	17.9	-10.0	-24.2	-15.0	-16.3	-16.0		-81.6
11/7/03 14:00	17.8	17.1	-9.8	-22.7	-14.4	-15.5	-14.4		-76.8
11/7/03 15:00	17.4	16.8	-11.1	-25.9	-17.0	-14.2	-13.8		-82.0
11/7/03 16:00	14.3	14.0	-16.3	-34.6	-24.3	-11.5	-11.3		-98.1
11/7/03 17:00	17.8	17.7	-8.0	-20.3	-12.3	-12.7	-12.1		-65.3
11/7/03 18:00	16.5	16.9	-7.2	-20.3	-11.2	-9.6	-9.0		-57.3
11/7/03 19:00	13.9	14.0	-6.4	-17.0	-10.1	-6.1	-5.8		-45.3
11/7/03 20:00	13.3	13.6	-7.1	-18.1	-10.5	-5.9	-5.3		-46.8
11/7/03 21:00	17.8	17.7	-9.1	-22.5	-14.0	14.2	14.5		-16.8
11/7/03 22:00	19.4	19.9	-4.2	-11.5	-4.8	13.7	14.6		7.9
11/7/03 23:00	21.0	21.2	-9.3	-22.9	-14.6	10.4	11.8		-24.5
11/8/03 0:00	22.4	20.4	-12.0	-26.9	-18.0	10.2	11.4		-35.3
11/8/03 1:00	20.7	20.9	-14.7	-30.7	-22.3	11.2	11.6		-45.0
11/8/03 2:00	19.9	20.3	-14.9	-30.5	-22.3	11.3	11.8		-44.6
11/8/03 3:00	19.2	19.5	-16.6	-34.4	-24.8	11.4	12.2		-52.2
11/8/03 4:00	19.2	19.4	-17.0	-34.6	-25.9	11.3	12.1		-54.1
11/8/03 5:00	19.6	19.8	-15.6	-34.2	-25.2	11.2	11.6		-52.3
11/8/03 6:00	18.5	18.3	-14.6	-29.7	-22.7	-4.9	-4.7		-76.6
11/8/03 7:00	14.1	13.7	-16.5	-35.0	-25.7	-0.2	0.4		-77.0
11/8/03 8:00	14.6	14.8	-18.9	-39.7	-28.4	-4.7	-3.9		-95.6
11/8/03 9:00	15.6	15.5	-17.3	-37.7	-25.8	-3.9	-4.2		-88.8
11/8/03 10:00	14.9	14.8	-24.3	-51.1	-36.5	-6.2	-5.5		-123.6
11/8/03 11:00	15.0	14.8	-21.8	-46.1	-32.9	-8.1	-6.7		-115.5
11/8/03 12:00	16.2	15.7	-19.8	-42.2	-30.4	-7.5	-7.3		-107.2
11/8/03 13:00	16.4	16.0	-20.8	-43.1	-31.6	-8.5	-7.9		-111.9
11/8/03 14:00	14.3	13.6	-23.2	-48.1	-36.6	-6.1	-5.9		-119.9
11/8/03 15:00	15.0	15.2	-16.3	-35.7	-25.1	-6.9	-6.2		-90.3
11/8/03 16:00	13.1	13.5	-18.1	-38.4	-27.0	-4.4	-4.0		-91.9
11/8/03 17:00	20.2	20.4	-12.3	-30.2	-19.7	-12.9	-11.8		-86.9

11/8/03 18:00	20.1	20.1	-11.9	-28.9	-19.7	-11.1	-10.4	-82.1
11/8/03 19:00	18.6	19.0	-11.3	-28.0	-18.0	-9.6	-9.2	-76.1
11/8/03 20:00	18.6	18.8	-12.4	-28.7	-19.3	-9.9	-9.5	-79.9
11/8/03 21:00	19.0	19.3	-12.4	-30.3	-19.7	6.4	7.2	-48.9
11/8/03 22:00	22.0	22.6	-10.4	-24.4	-16.3	5.7	5.7	-39.7
11/8/03 23:00	22.5	23.6	-8.7	-20.5	-13.7	5.7	6.5	-30.6
11/9/03 0:00	22.8	23.5	-6.7	-16.0	-10.3	7.4	7.9	-17.6
11/9/03 1:00	22.0	22.4	-8.2	-17.5	-11.8	8.5	8.7	-20.3
11/9/03 2:00	22.8	23.1	-6.7	-16.8	-11.9	7.3	7.6	-20.4
11/9/03 3:00	22.0	22.6	-7.4	-18.6	-13.1	7.6	8.0	-23.4
11/9/03 4:00	20.5	20.7	-10.0	-21.4	-15.7	10.5	11.2	-25.4
11/9/03 5:00	20.7	20.2	-10.3	-22.6	-16.5	8.9	10.3	-30.1
11/9/03 6:00	18.3	18.2	-10.0	-21.9	-15.9	-4.3	-3.3	-55.4
11/9/03 7:00	11.7	12.0	-12.0	-25.2	-18.2	2.7	2.6	-50.0
11/9/03 8:00	14.0	13.7	-11.5	-25.8	-18.3	-1.1	-1.0	-57.6
11/9/03 9:00	14.3	14.1	-13.7	-31.1	-21.4	-3.4	-2.9	-72.5
11/9/03 10:00	15.8	15.8	-10.6	-24.2	-15.6	-3.8	-3.9	-58.1
11/9/03 11:00	16.9	16.8	-12.4	-27.5	-18.3	-5.6	-5.2	-69.0
11/9/03 12:00	14.6	14.4	-17.5	-37.6	-27.1	-5.2	-4.7	-92.2
11/9/03 13:00	14.8	15.1	-14.7	-32.7	-23.1	-4.9	-4.6	-80.0
11/9/03 14:00	15.3	15.3	-15.6	-34.6	-24.7	-5.9	-5.0	-85.8
11/9/03 15:00	15.1	15.2	-12.4	-28.4	-18.9	-4.7	-4.3	-68.7
11/9/03 16:00	17.8	18.8	-8.5	-20.6	-12.7	-8.1	-7.2	-57.2
11/9/03 17:00	19.4	19.9	-4.7	-15.1	-6.9	-6.7	-6.5	-39.8
11/9/03 18:00	22.0	22.6	-5.6	-15.4	-7.4	-10.1	-9.3	-47.8
11/9/03 19:00	19.8	20.6	-7.3	-20.6	-11.9	-8.4	-7.7	-56.0
11/9/03 20:00	18.8	19.1	-4.8	-14.9	-8.1	-5.8	-5.6	-39.2
11/9/03 21:00	19.9	20.3	-8.8	-22.8	-14.3	8.3	8.9	-28.7
11/9/03 22:00	20.3	21.2	-11.0	-23.5	-16.0	10.0	9.6	-30.8
11/9/03 23:00	21.2	22.0	-13.0	-28.4	-20.9	8.1	8.8	-45.5
11/10/03 0:00	21.9	22.3	-9.6	-20.8	-15.1	8.0	8.1	-29.4
11/10/03 1:00	23.1	23.8	-7.5	-18.0	-12.1	7.3	8.0	-22.3
11/10/03 2:00	23.0	23.6	-10.7	-24.0	-17.4	6.7	7.1	-38.2
11/10/03 3:00	23.3	24.1	-9.3	-22.0	-16.2	6.8	7.0	-33.6
11/10/03 4:00	23.0	23.6	-10.3	-22.5	-16.2	7.3	6.5	-35.3
11/10/03 5:00	24.8	25.5	-9.6	-21.9	-15.0	4.2	4.3	-38.0
11/10/03 6:00	22.7	23.8	-6.3	-16.5	-10.6	-19.5	-18.5	-71.4
11/10/03 7:00	19.5	19.8	-6.4	-16.9	-10.3	-18.6	-17.9	-70.1
11/10/03 8:00	18.8	19.1	-8.0	-19.4	-12.8	-19.6	-19.4	-79.1
11/10/03 9:00	22.3	22.4	-2.7	-10.9	-6.2	-21.0	-21.1	-61.9
11/10/03 10:00	20.8	20.9	-6.1	-16.0	-10.5	-21.2	-21.2	-75.1
11/10/03 11:00	22.1	22.7	-4.2	-10.5	-6.3	-21.8	-21.2	-63.9
11/10/03 12:00	23.0	23.3	-2.6	-8.8	-4.0	-22.4	-22.2	-60.1
11/10/03 13:00	22.6	23.0	-5.9	-15.5	-9.8	-22.1	-22.1	-75.4
11/10/03 14:00	22.3	22.3	-6.1	-16.2	-10.1	-22.2	-21.2	-75.8
11/10/03 15:00	19.7	19.9	-4.9	-11.8	-7.6	-19.0	-18.5	-61.8
11/10/03 16:00	17.6	18.4	-4.2	-11.7	-7.2	-16.5	-15.9	-55.5
11/10/03 17:00	21.8	22.5	-2.2	-7.9	-3.6	-18.7	-18.4	-50.7
11/10/03 18:00	20.3	20.7	-8.8	-19.6	-13.2	-16.0	-15.5	-73.1
11/10/03 19:00	18.0	18.5	-8.4	-18.9	-13.7	-12.6	-12.2	-65.7
11/10/03 20:00	17.7	17.9	-7.8	-16.8	-12.2	-11.2	-11.2	-59.3
11/10/03 21:00	22.1	22.9	-10.4	-21.3	-15.9	5.7	6.7	-35.2

11/10/03 22:00	20.3	21.0	-10.8	-23.1	-16.3	10.5	10.7		-29.0
11/10/03 23:00	23.5	24.2	-8.7	-19.8	-13.0	6.4	6.5		-28.6
11/11/03 0:00	21.4	21.7	-14.1	-32.1	-22.7	7.6	7.7		-53.6
11/11/03 1:00	22.7	23.2	-10.7	-22.1	-15.3	6.9	7.6		-33.6
11/11/03 2:00	21.6	22.2	-10.2	-23.1	-16.6	8.6	8.9		-32.4
11/11/03 3:00	21.8	22.0	-9.2	-21.0	-14.8	8.7	9.0		-27.3
11/11/03 4:00	22.5	23.6	-8.6	-19.8	-14.4	7.7	7.6		-27.4
11/11/03 5:00	23.9	24.9	-10.9	-23.9	-16.8	5.0	5.3		-41.2
11/11/03 6:00	21.2	22.1	-9.4	-21.4	-14.3	-16.0	-16.8		-77.9
11/11/03 7:00	18.4	18.5	-7.8	-18.7	-12.7	-11.6	-11.7		-62.6
11/11/03 8:00	18.3	18.6	-7.2	-17.6	-12.1	-11.0	-10.2		-58.0
11/11/03 9:00	17.8	17.7	-9.7	-21.4	-14.6	-13.3	-12.8		-71.8
11/11/03 10:00	19.2	18.9	-6.4	-16.7	-9.5	-13.4	-12.9		-58.9
11/11/03 11:00	18.8	19.3	-7.9	-20.1	-12.7	-13.5	-12.6		-66.8
11/11/03 12:00	19.3	19.5	-7.5	-17.1	-11.1	-13.3	-12.5		-61.4
11/11/03 13:00	20.7	21.3	-7.2	-17.8	-10.9	-15.2	-14.6		-65.7
11/11/03 14:00	19.7	19.9	-7.5	-18.8	-12.9	-14.0	-13.1		-66.4
11/11/03 15:00	17.7	17.8	-6.5	-18.1	-11.5	-10.4	-10.1		-56.6
11/11/03 16:00	16.2	16.4	-6.6	-15.9	-10.6	-8.1	-7.1		-48.3
11/11/03 17:00	21.5	22.6	-2.8	-10.7	-5.5	-14.5	-13.8		-47.3
11/11/03 18:00	19.6	20.0	-6.9	-16.7	-9.9	-11.3	-10.3		-55.1
11/11/03 19:00	16.7	17.3	-9.7	-22.7	-15.6	-7.7	-7.2		-62.9
11/11/03 20:00	14.9	14.9	-9.0	-19.5	-12.6	-4.0	-0.1		-45.2
11/11/03 21:00	17.0	16.9	-9.5	-21.7	-14.7	18.1	18.5		-9.3
11/11/03 22:00	20.3	20.8	-13.7	-30.2	-21.4	9.6	9.7		-46.0
11/11/03 23:00	21.3	21.5	-12.1	-27.4	-19.5	8.1	8.0		-42.8
11/12/03 0:00	20.2	20.4	-14.8	-30.8	-22.0	9.7	10.4		-47.6
11/12/03 1:00	24.4	24.6	-10.5	-21.6	-15.6	5.6	4.8		-37.3
11/12/03 2:00	24.8	25.3	-8.6	-20.0	-15.0	4.1	4.7		-34.8
11/12/03 3:00	22.5	22.9	-9.9	-22.0	-16.4	7.9	8.0		-32.3
11/12/03 4:00	23.7	24.9	-10.0	-23.4	-16.0	4.2	4.6		-40.5
11/12/03 5:00	24.0	25.4	-12.0	-26.8	-19.5	3.6	4.1		-50.7
11/12/03 6:00	22.4	23.4	-13.5	-30.5	-22.4	-20.5	-20.0		-106.9
11/12/03 7:00	19.5	19.7	-8.1	-17.0	-12.3	-18.0	-17.8		-73.1
11/12/03 8:00	20.9	20.9	-8.0	-19.5	-13.8	-21.6	-20.7		-83.5
11/12/03 9:00	19.8	18.7	-10.0	-23.9	-17.2	-20.7	-17.9		-89.5
11/12/03 10:00	20.6	21.4	-9.5	-21.0	-14.9	-22.0	-20.6		-88.0
11/12/03 11:00	19.7	21.1	-9.1	-19.9	-14.6	-19.0	-19.1		-81.7
11/12/03 12:00	19.5	19.9	-8.7	-20.0	-14.0	-18.5	-18.0		-79.1
11/12/03 13:00	21.6	22.2	-9.2	-21.7	-15.2	-21.8	-20.8		-88.7
11/12/03 14:00	18.8	19.8	-8.4	-19.7	-14.1	-18.9	-18.2		-79.2
11/12/03 15:00	15.8	16.4	-10.5	-23.5	-17.1	-14.5	-14.1		-79.7
11/12/03 16:00	16.2	16.6	-8.7	-20.4	-13.9	-14.2	-13.6		-70.8
11/12/03 17:00	19.8	20.5	-6.1	-15.3	-10.8	-17.2	-16.8		-66.2
11/12/03 18:00	17.5	18.1	-11.1	-23.7	-17.2	-14.1	-13.6		-79.8
11/12/03 19:00	14.8	14.9	-15.3	-32.0	-23.6	-11.7	-10.6		-93.2
11/12/03 20:00	14.8	15.3	-11.6	-23.8	-17.0	-10.5	-9.4		-72.3
11/12/03 21:00	18.3	18.5	-12.1	-25.9	-18.6	11.8	12.5		-32.3
11/12/03 22:00	20.0	21.1	-16.3	-36.9	-25.9	7.4	8.4		-63.4
11/12/03 23:00	19.5	19.6	-19.6	-39.7	-29.7	8.2	7.9		-72.9
11/13/03 0:00	20.8	21.3	-16.7	-34.4	-26.1	7.5	8.0		-61.7
11/13/03 1:00	22.3	23.0	-11.7	-25.6	-18.8	7.1	7.4		-41.5

11/13/03 2:00	21.7	22.6	-18.6	-38.4	-29.4	6.8	7.5	-72.1
11/13/03 3:00	21.5	22.0	-18.4	-38.5	-29.4	7.7	7.9	-70.7
11/13/03 4:00	21.4	22.3	-18.2	-38.2	-29.1	6.7	7.4	-71.4
11/13/03 5:00	23.1	23.8	-15.0	-36.0	-26.7	5.1	5.8	-66.7
11/13/03 6:00	23.0	23.0	-8.6	-20.7	-13.5	-20.2	-19.6	-82.7
11/13/03 7:00	17.5	17.4	-10.7	-24.5	-16.8	-16.2	-15.5	-83.7
11/13/03 8:00	16.3	16.0	-7.9	-18.0	-11.5	-14.0	-13.5	-64.9
11/13/03 9:00	18.9	19.5	-8.1	-19.3	-13.1	-18.4	-17.3	-76.1
11/13/03 10:00	19.8	20.4	-6.1	-16.2	-10.5	-17.7	-17.2	-67.7
11/13/03 11:00	19.5	20.1	-8.2	-20.5	-13.1	-17.9	-17.6	-77.2
11/13/03 12:00	16.9	17.4	-7.6	-19.6	-12.2	-14.2	-13.8	-67.4
11/13/03 13:00	18.0	18.8	-7.6	-18.2	-10.8	-16.3	-15.3	-68.3
11/13/03 14:00	19.0	19.4	-7.6	-19.6	-12.3	-17.1	-16.5	-73.1
11/13/03 15:00	17.6	18.5	-8.8	-22.2	-14.1	-16.2	-15.8	-77.1
11/13/03 16:00	13.8	14.5	-11.5	-26.8	-17.9	-11.2	-10.6	-77.9
11/13/03 17:00	19.0	19.9	-8.3	-20.4	-12.6	-16.7	-16.3	-74.3
11/13/03 18:00	18.4	19.0	-6.3	-17.1	-10.4	-13.8	-13.3	-60.8
11/13/03 19:00	14.6	15.0	-7.4	-18.5	-11.5	-8.0	-8.4	-53.8
11/13/03 20:00	16.2	16.5	-8.7	-21.1	-14.5	15.5	15.5	-13.3
11/13/03 21:00	17.2	17.8	-13.0	-27.8	-19.2	12.6	13.5	-33.8
11/13/03 22:00	17.3	18.0	-10.9	-24.3	-15.7	14.2	14.2	-22.5
11/13/03 23:00	20.9	21.8	-13.2	-28.6	-20.2	7.6	7.5	-46.9
11/14/03 0:00	21.5	22.6	-12.5	-25.9	-18.7	6.3	6.9	-43.9
11/14/03 1:00	23.7	24.4	-10.4	-22.9	-15.3	5.2	5.5	-37.9
11/14/03 2:00	23.6	24.1	-11.9	-25.6	-18.1	4.8	5.4	-45.4
11/14/03 3:00	23.3	24.8	-13.0	-27.7	-20.3	5.5	4.4	-51.1
11/14/03 4:00	22.6	23.5	-12.3	-27.6	-19.8	6.2	6.5	-47.1
11/14/03 5:00	21.9	22.8	-9.8	-21.1	-14.3	-17.9	-17.8	-80.8
11/14/03 6:00	21.9	22.9	-6.9	-16.9	-10.0	-19.7	-19.1	-72.5
11/14/03 7:00	18.3	19.0	-10.7	-24.4	-16.1	-19.9	-19.1	-90.2
11/14/03 8:00	14.8	15.2	-7.4	-18.4	-11.1	-14.3	-14.0	-65.3
11/14/03 9:00	16.7	17.2	-4.3	-13.2	-6.3	-16.3	-16.1	-56.2
11/14/03 10:00	17.1	17.6	-8.3	-21.1	-11.8	-17.4	-17.3	-75.8
11/14/03 11:00	15.4	15.9	-11.8	-27.5	-17.7	-16.6	-15.4	-89.1
11/14/03 12:00	13.7	14.6	-13.9	-30.6	-21.0	-14.1	-13.5	-92.9
11/14/03 13:00	16.1	16.6	-11.3	-26.0	-17.0	-16.3	-16.2	-86.8
11/14/03 14:00	15.6	16.6	-10.4	-26.2	-16.4	-16.2	-16.3	-85.4
11/14/03 15:00	13.5	14.4	-10.3	-26.5	-16.7	-13.5	-13.0	-80.0
11/14/03 16:00	11.0	12.6	-9.4	-24.5	-15.2	-9.5	-8.8	-67.4
11/14/03 17:00	14.9	15.4	-8.4	-22.7	-13.0	-12.4	-12.9	-69.4
11/14/03 18:00	14.5	15.5	-10.9	-26.1	-16.0	-11.3	-10.6	-74.9
11/14/03 19:00	13.2	14.1	-10.3	-26.9	-16.3	-9.0	-8.8	-71.3
11/14/03 20:00	15.4	16.2	-10.1	-26.2	-15.7	13.9	14.6	-23.5
11/14/03 21:00	15.4	16.1	-11.0	-25.8	-15.1	14.8	14.7	-22.4
11/14/03 22:00	16.0	17.0	-12.7	-29.5	-20.0	15.7	16.7	-29.8
11/14/03 23:00	16.0	16.5	-18.9	-38.2	-28.0	15.6	16.0	-53.5
11/15/03 0:00	19.1	19.9	-16.9	-35.8	-26.8	9.9	9.8	-59.7
11/15/03 1:00	18.6	19.4	-19.2	-39.6	-30.0	9.9	10.7	-68.3
11/15/03 2:00	19.7	20.3	-16.9	-35.8	-26.8	9.9	10.4	-59.2
11/15/03 3:00	19.8	20.5	-16.8	-34.8	-26.1	9.9	10.8	-57.1
11/15/03 4:00	20.7	21.8	-19.0	-37.7	-28.0	7.7	7.8	-69.2
11/15/03 5:00	17.9	18.6	-16.7	-33.0	-23.8	-5.2	-4.6	-83.2

11/15/03 6:00	18.7	19.5	-15.3	-32.2	-23.3	-8.1	-7.5		-86.4
11/15/03 7:00	15.1	16.2	-17.0	-33.9	-25.0	-5.0	-4.7		-85.7
11/15/03 8:00	16.2	16.4	-15.5	-31.1	-22.4	-6.6	-6.0		-81.6
11/15/03 9:00	17.4	18.3	-11.2	-23.2	-15.3	-8.2	-7.5		-65.3
11/15/03 10:00	18.7	19.4	-11.7	-24.4	-16.9	-8.1	-7.8		-69.0
11/15/03 11:00	18.4	19.1	-13.3	-26.7	-18.5	-7.6	-7.4		-73.6
11/15/03 12:00	17.6	18.3	-11.7	-24.6	-16.9	-7.4	-6.9		-67.4
11/15/03 13:00	16.1	16.7	-14.0	-28.2	-19.4	-5.1	-5.2		-71.9
11/15/03 14:00	16.2	16.7	-12.5	-26.0	-18.9	-5.0	-5.0		-67.4
11/15/03 15:00	15.1	15.8	-12.7	-25.9	-18.5	-3.5	-4.0		-64.6
11/15/03 16:00	16.0	16.6	-14.8	-29.6	-20.3	-5.5	-5.4		-75.6
11/15/03 17:00	18.0	19.0	-9.4	-22.0	-13.4	-6.6	-5.5		-56.8
11/15/03 18:00	17.9	18.4	-14.3	-30.2	-20.3	-4.5	-5.2		-74.5
11/15/03 19:00	16.0	16.7	-15.9	-32.6	-22.7	-3.6	-2.5		-77.4
11/15/03 20:00	16.4	17.1	-19.0	-38.4	-27.5	12.8	13.3		-58.7
11/15/03 21:00	18.5	19.3	-13.6	-27.8	-18.7	11.6	11.9		-36.6
11/15/03 22:00	17.7	18.7	-16.0	-33.5	-23.5	12.3	13.6		-47.1
11/15/03 23:00	20.2	21.0	-12.3	-27.0	-18.8	11.1	10.4		-36.6
11/16/03 0:00	20.2	21.1	-14.9	-31.1	-23.4	8.2	8.7		-52.5
11/16/03 1:00	21.2	22.7	-10.0	-21.9	-15.6	7.2	7.8		-32.5
11/16/03 2:00	19.6	20.8	-17.3	-36.3	-27.4	10.5	10.5		-60.0
11/16/03 3:00	18.1	18.7	-20.6	-42.3	-31.7	11.4	12.0		-71.2
11/16/03 4:00	16.9	17.5	-18.9	-39.8	-30.2	14.0	14.1		-60.9
11/16/03 5:00	15.4	16.4	-18.7	-38.0	-29.0	-2.6	-1.9		-90.1
11/16/03 6:00	17.8	18.2	-18.1	-36.3	-28.5	-5.3	-5.4		-93.5
11/16/03 7:00	14.7	15.1	-20.8	-41.7	-32.4	-3.9	-3.9		-102.7
11/16/03 8:00	13.9	14.2	-18.5	-38.9	-29.2	-2.9	-2.9		-92.3
11/16/03 9:00	19.1	19.1	-8.7	-18.0	-13.2	-8.5	-8.8		-57.2
11/16/03 10:00	17.2	18.0	-11.3	-24.5	-17.7	-7.0	-7.1		-67.5
11/16/03 11:00	18.4	19.1	-7.5	-18.6	-13.0	-8.1	-7.9		-55.1
11/16/03 12:00	18.5	19.5	-6.2	-15.6	-10.3	-8.9	-8.6		-49.5
11/16/03 13:00	18.5	19.5	-8.9	-20.5	-14.3	-9.2	-8.9		-61.9
11/16/03 14:00	18.9	19.7	-9.4	-21.7	-15.3	-9.9	-9.7		-65.9
11/16/03 15:00	18.9	19.8	-9.2	-22.0	-15.3	-10.6	-10.0		-67.1
11/16/03 16:00	16.6	17.0	-11.9	-25.6	-18.3	-6.6	-6.6		-69.0
11/16/03 17:00	20.3	21.4	-8.2	-21.3	-14.1	-10.8	-9.9		-64.3
11/16/03 18:00	20.2	21.0	-9.9	-22.4	-15.5	-7.7	-7.7		-63.3
11/16/03 19:00	20.4	21.3	-10.5	-25.4	-17.6	-9.5	-9.0		-72.1
11/16/03 20:00	21.4	22.7	-7.7	-19.3	-12.5	6.5	7.1		-25.8
11/16/03 21:00	19.8	20.6	-10.6	-24.9	-17.0	8.8	9.4		-34.2
11/16/03 22:00	18.3	19.0	-18.3	-38.6	-28.7	11.1	10.8		-63.7
11/16/03 23:00	19.0	20.1	-11.8	-26.6	-18.8	11.4	11.8		-34.0
11/17/03 0:00	20.3	21.4	-12.1	-26.1	-18.9	9.1	8.9		-39.0
11/17/03 1:00	21.8	22.7	-14.7	-31.7	-23.6	6.3	6.5		-57.3
11/17/03 2:00	19.7	20.7	-18.4	-38.4	-29.4	9.3	9.2		-67.6
11/17/03 3:00	19.2	20.4	-18.4	-38.4	-29.1	10.3	10.2		-65.3
11/17/03 4:00	20.6	21.8	-18.1	-37.6	-27.9	8.1	9.2		-66.3
11/17/03 5:00	19.8	20.3	-11.9	-26.9	-19.0	-15.4	-14.7		-88.0
11/17/03 6:00	21.5	22.9	-6.2	-17.2	-11.1	-17.9	-17.1		-69.5
11/17/03 7:00	18.1	18.9	-8.2	-21.0	-14.2	-15.9	-15.6		-74.8
11/17/03 8:00	20.1	20.8	-2.5	-10.3	-5.9	-18.3	-18.1		-55.0
11/17/03 9:00	18.8	19.7	-3.5	-13.4	-7.0	-16.7	-16.0		-56.6

11/17/03 10:00	19.5	19.8	-6.1	-17.7	-10.7	-17.9	-17.0		-69.5
11/17/03 11:00	19.3	20.2	-5.0	-16.7	-9.5	-17.2	-16.5		-65.1
11/17/03 12:00	19.1	19.4	-7.0	-19.2	-12.5	-16.7	-16.6		-72.0
11/17/03 13:00	20.1	21.0	-5.9	-16.2	-10.2	-17.3	-17.2		-66.9
11/17/03 14:00	18.8	19.4	-5.4	-15.6	-9.7	-15.8	-15.6		-62.1
11/17/03 15:00	17.6	18.5	-8.1	-20.4	-13.4	-15.2	-14.9		-72.0
11/17/03 16:00	15.0	15.8	-11.1	-25.5	-18.0	-12.3	-11.7		-78.7
11/17/03 17:00	21.5	23.2	-3.3	-11.4	-5.3	-18.2	-17.4		-55.5
11/17/03 18:00	17.9	17.9	-8.2	-21.3	-13.1	-12.4	-11.7		-66.8
11/17/03 19:00	16.6	17.5	-11.1	-25.9	-16.9	-11.4	-10.7		-76.0
11/17/03 20:00	18.9	19.8	-9.2	-22.5	-14.8	12.0	12.2		-22.3
11/17/03 21:00	17.9	19.0	-6.0	-16.2	-9.6	13.3	13.0		-5.5
11/17/03 22:00	17.2	18.0	-10.1	-22.0	-15.0	14.0	14.5		-18.7
11/17/03 23:00	23.4	24.1	-5.3	-14.1	-8.1	6.2	6.8		-14.5
11/18/03 0:00	21.6	23.3	-11.0	-24.7	-17.0	4.6	5.3		-42.8
11/18/03 1:00	22.2	23.8	-11.5	-25.7	-18.2	5.3	5.8		-44.3
11/18/03 2:00	20.7	21.8	-15.3	-33.7	-24.6	9.3	9.5		-54.8
11/18/03 3:00	20.0	21.1	-16.9	-36.2	-27.1	9.5	9.6		-61.1
11/18/03 4:00	20.0	21.0	-16.1	-36.4	-27.2	9.9	9.7		-60.1
11/18/03 5:00	21.6	22.7	-8.7	-21.6	-14.3	-18.3	-17.4		-80.4
11/18/03 6:00	24.8	26.3	-3.2	-10.3	-5.5	-23.3	-22.9		-65.3
11/18/03 7:00	19.6	20.7	-4.8	-13.8	-8.4	-16.4	-16.0		-59.5
11/18/03 8:00	18.8	19.6	-6.2	-17.2	-10.9	-17.7	-17.0		-69.0
11/18/03 9:00	21.5	22.3	-4.3	-14.4	-7.8	-20.0	-18.8		-65.4
11/18/03 10:00	20.7	21.9	-5.2	-14.7	-8.7	-19.2	-18.6		-66.5
11/18/03 11:00	19.4	20.2	-7.6	-19.2	-12.4	-17.2	-16.9		-73.4
11/18/03 12:00	18.0	19.4	-6.0	-16.6	-10.5	-15.3	-14.6		-62.9
11/18/03 13:00	20.0	21.1	-4.1	-13.6	-7.3	-17.3	-16.6		-58.8
11/18/03 14:00	20.1	21.4	-3.0	-10.9	-5.8	-17.0	-16.6		-53.3
11/18/03 15:00	17.2	18.7	-5.5	-15.1	-8.6	-14.1	-13.7		-56.9
11/18/03 16:00	14.3	15.8	-11.9	-27.0	-18.5	-12.0	-11.6		-81.0
11/18/03 17:00	19.0	20.5	-9.4	-23.0	-14.7	-17.9	-17.2		-82.2
11/18/03 18:00	16.0	17.4	-8.4	-22.5	-13.3	-12.2	-11.7		-68.0
11/18/03 19:00	13.9	15.2	-10.2	-26.0	-15.9	-9.8	-9.1		-71.0
11/18/03 20:00	14.3	15.4	-10.4	-25.0	-15.4	16.2	16.3		-18.3
11/18/03 21:00	15.6	16.9	-9.6	-23.0	-15.2	14.9	15.2		-17.7
11/18/03 22:00	16.4	17.8	-13.1	-27.7	-18.6	13.4	13.7		-32.3
11/18/03 23:00	20.2	21.3	-16.0	-35.1	-25.4	7.1	7.3		-62.2
11/19/03 0:00	24.6	26.3	-7.7	-18.2	-12.2	2.7	2.8		-32.6
11/19/03 1:00	23.6	24.8	-10.6	-24.3	-18.0	4.2	4.1		-44.5
11/19/03 2:00	22.0	23.2	-12.8	-28.3	-20.7	6.0	5.6		-50.0
11/19/03 3:00	21.6	22.6	-13.6	-30.9	-22.5	6.7	6.7		-53.5
11/19/03 4:00	21.8	22.4	-13.9	-30.3	-21.7	6.6	6.7		-52.7
11/19/03 5:00	20.9	21.7	-10.7	-24.1	-16.9	-17.4	-17.4		-86.7
11/19/03 6:00	24.6	26.1	-2.3	-9.0	-4.1	-22.0	-21.8		-59.2
11/19/03 7:00	19.2	19.7	-4.0	-11.4	-6.2	-16.9	-16.7		-55.2
11/19/03 8:00	17.9	18.1	-5.4	-16.0	-9.0	-15.4	-15.2		-61.0
11/19/03 9:00	20.0	20.2	-7.0	-18.3	-12.0	-18.6	-17.9		-73.8
11/19/03 10:00	21.2	21.9	-4.4	-14.3	-8.7	-20.2	-18.8		-66.5
11/19/03 11:00	21.0	21.5	-12.5	-29.5	-20.5	-19.5	-19.2		-101.1
11/19/03 12:00	19.5	20.3	-10.0	-25.3	-15.7	-16.9	-16.4		-84.4
11/19/03 13:00	20.4	21.1	-8.3	-21.5	-13.1	-17.2	-16.5		-76.6

11/19/03 14:00	20.0	20.8	-8.0	-21.3	-12.7	-15.8	-15.2		-72.9
11/19/03 15:00	19.4	19.4	-6.2	-22.4	-9.8	-14.9	-14.9		-68.2
11/19/03 16:00	17.3	17.4	-8.5	-21.6	-14.0	-13.1	-12.7		-69.8
11/19/03 17:00	19.2	20.0	-5.7	-18.7	-9.7	-15.5	-14.9		-64.6
11/19/03 18:00	17.3	18.0	-4.8	-15.1	-7.9	-12.0	-11.5		-51.3
11/19/03 19:00	16.5	16.3	-3.8	-12.9	-5.8	-10.4	-9.4		-42.2
11/19/03 20:00	20.0	20.0	-2.5	-11.2	-5.0	10.6	11.6		3.6
11/19/03 21:00	21.3	21.9	-3.6	-11.9	-6.3	9.3	9.9		-2.5
11/19/03 22:00	22.4	23.1	-4.9	-13.5	-7.1	7.5	8.8		-9.1
11/19/03 23:00	21.8	22.5	-6.1	-18.0	-10.6	8.6	8.8		-17.3
11/20/03 0:00	21.6	21.1	-18.7	-38.9	-28.7	7.9	8.2		-70.2
11/20/03 1:00	23.1	23.8	-12.4	-25.8	-19.1	6.3	6.9		-44.1
11/20/03 2:00	22.8	23.1	-13.8	-30.8	-22.4	6.7	7.1		-53.3
11/20/03 3:00	21.9	22.0	-16.5	-34.4	-24.4	7.3	7.5		-60.5
11/20/03 4:00	20.9	21.5	-16.7	-33.9	-25.7	9.0	9.2		-58.1
11/20/03 5:00	20.7	20.9	-12.4	-26.5	-18.9	-16.2	-15.7		-89.7
11/20/03 6:00	22.0	22.8	-11.3	-25.4	-17.9	-19.4	-18.6		-92.6
11/20/03 7:00	20.9	21.2	-8.5	-21.0	-13.8	-17.4	-17.1		-77.8
11/20/03 8:00	21.8	21.8	-8.2	-21.1	-14.2	-19.2	-18.8		-81.6
11/20/03 9:00	21.9	22.0	-6.2	-15.9	-10.8	-18.2	-17.9		-69.0
11/20/03 10:00	20.7	21.1	-12.7	-29.3	-20.5	-18.9	-18.1		-99.5
11/20/03 11:00	19.4	19.4	-10.1	-24.0	-16.3	-16.5	-15.8		-82.7
11/20/03 12:00	20.7	21.1	-12.0	-27.6	-19.1	-18.6	-18.0		-95.2
11/20/03 13:00	21.6	22.1	-14.4	-32.6	-22.7	-20.4	-19.7		-109.7
11/20/03 14:00	20.8	21.1	-14.0	-30.8	-21.5	-19.1	-18.6		-104.0
11/20/03 15:00	19.9	19.8	-12.3	-28.9	-20.5	-18.0	-16.9		-96.6
11/20/03 16:00	14.7	15.0	-12.7	-28.3	-19.3	-11.5	-11.2		-82.9
11/20/03 17:00	23.2	23.0	-10.1	-25.0	-16.0	-21.6	-20.7		-93.4
11/20/03 18:00	18.5	18.7	-9.8	-23.4	-14.9	-15.0	-14.4		-77.3
11/20/03 19:00	14.7	14.8	-13.5	-30.3	-20.9	-11.5	-10.1		-86.3
11/20/03 20:00	19.4	19.4	-9.3	-23.5	-15.8	9.3	9.6		-29.6
11/20/03 21:00	19.0	19.6	-10.1	-24.9	-16.8	9.6	10.5		-31.8
11/20/03 22:00	15.9	15.9	-14.8	-34.9	-24.2	14.5	14.1		-45.3
11/20/03 23:00	22.3	22.7	-12.0	-26.5	-19.2	7.7	8.0		-41.9
11/21/03 0:00	23.5	24.0	-12.8	-27.3	-19.7	5.8	6.0		-48.1
11/21/03 1:00	24.3	24.3	-10.8	-24.3	-17.6	5.5	5.5		-41.6
11/21/03 2:00	24.6	25.1	-11.0	-25.1	-18.3	4.1	4.7		-45.6
11/21/03 3:00	22.0	23.2	-14.1	-30.6	-22.6	7.1	7.2		-53.0
11/21/03 4:00	22.8	23.1	-14.1	-31.0	-23.1	7.7	8.0		-52.6
11/21/03 5:00	22.3	22.6	-11.5	-24.9	-18.0	-18.5	-18.2		-91.0
11/21/03 6:00	22.7	22.6	-11.1	-28.0	-19.5	-18.4	-18.1		-95.1
11/21/03 7:00	20.9	21.2	-12.2	-28.4	-20.7	-18.9	-18.7		-98.8
11/21/03 8:00	17.5	17.0	-8.8	-21.1	-14.7	-13.1	-12.7		-70.4
11/21/03 9:00	18.2	18.5	-9.7	-23.9	-16.2	-15.0	-14.4		-79.1
11/21/03 10:00	17.3	17.3	-10.3	-24.4	-16.1	-14.5	-13.9		-79.2
11/21/03 11:00	16.5	16.4	-11.4	-26.4	-17.6	-12.2	-12.3		-80.0
11/21/03 12:00	16.7	16.5	-10.4	-26.3	-16.9	-12.5	-12.3		-78.4
11/21/03 13:00	16.9	16.7	-10.0	-26.5	-16.5	-12.7	-12.3		-78.0
11/21/03 14:00	15.6	15.5	-9.8	-25.4	-16.5	-11.4	-11.2		-74.3
11/21/03 15:00	13.5	13.0	-9.8	-27.7	-18.5	-8.4	-7.8		-72.2
11/21/03 16:00	10.8	10.9	-10.5	-25.7	-16.3	-4.1	-3.9		-60.5
11/21/03 17:00	19.4	19.1	0.8	-5.4	1.1	-12.9	-12.5		-29.0

11/21/03 18:00	15.4	15.3	-5.7	-18.2	-9.4	-8.7	-7.9		-49.9
11/21/03 19:00	13.5	13.1	-5.7	-17.0	-8.1	-6.4	-5.5		-42.7
11/21/03 20:00	15.2	15.2	-7.6	-22.1	-12.6	16.1	16.5		-9.6
11/21/03 21:00	15.7	15.3	-7.4	-19.5	-11.1	17.2	17.2		-3.6
11/21/03 22:00	21.8	22.4	-6.4	-17.0	-9.9	8.0	9.1		-16.2
11/21/03 23:00	22.6	22.6	-14.0	-31.8	-21.6	5.8	6.2		-55.5
11/22/03 0:00	19.8	23.2	-17.1	-35.9	-25.8	9.6	10.2		-58.9
11/22/03 1:00	17.4	17.5	-15.2	-31.9	-22.1	-15.5	-14.9		-99.7
11/22/03 2:00	11.7	11.6	-19.5	-40.5	-29.7	-37.1	-36.1		-162.9
11/22/03 3:00	11.1	11.1	-19.7	-39.9	-29.7	-36.0	-35.9		-161.3
11/22/03 4:00	12.4	12.4	-19.6	-41.8	-30.6	-38.1	-38.0		-168.0
11/22/03 5:00	11.2	11.5	-17.4	-37.2	-27.5	-53.1	-52.9		-188.0
11/22/03 6:00	11.4	11.0	-14.9	-32.9	-23.6	-54.0	-53.0		-178.3
11/22/03 7:00	8.4	8.0	-15.7	-34.6	-24.5	-51.8	-52.3		-178.9
11/22/03 8:00	9.6	9.3	-12.7	-29.4	-20.5	-54.3	-54.2		-171.0
11/22/03 9:00	10.8	11.1	-14.7	-34.4	-24.1	-56.6	-56.4		-186.3
11/22/03 10:00	10.6	10.5	-12.6	-28.3	-19.2	-55.2	-55.3		-170.7
11/22/03 11:00	11.1	10.4	-13.6	-31.1	-21.0	-55.1	-54.5		-175.2
11/22/03 12:00	8.4	7.4	-13.0	-30.9	-21.0	-50.6	-50.6		-166.2
11/22/03 13:00	7.0	6.7	-14.9	-33.8	-23.0	-49.5	-49.8		-171.0
11/22/03 14:00	5.7	5.6	-15.2	-34.0	-23.0	-48.9	-48.4		-169.4
11/22/03 15:00	3.7	3.2	-14.3	-32.4	-21.7	-46.1	-46.1		-160.6
11/22/03 16:00	4.2	3.8	-17.1	-38.6	-27.2	-47.2	-47.1		-177.2
11/22/03 17:00	12.8	12.9	-4.3	-14.1	-6.2	-55.6	-55.2		-135.3
11/22/03 18:00	11.8	12.2	-6.3	-18.3	-9.2	-55.3	-54.4		-143.5
11/22/03 19:00	13.2	13.6	-8.2	-21.5	-12.2	-30.0	-29.1		-101.1
11/22/03 20:00	13.5	13.6	-10.9	-26.5	-15.8	-18.4	-18.0		-89.5
11/22/03 21:00	13.6	13.4	-5.3	-19.2	-10.5	-15.7	-15.3		-65.9
11/22/03 22:00	16.7	16.9	-3.2	-12.4	-5.1	-7.4	-7.2		-35.3
11/22/03 23:00	17.2	17.0	-9.3	-22.1	-14.1	-10.9	-10.6		-67.0
11/23/03 0:00	16.4	16.6	-13.6	-30.1	-21.0	-14.2	-13.6		-92.6
11/23/03 1:00	16.4	16.6	-13.3	-28.4	-19.3	-15.6	-15.2		-91.8
11/23/03 2:00	13.4	13.7	-16.5	-34.8	-25.2	-16.6	-16.5		-109.6
11/23/03 3:00	13.7	13.7	-17.1	-37.3	-26.5	-17.8	-17.5		-116.2
11/23/03 4:00	13.1	13.1	-17.9	-37.7	-27.0	-17.7	-17.4		-117.7
11/23/03 5:00	14.0	14.0	-16.5	-35.1	-25.3	-17.9	-17.9		-112.7
11/23/03 6:00	15.5	15.5	-12.3	-26.8	-19.1	-18.2	-17.8		-94.2
11/23/03 7:00	9.4	9.8	-12.6	-28.5	-20.4	-26.6	-25.9		-114.1
11/23/03 8:00	12.1	12.9	-10.8	-26.7	-17.4	-28.6	-28.7		-112.2
11/23/03 9:00	13.7	13.9	-11.7	-26.7	-17.3	-26.9	-26.6		-109.3
11/23/03 10:00	14.5	14.3	-12.6	-29.4	-19.8	-26.6	-26.0		-114.5
11/23/03 11:00	13.2	13.1	-14.1	-31.1	-21.3	-25.8	-25.4		-117.7
11/23/03 12:00	12.0	12.0	-13.8	-31.1	-20.8	-25.4	-25.2		-116.3
11/23/03 13:00	12.4	12.2	-16.2	-34.6	-24.2	-26.1	-25.8		-126.9
11/23/03 14:00	11.8	11.9	-16.2	-35.8	-25.3	-26.8	-26.3		-130.5
11/23/03 15:00	12.4	12.2	-14.1	-31.1	-20.9	-26.6	-26.6		-119.4
11/23/03 16:00	8.5	10.8	-15.7	-37.5	-26.3	-27.2	-26.6		-133.2
11/23/03 17:00	20.4	24.2	-3.4	-12.1	-4.6	-17.1	-16.2		-53.5
11/23/03 18:00	21.3	24.7	-5.6	-16.7	-8.1	-15.5	-15.1		-61.0
11/23/03 19:00	18.9	21.7	-7.9	-20.8	-10.3	-15.3	-14.5		-68.8
11/23/03 20:00	17.7	21.0	-7.2	-18.1	-9.3	-15.4	-14.8		-64.9
11/23/03 21:00	14.9	17.5	-11.9	-28.2	-18.5	-16.9	-16.5		-92.0

11/23/03 22:00	12.3	15.4	-17.1	-39.1	-27.4	-16.4	-15.9		-115.9
11/23/03 23:00	12.5	15.6	-18.3	-38.4	-27.4	-13.8	-13.3		-111.1
11/24/03 0:00	10.6	13.4	-22.2	-45.5	-33.9	-17.7	-17.3		-136.6
11/24/03 1:00	11.3	13.7	-21.9	-45.5	-33.3	-19.5	-19.0		-139.2
11/24/03 2:00	10.9	13.7	-20.8	-43.9	-32.8	-19.9	-19.6		-136.9
11/24/03 3:00	11.2	14.2	-21.6	-46.1	-34.2	-20.4	-20.3		-142.7
11/24/03 4:00	12.7	15.6	-21.1	-44.7	-32.0	-19.7	-19.6		-137.1
11/24/03 5:00	12.9	16.1	-21.7	-46.0	-33.1	-19.8	-19.4		-139.9
11/24/03 6:00	15.6	19.1	-15.3	-34.3	-24.0	-17.4	-16.9		-107.8
11/24/03 7:00	9.7	12.7	-11.2	-26.2	-16.8	-24.0	-23.5		-101.7
11/24/03 8:00	11.2	13.7	-10.8	-26.9	-17.0	-29.9	-29.3		-113.9
11/24/03 9:00	14.3	17.1	-11.2	-27.9	-17.4	-13.4	-13.0		-82.9
11/24/03 10:00	15.2	18.2	-11.2	-27.2	-16.9	-14.2	-13.9		-83.4
11/24/03 11:00	14.8	18.0	-7.7	-21.0	-11.3	-13.4	-13.0		-66.4
11/24/03 12:00	14.1	17.6	-9.4	-23.6	-14.0	-12.7	-11.9		-71.6
11/24/03 13:00	13.4	16.1	-12.0	-27.0	-17.0	-12.5	-11.5		-80.0
11/24/03 14:00	13.0	15.6	-12.7	-29.0	-19.2	-11.1	-10.4		-82.3
11/24/03 15:00	11.0	14.2	-10.0	-24.8	-14.6	-8.4	-7.6		-65.3
11/24/03 16:00	12.2	14.9	-11.3	-27.5	-17.6	-9.0	-8.4		-73.8
11/24/03 17:00	17.6	20.2	-6.7	-20.4	-10.2	-14.2	-12.8		-64.2
11/24/03 18:00	18.3	21.5	-5.5	-17.0	-7.2	-13.0	-12.8		-55.5
11/24/03 19:00	16.9	20.2	-8.4	-22.2	-11.6	-12.3	-11.6		-66.0
11/24/03 20:00	17.0	20.2	-7.2	-20.4	-9.7	13.7	13.8		-9.8
11/24/03 21:00	16.1	19.4	-9.7	-24.8	-15.3	15.4	16.4		-18.0
11/24/03 22:00	17.3	20.0	-12.9	-29.8	-18.8	13.0	13.8		-34.8
11/24/03 23:00	19.3	22.6	-10.0	-24.0	-15.0	11.3	11.6		-26.1
11/25/03 0:00	17.8	21.2	-12.8	-29.6	-19.7	13.8	13.4		-34.8
11/25/03 1:00	19.5	23.1	-9.9	-23.3	-14.9	10.8	10.9		-26.4
11/25/03 2:00	17.9	21.4	-11.8	-27.2	-18.4	13.0	13.0		-31.5
11/25/03 3:00	18.1	21.4	-12.9	-28.8	-20.1	12.0	12.1		-37.7
11/25/03 4:00	17.9	21.2	-12.9	-27.4	-19.0	13.3	13.5		-32.5
11/25/03 5:00	18.8	22.1	-8.3	-19.4	-12.1	-14.2	-13.6		-67.6
11/25/03 6:00	15.9	18.7	-20.8	-43.2	-30.4	-12.7	-12.8		-119.9
11/25/03 7:00	12.4	15.6	-17.4	-37.7	-26.8	-9.5	-9.0		-100.4
11/25/03 8:00	12.7	15.6	-14.2	-33.3	-21.5	-9.4	-9.0		-87.4
11/25/03 9:00	15.3	18.2	-11.6	-27.7	-17.7	-13.3	-12.9		-83.2
11/25/03 10:00	17.1	19.6	-8.0	-20.2	-10.1	-15.6	-14.6		-68.4
11/25/03 11:00	17.5	20.6	-5.7	-16.4	-7.4	-16.3	-16.4		-62.3
11/25/03 12:00	16.0	18.3	-8.6	-22.9	-12.3	-13.5	-13.0		-70.2
11/25/03 13:00	16.4	19.4	-8.9	-22.6	-12.9	-15.4	-14.8		-74.6
11/25/03 14:00	15.0	18.3	-9.3	-24.4	-13.8	-13.5	-12.8		-73.8
11/25/03 15:00	12.1	15.4	-9.5	-24.2	-14.8	-9.8	-9.6		-67.9
11/25/03 16:00	10.1	13.1	-12.2	-29.4	-18.3	-5.9	-5.4		-71.2
11/25/03 17:00	22.1	25.6	4.3	1.5	7.7	-18.4	-17.7		-22.6
11/25/03 18:00	15.5	18.8	-11.2	-26.5	-15.7	-34.9	-34.3		-122.6
11/25/03 19:00	13.3	16.4	-7.3	-20.8	-11.1	-31.8	-30.7		-101.8
11/25/03 20:00	16.5	19.7	-9.6	-25.4	-15.0	14.0	14.2		-21.8
11/25/03 21:00	17.0	19.8	-9.6	-23.0	-13.7	14.6	14.9		-16.8
11/25/03 22:00	16.0	19.8	-9.8	-23.9	-14.4	16.8	17.5		-13.8
11/25/03 23:00	20.2	23.6	-7.2	-17.8	-9.9	10.6	11.0		-13.3
11/26/03 0:00	18.3	21.8	-12.7	-28.7	-18.7	11.9	12.3		-35.9
11/26/03 1:00	19.1	22.6	-12.1	-27.6	-18.8	11.3	11.8		-35.4

11/26/03 2:00	17.8	21.4	-15.3	-32.9	-23.4	11.5	11.8	-48.3
11/26/03 3:00	17.7	20.6	-16.8	-36.0	-26.0	13.0	13.1	-52.7
11/26/03 4:00	18.0	20.6	-15.8	-34.7	-24.5	12.2	13.0	-49.7
11/26/03 5:00	17.7	20.7	-12.1	-27.3	-18.3	-12.1	-11.5	-81.3
11/26/03 6:00	14.2	18.0	-15.1	-34.6	-23.8	-10.1	-10.4	-94.0
11/26/03 7:00	13.9	17.4	-18.4	-39.8	-28.1	-11.9	-11.4	-109.6
11/26/03 8:00	12.6	15.7	-14.3	-34.7	-23.0	-9.7	-8.7	-90.5
11/26/03 9:00	15.9	18.9	-6.1	-19.0	-10.0	-12.0	-12.0	-59.1
11/26/03 10:00	16.5	19.5	-6.8	-19.4	-10.7	-14.7	-14.5	-66.1
11/26/03 11:00	14.8	18.5	-5.7	-16.2	-8.4	-12.2	-11.5	-54.1
11/26/03 12:00	13.7	16.6	-6.8	-19.7	-10.2	-9.1	-9.0	-54.7
11/26/03 13:00	13.1	16.2	-8.8	-24.0	-14.3	-9.8	-9.7	-66.6
11/26/03 14:00	12.2	15.3	-7.9	-21.6	-12.5	-9.5	-9.1	-60.7
11/26/03 15:00	9.3	11.9	-12.4	-29.3	-19.6	-5.0	-4.6	-70.9
11/26/03 16:00	11.0	13.8	-10.8	-27.5	-17.2	-6.2	-5.4	-67.0
11/26/03 17:00	15.7	18.6	-9.6	-25.2	-14.2	-13.6	-13.0	-75.6
11/26/03 18:00	17.5	20.5	-4.2	-14.8	-6.0	-13.0	-12.2	-50.2
11/26/03 19:00	13.5	16.5	-5.5	-16.3	-7.6	-8.1	-7.4	-44.9
11/26/03 20:00	15.6	19.0	-4.1	-14.1	-5.7	16.5	16.5	9.1
11/26/03 21:00	14.8	18.8	-5.2	-15.9	-6.5	18.2	18.4	9.1
11/26/03 22:00	16.5	19.5	-9.3	-22.4	-13.1	16.5	16.1	-12.3
11/26/03 23:00	17.3	20.4	-11.4	-26.9	-17.3	14.8	15.2	-25.6
11/27/03 0:00	17.4	20.5	-11.6	-26.6	-17.8	15.8	15.3	-24.9
11/27/03 1:00	15.9	19.1	-14.4	-32.1	-22.0	15.5	15.7	-37.3
11/27/03 2:00	14.7	17.9	-16.2	-35.3	-25.2	17.4	17.6	-41.7
11/27/03 3:00	13.9	16.9	-17.8	-38.0	-26.8	18.4	18.6	-45.6
11/27/03 4:00	13.3	16.2	-17.4	-37.7	-26.5	19.1	19.2	-43.3
11/27/03 5:00	10.3	13.2	-15.6	-33.3	-23.1	-1.7	-1.2	-74.9
11/27/03 6:00	11.4	14.2	-15.7	-34.8	-24.2	-3.8	-3.6	-82.1
11/27/03 7:00	6.7	9.2	-17.9	-37.7	-26.6	3.5	3.7	-75.0
11/27/03 8:00	9.0	11.7	-13.4	-30.4	-20.6	1.9	1.9	-60.6
11/27/03 9:00	11.7	14.3	-7.3	-17.5	-9.7	-1.9	-1.0	-37.3
11/27/03 10:00	12.3	15.2	-9.2	-23.9	-14.3	-1.6	-2.3	-51.4
11/27/03 11:00	12.6	15.6	-10.4	-24.3	-14.5	-2.7	-2.1	-54.0
11/27/03 12:00	12.9	16.3	-9.9	-22.6	-14.0	-3.0	-2.4	-51.9
11/27/03 13:00	11.0	14.0	-12.9	-29.6	-19.1	-1.0	-0.2	-62.7
11/27/03 14:00	9.1	12.0	-16.0	-35.8	-24.8	1.8	2.4	-72.4
11/27/03 15:00	7.0	10.0	-17.3	-37.1	-25.7	2.5	2.6	-75.0
11/27/03 16:00	6.5	9.2	-18.6	-40.6	-28.8	4.1	4.5	-79.4
11/27/03 17:00	11.9	15.9	-15.8	-35.0	-24.0	-3.8	-3.3	-81.9
11/27/03 18:00	10.6	13.8	-17.3	-37.7	-25.4	-0.6	-0.2	-81.2
11/27/03 19:00	9.7	12.8	-15.7	-34.8	-23.4	1.1	1.3	-71.5
11/27/03 20:00	11.7	14.7	-17.5	-38.2	-26.2	23.1	23.1	-35.7
11/27/03 21:00	13.1	15.8	-19.1	-41.0	-28.7	22.1	22.3	-44.4
11/27/03 22:00	12.1	15.2	-20.2	-44.1	-31.5	22.4	21.9	-51.5
11/27/03 23:00	14.5	17.2	-14.4	-30.3	-20.9	19.4	19.9	-26.4
11/28/03 0:00	12.8	15.6	-18.0	-38.1	-26.5	20.9	21.1	-40.5
11/28/03 1:00	12.2	15.1	-20.5	-41.9	-30.3	20.4	20.5	-51.9
11/28/03 2:00	12.6	15.5	-20.8	-43.8	-32.2	19.9	20.8	-56.2
11/28/03 3:00	12.3	15.4	-21.5	-45.0	-32.7	20.8	21.5	-57.0
11/28/03 4:00	12.6	15.3	-21.5	-44.4	-32.7	20.7	20.9	-57.0
11/28/03 5:00	10.9	13.5	-17.6	-36.9	-26.6	-3.1	-2.4	-86.6

11/28/03 6:00	13.0	15.9	-13.0	-29.8	-20.6	-7.0	-7.0		-77.4
11/28/03 7:00	5.8	8.5	-21.7	-44.2	-32.2	0.8	1.3		-96.0
11/28/03 8:00	8.1	11.0	-19.4	-40.6	-27.9	-3.5	-3.1		-94.6
11/28/03 9:00	10.0	12.9	-14.6	-32.2	-20.7	-6.5	-5.2		-79.2
11/28/03 10:00	10.3	12.7	-14.1	-32.7	-21.0	-5.4	-5.4		-78.6
11/28/03 11:00	12.2	14.1	-14.1	-31.8	-20.1	-6.7	-6.4		-79.1
11/28/03 12:00	13.3	14.0	-13.9	-30.9	-19.8	-7.1	-6.6		-78.4
11/28/03 13:00	13.0	13.1	-15.3	-35.3	-23.1	-6.6	-6.0		-86.2
11/28/03 14:00	12.2	12.5	-15.3	-34.9	-23.5	-5.4	-4.6		-83.8
11/28/03 15:00	10.8	11.7	-16.1	-35.3	-23.6	-4.8	-4.2		-84.0
11/28/03 16:00	8.0	12.4	-16.2	-36.5	-23.9	-4.7	-4.1		-85.4
11/28/03 17:00	12.9	17.4	-14.2	-29.8	-17.4	-10.7	-10.5		-82.6
11/28/03 18:00	13.0	17.4	-10.4	-26.4	-14.7	-7.8	-7.0		-66.3
11/28/03 19:00	9.9	13.6	-14.6	-34.4	-21.5	-2.8	-2.3		-75.6
11/28/03 20:00	13.5	17.5	-13.0	-30.6	-19.5	16.5	17.4		-29.0
11/28/03 21:00	14.3	18.4	-12.7	-30.8	-19.7	16.5	17.7		-29.2
11/28/03 22:00	14.9	19.4	-14.0	-30.9	-20.7	16.6	17.0		-31.8
11/28/03 23:00	14.6	19.0	-15.3	-33.5	-23.0	16.7	17.0		-38.1
11/29/03 0:00	13.2	17.5	-18.0	-39.1	-28.0	17.9	18.5		-48.7
11/29/03 1:00	13.1	17.0	-19.3	-40.2	-28.9	18.0	17.6		-52.8
11/29/03 2:00	11.5	15.3	-22.4	-45.9	-34.1	20.3	21.0		-61.1
11/29/03 3:00	11.2	15.1	-22.3	-45.0	-33.0	21.3	21.4		-57.6
11/29/03 4:00	11.4	15.3	-18.5	-40.2	-28.4	20.9	21.6		-44.7
11/29/03 5:00	10.0	13.7	-16.6	-35.9	-25.2	6.1	6.5		-65.2
11/29/03 6:00	11.0	14.6	-16.4	-36.3	-24.6	4.4	4.5		-68.4
11/29/03 7:00	8.2	12.3	-14.6	-33.6	-22.8	5.2	5.9		-59.9
11/29/03 8:00	9.8	13.3	-14.0	-32.2	-21.3	1.8	2.4		-63.3
11/29/03 9:00	12.0	16.0	-8.4	-23.2	-12.2	0.1	0.7		-43.0
11/29/03 10:00	13.5	17.6	-10.1	-25.7	-14.8	-3.2	-2.8		-56.6
11/29/03 11:00	13.2	17.1	-10.7	-26.2	-15.4	-2.0	-2.7		-57.1
11/29/03 12:00	13.4	17.4	-10.6	-26.8	-15.7	-1.8	-1.4		-56.3
11/29/03 13:00	11.4	15.2	-11.1	-28.5	-16.9	1.7	2.3		-52.6
11/29/03 14:00	10.8	15.2	-11.0	-26.5	-16.1	1.4	1.8		-50.4
11/29/03 15:00	9.8	14.0	-10.1	-25.1	-14.7	2.5	3.5		-44.0
11/29/03 16:00	9.5	13.7	-11.8	-28.5	-17.1	3.8	3.8		-49.8
11/29/03 17:00	16.3	20.6	-5.3	-16.8	-6.9	-4.2	-3.9		-37.1
11/29/03 18:00	14.2	18.4	-4.4	-16.5	-6.0	0.3	0.3		-26.3
11/29/03 19:00	13.3	17.1	-5.4	-18.5	-6.1	0.8	1.1		-28.1
11/29/03 20:00	15.4	19.8	-6.2	-17.5	-7.4	14.5	15.1		-1.4
11/29/03 21:00	13.9	18.0	-7.0	-21.6	-10.7	18.1	18.1		-3.0
11/29/03 22:00	14.8	19.2	-9.4	-25.3	-14.4	17.5	18.1		-13.6
11/29/03 23:00	16.4	21.0	-8.2	-20.0	-10.2	14.4	15.2		-8.8
11/30/03 0:00	15.5	18.8	-8.6	-20.8	-12.3	16.2	17.1		-8.4
11/30/03 1:00	14.4	18.3	-10.3	-25.1	-16.3	16.7	17.4		-17.6
11/30/03 2:00	14.2	17.5	-13.6	-30.1	-20.8	17.1	17.4		-30.1
11/30/03 3:00	14.3	17.9	-13.9	-31.2	-22.3	16.7	16.7		-33.9
11/30/03 4:00	14.5	17.6	-14.1	-31.9	-22.6	16.4	17.0		-35.2
11/30/03 5:00	13.4	16.2	-14.0	-29.4	-20.6	1.7	2.0		-60.3
11/30/03 6:00	13.2	15.5	-11.5	-25.3	-17.4	0.9	0.6		-52.7
11/30/03 7:00	8.5	11.2	-12.8	-27.8	-19.0	4.4	4.8		-50.4
11/30/03 8:00	10.3	12.7	-10.2	-25.0	-16.0	0.6	1.1		-49.5
11/30/03 9:00	12.2	14.8	-7.0	-17.3	-9.6	-2.2	-1.8		-37.8

11/30/03 10:00	12.7	14.7	-8.4	-23.4	-13.0	-3.3	-2.9		-51.0
11/30/03 11:00	14.5	15.4	-8.0	-21.1	-12.0	-5.6	-4.7		-51.4
11/30/03 12:00	14.0	14.5	-9.6	-24.8	-14.4	-3.8	-3.9		-56.5
11/30/03 13:00	14.1	14.2	-9.8	-24.9	-15.5	-4.6	-4.2		-59.0
11/30/03 14:00	14.4	14.1	-10.4	-25.3	-15.7	-4.9	-4.3		-60.6
11/30/03 15:00	13.5	13.7	-10.7	-26.5	-16.5	-4.5	-3.7		-62.0
11/30/03 16:00	13.7	13.4	-8.7	-22.7	-13.3	-2.3	-1.6		-48.6
11/30/03 17:00	18.8	19.2	-2.1	-11.4	-2.6	-7.5	-6.8		-30.5
11/30/03 18:00	19.8	19.8	0.3	-7.2	1.5	-6.3	-5.5		-17.2
11/30/03 19:00	19.6	20.1	3.4	-1.9	5.7	-5.0	-4.9		-2.6
11/30/03 20:00	20.3	20.8	-1.0	-8.6	-0.2	9.5	9.8		9.6
11/30/03 21:00	21.0	22.2	-1.4	-8.4	-1.1	8.4	8.8		6.4
11/30/03 22:00	19.1	19.7	-10.1	-23.7	-14.8	11.9	11.9		-24.7
11/30/03 23:00	18.6	18.9	-11.1	-25.0	-16.0	12.7	13.1		-26.4
12/1/03 0:00	18.8	19.1	-9.5	-22.0	-14.8	12.5	12.0		-21.8
12/1/03 1:00	19.5	19.4	-11.5	-25.0	-18.3	10.1	10.3		-34.5
12/1/03 2:00	18.5	19.4	-14.7	-31.0	-22.9	10.8	11.2		-46.6
12/1/03 3:00	19.9	20.3	-15.4	-33.4	-24.7	9.0	9.2		-55.3
12/1/03 4:00	19.7	19.8	-15.7	-32.6	-24.0	10.3	9.9		-52.1
12/1/03 5:00	19.4	19.4	-10.8	-25.3	-17.5	-14.4	-14.5		-82.5
12/1/03 6:00	19.6	19.8	-10.4	-23.7	-15.1	-14.6	-14.3		-78.1
12/1/03 7:00	17.2	16.8	-10.1	-23.1	-14.6	-12.5	-11.9		-72.1
12/1/03 8:00	15.6	16.1	-13.7	-31.0	-20.3	-14.5	-14.1		-93.7
12/1/03 9:00	17.2	17.3	-11.3	-26.7	-17.2	-16.5	-15.6		-87.4
12/1/03 10:00	18.6	18.9	-11.4	-26.2	-17.5	-18.3	-17.6		-91.0
12/1/03 11:00	16.9	17.2	-13.3	-28.9	-19.8	-17.0	-16.9		-96.0
12/1/03 12:00	15.4	15.4	-15.6	-34.3	-23.3	-16.9	-16.9		-106.9
12/1/03 13:00	16.9	16.7	-15.6	-34.0	-23.9	-18.5	-17.3		-109.3
12/1/03 14:00	16.0	16.4	-16.0	-34.2	-23.9	-17.3	-17.1		-108.5
12/1/03 15:00	16.1	16.2	-11.0	-24.1	-16.4	-16.1	-15.2		-82.7
12/1/03 16:00	14.2	14.5	-12.8	-28.1	-19.9	-15.0	-14.3		-90.1
12/1/03 17:00	14.3	14.5	-11.7	-25.5	-20.0	-15.4	-14.7		-87.3
12/1/03 18:00	14.3	14.5	-11.7	-25.5	-19.9	-15.7	-15.1		-87.9
12/1/03 19:00	14.4	14.6	-11.6	-25.5	-19.8	-16.1	-15.4		-88.5
12/1/03 20:00	14.4	14.6	-11.6	-25.5	-19.8	-16.5	-15.8		-89.1
12/1/03 21:00	14.5	14.6	-11.6	-25.5	-19.7	-16.8	-16.1		-89.7
12/1/03 22:00	14.5	14.6	-11.6	-25.5	-19.6	-17.2	-16.5		-90.4
12/1/03 23:00	14.6	14.6	-11.6	-25.5	-19.5	-17.5	-16.9		-91.0
12/2/03 0:00	14.6	14.6	-11.5	-25.5	-19.4	-17.9	-17.2		-91.6
12/2/03 1:00	14.6	14.7	-11.5	-25.5	-19.4	-18.3	-17.6		-92.2
12/2/03 2:00	14.7	14.7	-11.5	-25.5	-19.3	-18.6	-17.9		-92.8
12/2/03 3:00	14.7	14.7	-11.5	-25.5	-19.2	-19.0	-18.3		-93.5
12/2/03 4:00	14.8	14.7	-11.4	-25.5	-19.1	-19.4	-18.7		-94.1
12/2/03 5:00	14.8	14.7	-11.4	-25.4	-19.1	-19.7	-19.0		-94.7
12/2/03 6:00	14.9	14.7	-11.4	-25.4	-19.0	-20.1	-19.4		-95.3
12/2/03 7:00	14.9	14.8	-11.4	-25.4	-18.9	-20.5	-19.7		-95.9
12/2/03 8:00	15.0	14.8	-11.4	-25.4	-18.8	-20.8	-20.1		-96.5
12/2/03 9:00	15.0	14.8	-11.3	-25.4	-18.8	-21.2	-20.5		-97.2
12/2/03 10:00	15.0	14.8	-11.3	-25.4	-18.7	-21.5	-20.8		-97.8
12/2/03 11:00	15.1	14.8	-11.3	-25.4	-18.6	-21.9	-21.2		-98.4
12/2/03 12:00	15.1	14.8	-11.3	-25.4	-18.5	-22.3	-21.6		-99.0
12/2/03 13:00	15.2	14.9	-11.3	-25.4	-18.4	-22.6	-21.9		-99.6

12/2/03 14:00	15.2	14.9	-11.2	-25.4	-18.4	-23.0	-22.3		-100.2
12/2/03 15:00	15.3	14.9	-11.2	-25.4	-18.3	-23.4	-22.6		-100.9
12/2/03 16:00	15.3	14.9	-11.2	-25.3	-18.2	-23.7	-23.0		-101.5
12/2/03 17:00	15.4	14.9	-11.2	-25.3	-18.1	-24.1	-23.4		-102.1
12/2/03 18:00	15.4	14.9	-11.1	-25.3	-18.1	-24.4	-23.7		-102.7
12/2/03 19:00	15.4	15.0	-11.1	-25.3	-18.0	-24.8	-24.1		-103.3
12/2/03 20:00	15.5	15.0	-11.1	-25.3	-17.9	-25.2	-24.4		-103.9
12/2/03 21:00	15.5	15.0	-11.1	-25.3	-17.8	-25.5	-24.8		-104.6
12/2/03 22:00	15.6	15.0	-11.1	-25.3	-17.8	-25.9	-25.2		-105.2
12/2/03 23:00	15.6	15.0	-11.0	-25.3	-17.7	-26.3	-25.5		-105.8
12/3/03 0:00	15.7	15.0	-11.0	-25.3	-17.6	-26.6	-25.9		-106.4
12/3/03 1:00	15.7	15.0	-11.0	-25.3	-17.5	-27.0	-26.2		-107.0
12/3/03 2:00	15.7	15.1	-11.0	-25.3	-17.5	-27.4	-26.6		-107.7
12/3/03 3:00	15.8	15.1	-11.0	-25.3	-17.4	-27.7	-27.0		-108.3
12/3/03 4:00	15.8	15.1	-10.9	-25.2	-17.3	-28.1	-27.3		-108.9
12/3/03 5:00	15.9	15.1	-10.9	-25.2	-17.2	-28.4	-27.7		-109.5
12/3/03 6:00	15.9	15.1	-10.9	-25.2	-17.1	-28.8	-28.1		-110.1
12/3/03 7:00	16.0	15.1	-10.9	-25.2	-17.1	-29.2	-28.4		-110.7
12/3/03 8:00	16.0	15.2	-10.8	-25.2	-17.0	-29.5	-28.8		-111.4
12/3/03 9:00	16.1	15.2	-10.8	-25.2	-16.9	-29.9	-29.1		-112.0
12/3/03 10:00	16.1	15.2	-10.8	-25.2	-16.8	-30.3	-29.5		-112.6
12/3/03 11:00	16.1	15.2	-10.8	-25.2	-16.8	-30.6	-29.9		-113.2
12/3/03 12:00	16.2	15.2	-10.8	-25.2	-16.7	-31.0	-30.2		-113.8
12/3/03 13:00	16.2	15.2	-10.7	-25.2	-16.6	-31.3	-30.6		-114.4
12/3/03 14:00	16.3	15.3	-10.7	-25.2	-16.5	-31.7	-30.9		-115.1
12/3/03 15:00	16.3	15.3	-10.7	-25.2	-16.5	-32.1	-31.3		-115.7
12/3/03 16:00	16.4	15.3	-10.7	-25.1	-16.4	-32.4	-31.7		-116.3
12/3/03 17:00	16.4	15.3	-10.7	-25.1	-16.3	-32.8	-32.0		-116.9
12/3/03 18:00	16.4	15.3	-10.6	-25.1	-16.2	-33.2	-32.4		-117.5
12/3/03 19:00	16.5	15.3	-10.6	-25.1	-16.1	-33.5	-32.7		-118.2
12/3/03 20:00	16.5	15.4	-10.6	-25.1	-16.1	-33.9	-33.1		-118.8
12/3/03 21:00	16.6	15.4	-10.6	-25.1	-16.0	-34.3	-33.5		-119.4
12/3/03 22:00	16.6	15.4	-10.6	-25.1	-15.9	-34.6	-33.8		-120.0
12/3/03 23:00	16.7	15.4	-10.5	-25.1	-15.8	-35.0	-34.2		-120.6
12/4/03 0:00	16.7	15.4	-10.5	-25.1	-15.8	-35.3	-34.6		-121.2
12/4/03 1:00	15.0	15.1	-6.3	-17.0	-9.6	-34.8	-34.3		-102.0
12/4/03 2:00	14.5	14.7	-8.5	-18.9	-12.7	-35.1	-35.1		-110.3
12/4/03 3:00	13.1	13.5	-9.9	-23.2	-14.7	-34.7	-34.2		-116.7
12/4/03 4:00	13.0	13.3	-8.8	-21.0	-13.6	-33.5	-33.6		-110.5
12/4/03 5:00	9.9	10.2	-3.5	-10.4	-3.8	-79.5	-78.3		-175.5
12/4/03 6:00	19.3	19.8	9.0	10.0	14.2	-59.5	-58.4		-84.8
12/4/03 7:00	18.0	18.6	13.6	21.5	22.8	-56.3	-56.5		-54.9
12/4/03 8:00	16.0	15.9	6.0	3.2	8.4	-57.5	-56.5		-96.4
12/4/03 9:00	14.3	15.1	-3.0	-11.9	-4.3	-57.7	-57.0		-133.9
12/4/03 10:00	14.6	15.4	-7.7	-20.1	-11.5	-35.8	-35.6		-110.6
12/4/03 11:00	14.7	14.8	-6.6	-19.5	-11.2	-37.6	-37.3		-112.3
12/4/03 12:00	14.8	15.1	-6.4	-19.1	-11.2	-36.9	-36.6		-110.2
12/4/03 13:00	14.5	14.6	-9.1	-22.3	-13.9	-36.4	-36.0		-117.8
12/4/03 14:00	14.2	14.6	-11.9	-27.2	-18.1	-37.3	-37.2		-131.7
12/4/03 15:00	13.2	13.2	-10.6	-24.4	-16.0	-10.8	-11.3		-73.1
12/4/03 16:00	11.2	11.3	-11.9	-28.0	-18.5	-8.9	-9.3		-76.5
12/4/03 17:00	19.0	19.9	-6.5	-18.5	-9.5	-14.8	-14.1		-63.5

12/4/03 18:00	15.5	16.0	-8.0	-21.9	-12.0	-32.7	-31.4		-106.0
12/4/03 19:00	13.2	13.4	-7.2	-19.6	-10.1	-29.0	-28.4		-94.4
12/4/03 20:00	17.5	18.1	-6.6	-19.3	-10.1	14.8	15.0		-6.2
12/4/03 21:00	17.5	17.9	-7.1	-18.2	-9.7	15.9	16.7		-2.4
12/4/03 22:00	15.4	15.8	-10.1	-24.6	-16.0	19.1	19.3		-12.3
12/4/03 23:00	21.7	21.8	-7.8	-19.1	-10.9	9.5	10.0		-18.3
12/5/03 0:00	20.6	21.6	-9.8	-22.5	-13.2	10.2	10.3		-25.1
12/5/03 1:00	18.0	18.4	-15.2	-32.9	-22.8	13.1	13.7		-44.0
12/5/03 2:00	17.3	17.7	-18.6	-38.5	-27.2	13.8	14.7		-55.7
12/5/03 3:00	15.4	15.7	-16.7	-37.0	-25.7	17.2	17.4		-44.8
12/5/03 4:00	15.5	15.4	-16.7	-35.0	-24.2	18.4	18.1		-39.4
12/5/03 5:00	16.1	16.5	-12.4	-28.5	-18.5	-9.6	-9.2		-78.3
12/5/03 6:00	15.5	16.5	-1.9	-9.5	-1.7	-32.2	-32.2		-77.5
12/5/03 7:00	12.9	12.6	-1.9	-8.8	-0.9	-29.9	-28.8		-70.2
12/5/03 8:00	14.9	15.3	2.6	-2.8	5.4	-33.5	-32.9		-61.3
12/5/03 9:00	13.8	14.1	-3.8	-14.6	-6.2	-31.9	-32.3		-88.8
12/5/03 10:00	12.5	13.1	-4.7	-15.4	-6.9	-29.7	-29.4		-86.1
12/5/03 11:00	13.8	14.7	-3.0	-12.7	-4.2	-32.7	-32.2		-84.8
12/5/03 12:00	13.0	13.7	-1.9	-11.1	-3.1	-31.1	-30.7		-77.9
12/5/03 13:00	15.7	15.7	-0.5	-8.8	-1.2	-33.7	-33.4		-77.6
12/5/03 14:00	14.3	14.8	-0.1	-8.4	-1.3	-32.3	-31.5		-73.6
12/5/03 15:00	12.3	12.2	-5.3	-16.6	-7.8	-32.0	-31.5		-93.2
12/5/03 16:00	12.0	12.4	-7.1	-19.4	-9.8	-10.2	-8.4		-54.8
12/5/03 17:00	19.3	20.1	-4.0	-13.5	-4.2	-17.2	-17.4		-56.2
12/5/03 18:00	14.6	14.7	-3.0	-12.7	-2.7	-9.7	-9.4		-37.5
12/5/03 19:00	14.3	15.1	-6.1	-18.5	-7.9	-10.7	-9.9		-53.1
12/5/03 20:00	15.6	15.1	-6.7	-20.8	-9.9	14.3	14.6		-8.4
12/5/03 21:00	16.5	16.9	-7.8	-20.0	-9.8	13.0	13.7		-10.8
12/5/03 22:00	20.4	20.9	-0.2	-6.6	0.5	9.4	10.5		13.5
12/5/03 23:00	19.4	19.3	-2.6	-11.2	-2.7	13.8	14.7		11.9
12/6/03 0:00	17.4	16.4	-6.8	-17.3	-8.8	20.0	20.1		7.2
12/6/03 1:00	18.1	18.7	-8.2	-19.7	-12.5	12.8	12.9		-14.7
12/6/03 2:00	17.0	17.7	-14.3	-31.3	-21.9	15.2	15.0		-37.2
12/6/03 3:00	16.1	16.5	-15.6	-34.6	-24.9	16.0	16.1		-43.0
12/6/03 4:00	15.5	15.6	-15.2	-32.6	-23.2	18.5	17.7		-34.8
12/6/03 5:00	14.8	15.1	-13.3	-28.6	-19.2	0.6	1.6		-58.9
12/6/03 6:00	17.1	17.8	-10.7	-24.8	-15.4	-4.0	-3.2		-58.2
12/6/03 7:00	14.0	14.1	-10.7	-26.3	-16.5	-0.4	-0.4		-54.3
12/6/03 8:00	16.6	16.8	-7.0	-20.1	-11.4	-4.5	-4.2		-47.2
12/6/03 9:00	17.5	17.8	-5.1	-15.8	-7.2	-5.2	-5.5		-38.8
12/6/03 10:00	15.2	15.3	-8.8	-22.9	-13.4	-5.3	-3.6		-54.0
12/6/03 11:00	15.2	15.4	-8.9	-22.9	-13.4	-5.1	-3.5		-53.8
12/6/03 12:00	15.3	15.5	-8.9	-22.9	-13.4	-5.0	-3.4		-53.6
12/6/03 13:00	15.4	15.5	-8.9	-22.9	-13.4	-4.9	-3.3		-53.4
12/6/03 14:00	15.4	15.6	-8.9	-22.9	-13.4	-4.8	-3.2		-53.2
12/6/03 15:00	15.5	15.7	-8.9	-22.9	-13.5	-4.7	-3.1		-53.0
12/6/03 16:00	15.6	15.8	-8.9	-22.9	-13.5	-4.5	-3.0		-52.8
12/6/03 17:00	15.6	15.8	-8.9	-22.9	-13.5	-4.4	-2.9		-52.6
12/6/03 18:00	15.7	15.9	-8.9	-22.9	-13.5	-4.3	-2.8		-52.4
12/6/03 19:00	15.8	16.0	-8.9	-22.9	-13.5	-4.2	-2.7		-52.2
12/6/03 20:00	15.8	16.0	-8.9	-22.9	-13.5	-4.1	-2.6		-52.0
12/6/03 21:00	15.9	16.1	-9.0	-22.9	-13.5	-3.9	-2.5		-51.8

12/6/03 22:00	16.0	16.2	-9.0	-22.9	-13.6	-3.8	-2.4		-51.6
12/6/03 23:00	16.0	16.3	-9.0	-22.9	-13.6	-3.7	-2.3		-51.4
12/7/03 0:00	16.1	16.3	-9.0	-22.9	-13.6	-3.6	-2.2		-51.2
12/7/03 1:00	16.2	16.4	-9.0	-22.9	-13.6	-3.5	-2.1		-51.0
12/7/03 2:00	16.2	16.5	-9.0	-22.9	-13.6	-3.4	-2.0		-50.8
12/7/03 3:00	16.3	16.6	-9.0	-22.9	-13.6	-3.2	-1.9		-50.6
12/7/03 4:00	16.4	16.6	-9.0	-22.9	-13.6	-3.1	-1.8		-50.4
12/7/03 5:00	16.4	16.7	-9.0	-22.9	-13.7	-3.0	-1.7		-50.2
12/7/03 6:00	16.5	16.8	-9.1	-22.9	-13.7	-2.9	-1.6		-50.0
12/7/03 7:00	16.6	16.9	-9.1	-22.9	-13.7	-2.8	-1.4		-49.8
12/7/03 8:00	16.6	16.9	-9.1	-22.9	-13.7	-2.6	-1.3		-49.6
12/7/03 9:00	16.7	17.0	-9.1	-22.9	-13.7	-2.5	-1.2		-49.4
12/7/03 10:00	16.7	17.1	-9.1	-22.9	-13.7	-2.4	-1.1		-49.3
12/7/03 11:00	16.8	17.2	-9.1	-22.9	-13.8	-2.3	-1.0		-49.1
12/7/03 12:00	16.9	17.2	-9.1	-22.9	-13.8	-2.2	-0.9		-48.9
12/7/03 13:00	16.9	17.3	-9.1	-22.9	-13.8	-2.0	-0.8		-48.7
12/7/03 14:00	17.0	17.4	-9.1	-22.9	-13.8	-1.9	-0.7		-48.5
12/7/03 15:00	17.1	17.5	-9.2	-22.9	-13.8	-1.8	-0.6		-48.3
12/7/03 16:00	17.1	17.5	-9.2	-22.9	-13.8	-1.7	-0.5		-48.1
12/7/03 17:00	17.2	17.6	-9.2	-22.9	-13.8	-1.6	-0.4		-47.9
12/7/03 18:00	17.3	17.7	-9.2	-22.9	-13.9	-1.5	-0.3		-47.7
12/7/03 19:00	17.3	17.7	-9.2	-22.9	-13.9	-1.3	-0.2		-47.5
12/7/03 20:00	17.4	17.8	-9.2	-22.9	-13.9	-1.2	-0.1		-47.3
12/7/03 21:00	17.5	17.9	-9.2	-22.8	-13.9	-1.1	0.0		-47.1
12/7/03 22:00	17.5	18.0	-9.2	-22.8	-13.9	-1.0	0.1		-46.9
12/7/03 23:00	17.6	18.0	-9.2	-22.8	-13.9	-0.9	0.2		-46.7
12/8/03 0:00	17.7	18.1	-9.3	-22.8	-14.0	-0.7	0.3		-46.5
12/8/03 1:00	17.7	18.2	-9.3	-22.8	-14.0	-0.6	0.4		-46.3
12/8/03 2:00	17.8	18.3	-9.3	-22.8	-14.0	-0.5	0.5		-46.1
12/8/03 3:00	17.9	18.3	-9.3	-22.8	-14.0	-0.4	0.6		-45.9
12/8/03 4:00	17.9	18.4	-9.3	-22.8	-14.0	-0.3	0.7		-45.7
12/8/03 5:00	18.0	18.5	-9.3	-22.8	-14.0	-0.1	0.8		-45.5
12/8/03 6:00	18.1	18.6	-9.3	-22.8	-14.0	0.0	0.9		-45.3
12/8/03 7:00	18.1	18.6	-9.3	-22.8	-14.1	0.1	1.1		-45.1
12/8/03 8:00	18.2	18.7	-9.3	-22.8	-14.1	0.2	1.2		-44.9
12/8/03 9:00	18.3	18.8	-9.3	-22.8	-14.1	0.3	1.3		-44.7
12/8/03 10:00	18.3	18.9	-9.4	-22.8	-14.1	0.5	1.4		-44.5
12/8/03 11:00	18.4	18.9	-9.4	-22.8	-14.1	0.6	1.5		-44.3
12/8/03 12:00	18.5	19.0	-9.4	-22.8	-14.1	0.7	1.6		-44.1
12/8/03 13:00	18.5	19.1	-9.4	-22.8	-14.1	0.8	1.7		-43.9
12/8/03 14:00	18.6	19.2	-9.4	-22.8	-14.2	0.9	1.8		-43.7
12/8/03 15:00	18.7	19.2	-9.4	-22.8	-14.2	1.0	1.9		-43.5
12/8/03 16:00	18.7	19.3	-9.4	-22.8	-14.2	1.2	2.0		-43.3
12/8/03 17:00	18.8	19.4	-9.4	-22.8	-14.2	1.3	2.1		-43.1
12/8/03 18:00	18.9	19.5	-9.4	-22.8	-14.2	1.4	2.2		-42.9
12/8/03 19:00	18.9	19.5	-9.5	-22.8	-14.2	1.5	2.3		-42.7
12/8/03 20:00	19.0	19.6	-9.5	-22.8	-14.3	1.6	2.4		-42.5
12/8/03 21:00	19.1	19.7	-9.5	-22.8	-14.3	1.8	2.5		-42.3
12/8/03 22:00	19.1	19.7	-9.5	-22.8	-14.3	1.9	2.6		-42.1
12/8/03 23:00	19.2	19.8	-9.5	-22.8	-14.3	2.0	2.7		-41.9
12/9/03 0:00	19.2	19.9	-9.5	-22.8	-14.3	2.1	2.8		-41.7
12/9/03 1:00	19.3	20.0	-9.5	-22.8	-14.3	2.2	2.9		-41.5

12/9/03 2:00	19.4	20.0	-9.5	-22.8	-14.3	2.4	3.0	-41.3
12/9/03 3:00	19.4	20.1	-9.5	-22.8	-14.4	2.5	3.1	-41.1
12/9/03 4:00	19.5	20.2	-9.6	-22.8	-14.4	2.6	3.2	-40.9
12/9/03 5:00	19.6	20.3	-9.6	-22.8	-14.4	2.7	3.3	-40.7
12/9/03 6:00	19.6	20.3	-9.6	-22.8	-14.4	2.8	3.4	-40.5
12/9/03 7:00	19.7	20.4	-9.6	-22.8	-14.4	3.0	3.6	-40.3
12/9/03 8:00	19.8	20.5	-9.6	-22.8	-14.4	3.1	3.7	-40.1
12/9/03 9:00	19.8	20.6	-9.6	-22.8	-14.5	3.2	3.8	-39.9
12/9/03 10:00	19.9	20.6	-9.6	-22.8	-14.5	3.3	3.9	-39.7
12/9/03 11:00	20.0	20.7	-9.6	-22.8	-14.5	3.4	4.0	-39.5
12/9/03 12:00	20.0	20.8	-9.6	-22.8	-14.5	3.5	4.1	-39.3
12/9/03 13:00	20.1	20.9	-9.6	-22.8	-14.5	3.7	4.2	-39.1
12/9/03 14:00	20.2	20.9	-9.7	-22.8	-14.5	3.8	4.3	-38.9
12/9/03 15:00	20.2	21.0	-9.7	-22.8	-14.5	3.9	4.4	-38.7
12/9/03 16:00	20.3	21.1	-9.7	-22.8	-14.6	4.0	4.5	-38.5
12/9/03 17:00	20.4	21.2	-9.7	-22.8	-14.6	4.1	4.6	-38.3
12/9/03 18:00	20.4	21.2	-9.7	-22.8	-14.6	4.3	4.7	-38.1
12/9/03 19:00	20.5	21.3	-9.7	-22.7	-14.6	4.4	4.8	-37.9
12/9/03 20:00	20.6	21.4	-9.7	-22.7	-14.6	4.5	4.9	-37.7
12/9/03 21:00	20.6	21.4	-9.7	-22.7	-14.6	4.6	5.0	-37.5
12/9/03 22:00	20.7	21.5	-9.7	-22.7	-14.6	4.7	5.1	-37.3
12/9/03 23:00	20.8	21.6	-9.8	-22.7	-14.7	4.9	5.2	-37.1
12/10/03 0:00	20.8	21.7	-9.8	-22.7	-14.7	5.0	5.3	-36.9
12/10/03 1:00	20.9	21.7	-9.8	-22.7	-14.7	5.1	5.4	-36.7
12/10/03 2:00	21.0	21.8	-9.8	-22.7	-14.7	5.2	5.5	-36.5
12/10/03 3:00	21.0	21.9	-9.8	-22.7	-14.7	5.3	5.6	-36.3
12/10/03 4:00	21.1	22.0	-9.8	-22.7	-14.7	5.4	5.7	-36.1
12/10/03 5:00	21.2	22.0	-9.8	-22.7	-14.8	5.6	5.8	-35.9
12/10/03 6:00	21.2	22.1	-9.8	-22.7	-14.8	5.7	5.9	-35.7
12/10/03 7:00	21.3	22.2	-9.8	-22.7	-14.8	5.8	6.1	-35.5
12/10/03 8:00	21.4	22.3	-9.9	-22.7	-14.8	5.9	6.2	-35.3
12/10/03 9:00	21.4	22.3	-9.9	-22.7	-14.8	6.0	6.3	-35.1
12/10/03 10:00	21.5	22.4	-9.9	-22.7	-14.8	6.2	6.4	-34.9
12/10/03 11:00	21.6	22.5	-9.9	-22.7	-14.8	6.3	6.5	-34.7
12/10/03 12:00	21.6	22.6	-9.9	-22.7	-14.9	6.4	6.6	-34.5
12/10/03 13:00	21.7	22.6	-9.9	-22.7	-14.9	6.5	6.7	-34.3
12/10/03 14:00	21.7	22.7	-9.9	-22.7	-14.9	6.6	6.8	-34.1
12/10/03 15:00	21.8	22.8	-9.9	-22.7	-14.9	6.8	6.9	-33.9
12/10/03 16:00	21.9	22.9	-9.9	-22.7	-14.9	6.9	7.0	-33.7
12/10/03 17:00	21.9	22.9	-10.0	-22.7	-14.9	7.0	7.1	-33.5
12/10/03 18:00	22.0	23.0	-10.0	-22.7	-15.0	7.1	7.2	-33.3
12/10/03 19:00	22.1	23.1	-10.0	-22.7	-15.0	7.2	7.3	-33.1
12/10/03 20:00	22.1	23.1	-10.0	-22.7	-15.0	7.4	7.4	-32.9
12/10/03 21:00	22.2	23.2	-10.0	-22.7	-15.0	7.5	7.5	-32.7
12/10/03 22:00	22.3	23.3	-10.0	-22.7	-15.0	7.6	7.6	-32.5
12/10/03 23:00	22.3	23.4	-10.0	-22.7	-15.0	7.7	7.7	-32.3
12/11/03 0:00	22.4	23.4	-10.0	-22.7	-15.0	7.8	7.8	-32.1
12/11/03 1:00	20.2	21.1	-12.3	-26.8	-18.7	10.5	10.0	-37.4
12/11/03 2:00	20.9	21.3	-15.2	-31.8	-23.6	8.6	8.5	-53.6
12/11/03 3:00	19.7	20.3	-15.3	-33.3	-24.7	10.2	10.3	-52.7
12/11/03 4:00	19.5	20.2	-15.3	-32.2	-23.0	11.2	11.1	-48.2
12/11/03 5:00	17.5	17.6	-13.3	-28.8	-20.1	-12.6	-12.0	-86.9

12/11/03 6:00	20.9	21.0	-8.7	-21.7	-13.0	-16.9	-16.3		-76.5
12/11/03 7:00	18.9	19.2	-8.7	-21.5	-12.8	-16.8	-15.9		-75.8
12/11/03 8:00	18.1	18.8	-14.6	-33.4	-24.1	-18.4	-18.1		-108.6
12/11/03 9:00	18.2	18.6	-9.4	-21.8	-14.3	-16.3	-16.0		-78.0
12/11/03 10:00	19.5	19.7	-7.4	-19.4	-11.9	-18.2	-18.5		-75.4
12/11/03 11:00	18.7	19.7	-8.9	-23.6	-15.4	-17.9	-17.2		-83.0
12/11/03 12:00	16.4	16.8	-7.7	-20.1	-13.2	-12.0	-11.5		-64.6
12/11/03 13:00	17.6	18.3	-9.2	-20.4	-13.4	-14.2	-13.5		-70.6
12/11/03 14:00	14.9	15.4	-10.0	-23.4	-16.0	-10.7	-10.3		-70.5
12/11/03 15:00	14.6	15.8	-8.6	-22.2	-14.4	-11.5	-10.8		-67.5
12/11/03 16:00	13.7	14.4	-9.8	-24.5	-15.7	-9.1	-9.0		-68.1
12/11/03 17:00	19.0	20.3	-2.0	-8.9	-3.2	-36.3	-35.7		-86.0
12/11/03 18:00	17.4	18.0	-7.3	-19.4	-11.6	-33.2	-32.2		-103.6
12/11/03 19:00	15.5	15.9	-8.2	-21.5	-12.5	-30.9	-29.5		-102.7
12/11/03 20:00	18.6	19.5	0.0	-7.4	-0.7	-7.0	-6.7		-21.9
12/11/03 21:00	18.9	20.4	-4.3	-13.9	-7.0	-8.2	-7.6		-41.0
12/11/03 22:00	19.4	20.7	-10.4	-24.7	-16.1	-11.3	-10.6		-73.0
12/11/03 23:00	17.1	18.6	-14.3	-31.5	-21.8	-9.3	-9.7		-86.7
12/12/03 0:00	20.2	21.3	-10.1	-24.4	-15.9	10.1	10.4		-29.9
12/12/03 1:00	21.6	22.7	-8.1	-19.6	-13.2	7.3	7.7		-25.8
12/12/03 2:00	20.5	21.4	-9.1	-21.7	-14.6	9.0	9.4		-27.0
12/12/03 3:00	19.6	20.6	-9.8	-23.2	-15.6	9.7	10.1		-28.7
12/12/03 4:00	19.5	20.3	-8.3	-20.6	-13.1	11.6	12.0		-18.4
12/12/03 5:00	19.9	20.5	-6.3	-15.8	-9.2	-14.4	-13.7		-59.4
12/12/03 6:00	18.5	19.1	-6.7	-18.2	-9.6	-38.7	-38.7		-111.9
12/12/03 7:00	19.0	19.8	-2.0	-8.6	-1.6	-40.5	-39.2		-91.9
12/12/03 8:00	15.4	15.7	-4.2	-13.1	-5.8	-33.8	-33.6		-90.5
12/12/03 9:00	18.0	18.5	-2.9	-11.8	-4.8	-37.5	-37.5		-94.5
12/12/03 10:00	16.0	16.6	-6.4	-18.5	-9.6	-35.9	-35.7		-106.1
12/12/03 11:00	15.4	15.8	-7.6	-19.6	-10.8	-35.1	-34.7		-107.8
12/12/03 12:00	14.0	14.1	-4.8	-14.9	-6.7	-32.9	-32.3		-91.7
12/12/03 13:00	15.2	15.1	-6.2	-17.8	-9.1	-34.9	-33.9		-101.9
12/12/03 14:00	12.6	13.3	-6.2	-17.5	-9.2	-32.2	-31.7		-96.9
12/12/03 15:00	10.8	11.4	-6.9	-20.2	-9.9	-30.8	-29.8		-97.6
12/12/03 16:00	9.9	9.9	-8.0	-22.5	-13.1	-28.2	-28.1		-100.0
12/12/03 17:00	18.1	19.5	0.8	-7.1	1.1	-36.2	-35.8		-77.2
12/12/03 18:00	15.3	15.3	-3.3	-12.4	-4.0	-53.2	-52.1		-124.9
12/12/03 19:00	11.3	11.7	-7.5	-20.5	-10.7	-49.0	-48.3		-136.0
12/12/03 20:00	17.2	17.8	-6.1	-17.9	-9.3	6.6	4.6		-22.2
12/12/03 21:00	21.1	22.3	3.1	-1.0	5.3	11.0	11.4		29.9
12/12/03 22:00	19.7	20.8	0.3	-4.6	2.6	14.5	15.2		28.0
12/12/03 23:00	23.3	23.9	-3.5	-11.2	-4.8	7.0	7.6		-4.9
12/13/03 0:00	21.8	21.4	-8.1	-20.5	-12.9	9.3	10.7		-21.5
12/13/03 1:00	18.4	19.5	-11.7	-26.2	-17.6	10.0	10.5		-34.9
12/13/03 2:00	19.5	20.5	-10.3	-24.0	-16.6	10.6	11.1		-29.2
12/13/03 3:00	19.1	20.4	-10.5	-25.7	-17.2	10.7	10.9		-31.8
12/13/03 4:00	18.3	18.8	-10.5	-24.4	-16.3	12.6	13.1		-25.5
12/13/03 5:00	18.0	18.3	-9.6	-22.8	-14.5	-4.5	-3.6		-55.0
12/13/03 6:00	19.3	20.0	-6.6	-18.1	-10.7	-6.7	-6.2		-48.3
12/13/03 7:00	13.4	14.6	-17.8	-37.0	-24.9	-4.1	-3.8		-87.5
12/13/03 8:00	15.3	15.7	-14.6	-33.5	-20.5	-7.4	-6.8		-82.7
12/13/03 9:00	17.5	18.3	-9.1	-23.7	-13.0	-8.8	-8.0		-62.6

12/13/03 10:00	16.9	18.0	-8.8	-23.6	-14.0	-9.1	-8.6		-64.2
12/13/03 11:00	16.2	16.7	-10.8	-26.9	-15.7	-9.1	-8.1		-70.7
12/13/03 12:00	16.6	17.7	-12.0	-28.8	-18.1	-9.6	-8.8		-77.3
12/13/03 13:00	14.5	15.4	-12.9	-30.5	-19.8	-7.2	-7.0		-77.5
12/13/03 14:00	14.9	15.7	-13.5	-29.6	-19.5	-6.5	-6.1		-75.3
12/13/03 15:00	13.7	14.1	-15.2	-34.1	-22.9	-5.7	-4.7		-82.6
12/13/03 16:00	14.1	14.5	-14.1	-34.0	-22.5	-5.7	-5.3		-81.6
12/13/03 17:00	23.2	24.0	-1.9	-10.7	-1.8	-15.0	-13.3		-42.8
12/13/03 18:00	19.6	20.9	-8.8	-23.1	-12.7	-11.5	-10.3		-66.3
12/13/03 19:00	18.0	19.1	-9.8	-27.0	-14.4	-9.5	-9.0		-69.8
12/13/03 20:00	18.8	20.0	-11.5	-29.6	-16.5	6.8	7.5		-43.2
12/13/03 21:00	19.8	21.0	-11.6	-30.1	-18.5	5.4	6.4		-48.5
12/13/03 22:00	19.9	20.2	-10.0	-24.0	-14.9	9.0	9.9		-29.9
12/13/03 23:00	20.6	22.3	-2.7	-10.9	-4.6	10.7	11.3		3.8
12/14/03 0:00	22.3	23.6	-1.4	-6.5	-1.6	8.5	9.2		8.2
12/14/03 1:00	20.2	20.9	-8.2	-20.5	-13.2	9.9	10.8		-21.3
12/14/03 2:00	20.3	21.3	-10.9	-27.0	-19.0	8.9	9.5		-38.5
12/14/03 3:00	20.0	21.3	-9.3	-22.0	-15.1	9.3	9.7		-27.4
12/14/03 4:00	20.3	20.5	-9.7	-23.1	-15.8	11.2	11.8		-25.7
12/14/03 5:00	18.2	19.0	-8.3	-20.5	-13.2	-3.7	-3.5		-49.3
12/14/03 6:00	16.9	17.8	-6.6	-16.5	-9.3	-2.5	-2.3		-37.2
12/14/03 7:00	13.5	14.8	-8.1	-20.6	-12.8	0.2	0.6		-40.7
12/14/03 8:00	15.9	16.4	-5.9	-16.6	-8.7	-5.0	-4.2		-40.3
12/14/03 9:00	16.8	17.6	-4.8	-15.2	-7.4	-6.7	-5.7		-39.7
12/14/03 10:00	17.6	19.9	-7.4	-20.0	-10.6	-8.2	-8.1		-54.3
12/14/03 11:00	18.2	18.8	-7.1	-20.1	-10.9	-9.2	-7.8		-55.1
12/14/03 12:00	15.6	19.5	-8.2	-21.3	-12.3	-4.3	-3.9		-50.0
12/14/03 13:00	15.6	20.1	-8.9	-21.8	-13.3	-5.5	-4.7		-54.2
12/14/03 14:00	18.2	19.0	-6.9	-18.3	-10.8	-7.8	-7.2		-50.9
12/14/03 15:00	17.0	17.5	-12.6	-30.1	-20.4	-7.9	-7.2		-78.1
12/14/03 16:00	15.5	16.1	-11.3	-26.3	-17.3	-5.9	-4.9		-65.7
12/14/03 17:00	23.1	24.0	-3.3	-13.8	-5.1	-14.2	-13.4		-49.8
12/14/03 18:00	23.1	23.9	-4.7	-15.3	-7.7	-14.7	-13.5		-55.9
12/14/03 19:00	7.5	8.0	-8.4	-22.8	-13.3	-9.8	-9.1		-63.4
12/14/03 20:00	13.6	13.8	-8.0	-21.0	-11.9	0.7	1.1		-39.1
12/14/03 21:00	14.5	14.6	0.6	-6.4	0.5	2.3	3.0		0.0
12/14/03 22:00	11.1	11.9	-5.5	-16.2	-7.7	5.2	5.8		-18.4
12/14/03 23:00	16.6	17.3	-7.5	-20.7	-12.4	-2.7	-2.4		-45.7
12/15/03 0:00	15.6	16.3	-12.7	-28.1	-18.7	-1.6	-2.1		-63.3
12/15/03 1:00	17.4	17.8	-10.4	-24.8	-17.4	-4.4	-4.3		-61.3
12/15/03 2:00	17.8	17.9	-11.6	-26.4	-18.9	-4.6	-4.6		-66.1
12/15/03 3:00	15.9	16.8	-12.5	-26.2	-19.3	-1.9	-1.7		-61.6
12/15/03 4:00	14.9	15.7	-12.9	-29.8	-21.1	-2.2	-1.7		-67.8
12/15/03 5:00	13.1	13.2	-9.0	-21.7	-13.6	-46.2	-45.2		-135.7
12/15/03 6:00	13.0	13.2	-6.9	-19.6	-10.7	-46.8	-47.0		-131.1
12/15/03 7:00	7.8	8.0	-10.0	-25.0	-13.3	-40.3	-40.2		-128.7
12/15/03 8:00	7.7	8.2	-6.8	-19.7	-9.3	-43.7	-42.6		-122.0
12/15/03 9:00	8.6	9.2	-6.9	-20.8	-9.5	-44.5	-44.3		-126.0
12/15/03 10:00	7.4	7.1	-12.9	-31.0	-18.7	-44.0	-43.0		-149.7
12/15/03 11:00	9.2	9.3	-13.3	-30.5	-19.6	-46.0	-45.9		-155.3
12/15/03 12:00	8.6	8.6	-14.1	-32.8	-22.1	-45.5	-44.5		-159.0
12/15/03 13:00	8.0	7.7	-15.8	-35.8	-24.5	-45.2	-44.8		-166.1

12/15/03 14:00	7.4	7.9	-15.3	-34.8	-24.2	-44.8	-44.5		-163.6
12/15/03 15:00	8.0	8.5	-12.8	-29.8	-20.9	-44.5	-44.1		-152.1
12/15/03 16:00	6.7	7.0	-10.8	-25.9	-18.1	-41.5	-40.9		-137.0
12/15/03 17:00	12.3	13.0	-5.5	-16.0	-7.2	-48.3	-47.9		-124.9
12/15/03 18:00	13.6	13.8	-10.9	-27.0	-16.7	-49.5	-49.0		-153.2
12/15/03 19:00	11.4	11.0	-7.1	-20.4	-10.5	-44.1	-44.1		-126.2
12/15/03 20:00	12.5	12.7	-9.1	-24.2	-13.3	-21.4	-20.5		-88.5
12/15/03 21:00	10.1	10.4	-14.1	-32.9	-20.4	-19.3	-18.2		-104.9
12/15/03 22:00	9.6	9.8	-13.9	-32.6	-20.7	5.5	5.5		-56.1
12/15/03 23:00	17.0	17.0	-11.2	-26.6	-16.6	-3.3	-2.6		-60.3
12/16/03 0:00	14.9	15.1	-10.3	-23.1	-14.4	0.8	0.5		-46.4
12/16/03 1:00	17.4	16.4	-10.2	-24.2	-16.0	-3.5	-3.0		-56.9
12/16/03 2:00	16.9	17.3	-10.9	-24.9	-17.0	-1.7	-1.4		-55.9
12/16/03 3:00	17.3	17.4	-10.8	-26.2	-17.6	-3.2	-3.2		-61.1
12/16/03 4:00	16.6	16.4	-10.3	-24.3	-16.3	-1.8	-1.5		-54.3
12/16/03 5:00	11.9	11.7	-11.3	-25.4	-16.6	-44.7	-44.3		-142.4
12/16/03 6:00	8.3	7.9	-15.0	-34.9	-23.3	-66.0	-65.2		-204.4
12/16/03 7:00	4.5	2.4	-8.2	-21.2	-11.2	-59.6	-59.2		-159.5
12/16/03 8:00	5.7	5.5	-8.5	-23.6	-13.7	-41.9	-42.1		-129.8
12/16/03 9:00	6.3	6.4	-8.1	-22.6	-12.9	-43.1	-42.6		-129.2
12/16/03 10:00	7.7	8.0	-15.5	-36.7	-24.1	-46.3	-44.8		-167.5
12/16/03 11:00	4.7	4.8	-17.4	-38.2	-26.5	-43.9	-43.6		-169.5
12/16/03 12:00	5.6	5.8	-17.6	-39.7	-26.5	-22.8	-22.5		-129.2
12/16/03 13:00	Out of S	Out of S	Out of S	Out of S	Out of S	Out of S	Out of Serv		0.0
12/16/03 14:00	4.5	4.8	-18.9	-42.3	-29.2	-21.6	-21.4		-133.4
12/16/03 15:00	4.8	3.3	-17.4	-34.8	-22.5	-19.9	-18.8		-113.4
12/16/03 16:00	7.5	7.3	-10.2	-25.2	-16.0	-18.4	-17.2		-87.1
12/16/03 17:00	10.0	10.4	-8.9	-22.3	-12.5	-43.7	-43.0		-130.4
12/16/03 18:00	7.5	8.2	-9.6	-26.0	-14.1	-61.6	-60.2		-171.5
12/16/03 19:00	6.1	6.6	-9.3	-24.4	-12.9	-58.8	-58.8		-164.2
12/16/03 20:00	8.8	8.5	-13.5	-32.4	-19.9	-13.5	-12.5		-91.9
12/16/03 21:00	9.6	10.3	-10.6	-27.3	-15.9	-14.0	-12.9		-80.6
12/16/03 22:00	6.0	6.6	-13.7	-31.8	-20.7	-8.8	-8.3		-83.3
12/16/03 23:00	9.7	11.1	-14.9	-33.1	-22.1	-15.5	-15.4		-101.0
12/17/03 0:00	10.5	11.5	-17.0	-36.8	-25.6	5.1	4.6		-69.6
12/17/03 1:00	12.4	13.8	-14.6	-32.4	-22.5	1.9	2.6		-64.9
12/17/03 2:00	12.9	13.6	-15.3	-33.5	-23.6	2.0	2.0		-68.5
12/17/03 3:00	13.1	14.0	-15.3	-32.8	-23.3	1.3	2.1		-68.0
12/17/03 4:00	12.9	14.1	-14.4	-32.5	-23.2	1.5	1.8		-66.8
12/17/03 5:00	9.2	14.7	-13.3	-30.9	-20.7	-20.3	-19.1		-104.3
12/17/03 6:00	9.6	18.7	-11.8	-27.0	-17.4	-21.6	-21.9		-99.7
12/17/03 7:00	9.0	20.5	-9.8	-24.2	-15.5	-21.9	-21.8		-93.2
12/17/03 8:00	4.6	17.9	-8.4	-21.6	-13.2	-17.6	-17.3		-78.1
12/17/03 9:00	5.6	18.8	-12.2	-28.8	-20.4	-19.3	-18.8		-99.6
12/17/03 10:00	6.2	19.9	-11.4	-27.2	-18.9	-21.3	-20.0		-98.8
12/17/03 11:00	7.3	16.7	-13.8	-32.0	-22.0	-22.5	-22.0		-112.2
12/17/03 12:00	6.7	11.9	-15.6	-34.8	-24.1	-21.5	-20.9		-116.9
12/17/03 13:00	7.0	9.3	-16.3	-36.3	-24.9	-23.5	-23.6		-124.6
12/17/03 14:00	5.8	5.8	-16.3	-35.9	-24.5	-21.5	-21.3		-119.5
12/17/03 15:00	7.2	6.3	-15.3	-34.3	-23.1	-23.8	-22.2		-118.8
12/17/03 16:00	6.7	6.0	-14.3	-31.9	-20.0	-17.2	-16.9		-100.4
12/17/03 17:00	11.1	11.2	-12.6	-29.8	-18.7	-45.0	-44.2		-150.2

12/17/03 18:00	7.7	7.7	-12.7	-30.0	-19.2	-62.6	-62.2	-186.7
12/17/03 19:00	5.8	5.0	-11.8	-28.7	-18.4	-60.7	-59.1	-178.7
12/17/03 20:00	9.8	9.2	-14.1	-32.5	-20.9	-15.6	-15.2	-98.2
12/17/03 21:00	9.7	9.6	-16.0	-34.9	-23.8	-15.1	-14.9	-104.7
12/17/03 22:00	9.0	8.6	-15.4	-33.7	-23.5	-15.0	-14.6	-102.2
12/17/03 23:00	10.9	10.7	-17.6	-39.0	-27.0	-17.9	-18.0	-119.5
12/18/03 0:00	12.2	12.0	-18.5	-39.3	-27.7	0.4	0.4	-84.7
12/18/03 1:00	14.0	13.5	-17.6	-37.2	-26.0	-0.7	-0.1	-81.6
12/18/03 2:00	13.1	12.9	-15.5	-33.8	-24.4	1.7	2.5	-69.5
12/18/03 3:00	13.4	13.1	-14.8	-31.9	-23.3	0.6	1.5	-67.9
12/18/03 4:00	14.2	13.8	-14.1	-30.6	-21.9	2.0	1.2	-63.4
12/18/03 5:00	10.8	10.8	-11.6	-26.7	-17.5	-43.8	-43.5	-143.1
12/18/03 6:00	11.1	10.9	-9.9	-24.2	-14.6	-45.4	-46.1	-140.1
12/18/03 7:00	6.3	6.0	-5.9	-16.4	-8.8	-39.6	-38.7	-109.4
12/18/03 8:00	6.1	5.6	-7.2	-19.4	-10.3	-41.8	-40.9	-119.6
12/18/03 9:00	5.3	4.8	-15.1	-34.3	-21.5	-42.6	-42.1	-155.6
12/18/03 10:00	6.6	6.2	-13.9	-32.0	-20.4	-44.3	-44.1	-154.7
12/18/03 11:00	7.4	7.5	-12.7	-30.6	-19.3	-45.8	-45.1	-153.5
12/18/03 12:00	6.9	6.8	-12.0	-28.4	-17.7	-45.4	-44.9	-148.3
12/18/03 13:00	8.3	7.8	-11.5	-27.5	-17.3	-45.5	-45.8	-147.7
12/18/03 14:00	8.9	8.6	-11.1	-27.2	-16.8	-46.4	-45.9	-147.3
12/18/03 15:00	5.8	5.5	-12.8	-29.6	-19.6	-43.0	-43.2	-148.2
12/18/03 16:00	-0.2	-0.5	-21.4	-46.8	-32.6	-36.6	-35.9	-173.3
12/18/03 17:00	12.3	12.5	-19.0	-43.7	-29.9	-28.8	-27.2	-148.6
12/18/03 18:00	10.7	10.2	-10.9	-25.7	-15.4	-46.9	-45.7	-144.5
12/18/03 19:00	8.4	8.1	-14.0	-33.2	-22.1	-44.4	-43.3	-157.0
12/18/03 20:00	10.8	10.3	-17.4	-37.2	-25.8	-21.6	-20.6	-122.5
12/18/03 21:00	13.3	12.6	-17.7	-38.0	-27.4	-1.4	-1.3	-85.8
12/18/03 22:00	14.9	14.8	-16.7	-36.8	-25.1	-2.9	-2.1	-83.6
12/18/03 23:00	16.1	16.3	-16.9	-37.2	-25.0	-3.6	-3.5	-86.1
12/19/03 0:00	14.2	14.4	-18.6	-41.1	-29.8	-1.9	-2.1	-93.5
12/19/03 1:00	16.5	16.9	-14.1	-31.2	-21.7	-3.6	-3.1	-73.7
12/19/03 2:00	16.9	17.4	-15.0	-30.9	-21.4	-3.1	-3.3	-73.7
12/19/03 3:00	16.3	16.6	-14.6	-31.3	-22.4	-3.8	-3.5	-75.6
12/19/03 4:00	16.8	16.6	-14.2	-30.5	-21.6	-3.2	-2.9	-72.5
12/19/03 5:00	11.8	12.4	-12.4	-28.2	-18.8	-45.7	-45.3	-150.5
12/19/03 6:00	12.7	13.4	-9.8	-22.9	-13.1	-49.5	-49.3	-144.6
12/19/03 7:00	7.3	7.5	-7.8	-20.0	-9.7	-42.2	-41.4	-121.0
12/19/03 8:00	10.0	9.8	-5.1	-14.8	-5.7	-47.1	-46.4	-119.1
12/19/03 9:00	9.4	9.8	-6.6	-17.3	-8.1	-47.6	-46.7	-126.3
12/19/03 10:00	9.0	8.8	-9.8	-24.6	-13.5	-46.6	-45.9	-140.6
12/19/03 11:00	7.1	7.2	-12.1	-29.2	-17.2	-44.4	-43.8	-146.7
12/19/03 12:00	6.3	6.2	-13.5	-31.6	-19.9	-42.4	-42.3	-149.8
12/19/03 13:00	6.3	6.7	-13.6	-31.4	-19.3	-43.4	-43.0	-150.6
12/19/03 14:00	5.3	5.5	-15.2	-33.7	-22.1	-42.4	-41.5	-154.8
12/19/03 15:00	3.9	4.4	-16.6	-35.3	-24.3	-40.0	-39.5	-155.8
12/19/03 16:00	6.8	6.8	-9.8	-25.0	-14.9	-41.3	-41.3	-132.3
12/19/03 17:00	12.1	12.2	-12.7	-30.0	-18.3	-50.0	-49.5	-160.5
12/19/03 18:00	10.2	10.8	-8.8	-21.7	-13.1	-67.5	-67.3	-178.5
12/19/03 19:00	6.4	6.3	-12.2	-28.7	-19.1	-63.8	-62.6	-186.4
12/19/03 20:00	12.4	12.5	-13.1	-29.8	-19.9	-22.1	-21.6	-106.4
12/19/03 21:00	12.1	12.3	-15.7	-35.8	-24.5	0.7	1.4	-73.8

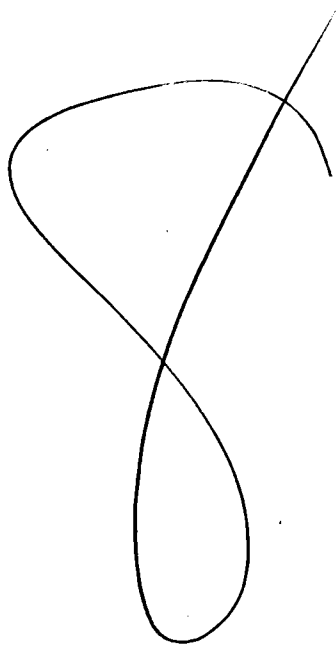
12/19/03 22:00	13.6	14.1	-16.9	-35.6	-25.2	-0.6	0.1		-78.3
12/19/03 23:00	16.2	16.3	-17.1	-36.6	-25.7	-3.0	-2.8		-85.3
12/20/03 0:00	17.2	17.7	-14.0	-32.2	-22.8	-5.5	-4.9		-79.4
12/20/03 1:00	16.4	19.5	-15.6	-33.9	-24.8	-2.6	-1.7		-78.5
12/20/03 2:00	14.9	17.1	-16.1	-34.2	-25.7	-0.7	-0.2		-76.9
12/20/03 3:00	16.6	17.0	-14.4	-31.9	-23.6	-2.5	-2.5		-74.9
12/20/03 4:00	16.6	16.7	-15.2	-33.9	-24.6	-2.3	-2.6		-78.6
12/20/03 5:00	13.4	13.8	-18.2	-37.8	-27.9	-18.2	-17.6		-119.7
12/20/03 6:00	14.3	14.2	-16.7	-34.9	-24.6	-20.0	-19.8		-116.0
12/20/03 7:00	8.3	8.3	-24.0	-49.7	-36.1	-16.2	-17.3		-143.4
12/20/03 8:00	9.1	9.2	-20.8	-45.1	-31.8	-20.2	-18.8		-136.7
12/20/03 9:00	10.7	11.0	-19.5	-41.5	-28.7	-20.2	-19.7		-129.6
12/20/03 10:00	12.9	12.9	-14.2	-31.6	-20.9	-21.5	-21.3		-109.5
12/20/03 11:00	10.9	10.7	-19.2	-39.7	-27.8	-19.2	-19.6		-125.5
12/20/03 12:00	9.6	9.7	-20.2	-43.7	-30.8	-18.2	-18.7		-131.6
12/20/03 13:00	9.9	9.5	-22.2	-46.3	-33.7	-18.4	-18.0		-138.7
12/20/03 14:00	9.4	11.0	-24.9	-51.4	-38.2	-20.8	-19.2		-154.5
12/20/03 15:00	12.1	12.3	-18.9	-39.5	-28.2	-16.8	-16.4		-119.8
12/20/03 16:00	11.3	11.4	-18.7	-40.4	-27.4	-16.4	-15.9		-118.8
12/20/03 17:00	10.7	10.8	-18.5	-39.4	-27.4	-35.4	-35.1		-155.8
12/20/03 18:00	11.1	11.8	-17.7	-39.2	-25.6	-35.9	-35.1		-153.4
12/20/03 19:00	9.4	9.9	-15.5	-35.8	-22.5	-33.3	-32.9		-140.0
12/20/03 20:00	11.9	12.4	-17.4	-37.6	-25.0	-19.4	-18.9		-118.4
12/20/03 21:00	13.1	13.3	-19.0	-41.3	-28.4	-20.5	-20.4		-129.5
12/20/03 22:00	13.4	13.6	-18.4	-40.1	-28.4	-20.4	-20.3		-127.8
12/20/03 23:00	15.2	15.5	-15.2	-36.0	-24.8	-23.3	-23.1		-122.4
12/21/03 0:00	16.5	17.3	-10.4	-24.1	-16.7	-25.6	-25.7		-102.5
12/21/03 1:00	20.5	20.6	-2.9	-10.4	-6.3	-27.8	-27.0		-74.4
12/21/03 2:00	15.0	15.8	-12.2	-28.0	-20.0	-22.8	-23.0		-106.0
12/21/03 3:00	14.8	15.2	-13.6	-30.3	-22.3	-24.1	-24.0		-114.3
12/21/03 4:00	11.8	11.2	-16.9	-36.3	-27.2	-20.0	-19.4		-119.8
12/21/03 5:00	11.7	12.0	-17.4	-36.0	-24.8	-37.6	-36.5		-152.3
12/21/03 6:00	11.3	11.7	-13.7	-29.0	-20.0	-37.7	-36.7		-137.1
12/21/03 7:00	6.6	6.8	-18.4	-36.7	-25.9	-32.8	-32.7		-146.4
12/21/03 8:00	9.6	10.4	-15.1	-32.5	-22.1	-17.0	-16.2		-102.9
12/21/03 9:00	12.1	12.6	-10.8	-25.0	-15.7	-18.5	-18.6		-88.7
12/21/03 10:00	7.4	7.7	-24.5	-51.2	-36.4	-18.8	-17.8		-148.7
12/21/03 11:00	9.3	9.8	-21.4	-44.8	-31.8	-20.1	-19.8		-137.9
12/21/03 12:00	9.9	10.1	-22.0	-45.2	-32.7	-17.4	-17.5		-134.7
12/21/03 13:00	10.9	10.6	-22.2	-46.5	-33.4	-17.5	-17.6		-137.2
12/21/03 14:00	10.8	11.3	-22.2	-46.5	-33.5	-18.7	-17.7		-138.5
12/21/03 15:00	11.5	11.4	-20.9	-42.0	-30.4	-18.8	-18.3		-130.4
12/21/03 16:00	9.5	10.0	-17.6	-37.3	-25.7	-17.0	-15.6		-113.2
12/21/03 17:00	13.5	14.1	-14.5	-32.4	-20.4	-18.7	-17.0		-103.0
12/21/03 18:00	13.2	13.7	-9.4	-26.2	-15.4	-39.2	-38.7		-128.8
12/21/03 19:00	12.1	12.3	-10.7	-27.0	-15.8	-35.5	-35.4		-124.5
12/21/03 20:00	14.2	14.4	-10.6	-27.7	-16.9	-22.4	-22.4		-100.0
12/21/03 21:00	14.1	14.5	-12.9	-30.0	-19.4	-21.3	-21.2		-104.8
12/21/03 22:00	13.8	14.7	-13.6	-31.1	-20.4	-21.9	-21.3		-108.2
12/21/03 23:00	15.8	16.3	-10.3	-23.9	-16.1	-22.4	-22.4		-95.0
12/22/03 0:00	20.2	20.3	-6.0	-15.8	-10.8	-28.4	-28.6		-89.6
12/22/03 1:00	19.4	19.8	-6.9	-17.7	-12.3	-27.7	-27.7		-92.3

12/22/03 2:00	18.8	19.2	-8.3	-21.3	-15.5	-27.3	-26.5		-98.8
12/22/03 3:00	18.6	19.9	-9.4	-20.6	-15.3	-28.3	-27.1		-100.8
12/22/03 4:00	18.2	18.8	-9.1	-21.3	-15.8	-25.5	-25.8		-97.5
12/22/03 5:00	16.5	17.4	-5.8	-16.2	-9.8	-48.3	-48.3		-128.4
12/22/03 6:00	9.7	10.9	-9.3	-23.1	-15.1	-67.6	-67.2		-182.2
12/22/03 7:00	7.8	8.7	-9.6	-22.1	-14.7	-66.3	-66.3		-178.9
12/22/03 8:00	8.0	8.3	-11.0	-27.1	-18.6	-68.2	-67.7		-192.7
12/22/03 9:00	10.4	9.8	-8.6	-20.1	-13.6	-70.3	-69.8		-182.5
12/22/03 10:00	9.9	9.3	-12.2	-28.5	-19.8	-72.0	-70.5		-202.9
12/22/03 11:00	7.7	8.4	-12.7	-29.4	-19.9	-68.9	-68.1		-199.0
12/22/03 12:00	8.3	8.4	-11.2	-26.4	-16.8	-68.1	-67.8		-190.3
12/22/03 13:00	8.4	8.9	-11.5	-27.8	-18.5	-69.7	-69.7		-197.1
12/22/03 14:00	6.6	7.1	-12.4	-28.7	-19.5	-67.0	-67.1		-194.7
12/22/03 15:00	9.9	10.2	-14.3	-32.6	-22.9	-53.9	-53.2		-176.9
12/22/03 16:00	6.1	6.5	-13.5	-29.9	-21.4	-44.9	-44.1		-153.8
12/22/03 17:00	11.2	10.7	-10.7	-25.6	-16.7	-49.5	-48.6		-151.0
12/22/03 18:00	11.5	12.1	-10.0	-23.8	-14.9	-47.8	-47.4		-143.9
12/22/03 19:00	9.5	9.8	-10.7	-25.7	-16.7	-45.5	-45.1		-143.6
12/22/03 20:00	13.0	13.4	-11.8	-27.7	-19.2	-1.3	-1.3		-61.4
12/22/03 21:00	14.3	14.6	-12.2	-27.6	-18.1	-2.4	-2.4		-62.7
12/22/03 22:00	14.2	14.9	-13.8	-29.7	-22.3	-3.4	-2.7		-71.9
12/22/03 23:00	15.7	15.8	-20.3	-42.4	-31.9	-6.0	-6.3		-107.0
12/23/03 0:00	16.8	17.8	-10.5	-27.6	-19.6	-3.5	-2.0		-63.2
12/23/03 1:00	16.6	17.7	-10.7	-23.9	-17.5	-2.3	-2.2		-56.5
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12/23/03 3:00	17.0	17.4	-10.8	-25.1	-18.8	-1.7	-1.1		-57.6
12/23/03 4:00	15.9	16.9	-11.1	-25.0	-19.1	-0.1	0.0		-55.4
12/23/03 5:00	12.4	13.4	-8.9	-21.2	-14.8	-45.4	-44.9		-135.1
12/23/03 6:00	10.7	10.9	-16.9	-34.4	-25.1	-46.2	-46.4		-169.0
12/23/03 7:00	7.2	7.5	-16.4	-33.2	-23.5	-43.5	-43.3		-159.9
12/23/03 8:00	8.2	8.7	-11.5	-25.8	-16.7	-44.8	-44.7		-143.4
12/23/03 9:00	7.9	7.9	-12.5	-27.3	-17.8	-47.8	-47.4		-152.8
12/23/03 10:00	8.5	8.4	-12.2	-25.7	-16.7	-49.1	-48.7		-152.3
12/23/03 11:00	8.9	9.1	-11.7	-25.4	-16.9	-49.1	-49.1		-152.2
12/23/03 12:00	8.1	7.9	-12.5	-28.1	-18.3	-44.0	-43.7		-146.5
12/23/03 13:00	9.2	9.6	-10.5	-22.4	-14.7	-43.7	-43.6		-134.9
12/23/03 14:00	7.8	7.1	-13.0	-26.5	-18.4	-40.4	-39.5		-137.8
12/23/03 15:00	6.9	6.9	-13.8	-28.7	-19.9	-40.9	-40.6		-144.0
12/23/03 16:00	6.0	5.9	-14.5	-29.6	-20.2	-39.1	-38.4		-141.8
12/23/03 17:00	7.2	7.6	-14.5	-31.5	-20.6	-39.0	-38.5		-144.0
12/23/03 18:00	8.2	9.2	-12.4	-26.3	-17.8	-62.4	-61.4		-180.4
12/23/03 19:00	8.7	9.2	-7.7	-20.4	-13.6	-60.1	-59.7		-161.4
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12/23/03 22:00	15.4	16.1	-9.8	-23.6	-16.9	-20.5	-20.5		-91.3
12/23/03 23:00	13.9	15.2	-12.2	-26.6	-19.1	-20.8	-20.0		-98.7
12/24/03 0:00	14.2	14.3	-11.0	-24.3	-17.3	-20.3	-20.4		-93.3
12/24/03 1:00	13.5	13.9	-7.3	-18.4	-12.3	-20.3	-20.7		-78.9
12/24/03 2:00	14.0	14.0	-6.3	-15.5	-10.2	-20.4	-20.1		-72.5
12/24/03 3:00	14.4	14.5	-6.7	-16.0	-10.7	-21.6	-21.4		-76.5
12/24/03 4:00	13.6	13.5	-6.7	-17.7	-11.8	-19.8	-19.6		-75.6
12/24/03 5:00	11.6	12.0	-4.1	-11.4	-6.5	-43.0	-42.7		-107.7

12/24/03 6:00	13.1	12.9	-5.0	-16.2	-9.7	-47.0	-47.2		-125.2
12/24/03 7:00	6.4	6.6	-8.2	-19.3	-13.0	-40.0	-39.5		-120.0
12/24/03 8:00	7.1	7.8	-5.6	-15.0	-9.0	-42.1	-41.3		-113.0
12/24/03 9:00	8.2	8.3	-4.9	-14.5	-9.0	-42.9	-42.2		-113.5
12/24/03 10:00	6.4	6.4	-10.1	-23.7	-16.5	-39.8	-39.9		-129.9
12/24/03 11:00	5.6	5.9	-10.5	-23.8	-16.5	-39.2	-38.7		-128.8
12/24/03 12:00	4.3	5.1	-9.8	-24.1	-16.0	-36.5	-36.2		-122.6
12/24/03 13:00	4.5	4.8	-8.6	-20.4	-13.1	-38.5	-38.0		-118.7
12/24/03 14:00	3.7	3.7	-9.5	-22.0	-14.7	-37.4	-36.4		-120.0
12/24/03 15:00	2.6	2.8	-8.4	-22.5	-14.2	-34.3	-33.9		-113.4
12/24/03 16:00	2.3	2.2	-7.3	-19.0	-11.9	-33.9	-33.7		-105.8
12/24/03 17:00	7.0	7.1	-4.3	-15.5	-7.5	-37.7	-37.3		-102.2
12/24/03 18:00	3.7	4.0	-7.5	-20.3	-11.3	-33.5	-33.4		-105.9
12/24/03 19:00	2.7	2.6	-9.6	-24.8	-14.8	-33.0	-32.2		-114.4
12/24/03 20:00	6.5	6.7	-10.7	-26.4	-16.5	11.0	11.3		-31.4
12/24/03 21:00	8.9	8.8	-10.6	-25.9	-16.1	8.8	9.7		-34.1
12/24/03 22:00	11.5	11.4	-11.3	-25.7	-16.8	7.0	7.3		-39.4
12/24/03 23:00	15.9	16.5	-9.8	-23.0	-15.3	0.6	1.0		-46.5
12/25/03 0:00	15.2	15.9	-6.0	-16.3	-9.5	1.0	1.6		-29.2
12/25/03 1:00	14.5	14.6	-7.4	-19.2	-13.2	2.4	2.6		-34.8
12/25/03 2:00	13.6	13.7	-9.9	-23.0	-16.9	4.0	3.8		-42.0
12/25/03 3:00	12.5	12.5	-12.2	-27.1	-19.2	3.7	4.7		-50.1
12/25/03 4:00	12.0	11.9	-12.6	-29.1	-20.5	5.1	5.5		-51.5
12/25/03 5:00	9.5	9.8	-12.4	-26.3	-19.0	-17.4	-16.4		-91.4
12/25/03 6:00	9.3	10.1	-12.1	-26.0	-19.5	-17.7	-17.0		-92.4
12/25/03 7:00	8.3	8.6	-12.0	-25.1	-18.4	-15.0	-14.6		-85.2
12/25/03 8:00	7.3	7.1	-15.0	-31.6	-22.9	-15.0	-14.3		-98.7
12/25/03 9:00	7.1	7.7	-12.0	-27.7	-19.8	-15.0	-14.4		-88.9
12/25/03 10:00	7.0	7.9	-8.8	-20.8	-14.4	-35.5	-35.1		-114.7
12/25/03 11:00	7.9	8.4	-10.9	-25.0	-17.6	-36.4	-36.2		-126.0
12/25/03 12:00	7.0	7.2	-9.6	-22.5	-16.2	-34.7	-34.4		-117.3
12/25/03 13:00	7.2	7.0	-9.6	-23.2	-16.2	-34.8	-34.1		-117.8
12/25/03 14:00	7.5	7.8	-9.6	-21.5	-14.6	-34.8	-34.3		-114.7
12/25/03 15:00	7.0	7.0	-10.5	-22.9	-16.0	-34.3	-33.9		-117.6
12/25/03 16:00	7.1	7.1	-9.5	-23.5	-16.2	-34.5	-34.0		-117.8
12/25/03 17:00	8.3	7.5	-6.5	-16.9	-10.2	-57.6	-56.7		-148.0
12/25/03 18:00	7.0	6.7	-11.2	-25.4	-16.6	-56.4	-55.6		-165.2
12/25/03 19:00	7.6	7.9	-4.8	-14.7	-8.1	-56.0	-55.4		-138.9
12/25/03 20:00	8.2	8.1	-9.8	-23.4	-15.1	-32.2	-31.5		-112.0
12/25/03 21:00	12.1	12.1	-10.0	-23.1	-15.2	-14.7	-14.5		-77.6
12/25/03 22:00	13.5	13.3	-5.2	-15.4	-9.3	-16.7	-16.1		-62.7
12/25/03 23:00	13.8	13.4	-5.9	-14.9	-8.9	-18.0	-17.0		-64.7
12/26/03 0:00	13.4	13.5	-7.1	-17.2	-11.9	-19.8	-19.4		-75.4
12/26/03 1:00	13.4	13.8	-8.1	-18.6	-13.5	-19.9	-19.8		-80.0
12/26/03 2:00	13.0	13.0	-6.9	-17.3	-12.9	-19.5	-19.5		-76.1
12/26/03 3:00	14.2	14.2	-10.3	-24.1	-17.2	3.6	3.2		-44.8
12/26/03 4:00	15.1	15.2	-10.3	-23.9	-18.3	2.3	2.2		-48.0
12/26/03 5:00	12.5	12.4	-4.2	-11.8	-8.0	-41.9	-41.2		-107.1
12/26/03 6:00	13.6	13.5	-4.3	-13.2	-8.8	-46.2	-46.2		-118.8
12/26/03 7:00	6.4	6.4	-12.0	-26.5	-19.4	-40.4	-39.6		-137.9
12/26/03 8:00	5.2	4.8	-10.4	-23.1	-16.3	-39.3	-39.1		-128.3
12/26/03 9:00	5.4	6.1	-9.3	-24.0	-15.4	-40.2	-39.8		-128.6

12/26/03 10:00	5.3	5.2	-9.0	-22.3	-14.7	-37.6	-36.6		-120.2
12/26/03 11:00	5.2	5.1	-10.4	-24.1	-16.0	-36.1	-36.0		-122.6
12/26/03 12:00	4.8	4.8	-9.2	-22.1	-15.0	-37.0	-36.5		-119.7
12/26/03 13:00	4.3	4.5	-9.9	-23.1	-16.3	-37.0	-36.5		-122.9
12/26/03 14:00	4.0	4.3	-10.4	-25.1	-17.7	-37.4	-37.0		-127.5
12/26/03 15:00	4.2	4.5	-8.6	-20.8	-14.4	-37.2	-37.1		-118.2
12/26/03 16:00	4.3	4.1	-10.9	-26.5	-18.0	-25.9	-25.3		-106.7
12/26/03 17:00	9.9	10.5	-13.2	-29.2	-20.4	-21.3	-20.8		-104.8
12/26/03 18:00	8.2	8.4	-14.1	-33.2	-21.4	-16.7	-15.4		-100.7
12/26/03 19:00	8.4	8.9	-11.3	-27.5	-16.8	-14.2	-13.8		-83.7
12/26/03 20:00	8.3	8.2	-12.7	-29.8	-18.9	-16.1	-15.2		-92.7
12/26/03 21:00	10.4	10.2	-14.7	-33.0	-21.9	7.4	8.3		-53.9
12/26/03 22:00	11.9	11.7	-15.3	-33.4	-23.9	7.0	7.0		-58.6
12/26/03 23:00	15.9	16.4	-15.8	-35.0	-25.1	0.1	0.1		-75.6
12/27/03 0:00	17.4	17.8	-6.3	-15.6	-9.5	-0.1	0.4		-31.1
12/27/03 1:00	18.5	19.1	-5.5	-14.6	-9.3	-2.6	-2.1		-34.1
12/27/03 2:00	15.9	16.3	-8.1	-19.9	-13.1	2.2	2.7		-36.3
12/27/03 3:00	17.9	18.3	-9.1	-21.0	-15.0	-0.2	-0.3		-45.7
12/27/03 4:00	16.2	16.4	-8.8	-21.0	-15.0	3.3	2.7		-38.9
12/27/03 5:00	17.3	18.5	-7.3	-19.6	-12.6	-0.8	-0.3		-40.6
12/27/03 6:00	15.7	16.3	-6.4	-17.0	-11.4	-14.6	-14.6		-64.0
12/27/03 7:00	8.9	9.2	-15.3	-33.4	-25.1	-10.5	-10.9		-95.3
12/27/03 8:00	11.7	11.4	-12.6	-25.4	-19.5	-15.4	-14.8		-87.8
12/27/03 9:00	12.8	12.4	-10.0	-23.1	-15.7	-16.1	-15.7		-80.7
12/27/03 10:00	13.2	13.8	-7.4	-19.2	-11.9	-17.7	-16.6		-72.8
12/27/03 11:00	12.0	12.7	-11.0	-25.2	-16.8	-15.5	-15.1		-83.6
12/27/03 12:00	11.6	11.7	-11.2	-26.7	-18.4	-14.1	-13.4		-83.9
12/27/03 13:00	9.9	10.6	-13.3	-31.2	-21.2	-13.0	-12.8		-91.5
12/27/03 14:00	9.3	9.2	-14.7	-31.7	-23.6	-11.7	-11.4		-93.1
12/27/03 15:00	9.1	9.0	-11.0	-25.1	-17.8	-11.4	-11.5		-76.8
12/27/03 16:00	8.8	8.9	-10.8	-26.7	-18.4	-11.2	-11.5		-78.5
12/27/03 17:00	14.3	14.7	-8.5	-21.7	-13.7	-16.9	-16.8		-77.7
12/27/03 18:00	11.6	12.1	-3.9	-14.5	-6.7	-32.4	-32.2		-89.6
12/27/03 19:00	12.7	12.7	-7.4	-19.0	-11.4	-35.9	-34.3		-108.0
12/27/03 20:00	12.7	11.7	-6.9	-18.6	-9.4	-34.2	-32.7		-101.8
12/27/03 21:00	14.6	15.2	-5.2	-16.3	-8.4	-18.6	-18.3		-66.9
12/27/03 22:00	12.5	12.5	-12.6	-28.3	-19.2	-16.5	-16.2		-92.8
12/27/03 23:00	12.8	13.4	-6.9	-19.0	-11.8	-16.5	-16.5		-70.5
12/28/03 0:00	12.8	12.7	-9.1	-21.8	-14.5	-17.7	-17.7		-80.8
12/28/03 1:00	12.6	12.8	-12.6	-26.6	-19.1	-19.2	-18.5		-96.0
12/28/03 2:00	13.4	13.5	-18.3	-39.2	-29.3	3.3	3.2		-80.3
12/28/03 3:00	12.8	12.6	-18.7	-40.4	-30.3	4.0	4.4		-81.0
12/28/03 4:00	15.1	15.2	-9.4	-22.8	-15.8	1.6	2.2		-44.2
12/28/03 5:00	14.5	14.9	-9.9	-23.5	-16.5	2.6	3.2		-44.0
12/28/03 6:00	13.3	13.1	-11.1	-25.4	-17.2	-12.9	-12.5		-79.0
12/28/03 7:00	7.1	7.4	-18.8	-40.3	-30.0	-9.5	-8.7		-107.4
12/28/03 8:00	7.3	7.6	-13.7	-31.9	-22.8	-10.9	-10.0		-89.3
12/28/03 9:00	9.8	9.9	-10.7	-23.9	-16.2	-12.4	-12.4		-75.5
12/28/03 10:00	10.3	10.7	-13.0	-28.6	-19.6	-13.9	-14.3		-89.5
12/28/03 11:00	10.6	10.6	-16.1	-33.4	-23.5	-15.2	-14.8		-102.9
12/28/03 12:00	9.8	10.7	-14.7	-30.2	-20.4	-14.9	-13.9		-94.2
12/28/03 13:00	10.5	10.9	-15.8	-32.5	-23.1	-16.2	-15.9		-103.5

12/28/03 14:00	8.9	10.0	-17.8	-36.4	-26.4	-14.4	-14.3		-109.2
12/28/03 15:00	9.9	9.3	-18.5	-37.1	-26.9	-15.2	-14.8		-112.5
12/28/03 16:00	7.4	7.8	-13.7	-30.6	-21.7	-10.5	-10.7		-87.3
12/28/03 17:00	14.1	14.0	-11.5	-27.2	-17.7	-17.4	-17.1		-90.9
12/28/03 18:00	14.1	14.1	-10.9	-28.2	-18.3	-17.5	-16.6		-91.5
12/28/03 19:00	13.7	13.7	-11.9	-28.2	-17.9	-15.8	-15.4		-89.2
12/28/03 20:00	13.2	13.9	-11.7	-27.7	-17.2	-16.3	-15.3		-88.1
12/28/03 21:00	14.8	14.9	-14.0	-32.0	-20.5	-2.4	-1.7		-70.8
12/28/03 22:00	13.4	14.3	-15.4	-35.6	-24.8	0.2	1.0		-74.6
12/28/03 23:00	14.5	14.6	-16.5	-36.9	-25.7	-0.5	-0.1		-79.7
12/29/03 0:00	14.3	14.7	-15.3	-33.4	-23.8	0.9	1.1		-70.5
12/29/03 1:00	16.0	16.3	-12.2	-29.1	-20.1	2.1	1.8		-57.4
12/29/03 2:00	15.1	15.8	-10.7	-25.1	-17.9	1.0	2.3		-50.5
12/29/03 3:00	14.5	14.9	-13.4	-30.2	-22.2	2.6	3.3		-59.9
12/29/03 4:00	13.9	14.9	-13.4	-29.5	-21.3	3.9	3.3		-57.0
12/29/03 5:00	17.2	17.3	-13.4	-28.3	-21.1	-1.9	-1.2		-65.9
12/29/03 6:00	10.8	11.2	-17.0	-35.8	-26.9	-43.4	-43.0		-166.1
12/29/03 7:00	11.1	11.0	-16.5	-34.1	-25.5	-45.7	-44.9		-166.7
12/29/03 8:00	7.6	7.7	-12.1	-25.7	-18.7	-41.7	-41.5		-139.7
12/29/03 9:00	9.0	9.1	-11.6	-25.1	-17.8	-42.0	-41.4		-137.9
12/29/03 10:00	I/O Time	I/O Time	I/O Time	I/O Time	I/O Time	I/O Time	I/O Timeout		0.0
12/29/03 11:00	9.0	8.8	-13.4	-27.7	-19.6	-42.6	-41.7		-145.0
12/29/03 12:00	5.1	5.3	-14.8	-29.6	-22.5	-37.1	-37.1		-141.2
12/29/03 13:00	6.0	5.7	-17.8	-37.7	-27.9	-39.5	-39.1		-162.1
12/29/03 14:00	5.0	5.6	-18.9	-39.2	-28.7	-20.6	-20.3		-127.6
12/29/03 15:00	4.3	4.1	-14.2	-32.2	-21.7	-19.7	-19.4		-107.1
12/29/03 16:00	4.2	4.5	-12.7	-30.5	-19.4	-15.3	-14.9		-92.7
12/29/03 17:00	12.1	12.7	-9.0	-25.0	-13.7	-24.6	-22.9		-95.2
12/29/03 18:00	10.0	10.1	-7.2	-20.4	-10.8	-41.4	-40.7		-120.6
12/29/03 19:00	5.7	5.6	-11.2	-26.4	-16.7	-36.0	-35.0		-125.4
12/29/03 20:00	4.3	4.0	-11.1	-25.4	-16.8	-33.9	-32.8		-120.0
12/29/03 21:00	10.3	10.4	-9.7	-26.1	-16.1	6.6	7.6		-37.7
12/29/03 22:00	9.9	10.3	-11.5	-26.9	-17.6	6.7	7.1		-42.4
12/29/03 23:00	13.7	13.3	-20.0	-43.1	-30.7	-0.2	0.1		-93.9
12/30/03 0:00	13.8	14.5	-19.2	-41.2	-29.6	0.6	1.1		-88.3
12/30/03 1:00	13.4	13.5	-17.0	-38.6	-28.3	1.5	2.4		-80.1
12/30/03 2:00	15.3	14.8	-10.5	-24.2	-16.4	2.7	3.2		-45.2
12/30/03 3:00	13.9	14.6	-11.1	-26.1	-17.9	3.5	3.9		-47.6
12/30/03 4:00	15.2	16.3	-11.4	-26.3	-17.7	1.4	1.7		-52.3
12/30/03 5:00	17.9	18.3	-5.5	-15.7	-9.4	0.3	-0.2		-30.5
12/30/03 6:00	12.6	12.3	-7.4	-19.9	-12.7	-45.3	-44.4		-129.6
12/30/03 7:00	4.7	4.5	-16.7	-36.0	-26.1	-36.3	-36.6		-151.6
12/30/03 8:00	6.8	7.6	-15.6	-35.9	-24.8	-22.5	-22.1		-120.9
12/30/03 9:00	8.1	8.3	-14.7	-34.3	-23.8	-24.4	-22.2		-119.4
12/30/03 10:00	8.5	8.4	-13.2	-30.8	-19.8	-22.8	-21.9		-108.5
12/30/03 11:00	7.1	7.2	-17.0	-37.7	-26.3	-21.8	-20.6		-123.5
12/30/03 12:00	6.5	6.3	-16.2	-36.5	-26.2	-21.0	-19.9		-119.8
12/30/03 13:00	6.8	6.0	-15.6	-36.2	-26.0	-19.6	-18.6		-116.1
12/30/03 14:00	6.0	5.8	-17.5	-38.7	-28.0	-19.1	-18.1		-121.4
12/30/03 15:00	4.7	4.7	-16.5	-36.4	-26.8	-17.3	-16.1		-113.1
12/30/03 16:00	6.1	6.4	-15.7	-35.1	-24.9	-17.5	-16.6		-109.9
12/30/03 17:00	10.5	10.6	-9.7	-25.8	-16.0	-22.0	-20.9		-94.4



RS TAB 8

SEE PAGE RS-21
OF SDG&E TESTIMONY
RE: PREVIOUS "ABSENCE
OF SONGS" STUDIES

PRELIMINARY EVALUATION OF THE IMPACT
OF SHUTTING DOWN SONGS UNITS 2&3
ON THE SCE AND SDG&E TRANSMISSION SYSTEMS

FINAL REPORT - JUNE 1994

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APPENDIX A - Power Flow Base Case Workpapers

APPENDIX B - Power Flow Results Summaries

APPENDIX C - Stability Results Summaries

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APPENDIX E - Cost Analysis Workpapers

I INTRODUCTION

The Division of Ratepayer Advocates (DRA) has proposed effectively shutting down units 2&3 of the San Onofre Nuclear Generating Station (SONGS) as presented in DRA Testimony Exhibit No. 404, for the Southern California Edison Company (SCE) General Rate Case Application No. 93-12-025. SCE and SDG&E performed this joint study to identify impacts to their transmission systems if the SONGS units were to be shut down, and determine related mitigation measures and costs.

At present, exposure to operation with SONGS 2&3 both off line is extremely low. However, a permanent shutdown of SONGS 2&3 makes the exposure continuous. This constant exposure would now trigger the need for long term planning studies to formulate a plan of service to ensure that the transmission system meets the planning criteria on a continuous basis for the foreseeable future. This joint study report is a preliminary articulation of such a plan.

In this preliminary joint study, analysis focuses on the following three transmission-related cost impacts.

1. Incremental Facility Additions (IFAs) that will be required to mitigate problems caused by changing power flow patterns due to SONGS shutdown, including integrating and wheeling SONGS replacement resources.
2. Net increase in transmission system losses that will result due to the absence of SONGS.
3. IFAs that will be required to meet WSCC reliability criteria under likely contingencies in the absence of SONGS and with the addition of SONGS replacement resources.

Power flow and stability simulations were performed for peak load conditions expected for the summer of 1998. Though the DRA

proposal would cut SONGS costs from the rate base effective January 1, 1995, it was assumed that units 2&3 would be phased out in a manner similar to the shutdown procedure for SONGS unit 1, and remain on line until the fuel is spent, and a safe, orderly shut down is achieved. In addition, long-term replacement resources and transmission upgrades would not be expected to be constructed and brought on line until about 1998, at the earliest.

A 1997 Heavy Summer base case had already been prepared for other studies and was available for simulations. Loads and resources were adjusted in this case and other modifications (e.g. IFAs required for Winning QF Bidders (BRPU)) were made to reflect the expected 1998 operating conditions. The results based on this case should be representative of not only 1998, but also the subsequent 3 to 5 years after 1998, since there are no likely major facility additions or significant system changes expected in this period.

In accordance with the WSCC policies and procedures, this power flow case represents flows on the Arizona-to-California (East-of-the-River or "EOR") path at its 1998 non-simultaneous rating of 7,000 MW. Based on previous planning studies, it is known that conditions represented in this 1998 power flow case meet the WSCC reliability criteria under likely contingencies. The evaluation in this study will determine if the WSCC criteria can be met in the absence of SONGS and with the addition of SONGS replacement resources as recommended by the DRA.

Though this evaluation partly focuses on the EOR path, it should not be inferred that system reliability related to other import paths would not be impacted by the SONGS shutdown proposal. The evaluation reported herein provides an order of magnitude estimate of transmission-related costs that would be required if SONGS were shut down. Owing to limited time to perform this study, attention has been focused on areas where problems would be most likely to

occur. An expanded evaluation might identify impacts and related costs not identified in this joint study.

Power flow and stability simulations were run using the Power Technologies, Inc.'s (PTI), Power System Simulator (PSS/E-20) computer model.

II EXECUTIVE SUMMARY

Shutting down SONGS units 2&3 in the near term will significantly impact the SCE and SDG&E transmission systems, resulting in overall 1995 net present value (NPV) costs of approximately \$227 million and \$191 million, respectively, for incremental revenue requirements.¹ These 1995 NPV costs were calculated based on the total of each individual transmission-related annual cost stream up to the year 2013, as discussed in the following text.

Shutting down SONGS affects the power flow pattern on the SCE and SDG&E transmission systems. For the SCE system, the Orange County area is particularly affected, placing additional stress on the transformer banks at SCE's Serrano Substation. To avoid overloading existing banks at Serrano Substation under likely contingencies, a third 500/230 kV bank is required. The estimated 1995 NPV cost of the third bank and related facilities is \$44 million.

IFAs are also required on the SDG&E transmission system, due to changes in the power flow pattern on the transmission system in the absence SONGS and for integrating the combined SONGS replacement resources located at North Gila 500 kV and Imperial Valley 500 kV Substations and at the border area between Tijuana 230 kV and Miguel 230 kV Substations. These IFAs involve 500 kV transmission line and substation upgrades on the system from North Gila Substation to Miguel Substation, and several upgrades on the lower voltage transmission system in the area around Miguel Substation and into SDG&E's internal system, to avoid line overloading and unacceptably low voltages under likely

¹ SDG&E's portion of the transmission costs associated with a SONGS shutdown put forth in this joint study (\$191 million) does not include potential costs that SDG&E may incur if SDG&E loses its favorable tax exempt status with respect to Industrial Development Bonds (IDBs). See Section V.G.

contingencies. The estimated 1995 NPV cost of these facilities is \$107 million.

In the absence of the SONGS generating units, transmission losses in the SCE system increase by 71 MW. Prior to removal of SONGS, SCE losses were calculated to be 349 MW. After removing SONGS, adding replacement resources and installing related IFAs, SCE losses were calculated to be 420 MW. The 1995 NPV capacity and energy cost of these increased losses over the 19 year period (1995-2013) is \$135 million.

In the absence of SONGS generating units, transmission losses in the SDG&E system increase by 16.5 MW. Prior to removal of SONGS, SDG&E losses were calculated to be 83.3 MW. After removing SONGS, adding replacement resources and installing related IFAs, SDG&E losses were calculated to be 99.8 MW. The 1995 NPV capacity and energy cost of these increased losses over the 19 year period is \$41 million.

In the case with SONGS in service, the WSCC criteria is met under key single and double transmission line outages. However, with SONGS off line, including DRA's SONGS replacement resources with their required IFAs, the key line outages result in unacceptable system performance, ranging from exceeding thermal loading and voltage criteria to system instability ("blackout"). IFAs are required on the SCE and SDG&E transmission systems to meet the WSCC reliability criteria. These IFAs include new transmission and substation facilities on the SCE and SDG&E systems. The 1995 NPV cost of these facilities is \$91 million. For the purpose of this study, \$48 million is allocated to SCE and \$43 million to SDG&E.

In addition to the aforementioned cost impacts attributed to the SONGS shutdown proposal, the study also identified an impact to the SCE and SDG&E simultaneous import capability, as defined by

the Southern California Import Transmission (SCIT) Nomogram. Shutting down SONGS unit 2 and 3 could reduce the SCE and SDG&E simultaneous import capability by up to 600 MW. Though not quantified in the study, this import reduction would add costs to the Shutdown Proposal in future years. As utilization of the transmission system into California increases over the years, the economic cost of forgoing transactions due to more stringent nomogram limitations is expected to increase.

III STUDY SCOPE AND METHODOLOGY

The following study plan was developed prior to performing the evaluation.

A. Base Case Development

Two power flow cases will be developed from the 1998 Heavy Summer base case. The first is the benchmark case which assumes SONGS units 2 & 3 are in service. The other case assumes that SONGS units 2 & 3 are off line. This last case differs by what is assumed for the SONGS replacement capacity resources as identified by the DRA. The DRA Scenario is based on DRA's list of Losing QF Bidders (refer to Section IV.5) for SCE and SDG&E.

The remainder of the Report will refer to these two cases as follows:

Benchmark Case - SONGS units 2 & 3 in service

DRA Scenario - Remove SONGS; add DRA replacement capacity

B. Internal Network Analysis

Shutting down SONGS affects the power flow pattern on the transmission system, which together with SONGS replacement capacity resources, depending on size and location of the resources, may adversely impact the local transmission network. For the DRA Scenario, the local transmission networks to which replacement resources have been connected will be evaluated under normal and contingency conditions to ensure that thermal loading, voltage, stability and post transient criteria are met. If the criteria are not met, IFAs are to be identified to mitigate deviations from the criteria.

C. System Loss Analysis

The overall impact of shutting down SONGS, on SCE and SDG&E system losses, will be evaluated by comparing losses in the Benchmark Case with those of the DRA Scenario which will include any required IFAs. The difference in losses (i.e. net positive or negative) would be attributed to the overall impact of shutting down SONGS.

D. WSCC Reliability Analysis

The WSCC interconnected transmission system must meet the performance levels specified in the WSCC "Reliability Criteria For Transmission System Planning." These performance levels define acceptable facility loadings, voltages, stability parameters, and degrees of load shedding under different contingencies. To determine possible impacts to system reliability because of the proposed SONGS shutdown for the off line case, the Benchmark Case and the DRA Scenario will be evaluated under normal and contingency conditions to ensure that the WSCC reliability criteria are met. The Benchmark Case is expected to meet the criteria under all conditions based on previously approved WSCC studies.

The evaluation under contingency conditions will assume the following four credible outages to test the EOR transmission path in meeting system planning criteria (see APPENDIX D):

- 1 Palo Verde-Devers 500 kV line
- 2 Palo Verde-North Gila 500 kV line
- 3 IV-Miguel 500 kV line w/trip of IV-La Rosita 230 kV line
- 4 Lugo-Mira Loma 500 kV 2 & 3 lines

If the analysis of the DRA Scenario shows that the WSCC reliability criteria were not met, IFAs are to be identified to mitigate deviations from the criteria.

E. Simultaneous Import Analysis

The simultaneous import capability, as defined by the Southern California Import Transmission (SCIT) nomogram, is a function of the amount of Southern California area inertia (i.e. rotating mass), measured in "MW-sec." The import capability generally increases/decreases as more MW-sec of inertia (i.e. massive generating Units) are brought on/off line. To determine possible impacts to the import capability due to the proposed SONGS shutdown, the Benchmark Case and the DRA Scenario will be evaluated by comparing import limitations as a function of a change in inertia based on the existing SCIT nomogram.

The reduction of the simultaneous import capability due exclusively to the removal of SONGS units would be lessened by the addition of replacement resources. However, the inertia of the replacement resources, will be significantly less than that of the SONGS units due to differences in turbine-generator designs. For example, the SONGS turbine-generators are much more massive, MW for MW, than combined cycle or combustion turbine units which would be typical of the resources proposed to replace SONGS units 2&3.

IV STUDY ASSUMPTIONS

The power flow base case, modeling the WSCC interconnected system, was developed with the following assumptions, which are typical of those used in WSCC studies (also see Workpapers in APPENDIX A):

1. Study simulations were based on meeting the current WSCC "Reliability Criteria For Transmission System Planning" as published in March 1994, as well as the SCE and SDG&E transmission planning criteria.
2. The study power flow base case originated from the WSCC 1997 HS2 (Heavy Summer) case, which has been updated to reflect the most current information available for 1998 conditions.
3. SCE's assumption for BRPU winning bidders, including a distribution of the 25% solicitation reduction to account for a lower load projection, is listed below:

<u>Connection Point</u>	<u>Capacity (MW)</u>
Devers 115 kV	36
Mirage 230 kV	68
Antelope 230 kV	10
Antelope 66 kV	12
Tejon 230 kV	30
Chino 12/16 kV	3
Olinda 66 kV	7
Santiago 66 kV	7
Sylmar LA 230 kV	15
Valley 115 kV	4
Vincent 230 kV	20
Vista 115 kV	7
Bailey 66 kV	10
Pastoria 230 kV	372
Control 115 kV	34
Kramer 115 kV	14
Lugo 500 kV	5
Victor 230 kV	10
Victor 115 kV	4
Eldorado 500 kV	5
Eldorado 500 kV	<u>15</u>
Total	688

4. SDG&E's assumption for BRPU winning bidders, including a distribution of the 25% solicitation reduction to account for a lower load projection, is listed below:

<u>Connection Point</u>	<u>Capacity (MW)</u>
Pastoria 230 kV	312
Imperial Valley 230 kV	39
La Rosita 230 kV	11
Palo Verde 500 kV	4
COB/NOB ²	6
Boulevard 69 kV	6
Border 69 kV	<u>0.5</u>
Total	378.5

5. The power flow case representing the SONGS shutdown scenario, assumed 1,350 MW of SONGS replacement resources for SCE and 430 MW for SDG&E, based on the list of BRPU losing bidders provided by the DRA, shown in the table below. SCE's 1,613 MW share of SONGS was reduced by the ratio of an assumed SONGS 75% capacity factor (CF) and a QF 90% CF, based on DRA statements³.

<u>Connection Point</u>	<u>Bidder Number</u>	<u>DRA Price Assumption</u>	<u>Capacity (MW)</u>	
			<u>SCE</u>	<u>SDG&E</u>
Magunden 230 kV	2180	2.861	274	0
Magunden 230 kV	4410	3.071	0	291
N. Gila 500 kV	5276	3.567	152	139
IV 500 kV ⁴	1848	3.760	248	0
Ormond 230 kV	4340	4.065	247	0
Tijuana 230 kV	4552B	4.149	242	0
Lag. Bell 230 kV	1680	4.168	<u>187</u>	<u>0</u>
Total	---	---	1350	430

² "COB" refers to the California-Oregon border, where the Pacific AC Intertie flow is metered, and "NOB" refers to the Nevada-Oregon border, where the Pacific DC Intertie flow is metered.; the "COB/NOB" notation refers to resources scheduled on the Pacific AC and/or DC Intertie.

³ A.93-12-025, Exhibit 404, page 17, and DRA response to SCE Data Request NU-35, Q.2.

⁴ The QFs at IV (Imperial Valley) would probably connect at the 230 kV bus, in which case a 500/230 kV transformer bank would be required to avoid overloading the 230 kV system, as discussed in Section V of this Report.

6. Anaheim/Riverside's 4.95% share of SONGS (107 MW) was represented as being scheduled from existing generation within SCE's control area.
7. In the base case, the East-of-the-River (EOR) Arizona to California path flow was approximately 7,000 MW matching the non-simultaneous transfer capability rating with the Mead-Phoenix and Marketplace-Adelanto Projects in service. The flow on the EOR path beginning in 1995 will be defined by the sum of the flows on the following lines.
 1. Navajo-McCullough 500 kV
 2. Moenkopi-Eldorado 500 kV
 3. Liberty-Mead 345 kV
 4. Palo Verde-Devers 500 kV
 5. Palo Verde-North Gila 500 kV
 6. Westwing-Mead 500 kV
8. Series compensation in the major Extra High Voltage (EHV) lines were represented at normal operating levels as shown below.

<u>East-of-the-River (EOR) EHV Lines</u>	<u>Compensation</u>
Navajo-McCullough 500kV	70%
Moenkopi-Eldorado 500kV	70%
Liberty-Mead 345kV	70%
Palo Verde-Devers 500kV #1	50%
Palo Verde-N. Gila 500kV	50%
Westwing-Mead 500kV	70%

<u>West-of-the-River (WOR) EHV Lines</u>	<u>Compensation</u>
McCullough-Victorville 500kV 1 & 2	35%
Eldorado-Lugo 500kV	35%
Mohave-Lugo 500kV	26%
Marketplace-Adelanto 500kV	45%
North Gila-Imperial Valley 500kV	50%

9. The flow on the Westwing-Mead 500 kV line was scheduled at 1,300 MW by use of the Westwing phase-shifter.

10. The Mead-Liberty phase shifter and series compensation were assumed to be in-service. The flow on the Mead-Liberty 345 kV line was scheduled at 450 MW from Liberty to Mead to avoid thermal overload on the Moenkopi-Eldorado 500 kV line.
11. The aggregate flow of all SCIT import paths was moderately heavy at 13,178 MW.
12. The base case studied was Heavy Summer with the Southern California area inertia at 109,000 MW-sec, (historically the SOCAL⁵ area inertia ranges from about 40,000 MW-sec to 109,000 MW-sec). The higher inertia levels tend to make the system more stable.
13. The generation levels at the Hoover and Mohave plants were represented with schedules according to realistic dispatch conditions as required to meet WOR loading requirements.
14. SDG&E's proposed South Bay Repower Project and related transmission were not assumed in the case. The 500 MW corresponding to its replacement were assumed to originate as follows (refer to SDG&E load and resource tables in APPENDIX A):
 1. 250 MW from the Midway-Pastoria area
 2. 250 MW from the Palo Verde area
15. SCE's Kramer/Victor area was represented in accordance with the most current plan.

⁵ The Southern California (SOCAL) area refers to the area bounded by SCE, LADWP and SDG&E service territories. SOCAL area inertia also includes units at the Mohave Generation Plant and selected units at the Hoover Generation Plant.

16. Based on the Navajo and Palo Verde Transmission Projects Operating Study Guidelines used for establishing the non-simultaneous rating on the EOR path, stability simulations must meet the stability criteria with 7% margin on the path and on the Palo Verde generator unit output. Two power flow cases were developed for the purpose of meeting the EOR stability criteria. One case represents EOR flow at 7,490 MW, and the other case assumes a total Palo Verde generator output of 4,340 MW.

V. STUDY FINDINGS

A. SCE Internal Network Requirements

For the DRA Scenario, IFA's were required to meet the SCE planning criteria at only one location on the SCE network: the Serrano 500 kV Substation. Changes in power flow pattern, due to the absence of SONGS generator MW output together with the SONGS replacement resources located far from the Orange County load center, has placed more stress on the two existing 500/230 kV transformer banks at Serrano Substation. The SCE planning criteria allows a transformer bank overload of 120% under likely single contingencies (i.e. one transformer bank outage).

Both the Benchmark Case and the DRA Scenario were checked for credible single (N-1) and double (N-2) contingencies, and the results are compiled in Tables B.1, APPENDIX B. In the Benchmark Case, the outage of transformer bank #1 causes a 102% overload on the remaining transformer bank #2 which is within the criteria. However, an unacceptable 125% overload occurs under the same contingency in the DRA Scenario. To avoid the overload, a third 500/230 kV transformer bank is required at Serrano Substation.

The transmission system south of Magunden 230 kV substation was studied due to the concentration of replacement resources located at the Magunden bus. However, based on a check of credible N-1 and N-2 contingencies in the Magunden area, no IFAs were required (see Magunden Workpaper in APPENDIX B).

B. SDG&E Internal Network Requirements

The physical location of the San Onofre units electrically results in North-to-South power flows from the point of

interconnection at San Onofre into the SDG&E system via five 230 kV lines:

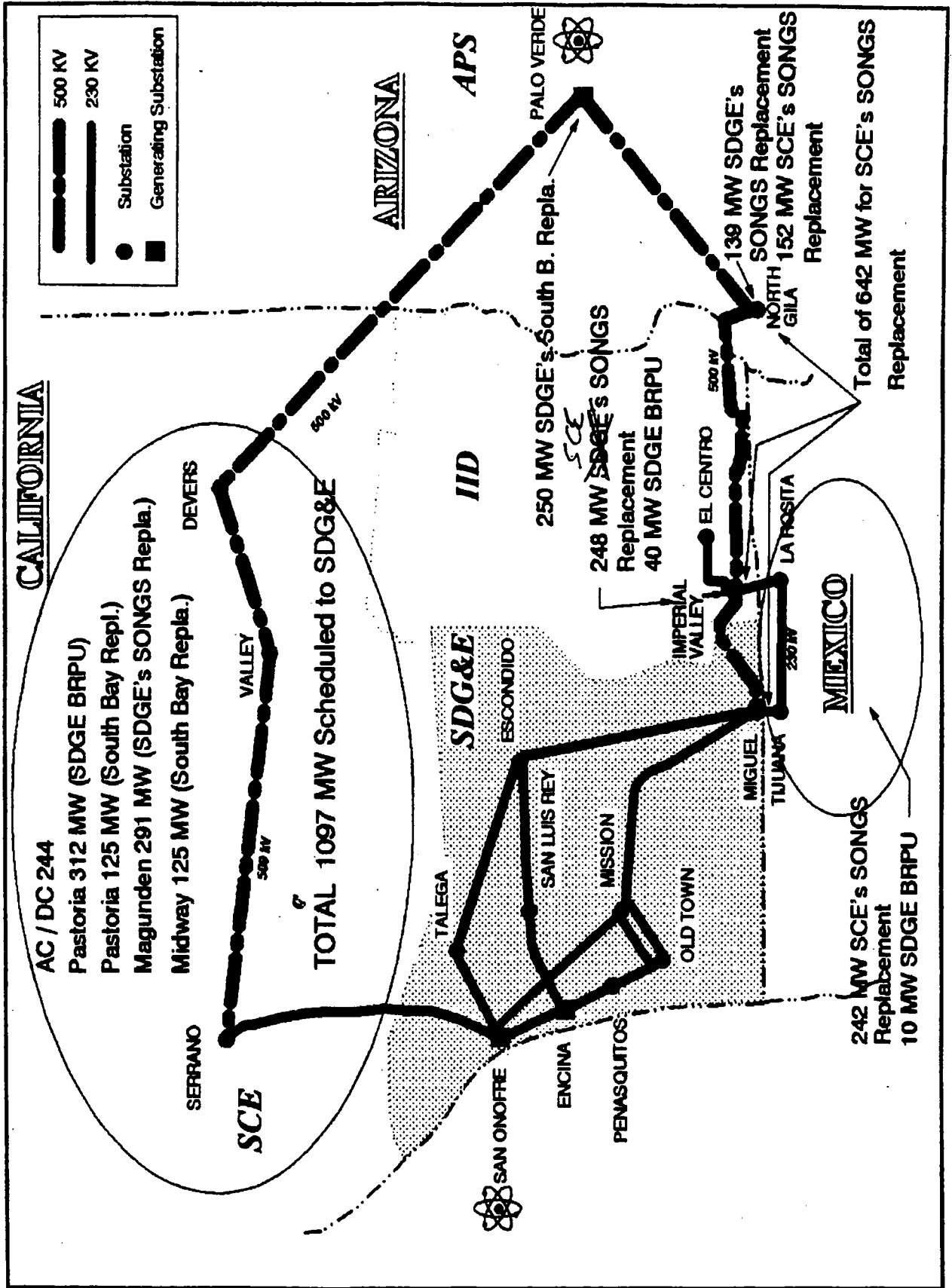
- San Onofre to Talega #1 and #2,
- San Onofre to San Luis Rey,
- San Onofre to Mission, and
- San Onofre to Encina.

If the SONGS units are removed, actual flows through these tie-lines into the San Diego area are significantly reduced, or even reversed, even if replacement power is scheduled to SDG&E through the San Onofre interconnection.

The chart on the following page indicates the locations of the San Onofre replacements assumed in the study. If the San Onofre units are replaced, less power would tend to flow on the San Onofre interconnection lines into SDG&E, and more would incrementally flow on the Southwest Power Link (SWPL) segments. As a result, the power flow into Miguel significantly increases.

The addition of one or more lines between the southern part of Edison's territory and the SDG&E system would not significantly facilitate the flow of power from the north under normal conditions. The flow would remain relatively low due to absence of a strong generation source in the area, and due to Edison's high level of load in the area.

Both the Benchmark Case and the DRA Scenario were checked for credible N-1 and N-2 contingencies. Based on SDG&E's Transmission Planning Design Criteria, a recommended plan was developed to ensure adequate reliability for the DRA Scenario. This process is done by adding one element at a time, which avoids over-designing due to the inter-dependent benefit of different facility additions. The last step in the



500 KV
 230 KV
 Substation
 Generating Substation

CALIFORNIA

ARIZONA

APS

IID

SDG&E

MEXICO

AC / DC 244
 Pastoria 312 MW (SDGE BRPU)
 Pastoria 125 MW (South Bay Repl.)
 Magunden 291 MW (SDGE's SONGS Repla.)
 Midway 125 MW (South Bay Repla.)

TOTAL 1097 MW Scheduled to SDG&E

250 MW SDGE's South B. Repla.

248 MW SDGE's SONGS Replacement

40 MW SDGE BRPU

139 MW SDGE's SONGS Replacement

152 MW SCE's SONGS Replacement

Total of 642 MW for SCE's SONGS Replacement

242 MW SCE's SONGS Replacement
10 MW SDGE BRPU

SERRANO
VALLEY
DEVERS

SCE

SAN ONOFFRE

ENCINA

PENASQUITOS

OLD TOWN

MIGUEL

TULUMA

TALEGA

ESCONDIDO

SAN LUIS REY

MISSION

OLD TOWN

IMPERIAL VALLEY

EL CENTRO

LA ROSITA

NORTH GILA

PALO VERDE

process is to test the final case against all the contingencies and ensure that no overloads are observed. For the DRA Scenario, IFA's were required to meet SDG&E's planning criteria at several locations on the SDG&E network. The results of the analysis show a need for the following plan of service (POS):

1. A new Miguel 500/230 kV transformer, parallel to the existing one and with similar MVA rating (1,120 MVA Nameplate).
2. An upgrade to the Imperial Valley to Miguel series capacitors to withstand at least 1,600 Amperes under normal conditions, and 2,500 Amperes under emergency conditions (keeping the present 50% compensation level).
3. An upgrade to the Imperial Valley to North Gila series capacitors to withstand at least 1,700 Amperes under normal conditions and 2,300 Amperes under emergency conditions (keeping the present 50% compensation level).
4. A new 230 kV line from Mission to Miguel. The line should be able to carry a continuous current of 1,700 Amperes and have an emergency rating of at least 2,600 Amperes.
5. A new Sycamore Canyon 230/69 kV transformer, parallel to the existing one and with similar MVA rating.
6. Reconductoring the Rancho Carmel to Bernardo 69 kV line, with a single 1033 ACSR or equivalent.
7. Bundling the Pomerado to Poway 69 kV line.
8. A 500/230 kV transformer to connect the QF deliveries at Imperial Valley to the 500 kV bus. The new bank will not be in parallel with the existing bank so that power from the QF deliveries is injected directly to the 500 kV bus, so as to not cause overloading on the 230 kV system. The transformer would have a nameplate rating of at least 350 MVA.

Refer to SDG&E section of APPENDIX B for the contingencies and overloads that justify the projects listed above.

C. Losses on SCE Transmission System

It is known that the farther resources are from loads they serve, the higher the transmission losses, or conversely, the closer resources are to loads they serve, the lower the losses. For the DRA Scenario, SCE system losses increased compared to the losses in the Benchmark Case (Table B.2, APPENDIX B). This increase in losses should be expected, since the Scenario involves eliminating SONGS resources that are in close proximity to major Orange County and Northern San Diego County loads and replacing them with resources much farther away. Based on power flow simulations, SCE system loss analysis is summarized below:

<u>Power Flow Case</u>	Losses on SCE System (MW)	
	<u>Calculated</u>	<u>Incremental</u>
Benchmark Case	349	--
DRA Scenario	420	71

D. Losses on SDG&E Transmission System

Similar to the results of the SCE loss analysis, SDG&E system losses for the DRA Scenario increased compared to the losses in the Benchmark Case. Based on power flow simulations, SDG&E system loss analysis is summarized below:

<u>Power Flow Case</u>	Losses on SDG&E System (MW)	
	<u>Calculated</u>	<u>Incremental</u>
Benchmark Case	83.3	--
DRA Scenario	99.8	16.5

E. Requirements To Meet WSCC Reliability Criteria

Under the Benchmark case, the WSCC Reliability Criteria are met for each of the four test outages mentioned in Section III.D (see APPENDIX C) without the need for additional facilities. However, IFAs are required to meet the WSCC criteria under the DRA Scenario.

Under the DRA Scenario, transient instability occurs for loss of the IV-Miguel 500 kV line and automatic trip of the IV-La Rosita 230 kV line. For outages of the Palo Verde-Devers and Palo Verde-North Gila 500 kV lines, the system is stable, but unacceptably low voltages occur on the SCE and SDG&E systems. The system is marginally damped for loss of both Lugo-Mira Loma 500 kV 2&3 lines. The WSCC criteria would be met under the above outages if the EOR rating was permanently reduced by about 1,100 MW (i.e. equivalent value to a 500 kV line).

The voltage deficiency during key line outages is a result of removing 1,100 MVARs of capacitive reactive power (SONGS reactive power capacity) which is needed to support Orange County and Northern San Diego County load centers during heavy load conditions. SONGS can also provide up to 820 MVARs of inductive reactive power to avoid unacceptably high voltages during light load conditions.

In addition, removing the SONGS MW output significantly changes the power flow pattern of the system in such a way as to weaken system stability during certain likely outages. For example, flows on the the North Gila-IV and IV-Miguel 500 kV lines increase considerably, which places greater stress on the remaining lines in the event one of these lines suddenly trips (Table A.1, APPENDIX A).

The following three options appear to be technically feasible in meeting the criteria under the DRA Scenario:

1. **SVC Option** - Install Static VAR Compensators (SVC) and fixed capacitors at strategic locations on the system.
2. **Condenser Option** - Convert SONGS units 2 & 3 each to synchronous condensers and install SVCs as needed.
3. **Valley-Rainbow Option** - Build Valley-Rainbow 500 kV line and related facilities, and install SVCs as needed.

Installing a total of 2,450 MVARs of SVCs and 600 MVARs of shunt capacitors on the SCE and SDG&E systems under the DRA Scenario allows the criteria to be met for all of the four of the test outages (APPENDIX C). The following is the Plan of Service for the SVC Option:

POS for the SVC Option

SCE System:

1. 450 MVAR SVC @ Devers 230 kV Substation
2. 500 MVAR SVC @ Chino 230 kV Substation
3. 400 MVAR SVC @ Santiago 230 kV Substation
4. 200 MVAR Shunt Capacitor @ Devers 230 kV Substation
5. 200 MVAR Shunt Capacitor @ Chino 230 kV Substation
6. 200 MVAR Shunt Capacitor @ Santiago 230 kV Substation

SDG&E System:

1. 550 MVAR SVC @ Talega 230 kV Substation
2. 550 MVAR SVC @ Escondido 230 kV Substation

Converting SONGS units 2 & 3 each into synchronous condensers and installing a total of 1,350 MVARs of SVCs and 600 MVARs of shunt capacitors on the SCE system under the DRA Scenario allows the criteria to be met for all four of the test outages (APPENDIX C). The following is the Plan of Service (POS) for the Condenser Option:

POS for the Condenser Option

SCE System:

1. 500 MVAR SVC @ Devers 230 kV Substation
2. 550 MVAR SVC @ Chino 230 kV Substation
3. 300 MVAR SVC @ Santiago 230 kV Substation
4. 200 MVAR Shunt Capacitor @ Devers 230 kV Substation
5. 200 MVAR Shunt Capacitor @ Chino 230 kV Substation
6. 200 MVAR Shunt Capacitor @ Santiago 230 kV Substation

SDG&E System:

1. SONGS units 2 & 3 conversion to synchronous condensers

Building a 25 mile Valley-Rainbow 500 kV line between the SCE and SDG&E systems, including 230 kV facilities, and installing a 250 MVar SVC at Devers Substation under the DRA Scenario allows the criteria to be met for all four of the test outages (APPENDIX C). The following is the Plan of Service (POS) for the Valley-Rainbow Option:

POS for the Valley-Rainbow Option

SCE System:

1. Termination facilities @ Valley 500/230 kV Substation
2. 20 mile 500 kV line w/ 2156 2 bundled ACSR conductor from Valley Substation to SCE/SDG&E service territory border.
3. 250 MVar SVC @ Devers 230 kV Substation

SDG&E System:

1. New Rainbow 500/230 kV Substation
2. Termination facilities @ Rainbow 500/230 kV Substation
3. 5 mile 500 kV line w/ 2156 2 bundled ACSR conductor from Rainbow Substation to SCE/SDG&E service territory border
4. Loop in the existing Talega-Escondido 230 kV line into Rainbow Substation and bundle the Rainbow-Escondido line.

F. Impacts On Simultaneous Import Capability

The SCIT Nomogram which would cover operating conditions in 1998 has yet to be developed. To approximate the effect of shutting down SONGS on the simultaneous import capability, the effects on the 1998 system were superimposed on the existing SCIT Nomogram⁶ which defines the simultaneous import capability into Southern California (see Figure 1). The import limit can increase/decrease as the MW-sec inertia in the Southern California area goes up/down. The Benchmark Case has 109,000 MW-sec of inertia and the DRA Scenario has 102,700 MW-sec of inertia.

⁶ The existing SCIT Nomogram is limited to 5,700 MW on the EOR path, since the Mead-Phoenix and Marketplace-Adelanto Projects are not yet in service.

Exhibit B - Southern California Import Transmission (SCIT) Nomogram

Revision No. 1



Based upon:
 Three Palo Verde units
 All transmission facilities in service
 500 MW margin taken normal to the limit

Reduction in SCIT Import Limit
 For Palo Verde Status:

3 units on Line	0 MW
2 units on Line	200 MW
1 unit on Line	400 MW
0 unit on Line	700 MW

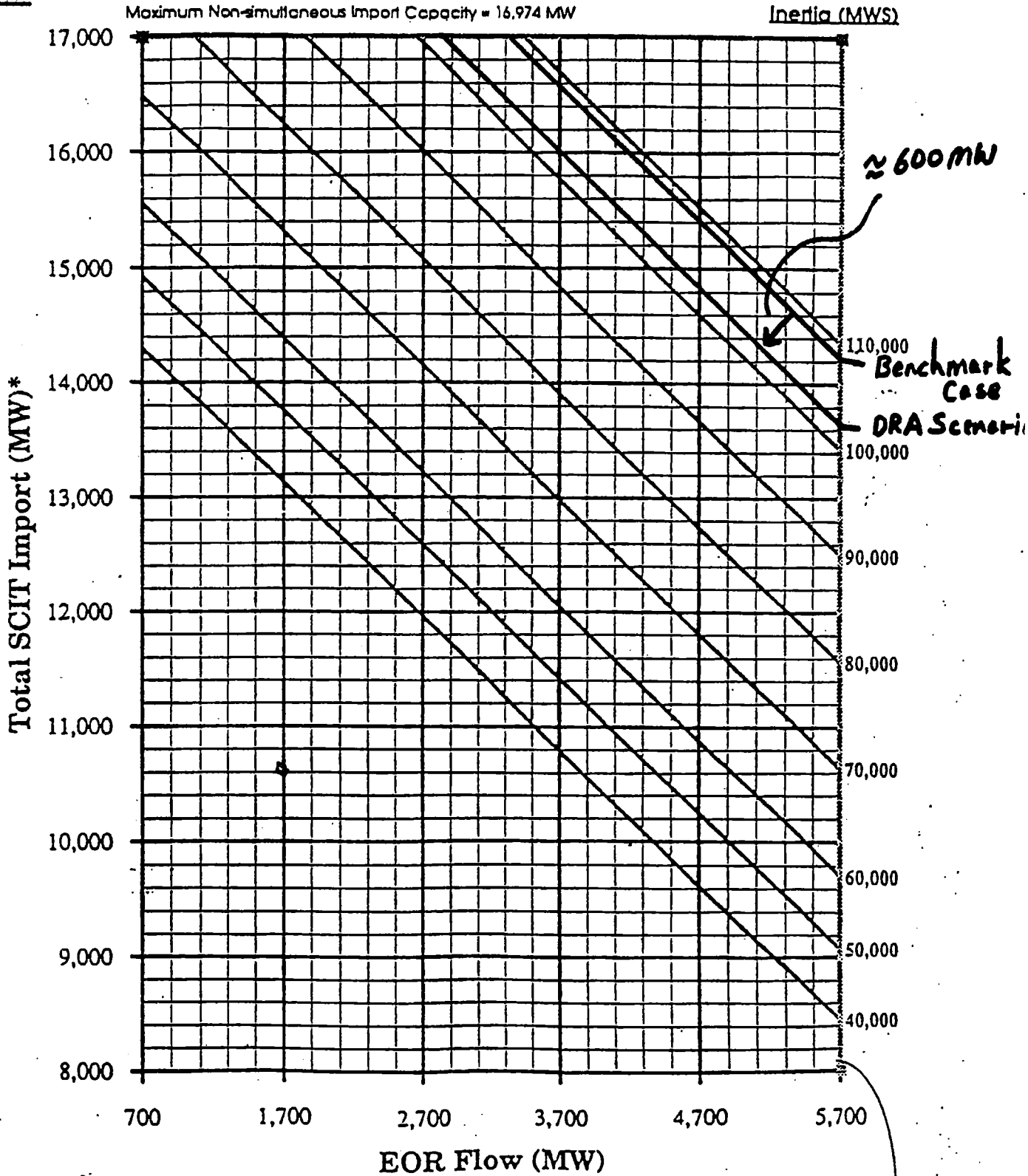


Figure 1

*Sum of flows on Midway-Vincent, PDCI, IPP, North of Lugo and WOR.

The DRA Scenario is without SONGS units 2 & 3, which are massive machines with a combined inertia of 13,500 MW-sec. SONGS replacement resources are less massive machines having a combined inertia of around 7,200 MW-sec. This means the DRA Scenario has 6,300 MW-sec less inertia than the Benchmark Case. Therefore, removing SONGS has the effect of reducing inertia, which in this case corresponds to decreasing the Southern California import capability by 600 MW.

G. Outbound Power Flow From SDG&E To SCE

Preserving SDG&E's favorable tax status of its Industrial Development Bonds (IDBs), requires inbound flows at each point of interconnection under normal conditions to a qualifying utility serving no more than two counties. To analyze the impact of the proposed shutdown of SONGS 2&3, a technical assessment was made in terms of determining whether the proposed SONGS shutdown and replacement would affect the inbound power flows.

Normally, except for extremely rare times when no SONGS units would be on-line due to emergency conditions involving scheduled or unscheduled outages, power flows into SDG&E's system from each of its interconnections: San Onofre, the Southwest Power Link (specifically the Imperial Valley-Miguel segment) and Mexico. Without the effect of this strong source at the San Onofre interconnection, but with replacements for this source in the Southern California, Arizona and Imperial Valley areas, simulations indicate that outbound flows could occur at the San Onofre interconnection point; that is, flow could occur from SDG&E to SCE, especially under winter conditions. Study results indicate that under normal conditions for the Heavy Summer (peak load) scenario studied, with the SONGS Shutdown simulated, along with resource replacements, and transmission additions and upgrades,

including the Rainbow-Valley line, as required by the shutdown, 180 MW could flow from SDG&E to SCE through the San Onofre interconnection. During Winter conditions, when SDG&E's load could be reduced and SDG&E could be exporting power to the Northwest, the outbound flow could be expected to increase. A Light Winter scenario studied indicated that 285 MW could flow from SDG&E to SCE at the San Onofre interconnection point. Thus, the studies indicate that outbound flows would be occurring at SDG&E's interconnection point at San Onofre under normal (non-emergency) conditions. Refer to APPENDIX A for the load and resource table that illustrates the Light Winter case.

VI. COST ANALYSIS

Preliminary 1995 NPV costs of the recommended IFAs as required by the SONGS shutdown proposal and identified in Section V of this Report, were calculated in support of the SONGS cost effectiveness evaluation. These calculations were based on a key assumption that the IFAs required in 1995 under the DRA proposal, would otherwise be required in the year 2013 when the scheduled decommissioning of SONGS begins. The DRA proposal advances this by 19 years. Therefore, the process of calculating the 1995 NPV costs for the recommended IFAs considers only the cost through the year 2013.

The first step in this process involves calculating the annual levelized costs of the IFAs over their book life, based on approximate annual carrying charge rates (ACCR) of 16.5% and 14.0% for SCE and SDG&E, respectively. To each ACCR was added an approximate annual O&M expense of 2.0%. The last step involves discounting the annual cost stream through the year 2013. The utility marginal cost of capital (10% and 9.5%, for SCE and SDG&E, respectively) was used as a proxy to discount revenue requirements. The NPV cost based on the above assumptions will change somewhat if the economic assumptions are revised.

A. SCE Internal Network Requirements

For the DRA Scenario, the POS to mitigate the bank overload at Serrano Substation is to install a third 500/230 kV bank, two 45 MVAR 13.8 kV tertiary reactors, a 3rd 500 kV circuit breaker (CB), two 230 kV CBs and a new 230 kV position. The 1994 capital cost with overheads (no AFUDC), of the POS is \$36 million.

As mentioned under Section VI, this capital cost was levelized to an annual stream of dollars. The annual charges were then discounted through the year 2013 to arrive at the 1995 NPV cost of \$44 million (SCE Workpapers in APPENDIX E).

B. SDG&E Internal Network Requirements

For the DRA Scenario, the 1994 capital costs for the POS to mitigate the overload and voltage problems on the SDG&E network is summarized in the table⁷ below.

System Addition or Upgrade	Transmission	Substation	Land	Total
Add a Miguel 500/230 kV bank	\$ 0.000	\$ 20.605	\$ 0.000	\$ 20.605
Upgrade N. Gila-Imperial Valley Series Capacitors	\$ 0.000	\$ 5.895	\$ 0.000	\$ 5.895
Upgrade Imperial Valley -Miguel Series Capacitors	\$ 0.000	\$ 5.895	\$ 0.000	\$ 5.895
Add Mission-Miguel 230 kV	\$ 40.208	\$ 3.511	\$ 1.993	\$ 45.712
Add Sycamore Cyn 230/69 Bank	\$ 0.000	\$ 5.600	\$ 0.000	\$ 5.600
Re conductor Rancho Carmel-Bernardo 69 kV Line	\$ 1.365	\$ 0.000	\$ 0.300	\$ 1.665
Bundle Pomerado-Poway 69 kV	\$ 1.268	\$ 0.350	\$ 0.300 ⁸	\$ 1.918
Add IV 500/230 kV Bank	\$ 0.000	\$ 8.877	\$ 0.000	\$ 8.877
TOTAL	\$ 42.841	\$ 50.733	\$ 2.593	\$ 96.17

The total 1994 capital cost, including overheads, of the POS is \$96.17 million. As mentioned under Section VI, the total capital cost of the POS was levelized to an annual stream of dollars. The annual charges were then discounted through the year 2013 to arrive at the 1995 NPV cost of \$107 million (SDG&E Workpapers in APPENDIX E).

C. Losses on SCE Transmission System

The cost of system losses are based on the capacity and energy cost of resources required to serve them. SCE uses the cost of a combustion turbine (CT) for determining the capacity value and estimated future energy values⁹. The

⁷ Figures given in table are in millions of 1994 dollars, assuming an in-service date of 1998, without Allowance for Funds During Construction (AFDC).

⁸ Land-associated costs for the bundling of the Pomerado-Poway 69 kV line could vary significantly, depending on specific right-of-way requirements.

⁹ Based on SCE Memo "Distribution of Energy and Capacity Valuation Tables GRC Assumptions, Phase 2, dated September 14, 1993.

capacity cost of losses is calculated by taking the system peak losses times the respective annual CT capacity values over a specified time frame. For the energy analysis, the average system loss is determined by multiplying the peak loss with the transmission system capacity factor (loss factor). The energy cost of losses is calculated by taking the average system losses times the respective annual energy values over a specified time frame. Below is a summary of the 1995 NPV cost of losses, based on 19 years of additional losses due to the proposed shut down of SONGS in 1995, under the DRA Scenario as shown in Section V.C (SCE Workpapers in APPENDIX E).

1995 NPV of Losses on SCE System (\$millions)

	<u>DRA Scenario</u>
Capacity	35
<u>Energy</u>	<u>100</u>
Total	135

D. Losses on SDG&E Transmission System

The cost analysis for SDG&E losses used the same type of basic assumptions as in the cost analysis for SCE losses. The following table is a summary of the 1995 NPV of losses, based on 19 years of additional losses due to the DRA proposal, as shown in Section V.D (SDG&E Workpapers in APPENDIX E).

1995 NPV of Losses on SDG&E System (\$millions)

	<u>DRA Scenario</u>
Capacity	13
<u>Energy</u>	<u>28</u>
Total	41

E. Requirements To Meet WSCC Reliability Criteria

The costs were based on planning estimates and work order level costs. The preferred option was selected based on the lowest total cost in 1994 dollars among the three options described under Section V.E. Based on the cost analysis, the Valley-Rainbow Option is preferred since it is less than half the cost of the next competing option, as summarized below:

Cost Comparison (1994\$ millions)

<u>Options</u>	<u>DRA Scenario</u>
SVC	285
Condenser	223
Valley-Rainbow Line	93

For the exclusive purposes of the SCE and SDG&E SONGS cost effectiveness analyses in A.93-12-025, the 1994 capital cost of \$93 million for the Valley-Rainbow Option is assumed to be allocated between SCE and SDG&E on a 50:50 basis. This assumption is for the purpose of this study only and does not bind SCE or SDG&E to a cost allocation methodology if the Valley-Rainbow Option, or any other IFA, would be needed to maintain adequate system performance in the event of a future SONGS 2&3 shutdown. Issues related to the allocation of the costs of future IFAs, if any, are not at issue in A.93-12-025 and are reserved for future proceedings, if necessary.

As mentioned under Section VI and based on assumptions described therein, the capital cost of the Valley-Rainbow Option was levelized to an annual stream of dollars over 30 years. The annual charges were then discounted through the year 2013 to arrive at the 1995 NPV costs of \$48 million and \$43 million, for SCE and SDG&E, respectively (refer to Workpapers in APPENDIX E). Therefore, the combined SCE and SDG&E 1995 NPV cost is \$91 million, based on advancing IFA

costs by 19 years due to the proposed premature shut down of SONGS in 1995.

The following is a summary description of the cost analysis under the DRA Scenario for each of the three options shown in Section V.E.

SVC Option

Based on recent SCE work order level cost estimates for installing a 400 MVAR SVC each at Devers and Eldorado Substations, the 1994 SVC unit cost is \$111/KVAR. Applying this unit cost to the 2,450 MVARs of SVC for this option, results in a total 1994 cost of \$272 million (no AFUDC).

Also, recent SCE work order level cost estimates for installing a 150 MVAR of shunt capacitors at Devers 230 kV bus, the 1994 shunt capacitor unit cost is \$21/KVAR. Applying this unit cost to the 600 MVARs of shunt capacitors for this option, gives a total 1994 cost of \$13 million (no AFUDC).

Below is cost breakdown for the SVC Option (APPENDIX E):

Cost Breakdown (1994\$ millions)

	<u>DRA Scenario</u>
SVCs	272
<u>Shunt Capacitors</u>	<u>13</u>
Total	285

Condenser Option

Based on recent SCE work order level cost estimates for converting SONGS unit 1 generator to a synchronous condenser, the condenser conversion cost estimate for both SONGS units 2 & 3 is \$60 million. Applying the 1994 SVC unit cost of \$111/KVAR to the 1,350 MVARs of SVC for this option, gives a total SVC cost of \$150 million. Also, applying the shunt

capacitor unit cost of \$21/KVAR to the 600 MVARs of shunt capacitors for this option, results in a cost of \$13 million. Below is a cost breakdown for the Condenser Option (refer to APPENDIX E):

Cost Breakdown (1994\$ millions)

	<u>DRA Scenario</u>
Synchronous Condensers	60
SVCs	150
<u>Shunt Capacitors</u>	<u>13</u>
Total	223

Valley-Rainbow Option

Based on recent SDG&E work order level cost estimates for building a Valley-Rainbow 500 kV Line and a Rainbow-Escondido 230 kV line, the 1994 line cost is \$65 million. Applying the 1994 SVC unit cost of \$111/KVAR to the 250 MVARs of SVC for this option, results in a 1994 cost of around \$28 million.

Below is a cost breakdown for the Valley-Rainbow Option (APPENDIX E):

Cost Breakdown (1994\$ millions)

	<u>DRA Scenario</u>
Transmission Elements	22
Substation Elements	29
Land and ROW	14
<u>SVC</u>	<u>28</u>
Total	93

APPENDIX A

POWER FLOW BASE CASE WORKPAPERS

TABLE A - 1

MAJOR LINE FLOW INCREMENT

<u>500 KV LINES</u>	<u>BENCHMARK CASE</u> (MW)	<u>DRA SCENARIO</u> (MW - NO IFAs)	<u>INCREMENT</u> (MW)
PV - Devers 500	1565.5	1161.0	-404.5
PV - N. Gila 500	1275.7	1197.5	-78.2
N. Gila - IV 500	1182.4	1398.7	216.3
Devers - Valley 500	787.1	777.0	-10.1
IV - Miguel 500	813.2	1162.0	348.8
 <u>230 KV LINES</u>			
S. Onofre - San Luis Ray 230	272.5	38.0	-234.5
S. Onofre - Santiago 230	356.5	92.8	-263.7
S. Onofre - Mission 230	115.0	-40.8	-155.8
S. Onofre - Talega 230 #1	391.8	100.6	-291.2
S. Onofre - Encina 230	178.1	-53.5	-231.6
S. Onofre - Serrano 230	148.7	-233.1	-381.8
S. Onofre - Viejo 230	327.3	-3.1	-330.4
Johanna - Santiago 230	262.5	44.5	-218.0
IV - Rosita 230	381.6	473.2	91.6
Tijuna - Miguel 230	391.6	721.6	330.0
 <u>500/230 Xfr BANKS</u>			
Imperial Valley AA #1	364.0	223.0	-141.0
Miguel AA #1	813.2	1151.7	-268.2
Devers AA #1	717.2	813.2	96.0
Serrano AA #1	1430.8	1707.0	276.2

YH -- 6/23/1994

RULE 74.3 - COMPUTER MODEL EQUATIONS, INPUT,
AND DOCUMENTATION

PART 1:

A description of the source of all input data

Refer to description given in Workpapers, SCE 8/Transmission/Vol:4/
Chapter II/Appendix A, page 4 of A.93-11-025. However, stability
data for the SONGS replacement resources were not readily available.
Therefore, SONGS replacement resources used Cool Water generation
stability models.

RULE 74.3 - COMPUTER MODEL EQUATIONS, INPUT,
AND DOCUMENTATION

PART 2:

The complete set of input data as used in the
sponsoring party's computer runs

Refer to APPENDIX D of this joint study Report for
stability input data.

SCE Data

BUS#	NAME	BSKV	COD	MCNS	PGEN	QGEN	QMAX	QMIN	VSCHED	VACT.	REMOT	PCT	Q
1154	MAGUND1	13.8	-2	1	.0	.0	.0	.0	1.0000	1.0080			
1155	MAGUND2	13.8	-2	1	.0	.0	.0	.0	1.0000	1.0080			
1156	MAGUND3	13.8	-2	1	.0	.0	.0	.0	1.0000	1.0080			
1157	MANDLY	316.4	-2	1	.0	.0	.0	.0	1.0000	1.0099			
1158	PASTOR1	13.8	2	1	100.0	12.3	42.0	-70.0	1.0000	1.0000			
1159	PASTOR2	13.8	2	1	100.0	12.3	42.0	-70.0	1.0000	1.0000			
1160	PASTOR3	13.8	2	1	112.0	15.1	42.0	-70.0	1.0000	1.0000			
1161	PASTOR4	13.8	2	1	125.0	18.4	45.0	-70.0	1.0000	1.0000			
34004	ALAMT3	G18.0	2	3	310.0	98.1	160.0	-100.0	1.0350	1.0350			
34005	ALAMT4	G18.0	2	3	310.0	98.1	160.0	-100.0	1.0350	1.0350			
34006	ALAMT5	G20.0	2	3	97.8	123.6	240.0	-150.0	1.0350	1.0350			
34008	ALAMT6	G20.0	2	3	470.0	111.9	240.0	-150.0	1.0250	1.0250			
34012	ANTELOPE	230	-2	1	50.0	.0	.0	.0	1.0200	.9921			
34013	ARCO	G13.8	2	1	396.0	34.4	200.0	-100.0	1.0000	1.0000			
34024	BIGCREEK	13.8	2	1	900.0	127.1	300.0	-100.0	1.0500	1.0500			
34026	BIOGEN G	115	-2	1	17.0	-3.0	5.0	-3.0	1.0000	1.0498			
34027	BLM EQG	13.8	4	1	166.0	13.5	80.0	-40.0	1.0000	1.0000			
34031	BSPHYD262	.20	2	1	14.0	.7	7.0	-3.0	1.0270	1.0270			
34032	BSPHYD342	.20	2	1	13.0	2.4	7.0	-3.0	1.0270	1.0270			
34035	CAL GENG	13.8	4	1	69.0	-.8	35.0	-17.0	1.0000	1.0000			
34037	CENTER S	230	-2	1	27.0	.0	.0	.0	1.0200	.9909			
34039	CHINO	230	-2	1	117.0	.0	.0	.0	1.0200	.9754			
34045	COLWT3GT	13.8	2	1	130.0	39.2	82.0	-60.0	1.0500	1.0500			
34046	COLWT3ST	13.8	2	1	106.0	29.4	58.0	-41.0	1.0500	1.0500			
34052	CSA DIAB	13.8	2	1	29.0	-2.3	15.0	-8.0	1.0000	1.0000			
34054	DELAMO	230	-2	1	31.0	.0	.0	.0	1.0200	.9932			
34055	DEVERS	230	-2	1	33.0	.0	.0	.0	1.0200	.9880			
34057	EAGLEMTN	6.90	-2	1	-57.6	1.0	1.0	.0	1.0000	.9945			
34063	EL NIDO	230	-2	1	66.0	.0	.0	.0	1.0200	1.0036			
34070	ELSEG3	G18.0	2	3	332.0	57.5	145.0	-100.0	1.0200	1.0200			
34072	ELSEG4	G18.0	2	3	332.0	56.2	145.0	-100.0	1.0200	1.0200			
34074	ETIWA3	G18.0	2	3	317.0	128.2	140.0	-100.0	1.0270	1.0270			
34076	ETIWA4	G18.0	2	3	317.0	122.3	140.0	-100.0	1.0240	1.0240			
34078	ETIWANDA	230	-2	1	18.0	.0	.0	.0	1.0200	.9830			
34086	HARBOR	G13.8	2	1	89.0	13.2	40.0	-20.0	1.0100	1.0100			
34091	HINSON	230	-2	1	52.0	.0	.0	.0	1.0200	.9991			
34093	HUNT1	G13.8	2	3	213.0	99.3	130.0	-65.0	1.0430	1.0430			
34098	HUNT2	G13.8	2	3	213.0	103.0	130.0	-65.0	1.0450	1.0450			
34107	IRON MTN	6.90	2	1	-17.0	.4	1.0	.0	1.0000	1.0000			
34109	J.HINDS	6.90	-2	1	-57.6	1.0	1.0	.0	1.0000	.9929			
34112	KER MGEE	13.8	4	1	54.0	-2.7	20.0	-10.0	1.0200	1.0200			
34116	LA FRESA	230	-2	1	9.0	.0	.0	.0	1.0200	1.0022			
34118	LAGUBELL	230	-2	1	115.0	.0	.0	.0	1.0200	.9949			
34126	LITEHIPE	230	-2	1	42.0	.0	.0	.0	1.0200	.9969			
34139	MANDLY1G	13.8	2	3	205.0	38.3	130.0	-67.5	1.0100	1.0100			
34140	MANDLY2G	13.8	2	3	205.0	38.3	130.0	-67.5	1.0100	1.0100			
34141	MC GEN	13.8	2	1	107.0	-11.2	75.0	-35.0	1.0000	1.0000			
34150	MOGEN	G13.8	2	1	101.0	.6	27.0	-13.0	1.0000	1.0000			
34151	MOHAV1CC	22.0	2	3	782.0	213.4	350.0	-150.0	1.0500	1.0500			
34152	MOHAV2CC	22.0	2	3	782.0	213.1	350.0	-150.0	1.0500	1.0500			
34154	MOORPARK	230	-2	1	25.0	.0	.0	.0	1.0200	.9929			
34157	OMAR	G13.8	2	1	295.0	52.9	150.0	-75.0	1.0000	1.0000			
34163	ORMOND1G	26.0	2	1	240.0	29.4	400.0	-240.0	1.0010	1.0010			
34165	OWBOW	G13.8	2	1	52.0	-2.6	27.0	-14.0	1.0000	1.0000			
34166	PADUA	230	-2	1	11.0	.0	.0	.0	1.0200	.9721			
34167	PARDEE	230	-2	1	171.0	.0	.0	.0	1.0200	.9936			
34170	REDON5	G18.0	2	1	170.0	37.0	85.0	-42.0	1.0220	1.0220			
34178	S.CLARA	230	-2	1	124.0	.0	.0	.0	1.0200	.9901			
34180	S.ONOFR	222.0	2	1	1070.0	201.2	550.0	-410.0	1.0000	1.0000	34182	100.0	
34181	S.ONOFR	322.0	2	1	1080.0	201.2	550.0	-410.0	1.0000	1.0000	34182	100.0	
34185	SANTIAGO	230	-2	1	15.0	.0	.0	.0	1.0200	.9933			
34188	SEAWEST	230	2	1	38.0	4.1	190.0	-95.0	1.0000	1.0000			
34189	SEGS 1	G13.8	4	1	19.0	.7	10.0	-5.0	1.0000	1.0000			
34190	SEGS 2	G 115	2	1	29.0	13.9	15.0	-8.0	1.0000	1.0000			
34196	SUNGEN	G13.8	4	1	173.0	-11.5	87.0	-40.0	1.0000	1.0000			
34198	SYC CYNG	13.8	2	1	295.0	50.9	150.0	-75.0	1.0000	1.0000			
34204	VALLEYS	500	-2	1	5.0	.0	.0	.0	1.0200	1.0031			
34205	VESTAL	230	-2	1	63.0	.0	.0	.0	1.0200	1.0086			

1998 HS2, SONGS UNITS ON LINE, SONGS23.SAV

GENERATING

PLANTM.SAV MODIFIED, INC. SDG&E CHNGS & NOL & SCE BRPU

PLANT DATA

BUS#	NAME	BSKV	COD	MCNS	PGEN	QGEN	QMAX	QMIN	VSCHED	VACT.	REMOT	PCT Q
34212	VISTA	230	-2	1	126.0	.0	.0	.0	1.0200	.9765		
34214	WALNUT	230	-2	1	47.0	.0	.0	.0	1.0200	.9804		
34216	LBEACH1G13.8		-2	1	.0	.0	.0	.0	1.0500	1.0147		
34217	LBEACH9G13.8		2	1	62.0	21.6	30.0	-15.0	1.0500	1.0500		
34219	COLWT4GT13.8		2	1	130.0	39.2	82.0	-60.0	1.0500	1.0500		
34220	COLWT4ST13.8		2	1	106.0	29.4	58.0	-41.0	1.0500	1.0500		
34222	ORMOND2G26.0		2	1	340.0	33.8	400.0	-240.0	1.0010	1.0010		
34224	ALAMT1 G18.0		-2	1	.0	.0	.0	.0	1.0350	1.0032		
34225	ALAMT2 G18.0		-2	1	.0	.0	.0	.0	1.0230	1.0032		
34226	ELSEG1 G18.0		2	1	169.0	32.8	75.0	-50.0	1.0200	1.0200		
34227	ELSEG2 G18.0		2	1	177.0	34.7	75.0	-50.0	1.0200	1.0200		
34228	LBEACH2G13.8		-2	1	.0	.0	.0	.0	1.0500	1.0147		
34229	LBEACH3G13.8		-2	1	.0	.0	.0	.0	1.0500	1.0147		
34230	LBEACH4G13.8		-2	1	.0	.0	.0	.0	1.0500	1.0147		
34231	LBEACH5G13.8		-2	1	.0	.0	.0	.0	1.0390	.9989		
34232	LBEACH6G13.8		-2	1	.0	.0	.0	.0	1.0370	.9989		
34233	LBEACH7G13.8		-2	1	.0	.0	.0	.0	1.0360	.9989		
34234	LBEACH8G13.8		2	1	81.5	32.4	48.0	-34.0	1.0500	1.0500		
34235	REDON6 G18.0		2	1	140.0	9.0	75.0	-40.0	1.0080	1.0080		
34242	LUZ89 EQ13.8		4	1	158.0	23.9	80.0	-40.0	1.0000	1.0000		
34244	REDON7 G20.0		2	3	270.0	121.5	240.0	-150.0	1.0350	1.0350		
34245	REDON8 G20.0		2	3	270.0	121.5	240.0	-150.0	1.0350	1.0350		
34292	BLM E1G13.8		2	1	29.7	.6	15.0	-7.5	1.0000	1.0000		
34293	BLM E2G13.8		2	1	29.6	.6	15.0	-7.5	1.0000	1.0000		
34294	BLM W1G13.8		2	1	23.7	-.1	12.0	-6.0	1.0000	1.0000		
34296	BORAX I 13.8		2	1	46.0	-3.4	22.0	-11.0	1.0000	1.0000		
34297	CALGEN1G13.8		2	1	29.6	1.7	15.0	-7.5	1.0000	1.0000		
34298	CALGEN2G13.8		2	1	23.7	1.3	12.0	-6.0	1.0000	1.0000		
34299	CALGEN3G13.8		2	1	23.7	1.3	12.0	-6.0	1.0000	1.0000		
34312	KERRGEN 13.8		2	1	54.0	-12.0	27.0	-14.0	1.0000	1.0000		
34313	KERRMGE13.8		-2	1	54.0	-3.0	7.0	-3.0	1.0000	1.0089		
34314	LUZ8 13.8		2	1	79.0	10.7	40.0	-20.0	1.0000	1.0000		
34315	LUZ9 13.8		2	1	79.0	10.7	40.0	-20.0	1.0000	1.0000		
34317	NAVY II 230		1	1	.0	.0	.0	.0	1.0000	1.0028		
34318	NAVYII1G13.8		2	1	29.7	.6	12.0	-6.0	1.0000	1.0000		
34319	NAVYII2G13.8		2	1	29.7	.6	12.0	-6.0	1.0000	1.0000		
34320	NAVYII3G13.8		2	1	29.6	.6	12.0	-6.0	1.0000	1.0000		
34324	ETIWA 5G16.4		-2	1	.0	.0	.0	.0	1.0000	1.0026		
34329	HUNT5 G16.4		-2	1	.0	.0	.0	.0	1.0000	1.0158		
34333	MANDLY 316.4		-2	1	.0	.0	.0	.0	1.0000	1.0099		
34344	SEGS 1G13.8		2	1	19.0	.7	10.0	-5.0	1.0000	1.0000		
34345	SEGS 2G13.8		2	1	29.0	1.6	10.0	-5.0	1.0000	1.0000		
34348	SUNGEN3G13.8		2	1	30.0	4.8	17.0	-8.0	1.0000	1.0000		
34349	SUNGEN4G13.8		2	1	30.0	4.8	17.0	-8.0	1.0000	1.0000		
34350	SUNGEN5G13.8		2	1	30.0	4.8	17.0	-8.0	1.0000	1.0000		
34351	SUNGEN6G13.8		2	1	30.0	4.8	17.0	-8.0	1.0000	1.0000		
34352	SUNGEN7G13.8		2	1	30.0	4.8	17.0	-8.0	1.0000	1.0000		
34800	BAILB 1313.8		2	1	10.0	9.5	25.0	-12.0	1.0000	1.0000		
34802	PASTB 1313.8		2	1	372.0	47.8	99.0	-63.0	1.0000	1.0000		
34804	CONTB 1313.8		2	1	34.0	-4.0	17.0	-9.0	1.0000	1.0000		
34806	KRAMB 1313.8		2	1	14.0	28.3	35.0	-17.0	1.0000	1.0000		
34808	LUGOB 1313.8		-2	1	5.0	-6.0	12.0	-6.0	1.0000	1.0316		
34810	VICTB 1313.8		-2	1	10.0	25.0	25.0	-12.0	1.0000	.9787		
34812	VICTLB1313.8		-2	1	4.0	10.0	10.0	-5.0	1.0000	.9597		
34814	ELDRB 1313.8		-2	1	5.0	-12.0	25.0	-12.0	1.0000	1.0321		
34816	DEVEB 1313.8		2	1	36.0	20.4	90.0	-45.0	1.0000	1.0000		
34818	MIRAB 1313.8		2	1	68.0	13.0	34.0	-17.0	1.0000	1.0000		
34820	ANTEB 1313.8		2	1	22.0	13.3	56.0	-28.0	1.0000	1.0000		
34822	CHINB 1313.8		-2	1	3.0	1.0	1.0	-1.0	1.0000	.9760		
34824	OLINB 1313.8		-2	1	7.0	3.0	3.0	-1.0	1.0000	.9852		
34826	SANTB 1313.8		-2	1	7.0	3.0	3.0	-1.0	1.0000	.9951		
34828	SYLMB 1313.8		2	1	15.0	-17.7	37.0	-19.0	1.0000	1.0000		
34830	VALLB 1313.8		-2	1	4.0	-5.0	9.0	-5.0	1.0000	1.0001		
34832	VINCB 1313.8		2	1	20.0	9.3	50.0	-25.0	1.0000	1.0000		
34834	VISTB 1313.8		-2	1	7.0	17.0	17.0	-9.0	1.0000	.9868		
34836	ELDRWB1313.8		-2	1	15.0	-19.0	37.0	-19.0	1.0000	1.0280		
34838	TEJOB 1313.8		2	1	30.0	3.5	75.0	-38.0	1.0000	1.0000		

FROM	TO	CKT	NAME	NAME	LINE R	LINE X	CHRGING	TP	ST	RATA	RATB	RATC
1154*	34134	1	MAGUND1	MAGUNDEN	.0000	.2112	.0000	T	1	0	0	0
1155*	34134	1	MAGUND2	MAGUNDEN	.0000	.2112	.0000	T	1	0	0	0
1156*	34134	1	MAGUND3	MAGUNDEN	.0000	.2112	.0000	T	1	0	0	0
1157*	34178	1	MANDLY 3	S.CLARA	.0000	.1206	.0000	T	1	0	0	0
1158*	34168	1	PASTOR1	PASTORIA	.0000	.2112	.0000	T	1	0	0	0
1159*	34168	1	PASTOR2	PASTORIA	.0000	.2112	.0000	T	1	0	0	0
1160*	34168	1	PASTOR3	PASTORIA	.0000	.2112	.0000	T	1	0	0	0
1161*	34168	1	PASTOR4	PASTORIA	.0000	.2112	.0000	T	1	0	0	0
2166*	34056	1	PALOVDR	DEVERS	.0026	.0297	.0000		1	1559	0	0
3977	34066*	1	MOENKO&4	ELDORADO	.0000	-.0180	.0000		1	0	0	0
8016	34055*2		COACHELV	DEVERS	.0064	.0493	.1080		1	462	0	0
8016	34144*	1	COACHELV	MIRAGE	.0036	.0283	.0569		1	462	0	0
10048	34066*	1	MCCULLGH	ELDORADO	.0000	.0002	.0000	Z	1	0	0	0
10055*	34104	1	OWENS	INYO	.0001	.0010	.0000		1	222	0	0
10094*	34201	1	SYLMARLA	SYLMAR S	.0000	.0012	.0000	F	1	0	0	0
10094	34828*	0	SYLMARIA	SYLMB 13	.0000	.0600	.0000	T	1	0	0	0
10105*	34128	1	VICTORVL	LUGO	.0002	.0041	.2962		1	0	0	0
16045	34153*	0	LAUGHLIN	MOHAVE	.0000	.0003	.0000		1	0	0	0
26242*	35993	3	MIDWAY	VINCEN&5	.0000	-.0093	.0000		1	1848	0	0
26242*	35995	2	MIDWAY	VINCEN&3	.0000	-.0094	.0000		1	1848	0	0
26242*	35997	1	MIDWAY	VINCEN&1	.0000	-.0093	.0000		1	1848	0	0
30020	34182*	1	ENCINA	S.ONOFRE	.0044	.0349	.0764		1	456	0	0
30053	34182*	1	MISSION	S.ONOFRE	.0097	.0754	.1578		1	456	0	0
30092	34182*	1	TALEGA	S.ONOFRE	.0012	.0097	.0211		1	518	0	0
30092	34182*	2	TALEGA	S.ONOFRE	.0012	.0097	.0211		1	518	0	0
30199	34182*	1	SANLUSRY	S.ONOFRE	.0012	.0123	.0478		1	797	0	0
32125*	34047	1	NEVBD501	CONTROL	.6931	1.0370	.0071		1	0	0	0
32125*	34215	1	NEVBD501	CONTROLX	.6931	1.0370	.0071		0	0	0	0
32126*	34047	1	NEVBD502	CONTROL	.7306	1.0600	.0087		1	0	0	0
32126*	34215	1	NEVBD502	CONTROLX	.7306	1.0600	.0087		0	0	0	0
34004*	34011	1	ALAMT3 G	ALMITOSW	.0000	.0418	.0000	T	1	0	0	0
34005*	34011	1	ALAMT4 G	ALMITOSW	.0000	.0418	.0000	T	1	0	0	0
34006*	34009	1	ALAMT5 G	ALMITOSE	.0000	.0268	.0000	T	1	0	0	0
34008*	34009	1	ALAMT6 G	ALMITOSE	.0000	.0268	.0000	T	1	0	0	0
34009*	34011	1	ALMITOSE	ALMITOSW	.0000	.0005	.0000		1	0	0	0
34009	34023*	1	ALMITOSE	BARRE	.0013	.0132	.0787		1	988	0	0
34009	34037*	1	ALMITOSE	CENTER S	.0010	.0163	.0600		1	988	0	0
34010*	34011	1	ALMITOSW	ALMITOSW	.0000	.1159	.0000	T	1	90	0	0
34010*	34011	2	ALMITOSW	ALMITOSW	.0000	.1159	.0000	T	1	90	0	0
34011	34023*	2	ALMITOSW	BARRE	.0010	.0163	.0600		1	988	0	0
34011	34126*	1	ALMITOSW	LITEHIPE	.0010	.0133	.0448		1	988	0	0
34011	34224*	1	ALMITOSW	ALAMT1 G	.0000	.0536	.0000	F	1	0	0	0
34011	34225*	1	ALMITOSW	ALAMT2 G	.0000	.0536	.0000	F	1	0	0	0
34011	34317*	1	ALMITOSW	NAVY II	.0000	.1135	.0000	F	0	0	0	0
34012*	34134	E	ANTELOPE	MAGUNDE	.0173	.0923	.1600		1	357	376	0
34012*	34134	W	ANTELOPE	MAGUNDEN	.0102	.0883	.1677		0	494	0	0
34012*	34143	1	ANTELOPE	MESA CAL	.0148	.0920	.1643		1	357	0	0
34012*	34209	1	ANTELOPE	VINCENT	.0030	.0263	.0499		1	494	0	0
34012	34820*	0	ANTELOPE	ANTEB 13	.0000	.0600	.0000	T	1	0	0	0
34012	34840*	2	ANTELOPE	TEJON 23	.0033	.0135	.0540		1	494	535	0
34013*	34218	0	ARCO G	ARCO G	.0000	.0413	.0000	T	1	0	0	0
34022*	34167	1	BAILEY	PARDEE	.0076	.0410	.0713		1	353	373	0
34022	34168*	1	BAILEY	PASTORIA	.0036	.0185	.0351		1	353	373	0
34022	34800*	0	BAILEY	BAILB 13	.0000	.0600	.0000	T	1	0	0	0
34023	34067*	0	BARRE	ELLIS	.0011	.0091	.0755		1	988	0	0
34023	34124*	1	BARRE	LEWIS	.0004	.0057	.0185		1	988	0	0
34023	34208*	1	BARRE	VILLA PK	.0008	.0101	.0330		1	988	0	0
34024*	34025	1	BIGCREEK	BIGCREEK	.0000	.0155	.0000	T	1	0	0	0
34025	34061*	1	BIGCREEK	EASTWOOD	.0014	.0075	.0300		1	0	0	0
34025	34169*	1	BIGCREEK	RECTOR	.0189	.0960	.1818		1	353	373	0
34025	34169*	2	BIGCREEK	RECTOR	.0218	.1112	.2108		1	353	373	0
34025*	34193	1	BIGCREEK	SPRINGVL	.0230	.1256	.2206		1	494	535	0
34025*	34193	2	BIGCREEK	SPRINGVL	.0132	.1143	.2170		1	357	376	0
34026	34041*	1	BIOGEN G	COLWATER	.0443	.6797	.0000		1	0	0	0
34026	34064*	1	BIOGEN G	ELDORAD	.2400	.3345	.0000		0	0	0	0
34026	34304*	1	BIOGEN G	ELDORODO	.2400	.3345	.0000		1	0	0	0
34027*	34028	1	BLM EQG	BLM WEST	.0000	.0689	.0000	T	0	0	0	0
34028	34114*	1	BLM WEST	KRAMER	.0100	.1019	.2586		0	494	0	0

FROM	TO	CKT	NAME	LINE R	LINE X	CHRGING	TP	ST	RATA	RATB	RATC
34028*	34295	1	BLM WEST BLM EAST	.0001	.0016	.0000		1	494	0	0
34028	34844*	1	BLM WEST INYOK 23	.0049	.0663	.2586		1	643	0	0
34029	34058*	1	BLYTHESC EAGLEMTN	.0499	.1890	.0834		1	187	0	0
34029	40003*	1	BLYTHESC BLYTHE	.0000	.0005	.0000		1	0	0	0
34031*	34047	1	BSPHYD26 CONTROL	.0000	.6000	.0000	T	1	0	0	0
34032*	34048	1	BSPHYD34 CONTROL	.0000	.5100	.0000	T	1	0	0	0
34034	34035*	1	CAL GEN CAL GENG	.0000	.1467	.0000	F	0	0	0	0
34034	34106*	1	CAL GEN INYOKERN	.0392	.1437	.0000		1	169	0	0
34034	34297*	1	CAL GEN CALGEN1G	.0000	.2857	.0000	F	1	0	0	0
34034	34298*	1	CAL GEN CALGEN2G	.0000	.2933	.0000	F	1	0	0	0
34034	34299*	1	CAL GEN CALGEN3G	.0000	.2933	.0000	F	1	0	0	0
34036	34080*	1	CAMINO GENE	.0133	.0910	.1661		1	359	0	0
34036*	34108	1	CAMINO IRON MTN	.0120	.0732	.1312		1	335	0	0
34036	40037*	E	CAMINO MEAD	.0173	.1157	.2120		1	319	0	0
34036	40037*	W	CAMINO MEAD	.0173	.1157	.2120		1	319	0	0
34037*	34054	1	CENTER S DELAMO	.0005	.0069	.0223		1	988	0	0
34037	34143*	0	CENTER S MESA CAL	.0011	.0135	.0472		1	988	0	0
34037	34155*	1	CENTER S OLINDA	.0016	.0203	.0726		1	988	0	0
34039	34147*	1	CHINO MIRLOMAA	.0010	.0055	.0392		1	713	0	0
34039	34147*	2	CHINO MIRLOMAA	.0006	.0070	.0264		1	988	0	0
34039	34148*	3	CHINO MIRLOMAC	.0006	.0070	.0265		1	988	0	0
34039	34182*	1	CHINO S.ONOFRE	.0027	.0491	.1932		0	1287	0	0
34039	34191*	1	CHINO SERRANO	.0014	.0254	.0999		1	1287	0	0
34039	34223*	1	CHINO VIEJO	.0014	.0250	.0982		1	1287	0	0
34039	34822*	0	CHINO CHINB 13	.0000	.0600	.0000	T	1	0	0	0
34041*	34113	1	COLWATER KRAMER	.0400	.2170	.0000		1	0	0	0
34041	34189*	0	COLWATER SEGS 1 G	.0000	.3325	.0000	F	0	0	0	0
34041*	34190	1	COLWATER SEGS 2 G	.0004	.0023	.0000		1	0	0	0
34041*	34343	1	COLWATER SEGS	.0004	.0023	.0000		1	0	0	0
34041	34344*	1	COLWATER SEGS 1G	.0000	.3325	.0000	F	1	0	0	0
34042	34045*	0	COLWATER COLWT3GT	.0000	.0632	.0000	F	1	0	0	0
34042	34046*	0	COLWATER COLWT3ST	.0000	.0870	.0000	F	1	0	0	0
34042*	34114	1	COLWATER KRAMER	.0068	.0663	.1333		1	643	0	0
34042*	34114	2	COLWATER KRAMER	.0068	.0663	.1333		1	643	0	0
34042	34219*	0	COLWATER COLWT4GT	.0000	.0632	.0000	F	1	0	0	0
34042	34220*	0	COLWATER COLWT4ST	.0000	.0870	.0000	F	1	0	0	0
34047*	34048	1	CONTROL CONTROL	.0000	.5400	.0000	T	1	28	0	0
34048*	34049	1	CONTROL CONTROL	.0001	.1092	.0000	T	1	0	0	0
34048*	34053	1	CONTROL CSA DIAB	.1170	.2160	.0000		1	0	0	0
34048*	34053	2	CONTROL CSA DIAB	.1230	.3110	.0000		1	0	0	0
34048	34103*	1	CONTROL INYO	.0060	.0196	.0024		1	0	0	0
34048	34106*	1	CONTROL INYOKERN	.4410	.8150	.0880		1	0	0	0
34048	34106*	2	CONTROL INYOKERN	.4410	.8150	.0880		1	0	0	0
34048	34215*	1	CONTROL CONTROLX	.0000	.5667	.0000	F	0	0	0	0
34048*	34842	1	CONTROL CONTR 25	.0000	.0600	.0000	F	1	280	0	0
34049	34243*	1	CONTROL OXBOW G	.0467	.3399	.6476		1	0	0	0
34049	34804*	0	CONTROL CONTB 13	.0000	.0600	.0000	T	1	0	0	0
34052*	34053	1	CSA DIAB CSA DIAB	.0000	.0978	.0000	T	1	0	0	0
34054	34067*	0	DELAMO ELLIS	.0017	.0193	.1151		1	988	0	0
34054*	34091	0	DELAMO HINSON	.0011	.0138	.0481		1	988	0	0
34054	34118*	0	DELAMO LAGUBELL	.0011	.0125	.0624		1	988	0	0
34055*	34056	1	DEVERS DEVERS	.0000	.0117	.0000	T	1	1120	0	0
34055	34144*	2	DEVERS MIRAGE	.0026	.0203	.0444		1	494	0	0
34055*	34184	1	DEVERS SANBRDNO	.0118	.0659	.1172		1	317	0	0
34055	34184*	2	DEVERS SANBRDNO	.0075	.0643	.1245		1	458	0	0
34055*	34212	1	DEVERS VISTA	.0078	.0660	.1308		1	458	0	0
34055	34212*	2	DEVERS VISTA	.0078	.0653	.1319		1	494	0	0
34055	34816*	0	DEVERS DEVEB 13	.0000	.0600	.0000	T	1	0	0	0
34056	34204*	1	DEVERS VALLEYS	.0004	.0091	.6679		1	3421	0	0
34057*	34059	1	EAGLEMTN EAGLEMTN	.0000	.1212	.0000	T	1	90	0	0
34058*	34059	1	EAGLEMTN EAGLEMTN	.0000	.0272	.0000	T	1	48	0	0
34059	34108*	1	EAGLEMTN IRON MTN	.0066	.0453	.0787		1	420	0	0
34059*	34110	1	EAGLEMTN J.HINDS	.0032	.0210	.0350		1	420	0	0
34060	34143*	1	EAGLROCK MESA CAL	.0014	.0256	.1003		1	1287	0	0
34060	34167*	1	EAGLROCK PARDEE	.0084	.0700	.1593		1	494	0	0
34060	34201*	1	EAGLROCK SYLMAR S	.0014	.0265	.1030		1	1287	0	0
34063*	34073	1	EL NIDO ELSEGND	.0003	.0036	.1340		1	988	0	0
34063*	34073	2	EL NIDO ELSEGND	.0003	.0036	.1340		1	988	0	0

FROM	TO	CKT	NAME	NAME	LINE R	LINE X	CHRGING	TP	ST	RATA	RATB	RATC
34063	34116*	1	EL NIDO	LA FRESA	.0005	.0035	.0191		1	964	0	0
34063	34116*	2	EL NIDO	LA FRESA	.0005	.0035	.0191		1	964	0	0
34063	34123*	1	EL NIDO	LCIENEGA	.0010	.0116	.0263		1	643	0	0
34064*	34065	1	ELDORAD	ELDORADO	.0000	.1049	.0000	T	0	75	0	0
34065*	34066	1	ELDORADO	ELDORADO	.0000	.0232	.0000	T	1	500	0	0
34065*	34066	2	ELDORADO	ELDORADO	.0000	.0232	.0000	T	1	500	0	0
34065	34127*	N	ELDORADO	LUGO	.0494	.2692	.4728		1	327	0	0
34065	34127*	S	ELDORADO	LUGO	.0494	.2696	.4728		1	327	0	0
34065	34304*	1	ELDORADO	ELDORODO	.0000	.1049	.0000	F	1	75	0	0
34065	40037*	1	ELDORADO	MEAD	.0013	.0165	.0568		1	398	0	0
34065	40037*	2	ELDORADO	MEAD	.0013	.0168	.0578		1	398	0	0
34066	34128*	1	ELDORADO	LUGO	.0019	.0278	.0000		1	1386	0	0
34066*	34153	1	ELDORADO	MOHAVE	.0006	.0142	1.0429		1	3421	0	0
34066	34814*	0	ELDORADO	ELDRB 13	.0000	.0600	.0000	T	1	0	0	0
34066	34836*	0	ELDORADO	ELDRWB13	.0000	.0600	.0000	T	1	0	0	0
34067	34102*	1	ELLIS	HUNTGBCH	.0007	.0060	.0124		1	494	0	0
34067	34102*	2	ELLIS	HUNTGBCH	.0007	.0060	.0124		1	494	0	0
34067	34102*	3	ELLIS	HUNTGBCH	.0007	.0060	.0124		1	494	0	0
34067	34102*	4	ELLIS	HUNTGBCH	.0007	.0060	.0124		1	494	0	0
34067	34111*	1	ELLIS	JOHANNA	.0004	.0066	.0260		1	1287	0	0
34067	34185*	1	ELLIS	SANTIAGO	.0009	.0151	.0610		1	1287	0	0
34067	34329*	1	ELLIS	HUNT5 G	.0000	.1095	.0000	F	1	0	0	0
34070*	34073	1	ELSEG3 G	ELSEGND0	.0000	.0381	.0000	T	1	0	0	0
34072*	34073	1	ELSEG4 G	ELSEGND0	.0000	.0419	.0000	T	1	0	0	0
34073	34226*	1	ELSEGND0	ELSEG1 G	.0000	.0565	.0000	F	1	0	0	0
34073	34227*	1	ELSEGND0	ELSEG2 G	.0000	.0530	.0000	F	1	0	0	0
34074*	34078	1	ETIWA3 G	ETIWANDA	.0000	.0422	.0000	T	1	0	0	0
34076*	34078	1	ETIWA4 G	ETIWANDA	.0000	.0414	.0000	T	1	0	0	0
34077*	34078	1	ETIWANDA	ETIWANDA	.0000	.0653	.0000	T	1	150	0	0
34077*	34078	2	ETIWANDA	ETIWANDA	.0000	.0653	.0000	T	1	150	0	0
34078	34148*	1	ETIWANDA	MIRLOMAC	.0006	.0070	.0266		1	988	0	0
34078	34166*	1	ETIWANDA	PADUA	.0013	.0158	.0597		1	988	0	0
34078	34184*	1	ETIWANDA	SANBRDNO	.0021	.0251	.0954		1	988	0	0
34078	34212*	1	ETIWANDA	VISTA	.0014	.0158	.0671		1	988	0	0
34078	34324*	1	ETIWANDA	ETIWA 5G	.0000	.0898	.0000	F	1	0	0	0
34080*	40044	1	GENE	PARKER	.0005	.0027	.0046		1	355	0	0
34082*	34178	1	GOLETA	S.CLARA	.0016	.0130	.0270		1	494	0	0
34082*	34178	2	GOLETA	S.CLARA	.0016	.0130	.0270		1	494	0	0
34083	34084*	1	GOODRICH	GOULD	.0007	.0091	.0344		1	988	0	0
34083	34118*	1	GOODRICH	LAGUBELL	.0012	.0147	.0555		1	988	0	0
34084*	34201	1	GOULD	SYLMAR S	.0016	.0285	.1108		1	1287	0	0
34085	34086*	1	HARBOR	HARBOR G	.0000	.1664	.0000	F	1	0	0	0
34085	34091*	1	HARBOR	HINSON	.0005	.0044	.0081		1	441	0	0
34085	34120*	1	HARBOR	LBEACH	.0002	.0015	.0027		1	472	0	0
34090*	34091	1	HINSON	HINSON	.0000	.0665	.0000	T	1	280	0	0
34090*	34091	2	HINSON	HINSON	.0000	.0647	.0000	T	1	280	0	0
34090*	34119	1	HINSON	LBEACH	.0011	.0112	.0000		1	0	0	0
34091*	34116	1	HINSON	LA FRESA	.0010	.0152	.0547		1	988	0	0
34091*	34126	1	HINSON	LITEHIPE	.0010	.0093	.0171		1	472	0	0
34091*	34218	1	HINSON	ARCO G	.0003	.0021	.0042		1	494	0	0
34091*	34218	2	HINSON	ARCO G	.0003	.0021	.0042		1	494	0	0
34092	34113*	1	HOLGATE	KRAMER	.0347	.0674	.0000		1	183	0	0
34092*	34149	1	HOLGATE	MOGEN	.0041	.0106	.0000		1	0	0	0
34093*	34102	1	HUNT1 G	HUNTGBCH	.0000	.0585	.0000	T	1	0	0	0
34098*	34102	1	HUNT2 G	HUNTGBCH	.0000	.0585	.0000	T	1	0	0	0
34101*	34102	1	HUNTGBCH	HUNTGBCH	.0000	.0647	.0000	T	1	150	0	0
34101*	34102	2	HUNTGBCH	HUNTGBCH	.0000	.0671	.0000	T	1	150	0	0
34103	34105*	1	INYO	INYO PS	.0000	.1014	.0000	F	1	56	0	0
34104	34105*	1	INYO	INYO PS	.0000	.2666	.0000	F	1	56	0	0
34104	34105*	2	INYO	INYO PS	.0000	.2666	.0000	F	1	56	0	0
34106	34113*	1	INYOKERN	KRAMER	.0346	.2863	.0340		1	0	0	0
34106	34113*	2	INYOKERN	KRAMER	.0817	.1512	.0340		1	0	0	0
34106	34142*	1	INYOKERN	MC GEN	.0931	.1739	.0000		1	0	0	0
34106	34187*	1	INYOKERN	SEARLES	.0976	.1810	.0000		1	0	0	0
34106*	34844	1	INYOKERN	INYOK 23	.0000	.0600	.0000	F	1	280	0	0
34107*	34108	1	IRON MTN	IRON MTN	.0000	.3237	.0000	T	1	33	0	0
34109*	34110	1	J.HINDS	J.HINDS	.0000	.1212	.0000	T	1	90	0	0
34110*	34144	1	J.HINDS	MIRAGE	.0132	.0721	.1269		1	357	0	0

FROM	TO	CKT	NAME	NAME	LINE R	LINE X	CHRGING	TP	ST	RATA	RATB	RATC
34111	34185*	1	JOHANNA	SANTIAGO	.0005	.0086	.0330		1	1287	0	0
34112*	34187	0	KER MGEE	SEARLES	.0000	.0978	.0000	T	0	0	0	0
34113*	34114	1	KRAMER	KRAMER	.0000	.0567	.0000	T	1	250	0	0
34113*	34114	2	KRAMER	KRAMER	.0000	.0580	.0000	T	1	280	0	0
34113	34195*	1	KRAMER	SUNGEN	.0033	.0149	.0022		1	183	0	0
34113	34202*	1	KRAMER	TORTILLA	.0340	.1840	.0000		1	0	0	0
34113*	34206	1	KRAMER	VICTOR	.0308	.1847	.0274		1	0	0	0
34113*	34206	2	KRAMER	VICTOR	.0308	.1847	.0274		1	0	0	0
34113	34806*	0	KRAMER	KRAMB 13	.0000	.0600	.0000	T	1	0	0	0
34114	34127*	1	KRAMER	LUGO	.0082	.0685	.1412		1	494	0	0
34114	34127*	2	KRAMER	LUGO	.0082	.0685	.1412		1	494	0	0
34114*	34129	1	KRAMER	LUZ	.0010	.0156	.0585		1	1287	0	0
34114*	34207	1	KRAMER	VICTOR	.0063	.0846	.2756		1	643	0	0
34114*	34844	1	KRAMER	INYOK 23	.0051	.0356	.0426		1	494	0	0
34116	34118*	1	LA FRESA	LAGUBELL	.0010	.0184	.0644		1	1287	0	0
34116*	34123	1	LA FRESA	LCIENEGA	.0014	.0163	.0369		1	643	0	0
34116	34175*	1	LA FRESA	REDONDO	.0003	.0050	.0174		1	1287	0	0
34116	34175*	2	LA FRESA	REDONDO	.0003	.0050	.0174		1	1287	0	0
34118	34176*	1	LAGUBELL	RIOHONDO	.0014	.0177	.0604		1	988	0	0
34119	34216*	1	LBEACH	LBEACH1G	.0000	.2084	.0000	F	1	0	0	0
34119	34217*	1	LBEACH	LBEACH9G	.0000	.2077	.0000	F	1	0	0	0
34119	34228*	1	LBEACH	LBEACH2G	.0000	.2107	.0000	F	1	0	0	0
34119	34229*	1	LBEACH	LBEACH3G	.0000	.2077	.0000	F	1	0	0	0
34119	34230*	1	LBEACH	LBEACH4G	.0000	.2084	.0000	F	1	0	0	0
34119	34234*	1	LBEACH	LBEACH8G	.0000	.1312	.0000	F	1	0	0	0
34120	34126*	1	LBEACH	LITEHIPE	.0016	.0146	.0262		1	472	0	0
34120	34231*	1	LBEACH	LBEACH5G	.0000	.2112	.0000	F	1	0	0	0
34120	34232*	1	LBEACH	LBEACH6G	.0000	.2010	.0000	F	1	0	0	0
34120	34233*	1	LBEACH	LBEACH7G	.0000	.1996	.0000	F	1	0	0	0
34124	34191*	1	LEWIS	SERRANO	.0004	.0075	.0297		1	1287	0	0
34124	34191*	2	LEWIS	SERRANO	.0004	.0075	.0297		1	1287	0	0
34124	34208*	1	LEWIS	VILLA PK	.0004	.0048	.0156		1	988	0	0
34126	34143*	1	LITEHIPE	MESA CAL	.0010	.0135	.0455		1	988	0	0
34126*	34175	1	LITEHIPE	REDONDO	.0012	.0161	.0526		1	988	0	0
34127*	34128	1	LUGO	LUGO	.0000	.0126	.0000	T	1	1120	0	0
34127*	34128	2	LUGO	LUGO	.0000	.0126	.0000	T	1	1120	0	0
34127*	34207	1	LUGO	VICTOR	.0019	.0155	.0321		1	494	0	0
34127*	34207	2	LUGO	VICTOR	.0019	.0155	.0321		1	494	0	0
34128	34146*	2	LUGO	MIRALOMA	.0003	.0075	.5174		1	3421	0	0
34128	34146*	3	LUGO	MIRALOMA	.0004	.0075	.5536		1	3421	0	0
34128*	34153	1	LUGO	MOHAVE	.0019	.0309	.0000		1	1386	0	0
34128	34192*	1	LUGO	SERRANO	.0006	.0128	.9462		1	3421	0	0
34128	34210*	1	LUGO	VINCENT	.0004	.0113	.8292		1	3421	0	0
34128	34210*	2	LUGO	VINCENT	.0004	.0113	.8292		1	3421	0	0
34128	34808*	0	LUGO	LUGOB 1	.0000	.0600	.0000	T	1	0	0	0
34129	34242*	0	LUZ	LUZ89 EQ	.0000	.0500	.0000	F	0	0	0	0
34129	34314*	0	LUZ	LUZ8	.0000	.1000	.0000	F	1	0	0	0
34129	34315*	0	LUZ	LUZ9	.0000	.1000	.0000	F	1	0	0	0
34134	34156*	1	MAGUNDEN	OMAR	.0011	.0132	.0285		1	643	0	0
34134	34168*	3	MAGUNDEN	PASTORIA	.0051	.0443	.0854		1	494	535	0
34134	34168*	E	MAGUNDEN	PASTORIA	.0088	.0467	.0844		1	353	373	0
34134	34168*	W	MAGUNDEN	PASTORIA	.0088	.0467	.0844		1	353	373	0
34134	34193*	1	MAGUNDEN	SPRINGVL	.0089	.0770	.1461		1	494	535	0
34134	34193*	2	MAGUNDEN	SPRINGVL	.0147	.0801	.1406		1	357	376	0
34134	34205*	E	MAGUNDEN	VESTAL	.0090	.0524	.1025		1	353	373	0
34134	34205*	W	MAGUNDEN	VESTAL	.0103	.0530	.1011		1	353	373	0
34134	34840*	2	MAGUNDEN	TEJON 23	.0069	.0749	.1137		1	494	0	0
34136	34139*	1	MANDALAY	MANDLY1G	.0000	.0589	.0000	F	1	0	0	0
34136	34140*	1	MANDALAY	MANDLY2G	.0000	.0589	.0000	F	1	0	0	0
34136*	34178	1	MANDALAY	S.CLARA	.0016	.0130	.0270		1	494	0	0
34136*	34178	2	MANDALAY	S.CLARA	.0016	.0130	.0270		1	494	0	0
34141*	34142	0	MC GEN	MC GEN	.0000	.0850	.0000	T	1	0	0	0
34142*	34187	1	MC GEN	SEARLES	.0055	.0250	.0044		1	1833	0	0
34143	34175*	1	MESA CAL	REDONDO	.0023	.0287	.1007		1	988	0	0
34143	34176*	1	MESA CAL	RIOHONDO	.0009	.0121	.0407		1	988	0	0
34143*	34209	1	MESA CAL	VINCENT	.0031	.0391	.1407		1	988	0	0
34143	34214*	1	MESA CAL	WALNUT	.0012	.0138	.0600		1	988	0	0
34144	34818*	0	MIRAGE	MIRAB 13	.0000	.0600	.0000	T	1	0	0	0

FROM	TO	CKT	NAME	NAME	LINE R	LINE X	CHRGING	TP	ST	RATA	RATB	RATC
34146	34147*	1	MIRALOMA	MIRLOMAA	.0000	.0111	.0000	F	1	1120	0	0
34146	34148*	2	MIRALOMA	MIRLOMAC	.0000	.0112	.0000	F	1	1000	0	0
34146	34148*	4	MIRALOMA	MIRLOMAC	.0000	.0121	.0000	F	1	1120	0	0
34146	34192*	1	MIRALOMA	SERRANO	.0002	.0046	.3234		1	3421	0	0
34147	34148*	1	MIRLOMAA	MIRLOMAC	.0000	.0003	.0000		1	0	0	0
34147	34212*	1	MIRLOMAA	VISTA	.0013	.0169	.0597		1	988	0	0
34147	34214*	1	MIRLOMAA	WALNUT	.0024	.0291	.1100		1	988	0	0
34148	34155*	1	MIRLOMAC	OLINDA	.0021	.0256	.1023		1	988	0	0
34148	34166*	1	MIRLOMAC	PADUA	.0018	.0226	.0855		1	988	0	0
34148	34212*	2	MIRLOMAC	VISTA	.0013	.0169	.0598		1	988	0	0
34149	34150*	1	MOGEN	MOGEN G	.0000	.0978	.0000	F	1	0	0	0
34149	34296*	1	MOGEN	BORAX I	.0000	.0978	.0000	F	1	0	0	0
34151*	34153	1	MOHAV1CC	MOHAVE	.0000	.0197	.0000	T	1	0	0	0
34152*	34153	1	MOHAV2CC	MOHAVE	.0000	.0198	.0000	T	1	0	0	0
34154	34160*	1	MOORPARK	ORMOND	.0013	.0225	.0900		1	1287	0	0
34154	34160*	2	MOORPARK	ORMOND	.0013	.0225	.0900		1	1287	0	0
34154	34160*	3	MOORPARK	ORMOND	.0013	.0225	.0900		1	1287	0	0
34154	34160*	4	MOORPARK	ORMOND	.0013	.0225	.0900		1	1287	0	0
34154*	34167	1	MOORPARK	PARDEE	.0015	.0268	.1055		1	1287	0	0
34154*	34167	2	MOORPARK	PARDEE	.0015	.0267	.1056		1	1287	0	0
34154*	34167	3	MOORPARK	PARDEE	.0015	.0267	.1056		1	1287	0	0
34154*	34178	1	MOORPARK	S.CLARA	.0043	.0363	.0743		1	494	0	0
34154*	34178	2	MOORPARK	S.CLARA	.0043	.0363	.0743		1	494	0	0
34155	34214*	1	OLINDA	WALNUT	.0005	.0068	.0256		1	988	0	0
34155	34824*	0	OLINDA	OLINB 13	.0000	.0600	.0000	T	1	0	0	0
34156	34157*	0	OMAR	OMAR G	.0000	.0393	.0000	F	1	0	0	0
34156*	34197	1	OMAR	SYC CYN	.0001	.0018	.0038		1	353	0	0
34160	34163*	1	ORMOND	ORMOND1G	.0000	.0148	.0000	F	1	0	0	0
34160	34222*	1	ORMOND	ORMOND2G	.0000	.0146	.0000	F	1	0	0	0
34165*	34243	1	OXBOW G	OXBOW G	.0000	.1514	.0000	T	1	0	0	0
34167	34168*	3	PARDEE	PASTORIA	.0066	.0570	.1096		1	494	535	0
34167	34168*	W	PARDEE	PASTORIA	.0110	.0601	.1056		1	353	373	0
34167	34178*	1	PARDEE	S.CLARA	.0068	.0570	.1176		1	494	0	0
34167	34178*	2	PARDEE	S.CLARA	.0068	.0570	.1176		1	494	0	0
34167	34201*	1	PARDEE	SYLMAR S	.0007	.0119	.0467		1	1287	0	0
34167	34201*	2	PARDEE	SYLMAR S	.0007	.0119	.0467		1	1287	0	0
34167	34209*	1	PARDEE	VINCENT	.0029	.0365	.1266		1	988	0	0
34167	34209*	2	PARDEE	VINCENT	.0014	.0340	.1125		1	988	0	0
34168	34802*	0	PASTORIA	PASTB 13	.0000	.0600	.0000	T	1	0	0	0
34169*	34205	1	RECTOR	VESTAL	.0097	.0496	.0939		1	353	373	0
34169	34205*	2	RECTOR	VESTAL	.0097	.0496	.0939		1	353	373	0
34170*	34175	1	REDON5 G	REDONDO	.0000	.0565	.0000	T	1	0	0	0
34175	34235*	1	REDONDO	REDON6 G	.0000	.0524	.0000	F	1	0	0	0
34175	34244*	1	REDONDO	REDON7 G	.0000	.0268	.0000	F	1	0	0	0
34175	34245*	1	REDONDO	REDON8	.0000	.0268	.0000	F	1	0	0	0
34176*	34209	1	RIOHONDO	VINCENT	.0028	.0354	.1239		1	988	0	0
34176	34209*	2	RIOHONDO	VINCENT	.0018	.0359	.1203		1	988	0	0
34178	34333*	1	S.CLARA	MANDLY 3	.0000	.1206	.0000	F	1	0	0	0
34180*	34182	1	S.ONOFR2	S.ONOFRE	.0000	.0097	.0000	T	1	0	0	0
34181*	34182	1	S.ONOFR3	S.ONOFRE	.0000	.0097	.0000	T	1	0	0	0
34182	34185*	1	S.ONOFRE	SANTIAGO	.0016	.0295	.1159		1	1287	0	0
34182	34185*	2	S.ONOFRE	SANTIAGO	.0016	.0295	.1159		1	1287	0	0
34182	34191*	1	S.ONOFRE	SERRANO	.0023	.0413	.1625		1	1287	0	0
34182*	34223	1	S.ONOFRE	VIEJO	.0013	.0242	.0950		1	1287	0	0
34182*	34901	1	S.ONOFRE	3XR2H	.0008	.0175	.0000	F	0	0	0	0
34184*	34212	2	SANBRDNO	VISTA	.0007	.0088	.0319		1	988	0	0
34185	34826*	0	SANTIAGO	SANTB 13	.0000	.0600	.0000	T	1	0	0	0
34187	34312*	0	SEARLES	KERRGEN	.0000	.0978	.0000	F	1	0	0	0
34187	34313*	0	SEARLES	KERRMGEE	.0000	.0978	.0000	F	1	0	0	0
34188*	34209	1	SEAWEST	VINCENT	.0076	.0638	.0102		1	494	0	0
34190*	34202	1	SEGS 2 G	TORTILLA	.0096	.0536	.0000		0	0	0	0
34191*	34192	1	SERRANO	SERRANO	.0000	.0115	.0000	T	1	1120	0	0
34191*	34192	2	SERRANO	SERRANO	.0000	.0115	.0000	T	1	1120	0	0
34191	34208*	1	SERRANO	VILLA PK	.0002	.0033	.0130		1	1287	0	0
34191	34208*	2	SERRANO	VILLA PK	.0002	.0033	.0130		1	1287	0	0
34192	34204*	1	SERRANO	VALLEYSC	.0004	.0093	.6856		1	3421	0	0
34195	34196*	0	SUNGEN	SUNGEN G	.0000	.0587	.0000	F	0	0	0	0
34195	34348*	0	SUNGEN	SUNGEN3G	.0000	.3325	.0000	F	1	0	0	0

FROM	TO	CKT	NAME	NAME	LINE R	LINE X	CHRGING	TP	ST	RATA	RATB	RATC
34195	34349*	0	SUNGEN	SUNGEN4G	.0000	.3325	.0000	F	1	0	0	0
34195	34350*	0	SUNGEN	SUNGEN5G	.0000	.3325	.0000	F	1	0	0	0
34195	34351*	0	SUNGEN	SUNGEN6G	.0000	.3325	.0000	F	1	0	0	0
34195	34352*	0	SUNGEN	SUNGEN7G	.0000	.3325	.0000	F	1	0	0	0
34197	34198*	1	SYC CYN	SYC CYNG	.0000	.0402	.0000	F	1	0	0	0
34202	34343*	1	TORTILLA	SEGS	.0096	.0536	.0000		1	0	0	0
34204	34830*	0	VALLEYS	VALLB 13	.0000	.0600	.0000	T	1	0	0	0
34206*	34207	1	VICTOR	VICTOR	.0000	.0573	.0000	T	1	280	0	0
34206*	34207	2	VICTOR	VICTOR	.0000	.0573	.0000	T	1	280	0	0
34206	34812*	0	VICTOR	VICTLB13	.0000	.0600	.0000	T	1	0	0	0
34207	34810*	0	VICTOR	VICTB 13	.0000	.0600	.0000	T	1	0	0	0
34209*	34210	1	VINCENT	VINCENT	.0000	.0120	.0000	T	1	1000	0	0
34209*	34210	2	VINCENT	VINCENT	.0000	.0118	.0000	T	1	1000	0	0
34209*	34210	3	VINCENT	VINCENT	.0000	.0122	.0000	T	1	1120	0	0
34209	34832*	0	VINCENT	VINCB 13	.0000	.0600	.0000	T	1	0	0	0
34210	35991*	3	VINCENT	VINCEN&7	.0000	-.0084	.0000		1	1819	0	0
34210	35994*	2	VINCENT	VINCEN&4	.0000	-.0093	.0000		1	1848	0	0
34210	35996*	1	VINCENT	VINCEN&2	.0000	-.0093	.0000		1	1848	0	0
34212	34834*	0	VISTA	VISTB 13	.0000	.0600	.0000	T	1	0	0	0
34292*	34295	1	BLM E1G	BLM EAST	.0000	.3325	.0000	T	1	0	0	0
34293*	34295	1	BLM E2G	BLM EAST	.0000	.3325	.0000	T	1	0	0	0
34294*	34295	1	BLM W1G	BLM EAST	.0000	.2933	.0000	T	1	0	0	0
34295*	34317	1	BLM EAST	NAVY II	.0001	.0014	.0000		1	494	0	0
34317	34318*	1	NAVY II	NAVYII1G	.0000	.3325	.0000	F	1	0	0	0
34317	34319*	1	NAVY II	NAVYII2G	.0000	.3325	.0000	F	1	0	0	0
34317	34320*	1	NAVY II	NAVYII3G	.0000	.3325	.0000	F	1	0	0	0
34343	34345*	0	SEGS	SEGS 2G	.0000	.3325	.0000	F	1	0	0	0
34838*	34840	0	TEJOB 13	TEJON 23	.0000	.0600	.0000	F	1	0	0	0
34842*	34844	1	CONTR 23	INYOK 23	.0212	.2860	.9310		1	643	0	0
34901	34902*	1	3XR2H	3XR2Y	.0184	.3821	.0000	T	0	0	0	0
34901	34903*	1	3XR2H	3XR2X	.0229	.4770	.0000	T	0	0	0	0
34903*	34904	1	3XR2X	3A06	.0310	.0470	.0000		0	0	0	0
35991	35992*	3	VINCEN&7	VINCEN&6	.0006	.0125	.9250		1	3118	0	0
35992	35993*	3	VINCEN&6	VINCEN&5	.0005	.0127	.9109		1	3118	0	0
35994	35995*	2	VINCEN&4	VINCEN&3	.0012	.0266	1.9888		1	3118	0	0
35996	35997*	1	VINCEN&2	VINCEN&1	.0012	.0266	1.9870		1	3118	0	0

BUS#	NAME	BSKV	COD	MCNS	PGEN	QGEN	QMAX	QMIN	VSCHED	VACT.	REMOT	PCT	Q
1154	MAGUND1	13.8	2	1	100.0	8.0	42.0	-70.0	1.0000	1.0000			
1155	MAGUND2	13.8	2	1	100.0	8.0	42.0	-70.0	1.0000	1.0000			
1156	MAGUND3	13.8	2	1	91.0	6.1	42.0	-70.0	1.0000	1.0000			
1157	MANDLY	316.4	-2	1	.0	.0	.0	.0	1.0000	1.0058			
1158	PASTOR1	13.8	2	1	100.0	14.5	42.0	-70.0	1.0000	1.0000			
1159	PASTOR2	13.8	2	1	100.0	14.5	42.0	-70.0	1.0000	1.0000			
1160	PASTOR3	13.8	2	1	112.0	17.3	42.0	-70.0	1.0000	1.0000			
1161	PASTOR4	13.8	2	1	125.0	20.6	45.0	-70.0	1.0000	1.0000			
34004	ALAMT3	G18.0	2	3	310.0	117.5	160.0	-100.0	1.0350	1.0350			
34005	ALAMT4	G18.0	2	3	310.0	117.5	160.0	-100.0	1.0350	1.0350			
34006	ALAMT5	G20.0	2	3	295.3	163.8	240.0	-150.0	1.0350	1.0350			
34008	ALAMT6	G20.0	2	3	470.0	141.9	240.0	-150.0	1.0250	1.0250			
34012	ANTELOPE	230	-2	1	50.0	.0	.0	.0	1.0200	.9851			
34013	ARCO	G13.8	2	1	396.0	48.6	200.0	-100.0	1.0000	1.0000			
34024	BIGCREEK	13.8	2	1	900.0	99.4	300.0	-100.0	1.0500	1.0500			
34026	BIOGEN G	115	-2	1	17.0	-3.0	5.0	-3.0	1.0000	1.0464			
34027	BLM EQG	13.8	4	1	166.0	13.5	80.0	-40.0	1.0000	1.0000			
34031	BSPHYD262	.20	2	1	14.0	.8	7.0	-3.0	1.0270	1.0270			
34032	BSPHYD342	.20	2	1	13.0	2.5	7.0	-3.0	1.0270	1.0270			
34035	CAL GENGL	13.8	4	1	69.0	-.8	35.0	-17.0	1.0000	1.0000			
34037	CENTER S	230	-2	1	27.0	.0	.0	.0	1.0200	.9815			
34039	CHINO	230	-2	1	117.0	.0	.0	.0	1.0200	.9576			
34045	COLWT3GT	13.8	2	1	130.0	41.8	82.0	-60.0	1.0500	1.0500			
34046	COLWT3ST	13.8	2	1	106.0	31.3	58.0	-41.0	1.0500	1.0500			
34052	CSA DIAB	13.8	2	1	29.0	-2.0	15.0	-8.0	1.0000	1.0000			
34054	DEAMO	230	-2	1	31.0	.0	.0	.0	1.0200	.9838			
34055	DEVERS	230	-2	1	33.0	.0	.0	.0	1.0200	.9754			
34057	EAGLEMTN	6.90	-2	1	-57.6	1.0	1.0	.0	1.0000	.9858			
34063	EL NIDO	230	-2	1	66.0	.0	.0	.0	1.0200	1.0003			
34070	ELSEG3	G18.0	2	3	332.0	65.2	145.0	-100.0	1.0200	1.0200			
34072	ELSEG4	G18.0	2	3	332.0	63.2	145.0	-100.0	1.0200	1.0200			
34074	ETIWA3	G18.0	-2	3	317.0	140.0	140.0	-100.0	1.0270	1.0174			
34076	ETIWA4	G18.0	-2	3	317.0	140.0	140.0	-100.0	1.0240	1.0167			
34078	ETIWANDA	230	-2	1	18.0	.0	.0	.0	1.0200	.9683			
34086	HARBOR	G13.8	2	1	89.0	16.9	40.0	-20.0	1.0100	1.0100			
34091	HINSON	230	-2	1	52.0	.0	.0	.0	1.0200	.9932			
34093	HUNT1	G13.8	2	3	213.0	127.4	130.0	-65.0	1.0430	1.0430			
34098	HUNT2	G13.8	-2	3	213.0	130.0	130.0	-65.0	1.0450	1.0444			
34107	IRON MTN	6.90	-2	1	-17.0	1.0	1.0	.0	1.0000	.9943			
34109	J.HINDS	6.90	-2	1	-57.6	1.0	1.0	.0	1.0000	.9839			
34112	KER MGEE	13.8	4	1	54.0	-2.7	20.0	-10.0	1.0200	1.0200			
34116	LA FRESA	230	-2	1	9.0	.0	.0	.0	1.0200	.9985			
34118	LAGUBELL	230	-2	1	115.0	.0	.0	.0	1.0200	.9884			
34126	LITEHIPE	230	-2	1	42.0	.0	.0	.0	1.0200	.9904			
34139	MANDLY1G	13.8	2	3	205.0	43.9	130.0	-67.5	1.0100	1.0100			
34140	MANDLY2G	13.8	2	3	205.0	43.9	130.0	-67.5	1.0100	1.0100			
34141	MC GEN	13.8	2	1	107.0	-10.5	75.0	-35.0	1.0000	1.0000			
34150	MOGEN	G13.8	2	1	101.0	1.7	27.0	-13.0	1.0000	1.0000			
34151	MOHAV1CC	22.0	2	3	782.0	235.0	350.0	-150.0	1.0500	1.0500			
34152	MOHAV2CC	22.0	2	3	782.0	234.6	350.0	-150.0	1.0500	1.0500			
34154	MOORPARK	230	-2	1	25.0	.0	.0	.0	1.0200	.9877			
34157	OMAR	G13.8	2	1	295.0	56.6	150.0	-75.0	1.0000	1.0000			
34163	ORMOND1G	26.0	2	1	440.0	63.9	400.0	-240.0	1.0010	1.0010			
34165	OXBOW	G13.8	2	1	52.0	-2.5	27.0	-14.0	1.0000	1.0000			
34166	PADUA	230	-2	1	11.0	.0	.0	.0	1.0200	.9567			
34167	PARDEE	230	-2	1	171.0	.0	.0	.0	1.0200	.9879			
34170	REDON5	G18.0	2	1	170.0	43.5	85.0	-42.0	1.0220	1.0220			
34178	S.CLARA	230	-2	1	124.0	.0	.0	.0	1.0200	.9861			
34180	S.ONOFR2	22.0	-2	1	.0	.0	.0	.0	1.0000	.9633	34182	100.0	
34181	S.ONOFR3	22.0	-2	1	.0	.0	.0	.0	1.0000	.9633	34182	100.0	
34185	SANTIAGO	230	-2	1	15.0	.0	.0	.0	1.0200	.9715			
34188	SEAWEST	230	2	1	38.0	13.7	190.0	-95.0	1.0000	1.0000			
34189	SEGS 1	G13.8	4	1	19.0	.7	10.0	-5.0	1.0000	1.0000			
34190	SEGS 2	G 115	-2	1	29.0	15.0	15.0	-8.0	1.0000	.9990			
34196	SUNGEN	G13.8	4	1	173.0	-11.5	87.0	-40.0	1.0000	1.0000			
34198	SYC CYNG	13.8	2	1	295.0	54.4	150.0	-75.0	1.0000	1.0000			
34204	VALLEYS	500	-2	1	5.0	.0	.0	.0	1.0200	.9881			
34205	VESTAL	230	-2	1	63.0	.0	.0	.0	1.0200	1.0177			

1998 HS2, SONGSOFFM10MOD.SAV

GENERATING

SONGSOFF.SAV MODIFIED, INC. PGEN AT ORMOND BY 300 MW

PLANT DATA

BUS#	NAME	BSKV	COD	MCNS	PGEN	QGEN	QMAX	QMIN	VSCHED	VACT.	REMOT	PCT	Q
34212	VISTA	230	-2	1	126.0	.0	.0	.0	1.0200	.9614			
34214	WALNUT	230	-2	1	47.0	.0	.0	.0	1.0200	.9687			
34216	LBEACH1G13.8	-2	1		.0	.0	.0	.0	1.0500	1.0108			
34217	LBEACH9G13.8	2	1	62.0	23.6	30.0	-15.0	1.0500	1.0500				
34219	COLWT4GT13.8	2	1	130.0	41.8	82.0	-60.0	1.0500	1.0500				
34220	COLWT4ST13.8	2	1	106.0	31.3	58.0	-41.0	1.0500	1.0500				
34222	ORMOND2G26.0	2	1	440.0	64.1	400.0	-240.0	1.0010	1.0010				
34224	ALAMT1 G18.0	-2	1	.0	.0	.0	.0	1.0350	.9955				
34225	ALAMT2 G18.0	-2	1	.0	.0	.0	.0	1.0230	.9955				
34226	ELSEG1 G18.0	2	1	169.0	37.9	75.0	-50.0	1.0200	1.0200				
34227	ELSEG2 G18.0	2	1	177.0	40.2	75.0	-50.0	1.0200	1.0200				
34228	LBEACH2G13.8	-2	1	.0	.0	.0	.0	1.0500	1.0108				
34229	LBEACH3G13.8	-2	1	.0	.0	.0	.0	1.0500	1.0108				
34230	LBEACH4G13.8	-2	1	.0	.0	.0	.0	1.0500	1.0108				
34231	LBEACH5G13.8	-2	1	.0	.0	.0	.0	1.0390	.9929				
34232	LBEACH6G13.8	-2	1	.0	.0	.0	.0	1.0370	.9929				
34233	LBEACH7G13.8	-2	1	.0	.0	.0	.0	1.0360	.9929				
34234	LBEACH8G13.8	2	1	81.5	35.5	48.0	-34.0	1.0500	1.0500				
34235	REDON6 G18.0	2	1	140.0	15.9	75.0	-40.0	1.0080	1.0080				
34242	LUZ89 EQ13.8	4	1	158.0	23.9	80.0	-40.0	1.0000	1.0000				
34244	REDON7 G20.0	2	3	270.0	135.5	240.0	-150.0	1.0350	1.0350				
34245	REDON8 G20.0	2	3	270.0	135.5	240.0	-150.0	1.0350	1.0350				
34292	BLM E1G13.8	2	1	29.7	1.0	15.0	-7.5	1.0000	1.0000				
34293	BLM E2G13.8	2	1	29.6	1.0	15.0	-7.5	1.0000	1.0000				
34294	BLM W1G13.8	2	1	23.7	.3	12.0	-6.0	1.0000	1.0000				
34296	BORAX I 13.8	2	1	46.0	-2.3	22.0	-11.0	1.0000	1.0000				
34297	CALGEN1G13.8	2	1	29.6	2.0	15.0	-7.5	1.0000	1.0000				
34298	CALGEN2G13.8	2	1	23.7	1.6	12.0	-6.0	1.0000	1.0000				
34299	CALGEN3G13.8	2	1	23.7	1.6	12.0	-6.0	1.0000	1.0000				
34312	KERRGEN 13.8	2	1	54.0	-11.4	27.0	-14.0	1.0000	1.0000				
34313	KERRMGE13.8	-2	1	54.0	-3.0	7.0	-3.0	1.0000	1.0082				
34314	LUZ8 13.8	2	1	79.0	14.1	40.0	-20.0	1.0000	1.0000				
34315	LUZ9 13.8	2	1	79.0	14.1	40.0	-20.0	1.0000	1.0000				
34317	NAVY II 230	1	1	.0	.0	.0	.0	1.0000	1.0015				
34318	NAVYII1G13.8	2	1	29.7	1.0	12.0	-6.0	1.0000	1.0000				
34319	NAVYII2G13.8	2	1	29.7	1.0	12.0	-6.0	1.0000	1.0000				
34320	NAVYII3G13.8	2	1	29.6	1.0	12.0	-6.0	1.0000	1.0000				
34324	ETIWA 5G16.4	-2	1	.0	.0	.0	.0	1.0000	.9876				
34329	HUNT5 G16.4	-2	1	.0	.0	.0	.0	1.0000	.9989				
34333	MANDLY 316.4	-2	1	.0	.0	.0	.0	1.0000	1.0058				
34344	SEGS 1G13.8	2	1	19.0	1.0	10.0	-5.0	1.0000	1.0000				
34345	SEGS 2G13.8	2	1	29.0	1.9	10.0	-5.0	1.0000	1.0000				
34348	SUNGEN3G13.8	2	1	30.0	5.5	17.0	-8.0	1.0000	1.0000				
34349	SUNGEN4G13.8	2	1	30.0	5.5	17.0	-8.0	1.0000	1.0000				
34350	SUNGEN5G13.8	2	1	30.0	5.5	17.0	-8.0	1.0000	1.0000				
34351	SUNGEN6G13.8	2	1	30.0	5.5	17.0	-8.0	1.0000	1.0000				
34352	SUNGEN7G13.8	2	1	30.0	5.5	17.0	-8.0	1.0000	1.0000				
34800	BAILB 1313.8	2	1	10.0	15.2	25.0	-12.0	1.0000	1.0000				
34802	PASTB 1313.8	2	1	372.0	55.4	99.0	-63.0	1.0000	1.0000				
34804	CONTB 1313.8	2	1	34.0	-3.6	17.0	-9.0	1.0000	1.0000				
34806	KRAMB 1313.8	2	1	14.0	32.9	35.0	-17.0	1.0000	1.0000				
34808	LUGOB 1313.8	-2	1	5.0	-6.0	12.0	-6.0	1.0000	1.0195				
34810	VICTB 1313.8	-2	1	10.0	25.0	25.0	-12.0	1.0000	.9696				
34812	VICTLB1313.8	-2	1	4.0	10.0	10.0	-5.0	1.0000	.9515				
34814	ELDRB 1313.8	-2	1	5.0	-12.0	25.0	-12.0	1.0000	1.0275				
34816	DEVEB 1313.8	2	1	36.0	41.4	90.0	-45.0	1.0000	1.0000				
34818	MIRAB 1313.8	2	1	68.0	27.9	34.0	-17.0	1.0000	1.0000				
34820	ANTEB 1313.8	2	1	22.0	25.1	56.0	-28.0	1.0000	1.0000				
34822	CHINB 1313.8	-2	1	3.0	1.0	1.0	-1.0	1.0000	.9582				
34824	OLINB 1313.8	-2	1	7.0	3.0	3.0	-1.0	1.0000	.9734				
34826	SANTB 1313.8	-2	1	7.0	3.0	3.0	-1.0	1.0000	.9734				
34828	SYLMB 1313.8	2	1	15.0	-10.0	37.0	-19.0	1.0000	1.0000				
34830	VALLB 1313.8	-2	1	4.0	9.0	9.0	-5.0	1.0000	.9935				
34832	VINCB 1313.8	2	1	20.0	-19.6	50.0	-25.0	1.0000	1.0000				
34834	VISTB 1313.8	-2	1	7.0	17.0	17.0	-9.0	1.0000	.9719				
34836	ELDRWB1313.8	-2	1	15.0	-19.0	37.0	-19.0	1.0000	1.0233				
34838	TEJOB 1313.8	2	1	30.0	13.0	75.0	-38.0	1.0000	1.0000				
34900	MAGUENDN13.8	2	1	274.0	13.2	137.0	-68.0	1.0000	1.0000				

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E TUE, JUN 21 1994 11:58
1998 HS2, SONGSOFFM10MOD.SAV GENERATING
SONGSOFF.SAV MODIFIED, INC. PGEN AT ORMOND BY 300 MW PLANT DATA
BUS# NAME BSKV COD MCNS PGEN QGEN QMAX QMIN VSCHED VACT. REMOT PCT Q

34902	LAGUNABL	13.8	2	1	187.0	29.9	137.0	-68.0	1.0000	1.0000	
34904	ORMOND	13.8	2	1	247.0	29.0	124.0	-62.0	1.0000	1.0000	

SONGSOFF.SAV MODIFIED, INC. PGEN AT ORMOND BY 300 MW

FROM	TO	CKT	NAME	NAME	LINE R	LINE X	CHRGING	TP	ST	RATA	RATB	RATC
1154*	34134	1	MAGUND1	MAGUNDEN	.0000	.2112	.0000	T	1	0	0	0
1155*	34134	1	MAGUND2	MAGUNDEN	.0000	.2112	.0000	T	1	0	0	0
1156*	34134	1	MAGUND3	MAGUNDEN	.0000	.2112	.0000	T	1	0	0	0
1157*	34178	1	MANDLY 3	S.CLARA	.0000	.1206	.0000	T	1	0	0	0
1158*	34168	1	PASTOR1	PASTORIA	.0000	.2112	.0000	T	1	0	0	0
1159*	34168	1	PASTOR2	PASTORIA	.0000	.2112	.0000	T	1	0	0	0
1160*	34168	1	PASTOR3	PASTORIA	.0000	.2112	.0000	T	1	0	0	0
1161*	34168	1	PASTOR4	PASTORIA	.0000	.2112	.0000	T	1	0	0	0
2166*	34056	1	PALOVRDE	DEVERS	.0026	.0297	.0000		1	1645	0	0
3977	34066*	1	MOENKO&4	ELDORADO	.0000	-.0180	.0000		1	1645	0	0
8016	34055*	2	COACHELV	DEVERS	.0064	.0493	.1080		1	462	0	0
8016	34144*	1	COACHELV	MIRAGE	.0036	.0283	.0569		1	462	0	0
10048	34066*	1	MCCULLGH	ELDORADO	.0000	.0002	.0000	Z	1	0	0	0
10055*	34104	1	OWENS	INYO	.0001	.0010	.0000		1	222	0	0
10094*	34201	1	SYLMARLA	SYLMAR S	.0000	.0012	.0000	F	1	0	0	0
10094	34828*	0	SYLMARLA	SYLMB 13	.0000	.0600	.0000	T	1	0	0	0
10105*	34128	1	VICTORVL	LUGO	.0002	.0041	.2962		1	0	0	0
16045	34153*	0	LAUGHLIN	MOHAVE	.0000	.0003	.0000		1	0	0	0
26242*	35993	3	MIDWAY	VINCEN&5	.0000	-.0093	.0000		1	1848	0	0
26242*	35995	2	MIDWAY	VINCEN&3	.0000	-.0094	.0000		1	1848	0	0
26242*	35997	1	MIDWAY	VINCEN&1	.0000	-.0093	.0000		1	1848	0	0
30020	34182*	1	ENCINA	S.ONOFRE	.0044	.0349	.0764		1	456	0	0
30053	34182*	1	MISSION	S.ONOFRE	.0097	.0754	.1578		1	456	0	0
30092	34182*	1	TALEGA	S.ONOFRE	.0012	.0097	.0211		1	518	0	0
30092	34182*	2	TALEGA	S.ONOFRE	.0012	.0097	.0211		1	518	0	0
30199	34182*	1	SANLUSRY	S.ONOFRE	.0012	.0123	.0478		1	797	0	0
30996	34204*	1	RAINBOW	VALLEYS	.0002	.0061	.4413		1	1040	0	0
32125*	34047	1	NEVBD501	CONTROL	.6931	1.0370	.0071		1	0	0	0
32125*	34215	1	NEVBD501	CONTROLX	.6931	1.0370	.0071		0	0	0	0
32126*	34047	1	NEVBD502	CONTROL	.7306	1.0600	.0087		1	0	0	0
32126*	34215	1	NEVBD502	CONTROLX	.7306	1.0600	.0087		0	0	0	0
34004*	34011	1	ALAMT3	G ALMITOSW	.0000	.0418	.0000	T	1	0	0	0
34005*	34011	1	ALAMT4	G ALMITOSW	.0000	.0418	.0000	T	1	0	0	0
34006*	34009	1	ALAMT5	G ALMITOSE	.0000	.0268	.0000	T	1	0	0	0
34008*	34009	1	ALAMT6	G ALMITOSE	.0000	.0268	.0000	T	1	0	0	0
34009*	34011	1	ALMITOSE	ALMITOSW	.0000	.0005	.0000		1	0	0	0
34009	34023*	1	ALMITOSE	BARRE	.0013	.0132	.0787		1	988	0	0
34009	34037*	1	ALMITOSE	CENTER S	.0010	.0163	.0600		1	988	0	0
34010*	34011	1	ALMITOSW	ALMITOSW	.0000	.1159	.0000	T	1	90	0	0
34010*	34011	2	ALMITOSW	ALMITOSW	.0000	.1159	.0000	T	1	90	0	0
34011	34023*	2	ALMITOSW	BARRE	.0010	.0163	.0600		1	988	0	0
34011	34126*	1	ALMITOSW	LITEHIPE	.0010	.0133	.0448		1	988	0	0
34011	34224*	1	ALMITOSW	ALAMT1 G	.0000	.0536	.0000	F	1	0	0	0
34011	34225*	1	ALMITOSW	ALAMT2 G	.0000	.0536	.0000	F	1	0	0	0
34011	34317*	1	ALMITOSW	NAVY II	.0000	.1135	.0000	F	0	0	0	0
34012*	34134	E	ANTELOPE	MAGUNDEN	.0173	.0923	.1600		1	357	376	0
34012*	34134	W	ANTELOPE	MAGUNDEN	.0102	.0883	.1677		0	494	0	0
34012*	34143	1	ANTELOPE	MESA CAL	.0148	.0920	.1643		1	357	0	0
34012*	34209	1	ANTELOPE	VINCENT	.0030	.0263	.0499		1	494	0	0
34012	34820*	0	ANTELOPE	ANTEB 13	.0000	.0600	.0000	T	1	0	0	0
34012	34840*	2	ANTELOPE	TEJON 23	.0033	.0135	.0540		1	494	535	0
34013*	34218	0	ARCO	G ARCO G	.0000	.0413	.0000	T	1	0	0	0
34022*	34167	1	BAILEY	PARDEE	.0076	.0410	.0713		1	353	373	0
34022*	34167	4	BAILEY	PARDEE	.0024	.0302	.1088		1	988	1136	0
34022	34168*	1	BAILEY	PASTORIA	.0036	.0185	.0351		1	353	373	0
34022	34168*	4	BAILEY	PASTORIA	.0010	.0129	.0466		1	988	1136	0
34022	34800*	0	BAILEY	BAILB 13	.0000	.0600	.0000	T	1	0	0	0
34023	34067*	0	BARRE	ELLIS	.0011	.0091	.0755		1	988	0	0
34023	34124*	1	BARRE	LEWIS	.0004	.0057	.0185		1	988	0	0
34023	34208*	1	BARRE	VILLA PK	.0008	.0101	.0330		1	988	0	0
34024*	34025	1	BIGCREEK	BIGCREEK	.0000	.0155	.0000	T	1	0	0	0
34025	34061*	1	BIGCREEK	EASTWOOD	.0014	.0075	.0300		1	0	0	0
34025	34169*	1	BIGCREEK	RECTOR	.0189	.0960	.1818		1	353	373	0
34025	34169*	2	BIGCREEK	RECTOR	.0218	.1112	.2108		1	353	373	0
34025*	34169	4	BIGCREEK	RECTOR	.0065	.0808	.2914		1	988	1136	0
34025*	34193	1	BIGCREEK	SPRINGVL	.0230	.1256	.2206		1	494	535	0
34025*	34193	2	BIGCREEK	SPRINGVL	.0132	.1143	.2170		1	357	376	0
34026	34041*	1	BIOGEN G	COLWATER	.0443	.6797	.0000		1	0	0	0

FROM	TO	CKT	NAME	NAME	LINE R	LINE X	CHRGING	TP	ST	RATA	RATB	RATC
34026	34064*	1	BIOGEN G	ELDORAD	.2400	.3345	.0000		0	0	0	0
34026	34304*	1	BIOGEN G	ELDORODO	.2400	.3345	.0000		1	0	0	0
34027*	34028	1	BLM EQG	BLM WEST	.0000	.0689	.0000	T	0	0	0	0
34028	34114*	1	BLM WEST	KRAMER	.0100	.1019	.2586		0	494	0	0
34028*	34295	1	BLM WEST	BLM EAST	.0001	.0016	.0000		1	494	0	0
34028	34844*	1	BLM WEST	INYOK 23	.0049	.0663	.2586		1	643	0	0
34029	34058*	1	BLYTHESC	EAGLEMTN	.0499	.1890	.0834		1	187	0	0
34029	40003*	1	BLYTHESC	BLYTHE	.0000	.0005	.0000		1	0	0	0
34031*	34047	1	BSPHYD26	CONTROL	.0000	.6000	.0000	T	1	0	0	0
34032*	34048	1	BSPHYD34	CONTROL	.0000	.5100	.0000	T	1	0	0	0
34034	34035*	1	CAL GEN	CAL GENG	.0000	.1467	.0000	F	0	0	0	0
34034	34106*	1	CAL GEN	INYOKERN	.0392	.1437	.0000		1	169	0	0
34034	34297*	1	CAL GEN	CALGEN1G	.0000	.2857	.0000	F	1	0	0	0
34034	34298*	1	CAL GEN	CALGEN2G	.0000	.2933	.0000	F	1	0	0	0
34034	34299*	1	CAL GEN	CALGEN3G	.0000	.2933	.0000	F	1	0	0	0
34036	34080*	1	CAMINO	GENE	.0133	.0910	.1661		1	359	0	0
34036*	34108	1	CAMINO	IRON MTN	.0120	.0732	.1312		1	335	0	0
34036	40037*	E	CAMINO	MEAD	.0173	.1157	.2120		1	319	0	0
34036	40037*	W	CAMINO	MEAD	.0173	.1157	.2120		1	319	0	0
34037*	34054	1	CENTER S	DELAMO	.0005	.0069	.0223		1	988	0	0
34037	34143*	0	CENTER S	MESA CAL	.0011	.0135	.0472		1	988	0	0
34037	34155*	1	CENTER S	OLINDA	.0016	.0203	.0726		1	988	0	0
34039	34147*	1	CHINO	MIRLOMAA	.0010	.0055	.0392		1	713	0	0
34039	34147*	2	CHINO	MIRLOMAA	.0006	.0070	.0264		1	988	0	0
34039	34148*	3	CHINO	MIRLOMAC	.0006	.0070	.0265		1	988	0	0
34039	34182*	1	CHINO	S.ONOFRE	.0027	.0491	.1932		0	1287	0	0
34039	34191*	1	CHINO	SERRANO	.0014	.0254	.0999		1	1287	0	0
34039	34223*	1	CHINO	VIEJO	.0014	.0250	.0982		1	1287	0	0
34039	34822*	0	CHINO	CHINB 13	.0000	.0600	.0000	T	1	0	0	0
34041*	34113	1	COLWATER	KRAMER	.0400	.2170	.0000		1	0	0	0
34041	34189*	0	COLWATER	SEGS 1 G	.0000	.3325	.0000	F	0	0	0	0
34041*	34190	1	COLWATER	SEGS 2 G	.0004	.0023	.0000		1	0	0	0
34041*	34343	1	COLWATER	SEGS	.0004	.0023	.0000		1	0	0	0
34041	34344*	1	COLWATER	SEGS 1G	.0000	.3325	.0000	F	1	0	0	0
34042	34045*	0	COLWATER	COLWT3GT	.0000	.0632	.0000	F	1	0	0	0
34042	34046*	0	COLWATER	COLWT3ST	.0000	.0870	.0000	F	1	0	0	0
34042*	34114	1	COLWATER	KRAMER	.0068	.0663	.1333		1	643	0	0
34042*	34114	2	COLWATER	KRAMER	.0068	.0663	.1333		1	643	0	0
34042	34219*	0	COLWATER	COLWT4GT	.0000	.0632	.0000	F	1	0	0	0
34042	34220*	0	COLWATER	COLWT4ST	.0000	.0870	.0000	F	1	0	0	0
34047*	34048	1	CONTROL	CONTROL	.0000	.5400	.0000	T	1	28	0	0
34048*	34049	1	CONTROL	CONTROL	.0001	.1092	.0000	T	1	0	0	0
34048*	34053	1	CONTROL	CSA DIAB	.1170	.2160	.0000		1	0	0	0
34048*	34053	2	CONTROL	CSA DIAB	.1230	.3110	.0000		1	0	0	0
34048	34103*	1	CONTROL	INYO	.0060	.0196	.0024		1	0	0	0
34048	34106*	1	CONTROL	INYOKERN	.4410	.8150	.0880		1	0	0	0
34048	34106*	2	CONTROL	INYOKERN	.4410	.8150	.0880		1	0	0	0
34048	34215*	1	CONTROL	CONTROLX	.0000	.5667	.0000	F	0	0	0	0
34048*	34842	1	CONTROL	CONTR 23	.0000	.0600	.0000	F	1	280	0	0
34049	34243*	1	CONTROL	OXBOW G	.0467	.3399	.6476		1	0	0	0
34049	34804*	0	CONTROL	CONTB 13	.0000	.0600	.0000	T	1	0	0	0
34052*	34053	1	CSA DIAB	CSA DIAB	.0000	.0978	.0000	T	1	0	0	0
34054	34067*	0	DELAMO	ELLIS	.0017	.0193	.1151		1	988	0	0
34054*	34091	0	DELAMO	HINSON	.0011	.0138	.0481		1	988	0	0
34054	34118*	0	DELAMO	LAGUBELL	.0011	.0125	.0624		1	988	0	0
34055*	34056	1	DEVERS	DEVERS	.0000	.0117	.0000	T	1	1120	0	0
34055	34144*	2	DEVERS	MIRAGE	.0026	.0203	.0444		1	494	0	0
34055*	34184	1	DEVERS	SANBRDNO	.0118	.0659	.1172		1	317	0	0
34055	34184*	2	DEVERS	SANBRDNO	.0075	.0643	.1245		1	458	0	0
34055*	34212	1	DEVERS	VISTA	.0078	.0660	.1308		1	458	0	0
34055	34212*	2	DEVERS	VISTA	.0078	.0653	.1319		1	494	0	0
34055	34816*	0	DEVERS	DEVEB 13	.0000	.0600	.0000	T	1	0	0	0
34056	34204*	1	DEVERS	VALLEYSC	.0004	.0091	.6679		1	3421	0	0
34057*	34059	1	EAGLEMTN	EAGLEMTN	.0000	.1212	.0000	T	1	90	0	0
34058*	34059	1	EAGLEMTN	EAGLEMTN	.0000	.0272	.0000	T	1	48	0	0
34059	34108*	1	EAGLEMTN	IRON MTN	.0066	.0453	.0787		1	420	0	0
34059*	34110	1	EAGLEMTN	J.HINDS	.0032	.0210	.0350		1	420	0	0
34060	34143*	1	EAGLROCK	MESA CAL	.0014	.0256	.1003		1	1287	0	0

FROM	TO	KCT	NAME	NAME	LINE R	LINE X	CHRGING	TP	ST	RATA	RATB	RATC
34060	34167*	1	EAGLROCK	PARDEE	.0084	.0700	.1593		1	494	0	0
34060	34201*	1	EAGLROCK	SYLMAR S	.0014	.0265	.1030		1	1287	0	0
34063*	34073	1	EL NIDO	ELSEGNO	.0003	.0036	.1340		1	988	0	0
34063*	34073	2	EL NIDO	ELSEGNO	.0003	.0036	.1340		1	988	0	0
34063	34116*	1	EL NIDO	LA FRESA	.0005	.0035	.0191		1	964	0	0
34063	34116*	2	EL NIDO	LA FRESA	.0005	.0035	.0191		1	964	0	0
34063	34123*	1	EL NIDO	LCIENEGA	.0010	.0116	.0263		1	643	0	0
34064*	34065	1	ELDORAD	ELDORADO	.0000	.1049	.0000		T 0	75	0	0
34065*	34066	1	ELDORADO	ELDORADO	.0000	.0232	.0000		T 1	500	0	0
34065*	34066	2	ELDORADO	ELDORADO	.0000	.0232	.0000		T 1	500	0	0
34065	34127*	N	ELDORADO	LUGO	.0494	.2692	.4728		1	327	0	0
34065	34127*	S	ELDORADO	LUGO	.0494	.2696	.4728		1	327	0	0
34065	34304*	1	ELDORADO	ELDORODO	.0000	.1049	.0000		F 1	75	0	0
34065	40037*	1	ELDORADO	MEAD	.0013	.0165	.0568		1	398	0	0
34065	40037*	2	ELDORADO	MEAD	.0013	.0168	.0578		1	398	0	0
34066	34128*	1	ELDORADO	LUGO	.0019	.0278	.0000		1	1386	0	0
34066*	34153	1	ELDORADO	MOHAVE	.0006	.0142	1.0429		1	1732	0	0
34066	34814*	0	ELDORADO	ELDRB 13	.0000	.0600	.0000		T 1	0	0	0
34066	34836*	0	ELDORADO	ELDRWB13	.0000	.0600	.0000		T 1	0	0	0
34067	34102*	1	ELLIS	HUNTGBCH	.0007	.0060	.0124		1	494	0	0
34067*	34102*	2	ELLIS	HUNTGBCH	.0007	.0060	.0124		1	494	0	0
34067	34102*	3	ELLIS	HUNTGBCH	.0007	.0060	.0124		1	494	0	0
34067	34102*	4	ELLIS	HUNTGBCH	.0007	.0060	.0124		1	494	0	0
34067	34111*	1	ELLIS	JOHANNA	.0004	.0066	.0260		1	1287	0	0
34067	34185*	1	ELLIS	SANTIAGO	.0009	.0151	.0610		1	1287	0	0
34067	34329*	1	ELLIS	HUNT5 G	.0000	.1095	.0000		F 1	0	0	0
34070*	34073	1	ELSEG3 G	ELSEGNO	.0000	.0381	.0000		T 1	0	0	0
34072*	34073	1	ELSEG4 G	ELSEGNO	.0000	.0419	.0000		T 1	0	0	0
34073	34226*	1	ELSEGNO	ELSEG1 G	.0000	.0565	.0000		F 1	0	0	0
34073	34227*	1	ELSEGNO	ELSEG2 G	.0000	.0530	.0000		F 1	0	0	0
34074*	34078	1	ETIWA3 G	ETIWANDA	.0000	.0422	.0000		T 1	0	0	0
34076*	34078	1	ETIWA4 G	ETIWANDA	.0000	.0414	.0000		T 1	0	0	0
34077*	34078	1	ETIWANDA	ETIWANDA	.0000	.0653	.0000		T 1	150	0	0
34077*	34078	2	ETIWANDA	ETIWANDA	.0000	.0653	.0000		T 1	150	0	0
34078	34148*	1	ETIWANDA	MIRLOMAC	.0006	.0070	.0266		1	988	0	0
34078	34166*	1	ETIWANDA	PADUA	.0013	.0158	.0597		1	988	0	0
34078	34184*	1	ETIWANDA	SANBRDNO	.0021	.0251	.0954		1	988	0	0
34078	34212*	1	ETIWANDA	VISTA	.0014	.0158	.0671		1	988	0	0
34078	34324*	1	ETIWANDA	ETIWA 5G	.0000	.0898	.0000		F 1	0	0	0
34080*	40044	1	GENE	PARKER	.0005	.0027	.0046		1	355	0	0
34082*	34178	1	GOLETA	S.CLARA	.0016	.0130	.0270		1	494	0	0
34082*	34178	2	GOLETA	S.CLARA	.0016	.0130	.0270		1	494	0	0
34083	34084*	1	GOODRICH	GOULD	.0007	.0091	.0344		1	988	0	0
34083	34118*	1	GOODRICH	LAGUBELL	.0012	.0147	.0555		1	988	0	0
34084*	34201	1	GOULD	SYLMAR S	.0016	.0285	.1108		1	1287	0	0
34085	34086*	1	HARBOR	HARBOR G	.0000	.1664	.0000		F 1	0	0	0
34085	34091*	1	HARBOR	HINSON	.0005	.0044	.0081		1	441	0	0
34085	34120*	1	HARBOR	LBEACH	.0002	.0015	.0027		1	472	0	0
34090*	34091	1	HINSON	HINSON	.0000	.0665	.0000		T 1	280	0	0
34090*	34091	2	HINSON	HINSON	.0000	.0647	.0000		T 1	280	0	0
34090*	34119	1	HINSON	LBEACH	.0011	.0112	.0000		1	0	0	0
34091*	34116	1	HINSON	LA FRESA	.0010	.0152	.0547		1	988	0	0
34091*	34126	1	HINSON	LITEHIPE	.0010	.0093	.0171		1	472	0	0
34091*	34218	1	HINSON	ARCO G	.0003	.0021	.0042		1	494	0	0
34091*	34218	2	HINSON	ARCO G	.0003	.0021	.0042		1	494	0	0
34092	34113*	1	HOLGATE	KRAMER	.0347	.0674	.0000		1	183	0	0
34092*	34149	1	HOLGATE	MOGEN	.0041	.0106	.0000		1	0	0	0
34093*	34102	1	HUNT1 G	HUNTGBCH	.0000	.0585	.0000		T 1	0	0	0
34098*	34102	1	HUNT2 G	HUNTGBCH	.0000	.0585	.0000		T 1	0	0	0
34101*	34102	1	HUNTGBCH	HUNTGBCH	.0000	.0647	.0000		T 1	150	0	0
34101*	34102	2	HUNTGBCH	HUNTGBCH	.0000	.0671	.0000		T 1	150	0	0
34103	34105*	1	INYO	INYO PS	.0000	.1014	.0000		F 1	56	0	0
34104	34105*	1	INYO	INYO PS	.0000	.2666	.0000		F 1	56	0	0
34104	34105*	2	INYO	INYO PS	.0000	.2666	.0000		F 1	56	0	0
34106	34113*	1	INYOKERN	KRAMER	.0346	.2863	.0340		1	0	0	0
34106	34113*	2	INYOKERN	KRAMER	.0817	.1512	.0340		1	0	0	0
34106	34142*	1	INYOKERN	MC GEN	.0931	.1739	.0000		1	0	0	0
34106	34187*	1	INYOKERN	SEARLES	.0976	.1810	.0000		1	0	0	0

FROM	TO	CKT	NAME	NAME	LINE R	LINE X	CHRGING	TP	ST	RATA	RATB	RATC
34106*	34844	1	INYO KERN	INYO K 23	.0000	.0600	.0000	F	1	280	0	0
34107*	34108	1	IRON MTN	IRON MTN	.0000	.3237	.0000	T	1	33	0	0
34109*	34110	1	J.HINDS	J.HINDS	.0000	.1212	.0000	T	1	90	0	0
34110*	34144	1	J.HINDS	MIRAGE	.0132	.0721	.1269		1	357	0	0
34111	34185*	1	JOHANNA	SANTIAGO	.0005	.0086	.0330		1	1287	0	0
34112*	34187	0	KER MGEE	SEARLES	.0000	.0978	.0000	T	0	0	0	0
34113*	34114	1	KRAMER	KRAMER	.0000	.0567	.0000	T	1	250	0	0
34113*	34114	2	KRAMER	KRAMER	.0000	.0580	.0000	T	1	280	0	0
34113	34195*	1	KRAMER	SUNGEN	.0033	.0149	.0022		1	183	0	0
34113	34202*	1	KRAMER	TORTILLA	.0340	.1840	.0000		1	0	0	0
34113*	34206	1	KRAMER	VICTOR	.0308	.1847	.0274		1	0	0	0
34113*	34206	2	KRAMER	VICTOR	.0308	.1847	.0274		1	0	0	0
34113	34806*	0	KRAMER	KRAMB 13	.0000	.0600	.0000	T	1	0	0	0
34114	34127*	1	KRAMER	LUGO	.0082	.0685	.1412		1	494	0	0
34114	34127*	2	KRAMER	LUGO	.0082	.0685	.1412		1	494	0	0
34114*	34129	1	KRAMER	LUZ	.0010	.0156	.0585		1	1287	0	0
34114*	34207	1	KRAMER	VICTOR	.0063	.0846	.2756		1	643	0	0
34114*	34844	1	KRAMER	INYO K 23	.0051	.0356	.0426		1	494	0	0
34116	34118*	1	LA FRESA	LAGUBELL	.0010	.0184	.0644		1	1287	0	0
34116*	34123	1	LA FRESA	LCIENEGA	.0014	.0163	.0369		1	643	0	0
34116	34175*	1	LA FRESA	REDONDO	.0003	.0050	.0174		1	1287	0	0
34116	34175*	2	LA FRESA	REDONDO	.0003	.0050	.0174		1	1287	0	0
34118	34176*	1	LAGUBELL	RIOHONDO	.0014	.0177	.0604		1	988	0	0
34118	34902*	0	LAGUBELL	LAGUNABL	.0000	.0600	.0000	T	1	0	0	0
34119	34216*	1	LBEACH	LBEACH1G	.0000	.2084	.0000	F	1	0	0	0
34119	34217*	1	LBEACH	LBEACH9G	.0000	.2077	.0000	F	1	0	0	0
34119	34228*	1	LBEACH	LBEACH2G	.0000	.2107	.0000	F	1	0	0	0
34119	34229*	1	LBEACH	LBEACH3G	.0000	.2077	.0000	F	1	0	0	0
34119	34230*	1	LBEACH	LBEACH4G	.0000	.2084	.0000	F	1	0	0	0
34119	34234*	1	LBEACH	LBEACH8G	.0000	.1312	.0000	F	1	0	0	0
34120	34126*	1	LBEACH	LITEHIPE	.0016	.0146	.0262		1	472	0	0
34120	34231*	1	LBEACH	LBEACH5G	.0000	.2112	.0000	F	1	0	0	0
34120	34232*	1	LBEACH	LBEACH6G	.0000	.2010	.0000	F	1	0	0	0
34120	34233*	1	LBEACH	LBEACH7G	.0000	.1996	.0000	F	1	0	0	0
34124	34191*	1	LEWIS	SERRANO	.0004	.0075	.0297		1	1287	0	0
34124	34191*	2	LEWIS	SERRANO	.0004	.0075	.0297		1	1287	0	0
34124	34208*	1	LEWIS	VILLA PK	.0004	.0048	.0156		1	988	0	0
34126	34143*	1	LITEHIPE	MESA CAL	.0010	.0135	.0455		1	988	0	0
34126*	34175	1	LITEHIPE	REDONDO	.0012	.0161	.0526		1	988	0	0
34127*	34128	1	LUGO	LUGO	.0000	.0126	.0000	T	1	1120	0	0
34127*	34128	2	LUGO	LUGO	.0000	.0126	.0000	T	1	1120	0	0
34127*	34207	1	LUGO	VICTOR	.0019	.0155	.0321		1	494	0	0
34127*	34207	2	LUGO	VICTOR	.0019	.0155	.0321		1	494	0	0
34128	34146*	2	LUGO	MIRALOMA	.0003	.0075	.5174		1	3118	0	0
34128	34146*	3	LUGO	MIRALOMA	.0004	.0075	.5536		1	3118	0	0
34128*	34153	1	LUGO	MOHAVE	.0019	.0309	.0000		1	1386	0	0
34128	34192*	1	LUGO	SERRANO	.0006	.0128	.9462		1	3118	0	0
34128	34210*	1	LUGO	VINCENT	.0004	.0113	.8292		1	2598	0	0
34128	34210*	2	LUGO	VINCENT	.0004	.0113	.8292		1	2598	0	0
34128	34808*	0	LUGO	LUGOB 13	.0000	.0600	.0000	T	1	0	0	0
34129	34242*	0	LUZ	LUZ89 EQ	.0000	.0500	.0000	F	0	0	0	0
34129	34314*	0	LUZ	LUZ8	.0000	.1000	.0000	F	1	0	0	0
34129	34315*	0	LUZ	LUZ9	.0000	.1000	.0000	F	1	0	0	0
34134	34156*	1	MAGUNDEN	OMAR	.0011	.0132	.0285		1	643	0	0
34134	34168*	3	MAGUNDEN	PASTORIA	.0051	.0443	.0854		1	494	535	0
34134*	34168	4	MAGUNDEN	PASTORIA	.0026	.0323	.1165		1	988	1136	0
34134*	34168	5	MAGUNDEN	PASTORIA	.0026	.0323	.1165		0	988	1136	0
34134*	34168	6	MAGUNDEN	PASTORIA	.0026	.0323	.1165		0	988	1136	0
34134	34168*	E	MAGUNDEN	PASTORIA	.0088	.0467	.0844		1	353	373	0
34134	34168*	W	MAGUNDEN	PASTORIA	.0088	.0467	.0844		1	353	373	0
34134	34193*	1	MAGUNDEN	SPRINGVL	.0089	.0770	.1461		1	494	535	0
34134	34193*	2	MAGUNDEN	SPRINGVL	.0147	.0801	.1406		1	357	376	0
34134	34205*	4	MAGUNDEN	VESTAL	.0030	.0377	.1360		1	988	1136	0
34134	34205*	E	MAGUNDEN	VESTAL	.0090	.0524	.1025		1	353	373	0
34134	34205*	W	MAGUNDEN	VESTAL	.0103	.0530	.1011		1	353	373	0
34134	34840*	2	MAGUNDEN	TEJON 23	.0069	.0749	.1137		1	494	0	0
34134	34900*	0	MAGUNDEN	MAGUENDN	.0000	.0600	.0000	T	1	0	0	0
34136	34139*	1	MANDALAY	MANDLY1G	.0000	.0589	.0000	F	1	0	0	0

FROM	TO	CKT	NAME	NAME	LINE R	LINE X	CHRGING	TP	ST	RATA	RATB	RATC
34136	34140*	1	MANDALAY	MANDLY2G	.0000	.0589	.0000	F	1	0	0	0
34136*	34178	1	MANDALAY	S.CLARA	.0016	.0130	.0270		1	494	0	0
34136*	34178	2	MANDALAY	S.CLARA	.0016	.0130	.0270		1	494	0	0
34141*	34142	0	MC GEN	MC GEN	.0000	.0850	.0000	T	1	0	0	0
34142*	34187	1	MC GEN	SEARLES	.0055	.0250	.0044		1	1833	0	0
34143	34175*	1	MESA CAL	REDONDO	.0023	.0287	.1007		1	988	0	0
34143	34176*	1	MESA CAL	RIOHONDO	.0009	.0121	.0407		1	988	0	0
34143*	34209	1	MESA CAL	VINCENT	.0031	.0391	.1407		1	988	0	0
34143	34214*	1	MESA CAL	WALNUT	.0012	.0138	.0600		1	988	0	0
34144	34818*	0	MIRAGE	MIRAB 13	.0000	.0600	.0000	T	1	0	0	0
34146	34147*	1	MIRALOMA	MIRLOMAA	.0000	.0111	.0000	F	1	1120	0	0
34146	34148*	2	MIRALOMA	MIRLOMAC	.0000	.0112	.0000	F	1	1000	0	0
34146	34148*	4	MIRALOMA	MIRLOMAC	.0000	.0121	.0000	F	1	1120	0	0
34146	34192*	1	MIRALOMA	SERRANO	.0002	.0046	.3234		1	3118	0	0
34147	34148*	1	MIRLOMAA	MIRLOMAC	.0000	.0003	.0000		1	0	0	0
34147	34212*	1	MIRLOMAA	VISTA	.0013	.0169	.0597		1	988	0	0
34147	34214*	1	MIRLOMAA	WALNUT	.0024	.0291	.1100		1	988	0	0
34148	34155*	1	MIRLOMAC	OLINDA	.0021	.0256	.1023		1	988	0	0
34148	34166*	1	MIRLOMAC	PADUA	.0018	.0226	.0855		1	988	0	0
34148	34212*	2	MIRLOMAC	VISTA	.0013	.0169	.0598		1	988	0	0
34149	34150*	1	MOGEN	MOGEN G	.0000	.0978	.0000	F	1	0	0	0
34149	34296*	1	MOGEN	BORAX I	.0000	.0978	.0000	F	1	0	0	0
34151*	34153	1	MOHAVICC	MOHAVE	.0000	.0197	.0000	T	1	0	0	0
34152*	34153	1	MOHAV2CC	MOHAVE	.0000	.0198	.0000	T	1	0	0	0
34154	34160*	1	MOORPARK	ORMOND	.0013	.0225	.0900		1	1287	0	0
34154	34160*	2	MOORPARK	ORMOND	.0013	.0225	.0900		1	1287	0	0
34154	34160*	3	MOORPARK	ORMOND	.0013	.0225	.0900		1	1287	0	0
34154	34160*	4	MOORPARK	ORMOND	.0013	.0225	.0900		1	1287	0	0
34154*	34167	1	MOORPARK	PARDEE	.0015	.0268	.1055		1	1287	0	0
34154*	34167	2	MOORPARK	PARDEE	.0015	.0267	.1056		1	1287	0	0
34154*	34167	3	MOORPARK	PARDEE	.0015	.0267	.1056		1	1287	0	0
34154*	34178	1	MOORPARK	S.CLARA	.0043	.0363	.0743		1	494	0	0
34154*	34178	2	MOORPARK	S.CLARA	.0043	.0363	.0743		1	494	0	0
34155	34214*	1	OLINDA	WALNUT	.0005	.0068	.0256		1	988	0	0
34155	34824*	0	OLINDA	OLINB 13	.0000	.0600	.0000	T	1	0	0	0
34156	34157*	0	OMAR	OMAR G	.0000	.0393	.0000	F	1	0	0	0
34156*	34197	1	OMAR	SYC CYN	.0001	.0018	.0038		1	353	0	0
34160	34163*	1	ORMOND	ORMOND1G	.0000	.0148	.0000	F	1	0	0	0
34160	34222*	1	ORMOND	ORMOND2G	.0000	.0146	.0000	F	1	0	0	0
34160	34904*	0	ORMOND	ORMOND	.0000	.0600	.0000	T	1	0	0	0
34165*	34243	1	OXBOW G	OXBOW G	.0000	.1514	.0000	T	1	0	0	0
34167	34168*	3	PARDEE	PASTORIA	.0066	.0570	.1096		1	494	535	0
34167	34168*	4	PARDEE	PASTORIA	.0034	.0431	.1554		1	988	1136	0
34167	34168*	5	PARDEE	PASTORIA	.0034	.0431	.1554		0	988	1136	0
34167	34168*	W	PARDEE	PASTORIA	.0110	.0601	.1056		1	353	373	0
34167	34178*	1	PARDEE	S.CLARA	.0068	.0570	.1176		1	494	0	0
34167	34178*	2	PARDEE	S.CLARA	.0068	.0570	.1176		0	494	0	0
34167	34201*	1	PARDEE	SYLMAR S	.0007	.0119	.0467		1	1287	0	0
34167	34201*	2	PARDEE	SYLMAR S	.0007	.0119	.0467		1	1287	0	0
34167	34209*	1	PARDEE	VINCENT	.0029	.0365	.1266		1	988	0	0
34167	34209*	2	PARDEE	VINCENT	.0014	.0340	.1125		0	988	0	0
34168	34802*	0	PASTORIA	PASTB 13	.0000	.0600	.0000	T	1	0	0	0
34169*	34205	1	RECTOR	VESTAL	.0097	.0496	.0939		1	353	373	0
34169	34205*	2	RECTOR	VESTAL	.0097	.0496	.0939		1	353	373	0
34169*	34205	4	RECTOR	VESTAL	.0028	.0356	.1282		1	988	1136	0
34170*	34175	1	REDONS G	REDONDO	.0000	.0565	.0000	T	1	0	0	0
34175	34235*	1	REDONDO	REDON6 G	.0000	.0524	.0000	F	1	0	0	0
34175	34244*	1	REDONDO	REDON7 G	.0000	.0268	.0000	F	1	0	0	0
34175	34245*	1	REDONDO	REDON8 G	.0000	.0268	.0000	F	1	0	0	0
34176*	34209	1	RIOHONDO	VINCENT	.0028	.0354	.1239		1	988	0	0
34176	34209*	2	RIOHONDO	VINCENT	.0018	.0359	.1203		1	988	0	0
34178	34209*	2	S.CLARA	VINCENT	.0082	.0910	.2301		1	494	568	0
34178	34333*	1	S.CLARA	MANDLY 3	.0000	.1206	.0000	F	1	0	0	0
34180*	34182	1	S.ONOFR2	S.ONOFRE	.0000	.0097	.0000	T	1	0	0	0
34181*	34182	1	S.ONOFR3	S.ONOFRE	.0000	.0097	.0000	T	1	0	0	0
34182	34185*	1	S.ONOFRE	SANTIAGO	.0016	.0295	.1159		1	1287	0	0
34182	34185*	2	S.ONOFRE	SANTIAGO	.0016	.0295	.1159		1	1287	0	0
34182	34191*	1	S.ONOFRE	SERRANO	.0023	.0413	.1625		1	1287	0	0

FROM	TO	CKT	NAME	LINE R	LINE X	CHRGING	TP	ST	RATA	RATB	RATC
34182*	34223	1	S.ONOFRE VIEJO	.0013	.0242	.0950		1	1287	0	0
34182*	34901	1	S.ONOFRE 3XR2H	.0008	.0175	.0000	F	0	0	0	0
34184*	34212	2	SANBRDNO VISTA	.0007	.0088	.0319		1	988	0	0
34185	34826*	0	SANTIAGO SANTB 13	.0000	.0600	.0000	T	1	0	0	0
34187	34312*	0	SEARLES KERRGEN	.0000	.0978	.0000	F	1	0	0	0
34187	34313*	0	SEARLES KERRMGEE	.0000	.0978	.0000	F	1	0	0	0
34188*	34209	1	SEAWEST VINCENT	.0076	.0638	.0102		1	494	0	0
34190*	34202	1	SEGS 2 G TORTILLA	.0096	.0536	.0000		0	0	0	0
34191*	34192	1	SERRANO SERRANO	.0000	.0115	.0000	T	1	1120	0	0
34191*	34192	2	SERRANO SERRANO	.0000	.0115	.0000	T	1	1120	0	0
34191	34208*	1	SERRANO VILLA PK	.0002	.0033	.0130		1	1287	0	0
34191	34208*	2	SERRANO VILLA PK	.0002	.0033	.0130		1	1287	0	0
34192	34204*	1	SERRANO VALLEYS	.0004	.0093	.6856		1	3421	0	0
34195	34196*	0	SUNGEN SUNGEN G	.0000	.0587	.0000	F	0	0	0	0
34195	34348*	0	SUNGEN SUNGEN3G	.0000	.3325	.0000	F	1	0	0	0
34195	34349*	0	SUNGEN SUNGEN4G	.0000	.3325	.0000	F	1	0	0	0
34195	34350*	0	SUNGEN SUNGEN5G	.0000	.3325	.0000	F	1	0	0	0
34195	34351*	0	SUNGEN SUNGEN6G	.0000	.3325	.0000	F	1	0	0	0
34195	34352*	0	SUNGEN SUNGEN7G	.0000	.3325	.0000	F	1	0	0	0
34197	34198*	1	SYC CYN SYC CYNG	.0000	.0402	.0000	F	1	0	0	0
34202	34343*	1	TORTILLA SEGS	.0096	.0536	.0000		1	0	0	0
34204	34830*	0	VALLEYS VALLB 13	.0000	.0600	.0000	T	1	0	0	0
34206*	34207	1	VICTOR VICTOR	.0000	.0573	.0000	T	1	280	0	0
34206*	34207	2	VICTOR VICTOR	.0000	.0573	.0000	T	1	280	0	0
34206	34812*	0	VICTOR VICTLB13	.0000	.0600	.0000	T	1	0	0	0
34207	34810*	0	VICTOR VICTB 13	.0000	.0600	.0000	T	1	0	0	0
34209*	34210	1	VINCENT VINCENT	.0000	.0120	.0000	T	1	1000	0	0
34209*	34210	2	VINCENT VINCENT	.0000	.0118	.0000	T	1	1000	0	0
34209*	34210	3	VINCENT VINCENT	.0000	.0122	.0000	T	1	1120	0	0
34209	34832*	0	VINCENT VINCB 13	.0000	.0600	.0000	T	1	0	0	0
34210	35991*	3	VINCENT VINCEN&7	.0000	-.0084	.0000		1	1819	0	0
34210	35994*	2	VINCENT VINCEN&4	.0000	-.0093	.0000		1	1848	0	0
34210	35996*	1	VINCENT VINCEN&2	.0000	-.0093	.0000		1	1848	0	0
34212	34834*	0	VISTA VISTB 13	.0000	.0600	.0000	T	1	0	0	0
34292*	34295	1	BLM E1G BLM EAST	.0000	.3325	.0000	T	1	0	0	0
34293*	34295	1	BLM E2G BLM EAST	.0000	.3325	.0000	T	1	0	0	0
34294*	34295	1	BLM W1G BLM EAST	.0000	.2933	.0000	T	1	0	0	0
34295*	34317	1	BLM EAST NAVY II	.0001	.0014	.0000		1	494	0	0
34317	34318*	1	NAVY II NAVYII1G	.0000	.3325	.0000	F	1	0	0	0
34317	34319*	1	NAVY II NAVYII2G	.0000	.3325	.0000	F	1	0	0	0
34317	34320*	1	NAVY II NAVYII3G	.0000	.3325	.0000	F	1	0	0	0
34343	34345*	0	SEGS SEGS 2G	.0000	.3325	.0000	F	1	0	0	0
34838*	34840	0	TEJOB 13 TEJON 23	.0000	.0600	.0000	F	1	0	0	0
34842*	34844	1	CONTR 23 INYOK 23	.0212	.2860	.9310		1	643	0	0
34901	34902*	1	3XR2H LAGUNABL	.0184	.3821	.0000	T	0	0	0	0
34901	34903*	1	3XR2H 3XR2X	.0229	.4770	.0000	T	0	0	0	0
34903*	34904	1	3XR2X ORMOND	.0310	.0470	.0000		0	0	0	0
35991	35992*	3	VINCEN&7 VINCEN&6	.0006	.0125	.9250		1	3118	0	0
35992	35993*	3	VINCEN&6 VINCEN&5	.0005	.0127	.9109		1	3118	0	0
35994	35995*	2	VINCEN&4 VINCEN&3	.0012	.0266	1.9888		1	3118	0	0
35996	35997*	1	VINCEN&2 VINCEN&1	.0012	.0266	1.9870		1	3118	0	0

BUS#	NAME	BSKV	COD	MCNS	PGEN	QGEN	QMAX	QMIN	VSCHED	VACT.	REMO	PCT Q
1154	MAGUND1	13.8	-2	1	.0	.0	.0	.0	1.0000	1.0067		
1155	MAGUND2	13.8	-2	1	.0	.0	.0	.0	1.0000	1.0067		
1156	MAGUND3	13.8	-2	1	.0	.0	.0	.0	1.0000	1.0067		
1157	MANDLY	316.4	-2	1	.0	.0	.0	.0	1.0000	1.0076		
1158	PASTOR1	13.8	2	1	100.0	13.1	42.0	-70.0	1.0000	1.0000		
1159	PASTOR2	13.8	2	1	100.0	13.1	42.0	-70.0	1.0000	1.0000		
1160	PASTOR3	13.8	2	1	112.0	15.9	42.0	-70.0	1.0000	1.0000		
1161	PASTOR4	13.8	2	1	125.0	19.3	45.0	-70.0	1.0000	1.0000		
34004	ALAMT3	G18.0	2	3	210.0	92.0	160.0	-100.0	1.0350	1.0350		
34005	ALAMT4	G18.0	2	3	210.0	92.0	160.0	-100.0	1.0350	1.0350		
34006	ALAMT5	G20.0	2	3	92.0	130.4	240.0	-150.0	1.0350	1.0350		
34008	ALAMT6	G20.0	2	3	370.0	107.7	240.0	-150.0	1.0250	1.0250		
34012	ANTELOPE	230	-2	1	50.0	.0	.0	.0	1.0200	.9896		
34013	ARCO	G13.8	2	1	396.0	38.8	200.0	-100.0	1.0000	1.0000		
34024	BIGCREEK	13.8	2	1	900.0	129.4	300.0	-100.0	1.0500	1.0500		
34026	BIOGEN G	115	-2	1	17.0	-3.0	5.0	-3.0	1.0000	1.0438		
34027	BLM EQG	13.8	4	1	166.0	13.5	80.0	-40.0	1.0000	1.0000		
34031	BSPHYD262	.20	2	1	14.0	.8	7.0	-3.0	1.0270	1.0270		
34032	BSPHYD342	.20	2	1	13.0	2.5	7.0	-3.0	1.0270	1.0270		
34035	CAL GENG	13.8	4	1	69.0	-.8	35.0	-17.0	1.0000	1.0000		
34037	CENTER S	230	-2	1	27.0	.0	.0	.0	1.0200	.9879		
34039	CHINO	230	-2	1	117.0	.0	.0	.0	1.0200	.9683		
34045	COLWT3GT	13.8	2	1	130.0	41.3	82.0	-60.0	1.0500	1.0500		
34046	COLWT3ST	13.8	2	1	106.0	31.0	58.0	-41.0	1.0500	1.0500		
34052	CSA DIAB	13.8	2	1	29.0	-1.9	15.0	-8.0	1.0000	1.0000		
34054	DELAMO	230	-2	1	31.0	.0	.0	.0	1.0200	.9905		
34055	DEVERS	230	-2	1	33.0	.0	.0	.0	1.0200	.9793		
34057	EAGLEMTN	6.90	-2	1	-57.6	1.0	1.0	.0	1.0000	.9885		
34063	EL NIDO	230	-2	1	66.0	.0	.0	.0	1.0200	1.0024		
34070	ELSEG3	G18.0	2	3	332.0	60.4	145.0	-100.0	1.0200	1.0200		
34072	ELSEG4	G18.0	2	3	332.0	58.9	145.0	-100.0	1.0200	1.0200		
34074	ETIWA3	G18.0	-2	3	317.0	140.0	140.0	-100.0	1.0270	1.0253		
34076	ETIWA4	G18.0	2	3	317.0	138.6	140.0	-100.0	1.0240	1.0240		
34078	ETIWANDA	230	-2	1	18.0	.0	.0	.0	1.0200	.9764		
34086	HARBOR	G13.8	2	1	89.0	14.4	40.0	-20.0	1.0100	1.0100		
34091	HINSON	230	-2	1	52.0	.0	.0	.0	1.0200	.9973		
34093	HUNT1	G13.8	2	3	213.0	103.4	130.0	-65.0	1.0430	1.0430		
34098	HUNT2	G13.8	2	3	213.0	107.1	130.0	-65.0	1.0450	1.0450		
34107	IRON MTN	6.90	-2	1	-17.0	1.0	1.0	.0	1.0000	.9966		
34109	J.HINDS	6.90	-2	1	-57.6	1.0	1.0	.0	1.0000	.9868		
34112	KER MGEE	13.8	4	1	54.0	-2.7	20.0	-10.0	1.0200	1.0200		
34116	LA FRESA	230	-2	1	9.0	.0	.0	.0	1.0200	1.0008		
34118	LAGUBELL	230	-2	1	115.0	.0	.0	.0	1.0200	.9918		
34126	LITEHIPE	230	-2	1	42.0	.0	.0	.0	1.0200	.9948		
34139	MANDLY1G	13.8	2	3	205.0	41.4	130.0	-67.5	1.0100	1.0100		
34140	MANDLY2G	13.8	2	3	205.0	41.4	130.0	-67.5	1.0100	1.0100		
34141	MC GEN	13.8	2	1	107.0	-10.6	75.0	-35.0	1.0000	1.0000		
34150	MOGEN	G13.8	2	1	101.0	1.5	27.0	-13.0	1.0000	1.0000		
34151	MOHAV1CC	22.0	2	3	782.0	243.3	350.0	-150.0	1.0500	1.0500		
34152	MOHAV2CC	22.0	2	3	782.0	242.9	350.0	-150.0	1.0500	1.0500		
34154	MOORPARK	230	-2	1	25.0	.0	.0	.0	1.0200	.9906		
34157	OMAR	G13.8	2	1	295.0	54.8	150.0	-75.0	1.0000	1.0000		
34163	ORMOND1G	26.0	2	1	240.0	38.0	400.0	-240.0	1.0010	1.0010		
34165	OXBOW	G13.8	2	1	52.0	-2.5	27.0	-14.0	1.0000	1.0000		
34166	PADUA	230	-2	1	11.0	.0	.0	.0	1.0200	.9652		
34167	PARDEE	230	-2	1	171.0	.0	.0	.0	1.0200	.9898		
34170	REDON5	G18.0	2	1	170.0	39.4	85.0	-42.0	1.0220	1.0220		
34178	S.CLARA	230	-2	1	124.0	.0	.0	.0	1.0200	.9879		
34180	S.ONOFR2	22.0	2	1	1070.0	236.8	550.0	-410.0	1.0000	1.0000	34182	100.0
34181	S.ONOFR3	22.0	2	1	1080.0	236.8	550.0	-410.0	1.0000	1.0000	34182	100.0
34185	SANTIAGO	230	-2	1	15.0	.0	.0	.0	1.0200	.9914		
34188	SEAWEST	230	2	1	38.0	11.2	190.0	-95.0	1.0000	1.0000		
34189	SEGS 1	G13.8	4	1	19.0	.7	10.0	-5.0	1.0000	1.0000		
34190	SEGS 2	G 115	-2	1	29.0	15.0	15.0	-8.0	1.0000	.9990		
34196	SUNGEN	G13.8	4	1	173.0	-11.5	87.0	-40.0	1.0000	1.0000		
34198	SYC CYNG	13.8	2	1	295.0	52.7	150.0	-75.0	1.0000	1.0000		
34204	VALLEYSC	500	-2	1	5.0	.0	.0	.0	1.0200	.9922		
34205	VESTAL	230	-2	1	63.0	.0	.0	.0	1.0200	1.0076		

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 PLANTM.SAV MODIFIED, INC. SDG&E CHNGS & NOL & SCE BRPU PLANT DATA

BUS#	NAME	BSKV	COD	MCNS	PGEN	OGEN	QMAX	QMIN	VSCHED	VACT.	REMOT	PCT Q
34212	VISTA	230	-2	1	126.0	.0	.0	.0	1.0200	.9689		
34214	WALNUT	230	-2	1	47.0	.0	.0	.0	1.0200	.9752		
34216	LBEACH1G13.8	-2	1	.0	.0	.0	.0	.0	1.0500	1.0135		
34217	LBEACH9G13.8	2	1	62.0	22.2	30.0	-15.0	1.0500	1.0500			
34219	COLWT4GT13.8	2	1	130.0	41.3	82.0	-60.0	1.0500	1.0500			
34220	COLWT4ST13.8	2	1	106.0	31.0	58.0	-41.0	1.0500	1.0500			
34222	ORMOND2G26.0	2	1	340.0	42.5	400.0	-240.0	1.0010	1.0010			
34224	ALAMT1 G18.0	-2	1	.0	.0	.0	.0	1.0350	1.0015			
34225	ALAMT2 G18.0	-2	1	.0	.0	.0	.0	1.0230	1.0015			
34226	ELSEG1 G18.0	2	1	169.0	34.8	75.0	-50.0	1.0200	1.0200			
34227	ELSEG2 G18.0	2	1	177.0	36.8	75.0	-50.0	1.0200	1.0200			
34228	LBEACH2G13.8	-2	1	.0	.0	.0	.0	1.0500	1.0135			
34229	LBEACH3G13.8	-2	1	.0	.0	.0	.0	1.0500	1.0135			
34230	LBEACH4G13.8	-2	1	.0	.0	.0	.0	1.0500	1.0135			
34231	LBEACH5G13.8	-2	1	.0	.0	.0	.0	1.0390	.9970			
34232	LBEACH6G13.8	-2	1	.0	.0	.0	.0	1.0370	.9970			
34233	LBEACH7G13.8	-2	1	.0	.0	.0	.0	1.0360	.9970			
34234	LBEACH8G13.8	2	1	81.5	33.3	48.0	-34.0	1.0500	1.0500			
34235	REDON6 G18.0	2	1	140.0	11.6	75.0	-40.0	1.0080	1.0080			
34242	LUZ89 EQ13.8	4	1	158.0	23.9	80.0	-40.0	1.0000	1.0000			
34244	REDON7 G20.0	2	3	270.0	126.8	240.0	-150.0	1.0350	1.0350			
34245	REDON8 G20.0	2	3	270.0	126.8	240.0	-150.0	1.0350	1.0350			
34292	BLM E1G13.8	2	1	29.7	.9	15.0	-7.5	1.0000	1.0000			
34293	BLM E2G13.8	2	1	29.6	.9	15.0	-7.5	1.0000	1.0000			
34294	BLM W1G13.8	2	1	23.7	.2	12.0	-6.0	1.0000	1.0000			
34296	BORAX I 13.8	2	1	46.0	-2.5	22.0	-11.0	1.0000	1.0000			
34297	CALGEN1G13.8	2	1	29.6	2.0	15.0	-7.5	1.0000	1.0000			
34298	CALGEN2G13.8	2	1	23.7	1.5	12.0	-6.0	1.0000	1.0000			
34299	CALGEN3G13.8	2	1	23.7	1.5	12.0	-6.0	1.0000	1.0000			
34312	KERRGEN 13.8	2	1	54.0	-11.5	27.0	-14.0	1.0000	1.0000			
34313	KERRMGEEL3.8	-2	1	54.0	-3.0	7.0	-3.0	1.0000	1.0083			
34314	LUZ8 13.8	2	1	79.0	13.5	40.0	-20.0	1.0000	1.0000			
34315	LUZ9 13.8	2	1	79.0	13.5	40.0	-20.0	1.0000	1.0000			
34317	NAVY II 230	1	1	.0	.0	.0	.0	1.0000	1.0017			
34318	NAVYIII1G13.8	2	1	29.7	.9	12.0	-6.0	1.0000	1.0000			
34319	NAVYII2G13.8	2	1	29.7	.9	12.0	-6.0	1.0000	1.0000			
34320	NAVYII3G13.8	2	1	29.6	.9	12.0	-6.0	1.0000	1.0000			
34324	ETIWA 5G16.4	-2	1	.0	.0	.0	.0	1.0000	.9959			
34329	HUNT5 G16.4	-2	1	.0	.0	.0	.0	1.0000	1.0133			
34333	MANDLY 316.4	-2	1	.0	.0	.0	.0	1.0000	1.0076			
34344	SEGS 1G13.8	2	1	19.0	1.0	10.0	-5.0	1.0000	1.0000			
34345	SEGS 2G13.8	2	1	29.0	1.9	10.0	-5.0	1.0000	1.0000			
34348	SUNGEN3G13.8	2	1	30.0	5.4	17.0	-8.0	1.0000	1.0000			
34349	SUNGEN4G13.8	2	1	30.0	5.4	17.0	-8.0	1.0000	1.0000			
34350	SUNGEN5G13.8	2	1	30.0	5.4	17.0	-8.0	1.0000	1.0000			
34351	SUNGEN6G13.8	2	1	30.0	5.4	17.0	-8.0	1.0000	1.0000			
34352	SUNGEN7G13.8	2	1	30.0	5.4	17.0	-8.0	1.0000	1.0000			
34800	BAILB 1313.8	2	1	10.0	12.7	25.0	-12.0	1.0000	1.0000			
34802	PASTB 1313.8	2	1	372.0	50.7	99.0	-63.0	1.0000	1.0000			
34804	CONTB 1313.8	2	1	34.0	-3.6	17.0	-9.0	1.0000	1.0000			
34806	KRAMB 1313.8	2	1	14.0	32.2	35.0	-17.0	1.0000	1.0000			
34808	LUGOB 1313.8	-2	1	5.0	-6.0	12.0	-6.0	1.0000	1.0219			
34810	VICTB 1313.8	-2	1	10.0	25.0	25.0	-12.0	1.0000	.9711			
34812	VICTLB1313.8	-2	1	4.0	10.0	10.0	-5.0	1.0000	.9529			
34814	ELDRB 1313.8	-2	1	5.0	-12.0	25.0	-12.0	1.0000	1.0227			
34816	DEVEB 1313.8	2	1	36.0	34.9	90.0	-45.0	1.0000	1.0000			
34818	MIRAB 1313.8	2	1	68.0	23.2	34.0	-17.0	1.0000	1.0000			
34820	ANTEB 1313.8	2	1	22.0	17.5	56.0	-28.0	1.0000	1.0000			
34822	CHINB 1313.8	-2	1	3.0	1.0	1.0	-1.0	1.0000	.9689			
34824	OLINB 1313.8	-2	1	7.0	3.0	3.0	-1.0	1.0000	.9800			
34826	SANTB 1313.8	-2	1	7.0	3.0	3.0	-1.0	1.0000	.9932			
34828	SYLMB 1313.8	2	1	15.0	-8.1	37.0	-19.0	1.0000	1.0000			
34830	VALLB 1313.8	-2	1	4.0	9.0	9.0	-5.0	1.0000	.9976			
34832	VINCB 1313.8	2	1	20.0	16.9	50.0	-25.0	1.0000	1.0000			
34834	VISTB 1313.8	-2	1	7.0	17.0	17.0	-9.0	1.0000	.9793			
34836	ELDRWB1313.8	-2	1	15.0	-19.0	37.0	-19.0	1.0000	1.0185			
34838	TEJOB 1313.8	2	1	30.0	6.8	75.0	-38.0	1.0000	1.0000			
34996	SANTISVC 230	4	1	.0	.0	300.0	.0	.9620	.9914	34185	100.0	

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BUS#	NAME	BSKV	COD	MCNS	PGEN	QGEN	QMAX	QMIN	VSCHED	VACT.	REMOT	PCT	Q
34997	SONGSSVC	230	4	1	.0	.0	300.0	.0	.9932	1.0000	34182	100.0	
34998	DEVER SVC	230	4	1	.0	.0	300.0	.0	.9902	.9793	34055	100.0	

FROM	TO	CKT	NAME	NAME	LINE R	LINE X	CHRGING	TP	ST	RATA	RATB	RATC
1154*	34134	1	MAGUND1	MAGUNDEN	.0000	.2112	.0000	T	1	0	0	0
1155*	34134	1	MAGUND2	MAGUNDEN	.0000	.2112	.0000	T	1	0	0	0
1156*	34134	1	MAGUND3	MAGUNDEN	.0000	.2112	.0000	T	1	0	0	0
1157*	34178	1	MANDLY 3	S.CLARA	.0000	.1206	.0000	T	1	0	0	0
1158*	34168	1	PASTOR1	PASTORIA	.0000	.2112	.0000	T	1	0	0	0
1159*	34168	1	PASTOR2	PASTORIA	.0000	.2112	.0000	T	1	0	0	0
1160*	34168	1	PASTOR3	PASTORIA	.0000	.2112	.0000	T	1	0	0	0
1161*	34168	1	PASTOR4	PASTORIA	.0000	.2112	.0000	T	1	0	0	0
2166*	34056	1	PALOVRDE	DEVERS	.0026	.0297	.0000		1	1645	0	0
3977	34066*	1	MOENKO&4	ELDORADO	.0000	-.0180	.0000		1	0	0	0
8016	34055*	2	COACHELV	DEVERS	.0064	.0493	.1080		1	462	0	0
8016	34144*	1	COACHELV	MIRAGE	.0036	.0283	.0569		1	462	0	0
10048	34066*	1	MCCULLGH	ELDORADO	.0000	.0002	.0000	Z	1	0	0	0
10055*	34104	1	OWENS	INYO	.0001	.0010	.0000		1	222	0	0
10094*	34201	1	SYLMARLA	SYLMAR S	.0000	.0012	.0000	F	1	0	0	0
10094	34828*	0	SYLMARLA	SYLMB 13	.0000	.0600	.0000	T	1	0	0	0
10105*	34128	1	VICTORVL	LUGO	.0002	.0041	.2962		1	0	0	0
16045	34153*	0	LAUGHLIN	MOHAVE	.0000	.0003	.0000		1	0	0	0
26242*	35993	3	MIDWAY	VINCEN&5	.0000	-.0093	.0000		1	1848	0	0
26242*	35995	2	MIDWAY	VINCEN&3	.0000	-.0094	.0000		1	1848	0	0
26242*	35997	1	MIDWAY	VINCEN&1	.0000	-.0093	.0000		1	1848	0	0
30020	34182*	1	ENCINA	S.ONOFRE	.0044	.0349	.0764		1	456	0	0
30053	34182*	1	MISSION	S.ONOFRE	.0097	.0754	.1578		1	456	0	0
30092	34182*	1	TALEGA	S.ONOFRE	.0012	.0097	.0211		1	518	0	0
30092	34182*	2	TALEGA	S.ONOFRE	.0012	.0097	.0211		1	518	0	0
30199	34182*	1	SANLUSRY	S.ONOFRE	.0012	.0123	.0478		1	797	0	0
30996	34204*	1	RAINBOW	VALLEYS	.0002	.0061	.4413		0	1040	0	0
32125*	34047	1	NEVBD501	CONTROL	.6931	1.0370	.0071		1	0	0	0
32125*	34215	1	NEVBD501	CONTROLX	.6931	1.0370	.0071		0	0	0	0
32126*	34047	1	NEVBD502	CONTROL	.7306	1.0600	.0087		1	0	0	0
32126*	34215	1	NEVBD502	CONTROLX	.7306	1.0600	.0087		0	0	0	0
34004*	34011	1	ALAMT3 G	ALMITOSW	.0000	.0418	.0000	T	1	0	0	0
34005*	34011	1	ALAMT4 G	ALMITOSW	.0000	.0418	.0000	T	1	0	0	0
34006*	34009	1	ALAMT5 G	ALMITOSE	.0000	.0268	.0000	T	1	0	0	0
34008*	34009	1	ALAMT6 G	ALMITOSE	.0000	.0268	.0000	T	1	0	0	0
34009*	34011	1	ALMITOSE	ALMITOSW	.0000	.0005	.0000		1	0	0	0
34009	34023*	1	ALMITOSE	BARRE	.0013	.0132	.0787		1	988	0	0
34009	34037*	1	ALMITOSE	CENTER S	.0010	.0163	.0600		1	988	0	0
34010*	34011	1	ALMITOSW	ALMITOSW	.0000	.1159	.0000	T	1	90	0	0
34010*	34011	2	ALMITOSW	ALMITOSW	.0000	.1159	.0000	T	1	90	0	0
34011	34023*	2	ALMITOSW	BARRE	.0010	.0163	.0600		1	988	0	0
34011	34126*	1	ALMITOSW	LITEHIPE	.0010	.0133	.0448		1	988	0	0
34011	34224*	1	ALMITOSW	ALAMT1 G	.0000	.0536	.0000	F	1	0	0	0
34011	34225*	1	ALMITOSW	ALAMT2 G	.0000	.0536	.0000	F	1	0	0	0
34011	34317*	1	ALMITOSW	NAVY II	.0000	.1135	.0000	F	0	0	0	0
34012*	34134	E	ANTELOPE	MAGUNDEN	.0173	.0923	.1600		1	357	376	0
34012*	34134	W	ANTELOPE	MAGUNDEN	.0102	.0883	.1677		0	494	0	0
34012*	34143	1	ANTELOPE	MESA CAL	.0148	.0920	.1643		1	357	0	0
34012*	34209	1	ANTELOPE	VINCENT	.0030	.0263	.0499		1	494	0	0
34012	34820*	0	ANTELOPE	ANTEB 13	.0000	.0600	.0000	T	1	0	0	0
34012	34840*	2	ANTELOPE	TEJON 23	.0033	.0135	.0540		1	494	535	0
34013*	34218	0	ARCO G	ARCO G	.0000	.0413	.0000	T	1	0	0	0
34022*	34167	1	BAILEY	PARDEE	.0076	.0410	.0713		1	353	373	0
34022	34168*	1	BAILEY	PASTORIA	.0036	.0185	.0351		1	353	373	0
34022	34800*	0	BAILEY	BAILB 13	.0000	.0600	.0000	T	1	0	0	0
34023	34067*	0	BARRE	ELLIS	.0011	.0091	.0755		1	988	0	0
34023	34124*	1	BARRE	LEWIS	.0004	.0057	.0185		1	988	0	0
34023	34208*	1	BARRE	VILLA PK	.0008	.0101	.0330		1	988	0	0
34024*	34025	1	BIGCREEK	BIGCREEK	.0000	.0155	.0000	T	1	0	0	0
34025	34061*	1	BIGCREEK	EASTWOOD	.0014	.0075	.0300		1	0	0	0
34025	34169*	1	BIGCREEK	RECTOR	.0189	.0960	.1818		1	353	373	0
34025	34169*	2	BIGCREEK	RECTOR	.0218	.1112	.2108		1	353	373	0
34025*	34193	1	BIGCREEK	SPRINGVL	.0230	.1256	.2206		1	494	535	0
34025*	34193	2	BIGCREEK	SPRINGVL	.0132	.1143	.2170		1	357	376	0
34026	34041*	1	BIOGEN G	COLWATER	.0443	.6797	.0000		1	0	0	0
34026	34064*	1	BIOGEN G	ELDORAD	.2400	.3345	.0000		0	0	0	0
34026	34304*	1	BIOGEN G	ELDORODO	.2400	.3345	.0000		1	0	0	0
34027*	34028	1	BLM EQG	BLM WEST	.0000	.0689	.0000	T	0	0	0	0

FROM	TO	CKT	NAME	LINE R	LINE X	CHRGING	TP	ST	RATA	RATB	RATC
34028	34114*	1	BLM WEST KRAMER	.0100	.1019	.2586		0	494	0	0
34028*	34295	1	BLM WEST BLM EAST	.0001	.0016	.0000		1	494	0	0
34028	34844*	1	BLM WEST INYOK 23	.0049	.0663	.2586		1	643	0	0
34029	34058*	1	BLYTHESC EAGLEMTN	.0499	.1890	.0834		1	187	0	0
34029	40003*	1	BLYTHESC BLYTHE	.0000	.0005	.0000		1	0	0	0
34031*	34047	1	BSPHYD26 CONTROL	.0000	.6000	.0000	T	1	0	0	0
34032*	34048	1	BSPHYD34 CONTROL	.0000	.5100	.0000	T	1	0	0	0
34034	34035*	1	CAL GEN CAL GENG	.0000	.1467	.0000	F	0	0	0	0
34034	34106*	1	CAL GEN INYOKERN	.0392	.1437	.0000		1	169	0	0
34034	34297*	1	CAL GEN CALGEN1G	.0000	.2857	.0000	F	1	0	0	0
34034	34298*	1	CAL GEN CALGEN2G	.0000	.2933	.0000	F	1	0	0	0
34034	34299*	1	CAL GEN CALGEN3G	.0000	.2933	.0000	F	1	0	0	0
34036	34080*	1	CAMINO GENE	.0133	.0910	.1661		1	359	0	0
34036*	34108	1	CAMINO IRON MTN	.0120	.0732	.1312		1	335	0	0
34036	40037*	E	CAMINO MEAD	.0173	.1157	.2120		1	319	0	0
34036	40037*	W	CAMINO MEAD	.0173	.1157	.2120		1	319	0	0
34037*	34054	1	CENTER S DELAMO	.0005	.0069	.0223		1	988	0	0
34037	34143*	0	CENTER S MESA CAL	.0011	.0135	.0472		1	988	0	0
34037	34155*	1	CENTER S OLINDA	.0016	.0203	.0726		1	988	0	0
34039	34147*	1	CHINO MIRLOMAA	.0010	.0055	.0392		1	713	0	0
34039	34147*	2	CHINO MIRLOMAA	.0006	.0070	.0264		1	988	0	0
34039	34148*	3	CHINO MIRLOMAC	.0006	.0070	.0265		1	988	0	0
34039	34182*	1	CHINO S.ONOFRE	.0027	.0491	.1932		0	1287	0	0
34039	34191*	1	CHINO SERRANO	.0014	.0254	.0999		1	1287	0	0
34039	34223*	1	CHINO VIEJO	.0014	.0250	.0982		1	1287	0	0
34039	34822*	0	CHINO CHINB 13	.0000	.0600	.0000	T	1	0	0	0
34041*	34113	1	COLWATER KRAMER	.0400	.2170	.0000		1	0	0	0
34041	34189*	0	COLWATER SEGS 1 G	.0000	.3325	.0000	F	0	0	0	0
34041*	34190	1	COLWATER SEGS 2 G	.0004	.0023	.0000		1	0	0	0
34041*	34343	1	COLWATER SEGS	.0004	.0023	.0000		1	0	0	0
34041	34344*	1	COLWATER SEGS 1G	.0000	.3325	.0000	F	1	0	0	0
34042	34045*	0	COLWATER COLWT3GT	.0000	.0632	.0000	F	1	0	0	0
34042	34046*	0	COLWATER COLWT3ST	.0000	.0870	.0000	F	1	0	0	0
34042*	34114	1	COLWATER KRAMER	.0068	.0663	.1333		1	643	0	0
34042*	34114	2	COLWATER KRAMER	.0068	.0663	.1333		1	643	0	0
34042	34219*	0	COLWATER COLWT4GT	.0000	.0632	.0000	F	1	0	0	0
34042	34220*	0	COLWATER COLWT4ST	.0000	.0870	.0000	F	1	0	0	0
34047*	34048	1	CONTROL CONTROL	.0000	.5400	.0000	T	1	28	0	0
34048*	34049	1	CONTROL CONTROL	.0001	.1092	.0000	T	1	0	0	0
34048*	34053	1	CONTROL CSA DIAB	.1170	.2160	.0000		1	0	0	0
34048*	34053	2	CONTROL CSA DIAB	.1230	.3110	.0000		1	0	0	0
34048	34103*	1	CONTROL INYO	.0060	.0196	.0024		1	0	0	0
34048	34106*	1	CONTROL INYOKERN	.4410	.8150	.0880		1	0	0	0
34048	34106*	2	CONTROL INYOKERN	.4410	.8150	.0880		1	0	0	0
34048	34215*	1	CONTROL CONTROLX	.0000	.5667	.0000	F	0	0	0	0
34048*	34842	1	CONTROL CONTR 23	.0000	.0600	.0000	F	1	280	0	0
34049	34243*	1	CONTROL OXBOW G	.0467	.3399	.6476		1	0	0	0
34049	34804*	0	CONTROL CONTB 13	.0000	.0600	.0000	T	1	0	0	0
34052*	34053	1	CSA DIAB CSA DIAB	.0000	.0978	.0000	T	1	0	0	0
34054	34067*	0	DELAMO ELLIS	.0017	.0193	.1151		1	988	0	0
34054*	34091	0	DELAMO HINSON	.0011	.0138	.0481		1	988	0	0
34054	34118*	0	DELAMO LAGUBELL	.0011	.0125	.0624		1	988	0	0
34055*	34056	1	DEVERS DEVERS	.0000	.0117	.0000	T	1	1120	0	0
34055	34144*	2	DEVERS MIRAGE	.0026	.0203	.0444		1	494	0	0
34055*	34184	1	DEVERS SANBRDNO	.0118	.0659	.1172		1	317	0	0
34055	34184*	2	DEVERS SANBRDNO	.0075	.0643	.1245		1	458	0	0
34055*	34212	1	DEVERS VISTA	.0078	.0660	.1308		1	458	0	0
34055	34212*	2	DEVERS VISTA	.0078	.0653	.1319		1	494	0	0
34055	34816*	0	DEVERS DEVEB 13	.0000	.0600	.0000	T	1	0	0	0
34055*	34998	1	DEVERS DEVERSV	.0000	.0005	.0000		0	0	0	0
34056	34204*	1	DEVERS VALLEYSC	.0004	.0091	.6679		1	3421	0	0
34057*	34059	1	EAGLEMTN EAGLEMTN	.0000	.1212	.0000	T	1	90	0	0
34058*	34059	1	EAGLEMTN EAGLEMTN	.0000	.0272	.0000	T	1	48	0	0
34059	34108*	1	EAGLEMTN IRON MTN	.0066	.0453	.0787		1	420	0	0
34059*	34110	1	EAGLEMTN J.HINDS	.0032	.0210	.0350		1	420	0	0
34060	34143*	1	EAGLROCK MESA CAL	.0014	.0256	.1003		1	1287	0	0
34060	34167*	1	EAGLROCK PARDEE	.0084	.0700	.1593		1	494	0	0
34060	34201*	1	EAGLROCK SYLMAR S	.0014	.0265	.1030		1	1287	0	0

FROM	TO	CKT	NAME	NAME	LINE R	LINE X	CHRGING	TP	ST	RATA	RATB	RATC
34063*	34073	1	EL NIDO	ELSEGND0	.0003	.0036	.1340		1	988	0	0
34063*	34073	2	EL NIDO	ELSEGND0	.0003	.0036	.1340		1	988	0	0
34063	34116*	1	EL NIDO	LA FRESA	.0005	.0035	.0191		1	964	0	0
34063	34116*	2	EL NIDO	LA FRESA	.0005	.0035	.0191		1	964	0	0
34063	34123*	1	EL NIDO	LCIENEGA	.0010	.0116	.0263		1	643	0	0
34064*	34065	1	ELDORAD	ELDORADO	.0000	.1049	.0000	T	0	75	0	0
34065*	34066	1	ELDORADO	ELDORADO	.0000	.0232	.0000	T	1	500	0	0
34065*	34066	2	ELDORADO	ELDORADO	.0000	.0232	.0000	T	1	500	0	0
34065	34127*	N	ELDORADO	LUGO	.0494	.2692	.4728		1	327	0	0
34065	34127*	S	ELDORADO	LUGO	.0494	.2696	.4728		1	327	0	0
34065	34304*	1	ELDORADO	ELDORODO	.0000	.1049	.0000	F	1	75	0	0
34065	40037*	1	ELDORADO	MEAD	.0013	.0165	.0568		1	398	0	0
34065	40037*	2	ELDORADO	MEAD	.0013	.0168	.0578		1	398	0	0
34066	34128*	1	ELDORADO	LUGO	.0019	.0278	.0000		1	1386	0	0
34066*	34153	1	ELDORADO	MOHAVE	.0006	.0142	1.0429		1	3421	0	0
34066	34814*	0	ELDORADO	ELDRB 13	.0000	.0600	.0000	T	1	0	0	0
34066	34836*	0	ELDORADO	ELDRWB13	.0000	.0600	.0000	T	1	0	0	0
34067	34102*	1	ELLIS	HUNTGBCH	.0007	.0060	.0124		1	494	0	0
34067	34102*	2	ELLIS	HUNTGBCH	.0007	.0060	.0124		1	494	0	0
34067	34102*	3	ELLIS	HUNTGBCH	.0007	.0060	.0124		1	494	0	0
34067	34102*	4	ELLIS	HUNTGBCH	.0007	.0060	.0124		1	494	0	0
34067	34111*	1	ELLIS	JOHANNA	.0004	.0066	.0260		1	1287	0	0
34067	34185*	1	ELLIS	SANTIAGO	.0009	.0151	.0610		1	1287	0	0
34067	34329*	1	ELLIS	HUNT5 G	.0000	.1095	.0000	F	1	0	0	0
34070*	34073	1	ELSEG3 G	ELSEGND0	.0000	.0381	.0000	T	1	0	0	0
34072*	34073	1	ELSEG4 G	ELSEGND0	.0000	.0419	.0000	T	1	0	0	0
34073	34226*	1	ELSEGND0	ELSEG1 G	.0000	.0565	.0000	F	1	0	0	0
34073	34227*	1	ELSEGND0	ELSEG2 G	.0000	.0530	.0000	F	1	0	0	0
34074*	34078	1	ETIWA3 G	ETIWANDA	.0000	.0422	.0000	T	1	0	0	0
34076*	34078	1	ETIWA4 G	ETIWANDA	.0000	.0414	.0000	T	1	0	0	0
34077*	34078	1	ETIWANDA	ETIWANDA	.0000	.0653	.0000	T	1	150	0	0
34077*	34078	2	ETIWANDA	ETIWANDA	.0000	.0653	.0000	T	1	150	0	0
34078	34148*	1	ETIWANDA	MIRLOMAC	.0006	.0070	.0266		1	988	0	0
34078	34166*	1	ETIWANDA	PADUA	.0013	.0158	.0597		1	988	0	0
34078	34184*	1	ETIWANDA	SANBRDNO	.0021	.0251	.0954		1	988	0	0
34078	34212*	1	ETIWANDA	VISTA	.0014	.0158	.0671		1	988	0	0
34078	34324*	1	ETIWANDA	ETIWA 5G	.0000	.0898	.0000	F	1	0	0	0
34080*	40044	1	GENE	PARKER	.0005	.0027	.0046		1	355	0	0
34082*	34178	1	GOLETA	S.CLARA	.0016	.0130	.0270		1	494	0	0
34082*	34178	2	GOLETA	S.CLARA	.0016	.0130	.0270		1	494	0	0
34083	34084*	1	GOODRICH	GOULD	.0007	.0091	.0344		1	988	0	0
34083	34118*	1	GOODRICH	LAGUBELL	.0012	.0147	.0555		1	988	0	0
34084*	34201	1	GOULD	SYLMAR S	.0016	.0285	.1108		1	1287	0	0
34085	34086*	1	HARBOR	HARBOR G	.0000	.1664	.0000	F	1	0	0	0
34085	34091*	1	HARBOR	HINSON	.0005	.0044	.0081		1	441	0	0
34085	34120*	1	HARBOR	LBEACH	.0002	.0015	.0027		1	472	0	0
34090*	34091	1	HINSON	HINSON	.0000	.0665	.0000	T	1	280	0	0
34090*	34091	2	HINSON	HINSON	.0000	.0647	.0000	T	1	280	0	0
34090*	34119	1	HINSON	LBEACH	.0011	.0112	.0000		1	0	0	0
34091*	34116	1	HINSON	LA FRESA	.0010	.0152	.0547		1	988	0	0
34091*	34126	1	HINSON	LITEHIPE	.0010	.0093	.0171		1	472	0	0
34091*	34218	1	HINSON	ARCO G	.0003	.0021	.0042		1	494	0	0
34091*	34218	2	HINSON	ARCO G	.0003	.0021	.0042		1	494	0	0
34092	34113*	1	HOLGATE	KRAMER	.0347	.0674	.0000		1	183	0	0
34092*	34149	1	HOLGATE	MOGEN	.0041	.0106	.0000		1	0	0	0
34093*	34102	1	HUNT1 G	HUNTGBCH	.0000	.0585	.0000	T	1	0	0	0
34098*	34102	1	HUNT2 G	HUNTGBCH	.0000	.0585	.0000	T	1	0	0	0
34101*	34102	1	HUNTGBCH	HUNTGBCH	.0000	.0647	.0000	T	1	150	0	0
34101*	34102	2	HUNTGBCH	HUNTGBCH	.0000	.0671	.0000	T	1	150	0	0
34103	34105*	1	INYO	INYO PS	.0000	.1014	.0000	F	1	56	0	0
34104	34105*	1	INYO	INYO PS	.0000	.2666	.0000	F	1	56	0	0
34104	34105*	2	INYO	INYO PS	.0000	.2666	.0000	F	1	56	0	0
34106	34113*	1	INYOKERN	KRAMER	.0346	.2863	.0340		1	0	0	0
34106	34113*	2	INYOKERN	KRAMER	.0817	.1512	.0340		1	0	0	0
34106	34142*	1	INYOKERN	MC GEN	.0931	.1739	.0000		1	0	0	0
34106	34187*	1	INYOKERN	SEARLES	.0976	.1810	.0000		1	0	0	0
34106*	34844	1	INYOKERN	INYOK 23	.0000	.0600	.0000	F	1	280	0	0
34107*	34108	1	IRON MTN	IRON MTN	.0000	.3237	.0000	T	1	33	0	0

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E TUE, JUN 21 1994 11:53
 1998 HS2, SONGS 2&3 UNITS ON LINE, EOR=7490, SONGS23STB.SAV BRANCH DATA
 PLANTM.SAV MODIFIED, INC. SDG&E CHNGS & NOL & SCE BRPU

FROM	TO	CKT	NAME	NAME	LINE R	LINE X	CHRGING	TP	ST	RATA	RATB	RATC
34109*	34110	1	J.HINDS	J.HINDS	.0000	.1212	.0000	T	1	90	0	0
34110*	34144	1	J.HINDS	MIRAGE	.0132	.0721	.1269		1	357	0	0
34111	34185*	1	JOHANNA	SANTIAGO	.0005	.0086	.0330		1	1287	0	0
34112*	34187	0	KER MGEE	SEARLES	.0000	.0978	.0000	T	0	0	0	0
34113*	34114	1	KRAMER	KRAMER	.0000	.0567	.0000	T	1	250	0	0
34113*	34114	2	KRAMER	KRAMER	.0000	.0580	.0000	T	1	280	0	0
34113	34195*	1	KRAMER	SUNGEN	.0033	.0149	.0022		1	183	0	0
34113	34202*	1	KRAMER	TORTILLA	.0340	.1840	.0000		1	0	0	0
34113*	34206	1	KRAMER	VICTOR	.0308	.1847	.0274		1	0	0	0
34113*	34206	2	KRAMER	VICTOR	.0308	.1847	.0274		1	0	0	0
34113	34806*	0	KRAMER	KRAMB 13	.0000	.0600	.0000	T	1	0	0	0
34114	34127*	1	KRAMER	LUGO	.0082	.0685	.1412		1	494	0	0
34114	34127*	2	KRAMER	LUGO	.0082	.0685	.1412		1	494	0	0
34114*	34129	1	KRAMER	LUZ	.0010	.0156	.0585		1	1287	0	0
34114*	34207	1	KRAMER	VICTOR	.0063	.0846	.2756		1	643	0	0
34114*	34844	1	KRAMER	INYOK 23	.0051	.0356	.0426		1	494	0	0
34116	34118*	1	LA FRESA	LAGUBELL	.0010	.0184	.0644		1	1287	0	0
34116*	34123	1	LA FRESA	LCIENEGA	.0014	.0163	.0369		1	643	0	0
34116	34175*	1	LA FRESA	REDONDO	.0003	.0050	.0174		1	1287	0	0
34116	34175*	2	LA FRESA	REDONDO	.0003	.0050	.0174		1	1287	0	0
34118	34176*	1	LAGUBELL	RIOHONDO	.0014	.0177	.0604		1	988	0	0
34119	34216*	1	LBEACH	LBEACH1G	.0000	.2084	.0000	F	1	0	0	0
34119	34217*	1	LBEACH	LBEACH9G	.0000	.2077	.0000	F	1	0	0	0
34119	34228*	1	LBEACH	LBEACH2G	.0000	.2107	.0000	F	1	0	0	0
34119	34229*	1	LBEACH	LBEACH3G	.0000	.2077	.0000	F	1	0	0	0
34119	34230*	1	LBEACH	LBEACH4G	.0000	.2084	.0000	F	1	0	0	0
34119	34234*	1	LBEACH	LBEACH8G	.0000	.1312	.0000	F	1	0	0	0
34120	34126*	1	LBEACH	LITEHIPE	.0016	.0146	.0262		1	472	0	0
34120	34231*	1	LBEACH	LBEACH5G	.0000	.2112	.0000	F	1	0	0	0
34120	34232*	1	LBEACH	LBEACH6G	.0000	.2010	.0000	F	1	0	0	0
34120	34233*	1	LBEACH	LBEACH7G	.0000	.1996	.0000	F	1	0	0	0
34124	34191*	1	LEWIS	SERRANO	.0004	.0075	.0297		1	1287	0	0
34124	34191*	2	LEWIS	SERRANO	.0004	.0075	.0297		1	1287	0	0
34124	34208*	1	LEWIS	VILLA PK	.0004	.0048	.0156		1	988	0	0
34126	34143*	1	LITEHIPE	MESA CAL	.0010	.0135	.0455		1	988	0	0
34126*	34175	1	LITEHIPE	REDONDO	.0012	.0161	.0526		1	988	0	0
34127*	34128	1	LUGO	LUGO	.0000	.0126	.0000	T	1	1120	0	0
34127*	34128	2	LUGO	LUGO	.0000	.0126	.0000	T	1	1120	0	0
34127*	34207	1	LUGO	VICTOR	.0019	.0155	.0321		1	494	0	0
34127*	34207	2	LUGO	VICTOR	.0019	.0155	.0321		1	494	0	0
34128	34146*	2	LUGO	MIRALOMA	.0003	.0075	.5174		1	3421	0	0
34128	34146*	3	LUGO	MIRALOMA	.0004	.0075	.5536		1	3421	0	0
34128*	34153	1	LUGO	MOHAVE	.0019	.0309	.0000		1	1386	0	0
34128	34192*	1	LUGO	SERRANO	.0006	.0128	.9462		1	3421	0	0
34128	34210*	1	LUGO	VINCENT	.0004	.0113	.8292		1	3421	0	0
34128	34210*	2	LUGO	VINCENT	.0004	.0113	.8292		1	3421	0	0
34128	34808*	0	LUGO	LUGOB 13	.0000	.0600	.0000	T	1	0	0	0
34129	34242*	0	LUZ	LUZ89 EQ	.0000	.0500	.0000	F	0	0	0	0
34129	34314*	0	LUZ	LUZ8	.0000	.1000	.0000	F	1	0	0	0
34129	34315*	0	LUZ	LUZ9	.0000	.1000	.0000	F	1	0	0	0
34134	34156*	1	MAGUNDEN	OMAR	.0011	.0132	.0285		1	643	0	0
34134	34168*	3	MAGUNDEN	PASTORIA	.0051	.0443	.0854		1	494	535	0
34134	34168*	E	MAGUNDEN	PASTORIA	.0088	.0467	.0844		1	353	373	0
34134	34168*	W	MAGUNDEN	PASTORIA	.0088	.0467	.0844		1	353	373	0
34134	34193*	1	MAGUNDEN	SPRINGVL	.0089	.0770	.1461		1	494	535	0
34134	34193*	2	MAGUNDEN	SPRINGVL	.0147	.0801	.1406		1	357	376	0
34134	34205*	E	MAGUNDEN	VESTAL	.0090	.0524	.1025		1	353	373	0
34134	34205*	W	MAGUNDEN	VESTAL	.0103	.0530	.1011		1	353	373	0
34134	34840*	2	MAGUNDEN	TEJON 23	.0069	.0749	.1137		1	494	0	0
34136	34139*	1	MANDALAY	MANDLY1G	.0000	.0589	.0000	F	1	0	0	0
34136	34140*	1	MANDALAY	MANDLY2G	.0000	.0589	.0000	F	1	0	0	0
34136*	34178	1	MANDALAY	S.CLARA	.0016	.0130	.0270		1	494	0	0
34136*	34178	2	MANDALAY	S.CLARA	.0016	.0130	.0270		1	494	0	0
34141*	34142	0	MC GEN	MC GEN	.0000	.0850	.0000	T	1	0	0	0
34142*	34187	1	MC GEN	SEARLES	.0055	.0250	.0044		1	1833	0	0
34143	34175*	1	MESA CAL	REDONDO	.0023	.0287	.1007		1	988	0	0
34143	34176*	1	MESA CAL	RIOHONDO	.0009	.0121	.0407		1	988	0	0
34143*	34209	1	MESA CAL	VINCENT	.0031	.0391	.1407		1	988	0	0

FROM	TO	CKT	NAME	NAME	LINE R	LINE X	CHRGING	TP	ST	RATA	RATB	RATC
34143	34214*	1	MESA CAL	WALNUT	.0012	.0138	.0600		1	988	0	0
34144	34818*	0	MIRAGE	MIRAB 13	.0000	.0600	.0000	T	1	0	0	0
34146	34147*	1	MIRALOMA	MIRLOMAA	.0000	.0111	.0000	F	1	1120	0	0
34146	34148*	2	MIRALOMA	MIRLOMAC	.0000	.0112	.0000	F	1	1000	0	0
34146	34148*	4	MIRALOMA	MIRLOMAC	.0000	.0121	.0000	F	1	1120	0	0
34146	34192*	1	MIRALOMA	SERRANO	.0002	.0046	.3234		1	3421	0	0
34147	34148*	1	MIRLOMAA	MIRLOMAC	.0000	.0003	.0000		1	0	0	0
34147	34212*	1	MIRLOMAA	VISTA	.0013	.0169	.0597		1	988	0	0
34147	34214*	1	MIRLOMAA	WALNUT	.0024	.0291	.1100		1	988	0	0
34148	34155*	1	MIRLOMAC	OLINDA	.0021	.0256	.1023		1	988	0	0
34148	34166*	1	MIRLOMAC	PADUA	.0018	.0226	.0855		1	988	0	0
34148	34212*	2	MIRLOMAC	VISTA	.0013	.0169	.0598		1	988	0	0
34149	34150*	1	MOGEN	MOGEN G	.0000	.0978	.0000	F	1	0	0	0
34149	34296*	1	MOGEN	BORAX I	.0000	.0978	.0000	F	1	0	0	0
34151*	34153	1	MOHAV1CC	MOHAVE	.0000	.0197	.0000	T	1	0	0	0
34152*	34153	1	MOHAV2CC	MOHAVE	.0000	.0198	.0000	T	1	0	0	0
34154	34160*	1	MOORPARK	ORMOND	.0013	.0225	.0900		1	1287	0	0
34154	34160*	2	MOORPARK	ORMOND	.0013	.0225	.0900		1	1287	0	0
34154	34160*	3	MOORPARK	ORMOND	.0013	.0225	.0900		1	1287	0	0
34154	34160*	4	MOORPARK	ORMOND	.0013	.0225	.0900		1	1287	0	0
34154*	34167	1	MOORPARK	PARDEE	.0015	.0268	.1055		1	1287	0	0
34154*	34167	2	MOORPARK	PARDEE	.0015	.0267	.1056		1	1287	0	0
34154*	34167	3	MOORPARK	PARDEE	.0015	.0267	.1056		1	1287	0	0
34154*	34178	1	MOORPARK	S.CLARA	.0043	.0363	.0743		1	494	0	0
34154*	34178	2	MOORPARK	S.CLARA	.0043	.0363	.0743		1	494	0	0
34155	34214*	1	OLINDA	WALNUT	.0005	.0068	.0256		1	988	0	0
34155	34824*	0	OLINDA	OLINB 13	.0000	.0600	.0000	T	1	0	0	0
34156	34157*	0	OMAR	OMAR G	.0000	.0393	.0000	F	1	0	0	0
34156*	34197	1	OMAR	SYC CYN	.0001	.0018	.0038		1	353	0	0
34160	34163*	1	ORMOND	ORMOND1G	.0000	.0148	.0000	F	1	0	0	0
34160	34222*	1	ORMOND	ORMOND2G	.0000	.0146	.0000	F	1	0	0	0
34165*	34243	1	OXBOW G	OXBOW G	.0000	.1514	.0000	T	1	0	0	0
34167	34168*	3	PARDEE	PASTORIA	.0066	.0570	.1096		1	494	535	0
34167	34168*	W	PARDEE	PASTORIA	.0110	.0601	.1056		1	353	373	0
34167	34178*	1	PARDEE	S.CLARA	.0068	.0570	.1176		1	494	0	0
34167	34178*	2	PARDEE	S.CLARA	.0068	.0570	.1176		1	494	0	0
34167	34201*	1	PARDEE	SYLMAR S	.0007	.0119	.0467		1	1287	0	0
34167	34201*	2	PARDEE	SYLMAR S	.0007	.0119	.0467		1	1287	0	0
34167	34209*	1	PARDEE	VINCENT	.0029	.0365	.1266		1	988	0	0
34167	34209*	2	PARDEE	VINCENT	.0014	.0340	.1125		1	988	0	0
34168	34802*	0	PASTORIA	PASTB 13	.0000	.0600	.0000	T	1	0	0	0
34169*	34205	1	RECTOR	VESTAL	.0097	.0496	.0939		1	353	373	0
34169	34205*	2	RECTOR	VESTAL	.0097	.0496	.0939		1	353	373	0
34170*	34175	1	REDON5 G	REDONDO	.0000	.0565	.0000	T	1	0	0	0
34175	34235*	1	REDONDO	REDON6 G	.0000	.0524	.0000	F	1	0	0	0
34175	34244*	1	REDONDO	REDON7 G	.0000	.0268	.0000	F	1	0	0	0
34175	34245*	1	REDONDO	REDON8 G	.0000	.0268	.0000	F	1	0	0	0
34176*	34209	1	RIOHONDO	VINCENT	.0028	.0354	.1239		1	988	0	0
34176	34209*	2	RIOHONDO	VINCENT	.0018	.0359	.1203		1	988	0	0
34178	34333*	1	S.CLARA	MANDLY 3	.0000	.1206	.0000	F	1	0	0	0
34180*	34182	1	S.ONOFR2	S.ONOFRE	.0000	.0097	.0000	T	1	0	0	0
34181*	34182	1	S.ONOFR3	S.ONOFRE	.0000	.0097	.0000	T	1	0	0	0
34182	34185*	1	S.ONOFRE	SANTIAGO	.0016	.0295	.1159		1	1287	0	0
34182	34185*	2	S.ONOFRE	SANTIAGO	.0016	.0295	.1159		1	1287	0	0
34182	34191*	1	S.ONOFRE	SERRANO	.0023	.0413	.1625		1	1287	0	0
34182*	34223	1	S.ONOFRE	VIEJO	.0013	.0242	.0950		1	1287	0	0
34182*	34901	1	S.ONOFRE	3XR2H	.0008	.0175	.0000	F	0	0	0	0
34182*	34997	1	S.ONOFRE	SONGSSVC	.0000	.0001	.0000	Z	0	0	0	0
34184*	34212	2	SANBRDNO	VISTA	.0007	.0088	.0319		1	988	0	0
34185	34826*	0	SANTIAGO	SANTB 13	.0000	.0600	.0000	T	1	0	0	0
34185*	34996	1	SANTIAGO	SANTISVC	.0000	.0005	.0000		0	0	0	0
34187	34312*	0	SEARLES	KERRGEN	.0000	.0978	.0000	F	1	0	0	0
34187	34313*	0	SEARLES	KERRMGEE	.0000	.0978	.0000	F	1	0	0	0
34188*	34209	1	SEAWEST	VINCENT	.0076	.0638	.0102		1	494	0	0
34190*	34202	1	SEGS 2 G	TORTILLA	.0096	.0536	.0000		0	0	0	0
34191*	34192	1	SERRANO	SERRANO	.0000	.0115	.0000	T	1	1120	0	0
34191*	34192	2	SERRANO	SERRANO	.0000	.0115	.0000	T	1	1120	0	0
34191	34208*	1	SERRANO	VILLA PK	.0002	.0033	.0130		1	1287	0	0

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E TUE, JUN 21 1994 11:53
 1998 HS2, SONGS 2&3 UNITS ON LINE, EOR=7490, SONGS23STB.SAV BRANCH DATA
 PLANTM.SAV MODIFIED, INC. SDG&E CHNGS & NOL & SCE BRPU

FROM	TO	CKT	NAME	NAME	LINE R	LINE X	CHRGING	TP	ST	RATA	RATB	RATC
34191	34208*	2	SERRANO	VILLA PK	.0002	.0033	.0130		1	1287	0	0
34192	34204*	1	SERRANO	VALLEYSC	.0004	.0093	.6856		1	3421	0	0
34195	34196*	0	SUNGEN	SUNGEN G	.0000	.0587	.0000	F	0	0	0	0
34195	34348*	0	SUNGEN	SUNGEN3G	.0000	.3325	.0000	F	1	0	0	0
34195	34349*	0	SUNGEN	SUNGEN4G	.0000	.3325	.0000	F	1	0	0	0
34195	34350*	0	SUNGEN	SUNGEN5G	.0000	.3325	.0000	F	1	0	0	0
34195	34351*	0	SUNGEN	SUNGEN6G	.0000	.3325	.0000	F	1	0	0	0
34195	34352*	0	SUNGEN	SUNGEN7G	.0000	.3325	.0000	F	1	0	0	0
34197	34198*	1	SYC CYN	SYC CYNG	.0000	.0402	.0000	F	1	0	0	0
34202	34343*	1	TORTILLA	SEGS	.0096	.0536	.0000		1	0	0	0
34204	34830*	0	VALLEYSC	VALLB 13	.0000	.0600	.0000	T	1	0	0	0
34206*	34207	1	VICTOR	VICTOR	.0000	.0573	.0000	T	1	280	0	0
34206*	34207	2	VICTOR	VICTOR	.0000	.0573	.0000	T	1	280	0	0
34206	34812*	0	VICTOR	VICTLB13	.0000	.0600	.0000	T	1	0	0	0
34207	34810*	0	VICTOR	VICTB 13	.0000	.0600	.0000	T	1	0	0	0
34209*	34210	1	VINCENT	VINCENT	.0000	.0120	.0000	T	1	1000	0	0
34209*	34210	2	VINCENT	VINCENT	.0000	.0118	.0000	T	1	1000	0	0
34209*	34210	3	VINCENT	VINCENT	.0000	.0122	.0000	T	1	1120	0	0
34209	34832*	0	VINCENT	VINCB 13	.0000	.0600	.0000	T	1	0	0	0
34210	35991*	3	VINCENT	VINCEN&7	.0000	-.0084	.0000		1	1819	0	0
34210	35994*	2	VINCENT	VINCEN&4	.0000	-.0093	.0000		1	1848	0	0
34210	35996*	1	VINCENT	VINCEN&2	.0000	-.0093	.0000		1	1848	0	0
34212	34834*	0	VISTA	VISTB 13	.0000	.0600	.0000	T	1	0	0	0
34292*	34295	1	BLM E1G	BLM EAST	.0000	.3325	.0000	T	1	0	0	0
34293*	34295	1	BLM E2G	BLM EAST	.0000	.3325	.0000	T	1	0	0	0
34294*	34295	1	BLM W1G	BLM EAST	.0000	.2933	.0000	T	1	0	0	0
34295*	34317	1	BLM EAST	NAVY II	.0001	.0014	.0000		1	494	0	0
34317	34318*	1	NAVY II	NAVYII1G	.0000	.3325	.0000	F	1	0	0	0
34317	34319*	1	NAVY II	NAVYII2G	.0000	.3325	.0000	F	1	0	0	0
34317	34320*	1	NAVY II	NAVYII3G	.0000	.3325	.0000	F	1	0	0	0
34343	34345*	0	SEGS	SEGS 2G	.0000	.3325	.0000	F	1	0	0	0
34838*	34840	0	TEJOB 13	TEJON 23	.0000	.0600	.0000	F	1	0	0	0
34842*	34844	1	CONTR 23	INYOK 23	.0212	.2860	.9310		1	643	0	0
34901	34902*	1	3XR2H	3XR2Y	.0184	.3821	.0000	T	0	0	0	0
34901	34903*	1	3XR2H	3XR2X	.0229	.4770	.0000	T	0	0	0	0
34903*	34904	1	3XR2X	3A06	.0310	.0470	.0000		0	0	0	0
35991	35992*	3	VINCEN&7	VINCEN&6	.0006	.0125	.9250		1	3118	0	0
35992	35993*	3	VINCEN&6	VINCEN&5	.0005	.0127	.9109		1	3118	0	0
35994	35995*	2	VINCEN&4	VINCEN&3	.0012	.0266	1.9888		1	3118	0	0
35996	35997*	1	VINCEN&2	VINCEN&1	.0012	.0266	1.9870		1	3118	0	0

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E
 1998 HS2, SONGS OFF, VLY-RAINBW 500, SVC@SCE, SOFVRSVCSGD2.S
 BASED ON SONGSOFFCDSR.SAV, ADD SDG CHANGES ON 5/11 AND 5/17

TUE, JUN 21 1994 12:04

BUS DATA

SCE

BUS#	NAME	BSKV	CODE	VOLT	ANGLE	PLOAD	QLOAD	S	H	U	N	T	AREA	ZONE
34086	HARBOR	G13.8	2	1.0100	1.4	.0	.0	.0	.0	.0	.0	.0	34	340
34090	HINSON	66.0	1	1.0031	-4.5	.0	.0	.0	.0	.0	.0	.0	34	340
34091	HINSON	230	-2	.9910	-7.2	424.0	-38.5	.0	.0	.0	.0	.0	34	340
34092	HOLGATE	115	1	.9975	32.7	45.0	5.5	.0	.0	.0	.0	.0	34	348
34093	HUNT1	G13.8	-2	1.0400	-4.7	.0	.0	.0	.0	.0	.0	.0	34	340
34098	HUNT2	G13.8	-2	1.0400	-4.7	.0	.0	.0	.0	.0	.0	.0	34	340
34101	HUNTGBCH	66.0	1	.9785	-11.8	.0	.0	.0	.0	.0	.0	.0	34	340
34102	HUNTGBCH	230	1	.9785	-11.8	.0	.0	.0	.0	.0	.0	.0	34	340
34103	INYO	115	1	1.0155	37.2	.0	.0	.0	.0	.0	.0	.0	34	348
34104	INYO	230	1	1.0562	32.5	.0	.0	.0	.0	.0	.0	.0	34	340
34105	INYO PS	115	1	1.0315	36.0	.0	.0	.0	.0	.0	.0	.0	34	348
34106	INYOKERN	115	1	.9732	36.6	47.0	5.7	.0	.0	.0	.0	.0	34	348
34107	IRON MTN	6.90	-2	.9982	7.4	.0	.0	.0	.0	.0	.0	.0	34	340
34108	IRON MTN	230	1	.9965	10.6	.0	.0	.0	.0	.0	.0	.0	34	340
34109	J.HINDS	6.90	-2	.9966	-.6	.0	.0	.0	.0	.0	.0	.0	34	340
34110	J.HINDS	230	1	.9978	3.5	.0	.0	.0	.0	.0	.0	.0	34	340
34111	JOHANNA	230	1	.9692	-13.6	390.0	22.9	.0	.0	.0	.0	.0	34	340
34112	KER MGEE	13.8	4	1.0000	.0	.0	.0	.0	.0	.0	.0	.0	34	340
34113	KRAMER	115	1	.9776	28.3	28.0	3.2	.0	.0	45.0	.0	.0	34	348
34114	KRAMER	230	1	.9812	27.1	.0	.0	.0	.0	79.2	.0	.0	34	340
34116	LA FRESA	230	-2	.9969	-6.2	590.0	84.0	.0	.0	.0	.0	.0	34	340
34118	LAGUBELL	230	-2	.9853	-7.9	520.0	-75.0	.0	.0	.0	.0	.0	34	340
34119	LBEACH	66.0	1	1.0094	-3.6	.0	.0	.0	.0	.0	.0	.0	34	340
34120	LBEACH	230	1	.9906	-7.1	.0	.0	.0	.0	.0	.0	.0	34	340
34123	LCIENEGA	230	1	.9935	-7.6	421.0	28.1	.0	.0	.0	.0	.0	34	340
34124	LEWIS	230	1	.9563	-8.9	584.0	58.4	.0	.0	.0	.0	.0	34	340
34126	LITEHIPE	230	-2	.9879	-7.4	461.0	46.1	.0	.0	.0	.0	.0	34	340
34127	LUGO	230	1	.9445	12.1	.0	.0	.0	.0	.0	.0	.0	34	340
34128	LUGO	500	1	1.0135	7.8	.0	.0	.0	.0	.0	.0	.0	34	340
34129	LUZ	230	1	.9862	28.6	.0	.0	.0	.0	.0	.0	.0	34	340
34134	MAGUNDEN	230	1	.9970	16.7	.0	.0	.0	.0	.0	.0	.0	34	340
34136	MANDALAY	230	1	.9891	6.0	.0	.0	.0	.0	.0	.0	.0	34	340
34139	MANDLY1G	13.8	2	1.0100	13.0	.0	.0	.0	.0	.0	.0	.0	34	340
34140	MANDLY2G	13.8	2	1.0100	13.0	.0	.0	.0	.0	.0	.0	.0	34	340
34141	MC GEN	13.8	2	1.0000	53.2	.0	.0	.0	.0	.0	.0	.0	34	348
34142	MC GEN	115	1	1.0124	48.1	.0	.0	.0	.0	.0	.0	.0	34	348
34143	MESA CAL	230	1	.9753	-7.0	419.0	52.4	.0	.0	.0	.0	.0	34	340
34144	MIRAGE	230	1	1.0106	-1.5	229.0	-9.2	.0	.0	250.0	.0	.0	34	340
34146	MIRALOMA	500	1	.9969	.5	.0	.0	.0	.0	.0	.0	.0	34	340
34147	MIRLOMAA	230	1	.9540	-6.2	405.0	50.6	.0	.0	.0	.0	.0	34	340
34148	MIRLOMAC	230	1	.9542	-6.1	.0	.0	.0	.0	.0	.0	.0	34	340
34149	MOGEN	115	1	1.0022	33.6	.0	.0	.0	.0	.0	.0	.0	34	348
34150	MOGEN	G13.8	2	1.0000	39.3	.0	.0	.0	.0	.0	.0	.0	34	348
34151	MOHAV1CC	22.0	2	1.0500	25.6	.0	.0	.0	.0	.0	.0	.0	34	340
34152	MOHAV2CC	22.0	2	1.0500	25.7	.0	.0	.0	.0	.0	.0	.0	34	340
34153	MOHAVE	500	1	1.0514	27.3	.0	.0	.0	.0	.0	.0	.0	34	340
34154	MOORPARK	230	-2	.9843	6.5	597.0	74.6	.0	.0	.0	.0	.0	34	340
34155	OLINDA	230	1	.9665	-10.1	335.0	-55.8	.0	.0	.0	.0	.0	34	340
34156	OMAR	230	1	1.0088	21.1	.0	.0	.0	.0	.0	.0	.0	34	340
34157	OMAR	G13.8	2	1.0000	27.9	.0	.0	.0	.0	.0	.0	.0	34	340
34160	ORMOND	230	1	.9919	10.2	.0	.0	.0	.0	.0	.0	.0	34	340
34163	ORMOND1G	26.0	2	1.0010	13.9	.0	.0	.0	.0	.0	.0	.0	34	340
34165	OXBOW	G13.8	2	1.0000	57.6	.0	.0	.0	.0	.0	.0	.0	34	348
34166	PADUA	230	-2	.9501	-10.0	550.0	36.7	.0	.0	.0	.0	.0	34	340
34167	PARDEE	230	-2	.9821	4.6	429.0	.0	.0	.0	.0	.0	.0	34	340
34168	PASTORIA	230	1	.9869	11.8	607.0	.0	.0	.0	.0	.0	.0	34	340
34169	RECTOR	230	1	.9985	16.7	485.0	15.2	.0	.0	79.2	.0	.0	34	340
34170	REDON5	G18.0	2	1.0220	-.1	.0	.0	.0	.0	.0	.0	.0	34	340
34175	REDONDO	230	1	1.0008	-5.5	.0	.0	.0	.0	.0	.0	.0	34	340
34176	RIOHONDO	230	1	.9743	-6.0	578.0	21.4	.0	.0	.0	.0	.0	34	340
34178	S.CLARA	230	-2	.9831	4.5	484.0	32.2	.0	.0	.0	.0	.0	34	340
34180	S.ONOFR	222.0	-2	.9568	-11.3	.0	.0	.0	.0	.0	.0	.0	34	340
34181	S.ONOFR	322.0	-2	.9568	-11.3	.0	.0	.0	.0	.0	.0	.0	34	340
34182	S.ONOFR	230	1	.9568	-11.3	.0	.0	.0	.0	.0	.0	.0	34	340
34184	SANBRDNO	-230	1	.9589	-9.0	405.0	-15.6	.0	.0	.0	.0	.0	34	340
34185	SANTIAGO	230	-2	.9662	-13.4	374.0	18.7	.0	.0	.0	.0	.0	34	340
34187	SEARLES	115	1	1.0119	48.0	16.0	1.5	.0	.0	.0	.0	.0	34	348
34188	SEAWEST	230	2	1.0000	5.0	.0	.0	.0	.0	.0	.0	.0	34	340

2-1-94 NDA-SCE

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E TUE, JUN 21 1994 12:04
 1998 HS2, SONGS OFF, VLY-RAINBW 500, SVC@SCE, SOFVRSVCSDBG2.S BUS DATA
 BASED ON SONGSOFFCDJR.SAV, ADD SDG CHANGES ON 5/11 AND 5/17

BUS#	NAME	BSKV	CODE	VOLT	ANGLE	PLOAD	QLOAD	S	H	U	N	T	AREA	ZONE
34349	SUNGEN4G13.8	2	1.0000	35.4	.0	.0	.0	.0	.0	.0	.0	.0	34	348
34350	SUNGEN5G13.8	2	1.0000	35.4	.0	.0	.0	.0	.0	.0	.0	.0	34	348
34351	SUNGEN6G13.8	2	1.0000	35.4	.0	.0	.0	.0	.0	.0	.0	.0	34	348
34352	SUNGEN7G13.8	2	1.0000	35.4	.0	.0	.0	.0	.0	.0	.0	.0	34	348
34800	BAILB 1313.8	2	1.0000	10.7	.0	.0	.0	.0	.0	.0	.0	.0	34	340
34802	PASTB 1313.8	2	1.0000	24.8	.0	.0	.0	.0	.0	.0	.0	.0	34	340
34804	CONTB 1313.8	2	1.0000	44.2	.0	.0	.0	.0	.0	.0	.0	.0	34	340
34806	KRAMB 1313.8	-2	.9986	28.8	.0	.0	.0	.0	.0	.0	.0	.0	34	340
34808	LUGOB 1313.8	-2	1.0099	8.0	.0	.0	.0	.0	.0	.0	.0	.0	34	340
34810	VICTB 1313.8	-2	.9620	13.6	.0	.0	.0	.0	.0	.0	.0	.0	34	340
34812	VICTLB1313.8	-2	.9447	12.3	.0	.0	.0	.0	.0	.0	.0	.0	34	340
34814	ELDRB 1313.8	-2	1.0178	25.3	.0	.0	.0	.0	.0	.0	.0	.0	34	340
34816	DEVEB 1313.8	2	1.0000	-2.0	.0	.0	.0	.0	.0	.0	.0	.0	34	340
34818	MIRAB 1313.8	2	1.0000	.8	.0	.0	.0	.0	.0	.0	.0	.0	34	340
34820	ANTEB 1313.8	2	1.0000	3.9	.0	.0	.0	.0	.0	.0	.0	.0	34	340
34822	CHINB 1313.8	-2	.9513	-7.1	.0	.0	.0	.0	.0	.0	.0	.0	34	340
34824	OLINB 1313.8	-2	.9683	-9.8	.0	.0	.0	.0	.0	.0	.0	.0	34	340
34826	SANTB 1313.8	-2	.9681	-13.2	.0	.0	.0	.0	.0	.0	.0	.0	34	340
34828	SYLMB 1313.8	2	1.0000	2.2	.0	.0	.0	.0	.0	.0	.0	.0	34	340
34830	VALLB 1313.8	-2	.9838	-2.8	.0	.0	.0	.0	.0	.0	.0	.0	34	340
34832	VINCB 1313.8	2	1.0000	4.4	.0	.0	.0	.0	.0	.0	.0	.0	34	340
34834	VISTB 1313.8	-2	.9668	-8.6	.0	.0	.0	.0	.0	.0	.0	.0	34	340
34836	ELDRWB1313.8	-2	1.0136	25.6	.0	.0	.0	.0	.0	.0	.0	.0	34	340
34838	TEJOB 1313.8	2	1.0000	6.4	.0	.0	.0	.0	.0	.0	.0	.0	34	340
34840	TEJON 23 230	1	.9878	5.4	.0	.0	.0	.0	.0	.0	.0	.0	34	340
34842	CONTR 23 230	1	1.0366	37.0	.0	.0	.0	.0	.0	.0	.0	.0	34	340
34844	INYOK 23 230	1	.9961	33.2	.0	.0	.0	.0	.0	.0	.0	.0	34	340
34900	MAGUENDN13.8	2	1.0000	26.2	.0	.0	.0	.0	.0	.0	.0	.0	34	340
34901	3XR2H 230	4	1.0000	.0	.0	.0	.0	.0	.0	.0	.0	.0	34	340
34902	LAGUNABL13.8	2	1.0000	-1.4	.0	.0	.0	.0	.0	.0	.0	.0	34	340
34903	3XR2X 4.16	4	1.0000	.0	.0	.0	.0	.0	.0	.0	.0	.0	34	340
34904	ORMOND 13.8	2	1.0000	18.8	.0	.0	.0	.0	.0	.0	.0	.0	34	340
34995	CHINOSVC 230	4	.9484	-7.2	.0	.0	.0	.0	.0	.0	.0	.0	34	100
34996	SANTISVC 230	4	.9666	-13.0	.0	.0	.0	.0	.0	.0	.0	.0	34	100
34997	SONGSSVC 230	4	.9584	-10.5	.0	.0	.0	.0	.0	.0	.0	.0	34	100
34998	DEVER SVC 230	2	.9763	-3.2	.0	.0	.0	.0	.0	.0	.0	.0	34	100
35991	VINCEN&7 500	1	1.0286	5.2	.0	.0	.0	.0	.0	.0	.0	.0	34	340
35992	VINCEN&6 500	1	1.0471	7.6	.0	.0	.0	.0	.0	.0	.0	.0	34	340
35993	VINCEN&5 500	1	1.0552	9.9	.0	.0	.0	.0	.0	.0	.0	.0	34	340
35994	VINCEN&4 500	1	1.0262	5.2	.0	.0	.0	.0	.0	.0	.0	.0	34	340
35995	VINCEN&3 500	1	1.0544	9.8	.0	.0	.0	.0	.0	.0	.0	.0	34	340
35996	VINCEN&2 500	1	1.0262	5.2	.0	.0	.0	.0	.0	.0	.0	.0	34	340
35997	VINCEN&1 500	1	1.0545	9.8	.0	.0	.0	.0	.0	.0	.0	.0	34	340

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 1998 HS2, SONGS OFF, VLY-RAINBW 500, SVC@SCE, SOFVRSVCSGD2.S GENERATING
 BASED ON SONGSOFFCDSR.SAV, ADD SDG CHANGES ON 5/11 AND 5/17 PLANT DATA

BUS#	NAME	BSKV	COD	MCNS	PGEN	QGEN	QMAX	QMIN	VSCHED	VACT.	REMO	PCT	Q
1154	MAGUND1	13.8	2	1	100.0	12.1	42.0	-70.0	1.0000	1.0000			
1155	MAGUND2	13.8	2	1	100.0	12.1	42.0	-70.0	1.0000	1.0000			
1156	MAGUND3	13.8	2	1	91.0	10.3	42.0	-70.0	1.0000	1.0000			
1157	MANDLY	316.4	-2	1	.0	.0	.0	.0	1.0000	1.0027			
1158	PASTOR1	13.8	2	1	100.0	17.0	42.0	-70.0	1.0000	1.0000			
1159	PASTOR2	13.8	2	1	100.0	17.0	42.0	-70.0	1.0000	1.0000			
1160	PASTOR3	13.8	2	1	112.0	19.8	42.0	-70.0	1.0000	1.0000			
1161	PASTOR4	13.8	2	1	125.0	23.3	45.0	-70.0	1.0000	1.0000			
34000	SONGS2	18.0	4	1	.0	-8.7	550.0	-410.0	.9724	.9568	34182	100.0	
34001	SONGS3	18.0	4	1	.0	-8.7	550.0	-410.0	.9724	.9568	34182	100.0	
34004	ALAMT3	G18.0	2	3	210.0	113.0	160.0	-100.0	1.0350	1.0350			
34005	ALAMT4	G18.0	2	3	210.0	113.0	160.0	-100.0	1.0350	1.0350			
34006	ALAMT5	G20.0	2	3	485.7	193.1	240.0	-150.0	1.0350	1.0350			
34008	ALAMT6	G20.0	2	3	370.0	140.5	240.0	-150.0	1.0250	1.0250			
34012	ANTELOPE	230	-2	1	50.0	.0	.0	.0	1.0200	.9803			
34013	ARCO	G13.8	2	1	396.0	53.9	200.0	-100.0	1.0000	1.0000			
34024	BIGCREEK	13.8	2	1	900.0	146.7	300.0	-100.0	1.0500	1.0500			
34026	BIOGEN	G 115	-2	1	17.0	-3.0	5.0	-3.0	1.0000	1.0398			
34027	BLM	EQG13.8	4	1	166.0	13.5	80.0	-40.0	1.0000	1.0000			
34031	BSPHYD2	262.20	2	1	14.0	.9	7.0	-3.0	1.0270	1.0270			
34032	BSPHYD3	42.20	2	1	13.0	2.7	7.0	-3.0	1.0270	1.0270			
34035	CAL	GENG13.8	4	1	69.0	-.8	35.0	-17.0	1.0000	1.0000			
34037	CENTER	S 230	-2	1	27.0	.0	.0	.0	1.0200	.9779			
34039	CHINO	230	-2	1	117.0	.0	.0	.0	1.0200	.9506			
34045	COLWT3	GT13.8	2	1	130.0	44.0	82.0	-60.0	1.0500	1.0500			
34046	COLWT3	ST13.8	2	1	106.0	32.9	58.0	-41.0	1.0500	1.0500			
34052	CSA	DIAB13.8	2	1	29.0	-1.6	15.0	-8.0	1.0000	1.0000			
34054	DELAMO	230	-2	1	31.0	.0	.0	.0	1.0200	.9805			
34055	DEVERS	230	-2	1	33.0	.0	.0	.0	1.0200	.9763			
34057	EAGLEMTN	6.90	-2	1	-57.6	1.0	1.0	.0	1.0000	.9947			
34063	EL	NIDO 230	-2	1	66.0	.0	.0	.0	1.0200	.9989			
34070	ELSEG3	G18.0	2	3	332.0	68.5	145.0	-100.0	1.0200	1.0200			
34072	ELSEG4	G18.0	2	3	332.0	66.3	145.0	-100.0	1.0200	1.0200			
34074	ETIWA3	G18.0	-2	3	317.0	140.0	140.0	-100.0	1.0270	1.0114			
34076	ETIWA4	G18.0	-2	3	317.0	140.0	140.0	-100.0	1.0240	1.0107			
34078	ETIWANDA	230	-2	1	18.0	.0	.0	.0	1.0200	.9621			
34086	HARBOR	G13.8	2	1	89.0	18.2	40.0	-20.0	1.0100	1.0100			
34091	HINSON	230	-2	1	52.0	.0	.0	.0	1.0200	.9910			
34093	HUNT1	G13.8	-2	3	213.0	130.0	130.0	-65.0	1.0430	1.0400			
34098	HUNT2	G13.8	-2	3	213.0	130.0	130.0	-65.0	1.0450	1.0400			
34107	IRON	MTN6.90	-2	1	-17.0	1.0	1.0	.0	1.0000	.9982			
34109	J.HINDS	6.90	-2	1	-57.6	1.0	1.0	.0	1.0000	.9966			
34112	KER	MGEE13.8	4	1	54.0	-2.7	20.0	-10.0	1.0200	1.0000			
34116	LA	FRESA 230	-2	1	9.0	.0	.0	.0	1.0200	.9969			
34118	LAGUBELL	230	-2	1	115.0	.0	.0	.0	1.0200	.9853			
34126	LITEHIPE	230	-2	1	42.0	.0	.0	.0	1.0200	.9879			
34139	MANDLY1	G13.8	2	3	205.0	48.3	130.0	-67.5	1.0100	1.0100			
34140	MANDLY2	G13.8	2	3	205.0	48.3	130.0	-67.5	1.0100	1.0100			
34141	MC	GEN 13.8	2	1	107.0	-9.8	75.0	-35.0	1.0000	1.0000			
34150	MOGEN	G13.8	2	1	101.0	2.7	27.0	-13.0	1.0000	1.0000			
34151	MOHAV1	CC22.0	2	3	782.0	264.9	350.0	-150.0	1.0500	1.0500			
34152	MOHAV2	CC22.0	2	3	782.0	264.4	350.0	-150.0	1.0500	1.0500			
34154	MOORPARK	230	-2	1	25.0	.0	.0	.0	1.0200	.9843			
34157	OMAR	G13.8	2	1	295.0	69.9	150.0	-75.0	1.0000	1.0000			
34163	ORMOND1	G26.0	2	1	440.0	76.2	400.0	-240.0	1.0010	1.0010			
34165	OXBOW	G13.8	2	1	52.0	-2.5	27.0	-14.0	1.0000	1.0000			
34166	PADUA	230	-2	1	11.0	.0	.0	.0	1.0200	.9501			
34167	PARDEE	230	-2	1	171.0	.0	.0	.0	1.0200	.9821			
34170	REDON5	G18.0	2	1	170.0	46.3	85.0	-42.0	1.0220	1.0220			
34178	S.CLARA	230	-2	1	124.0	.0	.0	.0	1.0200	.9831			
34180	S.ONOFR	222.0	-2	1	.0	.0	.0	.0	1.0000	.9568	34182	100.0	
34181	S.ONOFR	322.0	-2	1	.0	.0	.0	.0	1.0000	.9568	34182	100.0	
34185	SANTIAGO	230	-2	1	15.0	.0	.0	.0	1.0200	.9662			
34188	SEAWEST	230	2	1	38.0	21.1	190.0	-95.0	1.0000	1.0000			
34189	SEGS 1	G13.8	4	1	19.0	.7	10.0	-5.0	1.0000	1.0000			
34190	SEGS 2	G 115	-2	1	29.0	15.0	15.0	-8.0	1.0000	.9970			
34196	SUNGEN	G13.8	4	1	173.0	-11.5	87.0	-40.0	1.0000	1.0000			
34198	SYC	CYNG13.8	2	1	295.0	66.9	150.0	-75.0	1.0000	1.0000			

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 1998 HS2, SONGS OFF, VLY-RAINBW 500, SVC@SCE, SOFVRSVCSGD2.S GENERATING
 BASED ON SONGSOFFCDJR.SAV, ADD SDG CHANGES ON 5/11 AND 5/17 PLANT DATA

BUS#	NAME	BSKV	COD	MCNS	PGEN	QGEN	QMAX	QMIN	VSCHEG	VACT.	REMOT	PCT	Q
34204	VALLEYS	500	-2	1	5.0	.0	.0	.0	1.0200	.9783			
34205	VESTAL	230	-2	1	63.0	.0	.0	.0	1.0200	.9993			
34212	VISTA	230	-2	1	126.0	.0	.0	.0	1.0200	.9563			
34214	WALNUT	230	-2	1	47.0	.0	.0	.0	1.0200	.9637			
34216	LBEACH1G	13.8	-2	1	.0	.0	.0	.0	1.0500	1.0094			
34217	LBEACH9G	13.8	2	1	62.0	24.3	30.0	-15.0	1.0500	1.0500			
34219	COLWT4GT	13.8	2	1	130.0	44.0	82.0	-60.0	1.0500	1.0500			
34220	COLWT4ST	13.8	2	1	106.0	32.9	58.0	-41.0	1.0500	1.0500			
34222	ORMOND2G	26.0	2	1	440.0	76.6	400.0	-240.0	1.0010	1.0010			
34224	ALAMT1	G18.0	-2	1	.0	.0	.0	.0	1.0350	.9930			
34225	ALAMT2	G18.0	-2	1	.0	.0	.0	.0	1.0230	.9930			
34226	ELSEG1	G18.0	2	1	169.0	40.2	75.0	-50.0	1.0200	1.0200			
34227	ELSEG2	G18.0	2	1	177.0	42.6	75.0	-50.0	1.0200	1.0200			
34228	LBEACH2G	13.8	-2	1	.0	.0	.0	.0	1.0500	1.0094			
34229	LBEACH3G	13.8	-2	1	.0	.0	.0	.0	1.0500	1.0094			
34230	LBEACH4G	13.8	-2	1	.0	.0	.0	.0	1.0500	1.0094			
34231	LBEACH5G	13.8	-2	1	.0	.0	.0	.0	1.0390	.9906			
34232	LBEACH6G	13.8	-2	1	.0	.0	.0	.0	1.0370	.9906			
34233	LBEACH7G	13.8	-2	1	.0	.0	.0	.0	1.0360	.9906			
34234	LBEACH8G	13.8	2	1	81.5	36.6	48.0	-34.0	1.0500	1.0500			
34235	REDON6	G18.0	2	1	140.0	18.9	75.0	-40.0	1.0080	1.0080			
34242	LUZ89	EQ13.8	4	1	158.0	23.9	80.0	-40.0	1.0000	1.0000			
34244	REDON7	G20.0	2	3	270.0	141.4	240.0	-150.0	1.0350	1.0350			
34245	REDON8	G20.0	2	3	270.0	141.4	240.0	-150.0	1.0350	1.0350			
34292	BLM	E1G13.8	2	1	29.7	1.3	15.0	-7.5	1.0000	1.0000			
34293	BLM	E2G13.8	2	1	29.6	1.3	15.0	-7.5	1.0000	1.0000			
34294	BLM	W1G13.8	2	1	23.7	.7	12.0	-6.0	1.0000	1.0000			
34296	BORAX	I 13.8	2	1	46.0	-1.3	22.0	-11.0	1.0000	1.0000			
34297	CALGEN1G	13.8	2	1	29.6	2.3	15.0	-7.5	1.0000	1.0000			
34298	CALGEN2G	13.8	2	1	23.7	1.8	12.0	-6.0	1.0000	1.0000			
34299	CALGEN3G	13.8	2	1	23.7	1.8	12.0	-6.0	1.0000	1.0000			
34312	KERRGEN	13.8	2	1	54.0	-10.8	27.0	-14.0	1.0000	1.0000			
34313	KERRMGE	E13.8	-2	1	54.0	-3.0	7.0	-3.0	1.0000	1.0077			
34314	LUZ8	13.8	2	1	79.0	17.0	40.0	-20.0	1.0000	1.0000			
34315	LUZ9	13.8	2	1	79.0	17.0	40.0	-20.0	1.0000	1.0000			
34317	NAVY II	230	1	1	.0	.0	.0	.0	1.0000	1.0004			
34318	NAVY I1G	13.8	2	1	29.7	1.3	12.0	-6.0	1.0000	1.0000			
34319	NAVY I2G	13.8	2	1	29.7	1.3	12.0	-6.0	1.0000	1.0000			
34320	NAVY I3G	13.8	2	1	29.6	1.3	12.0	-6.0	1.0000	1.0000			
34324	ETIWA	5G16.4	-2	1	.0	.0	.0	.0	1.0000	.9813			
34329	HUNT5	G16.4	-2	1	.0	.0	.0	.0	1.0000	.9941			
34333	MANDLY	316.4	-2	1	.0	.0	.0	.0	1.0000	1.0027			
34344	SEGS	1G13.8	2	1	19.0	1.6	10.0	-5.0	1.0000	1.0000			
34345	SEGS	2G13.8	2	1	29.0	2.5	10.0	-5.0	1.0000	1.0000			
34348	SUNGEN3G	13.8	2	1	30.0	6.1	17.0	-8.0	1.0000	1.0000			
34349	SUNGEN4G	13.8	2	1	30.0	6.1	17.0	-8.0	1.0000	1.0000			
34350	SUNGEN5G	13.8	2	1	30.0	6.1	17.0	-8.0	1.0000	1.0000			
34351	SUNGEN6G	13.8	2	1	30.0	6.1	17.0	-8.0	1.0000	1.0000			
34352	SUNGEN7G	13.8	2	1	30.0	6.1	17.0	-8.0	1.0000	1.0000			
34800	BAILB	1313.8	2	1	10.0	20.9	25.0	-12.0	1.0000	1.0000			
34802	PASTB	1313.8	2	1	372.0	64.5	99.0	-63.0	1.0000	1.0000			
34804	CONTB	1313.8	2	1	34.0	-3.1	17.0	-9.0	1.0000	1.0000			
34806	KRAMB	1313.8	-2	1	14.0	35.0	35.0	-17.0	1.0000	.9986			
34808	LUGOB	1313.8	-2	1	5.0	-6.0	12.0	-6.0	1.0000	1.0099			
34810	VICTB	1313.8	-2	1	10.0	25.0	25.0	-12.0	1.0000	.9620			
34812	VICTLB1	1313.8	-2	1	4.0	10.0	10.0	-5.0	1.0000	.9447			
34814	ELDRB	1313.8	-2	1	5.0	-12.0	25.0	-12.0	1.0000	1.0178			
34816	DEVEB	1313.8	2	1	36.0	39.9	90.0	-45.0	1.0000	1.0000			
34818	MIRAB	1313.8	2	1	68.0	-16.4	34.0	-17.0	1.0000	1.0000			
34820	ANTEB	1313.8	2	1	22.0	33.0	56.0	-28.0	1.0000	1.0000			
34822	CHINB	1313.8	-2	1	3.0	1.0	1.0	-1.0	1.0000	.9513			
34824	OLINB	1313.8	-2	1	7.0	3.0	3.0	-1.0	1.0000	.9683			
34826	SANB	1313.8	-2	1	7.0	3.0	3.0	-1.0	1.0000	.9681			
34828	SYLMB	1313.8	2	1	15.0	.6	37.0	-19.0	1.0000	1.0000			
34830	VALLB	1313.8	-2	1	4.0	9.0	9.0	-5.0	1.0000	.9838			
34832	VINCB	1313.8	2	1	20.0	27.5	50.0	-25.0	1.0000	1.0000			
34834	VISTB	1313.8	-2	1	7.0	17.0	17.0	-9.0	1.0000	.9668			
34836	ELDRWB1	1313.8	-2	1	15.0	-19.0	37.0	-19.0	1.0000	1.0136			

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 1998 HS2, SONGS OFF, VLY-RAINBW 500, SVC@SCE, SOFVRSVCSHG2.S GENERATING
 BASED ON SONGSOFFCDSR.SAV, ADD SDG CHANGES ON 5/11 AND 5/17 PLANT DATA

BUS#	NAME	BSKV	COD	MCNS	PGEN	QGEN	QMAX	QMIN	VSCHED	VACT.	REMOT	PCT	Q
34838	TEJOB	1313.8	2	1	30.0	20.7	75.0	-38.0	1.0000	1.0000			
34900	MAGUENDN	13.8	2	1	274.0	27.7	137.0	-68.0	1.0000	1.0000			
34902	LAGUNABL	13.8	2	1	187.0	35.2	137.0	-68.0	1.0000	1.0000			
34904	ORMOND	13.8	2	1	247.0	32.1	124.0	-62.0	1.0000	1.0000			
34995	CHINOSVC	230	4	1	.0	.0	300.0	.0	.9673	.9506	34039	100.0	
34996	SANTISVC	230	4	1	.0	.1	300.0	.0	.9908	.9662	34185	100.0	
34997	SONGSSVC	230	4	1	.0	.3	300.0	.0	.9724	.9568	34182	100.0	
34998	DEVER SVC	230	2	1	.0	.1	300.0	.0	.9763	.9763	34055	100.0	

FROM	TO	CKT	NAME	NAME	LINE R	LINE X	CHRGING	TP	ST	RATA	RATB	RATC
1154*	34134	1	MAGUND1	MAGUNDEN	.0000	.2112	.0000	T	1	0	0	0
1155*	34134	1	MAGUND2	MAGUNDEN	.0000	.2112	.0000	T	1	0	0	0
1156*	34134	1	MAGUND3	MAGUNDEN	.0000	.2112	.0000	T	1	0	0	0
1157*	34178	1	MANDLY 3	S.CLARA	.0000	.1206	.0000	T	1	0	0	0
1158*	34168	1	PASTOR1	PASTORIA	.0000	.2112	.0000	T	1	0	0	0
1159*	34168	1	PASTOR2	PASTORIA	.0000	.2112	.0000	T	1	0	0	0
1160*	34168	1	PASTOR3	PASTORIA	.0000	.2112	.0000	T	1	0	0	0
1161*	34168	1	PASTOR4	PASTORIA	.0000	.2112	.0000	T	1	0	0	0
2166*	34056	1	PALOVDRDE	DEVERS	.0026	.0297	.0000		1	1559	0	0
3977	34066*	1	MOENKO&4	ELDORADO	.0000	-.0180	.0000		1	0	0	0
8016	34055*	2	COACHELV	DEVERS	.0064	.0493	.1080		1	462	0	0
8016	34144*	1	COACHELV	MIRAGE	.0036	.0283	.0569		1	462	0	0
10048	34066*	1	MCCULLGH	ELDORADO	.0000	.0002	.0000	Z	1	0	0	0
10055*	34104	1	OWENS	INYO	.0001	.0010	.0000		1	222	0	0
10094*	34201	1	SYLMARLA	SYLMAR S	.0000	.0012	.0000	F	1	0	0	0
10094	34828*	0	SYLMARLA	SYLMB 13	.0000	.0600	.0000	T	1	0	0	0
10105*	34128	1	VICTORVL	LUGO	.0002	.0041	.2962		1	0	0	0
16045	34153*	0	LAUGHLIN	MOHAVE	.0000	.0003	.0000		1	0	0	0
26242*	35993	3	MIDWAY	VINCEN&5	.0000	-.0093	.0000		1	1848	0	0
26242*	35995	2	MIDWAY	VINCEN&3	.0000	-.0094	.0000		1	1848	0	0
26242*	35997	1	MIDWAY	VINCEN&1	.0000	-.0093	.0000		1	1848	0	0
30020	34182*	1	ENCINA	S.ONOFRE	.0044	.0349	.0764		1	456	0	0
30053	34182*	1	MISSION	S.ONOFRE	.0097	.0754	.1578		1	456	0	0
30092	34182*	1	TALEGA	S.ONOFRE	.0012	.0097	.0211		1	518	0	0
30092	34182*	2	TALEGA	S.ONOFRE	.0012	.0097	.0211		1	518	0	0
30199	34182*	1	SANLUSRY	S.ONOFRE	.0012	.0123	.0478		1	797	0	0
30996	34204*	1	RAINBOW	VALLEYS	.0002	.0061	.4413		1	1040	0	0
32125*	34047	1	NEVBD501	CONTROL	.6931	1.0370	.0071		1	0	0	0
32125*	34215	1	NEVBD501	CONTROLX	.6931	1.0370	.0071		0	0	0	0
32126*	34047	1	NEVBD502	CONTROL	.7306	1.0600	.0087		1	0	0	0
32126*	34215	1	NEVBD502	CONTROLX	.7306	1.0600	.0087		0	0	0	0
34000*	34182	1	SONGS2	S.ONOFRE	.0000	.0097	.0000	F	0	0	0	0
34001*	34182	1	SONGS3	S.ONOFRE	.0000	.0097	.0000	F	0	0	0	0
34004*	34011	1	ALAMT3 G	ALMITOSW	.0000	.0418	.0000	T	1	0	0	0
34005*	34011	1	ALAMT4 G	ALMITOSW	.0000	.0418	.0000	T	1	0	0	0
34006*	34009	1	ALAMT5 G	ALMITOSE	.0000	.0268	.0000	T	1	0	0	0
34008*	34009	1	ALAMT6 G	ALMITOSE	.0000	.0268	.0000	T	1	0	0	0
34009*	34011	1	ALMITOSE	ALMITOSW	.0000	.0005	.0000		1	0	0	0
34009	34023*	1	ALMITOSE	BARRE	.0013	.0132	.0787		1	988	0	0
34009	34037*	1	ALMITOSE	CENTER S	.0010	.0163	.0600		1	988	0	0
34010*	34011	1	ALMITOSW	ALMITOSW	.0000	.1159	.0000	T	1	90	0	0
34010*	34011	2	ALMITOSW	ALMITOSW	.0000	.1159	.0000	T	1	90	0	0
34011	34023*	2	ALMITOSW	BARRE	.0010	.0163	.0600		1	988	0	0
34011	34126*	1	ALMITOSW	LITEHIPE	.0010	.0133	.0448		1	988	0	0
34011	34224*	1	ALMITOSW	ALAMT1	.0000	.0536	.0000	F	1	0	0	0
34011	34225*	1	ALMITOSW	ALAMT2 G	.0000	.0536	.0000	F	1	0	0	0
34011	34317*	1	ALMITOSW	NAVY II	.0000	.1135	.0000	F	0	0	0	0
34012*	34134	E	ANTELOPE	MAGUNDEN	.0173	.0923	.1600		1	357	376	0
34012*	34134	W	ANTELOPE	MAGUNDEN	.0102	.0883	.1677		0	494	0	0
34012*	34143	1	ANTELOPE	MESA.CAL	.0148	.0920	.1643		1	357	0	0
34012*	34209	1	ANTELOPE	VINCENT	.0030	.0263	.0499		1	494	0	0
34012	34820*	0	ANTELOPE	ANTEB 13	.0000	.0600	.0000	T	1	0	0	0
34012	34840*	2	ANTELOPE	TEJON 23	.0033	.0135	.0540		1	494	535	0
34013*	34218	0	ARCO	G ARCO G	.0000	.0413	.0000	T	1	0	0	0
34022*	34167	1	BAILEY	PARDEE	.0076	.0410	.0713		1	353	373	0
34022	34168*	1	BAILEY	PASTORIA	.0036	.0185	.0351		1	353	373	0
34022	34168*	4	BAILEY	PASTORIA	.0010	.0129	.0466		1	988	1136	0
34022	34800*	0	BAILEY	BAILB 13	.0000	.0600	.0000	T	1	0	0	0
34023	34067*	0	BARRE	ELLIS	.0011	.0091	.0755		1	988	0	0
34023	34124*	1	BARRE	LEWIS	.0004	.0057	.0185		1	988	0	0
34023	34208*	1	BARRE	VILLA PK	.0008	.0101	.0330		1	988	0	0
34024*	34025	1	BIGCREEK	BIGCREEK	.0000	.0155	.0000	T	1	0	0	0
34025	34061*	1	BIGCREEK	EASTWOOD	.0014	.0075	.0300		1	0	0	0
34025	34169*	1	BIGCREEK	RECTOR	.0189	.0960	.1818		1	353	373	0
34025	34169*	2	BIGCREEK	RECTOR	.0218	.1112	.2108		1	353	373	0
34025*	34193	1	BIGCREEK	SPRINGVL	.0230	.1256	.2206		1	494	535	0
34025*	34193	2	BIGCREEK	SPRINGVL	.0132	.1143	.2170		1	357	376	0
34026	34041*	1	BIOGEN G	COLWATER	.0443	.6797	.0000		1	0	0	0

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 1998 HS2, SONGS OFF, VLY-RAINBW 500, SVC@SCE, SOFVRSVCSGD2.S BRANCH DATA
 BASED ON SONGSOFFCDSR.SAV, ADD SDG CHANGES ON 5/11 AND 5/17

FROM	TO	CKT	NAME	NAME	LINE R	LINE X	CHRGING	TP	ST	RATA	RATB	RATC
34026	34064*	1	BIOGEN G	ELDORAD	.2400	.3345	.0000		0	0	0	0
34026	34304*	1	BIOGEN G	ELDORODO	.2400	.3345	.0000		1	0	0	0
34027*	34028	1	BLM EQG	BLM WEST	.0000	.0689	.0000	T	0	0	0	0
34028	34114*	1	BLM WEST	KRAMER	.0100	.1019	.2586		0	494	0	0
34028*	34295	1	BLM WEST	BLM EAST	.0001	.0016	.0000		1	494	0	0
34028	34844*	1	BLM WEST	INYOK 23	.0049	.0663	.2586		1	643	0	0
34029	34058*	1	BLYTHESC	EAGLEMTN	.0499	.1890	.0834		1	187	0	0
34029	40003*	1	BLYTHESC	BLYTHE	.0000	.0005	.0000		1	0	0	0
34031*	34047	1	BSPHYD26	CONTROL	.0000	.6000	.0000	T	1	0	0	0
34032*	34048	1	BSPHYD34	CONTROL	.0000	.5100	.0000	T	1	0	0	0
34034	34035*	1	CAL GEN	CAL GENG	.0000	.1467	.0000	F	0	0	0	0
34034	34106*	1	CAL GEN	INYOKERN	.0392	.1437	.0000		1	169	0	0
34034	34297*	1	CAL GEN	CALGEN1G	.0000	.2857	.0000	F	1	0	0	0
34034	34298*	1	CAL GEN	CALGEN2G	.0000	.2933	.0000	F	1	0	0	0
34034	34299*	1	CAL GEN	CALGEN3G	.0000	.2933	.0000	F	1	0	0	0
34036	34080*	1	CAMINO	GENE	.0133	.0910	.1661		1	359	0	0
34036*	34108	1	CAMINO	IRON MTN	.0120	.0732	.1312		1	335	0	0
34036	40037*	E	CAMINO	MEAD	.0173	.1157	.2120		1	319	0	0
34036	40037*	W	CAMINO	MEAD	.0173	.1157	.2120		1	319	0	0
34037*	34054	1	CENTER S	DELAMO	.0005	.0069	.0223		1	988	0	0
34037	34143*	0	CENTER S	MESA CAL	.0011	.0135	.0472		1	988	0	0
34037	34155*	1	CENTER S	OLINDA	.0016	.0203	.0726		1	988	0	0
34039	34147*	1	CHINO	MIRLOMAA	.0010	.0055	.0392		1	713	0	0
34039	34147*	2	CHINO	MIRLOMAA	.0006	.0070	.0264		1	988	0	0
34039	34148*	3	CHINO	MIRLOMAC	.0006	.0070	.0265		1	988	0	0
34039	34182*	1	CHINO	S.ONOFRE	.0027	.0491	.1932		0	1287	0	0
34039	34191*	1	CHINO	SERRANO	.0014	.0254	.0999		1	1287	0	0
34039	34223*	1	CHINO	VIEJO	.0014	.0250	.0982		1	1287	0	0
34039	34822*	0	CHINO	CHINB 13	.0000	.0600	.0000	T	1	0	0	0
34039*	34995	1	CHINO	CHINOSVC	.0000	.0005	.0000		0	0	0	0
34041*	34113	1	COLWATER	KRAMER	.0400	.2170	.0000		1	0	0	0
34041	34189*	0	COLWATER	SEGS 1 G	.0000	.3325	.0000	F	0	0	0	0
34041*	34190	1	COLWATER	SEGS 2 G	.0004	.0023	.0000		1	0	0	0
34041*	34343	1	COLWATER	SEGS	.0004	.0023	.0000		1	0	0	0
34041	34344*	1	COLWATER	SEGS 1G	.0000	.3325	.0000	F	1	0	0	0
34042	34045*	0	COLWATER	COLWT3GT	.0000	.0632	.0000	F	1	0	0	0
34042	34046*	0	COLWATER	COLWT3ST	.0000	.0870	.0000	F	1	0	0	0
34042*	34114	1	COLWATER	KRAMER	.0068	.0663	.1333		1	643	0	0
34042*	34114	2	COLWATER	KRAMER	.0068	.0663	.1333		1	643	0	0
34042	34219*	0	COLWATER	COLWT4GT	.0000	.0632	.0000	F	1	0	0	0
34042	34220*	0	COLWATER	COLWT4ST	.0000	.0870	.0000	F	1	0	0	0
34047*	34048	1	CONTROL	CONTROL	.0000	.5400	.0000	T	1	28	0	0
34048*	34049	1	CONTROL	CONTROL	.0001	.1092	.0000	T	1	0	0	0
34048*	34053	1	CONTROL	CSA DIAB	.1170	.2160	.0000		1	0	0	0
34048*	34053	2	CONTROL	CSA DIAB	.1230	.3110	.0000		1	0	0	0
34048	34103*	1	CONTROL	INYO	.0060	.0196	.0024		1	0	0	0
34048	34106*	1	CONTROL	INYOKERN	.4410	.8150	.0880		1	0	0	0
34048	34106*	2	CONTROL	INYOKERN	.4410	.8150	.0880		1	0	0	0
34048	34215*	1	CONTROL	CONTROLX	.0000	.5667	.0000	F	0	0	0	0
34048*	34842	1	CONTROL	CONTR 23	.0000	.0600	.0000	F	1	280	0	0
34049	34243*	1	CONTROL	OXBOW G	.0467	.3399	.6476		1	0	0	0
34049	34804*	0	CONTROL	CONTB 13	.0000	.0600	.0000	T	1	0	0	0
34052*	34053	1	CSA DIAB	CSA DIAB	.0000	.0978	.0000	T	1	0	0	0
34054	34067*	0	DELAMO	ELLIS	.0017	.0193	.1151		1	988	0	0
34054*	34091	0	DELAMO	HINSON	.0011	.0138	.0481		1	988	0	0
34054	34118*	0	DELAMO	LAGUBELL	.0011	.0125	.0624		1	988	0	0
34055*	34056	1	DEVERS	DEVERS	.0000	.0117	.0000	T	1	1120	0	0
34055	34144*	2	DEVERS	MIRAGE	.0026	.0203	.0444		1	494	0	0
34055*	34184	1	DEVERS	SANBRDNO	.0118	.0659	.1172		1	317	0	0
34055	34184*	2	DEVERS	SANBRDNO	.0075	.0643	.1245		1	458	0	0
34055*	34212	1	DEVERS	VISTA	.0078	.0660	.1308		1	458	0	0
34055	34212*	2	DEVERS	VISTA	.0078	.0653	.1319		1	494	0	0
34055	34816*	0	DEVERS	DEVEB 13	.0000	.0600	.0000	T	1	0	0	0
34055*	34998	1	DEVERS	DEVERSV	.0000	.0005	.0000		1	0	0	0
34056	34204*	1	DEVERS	VALLEYSC	.0004	.0091	.6679		1	3421	0	0
34057*	34059	1	EAGLEMTN	EAGLEMTN	.0000	.1212	.0000	T	1	90	0	0
34058*	34059	1	EAGLEMTN	EAGLEMTN	.0000	.0272	.0000	T	1	48	0	0
34059	34108*	1	EAGLEMTN	IRON MTN	.0066	.0453	.0787		1	420	0	0

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E TUE, JUN 21 1994 12:04
 1998 HS2, SONGS OFF, VLY-RAINBW 500, SVC@SCE, SOFVRSVCSGD2.S BRANCH DATA
 BASED ON SONGSOFFCDSR.SAV, ADD SDG CHANGES ON 5/11 AND 5/17

FROM	TO	CKT	NAME	NAME	LINE R	LINE X	CHRGING	TP	ST	RATA	RATB	RATC
34059*	34110	1	EAGLEMTN	J.HINDS	.0032	.0210	.0350		1	420	0	0
34060	34143*	1	EAGLROCK	MESA CAL	.0014	.0256	.1003		1	1287	0	0
34060	34167*	1	EAGLROCK	PARDEE	.0084	.0700	.1593		1	494	0	0
34060	34201*	1	EAGLROCK	SYLMAR S	.0014	.0265	.1030		1	1287	0	0
34063*	34073	1	EL NIDO	ELSEGND0	.0003	.0036	.1340		1	988	0	0
34063*	34073	2	EL NIDO	ELSEGND0	.0003	.0036	.1340		1	988	0	0
34063	34116*	1	EL NIDO	LA FRESA	.0005	.0035	.0191		1	964	0	0
34063	34116*	2	EL NIDO	LA FRESA	.0005	.0035	.0191		1	964	0	0
34063	34123*	1	EL NIDO	LCIENEGA	.0010	.0116	.0263		1	643	0	0
34064*	34065	1	ELDORAD	ELDORADO	.0000	.1049	.0000	T	0	75	0	0
34065*	34066	1	ELDORADO	ELDORADO	.0000	.0232	.0000	T	1	500	0	0
34065*	34066	2	ELDORADO	ELDORADO	.0000	.0232	.0000	T	1	500	0	0
34065	34127*	N	ELDORADO	LUGO	.0494	.2692	.4728		1	327	0	0
34065	34127*	S	ELDORADO	LUGO	.0494	.2696	.4728		1	327	0	0
34065	34304*	1	ELDORADO	ELDORODO	.0000	.1049	.0000	F	1	75	0	0
34065	40037*	1	ELDORADO	MEAD	.0013	.0165	.0568		1	398	0	0
34065	40037*	2	ELDORADO	MEAD	.0013	.0168	.0578		1	398	0	0
34066	34128*	1	ELDORADO	LUGO	.0019	.0278	.0000		1	1386	0	0
34066*	34153	1	ELDORADO	MOHAVE	.0006	.0142	1.0429		1	3421	0	0
34066	34814*	0	ELDORADO	ELDRB 13	.0000	.0600	.0000	T	1	0	0	0
34066	34836*	0	ELDORADO	ELDRWB13	.0000	.0600	.0000	T	1	0	0	0
34067	34102*	1	ELLIS	HUNTGBCH	.0007	.0060	.0124		1	494	0	0
34067	34102*	2	ELLIS	HUNTGBCH	.0007	.0060	.0124		1	494	0	0
34067	34102*	3	ELLIS	HUNTGBCH	.0007	.0060	.0124		1	494	0	0
34067	34102*	4	ELLIS	HUNTGBCH	.0007	.0060	.0124		1	494	0	0
34067	34111*	1	ELLIS	JOHANNA	.0004	.0066	.0260		1	1287	0	0
34067	34185*	1	ELLIS	SANTIAGO	.0009	.0151	.0610		1	1287	0	0
34067	34329*	1	ELLIS	HUNT5 G	.0000	.1095	.0000	F	1	0	0	0
34070*	34073	1	ELSEG3 G	ELSEGND0	.0000	.0381	.0000	T	1	0	0	0
34072*	34073	1	ELSEG4 G	ELSEGND0	.0000	.0419	.0000	T	1	0	0	0
34073	34226*	1	ELSEGND0	ELSEG1 G	.0000	.0565	.0000	F	1	0	0	0
34073	34227*	1	ELSEGND0	ELSEG2 G	.0000	.0530	.0000	F	1	0	0	0
34074*	34078	1	ETIWA3 G	ETIWANDA	.0000	.0422	.0000	T	1	0	0	0
34076*	34078	1	ETIWA4 G	ETIWANDA	.0000	.0414	.0000	T	1	0	0	0
34077*	34078	1	ETIWANDA	ETIWANDA	.0000	.0653	.0000	T	1	150	0	0
34077*	34078	2	ETIWANDA	ETIWANDA	.0000	.0653	.0000	T	1	150	0	0
34078	34148*	1	ETIWANDA	MIRLOMAC	.0006	.0070	.0266		1	988	0	0
34078	34166*	1	ETIWANDA	PADUA	.0013	.0158	.0597		1	988	0	0
34078	34184*	1	ETIWANDA	SANBRDNO	.0021	.0251	.0954		1	988	0	0
34078	34212*	1	ETIWANDA	VISTA	.0014	.0158	.0671		1	988	0	0
34078	34324*	1	ETIWANDA	ETIWA 5G	.0000	.0898	.0000	F	1	0	0	0
34080*	40044	1	GENE	PARKER	.0005	.0027	.0046		1	355	0	0
34082*	34178	1	GOLETA	S.CLARA	.0016	.0130	.0270		1	494	0	0
34082*	34178	2	GOLETA	S.CLARA	.0016	.0130	.0270		1	494	0	0
34083	34084*	1	GOODRICH	GOULD	.0007	.0091	.0344		1	988	0	0
34083	34118*	1	GOODRICH	LAGUBELL	.0012	.0147	.0555		1	988	0	0
34084*	34201	1	GOULD	SYLMAR S	.0016	.0285	.1108		1	1287	0	0
34085	34086*	1	HARBOR	HARBOR G	.0000	.1664	.0000	F	1	0	0	0
34085	34091*	1	HARBOR	HINSON	.0005	.0044	.0081		1	441	0	0
34085	34120*	1	HARBOR	LBEACH	.0002	.0015	.0027		1	472	0	0
34090*	34091	1	HINSON	HINSON	.0000	.0665	.0000	T	1	280	0	0
34090*	34091	2	HINSON	HINSON	.0000	.0647	.0000	T	1	280	0	0
34090*	34119	1	HINSON	LBEACH	.0011	.0112	.0000		1	0	0	0
34091*	34116	1	HINSON	LA FRESA	.0010	.0152	.0547		1	988	0	0
34091*	34126	1	HINSON	LITEHIPE	.0010	.0093	.0171		1	472	0	0
34091*	34218	1	HINSON	ARCO G	.0003	.0021	.0042		1	494	0	0
34091*	34218	2	HINSON	ARCO G	.0003	.0021	.0042		1	494	0	0
34092	34113*	1	HOLGATE	KRAMER	.0347	.0674	.0000		1	183	0	0
34092*	34149	1	HOLGATE	MOGEN	.0041	.0106	.0000		1	0	0	0
34093*	34102	1	HUNT1 G	HUNTGBCH	.0000	.0585	.0000	T	1	0	0	0
34098*	34102	1	HUNT2 G	HUNTGBCH	.0000	.0585	.0000	T	1	0	0	0
34101*	34102	1	HUNTGBCH	HUNTGBCH	.0000	.0647	.0000	T	1	150	0	0
34101*	34102	2	HUNTGBCH	HUNTGBCH	.0000	.0671	.0000	T	1	150	0	0
34103	34105*	1	INYO	INYO PS	.0000	.1014	.0000	F	1	56	0	0
34104	34105*	1	INYO	INYO PS	.0000	.2666	.0000	F	1	56	0	0
34104	34105*	2	INYO	INYO PS	.0000	.2666	.0000	F	1	56	0	0
34106	34113*	1	INYOKERN	KRAMER	.0346	.2863	.0340		1	0	0	0
34106	34113*	2	INYOKERN	KRAMER	.0817	.1512	.0340		1	0	0	0

FROM	TO	CKT	NAME	NAME	LINE R	LINE X	CHRGING	TP	ST	RATA	RATB	RATC
34106	34142*	1	INYOKERN	MC GEN	.0931	.1739	.0000		1	0	0	0
34106	34187*	1	INYOKERN	SEARLES	.0976	.1810	.0000		1	0	0	0
34106*	34844	1	INYOKERN	INYOK 23	.0000	.0600	.0000	F	1	280	0	0
34107*	34108	1	IRON MTN	IRON MTN	.0000	.3237	.0000	T	1	33	0	0
34109*	34110	1	J.HINDS	J.HINDS	.0000	.1212	.0000	T	1	90	0	0
34110*	34144	1	J.HINDS	MIRAGE	.0132	.0721	.1269		1	357	0	0
34111	34185*	1	JOHANNA	SANTIAGO	.0005	.0086	.0330		1	1287	0	0
34112*	34187	0	KER MGEE	SEARLES	.0000	.0978	.0000	T	0	0	0	0
34113*	34114	1	KRAMER	KRAMER	.0000	.0567	.0000	T	1	250	0	0
34113*	34114	2	KRAMER	KRAMER	.0000	.0580	.0000	T	1	280	0	0
34113	34195*	1	KRAMER	SUNGEN	.0033	.0149	.0022		1	183	0	0
34113	34202*	1	KRAMER	TORTILLA	.0340	.1840	.0000		1	0	0	0
34113*	34206	1	KRAMER	VICTOR	.0308	.1847	.0274		1	0	0	0
34113*	34206	2	KRAMER	VICTOR	.0308	.1847	.0274		1	0	0	0
34113	34806*	0	KRAMER	KRAMB 13	.0000	.0600	.0000	T	1	0	0	0
34114	34127*	1	KRAMER	LUGO	.0082	.0685	.1412		1	494	0	0
34114	34127*	2	KRAMER	LUGO	.0082	.0685	.1412		1	494	0	0
34114*	34129	1	KRAMER	LUZ	.0010	.0156	.0585		1	1287	0	0
34114*	34207	1	KRAMER	VICTOR	.0063	.0846	.2756		1	643	0	0
34114*	34844	1	KRAMER	INYOK 23	.0051	.0356	.0426		1	494	0	0
34116	34118*	1	LA FRESA	LAGUBELL	.0010	.0184	.0644		1	1287	0	0
34116*	34123	1	LA FRESA	LCIENEGA	.0014	.0163	.0369		1	643	0	0
34116	34175*	1	LA FRESA	REDONDO	.0003	.0050	.0174		1	1287	0	0
34116	34175*	2	LA FRESA	REDONDO	.0003	.0050	.0174		1	1287	0	0
34118	34176*	1	LAGUBELL	RIOHONDO	.0014	.0177	.0604		1	988	0	0
34118	34902*	0	LAGUBELL	LAGUNABL	.0000	.0600	.0000	T	1	0	0	0
34119	34216*	1	LBEACH	LBEACH1G	.0000	.2084	.0000	F	1	0	0	0
34119	34217*	1	LBEACH	LBEACH9G	.0000	.2077	.0000	F	1	0	0	0
34119	34228*	1	LBEACH	LBEACH2G	.0000	.2107	.0000	F	1	0	0	0
34119	34229*	1	LBEACH	LBEACH3G	.0000	.2077	.0000	F	1	0	0	0
34119	34230*	1	LBEACH	LBEACH4G	.0000	.2084	.0000	F	1	0	0	0
34119	34234*	1	LBEACH	LBEACH8G	.0000	.1312	.0000	F	1	0	0	0
34120	34126*	1	LBEACH	LITEHIPE	.0016	.0146	.0262		1	472	0	0
34120	34231*	1	LBEACH	LBEACH5G	.0000	.2112	.0000	F	1	0	0	0
34120	34232*	1	LBEACH	LBEACH6G	.0000	.2010	.0000	F	1	0	0	0
34120	34233*	1	LBEACH	LBEACH7G	.0000	.1996	.0000	F	1	0	0	0
34124	34191*	1	LEWIS	SERRANO	.0004	.0075	.0297		1	1287	0	0
34124	34191*	2	LEWIS	SERRANO	.0004	.0075	.0297		1	1287	0	0
34124	34208*	1	LEWIS	VILLA PK	.0004	.0048	.0156		1	988	0	0
34126	34143*	1	LITEHIPE	MESA CAL	.0010	.0135	.0455		1	988	0	0
34126*	34175	1	LITEHIPE	REDONDO	.0012	.0161	.0526		1	988	0	0
34127*	34128	1	LUGO	LUGO	.0000	.0126	.0000	T	1	1120	0	0
34127*	34128	2	LUGO	LUGO	.0000	.0126	.0000	T	1	1120	0	0
34127*	34207	1	LUGO	VICTOR	.0019	.0155	.0321		1	494	0	0
34127*	34207	2	LUGO	VICTOR	.0019	.0155	.0321		1	494	0	0
34128	34146*	2	LUGO	MIRALOMA	.0003	.0075	.5174		1	3421	0	0
34128	34146*	3	LUGO	MIRALOMA	.0004	.0075	.5536		1	3421	0	0
34128*	34153	1	LUGO	MOHAVE	.0019	.0309	.0000		1	1386	0	0
34128	34192*	1	LUGO	SERRANO	.0006	.0128	.9462		1	3421	0	0
34128	34210*	1	LUGO	VINCENT	.0004	.0113	.8292		1	3421	0	0
34128	34210*	2	LUGO	VINCENT	.0004	.0113	.8292		1	3421	0	0
34128	34808*	0	LUGO	LUGOB 13	.0000	.0600	.0000	T	1	0	0	0
34129	34242*	0	LUZ	LUZ89 EQ	.0000	.0500	.0000	F	0	0	0	0
34129	34314*	0	LUZ	LUZ8	.0000	.1000	.0000	F	1	0	0	0
34129	34315*	0	LUZ	LUZ9	.0000	.1000	.0000	F	1	0	0	0
34134	34156*	1	MAGUNDEN	OMAR	.0011	.0132	.0285		1	643	0	0
34134	34168*	3	MAGUNDEN	PASTORIA	.0051	.0443	.0854		1	494	535	0
34134	34168*	4	MAGUNDEN	PASTORIA	.0026	.0323	.1165		1	988	1136	0
34134	34168*	E	MAGUNDEN	PASTORIA	.0088	.0467	.0844		1	353	373	0
34134	34168*	W	MAGUNDEN	PASTORIA	.0088	.0467	.0844		1	353	373	0
34134	34193*	1	MAGUNDEN	SPRINGVL	.0089	.0770	.1461		1	494	535	0
34134	34193*	2	MAGUNDEN	SPRINGVL	.0147	.0801	.1406		1	357	376	0
34134	34205*	E	MAGUNDEN	VESTAL	.0090	.0524	.1025		1	353	373	0
34134	34205*	W	MAGUNDEN	VESTAL	.0103	.0530	.1011		1	353	373	0
34134	34840*	2	MAGUNDEN	TEJON 23	.0069	.0749	.1137		1	494	0	0
34134	34900*	0	MAGUNDEN	MAGUENDN	.0000	.0600	.0000	T	1	0	0	0
34136	34139*	1	MANDALAY	MANDLY1G	.0000	.0589	.0000	F	1	0	0	0
34136	34140*	1	MANDALAY	MANDLY2G	.0000	.0589	.0000	F	1	0	0	0

FROM	TO	CKT	NAME	NAME	LINE R	LINE X	CHRGING	TP	ST	RATA	RATB	RATC
34136*	34178	1	MANDALAY	S.CLARA	.0016	.0130	.0270		1	494	0	0
34136*	34178	2	MANDALAY	S.CLARA	.0016	.0130	.0270		1	494	0	0
34141*	34142	0	MC GEN	MC GEN	.0000	.0850	.0000	T	1	0	0	0
34142*	34187	1	MC GEN	SEARLES	.0055	.0250	.0044		1	1833	0	0
34143	34175*	1	MESA CAL	REDONDO	.0023	.0287	.1007		1	988	0	0
34143	34176*	1	MESA CAL	RIOHONDO	.0009	.0121	.0407		1	988	0	0
34143*	34209	1	MESA CAL	VINCENT	.0031	.0391	.1407		1	988	0	0
34143	34214*	1	MESA CAL	WALNUT	.0012	.0138	.0600		1	988	0	0
34144	34818*	0	MIRAGE	MIRAB 13	.0000	.0600	.0000	T	1	0	0	0
34146	34147*	1	MIRALOMA	MIRLOMAA	.0000	.0111	.0000	F	1	1120	0	0
34146	34148*	2	MIRALOMA	MIRLOMAC	.0000	.0112	.0000	F	1	1000	0	0
34146	34148*	4	MIRALOMA	MIRLOMAC	.0000	.0121	.0000	F	1	1120	0	0
34146	34192*	1	MIRALOMA	SERRANO	.0002	.0046	.3234		1	3421	0	0
34147	34148*	1	MIRLOMAA	MIRLOMAC	.0000	.0003	.0000		1	0	0	0
34147	34212*	1	MIRLOMAA	VISTA	.0013	.0169	.0597		1	988	0	0
34147	34214*	1	MIRLOMAA	WALNUT	.0024	.0291	.1100		1	988	0	0
34148	34155*	1	MIRLOMAC	OLINDA	.0021	.0256	.1023		1	988	0	0
34148	34166*	1	MIRLOMAC	PADUA	.0018	.0226	.0855		1	988	0	0
34148	34212*	2	MIRLOMAC	VISTA	.0013	.0169	.0598		1	988	0	0
34149	34150*	1	MOGEN	MOGEN G	.0000	.0978	.0000	F	1	0	0	0
34149	34296*	1	MOGEN	BORAX I	.0000	.0978	.0000	F	1	0	0	0
34151*	34153	1	MOHAV1CC	MOHAVE	.0000	.0197	.0000	T	1	0	0	0
34152*	34153	1	MOHAV2CC	MOHAVE	.0000	.0198	.0000	T	1	0	0	0
34154	34160*	1	MOORPARK	ORMOND	.0013	.0225	.0900		1	1287	0	0
34154	34160*	2	MOORPARK	ORMOND	.0013	.0225	.0900		1	1287	0	0
34154	34160*	3	MOORPARK	ORMOND	.0013	.0225	.0900		1	1287	0	0
34154	34160*	4	MOORPARK	ORMOND	.0013	.0225	.0900		1	1287	0	0
34154*	34167	1	MOORPARK	PARDEE	.0015	.0268	.1055		1	1287	0	0
34154*	34167	2	MOORPARK	PARDEE	.0015	.0267	.1056		1	1287	0	0
34154*	34167	3	MOORPARK	PARDEE	.0015	.0267	.1056		1	1287	0	0
34154*	34178	1	MOORPARK	S.CLARA	.0043	.0363	.0743		1	494	0	0
34154*	34178	2	MOORPARK	S.CLARA	.0043	.0363	.0743		1	494	0	0
34155	34214*	1	OLINDA	WALNUT	.0005	.0068	.0256		1	988	0	0
34155	34824*	0	OLINDA	OLINB 13	.0000	.0600	.0000	T	1	0	0	0
34156	34157*	0	OMAR	OMAR G	.0000	.0393	.0000	F	1	0	0	0
34156*	34197	1	OMAR	SYC CYN	.0001	.0018	.0038		1	353	0	0
34160	34163*	1	ORMOND	ORMOND1G	.0000	.0148	.0000	F	1	0	0	0
34160	34222*	1	ORMOND	ORMOND2G	.0000	.0146	.0000	F	1	0	0	0
34160	34904*	0	ORMOND	ORMOND	.0000	.0600	.0000	T	1	0	0	0
34165*	34243	1	OXBOW G	OXBOW G	.0000	.1514	.0000	T	1	0	0	0
34167	34168*	3	PARDEE	PASTORIA	.0066	.0570	.1096		1	494	535	0
34167	34168*	4	PARDEE	PASTORIA	.0035	.0431	.1554		1	988	1136	0
34167	34168*	W	PARDEE	PASTORIA	.0110	.0601	.1056		1	353	373	0
34167	34178*	1	PARDEE	S.CLARA	.0068	.0570	.1176		1	494	0	0
34167	34178*	2	PARDEE	S.CLARA	.0068	.0570	.1176		0	494	0	0
34167	34201*	1	PARDEE	SYLMAR S	.0007	.0119	.0467		1	1287	0	0
34167	34201*	2	PARDEE	SYLMAR S	.0007	.0119	.0467		1	1287	0	0
34167	34209*	1	PARDEE	VINCENT	.0029	.0365	.1266		1	988	0	0
34167	34209*	2	PARDEE	VINCENT	.0014	.0340	.1125		0	988	0	0
34168	34802*	0	PASTORIA	PASTB 13	.0000	.0600	.0000	T	1	0	0	0
34169*	34205	1	RECTOR	VESTAL	.0097	.0496	.0939		1	353	373	0
34169	34205*	2	RECTOR	VESTAL	.0097	.0496	.0939		1	353	373	0
34170*	34175	1	REDON5 G	REDONDO	.0000	.0565	.0000	T	1	0	0	0
34175	34235*	1	REDONDO	REDON6 G	.0000	.0524	.0000	F	1	0	0	0
34175	34244*	1	REDONDO	REDON7 G	.0000	.0268	.0000	F	1	0	0	0
34175	34245*	1	REDONDO	REDON8 G	.0000	.0268	.0000	F	1	0	0	0
34176*	34209	1	RIOHONDO	VINCENT	.0028	.0354	.1239		1	988	0	0
34176	34209*	2	RIOHONDO	VINCENT	.0018	.0359	.1203		1	988	0	0
34178	34209*	2	S.CLARA	VINCENT	.0082	.0910	.2301		1	494	568	0
34178	34333*	1	S.CLARA	MANDLY 3	.0000	.1206	.0000	F	1	0	0	0
34180*	34182	1	S.ONOFR2	S.ONOFRE	.0000	.0097	.0000	T	1	0	0	0
34181*	34182	1	S.ONOFR3	S.ONOFRE	.0000	.0097	.0000	T	1	0	0	0
34182	34185*	1	S.ONOFRE	SANTIAGO	.0016	.0295	.1159		1	1287	0	0
34182	34185*	2	S.ONOFRE	SANTIAGO	.0016	.0295	.1159		1	1287	0	0
34182	34191*	1	S.ONOFRE	SERRANO	.0023	.0413	.1625		1	1287	0	0
34182*	34223	1	S.ONOFRE	VIEJO	.0013	.0242	.0950		1	1287	0	0
34182*	34901	1	S.ONOFRE	3XR2H	.0008	.0175	.0000	F	0	0	0	0
34182*	34997	1	S.ONOFRE	SONGSSVC	.0000	.0001	.0000	Z	0	0	0	0

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E TUE, JUN 21 1994 12:04
 1998 HS2, SONGS OFF, VLY-RAINBW 500, SVC@SCE, SOFVRSVCS DG2.S BRANCH DATA
 BASED ON SONGSOFFCDSR.SAV, ADD SDG CHANGES ON 5/11 AND 5/17

FROM	TO	CKT	NAME	NAME	LINE R	LINE X	CHRGING	TP	ST	RATA	RATB	RATC
34184*	34212	2	SANBRDNO	VISTA	.0007	.0088	.0319		1	988	0	0
34185	34826*	0	SANTIAGO	SANTB 13	.0000	.0600	.0000	T	1	0	0	0
34185*	34996	1	SANTIAGO	SANTISVC	.0000	.0005	.0000		0	0	0	0
34187	34312*	0	SEARLES	KERRGEN	.0000	.0978	.0000	F	1	0	0	0
34187	34313*	0	SEARLES	KERRMGEE	.0000	.0978	.0000	F	1	0	0	0
34188*	34209	1	SEAWEST	VINCENT	.0076	.0638	.0102		1	494	0	0
34190*	34202	1	SEGS 2 G	TORTILLA	.0096	.0536	.0000		0	0	0	0
34191*	34192	1	SERRANO	SERRANO	.0000	.0115	.0000	T	1	1120	0	0
34191*	34192	2	SERRANO	SERRANO	.0000	.0115	.0000	T	1	1120	0	0
34191	34208*	1	SERRANO	VILLA PK	.0002	.0033	.0130		1	1287	0	0
34191	34208*	2	SERRANO	VILLA PK	.0002	.0033	.0130		1	1287	0	0
34192	34204*	1	SERRANO	VALLEYSC	.0004	.0093	.6856		1	3421	0	0
34195	34196*	0	SUNGEN	SUNGEN G	.0000	.0587	.0000	F	0	0	0	0
34195	34348*	0	SUNGEN	SUNGEN3G	.0000	.3325	.0000	F	1	0	0	0
34195	34349*	0	SUNGEN	SUNGEN4G	.0000	.3325	.0000	F	1	0	0	0
34195	34350*	0	SUNGEN	SUNGEN5G	.0000	.3325	.0000	F	1	0	0	0
34195	34351*	0	SUNGEN	SUNGEN6G	.0000	.3325	.0000	F	1	0	0	0
34195	34352*	0	SUNGEN	SUNGEN7G	.0000	.3325	.0000	F	1	0	0	0
34197	34198*	1	SYC CYN	SYC CYNG	.0000	.0402	.0000	F	1	0	0	0
34202	34343*	1	TORTILLA	SEGS	.0096	.0536	.0000		1	0	0	0
34204	34830*	0	VALLEYSC	VALLB 13	.0000	.0600	.0000	T	1	0	0	0
34206*	34207	1	VICTOR	VICTOR	.0000	.0573	.0000	T	1	280	0	0
34206*	34207	2	VICTOR	VICTOR	.0000	.0573	.0000	T	1	280	0	0
34206	34812*	0	VICTOR	VICTLB13	.0000	.0600	.0000	T	1	0	0	0
34207	34810*	0	VICTOR	VICTB 13	.0000	.0600	.0000	T	1	0	0	0
34209*	34210	1	VINCENT	VINCENT	.0000	.0120	.0000	T	1	1000	0	0
34209*	34210	2	VINCENT	VINCENT	.0000	.0118	.0000	T	1	1000	0	0
34209*	34210	3	VINCENT	VINCENT	.0000	.0122	.0000	T	1	1120	0	0
34209	34832*	0	VINCENT	VINCB 13	.0000	.0600	.0000	T	1	0	0	0
34210	35991*	3	VINCENT	VINCEN&7	.0000	.0084	.0000		1	1819	0	0
34210	35994*	2	VINCENT	VINCEN&4	.0000	.0093	.0000		1	1848	0	0
34210	35996*	1	VINCENT	VINCEN&2	.0000	.0093	.0000		1	1848	0	0
34212	34834*	0	VISTA	VISTB 13	.0000	.0600	.0000	T	1	0	0	0
34292*	34295	1	BLM E1G	BLM EAST	.0000	.3325	.0000	T	1	0	0	0
34293*	34295	1	BLM E2G	BLM EAST	.0000	.3325	.0000	T	1	0	0	0
34294*	34295	1	BLM W1G	BLM EAST	.0000	.2933	.0000	T	1	0	0	0
34295*	34317	1	BLM EAST	NAVY II	.0001	.0014	.0000		1	494	0	0
34317	34318*	1	NAVY II	NAVYII1G	.0000	.3325	.0000	F	1	0	0	0
34317	34319*	1	NAVY II	NAVYII2G	.0000	.3325	.0000	F	1	0	0	0
34317	34320*	1	NAVY II	NAVYII3G	.0000	.3325	.0000	F	1	0	0	0
34343	34345*	0	SEGS	SEGS 2G	.0000	.3325	.0000	F	1	0	0	0
34838*	34840	0	TEJOB 13	TEJON 23	.0000	.0600	.0000	F	1	0	0	0
34842*	34844	1	CONTR 23	INYOK 23	.0212	.2860	.9310		1	643	0	0
34901	34902*	1	3XR2H	LAGUNABL	.0184	.3821	.0000	T	0	0	0	0
34901	34903*	1	3XR2H	3XR2X	.0229	.4770	.0000	T	0	0	0	0
34903*	34904	1	3XR2X	ORMOND	.0310	.0470	.0000		0	0	0	0
35991	35992*	3	VINCEN&7	VINCEN&6	.0006	.0125	.9250		1	3118	0	0
35992	35993*	3	VINCEN&6	VINCEN&5	.0005	.0127	.9109		1	3118	0	0
35994	35995*	2	VINCEN&4	VINCEN&3	.0012	.0266	1.9888		1	3118	0	0
35996	35997*	1	VINCEN&2	VINCEN&1	.0012	.0266	1.9870		1	3118	0	0

SDG&E Data

BUS#	NAME	BSKV	CODE	VOLT	ANGLE	PLOAD	QLOAD	S	H	U	N	T	AREA	ZONE
30001	BATIQTOS	138	1	1.0301	-8.5	37.0	7.5	.0	.0	.0	.0	.0	30	303
30003	CALAVRTP	138	1	1.0346	-7.8	.0	.0	.0	.0	.0	.0	.0	30	303
30004	CANNON	138	1	1.0368	-7.4	24.1	4.9	.0	.0	.0	.0	.0	30	303
30005	CAPSTRNO	138	1	1.0347	-7.7	44.5	9.0	.0	40.0	.0	.0	.0	30	303
30006	CARLHTTP	138	1	1.0318	-10.5	.0	.0	.0	.0	.0	.0	.0	30	303
30007	CARLTNHS	138	1	1.0313	-10.4	27.5	5.6	.0	.0	.0	.0	.0	30	303
30008	CHCARITA	138	1	1.0279	-10.0	26.2	5.3	.0	.0	.0	.0	.0	30	303
30010	CORONADO12.5		-2	1.0282	-15.0	27.3	5.5	.0	.0	.0	.0	.0	30	301
30011	CORONADO69.0		1	1.0173	-12.4	.0	.0	.0	.0	.0	.0	.0	30	301
30014	DIVISION69.0		-2	1.0216	-11.8	.0	.0	.0	.0	.0	.0	.0	30	301
30015	DIVISNGT12.5		-2	.9885	-18.9	41.0	8.3	.0	.0	.0	.0	.0	30	301
30016	DOUBLET	138	1	1.0358	-10.1	.0	.0	.0	.0	.0	.0	.0	30	303
30017	DOUBLTTP	138	1	1.0358	-10.1	.0	.0	.0	.0	.0	.0	.0	30	303
30019	ENCINA	138	1	1.0369	-7.4	.0	.0	.0	.0	.0	.0	.0	30	303
30020	ENCINA	230	1	.9998	-7.0	.0	.0	.0	.0	.0	.0	.0	30	303
30021	ENCINA	114.4	2	1.0030	-2.4	.0	.0	.0	.0	.0	.0	.0	30	303
30022	ENCINA	214.4	2	1.0030	-3.3	.0	.0	.0	.0	.0	.0	.0	30	303
30023	ENCINA	314.4	2	1.0040	-2.3	.0	.0	.0	.0	.0	.0	.0	30	303
30024	ENCINA	422.0	2	.9930	-4.9	.0	.0	.0	.0	.0	.0	.0	30	303
30025	ENCINA	524.0	-2	.9843	-5.7	.0	.0	.0	.0	.0	.0	.0	30	303
30028	ESCNDIDO	230	1	.9902	-7.8	.0	.0	.0	.0	.0	.0	.0	30	303
30029	ESCND050	138	1	1.0107	-8.7	.0	.0	.0	.0	.0	.0	.0	30	303
30030	ESCND051	138	1	1.0156	-9.1	.0	.0	.0	.0	.0	.0	.0	30	303
30032	IMPRLVLY	230	1	1.0130	7.4	.0	.0	.0	.0	.0	.0	.0	30	303
30033	IMPRLVLY	500	1	1.0562	12.2	.0	.0	.0	.0	.0	.0	.0	30	303
30034	KEARNY	69.0	1	1.0001	-15.6	70.8	14.4	.0	.0	.0	.0	.0	30	307
30035	KEARNYGT12.5		-2	.9911	-15.6	.0	.0	.0	.0	.0	.0	.0	30	307
30036	LAGNA NL	138	1	1.0328	-7.7	54.8	11.1	.0	.0	.0	.0	.0	30	303
30037	LOSCOCHS	138	1	1.0364	-11.2	.0	.0	.0	.0	.0	.0	.0	30	303
30040	MAIN ST	69.0	1	1.0245	-11.9	.0	.0	.0	100.0	.0	.0	.0	30	301
30042	MAINST50	138	1	1.0248	-7.8	.0	.0	.0	.0	.0	.0	.0	30	303
30043	MAINST51	138	1	1.0248	-7.8	.0	.0	.0	.0	.0	.0	.0	30	303
30044	MDWLRKTP	138	1	1.0279	-8.8	.0	.0	.0	.0	.0	.0	.0	30	303
30045	MIGUEL	69.0	1	1.0122	-9.3	.0	.0	.0	100.0	.0	.0	.0	30	309
30046	MIGUEL	138	1	1.0242	-3.4	.0	.0	.0	.0	.0	.0	.0	30	303
30047	MIGUEL	230	1	.9945	-1.1	.0	.0	.0	.0	.0	.0	.0	30	303
30048	MIGUEL	500	1	1.0353	8.0	.0	.0	.0	.0	.0	.0	.0	30	303
30051	MISSION	69.0	1	1.0165	-13.6	94.9	19.3	.0	50.0	.0	.0	.0	30	307
30052	MISSION	138	1	1.0320	-9.8	.0	.0	.0	.0	.0	.0	.0	30	303
30053	MISSION	230	1	.9786	-8.4	.0	.0	.0	.0	.0	.0	.0	30	303
30055	OLD TOWN69.0		1	.9992	-12.4	75.5	15.3	.0	.0	.0	.0	.0	30	301
30056	OLD TOWN	230	1	.9790	-8.8	.0	.0	.0	.0	.0	.0	.0	30	303
30057	PENSQTOS	138	1	1.0359	-10.1	.0	.0	.0	.0	.0	.0	.0	30	303
30058	PENSQTOS	230	1	.9807	-9.1	.0	.0	.0	.0	.0	.0	.0	30	306
30060	PRCTRVLY	138	1	1.0253	-3.7	18.4	3.7	.0	.0	.0	.0	.0	30	303
30066	SAMPSON	12.5	-2	.9603	-15.1	70.2	14.3	.0	.0	.0	.0	.0	30	301
30067	SAMPSON	69.0	1	1.0236	-11.9	.0	.0	.0	.0	.0	.0	.0	30	301
30069	SANLUSRY	138	1	1.0371	-8.0	.0	.0	.0	80.0	.0	.0	.0	30	303
30070	SANMATEO	138	1	1.0364	-6.8	34.4	7.0	.0	.0	.0	.0	.0	30	303
30071	SANMTOTP	138	1	1.0378	-6.5	.0	.0	.0	.0	.0	.0	.0	30	303
30081	SOUTHBAY69.0		1	1.0324	-10.4	.0	.0	.0	.0	.0	.0	.0	30	302
30082	SOUTHBAY	138	1	1.0403	-5.9	.0	.0	.0	.0	.0	.0	.0	30	303
30083	SOUTHBAY	230	4	1.0000	-4.0	.0	.0	.0	.0	.0	.0	.0	30	303
30084	SOUTHBY115.0		-2	1.0172	-5.2	.0	.0	.0	.0	.0	.0	.0	30	303
30085	SOUTHBY215.0		2	1.0160	-6.6	.0	.0	.0	.0	.0	.0	.0	30	303
30086	SOUTHBY320.0		2	1.0260	-6.1	.0	.0	.0	.0	.0	.0	.0	30	303
30087	SOUTHBY420.0		2	1.0170	-4.1	.0	.0	.0	.0	.0	.0	.0	30	303
30090	SYCAMORE	230	1	.9868	-6.0	.0	.0	.0	.0	.0	.0	.0	30	303
30091	TALEGA	138	1	1.0379	-6.5	.0	.0	.0	.0	.0	.0	.0	30	303
30092	TALEGA	230	1	.9968	-4.4	.0	.0	.0	.0	.0	.0	.0	30	303
30093	TRABUCO	138	1	1.0327	-7.7	93.0	18.9	.0	.0	.0	.0	.0	30	303
30094	ALPINE	69.0	1	1.0148	-16.0	12.8	2.6	.0	.0	.0	.0	.0	30	308
30095	ASH	69.0	1	1.0117	-14.2	45.1	9.2	.0	.0	.0	.0	.0	30	305
30096	ASH	TP69.0	1	1.0114	-14.3	.0	.0	.0	.0	.0	.0	.0	30	305
30097	AVCADOTP69.0		1	1.0206	-12.3	.0	.0	.0	.0	.0	.0	.0	30	304
30098	AVOCADO	69.0	1	1.0198	-12.4	21.0	4.3	.0	.0	.0	.0	.0	30	304
30099	B	69.0	1	1.0165	-12.4	80.8	16.4	.0	.0	.0	.0	.0	30	301
30101	BARRETLK69.0		1	1.0121	-17.2	2.8	.6	.0	.0	.0	.0	.0	30	308

SDG&E

BUS#	NAME	BSKV	CODE	VOLT	ANGLE	PLOAD	QLOAD	S	H	U	N	T	AREA	ZONE
30171	MURRAY	69.0	-2	1.0038	-15.4	97.6	19.8	.0	.0	.0	.0	.0	30	307
30172	N.GILA	500	1	1.0532	18.1	.0	.0	.0	.0	.0	.0	.0	30	300
30173	NARROWS	69.0	1	1.0116	-22.6	.0	.0	.0	.0	2.0	.0	.0	30	305
30174	NATLCYTP	69.0	1	1.0218	-11.7	.0	.0	.0	.0	.0	.0	.0	30	301
30175	NATNLCTY	69.0	1	1.0219	-11.7	3.5	.7	.0	.0	.0	.0	.0	30	301
30176	NAVSTMTR	69.0	1	1.0214	-11.7	18.9	3.8	.0	.0	.0	.0	.0	30	301
30177	OCEANSDE	69.0	1	1.0232	-11.9	22.1	4.5	.0	.0	.0	.0	.0	30	304
30178	OCNSDETP	69.0	1	1.0241	-11.9	.0	.0	.0	.0	.0	.0	.0	30	304
30179	OLDTWNGT	12.5	-2	.9949	-12.4	.0	.0	.0	.0	.0	.0	.0	30	303
30180	OTAY	69.0	-2	1.0264	-10.9	34.2	6.9	.0	.0	.0	.0	.0	30	302
30181	OTAY TP	69.0	1	1.0259	-11.0	.0	.0	.0	.0	.0	.0	.0	30	302
30182	OTAYLAKE	69.0	1	1.0134	-11.2	.8	.2	.0	.0	.0	.0	.0	30	302
30183	OTAYLKTP	69.0	1	1.0216	-11.1	.0	.0	.0	.0	.0	.0	.0	30	302
30184	PACFCBCH	69.0	1	.9928	-14.6	50.4	10.2	.0	.0	.0	.0	.0	30	301
30185	PALA	69.0	1	1.0449	-9.2	8.4	1.7	.0	.0	.0	.0	.0	30	304
30187	PARADISE	69.0	1	1.0081	-11.7	37.3	7.6	.0	.0	.0	.0	.0	30	309
30188	PENDLETN	69.0	1	1.0211	-12.3	18.1	3.7	.0	.0	.0	.0	.0	30	304
30189	PENSQTOS	69.0	1	1.0172	-13.5	.0	.0	.0	100.0	.0	.0	.0	30	306
30190	POINTLMA	69.0	-2	.9964	-12.8	43.7	8.9	.0	.0	.0	.0	.0	30	301
30193	R.SNTAFE	69.0	-2	.9944	-15.4	17.6	3.6	.0	.0	.0	.0	.0	30	306
30194	R.SNTATP	69.0	1	1.0112	-14.2	.0	.0	.0	.0	.0	.0	.0	30	306
30195	RINCON	69.0	-2	1.0087	-16.5	19.9	4.0	.0	.0	.0	.0	.0	30	305
30196	ROSCYNTP	69.0	1	.9988	-15.5	.0	.0	.0	.0	.0	.0	.0	30	306
30197	ROSE CYN	69.0	1	.9989	-15.5	45.5	9.2	.0	.0	.0	.0	.0	30	306
30198	SANLUSRY	69.0	1	1.0295	-11.3	66.7	13.6	.0	.0	.0	.0	.0	30	304
30199	SANLUSRY	230	1	.9935	-5.3	.0	.0	.0	.0	.0	.0	.0	30	303
30200	SANMRCOS	69.0	-2	1.0113	-13.9	64.1	13.0	.0	.0	.0	.0	.0	30	305
30201	SANTEE	69.0	1	.9985	-16.4	46.1	9.4	.0	.0	.0	.0	.0	30	308
30202	SANTYSBL	69.0	1	1.0211	-18.8	6.5	1.3	.0	.0	.0	.0	.0	30	308
30203	SANYSDRO	69.0	1	1.0206	-11.3	24.4	5.0	.0	.0	.1	.0	.0	30	302
30204	SCRAPDSP	69.0	1	1.0216	-11.7	1.3	.3	.0	.0	.0	.0	.0	30	301
30205	SCRIPPS	69.0	1	1.0013	-16.2	50.2	10.2	.0	.0	.0	.0	.0	30	306
30207	SPRNGVLY	69.0	1	1.0018	-13.2	26.7	5.4	.0	.0	.0	.0	.0	30	309
30208	STREAMVW	69.0	1	1.0085	-12.9	42.3	8.6	.0	.0	.0	.0	.0	30	309
30209	STUART	69.0	1	1.0205	-12.2	3.9	.8	.0	.0	.0	.0	.0	30	304
30210	SUNYSIDE	69.0	1	1.0126	-11.1	9.0	1.8	.0	.0	.0	.0	.0	30	309
30211	SWEETWTR	69.0	-2	1.0233	-11.4	42.2	8.6	.0	.0	.0	.0	.0	30	302
30212	SWTWTRTP	69.0	1	1.0220	-11.6	.0	.0	.0	.0	.0	.0	.0	30	301
30214	TOREYPNS	69.0	1	1.0125	-14.1	58.7	11.9	.0	.0	.0	.0	.0	30	306
30215	UCSD	69.0	1	1.0095	-14.6	23.6	4.8	.0	.0	.0	.0	.0	30	306
30216	URBAN	69.0	1	1.0185	-12.3	42.8	8.7	.0	.0	.0	.0	.0	30	301
30217	WABASH	69.0	1	1.0170	-12.3	7.4	1.5	.0	.0	.0	.0	.0	30	301
30218	WARCYNTP	69.0	1	1.0110	-14.6	.0	.0	.0	.0	.0	.0	.0	30	305
30219	WARENCYN	69.0	1	1.0098	-14.6	3.8	.8	.0	.0	.0	.0	.0	30	305
30220	WARNERS	69.0	1	1.0347	-20.1	4.4	.9	.0	25.0	.0	.0	.0	30	305
30221	ENCINAGT	12.5	-2	1.0344	-7.4	.0	.0	.0	.0	.0	.0	.0	30	303
30222	GENSETP	69.0	1	1.0094	-14.6	.0	.0	.0	.0	.0	.0	.0	30	306
30223	MARGARTA	138	1	1.0328	-7.7	15.8	3.2	.0	.0	.0	.0	.0	30	303
30224	MIRAMRGT	12.5	-2	.9621	-15.5	.0	.0	.0	.0	.0	.0	.0	30	306
30225	NOISLMTP	69.0	1	1.0173	-12.4	.0	.0	.0	.0	.0	.0	.0	30	301
30226	NOISLMTR	69.0	-2	1.0174	-12.3	20.9	4.2	.0	.0	.0	.0	.0	30	301
30227	PALOMAR	138	1	1.0345	-7.8	27.2	5.5	.0	.0	.0	.0	.0	30	303
30229	SOUTHGHT	12.5	-2	1.0066	-10.4	.0	.0	.0	.0	.0	.0	.0	30	302
30326	DALEY	69.0	1	1.0111	-9.4	3.2	.6	.0	.0	.0	.0	.0	30	309
30327	NORTHCTY	138	1	1.0357	-9.6	15.0	3.0	.0	.0	.0	.0	.0	30	303
30328	OLDTWNTP	69.0	1	1.0028	-12.5	.0	.0	.0	.0	.0	.0	.0	30	301
30329	PICO	138	1	1.0375	-6.6	13.0	2.6	.0	.0	.0	.0	.0	30	303
30330	TELECYN	138	1	1.0291	-4.4	18.4	3.7	.0	.0	.0	.0	.0	30	303
30331	MAIN	230	4	.9995	-6.6	.0	.0	.0	.0	.0	.0	.0	30	303
30332	PALA	230	1	.9897	-7.2	.0	.0	.0	.0	.0	.0	.0	30	304
30333	SBYRPW1	20.0	4	.9954	1.5	.0	.0	.0	.0	.0	.0	.0	30	303
30334	SBYRPW2	20.0	4	.9955	1.5	.0	.0	.0	.0	.0	.0	.0	30	303
30335	SBYRPW3	20.0	4	.9955	1.5	.0	.0	.0	.0	.0	.0	.0	30	303
30991	MESAHGTS	69.0	1	1.0020	-15.3	31.0	6.3	.0	.0	.0	.0	.0	30	307
30992	POMERADO	69.0	1	1.0146	-14.4	16.9	3.4	.0	.0	.0	.0	.0	30	305
30993	POWAY	69.0	1	1.0090	-15.1	41.5	8.4	.0	.0	.0	.0	.0	30	305
30994	R.CARMEL	69.0	1	1.0068	-15.3	41.5	8.4	.0	.0	.0	.0	.0	30	305
30995	SYCAMORE	69.0	-2	1.0216	-13.6	.0	.0	.0	50.0	.0	.0	.0	30	306

BUS#	NAME	BSKV	COD	MCNS	PGEN	QGEN	QMAX	QMIN	VSCHED	VACT.	REMO	PCT	Q
30010	CORONADO	12.5	-2	1	.0	.0	.0	.0	1.0200	1.0282			
30014	DIVISION	69.0	-2	1	47.0	.0	.0	.0	1.0200	1.0216			
30015	DIVISNGT	12.5	-2	1	.0	.0	.0	.0	1.0000	.9885			
30021	ENCINA	114.4	2	1	105.0	12.4	70.0	-20.0	1.0030	1.0030			
30022	ENCINA	214.4	2	1	104.0	13.8	69.0	-20.0	1.0030	1.0030			
30023	ENCINA	314.4	2	1	110.0	13.9	71.0	-20.0	1.0040	1.0040			
30024	ENCINA	422.0	2	1	130.5	23.4	130.0	-40.0	.9930	.9930			
30025	ENCINA	524.0	-2	1	115.0	173.0	173.0	-40.0	.9910	.9843			
30035	KEARNYGT	12.5	-2	1	.0	.0	.0	.0	1.0200	.9911			
30066	SAMPSON	12.5	-2	1	11.0	.0	.0	.0	1.0200	.9603			
30084	SOUTHBY	115.0	-2	1	147.0	58.0	58.0	-30.0	1.0250	1.0172			
30085	SOUTHBY	215.0	2	1	150.0	44.0	71.0	-30.0	1.0160	1.0160			
30086	SOUTHBY	320.0	2	1	224.0	87.1	120.0	-30.0	1.0260	1.0260			
30087	SOUTHBY	420.0	2	1	100.0	87.6	164.0	-30.0	1.0170	1.0170			
30106	BOLVRDTP	69.0	-2	1	6.5	.0	.0	.0	1.0200	1.0124			
30110	BOULEVRD	69.0	-2	1	.5	.0	.0	.0	1.0200	1.0064			
30111	CABRILLO	69.0	-2	1	1.0	.0	.0	.0	1.0200	.9950			
30127	ELCAJNGT	12.5	-2	1	.0	.0	.0	.0	1.0000	1.0068			
30131	ESCO	69.0	-2	1	50.0	.0	.0	.0	1.0200	1.0196			
30150	KYOCERA	69.0	-2	1	.5	.0	.0	.0	1.0200	1.0006			
30164	MIRAMAR	69.0	-2	1	.5	.0	.0	.0	1.0200	1.0011			
30171	MURRAY	69.0	-2	1	.5	.0	.0	.0	1.0200	1.0038			
30179	OLDTWNGT	12.5	-2	1	.0	.0	.0	.0	1.0000	.9949			
30180	OTAY	69.0	-2	1	3.5	.0	.0	.0	1.0200	1.0264			
30190	POINTLMA	69.0	-2	1	22.0	.0	.0	.0	1.0200	.9964			
30193	R.SNTAFE	69.0	-2	1	.5	.0	.0	.0	1.0200	.9944			
30195	RINCON	69.0	-2	1	.5	.0	.0	.0	1.0200	1.0087			
30200	SANMRCOS	69.0	-2	1	1.5	.0	.0	.0	1.0200	1.0113			
30211	SWEETWTR	69.0	-2	1	.5	.0	.0	.0	1.0200	1.0233			
30221	ENCINAGT	12.5	-2	1	.0	.0	.0	.0	1.0000	1.0344			
30224	MIRAMRGT	12.5	-2	1	.0	.0	.0	.0	1.0200	.9621			
30226	NOISLMTR	69.0	-2	1	33.0	.0	.0	.0	1.0200	1.0174			
30229	SOUTHBGT	12.5	-2	1	.0	.0	.0	.0	1.0000	1.0066			
30333	SBYRPW1	20.0	4	1	.0	.0	.0	.0	1.0000	1.0000	30083	34.0	
30334	SBYRPW2	20.0	4	1	.0	.0	.0	.0	1.0000	1.0000	30083	33.0	
30335	SBYRPW3	20.0	4	1	.0	.0	.0	.0	1.0000	1.0000	30083	33.0	
30995	SYCAMORE	69.0	-2	1	1.5	.0	.0	.0	1.0200	1.0216			

FROM	TO	CKT	NAME	NAME	LINE R	LINE X	CHRGING	TP	ST	RATA	RATB	RATC
104*	30172	1	N.GILAL	N.GILA	.0001	.0097	.0000	T	1	1533	0	0
203	30032*	1	IMPRLVLY	IMPRLVLY	.0030	.0902	.0000	F	1	125	0	0
2144	30172*	1	N.GILA	N.GILA	.0021	.1894	.0000	T	1	240	0	0
2166*	31997	1	PALOVTRDE	N.GILA&1	.0000	.0001	.0000	Z	1	0	0	0
8022	30032*	1	ELCENTRO	IMPRLVLY	.0038	.0250	.0561		1	442	0	0
12252*	30032	1	ROA	IMPRLVLY	.0016	.0124	.0258		1	456	0	0
12286*	30047	1	TJI-230	MIGUEL	.0012	.0097	.0770		1	797	0	0
30001	30044*	1	BATIQTOS	MDWLRKTP	.0006	.0074	.0038		1	478	0	0
30001*	30227	1	BATIQTOS	PALOMAR	.0009	.0111	.0042		1	478	0	0
30003	30019*	1	CALAVRTP	ENCINA	.0018	.0136	.0076		1	274	0	0
30003	30029*	1	CALAVRTP	ESCND050	.0175	.0613	.0138		1	112	0	0
30003	30069*	1	CALAVRTP	SANLUSRY	.0021	.0160	.0047		1	274	0	0
30004*	30019	1	CANNON	ENCINA	.0000	.0004	.0002		1	478	0	0
30004*	30069	1	CANNON	SANLUSRY	.0033	.0269	.0081		1	274	0	0
30005	30036*	1	CAPSTRNO	LAGNA NL	.0044	.0115	.0033		1	137	0	0
30005	30093*	1	CAPSTRNO	TRABUCO	.0020	.0147	.0040		1	274	0	0
30005*	30113	1	CAPSTRNO	CAPSTRNO	.0246	.7347	.0000	T	1	25	0	0
30005	30329*	1	CAPSTRNO	PICO	.0050	.0260	.0068		1	204	0	0
30006*	30007	1	CARLTHTP	CARLTNHS	.0007	.0059	.0016		1	274	0	0
30006*	30008	1	CARLTHTP	CHCARITA	.0085	.0431	.0119		1	204	0	0
30006*	30037	1	CARLTHTP	LOSCOCHS	.0073	.0322	.0132		1	273	0	0
30007*	30052	1	CARLTNHS	MISSION	.0049	.0239	.0190		1	273	0	0
30008	30044*	1	CHCARITA	MDWLRKTP	.0086	.0473	.0131		1	204	0	0
30010*	30011	1	CORONADO	CORONADO	.0007	.1817	.0000	T	1	84	0	0
30011*	30067	1	CORONADO	SAMPSON	.0077	.0301	.0208		1	73	0	0
30011	30225*	1	CORONADO	NOISLMTP	.0000	.0001	.0000	Z	1	54	0	0
30011*	30226	1	CORONADO	NOISLMTR	.0036	.0064	.0033		1	54	0	0
30014	30015*	1	DIVISION	DIVISNGT	.0000	.3059	.0000	F	1	53	0	0
30014*	30067	1	DIVISION	SAMPSON	.0053	.0150	.0010		1	101	0	0
30014	30176*	1	DIVISION	NAVSTMTR	.0027	.0079	.0010		1	98	0	0
30016	30017*	1	DOUBLET	DOUBLTTP	.0014	.0050	.0014		1	137	0	0
30017	30052*	1	DOUBLTTP	MISSION	.0091	.0472	.0141		1	204	0	0
30017	30057*	1	DOUBLTTP	PENSQTOS	.0004	.0019	.0030		1	204	0	0
30019*	30021	1	ENCINA	ENCINA 1	.0030	.0902	.0000	T	1	125	0	0
30019*	30022	1	ENCINA	ENCINA 2	.0025	.0750	.0000	T	1	134	0	0
30019*	30023	1	ENCINA	ENCINA 3	.0030	.0890	.0000	T	1	125	0	0
30019*	30024	1	ENCINA	ENCINA 4	.0009	.0368	.0000	T	1	310	0	0
30019	30057*	1	ENCINA	PENSQTOS	.0082	.0606	.0354		1	382	0	0
30019	30221*	1	ENCINA	ENCINAGT	.0043	.6751	.0000	F	1	20	0	0
30019	30227*	1	ENCINA	PALOMAR	.0004	.0048	.0018		1	478	0	0
30019	30327*	1	ENCINA	NORTHCTY	.0039	.0370	.0245		1	359	0	0
30020*	30025	1	ENCINA	ENCINA 5	.0006	.0215	.0000	T	1	355	0	0
30020*	30028	1	ENCINA	ESCNDIDO	.0012	.0156	.0627		1	797	0	0
30020*	30058	1	ENCINA	PENSQTOS	.0016	.0187	.0037		1	797	0	0
30020	34182*	1	ENCINA	S.ONOFRE	.0044	.0349	.0764		1	456	0	0
30028*	30090	1	ESCNDIDO	SYCAMORE	.0023	.0261	.0784		1	797	0	0
30028*	30130	1	ESCNDIDO	ESCNDIDO	.0017	.0648	.0000	T	1	224	0	0
30028*	30130	2	ESCNDIDO	ESCNDIDO	.0017	.0648	.0000	T	1	224	0	0
30028	30332*	1	ESCNDIDO	PALA	.0032	.0244	.0506		1	456	0	0
30029	30130*	2	ESCND050	ESCNDIDO	.0098	.2224	.0000	F	1	63	0	0
30030*	30044	1	ESCND051	MDWLRKTP	.0087	.0300	.0066		1	112	0	0
30030	30130*	1	ESCND051	ESCNDIDO	.0096	.2224	.0000	F	1	63	0	0
30032	30033*	0	IMPRLVLY	IMPRLVLY	.0003	.0264	.0000	F	1	535	0	0
30033	31998*	1	IMPRLVLY	IMPRLV&2	.0000	.0099	.0000		1	1213	0	0
30033	31999*	1	IMPRLVLY	IMPRLV&1	.0000	.0102	.0000		1	1067	0	0
30034	30035*	1	KEARNY	KEARNYGT	.0010	.0693	.0000	F	1	164	0	0
30034	30051*	2	KEARNY	MISSION	.0134	.0665	.0018		1	137	0	0
30034	30117*	1	KEARNY	CLARMTTP	.0084	.0408	.0015		1	101	0	0
30034	30139*	1	KEARNY	GENDYNTTP	.0012	.0081	.0002		1	137	0	0
30036*	30071	1	LAGNA NL	SANMTOTP	.0140	.0416	.0106		1	137	0	0
30037	30082*	1	LOSCOCHS	SOUTHBAY	.0288	.0905	.0300		1	204	0	0
30037	30155*	1	LOSCOCHS	LOSCOCHS	.0030	.0916	.0000	F	1	150	0	0
30037	30155*	2	LOSCOCHS	LOSCOCHS	.0032	.1005	.0000	F	1	140	0	0
30040*	30042	1	MAIN ST	MAINST50	.0017	.0584	.0000	T	1	224	0	0
30040*	30043	1	MAIN ST	MAINST51	.0017	.0584	.0000	T	1	224	0	0
30040*	30067	1	MAIN ST	SAMPSON	.0003	.0020	.0000		1	239	0	0
30040*	30067	2	MAIN ST	SAMPSON	.0002	.0020	.0000		1	239	0	0
30040*	30099	1	MAIN ST	B	.0061	.0251	.0213		1	98	0	0

FROM	TO	CKT	NAME	NAME	LINE R	LINE X	CHRGING	TP	ST	RATA	RATB	RATC
30040*	30099	2	MAIN ST	B	.0025	.0177	.0040		1	98	0	0
30040	30216*	1	MAIN ST	URBAN	.0050	.0154	.0049		1	98	0	0
30040*	30217	1	MAIN ST	WABASH	.0192	.0558	.0035		1	101	0	0
30042	30082*	1	MAINST50	SOUTHBAY	.0037	.0273	.0074		1	274	0	0
30043	30082*	1	MAINST51	SOUTHBAY	.0037	.0273	.0074		1	274	0	0
30045	30047*	1	MIGUEL	MIGUEL	.0010	.0907	.0000	F	1	224	0	0
30045	30047*	2	MIGUEL	MIGUEL	.0010	.0907	.0000	F	1	224	0	0
30045	30107*	1	MIGUEL	BORDER	.0227	.1414	.0033		1	137	0	0
30045	30143*	1	MIGUEL	GRANITTP	.0342	.1738	.0029		1	102	0	0
30045	30147*	1	MIGUEL	JAMACHA	.0157	.1068	.0026		1	137	0	0
30045	30147*	2	MIGUEL	JAMACHA	.0157	.1068	.0026		1	137	0	0
30045*	30163	1	MIGUEL	MIGUELTP	.0100	.0515	.0016		1	137	0	0
30045*	30187	1	MIGUEL	PARADISE	.0124	.0806	.0021		1	137	0	0
30045	30326*	1	MIGUEL	DALEY	.0174	.1088	.0025		1	137	0	0
30046*	30047	1	MIGUEL	MIGUEL	.0024	.0228	.0000	T	1	392	0	0
30046*	30060	1	MIGUEL	PRCTRVLY	.0004	.0028	.0013		1	408	0	0
30047	30053*	1	MIGUEL	MISSION	.0029	.0319	.1517		1	797	0	0
30047	30083*	1	MIGUEL	SOUTHBAY	.0010	.0110	.0425		0	912	0	0
30047	30090*	1	MIGUEL	SYCAMORE	.0023	.0261	.0784		1	797	0	0
30047	30162*	1	MIGUEL	MIGUELMP	.0000	.0088	.0000	F	1	1120	0	0
30048	30162*	1	MIGUEL	MIGUELMP	.0000	.0118	.0000		1	1067	0	0
30048*	31999	1	MIGUEL	IMPRLV&1	.0008	.0201	1.4783		1	1067	0	0
30051*	30052	1	MISSION	MISSION	.0047	.1021	.0000	T	1	100	0	0
30051*	30052	2	MISSION	MISSION	.0015	.0526	.0000	T	1	224	0	0
30051*	30052	3	MISSION	MISSION	.0015	.0526	.0000	T	1	224	0	0
30051*	30053	1	MISSION	MISSION	.0013	.0737	.0000	T	1	224	0	0
30051	30128*	1	MISSION	ELLIOTT	.0072	.0301	.0022		1	137	0	0
30051	30133*	1	MISSION	F	.0047	.0172	.0012		1	101	0	0
30051	30133*	2	MISSION	F	.0079	.0247	.0014		1	101	0	0
30051	30134*	1	MISSION	FASHNVLY	.0103	.0336	.0013		1	137	0	0
30051	30171*	1	MISSION	MURRAY	.0300	.0875	.0026		1	102	0	0
30051	30171*	2	MISSION	MURRAY	.0214	.0922	.0022		1	102	0	0
30051	30171*	3	MISSION	MURRAY	.0153	.0952	.0022		1	137	0	0
30051*	30991	1	MISSION	MESAHGTS	.0116	.0518	.0015		1	137	0	0
30052*	30053	1	MISSION	MISSION	.0006	.0230	.0000	T	1	392	0	0
30052*	30053	2	MISSION	MISSION	.0006	.0230	.0000	T	1	392	0	0
30052*	30082	1	MISSION	SOUTHBAY	.0068	.0470	.0181		1	274	0	0
30053*	30056	1	MISSION	OLD TOWN	.0007	.0055	.0113		1	797	0	0
30053*	30056	2	MISSION	OLD TOWN	.0007	.0055	.0113		1	797	0	0
30053*	30199	1	MISSION	SANLUSRY	.0065	.0500	.1044		1	456	0	0
30053*	30331	1	MISSION	MAIN	.0003	.0016	1.8428		0	732	0	0
30053	34182*	1	MISSION	S.ONOFRE	.0097	.0754	.1578		1	456	0	0
30055	30056*	1	OLD TOWN	OLD TOWN	.0016	.0649	.0000	F	1	224	0	0
30055	30056*	2	OLD TOWN	OLD TOWN	.0016	.0649	.0000	F	1	224	0	0
30055	30179*	1	OLD TOWN	OLDTWNGT	.0012	.1155	.0000	F	1	75	0	0
30055*	30184	1	OLD TOWN	PACFCBCH	.0076	.0567	.0262		1	98	0	0
30055	30190*	1	OLD TOWN	POINTLMA	.0070	.0501	.0010		1	108	0	0
30055	30190*	2	OLD TOWN	POINTLMA	.0082	.0406	.0050		1	137	0	0
30055	30328*	1	OLD TOWN	OLDTWNTP	.0011	.0072	.0007		1	239	0	0
30056*	30058	1	OLD TOWN	PENSQTOS	.0009	.0081	.0032		1	797	0	0
30057*	30189	1	PENSQTOS	PENSQTOS	.0032	.1056	.0000	T	1	140	0	0
30057*	30189	2	PENSQTOS	PENSQTOS	.0037	.1068	.0000	T	1	140	0	0
30057*	30189	3	PENSQTOS	PENSQTOS	.0030	.1061	.0000	T	1	140	0	0
30057*	30327	1	PENSQTOS	NORTHCTY	.0010	.0093	.0061		1	359	0	0
30058	30189*	1	PENSQTOS	PENSQTOS	.0011	.0657	.0000	F	1	224	0	0
30058	30189*	2	PENSQTOS	PENSQTOS	.0011	.0657	.0000	F	1	224	0	0
30060	30330*	1	PRCTRVLY	TELECYN	.0010	.0076	.0037		1	408	0	0
30066*	30067	1	SAMPSON	SAMPSON	.0000	.0880	.0000	T	1	132	0	0
30067	30114*	1	SAMPSON	CHOLASTP	.0095	.0265	.0017		1	101	0	0
30067*	30217	1	SAMPSON	WABASH	.0116	.0314	.0097		1	101	0	0
30069	30070*	1	SANLUSRY	SANMATEO	.0115	.0801	.0261		1	222	0	0
30069	30198*	2	SANLUSRY	SANLUSRY	.0018	.2340	.0000	F	1	63	0	0
30069	30198*	3	SANLUSRY	SANLUSRY	.0018	.2340	.0000	F	1	63	0	0
30069	30198*	4	SANLUSRY	SANLUSRY	.0018	.2340	.0000	F	1	63	0	0
30070*	30071	1	SANMATEO	SANMTOTP	.0022	.0084	.0055		1	222	0	0
30071*	30091	1	SANMTOTP	TALEGA	.0002	.0013	.0005		1	274	0	0
30081	30082*	1	SOUTHBAY	SOUTHBAY	.0026	.0953	.0000	F	1	140	0	0
30081*	30084	1	SOUTHBAY	SOUTHBY1	.0035	.0700	.0000	T	1	0	0	0

FROM	TO	CKT	NAME	NAME	LINE R	LINE X	CHRGING	TP	ST	RATA	RATB	RATC
30081	30146*	1	SOUTHBAY	IMPRLBCH	.0132	.0409	.0008		1	55	0	0
30081	30168*	1	SOUTHBAY	MONTGMRY	.0037	.0158	.0004		1	102	0	0
30081	30169*	1	SOUTHBAY	MONTGYTP	.0034	.0094	.0006		1	101	0	0
30081	30180*	1	SOUTHBAY	OTAY	.0109	.0300	.0022		1	101	0	0
30081	30180*	2	SOUTHBAY	OTAY	.0099	.0284	.0010		1	101	0	0
30081	30211*	1	SOUTHBAY	SWEETWTR	.0060	.0368	.0017		1	137	0	0
30081	30229*	1	SOUTHBAY	SOUTHBTG	.0000	.6568	.0000	F	1	25	0	0
30082*	30085	1	SOUTHBAY	SOUTHBY2	.0035	.0700	.0000	T	1	0	0	0
30082*	30086	1	SOUTHBAY	SOUTHBY3	.0013	.0530	.0000	T	1	212	0	0
30082*	30087	1	SOUTHBAY	SOUTHBY4	.0011	.0364	.0000	T	1	240	0	0
30082*	30330	1	SOUTHBAY	TELECYN	.0026	.0194	.0094		1	408	0	0
30083	30331*	1	SOUTHBAY	MAIN	.0007	.0073	.0283		0	729	0	0
30083	30333*	1	SOUTHBAY	SBYRPW1	.0018	.0632	.0000	F	0	200	0	0
30083	30334*	1	SOUTHBAY	SBYRPW2	.0018	.0632	.0000	F	0	200	0	0
30083	30335*	1	SOUTHBAY	SBYRPW3	.0018	.0632	.0000	F	0	200	0	0
30090*	30995	1	SYCAMORE	SYCAMORE	.0012	.0649	.0000	T	1	224	0	0
30091*	30092	1	TALEGA	TALEGA	.0024	.0633	.0000	T	1	168	0	0
30091*	30092	2	TALEGA	TALEGA	.0018	.0613	.0000	T	1	150	0	0
30091*	30092	3	TALEGA	TALEGA	.0024	.0228	.0000	T	1	392	0	0
30091	30093*	1	TALEGA	TRABUCO	.0062	.0451	.0122		1	274	0	0
30091	30223*	1	TALEGA	MARGARTA	.0071	.0515	.0139		1	274	0	0
30091*	30329	1	TALEGA	PICO	.0005	.0040	.0011		1	274	0	0
30092*	30332	1	TALEGA	PALA	.0063	.0485	.1004		1	456	0	0
30092	34182*	1	TALEGA	S.ONOFRE	.0012	.0097	.0211		1	518	0	0
30092	34182*	2	TALEGA	S.ONOFRE	.0012	.0097	.0211		1	518	0	0
30093*	30223	1	TRABUCO	MARGARTA	.0004	.0027	.0030		1	274	0	0
30094*	30155	1	ALPINE	LOSCOCHS	.0419	.1058	.0029		1	68	0	0
30094*	30156	1	ALPINE	LOVELAND	.0028	.0379	.0006		1	44	0	0
30095	30096*	1	ASH	ASH TP	.0048	.0207	.0004		1	102	0	0
30095*	30130	1	ASH	ESCNDIDO	.0108	.0465	.0010		1	102	0	0
30096*	30136	1	ASH	TP FELICITA	.0192	.0812	.0032		1	98	0	0
30096*	30195	1	ASH	TP RINCON	.0424	.1875	.0042		1	72	0	0
30097	30098*	1	AVCADOTP	AVOCADO	.0306	.0742	.0033		1	68	0	0
30097*	30188	1	AVCADOTP	PENDLETN	.0167	.0650	.0019		1	102	0	0
30098*	30167	1	AVOCADO	MONSRATE	.0260	.0622	.0048		1	68	0	0
30099*	30149	1	B	KETTNER	.0012	.0078	.0241		1	204	0	0
30099	30216*	1	B	URBAN	.0029	.0122	.0192		1	98	0	0
30099	30225*	1	B	NOISLMTP	.0030	.0063	.0210		1	84	0	0
30101	30102*	1	BARRETLK	BARTLKTP	.1043	.1556	.0024		1	32	0	0
30101	30112*	1	BARRETLK	CAMERON	.0686	.1674	.0035		1	68	0	0
30102*	30123	1	BARTLKTP	DESCANSO	.1046	.1505	.0022		1	32	0	0
30102*	30156	1	BARTLKTP	LOVELAND	.0190	.0909	.0017		1	102	0	0
30103	30104*	1	BERNARDO	BERNDOTP	.0137	.0626	.0015		1	102	0	0
30103	30135*	1	BERNARDO	FELCTATE	.0154	.0833	.0020		1	102	0	0
30103	30994*	1	BERNARDO	R.CARMEL	.0170	.0428	.0037		1	68	0	0
30104*	30130	1	BERNDOTP	ESCNDIDO	.0223	.0991	.0022		1	102	0	0
30104*	30193	1	BERNDOTP	R.SNTAFE	.0507	.0658	.0010		1	27	0	0
30105	30123*	1	BOLDRCRK	DESCANSO	.1455	.2110	.0018		1	32	0	0
30105	30202*	1	BOLDRCRK	SANTYSBL	.0820	.1185	.0016		1	32	0	0
30106*	30110	1	BOLVRDTP	BOULEVRD	.2121	.2197	.0032		1	32	0	0
30106*	30112	1	BOLVRDTP	CAMERON	.0797	.0826	.0012		1	32	0	0
30106*	30112	2	BOLVRDTP	CAMERON	.0797	.0826	.0012		1	32	0	0
30106*	30141	1	BOLVRDTP	GLENCLIF	.1097	.1137	.0016		1	32	0	0
30106*	30141	2	BOLVRDTP	GLENCLIF	.1097	.1137	.0016		1	32	0	0
30107	30108*	1	BORDER	BORDERTP	.0050	.0329	.0009		1	137	0	0
30108*	30182	1	BORDERTP	OTAYLAKE	.0043	.0111	.0002		1	68	0	0
30108*	30183	1	BORDERTP	OTAYLKTP	.0317	.0818	.0015		1	68	0	0
30109	30173*	1	BORREGO	NARROWS	.1085	.1865	.0035		1	50	0	0
30111	30190*	1	CABRILLO	POINTLMA	.0178	.0377	.0088		1	54	0	0
30111*	30328	1	CABRILLO	OLDTWNTP	.0233	.0676	.0188		1	54	0	0
30113	30119*	1	CAPSTRNO	CRSTNSTP	.0423	.1061	.0021		1	68	0	0
30114*	30115	1	CHOLASTP	CHOLLAS	.0117	.0825	.0019		1	137	0	0
30114*	30174	1	CHOLASTP	NATLCYTP	.0006	.0039	.0004		1	274	0	0
30115*	30187	1	CHOLLAS	PARADISE	.0093	.0289	.0015		1	101	0	0
30115	30207*	1	CHOLLAS	SPRNGVLY	.0074	.0462	.0011		1	137	0	0
30115*	30208	1	CHOLLAS	STREAMVW	.0042	.0275	.0007		1	137	0	0
30116	30117*	1	CLAIRMNT	CLARMTTP	.0045	.0126	.0002		1	50	0	0
30116	30134*	1	CLAIRMNT	FASHNVLY	.0087	.0544	.0013		1	137	0	0

FROM	TO	CKT	NAME	NAME	LINE R	LINE X	CHRGING	TP	ST	RATA	RATB	RATC
30117*	30197	1	CLARMTTP	ROSE CYN	.0097	.0274	.0018		1	101	0	0
30118	30155*	1	CREELMAN	LOSCOCHS	.1359	.2327	.0032		1	44	0	0
30118*	30202	1	CREELMAN	SANTYSBL	.1575	.2494	.0034		1	44	0	0
30118*	30995	1	CREELMAN	SYCAMORE	.0283	.1768	.0041		1	137	0	0
30119*	30120	1	CRSTNSTP	CRSTNTS	.0064	.0174	.0003		1	68	0	0
30119*	30148	1	CRSTNSTP	JAP MESA	.0607	.1251	.0020		1	55	0	0
30121	30122*	1	DEL MAR	DELMARTP	.0370	.1015	.0018		1	50	0	0
30121*	30129	1	DEL MAR	ENCNITAS	.0265	.1034	.0025		1	102	0	0
30121	30189*	1	DEL MAR	PENSQTOS	.0250	.0796	.0379		1	50	0	0
30121*	30194	1	DEL MAR	R.SNTATP	.0041	.0159	.0004		1	102	0	0
30122*	30124	1	DELMARTP	DOUBLTTP	.0013	.0102	.0004		1	137	0	0
30122*	30189	1	DELMARTP	PENSQTOS	.0013	.0086	.0002		1	137	0	0
30123	30141*	1	DESCANSO	GLENCLIF	.1987	.2041	.0030		1	32	0	0
30124*	30125	1	DOUBLTTP	DUNHILL	.0011	.0026	.0000		1	68	0	0
30125*	30214	1	DUNHILL	TOREYPNS	.0036	.0079	.0008		1	68	0	0
30126	30127*	1	EL CAJON	ELCAJNGT	.0010	.1813	.0000	F	1	84	0	0
30126	30142*	1	EL CAJON	GRANITE	.0092	.0571	.0006		1	137	0	0
30126	30147*	1	EL CAJON	JAMACHA	.0095	.0624	.0016		1	137	0	0
30126	30155*	1	EL CAJON	LOSCOCHS	.0495	.1320	.0025		1	55	0	0
30126*	30171	1	EL CAJON	MURRAY	.0101	.0427	.0010		1	102	0	0
30128	30201*	1	ELLIOTT	SANTEE	.0617	.1709	.0028		1	68	0	0
30128	30995*	1	ELLIOTT	SYCAMORE	.0464	.1123	.0024		1	68	0	0
30129	30189*	1	ENCNITAS	PENSQTOS	.0360	.1823	.0031		1	72	0	0
30130*	30131	1	ESCNDIDO	ESCO	.0064	.0272	.0007		1	102	0	0
30130*	30132	1	ESCNDIDO	ESCO TP	.0075	.0327	.0008		1	102	0	0
30130	30136*	1	ESCNDIDO	FELICITA	.0154	.0680	.0051		1	98	0	0
30130	30154*	1	ESCNDIDO	LILAC	.0514	.1259	.0082		1	68	0	0
30130	30200*	1	ESCNDIDO	SANMRCOS	.0113	.0739	.0019		1	137	0	0
30131*	30218	1	ESCO	WARCYNTP	.0301	.1284	.0031		1	102	0	0
30132	30135*	1	ESCO2 TP	FELCTATP	.0066	.0284	.0007		1	102	0	0
30135	30136*	1	FELCTATP	FELICITA	.0003	.0007	.0004		1	73	0	0
30137*	30164	1	FENTON	MIRAMAR	.0030	.0200	.0005		1	137	0	0
30137*	30165	1	FENTON	MIRAMRGT	.0040	.0265	.0007		1	137	0	0
30138	30139*	1	GEN DYNM	GENDYNTP	.0012	.0029	.0000		1	44	0	0
30139*	30151	1	GENDYNTP	KYOCRATP	.0006	.0038	.0000		1	137	0	0
30140*	30189	1	GENESEE	PENSQTOS	.0081	.0434	.0004		1	137	0	0
30140	30215*	1	GENESEE	UCSD	.0008	.0054	.0012		1	98	0	0
30140	30222*	1	GENESEE	GENESETP	.0009	.0048	.0052		1	98	0	0
30142	30143*	1	GRANITE	GRANITTP	.0046	.0298	.0019		1	98	0	0
30143*	30155	1	GRANITTP	LOSCOCHS	.0163	.0838	.0014		1	102	0	0
30144	30145*	1	HORNO	HORNO TP	.0238	.0574	.0012		1	68	0	0
30145	30148*	1	HORNO TP	JAP MESA	.0550	.0790	.0012		1	32	0	0
30145*	30153	1	HORNO TP	LASPULGS	.0247	.0356	.0005		1	32	0	0
30146	30181*	1	IMPRLBCH	OTAY TP	.0183	.0540	.0004		1	55	0	0
30147	30207*	1	JAMACHA	SPRNGVLY	.0175	.0512	.0009		1	50	0	0
30149*	30328	1	KETTNER	OLDTWNTP	.0021	.0144	.0014		1	239	0	0
30150*	30151	1	KYOCERA	KYOCRATP	.0017	.0114	.0003		1	137	0	0
30151*	30991	1	KYOCRATP	MESAHGTS	.0016	.0108	.0015		1	98	0	0
30152	30196*	1	LA JOLLA	ROSCYNTP	.0161	.0322	.0105		1	54	0	0
30152	30197*	1	LA JOLLA	ROSE CYN	.0163	.0278	.0141		1	54	0	0
30153	30209*	1	LASPULGS	STUART	.0608	.0874	.0013		1	32	0	0
30154*	30195	1	LILAC	RINCON	.0555	.1430	.0030		1	55	0	0
30155	30156*	1	LOSCOCHS	LOVELAND	.0356	.1441	.0044		1	68	0	0
30155	30201*	1	LOSCOCHS	SANTEE	.0453	.1250	.0020		1	68	0	0
30157	30158*	1	MELROSE	MELRSETP	.0116	.0490	.0012		1	102	0	0
30157	30198*	1	MELROSE	SANLUSRY	.0161	.0722	.0049		1	102	0	0
30157	30198*	2	MELROSE	SANLUSRY	.0109	.0680	.0016		1	137	0	0
30158*	30198	1	MELRSETP	SANLUSRY	.0138	.0610	.0017		1	98	0	0
30158*	30200	1	MELRSETP	SANMRCOS	.0197	.0842	.0020		1	102	0	0
30159	30164*	1	MESA RIM	MIRAMAR	.0066	.0437	.0050		1	98	0	0
30159*	30189	1	MESA RIM	PENSQTOS	.0012	.0845	.0105		1	98	0	0
30161	30162*	1	MIGUEL	MIGUELMP	.0000	.0545	.0000	F	1	180	0	0
30163*	30210	1	MIGUELTP	SUNYSIDE	.0007	.0027	.0000		1	101	0	0
30163*	30211	1	MIGUELTP	SWEETWTR	.0123	.0682	.0179		1	98	0	0
30164	30189*	1	MIRAMAR	PENSQTOS	.0174	.1262	.0078		1	137	0	0
30164	30205*	1	MIRAMAR	SCRIPPS	.0044	.0027	.0006		1	137	0	0
30165	30166*	1	MIRAMRGT	MIRAMRTP	.0218	.0573	.0012		1	68	0	0
30165	30224*	1	MIRAMRGT	MIRAMRGT	.0030	.3081	.0000	F	1	50	0	0

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E
 1998 HS2, SONGS UNITS ON LINE, SONGS23.SAV
 PLANTM.SAV MODIFIED, INC. SDG&E CHNGS & NOL & SCE BRPU

TUE, JUN 21 1994 11:48

BRANCH DATA

FROM	TO	CKT	NAME	NAME	LINE R	LINE X	CHRGING	TP	ST	RATA	RATB	RATC
30166*	30189	1	MIRAMRTP	PENSQTOS	.0071	.0327	.0055		1	98	0	0
30166*	30197	1	MIRAMRTP	ROSE CYN	.0102	.0666	.0017		1	137	0	0
30167	30170*	1	MONSRATE	MOROHILL	.0243	.1099	.0024		1	72	0	0
30167	30185*	1	MONSRATE	PALA	.0177	.1102	.0025		1	137	0	0
30168	30169*	1	MONTGMRY	MONTGYTP	.0004	.0012	.0000		1	102	0	0
30169*	30211	1	MONTGYTP	SWEETWTR	.0052	.0326	.0008		1	137	0	0
30170	30198*	1	MOROHILL	SANLUSRY	.0163	.0747	.0048		1	102	0	0
30172	31996*	1	N.GILA	N.GILA&2	.0000	.0135	.0000		1	0	0	0
30172*	31998	1	N.GILA	IMPRLV&2	.0008	.0193	1.4381		1	1213	0	0
30173	30220*	1	NARROWS	WARNERS	.2285	.4225	.0063		1	32	0	0
30174*	30175	1	NATLCYTP	NATNLCTY	.0020	.0085	.0002		1	102	0	0
30174*	30211	1	NATLCYTP	SWEETWTR	.0039	.0110	.0007		1	101	0	0
30175	30212*	1	NATNLCTY	SWTWTRTP	.0014	.0062	.0000		1	101	0	0
30176*	30204	1	NAVSTMTR	SCRAPDSP	.0009	.0028	.0016		1	98	0	0
30177*	30178	1	OCEANSDE	OCNSDETP	.0082	.0161	.0055		1	54	0	0
30177*	30198	1	OCEANSDE	SANLUSRY	.0322	.0885	.0027		1	54	0	0
30178	30198*	1	OCNSDETP	SANLUSRY	.0256	.0711	.0015		1	68	0	0
30178	30209*	1	OCNSDETP	STUART	.0429	.0616	.0009		1	32	0	0
30180	30181*	1	OTAY	OTAY TP	.0011	.0068	.0001		1	137	0	0
30180	30183*	1	OTAY	OTAYLKTP	.0127	.0371	.0006		1	50	0	0
30181*	30203	1	OTAY TP	SANYSDRO	.0194	.0540	.0010		1	50	0	0
30183*	30203	1	OTAYLKTP	SANYSDRO	.0100	.0273	.0005		1	50	0	0
30184*	30196	1	PACFCBCH	ROSCYNTP	.0153	.1088	.0025		1	137	0	0
30185*	30332	1	PALA	PALA	.0013	.0737	.0000	T	1	224	0	0
30187	30210*	1	PARADISE	SUNYSIDE	.0103	.0281	.0020		1	101	0	0
30188	30198*	1	PENDLETN	SANLUSRY	.0232	.1042	.0026		1	102	0	0
30189*	30194	1	PENSQTOS	R.SNTATP	.0153	.0596	.0014		1	102	0	0
30189	30214*	1	PENSQTOS	TOREYPNS	.0102	.0344	.0005		1	68	0	0
30189	30215*	1	PENSQTOS	UCSD	.0067	.0378	.0016		1	98	0	0
30189	30222*	1	PENSQTOS	GENESETP	.0079	.0493	.0011		1	137	0	0
30195*	30220	1	RINCON	WARNERS	.2188	.3350	.0052		1	32	0	0
30196	30197*	1	ROSCYNTP	ROSE CYN	.0002	.0013	.0000		1	137	0	0
30197	30222*	1	ROSE CYN	GENESETP	.0302	.0767	.0013		1	137	0	0
30198	30199*	1	SANLUSRY	SANLUSRY	.0015	.0630	.0000	F	1	224	0	0
30199	34182*	1	SANLUSRY	S.ONOFRE	.0012	.0123	.0478		1	797	0	0
30202*	30220	1	SANTYSBL	WARNERS	.1307	.1855	.0029		1	32	0	0
30204	30212*	1	SCRAPDSP	SWTWTRTP	.0015	.0042	.0007		1	101	0	0
30205*	30995	1	SCRIPPS	SYCAMORE	.0139	.0870	.0020		1	137	0	0
30208*	30217	1	STREAMVW	WABASH	.0052	.0355	.0008		1	137	0	0
30211*	30212	1	SWEETWTR	SWTWTRTP	.0039	.0126	.0007		1	101	0	0
30218*	30219	1	WARCYNTP	WARENCYN	.0249	.0365	.0006		1	44	0	0
30218*	30993	1	WARCYNTP	POWAY	.0096	.0409	.0010		1	102	0	0
30225*	30226	1	NOISLMTP	NOISLMTR	.0036	.0064	.0033		1	54	0	0
30992*	30993	1	POMERADO	POWAY	.0033	.0204	.0005		1	137	0	0
30992	30995*	1	POMERADO	SYCAMORE	.0065	.0408	.0009		1	137	0	0
30992*	30995	2	POMERADO	SYCAMORE	.0065	.0408	.0009		1	137	0	0
30993	30994*	1	POWAY	R.CARMEL	.0032	.0105	.0004		1	137	0	0
30994*	30995	1	R.CARMEL	SYCAMORE	.0240	.1496	.0035		1	137	0	0
31996	31997*	1	N.GILA&2	N.GILA&1	.0011	.0269	.0000		1	1386	0	0

SONGSOFF.SAV MODIFIED, INC. PGEN AT ORMOND BY 300 MW

BUS#	NAME	BSKV	CODE	VOLT	ANGLE	PLOAD	QLOAD	S	H	U	N	T	AREA	ZONE
30001	BATIQTOS	138	1	1.0172	-9.7	36.2	7.4	.0	.0	.0	.0	.0	30	303
30003	CALAVRTP	138	1	1.0195	-9.7	.0	.0	.0	.0	.0	.0	.0	30	303
30004	CANNON	138	1	1.0252	-8.9	23.6	4.8	.0	.0	.0	.0	.0	30	303
30005	CAPSTRNO	138	1	.9993	-13.9	43.6	8.9	.0	40.0	.0	.0	.0	30	303
30006	CARLHTP	138	1	1.0145	-10.9	.0	.0	.0	.0	.0	.0	.0	30	303
30007	CARLTNHS	138	1	1.0136	-10.8	27.0	5.5	.0	.0	.0	.0	.0	30	303
30008	CHCARITA	138	1	1.0125	-10.7	25.6	5.2	.0	.0	.0	.0	.0	30	303
30010	CORONADO	12.5	-2	1.0106	-15.3	26.7	5.4	.0	.0	.0	.0	.0	30	301
30011	CORONADO	69.0	1	1.0000	-12.6	.0	.0	.0	.0	.0	.0	.0	30	301
30014	DIVISION	69.0	-2	1.0046	-12.0	.0	.0	.0	.0	.0	.0	.0	30	301
30015	DIVISNGT	12.5	-2	.9715	-19.2	40.2	8.2	.0	.0	.0	.0	.0	30	301
30016	DOUBLET	138	1	1.0197	-10.9	.0	.0	.0	.0	.0	.0	.0	30	303
30017	DOUBLTTP	138	1	1.0197	-10.9	.0	.0	.0	.0	.0	.0	.0	30	303
30019	ENCINA	138	1	1.0253	-8.9	.0	.0	.0	.0	.0	.0	.0	30	303
30020	ENCINA	230	1	.9756	-8.5	.0	.0	.0	.0	.0	.0	.0	30	303
30021	ENCINA	114.4	2	1.0030	-4.1	.0	.0	.0	.0	.0	.0	.0	30	303
30022	ENCINA	214.4	2	1.0030	-5.1	.0	.0	.0	.0	.0	.0	.0	30	303
30023	ENCINA	314.4	2	1.0040	-5.1	.0	.0	.0	.0	.0	.0	.0	30	303
30024	ENCINA	422.0	2	.9930	-4.3	.0	.0	.0	.0	.0	.0	.0	30	303
30025	ENCINA	524.0	-2	.9620	-6.0	.0	.0	.0	.0	.0	.0	.0	30	303
30028	ESCNDIDO	230	1	.9653	-8.1	.0	.0	.0	.0	.0	.0	.0	30	303
30029	ESCND050	138	1	.9952	-10.2	.0	.0	.0	.0	.0	.0	.0	30	303
30030	ESCND051	138	1	1.0014	-10.2	.0	.0	.0	.0	.0	.0	.0	30	303
30032	IMPRLVLY	230	1	1.0013	13.0	.0	.0	.0	.0	.0	.0	.0	30	303
30033	IMPRLVLY	500	1	1.0394	15.9	.0	.0	.0	.0	.0	.0	.0	30	303
30034	KEARNY	69.0	1	.9797	-15.9	69.4	14.1	.0	.0	.0	.0	.0	30	307
30035	KEARNYGT	12.5	-2	.9709	-15.9	.0	.0	.0	.0	.0	.0	.0	30	307
30036	LAGNA NL	138	1	.9974	-13.9	53.7	10.9	.0	.0	.0	.0	.0	30	303
30037	LOSCOCHS	138	1	1.0197	-11.5	.0	.0	.0	.0	.0	.0	.0	30	303
30040	MAIN ST	69.0	1	1.0075	-12.2	.0	.0	.0	100.0	.0	.0	.0	30	301
30042	MAINST50	138	1	1.0121	-8.2	.0	.0	.0	.0	.0	.0	.0	30	303
30043	MAINST51	138	1	1.0121	-8.2	.0	.0	.0	.0	.0	.0	.0	30	303
30044	MDWLRKTP	138	1	1.0144	-9.9	.0	.0	.0	.0	.0	.0	.0	30	303
30045	MIGUEL	69.0	1	.9910	-9.0	.0	.0	.0	100.0	.0	.0	.0	30	309
30046	MIGUEL	138	1	1.0050	-3.1	.0	.0	.0	.0	.0	.0	.0	30	303
30047	MIGUEL	230	1	.9706	-2.2	.0	.0	.0	.0	.0	.0	.0	30	303
30048	MIGUEL	500	1	1.0095	9.9	.0	.0	.0	.0	.0	.0	.0	30	303
30051	MISSION	69.0	1	.9960	-13.8	93.1	18.9	.0	50.0	.0	.0	.0	30	307
30052	MISSION	138	1	1.0129	-10.1	.0	.0	.0	.0	.0	.0	.0	30	303
30053	MISSION	230	1	.9578	-8.5	.0	.0	.0	.0	.0	.0	.0	30	303
30055	OLD TOWN	69.0	1	.9799	-12.7	74.0	15.0	.0	.0	.0	.0	.0	30	301
30056	OLD TOWN	230	1	.9580	-9.0	.0	.0	.0	.0	.0	.0	.0	30	303
30057	PENSQTOS	138	1	1.0200	-10.9	.0	.0	.0	.0	.0	.0	.0	30	303
30058	PENSQTOS	230	1	.9592	-9.7	.0	.0	.0	.0	.0	.0	.0	30	306
30060	PRCTRVLY	138	1	1.0069	-3.5	18.1	3.7	.0	.0	.0	.0	.0	30	303
30066	SAMPSON	12.5	-2	.9442	-15.4	68.8	14.0	.0	.0	.0	.0	.0	30	301
30067	SAMPSON	69.0	1	1.0067	-12.2	.0	.0	.0	.0	.0	.0	.0	30	301
30069	SANLUSRY	138	1	1.0183	-10.4	.0	.0	.0	80.0	.0	.0	.0	30	303
30070	SANMATEO	138	1	1.0036	-12.6	33.8	6.9	.0	.0	.0	.0	.0	30	303
30071	SANMTOTP	138	1	1.0028	-12.7	.0	.0	.0	.0	.0	.0	.0	30	303
30081	SOUTHBAY	69.0	1	1.0160	-10.6	.0	.0	.0	.0	.0	.0	.0	30	302
30082	SOUTHBAY	138	1	1.0290	-6.4	.0	.0	.0	.0	.0	.0	.0	30	303
30083	SOUTHBAY	230	4	1.0000	-4.0	.0	.0	.0	.0	.0	.0	.0	30	303
30084	SOUTHBY	115.0	-2	1.0021	-5.2	.0	.0	.0	.0	.0	.0	.0	30	303
30085	SOUTHBY	215.0	2	1.0160	-1.1	.0	.0	.0	.0	.0	.0	.0	30	303
30086	SOUTHBY	320.0	2	1.0260	-1.8	.0	.0	.0	.0	.0	.0	.0	30	303
30087	SOUTHBY	420.0	2	1.0170	-5.0	.0	.0	.0	.0	.0	.0	.0	30	303
30090	SYCAMORE	230	1	.9613	-6.4	.0	.0	.0	.0	.0	.0	.0	30	303
30091	TALEGA	138	1	1.0028	-12.7	.0	.0	.0	.0	.0	.0	.0	30	303
30092	TALEGA	230	1	.9618	-11.2	.0	.0	.0	.0	.0	.0	.0	30	303
30093	TRABUCO	138	1	.9973	-14.0	91.1	18.5	.0	.0	.0	.0	.0	30	303
30094	ALPINE	69.0	1	.9951	-16.1	12.6	2.6	.0	.0	.0	.0	.0	30	308
30095	ASH	69.0	1	.9884	-14.6	44.2	9.0	.0	.0	.0	.0	.0	30	305
30096	ASH	TP69.0	1	.9882	-14.8	.0	.0	.0	.0	.0	.0	.0	30	305
30097	AVCADOTP	69.0	1	.9721	-19.2	.0	.0	.0	.0	.0	.0	.0	30	304
30098	AVOCADO	69.0	1	.9629	-20.1	20.5	4.2	.0	.0	.0	.0	.0	30	304
30099	B	69.0	1	.9992	-12.7	79.2	16.1	.0	.0	.0	.0	.0	30	301
30101	BARRETLK	69.0	1	.9920	-17.3	2.7	.5	.0	.0	.0	.0	.0	30	308

SD6+E

1998 HS2, SONGSOFFM10MOD.SAV

BUS DATA

SONGSOFF.SAV MODIFIED, INC. PGEN AT ORMOND BY 300 MW

BUS#	NAME	BSKV CODE	VOLT	ANGLE	PLOAD	QLOAD	S	H	U	N	T	AREA	ZONE
30102	BARTLKTP69.0	1	.9961	-16.9	.0	.0	.0	.0	.0	.0	.0	30	308
30103	BERNARDO69.0	1	.9805	-15.1	76.7	15.6	.0	.0	.0	.0	.0	30	305
30104	BERNDOTP69.0	1	.9844	-14.7	.0	.0	.0	.0	.0	.0	.0	30	305
30105	BOLDRCRK69.0	1	.9958	-18.4	2.2	.5	.0	.0	.0	.0	.0	30	308
30106	BOLVRDTP69.0	-2	.9922	-17.4	.0	.0	.0	.0	.0	.0	.0	30	308
30107	BORDER 69.0	1	.9919	-11.2	26.8	5.4	.0	.0	.0	.0	.0	30	302
30108	BORDERTP69.0	1	.9954	-11.2	.0	.0	.0	.0	.0	.0	.0	30	302
30109	BORREGO 69.0	1	.9733	-23.7	10.2	2.1	.0	.0	.0	.0	.0	30	305
30110	BOULEVRD69.0	-2	.9861	-17.7	2.9	.6	.0	.0	.0	.0	.0	30	308
30111	CABRILLO69.0	-2	.9759	-13.4	27.7	5.6	.0	.0	.0	.0	.0	30	301
30112	CAMERON 69.0	1	.9916	-17.4	2.2	.4	.0	.0	.0	.0	.0	30	308
30113	CAPSTRNO69.0	1	.9950	-17.3	.0	.0	.0	.0	.0	.0	.0	30	304
30114	CHOLASTP69.0	1	1.0043	-11.9	.0	.0	.0	.0	.0	.0	.0	30	301
30115	CHOLLAS 69.0	1	.9870	-12.8	47.7	9.7	.0	.0	.0	.0	.0	30	309
30116	CLAIRMNT69.0	1	.9803	-15.8	29.7	6.0	.0	.0	.0	.0	.0	30	307
30117	CLARMTTP69.0	1	.9798	-15.8	.0	.0	.0	.0	.0	.0	.0	30	306
30118	CREELMAN69.0	1	1.0060	-16.3	31.6	6.4	.0	.0	.0	.0	.0	30	308
30119	CRSTNSTP69.0	1	.9881	-17.6	.0	.0	.0	.0	.0	.0	.0	30	304
30120	CRSTNTS 69.0	1	.9876	-17.7	4.7	1.0	.0	.0	.0	.0	.0	30	304
30121	DEL MAR 69.0	1	.9895	-15.0	32.8	6.7	.0	.0	.0	.0	.0	30	306
30122	DELMARTP69.0	1	.9958	-14.3	.0	.0	.0	.0	.0	.0	.0	30	306
30123	DESCANSO69.0	1	.9920	-17.7	4.4	.9	.0	.0	.0	.0	.0	30	308
30124	DOUBLTTP69.0	1	.9946	-14.5	.0	.0	.0	.0	.0	.0	.0	30	306
30125	DUNHILL 69.0	1	.9941	-14.5	2.6	.5	.0	.0	.0	.0	.0	30	306
30126	EL CAJON69.0	1	.9846	-15.7	.0	.0	.0	50.0	.0	.0	.0	30	308
30127	ELCAJNGT12.5	-2	.9849	-24.5	85.6	17.4	.0	.0	.0	.0	.0	30	308
30128	ELLIOTT 69.0	1	.9901	-14.3	41.3	8.4	.0	.0	.0	.0	.0	30	307
30129	ENCNITAS69.0	1	.9796	-16.3	43.0	8.7	.0	.0	.0	.0	.0	30	306
30130	ESCNDIDO69.0	1	.9982	-13.2	61.3	12.4	.0	.0	.0	.0	.0	30	305
30131	ESCO 69.0	-2	.9967	-13.0	29.0	5.9	.0	.0	.0	.0	.0	30	305
30132	ESCO2 TP69.0	1	.9932	-13.8	.0	.0	.0	.0	.0	.0	.0	30	305
30133	F 69.0	1	.9938	-14.0	44.6	9.0	.0	.0	.0	.0	.0	30	307
30134	FASHNVLY69.0	1	.9879	-14.6	7.8	1.6	.0	.0	.0	.0	.0	30	307
30135	FELCTATP69.0	1	.9888	-14.3	.0	.0	.0	.0	.0	.0	.0	30	305
30136	FELICITA69.0	1	.9888	-14.4	40.6	8.2	.0	.0	.0	.0	.0	30	305
30137	FENTON 69.0	1	.9811	-15.9	2.9	.6	.0	.0	.0	.0	.0	30	306
30138	GEN DYNM69.0	1	.9797	-15.8	15.8	3.2	.0	.0	.0	.0	.0	30	307
30139	GENDYNTP69.0	1	.9800	-15.8	.0	.0	.0	.0	.0	.0	.0	30	307
30140	GENESEE 69.0	1	.9889	-15.2	95.5	19.4	.0	.0	.0	.0	.0	30	306
30141	GLENCLIF69.0	1	.9906	-17.5	3.2	.6	.0	.0	.0	.0	.0	30	308
30142	GRANITE 69.0	1	.9812	-15.9	61.6	12.5	.0	.0	.0	.0	.0	30	308
30143	GRANITTP69.0	1	.9862	-14.9	.0	.0	.0	.0	.0	.0	.0	30	308
30144	HORNO 69.0	1	.9811	-17.7	2.5	.5	.0	.0	.0	.0	.0	30	304
30145	HORNO TP69.0	1	.9820	-17.7	.0	.0	.0	.0	.0	.0	.0	30	304
30146	IMPRLBCH69.0	1	1.0091	-11.2	32.7	6.6	.0	.0	.0	.0	.0	30	302
30147	JAMACHA 69.0	1	.9823	-12.9	43.8	8.9	.0	.0	.0	.0	.0	30	309
30148	JAP MESA69.0	1	.9829	-17.8	4.1	.8	.0	.0	.0	.0	.0	30	304
30149	KETTNER 69.0	1	.9930	-12.8	44.8	9.1	.0	.0	.0	.0	.0	30	301
30150	KYOCERA 69.0	-2	.9802	-15.8	4.9	1.0	.0	.0	.0	.0	.0	30	301
30151	KYOCRATP69.0	1	.9804	-15.8	.0	.0	.0	.0	.0	.0	.0	30	307
30152	LA JOLLA69.0	1	.9764	-16.1	22.1	4.5	.0	.0	.0	.0	.0	30	306
30153	LASPULGS69.0	1	.9823	-17.6	3.0	.6	.0	.0	.0	.0	.0	30	304
30154	LILAC 69.0	1	.9805	-15.9	26.7	5.4	.0	.0	.0	.0	.0	30	305
30155	LOSCOCHS69.0	1	1.0027	-15.1	49.7	10.1	.0	100.0	.0	.0	.0	30	308
30156	LOVELAND69.0	1	.9958	-16.2	8.1	1.6	.0	.0	.0	.0	.0	30	308
30157	MELROSE 69.0	1	.9858	-17.2	81.3	16.5	.0	.0	.0	.0	.0	30	304
30158	MELRSETP69.0	1	.9888	-16.6	.0	.0	.0	.0	.0	.0	.0	30	304
30159	MESA RIM69.0	1	.9826	-16.3	48.7	9.9	.0	.0	.0	.0	.0	30	306
30161	MIGUEL 12.0	1	.9516	2.6	.0	.0	.0	.0	.0	.0	.0	30	300
30162	MIGUELMP 500	1	.9992	2.6	.0	.0	.0	.0	.0	.0	.0	30	303
30163	MIGUELTP69.0	1	.9936	-11.0	.0	.0	.0	.0	.0	.0	.0	30	309
30164	MIRAMAR 69.0	-2	.9801	-16.1	71.8	14.6	.0	.0	.0	.0	.0	30	306
30165	MIRAMRGT69.0	1	.9827	-15.6	.0	.0	.0	.0	.0	.0	.0	30	306
30166	MIRAMRTP69.0	1	.9890	-14.9	.0	.0	.0	.0	.0	.0	.0	30	306
30167	MONSRATE69.0	1	.9632	-20.1	25.0	5.1	.0	.0	.0	.0	.0	30	304
30168	MONTGMRY69.0	1	1.0131	-10.9	42.9	8.7	.0	.0	.0	.0	.0	30	302
30169	MONTGYTP69.0	1	1.0131	-10.9	.0	.0	.0	.0	.0	.0	.0	30	302
30170	MOROHILL69.0	1	.9799	-18.0	11.4	2.3	.0	.0	.0	.0	.0	30	304

SONGSOFF.SAV MODIFIED, INC. PGEN AT ORMOND BY 300 MW

BUS#	NAME	BSKV CODE	VOLT	ANGLE	PLOAD	QLOAD	S	H	U	N	T	AREA	ZONE
30171	MURRAY	69.0 -2	.9833	-15.5	95.6	19.4	.0	.0	.0	.0	.0	30	307
30172	N.GILA	500 1	1.0459	22.4	.0	.0	.0	.0	.0	.0	.0	30	300
30173	NARROWS	69.0 1	.9884	-22.7	.0	.0	.0	2.0	.0	.0	.0	30	305
30174	NATLCYTP	69.0 1	1.0047	-11.8	.0	.0	.0	.0	.0	.0	.0	30	301
30175	NATNLCTY	69.0 1	1.0048	-11.8	3.4	.7	.0	.0	.0	.0	.0	30	301
30176	NAVSTMTR	69.0 1	1.0044	-12.0	18.5	3.8	.0	.0	.0	.0	.0	30	301
30177	OCEANSDE	69.0 1	.9890	-16.9	21.6	4.4	.0	.0	.0	.0	.0	30	304
30178	OCNSDETP	69.0 1	.9899	-16.8	.0	.0	.0	.0	.0	.0	.0	30	304
30179	OLDTWNGT	12.5 -2	.9757	-12.7	.0	.0	.0	.0	.0	.0	.0	30	303
30180	OTAY	69.0 -2	1.0098	-11.1	33.5	6.8	.0	.0	.0	.0	.0	30	302
30181	OTAY TP	69.0 1	1.0093	-11.1	.0	.0	.0	.0	.0	.0	.0	30	302
30182	OTAYLAKE	69.0 1	.9953	-11.2	.8	.2	.0	.0	.0	.0	.0	30	302
30183	OTAYLKTP	69.0 1	1.0046	-11.3	.0	.0	.0	.0	.0	.0	.0	30	302
30184	PACFCBCH	69.0 1	.9732	-14.9	49.4	10.0	.0	.0	.0	.0	.0	30	301
30185	PALA	69.0 1	.9599	-20.6	8.2	1.7	.0	.0	.0	.0	.0	30	304
30187	PARADISE	69.0 1	.9887	-11.7	36.5	7.4	.0	.0	.0	.0	.0	30	309
30188	PENDLETN	69.0 1	.9781	-18.4	17.8	3.6	.0	.0	.0	.0	.0	30	304
30189	PENSQTOS	69.0 1	.9972	-14.1	.0	.0	.0	100.0	.0	.0	.0	30	306
30190	POINTLMA	69.0 -2	.9772	-13.1	42.9	8.7	.0	.0	.0	.0	.0	30	301
30193	R.SNTAFE	69.0 -2	.9732	-15.3	17.3	3.5	.0	.0	.0	.0	.0	30	306
30194	R.SNTATP	69.0 1	.9911	-14.8	.0	.0	.0	.0	.0	.0	.0	30	306
30195	RINCON	69.0 -2	.9851	-16.9	19.5	4.0	.0	.0	.0	.0	.0	30	305
30196	ROSCYNTP	69.0 1	.9787	-15.9	.0	.0	.0	.0	.0	.0	.0	30	306
30197	ROSE CYN	69.0 1	.9788	-15.9	44.6	9.1	.0	.0	.0	.0	.0	30	306
30198	SANLUSRY	69.0 1	.9955	-16.1	65.4	13.3	.0	.0	.0	.0	.0	30	304
30199	SANLUSRY	230 1	.9604	-11.3	.0	.0	.0	.0	.0	.0	.0	30	303
30200	SANMRCOS	69.0 -2	.9846	-16.1	62.9	12.8	.0	.0	.0	.0	.0	30	305
30201	SANTEE	69.0 1	.9782	-16.5	45.2	9.2	.0	.0	.0	.0	.0	30	308
30202	SANTYSBL	69.0 1	1.0001	-18.6	6.4	1.3	.0	.0	.0	.0	.0	30	308
30203	SANYSDRO	69.0 1	1.0038	-11.4	23.9	4.9	.0	.0	.0	.0	.0	30	302
30204	SCRAPDSP	69.0 1	1.0046	-11.9	1.2	.3	.0	.0	.0	.0	.0	30	301
30205	SCRIPPS	69.0 1	.9813	-16.1	49.2	10.0	.0	.0	.0	.0	.0	30	306
30207	SPRNGVLY	69.0 1	.9821	-13.2	26.2	5.3	.0	.0	.0	.0	.0	30	309
30208	STREAMVW	69.0 1	.9903	-13.0	41.5	8.4	.0	.0	.0	.0	.0	30	309
30209	STUART	69.0 1	.9855	-17.2	3.9	.8	.0	.0	.0	.0	.0	30	304
30210	SUNYSIDE	69.0 1	.9932	-11.0	8.8	1.8	.0	.0	.0	.0	.0	30	309
30211	SWEETWTR	69.0 -2	1.0063	-11.6	41.3	8.4	.0	.0	.0	.0	.0	30	302
30212	SWTWTRTP	69.0 1	1.0050	-11.8	.0	.0	.0	.0	.0	.0	.0	30	301
30214	TOREYPNS	69.0 1	.9925	-14.6	57.5	11.7	.0	.0	.0	.0	.0	30	306
30215	UCSD	69.0 1	.9895	-15.1	23.2	4.7	.0	.0	.0	.0	.0	30	306
30216	URBAN	69.0 1	1.0014	-12.6	41.9	8.5	.0	.0	.0	.0	.0	30	301
30217	WABASH	69.0 1	.9997	-12.5	7.3	1.5	.0	.0	.0	.0	.0	30	301
30218	WARCYNTP	69.0 1	.9904	-13.9	.0	.0	.0	.0	.0	.0	.0	30	305
30219	WARENCYN	69.0 1	.9892	-14.0	3.7	.8	.0	.0	.0	.0	.0	30	305
30220	WARNERS	69.0 1	1.0119	-20.2	4.3	.9	.0	25.0	.0	.0	.0	30	305
30221	ENCINAGT	12.5 -2	1.0228	-8.9	.0	.0	.0	.0	.0	.0	.0	30	303
30222	GENSETP	69.0 1	.9893	-15.2	.0	.0	.0	.0	.0	.0	.0	30	306
30223	MARGARTA	138 1	.9975	-14.0	15.4	3.1	.0	.0	.0	.0	.0	30	303
30224	MIRAMRGT	12.5 -2	.9428	-15.6	.0	.0	.0	.0	.0	.0	.0	30	306
30225	NOISLMTP	69.0 1	1.0000	-12.6	.0	.0	.0	.0	.0	.0	.0	30	301
30226	NOISLMTR	69.0 -2	1.0001	-12.6	20.5	4.2	.0	.0	.0	.0	.0	30	301
30227	PALOMAR	138 1	1.0226	-9.2	26.7	5.4	.0	.0	.0	.0	.0	30	303
30229	SOUTHGHT	12.5 -2	.9906	-10.6	.0	.0	.0	.0	.0	.0	.0	30	302
30326	DALEY	69.0 1	.9899	-9.2	3.1	.6	.0	.0	.0	.0	.0	30	309
30327	NORTHCTY	138 1	1.0207	-10.6	14.7	3.0	.0	.0	.0	.0	.0	30	303
30328	OLDTWNTP	69.0 1	.9839	-12.8	.0	.0	.0	.0	.0	.0	.0	30	301
30329	PICO	138 1	1.0023	-12.9	12.7	2.6	.0	.0	.0	.0	.0	30	303
30330	TELECYN	138 1	1.0126	-4.4	18.0	3.7	.0	.0	.0	.0	.0	30	303
30331	MAIN	230 4	.9995	-6.6	.0	.0	.0	.0	.0	.0	.0	30	303
30332	PALA	230 4	.9629	-9.9	.0	.0	.0	.0	.0	.0	.0	30	304
30333	SBYRPW1	20.0 4	.9954	1.5	.0	.0	.0	.0	.0	.0	.0	30	303
30334	SBYRPW2	20.0 4	.9955	1.5	.0	.0	.0	.0	.0	.0	.0	30	303
30335	SBYRPW3	20.0 4	.9955	1.5	.0	.0	.0	.0	.0	.0	.0	30	303
30991	MESAHGTS	69.0 1	.9816	-15.6	30.4	6.2	.0	.0	.0	.0	.0	30	307
30992	POMERADO	69.0 1	.9923	-13.5	16.5	3.4	.0	.0	.0	.0	.0	30	305
30993	POWAY	69.0 1	.9890	-14.1	40.7	8.3	.0	.0	.0	.0	.0	30	305
30994	R.CARMEL	69.0 1	.9860	-14.5	40.7	8.3	.0	.0	.0	.0	.0	30	305
30995	SYCAMORE	69.0 -2	1.0005	-12.2	.0	.0	.0	50.0	.0	.0	.0	30	306

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E
 1998 HS2, SONGSOFFM10MOD.SAV
 SONGSOFF.SAV MODIFIED, INC. PGEN AT ORMOND BY 300 MW

TUE, JUN 21 1994 11:58

GENERATING
 PLANT DATA

BUS#	NAME	BSKV	COD	MCNS	PGEN	QGEN	QMAX	QMIN	VSCHED	VACT.	REMO	PCT	Q
30010	CORONADO	12.5	-2	1	.0	.0	.0	.0	1.0200	1.0106			
30014	DIVISION	69.0	-2	1	47.0	.0	.0	.0	1.0200	1.0046			
30015	DIVISNGT	12.5	-2	1	.0	.0	.0	.0	1.0000	.9715			
30021	ENCINA	114.4	2	1	100.0	25.5	70.0	-20.0	1.0030	1.0030			
30022	ENCINA	214.4	2	1	95.0	29.7	69.0	-20.0	1.0030	1.0030			
30023	ENCINA	314.4	2	1	80.0	26.2	71.0	-20.0	1.0040	1.0040			
30024	ENCINA	422.0	2	1	231.6	59.9	130.0	-40.0	.9930	.9930			
30025	ENCINA	524.0	-2	1	200.0	173.0	173.0	-40.0	.9910	.9620			
30035	KEARNYGT	12.5	-2	1	.0	.0	.0	.0	1.0200	.9709			
30066	SAMPSON	12.5	-2	1	11.0	.0	.0	.0	1.0200	.9442			
30084	SOUTHBY	115.0	-2	1	147.0	58.0	58.0	-30.0	1.0250	1.0021			
30085	SOUTHBY	215.0	2	1	150.0	61.1	71.0	-30.0	1.0160	1.0160			
30086	SOUTHBY	320.0	2	1	171.0	106.4	120.0	-30.0	1.0260	1.0260			
30087	SOUTHBY	420.0	2	1	76.0	120.6	164.0	-30.0	1.0170	1.0170			
30106	BOLVRDTP	69.0	-2	1	6.5	.0	.0	.0	1.0200	.9922			
30110	BOULEVRD	69.0	-2	1	.5	.0	.0	.0	1.0200	.9861			
30111	CABRILLO	69.0	-2	1	1.0	.0	.0	.0	1.0200	.9759			
30127	ELCAJNGT	12.5	-2	1	.0	.0	.0	.0	1.0000	.9849			
30131	ESCO	69.0	-2	1	50.0	.0	.0	.0	1.0200	.9967			
30150	KYOCERA	69.0	-2	1	.5	.0	.0	.0	1.0200	.9802			
30164	MIRAMAR	69.0	-2	1	.5	.0	.0	.0	1.0200	.9801			
30171	MURRAY	69.0	-2	1	.5	.0	.0	.0	1.0200	.9833			
30179	OLDTWNGT	12.5	-2	1	.0	.0	.0	.0	1.0000	.9757			
30180	OTAY	69.0	-2	1	3.5	.0	.0	.0	1.0200	1.0098			
30190	POINTLMA	69.0	-2	1	22.0	.0	.0	.0	1.0200	.9772			
30193	R.SNTAFE	69.0	-2	1	.5	.0	.0	.0	1.0200	.9732			
30195	RINCON	69.0	-2	1	.5	.0	.0	.0	1.0200	.9851			
30200	SANMRCOS	69.0	-2	1	1.5	.0	.0	.0	1.0200	.9846			
30211	SWEETWTR	69.0	-2	1	.5	.0	.0	.0	1.0200	1.0063			
30221	ENCINAGT	12.5	-2	1	.0	.0	.0	.0	1.0000	1.0228			
30224	MIRAMRGT	12.5	-2	1	.0	.0	.0	.0	1.0200	.9428			
30226	NOISLMTR	69.0	-2	1	33.0	.0	.0	.0	1.0200	1.0001			
30229	SOUTHBGT	12.5	-2	1	.0	.0	.0	.0	1.0000	.9906			
30333	SBYRPW1	20.0	4	1	.0	.0	.0	.0	1.0000	1.0000	30083	34.0	
30334	SBYRPW2	20.0	4	1	.0	.0	.0	.0	1.0000	1.0000	30083	33.0	
30335	SBYRPW3	20.0	4	1	.0	.0	.0	.0	1.0000	1.0000	30083	33.0	
30995	SYCAMORE	69.0	-2	1	1.5	.0	.0	.0	1.0200	1.0005			

FROM	TO	CKT	NAME	NAME	LINE R	LINE X	CHRGING	TP	ST	RATA	RATB	RATC
104*	30172	1	N.GILA1	N.GILA	.0001	.0097	.0000	T	1	1533	0	0
203	30032*	1	IMPRLV1	IMPRLVLY	.0030	.0902	.0000	F	1	125	0	0
2144	30172*	1	N.GILA	N.GILA	.0021	.1894	.0000	T	1	240	0	0
2166*	31997	1	PALOV RDE	N.GILA&1	.0000	.0001	.0000	Z	1	1213	0	0
2990*	30172	0	N.GILA	N.GILA	.0000	.0600	.0000	F	1	0	0	0
8022	30032*	1	ELCENTRO	IMPRLVLY	.0038	.0250	.0561	1	442	0	0	0
8932*	30032	0	IMPERIAL	IMPRLVLY	.0000	.0600	.0000	F	1	0	0	0
12252*	30032	1	ROA	IMPRLVLY	.0016	.0124	.0258	1	456	0	0	0
12286*	30047	1	TJI-230	MIGUEL	.0012	.0097	.0770	1	797	0	0	0
30001	30044*	1	BATIQTOS	MDWLRKTP	.0006	.0074	.0038	1	478	0	0	0
30001*	30227	1	BATIQTOS	PALOMAR	.0009	.0111	.0042	1	478	0	0	0
30003	30019*	1	CALAVRTP	ENCINA	.0018	.0136	.0076	1	274	0	0	0
30003	30029*	1	CALAVRTP	ESCND050	.0175	.0613	.0138	1	112	0	0	0
30003	30069*	1	CALAVRTP	SANLUSRY	.0021	.0160	.0047	1	274	0	0	0
30004*	30019	1	CANNON	ENCINA	.0000	.0004	.0002	1	478	0	0	0
30004*	30069	1	CANNON	SANLUSRY	.0033	.0269	.0081	1	274	0	0	0
30005	30036*	1	CAPSTRNO	LAGNA NL	.0044	.0115	.0033	1	137	0	0	0
30005	30093*	1	CAPSTRNO	TRABUCO	.0020	.0147	.0040	1	274	0	0	0
30005*	30113	1	CAPSTRNO	CAPSTRNO	.0246	.7347	.0000	T	1	25	0	0
30005	30329*	1	CAPSTRNO	PICO	.0050	.0260	.0068	1	204	0	0	0
30006*	30007	1	CARLTHTP	CARLTNHS	.0007	.0059	.0016	1	274	0	0	0
30006*	30008	1	CARLTHTP	CHCARITA	.0085	.0431	.0119	1	204	0	0	0
30006*	30037	1	CARLTHTP	LOSCOCHS	.0073	.0322	.0132	1	273	0	0	0
30007*	30052	1	CARLTNHS	MISSION	.0049	.0239	.0190	1	273	0	0	0
30008	30044*	1	CHCARITA	MDWLRKTP	.0086	.0473	.0131	1	204	0	0	0
30010*	30011	1	CORONADO	CORONADO	.0007	.1817	.0000	T	1	84	0	0
30011*	30067	1	CORONADO	SAMPSON	.0077	.0301	.0208	1	73	0	0	0
30011	30225*	1	CORONADO	NOISLMTP	.0000	.0001	.0000	Z	1	54	0	0
30011*	30226	1	CORONADO	NOISLMTR	.0036	.0064	.0033	1	54	0	0	0
30014	30015*	1	DIVISION	DIVISNGT	.0000	.3059	.0000	F	1	53	0	0
30014*	30067	1	DIVISION	SAMPSON	.0053	.0150	.0010	1	101	0	0	0
30014	30176*	1	DIVISION	NAVSTMTR	.0027	.0079	.0010	1	98	0	0	0
30016	30017*	1	DOUBLET	DOUBLTTP	.0014	.0050	.0014	1	137	0	0	0
30017	30052*	1	DOUBLTTP	MISSION	.0091	.0472	.0141	1	204	0	0	0
30017	30057*	1	DOUBLTTP	PENSQTOS	.0004	.0019	.0030	1	204	0	0	0
30019*	30021	1	ENCINA	ENCINA 1	.0030	.0902	.0000	T	1	125	0	0
30019*	30022	1	ENCINA	ENCINA 2	.0025	.0750	.0000	T	1	134	0	0
30019*	30023	1	ENCINA	ENCINA 3	.0030	.0890	.0000	T	1	125	0	0
30019*	30024	1	ENCINA	ENCINA 4	.0009	.0368	.0000	T	1	310	0	0
30019	30057*	1	ENCINA	PENSQTOS	.0082	.0606	.0354	1	382	0	0	0
30019	30221*	1	ENCINA	ENCINAGT	.0043	.6751	.0000	F	1	20	0	0
30019	30227*	1	ENCINA	PALOMAR	.0004	.0048	.0018	1	478	0	0	0
30019	30327*	1	ENCINA	NORTHCTY	.0039	.0370	.0245	1	359	0	0	0
30020*	30025	1	ENCINA	ENCINA 5	.0006	.0215	.0000	T	1	355	0	0
30020*	30028	1	ENCINA	ESCNDIDO	.0012	.0156	.0627	1	797	0	0	0
30020*	30058	1	ENCINA	PENSQTOS	.0016	.0187	.0037	1	797	0	0	0
30020	34182*	1	ENCINA	S.ONOFRE	.0044	.0349	.0764	1	456	0	0	0
30028*	30090	1	ESCNDIDO	SYCAMORE	.0023	.0261	.0784	1	797	0	0	0
30028*	30130	1	ESCNDIDO	ESCNDIDO	.0017	.0648	.0000	T	1	224	0	0
30028*	30130	2	ESCNDIDO	ESCNDIDO	.0017	.0648	.0000	T	1	224	0	0
30028	30332*	1	ESCNDIDO	PALA	.0032	.0244	.0506	0	456	0	0	0
30028	30997*	1	ESCNDIDO	RAINB23	.0040	.0306	.0634	1	456	0	0	0
30028	30997*	2	ESCNDIDO	RAINB23	.0040	.0306	.0634	1	456	0	0	0
30029	30130*	2	ESCND050	ESCNDIDO	.0098	.2224	.0000	F	1	63	0	0
30030*	30044	1	ESCND051	MDWLRKTP	.0087	.0300	.0066	1	112	0	0	0
30030	30130*	1	ESCND051	ESCNDIDO	.0096	.2224	.0000	F	1	63	0	0
30032	30033*	0	IMPRLVLY	IMPRLVLY	.0003	.0264	.0000	F	1	535	0	0
30033	31998*	1	IMPRLVLY	IMPRLV&2	.0000	-.0099	.0000	1	1213	0	0	0
30033	31999*	1	IMPRLVLY	IMPRLV&1	.0000	-.0102	.0000	1	1067	0	0	0
30034	30035*	1	KEARNY	KEARNYGT	.0010	.0693	.0000	F	1	164	0	0
30034	30051*	2	KEARNY	MISSION	.0134	.0665	.0018	1	137	0	0	0
30034	30117*	1	KEARNY	CLARMTTP	.0084	.0408	.0015	1	101	0	0	0
30034	30139*	1	KEARNY	GENDYNTTP	.0012	.0081	.0002	1	137	0	0	0
30036*	30071	1	LAGNA NL	SANMTOTP	.0140	.0416	.0106	1	137	0	0	0
30037	30082*	1	LOSCOCHS	SOUTHBAY	.0288	.0905	.0300	1	204	0	0	0
30037	30155*	1	LOSCOCHS	LOSCOCHS	.0030	.0916	.0000	F	1	150	0	0
30037	30155*	2	LOSCOCHS	LOSCOCHS	.0032	.1005	.0000	F	1	140	0	0
30040*	30042	1	MAIN ST	MAINST50	.0017	.0584	.0000	T	1	224	0	0

FROM	TO	CKT	NAME	NAME	LINE R	LINE X	CHRGING	TP	ST	RATA	RATB	RATC
30040*	30043	1	MAIN ST	MAINST51	.0017	.0584	.0000	T	1	224	0	0
30040*	30067	1	MAIN ST	SAMPSON	.0003	.0020	.0000		1	239	0	0
30040*	30067	2	MAIN ST	SAMPSON	.0002	.0020	.0000		1	239	0	0
30040*	30099	1	MAIN ST	B	.0061	.0251	.0213		1	98	0	0
30040*	30099	2	MAIN ST	B	.0025	.0177	.0040		1	98	0	0
30040	30216*	1	MAIN ST	URBAN	.0050	.0154	.0049		1	98	0	0
30040*	30217	1	MAIN ST	WABASH	.0192	.0558	.0035		1	101	0	0
30042	30082*	1	MAINST50	SOUTHBAY	.0037	.0273	.0074		1	274	0	0
30043	30082*	1	MAINST51	SOUTHBAY	.0037	.0273	.0074		1	274	0	0
30045	30047*	1	MIGUEL	MIGUEL	.0010	.0907	.0000	F	1	224	0	0
30045	30047*	2	MIGUEL	MIGUEL	.0010	.0907	.0000	F	1	224	0	0
30045	30107*	1	MIGUEL	BORDER	.0227	.1414	.0033		1	137	0	0
30045	30143*	1	MIGUEL	GRANITTP	.0342	.1738	.0029		1	102	0	0
30045	30147*	1	MIGUEL	JAMACHA	.0157	.1068	.0026		1	137	0	0
30045	30147*	2	MIGUEL	JAMACHA	.0157	.1068	.0026		1	137	0	0
30045*	30163	1	MIGUEL	MIGUELTP	.0100	.0515	.0016		1	137	0	0
30045*	30187	1	MIGUEL	PARADISE	.0124	.0806	.0021		1	137	0	0
30045	30326*	1	MIGUEL	DALEY	.0174	.1088	.0025		1	137	0	0
30046*	30047	1	MIGUEL	MIGUEL	.0024	.0228	.0000	T	1	392	0	0
30046*	30060	1	MIGUEL	PRCTRVLY	.0004	.0028	.0013		1	408	0	0
30047	30053*	1	MIGUEL	MISSION	.0029	.0319	.1517		1	797	0	0
30047	30053*	2	MIGUEL	MISSION	.0029	.0319	.1517		1	797	0	0
30047	30083*	1	MIGUEL	SOUTHBAY	.0010	.0110	.0425		0	912	0	0
30047	30090*	1	MIGUEL	SYCAMORE	.0023	.0261	.0784		1	797	0	0
30047	30162*	1	MIGUEL	MIGUELMP	.0000	.0088	.0000	F	1	1120	0	0
30047	30162*	2	MIGUEL	MIGUELMP	.0000	.0088	.0000	F	1	1120	0	0
30048	30162*	1	MIGUEL	MIGUELMP	.0000	.0118	.0000		1	1067	0	0
30048*	31999	1	MIGUEL	IMPRLV&1	.0008	.0201	1.4783		1	1067	0	0
30051*	30052	1	MISSION	MISSION	.0047	.1021	.0000	T	1	100	0	0
30051*	30052	2	MISSION	MISSION	.0015	.0526	.0000	T	1	224	0	0
30051*	30052	3	MISSION	MISSION	.0015	.0526	.0000	T	1	224	0	0
30051*	30053	1	MISSION	MISSION	.0013	.0737	.0000	T	1	224	0	0
30051	30128*	1	MISSION	ELLIOTT	.0072	.0301	.0022		1	137	0	0
30051	30133*	1	MISSION	F	.0047	.0172	.0012		1	101	0	0
30051	30133*	2	MISSION	F	.0079	.0247	.0014		1	101	0	0
30051	30134*	1	MISSION	FASHNVLY	.0103	.0336	.0013		1	137	0	0
30051	30171*	1	MISSION	MURRAY	.0300	.0875	.0026		1	102	0	0
30051	30171*	2	MISSION	MURRAY	.0214	.0922	.0022		1	102	0	0
30051	30171*	3	MISSION	MURRAY	.0153	.0952	.0022		1	137	0	0
30051*	30991	1	MISSION	MESAHGTS	.0116	.0518	.0015		1	137	0	0
30052*	30053	1	MISSION	MISSION	.0006	.0230	.0000	T	1	392	0	0
30052*	30053	2	MISSION	MISSION	.0006	.0230	.0000	T	1	392	0	0
30052*	30082	1	MISSION	SOUTHBAY	.0068	.0470	.0181		1	274	0	0
30053*	30056	1	MISSION	OLD TOWN	.0007	.0055	.0113		1	797	0	0
30053*	30056	2	MISSION	OLD TOWN	.0007	.0055	.0113		1	797	0	0
30053*	30199	1	MISSION	SANLUSRY	.0065	.0500	.1044		1	456	0	0
30053*	30331	1	MISSION	MAIN	.0003	.0016	1.8428		0	732	0	0
30053	34182*	1	MISSION	S.ONOFRE	.0097	.0754	.1578		1	456	0	0
30055	30056*	1	OLD TOWN	OLD TOWN	.0016	.0649	.0000	F	1	224	0	0
30055	30056*	2	OLD TOWN	OLD TOWN	.0016	.0649	.0000	F	1	224	0	0
30055	30179*	1	OLD TOWN	OLDTWNGT	.0012	.1155	.0000	F	1	75	0	0
30055*	30184	1	OLD TOWN	PACFCBCH	.0076	.0567	.0262		1	98	0	0
30055	30190*	1	OLD TOWN	POINTLMA	.0070	.0501	.0010		1	108	0	0
30055	30190*	2	OLD TOWN	POINTLMA	.0082	.0406	.0050		1	137	0	0
30055	30328*	1	OLD TOWN	OLDTWNTP	.0011	.0072	.0007		1	239	0	0
30056*	30058	1	OLD TOWN	PENSQTOS	.0009	.0081	.0032		1	797	0	0
30057*	30189	1	PENSQTOS	PENSQTOS	.0032	.1056	.0000	T	1	140	0	0
30057*	30189	2	PENSQTOS	PENSQTOS	.0037	.1068	.0000	T	1	140	0	0
30057*	30189	3	PENSQTOS	PENSQTOS	.0030	.1061	.0000	T	1	140	0	0
30057*	30327	1	PENSQTOS	NORTHCTY	.0010	.0093	.0061		1	359	0	0
30058	30189*	1	PENSQTOS	PENSQTOS	.0011	.0657	.0000	F	1	224	0	0
30058	30189*	2	PENSQTOS	PENSQTOS	.0011	.0657	.0000	F	1	224	0	0
30060	30330*	1	PRCTRVLY	TELECYN	.0010	.0076	.0037		1	408	0	0
30066*	30067	1	SAMPSON	SAMPSON	.0000	.0880	.0000	T	1	132	0	0
30067	30114*	1	SAMPSON	CHOLASTP	.0095	.0265	.0017		1	101	0	0
30067*	30217	1	SAMPSON	WABASH	.0116	.0314	.0097		1	101	0	0
30069	30070*	1	SANLUSRY	SANMATEO	.0115	.0801	.0261		1	222	0	0
30069	30198*	2	SANLUSRY	SANLUSRY	.0018	.2340	.0000	F	1	63	0	0

FROM	TO	CKT	NAME	NAME	LINE R	LINE X	CHRGING	TP	ST	RATA	RATB	RATC
30069	30198*	3	SANLUSRY	SANLUSRY	.0018	.2340	.0000	F	1	63	0	0
30069	30198*	4	SANLUSRY	SANLUSRY	.0018	.2340	.0000	F	1	63	0	0
30070*	30071	1	SANMATEO	SANMTOTP	.0022	.0084	.0055		1	222	0	0
30071*	30091	1	SANMTOTP	TALEGA	.0002	.0013	.0005		1	274	0	0
30081	30082*	1	SOUTHBAY	SOUTHBAY	.0026	.0953	.0000	F	1	140	0	0
30081*	30084	1	SOUTHBAY	SOUTHBY1	.0035	.0700	.0000	T	1	0	0	0
30081	30146*	1	SOUTHBAY	IMPRLBCH	.0132	.0409	.0008		1	55	0	0
30081	30168*	1	SOUTHBAY	MONTGMRY	.0037	.0158	.0004		1	102	0	0
30081	30169*	1	SOUTHBAY	MONTGYTP	.0034	.0094	.0006		1	101	0	0
30081	30180*	1	SOUTHBAY	OTAY	.0109	.0300	.0022		1	101	0	0
30081	30180*	2	SOUTHBAY	OTAY	.0099	.0284	.0010		1	101	0	0
30081	30211*	1	SOUTHBAY	SWEETWTR	.0060	.0368	.0017		1	137	0	0
30081	30229*	1	SOUTHBAY	SOUTHBTG	.0000	.6568	.0000	F	1	25	0	0
30082*	30085	1	SOUTHBAY	SOUTHBY2	.0035	.0700	.0000	T	1	0	0	0
30082*	30086	1	SOUTHBAY	SOUTHBY3	.0013	.0530	.0000	T	1	212	0	0
30082*	30087	1	SOUTHBAY	SOUTHBY4	.0011	.0364	.0000	T	1	240	0	0
30082*	30330	1	SOUTHBAY	TELECYN	.0026	.0194	.0094		1	408	0	0
30083	30331*	1	SOUTHBAY	MAIN	.0007	.0073	.0283		0	729	0	0
30083	30333*	1	SOUTHBAY	SBYRPW1	.0018	.0632	.0000	F	0	200	0	0
30083	30334*	1	SOUTHBAY	SBYRPW2	.0018	.0632	.0000	F	0	200	0	0
30083	30335*	1	SOUTHBAY	SBYRPW3	.0018	.0632	.0000	F	0	200	0	0
30090*	30995	1	SYCAMORE	SYCAMORE	.0012	.0649	.0000	T	1	224	0	0
30090*	30995	2	SYCAMORE	SYCAMORE	.0012	.0649	.0000	T	1	224	0	0
30091*	30092	1	TALEGA	TALEGA	.0024	.0633	.0000	T	1	168	0	0
30091*	30092	2	TALEGA	TALEGA	.0018	.0613	.0000	T	1	150	0	0
30091*	30092	3	TALEGA	TALEGA	.0024	.0228	.0000	T	1	392	0	0
30091	30093*	1	TALEGA	TRABUCO	.0062	.0451	.0122		1	274	0	0
30091	30223*	1	TALEGA	MARGARTA	.0071	.0515	.0139		1	274	0	0
30091*	30329	1	TALEGA	PICO	.0005	.0040	.0011		1	274	0	0
30092*	30332	1	TALEGA	PALA	.0063	.0485	.1004		0	456	0	0
30092	30997*	1	TALEGA	RAINB23	.0055	.0423	.0876		1	456	0	0
30092	34182*	1	TALEGA	S.ONOFRE	.0012	.0097	.0211		1	518	0	0
30092	34182*	2	TALEGA	S.ONOFRE	.0012	.0097	.0211		1	518	0	0
30093*	30223	1	TRABUCO	MARGARTA	.0004	.0027	.0030		1	274	0	0
30094*	30155	1	ALPINE	LOSCOCHS	.0419	.1058	.0029		1	68	0	0
30094*	30156	1	ALPINE	LOVELAND	.0028	.0379	.0006		1	44	0	0
30095	30096*	1	ASH	ASH TP	.0048	.0207	.0004		1	102	0	0
30095*	30130	1	ASH	ESCNDIDO	.0108	.0465	.0010		1	102	0	0
30096*	30136	1	ASH	TP FELICITA	.0192	.0812	.0032		1	98	0	0
30096*	30195	1	ASH	TP RINCON	.0424	.1875	.0042		1	72	0	0
30097	30098*	1	AVCADOTP	AVOCADO	.0306	.0742	.0033		1	68	0	0
30097*	30188	1	AVCADOTP	PENDLETN	.0167	.0650	.0019		1	102	0	0
30098*	30167	1	AVOCADO	MONSRATE	.0260	.0622	.0048		1	68	0	0
30099*	30149	1	B	KETTNER	.0012	.0078	.0241		1	204	0	0
30099	30216*	1	B	URBAN	.0029	.0122	.0192		1	98	0	0
30099	30225*	1	B	NOISLMT	.0030	.0063	.0210		1	84	0	0
30101	30102*	1	BARRETLK	BARTLKTP	.1043	.1556	.0024		1	32	0	0
30101	30112*	1	BARRETLK	CAMERON	.0686	.1674	.0035		1	68	0	0
30102*	30123	1	BARTLKTP	DESCANSO	.1046	.1505	.0022		1	32	0	0
30102*	30156	1	BARTLKTP	LOVELAND	.0190	.0909	.0017		1	102	0	0
30103	30104*	1	BERNARDO	BERNDOTP	.0137	.0626	.0015		1	102	0	0
30103	30135*	1	BERNARDO	FELCTATP	.0154	.0833	.0020		1	102	0	0
30103	30994*	1	BERNARDO	R.CARMEL	.0085	.0214	.0019		1	136	0	0
30104*	30130	1	BERNDOTP	ESCNDIDO	.0223	.0991	.0022		1	102	0	0
30104*	30193	1	BERNDOTP	R.SNTAFE	.0507	.0658	.0010		1	27	0	0
30105	30123*	1	BOLDRCRK	DESCANSO	.1455	.2110	.0018		1	32	0	0
30105	30202*	1	BOLDRCRK	SANTYSBL	.0820	.1185	.0016		1	32	0	0
30106*	30110	1	BOLVRDTP	BOULEVRD	.2121	.2197	.0032		1	32	0	0
30106*	30112	1	BOLVRDTP	CAMERON	.0797	.0826	.0012		1	32	0	0
30106*	30112	2	BOLVRDTP	CAMERON	.0797	.0826	.0012		1	32	0	0
30106*	30141	1	BOLVRDTP	GLENCLIF	.1097	.1137	.0016		1	32	0	0
30106*	30141	2	BOLVRDTP	GLENCLIF	.1097	.1137	.0016		1	32	0	0
30107	30108*	1	BORDER	BORDERTP	.0050	.0329	.0009		1	137	0	0
30108*	30182	1	BORDERTP	OTAYLAKE	.0043	.0111	.0002		1	68	0	0
30108*	30183	1	BORDERTP	OTAYLKTP	.0317	.0818	.0015		1	68	0	0
30109	30173*	1	BORREGO	NARROWS	.1085	.1865	.0035		1	50	0	0
30111	30190*	1	CABRILLO	POINTLMA	.0178	.0377	.0088		1	54	0	0
30111*	30328	1	CABRILLO	OLDTWNT	.0233	.0676	.0188		1	54	0	0

FROM	TO	CKT	NAME	NAME	LINE R	LINE X	CHRGING	TP	ST	RATA	RATB	RATC
30113	30119*	1	CAPSTRNO	CRSTNSTP	.0423	.1061	.0021		1	68	0	0
30114*	30115	1	CHOLASTP	CHOLLAS	.0117	.0825	.0019		1	137	0	0
30114*	30174	1	CHOLASTP	NATLCYTP	.0006	.0039	.0004		1	274	0	0
30115*	30187	1	CHOLLAS	PARADISE	.0093	.0289	.0015		1	101	0	0
30115	30207*	1	CHOLLAS	SPRNGVLY	.0074	.0462	.0011		1	137	0	0
30115*	30208	1	CHOLLAS	STREAMVW	.0042	.0275	.0007		1	137	0	0
30116	30117*	1	CLAIRMNT	CLARMTTP	.0045	.0126	.0002		1	50	0	0
30116	30134*	1	CLAIRMNT	FASHNVLY	.0087	.0544	.0013		1	137	0	0
30117*	30197	1	CLARMTTP	ROSE CYN	.0097	.0274	.0018		1	101	0	0
30118	30155*	1	CREELMAN	LOSCOCHS	.1359	.2327	.0032		1	44	0	0
30118*	30202	1	CREELMAN	SANTYSBL	.1575	.2494	.0034		1	44	0	0
30118*	30995	1	CREELMAN	SYCAMORE	.0283	.1768	.0041		1	137	0	0
30119*	30120	1	CRSTNSTP	CRSTNTS	.0064	.0174	.0003		1	68	0	0
30119*	30148	1	CRSTNSTP	JAP MESA	.0607	.1251	.0020		1	55	0	0
30121	30122*	1	DEL MAR	DELMARTP	.0370	.1015	.0018		1	50	0	0
30121*	30129	1	DEL MAR	ENCNITAS	.0265	.1034	.0025		1	102	0	0
30121	30189*	1	DEL MAR	PENSQTOS	.0250	.0796	.0379		1	50	0	0
30121*	30194	1	DEL MAR	R.SNTATP	.0041	.0159	.0004		1	102	0	0
30122*	30124	1	DELMARTP	DOUBLTTP	.0013	.0102	.0004		1	137	0	0
30122*	30189	1	DELMARTP	PENSQTOS	.0013	.0086	.0002		1	137	0	0
30123	30141*	1	DESCANSO	GLENCLIF	.1987	.2041	.0030		1	32	0	0
30124*	30125	1	DOUBLTTP	DUNHILL	.0011	.0026	.0000		1	68	0	0
30125*	30214	1	DUNHILL	TOREYPNS	.0036	.0079	.0008		1	68	0	0
30126	30127*	1	EL CAJON	ELCAJNGT	.0010	.1813	.0000	F	1	84	0	0
30126	30142*	1	EL CAJON	GRANITE	.0092	.0571	.0006		1	137	0	0
30126	30147*	1	EL CAJON	JAMACHA	.0095	.0624	.0016		1	137	0	0
30126	30155*	1	EL CAJON	LOSCOCHS	.0495	.1320	.0025		1	55	0	0
30126*	30171	1	EL CAJON	MURRAY	.0101	.0427	.0010		1	102	0	0
30128	30201*	1	ELLIOTT	SANTEE	.0617	.1709	.0028		1	68	0	0
30128	30995*	1	ELLIOTT	SYCAMORE	.0464	.1123	.0024		1	68	0	0
30129	30189*	1	ENCNITAS	PENSQTOS	.0360	.1823	.0031		1	72	0	0
30130*	30131	1	ESCNDIDO	ESCO	.0064	.0272	.0007		1	102	0	0
30130*	30132	1	ESCNDIDO	ESCO2 TP	.0075	.0327	.0008		1	102	0	0
30130	30136*	1	ESCNDIDO	FELICITA	.0154	.0680	.0051		1	98	0	0
30130	30154*	1	ESCNDIDO	LILAC	.0514	.1259	.0082		1	68	0	0
30130	30200*	1	ESCNDIDO	SANMRCOS	.0113	.0739	.0019		1	137	0	0
30131*	30218	1	ESCO	WARCYNTP	.0301	.1284	.0031		1	102	0	0
30132	30135*	1	ESCO2 TP	FELCTATP	.0066	.0284	.0007		1	102	0	0
30135	30136*	1	FELCTATP	FELICITA	.0003	.0007	.0004		1	73	0	0
30137*	30164	1	FENTON	MIRAMAR	.0030	.0200	.0005		1	137	0	0
30137*	30165	1	FENTON	MIRAMRGT	.0040	.0265	.0007		1	137	0	0
30138	30139*	1	GEN DYNM	GENDYNTP	.0012	.0029	.0000		1	44	0	0
30139*	30151	1	GENDYNTP	KYOCRATP	.0006	.0038	.0000		1	137	0	0
30140*	30189	1	GENESEE	PENSQTOS	.0081	.0434	.0004		1	137	0	0
30140	30215*	1	GENESEE	UCSD	.0008	.0054	.0012		1	98	0	0
30140	30222*	1	GENESEE	GENESETP	.0009	.0048	.0052		1	98	0	0
30142	30143*	1	GRANITE	GRANITTP	.0046	.0298	.0019		1	98	0	0
30143*	30155	1	GRANITTP	LOSCOCHS	.0163	.0838	.0014		1	102	0	0
30144	30145*	1	HORNO	HORNO TP	.0238	.0574	.0012		1	68	0	0
30145	30148*	1	HORNO TP	JAP MESA	.0550	.0790	.0012		1	32	0	0
30145*	30153	1	HORNO TP	LASPULGS	.0247	.0356	.0005		1	32	0	0
30146	30181*	1	IMPRLBCH	OTAY TP	.0183	.0540	.0004		1	55	0	0
30147	30207*	1	JAMACHA	SPRNGVLY	.0175	.0512	.0009		1	50	0	0
30149*	30328	1	KETTNER	OLDTWNTP	.0021	.0144	.0014		1	239	0	0
30150*	30151	1	KYOCERA	KYOCRATP	.0017	.0114	.0003		1	137	0	0
30151*	30991	1	KYOCRATP	MESAHGTS	.0016	.0108	.0015		1	98	0	0
30152	30196*	1	LA JOLLA	ROSCYNTP	.0161	.0322	.0105		1	54	0	0
30152	30197*	1	LA JOLLA	ROSE CYN	.0163	.0278	.0141		1	54	0	0
30153	30209*	1	LASPULGS	STUART	.0608	.0874	.0013		1	32	0	0
30154*	30195	1	LILAC	RINCON	.0555	.1430	.0030		1	55	0	0
30155	30156*	1	LOSCOCHS	LOVELAND	.0356	.1441	.0044		1	68	0	0
30155	30201*	1	LOSCOCHS	SANTEE	.0453	.1250	.0020		1	68	0	0
30157	30158*	1	MELROSE	MELRSETP	.0116	.0490	.0012		1	102	0	0
30157	30198*	1	MELROSE	SANLUSRY	.0161	.0722	.0049		1	102	0	0
30157	30198*	2	MELROSE	SANLUSRY	.0109	.0680	.0016		1	137	0	0
30158*	30198	1	MELRSETP	SANLUSRY	.0138	.0610	.0017		1	98	0	0
30158*	30200	1	MELRSETP	SANMRCOS	.0197	.0842	.0020		1	102	0	0
30159	30164*	1	MESA RIM	MIRAMAR	.0066	.0437	.0050		1	98	0	0

SONGSOFF.SAV MODIFIED, INC. PGEN AT ORMOND BY 300 MW

FROM	TO	CKT	NAME	NAME	LINE R	LINE X	CHRGING	TP	ST	RATA	RATB	RATC
30159*	30189	1	MESA RIM	PENSQTOS	.0012	.0845	.0105		1	98	0	0
30161	30162*	1	MIGUEL	MIGUELMP	.0000	.0545	.0000	F	1	180	0	0
30163*	30210	1	MIGUELTP	SUNYSIDE	.0007	.0027	.0000		1	101	0	0
30163*	30211	1	MIGUELTP	SWEETWTR	.0123	.0682	.0179		1	98	0	0
30164	30189*	1	MIRAMAR	PENSQTOS	.0174	.1262	.0078		1	137	0	0
30164	30205*	1	MIRAMAR	SCRIPPS	.0044	.0027	.0006		1	137	0	0
30165	30166*	1	MIRAMRGT	MIRAMRTP	.0218	.0573	.0012		1	68	0	0
30165	30224*	1	MIRAMRGT	MIRAMRGT	.0030	.3081	.0000	F	1	50	0	0
30166*	30189	1	MIRAMRTP	PENSQTOS	.0071	.0327	.0055		1	98	0	0
30166*	30197	1	MIRAMRTP	ROSE CYN	.0102	.0666	.0017		1	137	0	0
30167	30170*	1	MONSRATE	MOROHILL	.0243	.1099	.0024		1	72	0	0
30167	30185*	1	MONSRATE	PALA	.0177	.1102	.0025		1	137	0	0
30168	30169*	1	MONTGMRY	MONTGYTP	.0004	.0012	.0000		1	102	0	0
30169*	30211	1	MONTGYTP	SWEETWTR	.0052	.0326	.0008		1	137	0	0
30170	30198*	1	MOROHILL	SANLUSRY	.0163	.0747	.0048		1	102	0	0
30172	31996*	1	N.GILA	N.GILA&2	.0000	.0135	.0000		1	0	0	0
30172*	31998	1	N.GILA	IMPRLV&2	.0008	.0193	1.4381		1	1213	0	0
30173	30220*	1	NARROWS	WARNERS	.2285	.4225	.0063		1	32	0	0
30174*	30175	1	NATLCYTP	NATNLCTY	.0020	.0085	.0002		1	102	0	0
30174*	30211	1	NATLCYTP	SWEETWTR	.0039	.0110	.0007		1	101	0	0
30175	30212*	1	NATNLCTY	SWTWTRTP	.0014	.0062	.0000		1	101	0	0
30176*	30204	1	NAVSTMTR	SCRAPDSP	.0009	.0028	.0016		1	98	0	0
30177*	30178	1	OCEANSDE	OCNSDETP	.0082	.0161	.0055		1	54	0	0
30177*	30198	1	OCEANSDE	SANLUSRY	.0322	.0885	.0027		1	54	0	0
30178	30198*	1	OCNSDETP	SANLUSRY	.0256	.0711	.0015		1	68	0	0
30178	30209*	1	OCNSDETP	STUART	.0429	.0616	.0009		1	32	0	0
30180	30181*	1	OTAY	OTAY TP	.0011	.0068	.0001		1	137	0	0
30180	30183*	1	OTAY	OTAYLKTP	.0127	.0371	.0006		1	50	0	0
30181*	30203	1	OTAY TP	SANYSYRO	.0194	.0540	.0010		1	50	0	0
30183*	30203	1	OTAYLKTP	SANYSYRO	.0100	.0273	.0005		1	50	0	0
30184*	30196	1	PACFCBCH	ROSCYNTP	.0153	.1088	.0025		1	137	0	0
30185*	30332	1	PALA	PALA	.0013	.0737	.0000	T	0	224	0	0
30187	30210*	1	PARADISE	SUNYSIDE	.0103	.0281	.0020		1	101	0	0
30188	30198*	1	PENDLETN	SANLUSRY	.0232	.1042	.0026		1	102	0	0
30189*	30194	1	PENSQTOS	R.SNTATP	.0153	.0596	.0014		1	102	0	0
30189	30214*	1	PENSQTOS	TOREYPNS	.0102	.0344	.0005		1	68	0	0
30189	30215*	1	PENSQTOS	UCSD	.0067	.0378	.0016		1	98	0	0
30189	30222*	1	PENSQTOS	GENESETP	.0079	.0493	.0011		1	137	0	0
30195*	30220	1	RINCON	WARNERS	.2188	.3350	.0052		1	32	0	0
30196	30197*	1	ROSCYNTP	ROSE CYN	.0002	.0013	.0000		1	137	0	0
30197	30222*	1	ROSE CYN	GENESETP	.0302	.0767	.0013		1	137	0	0
30198	30199*	1	SANLUSRY	SANLUSRY	.0015	.0630	.0000	F	1	224	0	0
30199	34182*	1	SANLUSRY	S.ONOFRE	.0012	.0123	.0478		1	797	0	0
30202*	30220	1	SANTYSBL	WARNERS	.1307	.1855	.0029		1	32	0	0
30204	30212*	1	SCRAPDSP	SWTWTRTP	.0015	.0042	.0007		1	101	0	0
30205*	30995	1	SCRIPPS	SYCAMORE	.0139	.0870	.0020		1	137	0	0
30208*	30217	1	STREAMVW	WABASH	.0052	.0355	.0008		1	137	0	0
30211*	30212	1	SWEETWTR	SWTWTRTP	.0039	.0126	.0007		1	101	0	0
30218*	30219	1	WARCYNTP	WARENCYN	.0249	.0365	.0006		1	44	0	0
30218*	30993	1	WARCYNTP	POWAY	.0096	.0409	.0010		1	102	0	0
30225*	30226	1	NOISLMTP	NOISLMTR	.0036	.0064	.0033		1	54	0	0
30992*	30993	1	POMERADO	POWAY	.0016	.0102	.0002		1	374	0	0
30992	30995*	1	POMERADO	SYCAMORE	.0065	.0408	.0009		1	137	0	0
30992*	30995	2	POMERADO	SYCAMORE	.0065	.0408	.0009		1	137	0	0
30993	30994*	1	POWAY	R.CARMEL	.0032	.0105	.0004		1	137	0	0
30994*	30995	1	R.CARMEL	SYCAMORE	.0240	.1496	.0035		1	137	0	0
30996*	30997	1	RAINBOW	RAINB23	.0000	.0088	.0000	F	1	1120	0	0
30996	34204*	1	RAINBOW	VALLEYSC	.0002	.0061	.4413		1	1040	0	0
31996	31997*	1	N.GILA&2	N.GILA&1	.0011	.0269	.0000		1	1213	0	0

BUS#	NAME	BSKV	CODE	VOLT	ANGLE	PLOAD	QLOAD	S	H	U	N	T	AREA	ZONE
30001	BATIQTOS	138	1	1.0284	-9.6	37.0	7.5	.0	.0	.0	.0	.0	30	303
30003	CALAVRTP	138	1	1.0333	-9.0	.0	.0	.0	.0	.0	.0	.0	30	303
30004	CANNON	138	1	1.0356	-8.7	24.1	4.9	.0	.0	.0	.0	.0	30	303
30005	CAPSTRNO	138	1	1.0342	-8.3	44.5	9.0	.0	40.0	.0	.0	.0	30	303
30006	CARLTHTP	138	1	1.0283	-10.8	.0	.0	.0	.0	.0	.0	.0	30	303
30007	CARLTNHS	138	1	1.0278	-10.7	27.5	5.6	.0	.0	.0	.0	.0	30	303
30008	CHCARITA	138	1	1.0253	-10.6	26.2	5.3	.0	.0	.0	.0	.0	30	303
30010	CORONADO12.5		-2	1.0236	-15.0	27.3	5.5	.0	.0	.0	.0	.0	30	301
30011	CORONADO69.0		1	1.0129	-12.4	.0	.0	.0	.0	.0	.0	.0	30	301
30014	DIVISION69.0		-2	1.0172	-11.7	.0	.0	.0	.0	.0	.0	.0	30	301
30015	DIVISNGT12.5		-2	.9838	-18.9	41.0	8.3	.0	.0	.0	.0	.0	30	301
30016	DOUBLET	138	1	1.0334	-10.8	.0	.0	.0	.0	.0	.0	.0	30	303
30017	DOUBLTTP	138	1	1.0334	-10.8	.0	.0	.0	.0	.0	.0	.0	30	303
30019	ENCINA	138	1	1.0356	-8.7	.0	.0	.0	.0	.0	.0	.0	30	303
30020	ENCINA	230	1	.9971	-7.3	.0	.0	.0	.0	.0	.0	.0	30	303
30021	ENCINA	114.4	2	1.0030	-3.7	.0	.0	.0	.0	.0	.0	.0	30	303
30022	ENCINA	214.4	2	1.0030	-4.6	.0	.0	.0	.0	.0	.0	.0	30	303
30023	ENCINA	314.4	2	1.0040	-3.5	.0	.0	.0	.0	.0	.0	.0	30	303
30024	ENCINA	422.0	2	.9930	-7.7	.0	.0	.0	.0	.0	.0	.0	30	303
30025	ENCINA	524.0	-2	.9818	-5.9	.0	.0	.0	.0	.0	.0	.0	30	303
30028	ESCNDIDO	230	1	.9867	-8.0	.0	.0	.0	.0	.0	.0	.0	30	303
30029	ESCND050	138	1	1.0097	-9.7	.0	.0	.0	.0	.0	.0	.0	30	303
30030	ESCND051	138	1	1.0139	-10.1	.0	.0	.0	.0	.0	.0	.0	30	303
30032	IMPRLVLY	230	1	1.0076	9.3	.0	.0	.0	.0	.0	.0	.0	30	303
30033	IMPRLVLY	500	1	1.0469	14.5	.0	.0	.0	.0	.0	.0	.0	30	303
30034	KEARNY	69.0	1	.9960	-15.9	70.8	14.4	.0	.0	.0	.0	.0	30	307
30035	KEARNYGT12.5		-2	.9871	-15.9	.0	.0	.0	.0	.0	.0	.0	30	307
30036	LAGNA NL	138	1	1.0323	-8.3	54.8	11.1	.0	.0	.0	.0	.0	30	303
30037	LOSCOCHS	138	1	1.0325	-11.4	.0	.0	.0	.0	.0	.0	.0	30	303
30040	MAIN ST	69.0	1	1.0201	-11.9	.0	.0	.0	100.0	.0	.0	.0	30	301
30042	MAINST50	138	1	1.0214	-7.7	.0	.0	.0	.0	.0	.0	.0	30	303
30043	MAINST51	138	1	1.0214	-7.7	.0	.0	.0	.0	.0	.0	.0	30	303
30044	MDWLRKTP	138	1	1.0260	-9.8	.0	.0	.0	.0	.0	.0	.0	30	303
30045	MIGUEL	69.0	1	1.0061	-9.0	.0	.0	.0	100.0	.0	.0	.0	30	309
30046	MIGUEL	138	1	1.0186	-3.0	.0	.0	.0	.0	.0	.0	.0	30	303
30047	MIGUEL	230	1	.9874	-.4	.0	.0	.0	.0	.0	.0	.0	30	303
30048	MIGUEL	500	1	1.0247	9.8	.0	.0	.0	.0	.0	.0	.0	30	303
30051	MISSION	69.0	1	1.0125	-13.8	94.9	19.3	.0	50.0	.0	.0	.0	30	307
30052	MISSION	138	1	1.0284	-10.0	.0	.0	.0	.0	.0	.0	.0	30	303
30053	MISSION	230	1	.9749	-8.5	.0	.0	.0	.0	.0	.0	.0	30	303
30055	OLD TOWN69.0		1	.9951	-12.5	75.5	15.3	.0	.0	.0	.0	.0	30	301
30056	OLD TOWN	230	1	.9753	-9.0	.0	.0	.0	.0	.0	.0	.0	30	303
30057	PENSQTOS	138	1	1.0336	-10.8	.0	.0	.0	.0	.0	.0	.0	30	303
30058	PENSQTOS	230	1	.9772	-9.3	.0	.0	.0	.0	.0	.0	.0	30	306
30060	PRCTRVLY	138	1	1.0200	5.3	18.4	3.7	.0	.0	.0	.0	.0	30	303
30066	SAMPSON	12.5	-2	.9561	-15.1	70.2	14.3	.0	.0	.0	.0	.0	30	301
30067	SAMPSON	69.0	1	1.0192	-11.9	.0	.0	.0	.0	.0	.0	.0	30	301
30069	SANLUSRY	138	1	1.0360	-9.1	.0	.0	.0	80.0	.0	.0	.0	30	303
30070	SANMATEO	138	1	1.0358	-7.5	34.4	7.0	.0	.0	.0	.0	.0	30	303
30071	SANMTOTP	138	1	1.0373	-7.2	.0	.0	.0	.0	.0	.0	.0	30	303
30081	SOUTHBAY69.0		1	1.0280	-10.4	.0	.0	.0	.0	.0	.0	.0	30	302
30082	SOUTHBAY	138	1	1.0374	-5.8	.0	.0	.0	.0	.0	.0	.0	30	303
30083	SOUTHBAY	230	4	1.0000	-4.0	.0	.0	.0	.0	.0	.0	.0	30	303
30084	SOUTHBY115.0		-2	1.0132	-5.1	.0	.0	.0	.0	.0	.0	.0	30	303
30085	SOUTHBY215.0		2	1.0160	-.5	.0	.0	.0	.0	.0	.0	.0	30	303
30086	SOUTHBY320.0		2	1.0260	.2	.0	.0	.0	.0	.0	.0	.0	30	303
30087	SOUTHBY420.0		2	1.0170	-4.0	.0	.0	.0	.0	.0	.0	.0	30	303
30090	SYCAMORE	230	1	.9810	-5.8	.0	.0	.0	.0	.0	.0	.0	30	303
30091	TALEGA	138	1	1.0375	-7.1	.0	.0	.0	.0	.0	.0	.0	30	303
30092	TALEGA	230	1	.9965	-5.0	.0	.0	.0	.0	.0	.0	.0	30	303
30093	TRABUCO	138	1	1.0323	-8.3	93.0	18.9	.0	.0	.0	.0	.0	30	303
30094	ALPINE	69.0	1	1.0101	-16.2	12.8	2.6	.0	.0	.0	.0	.0	30	308
30095	ASH	69.0	1	1.0081	-14.6	45.1	9.2	.0	.0	.0	.0	.0	30	305
30096	ASH	TP69.0	1	1.0077	-14.7	.0	.0	.0	.0	.0	.0	.0	30	305
30097	AVCADOTP69.0		1	1.0186	-13.0	.0	.0	.0	.0	.0	.0	.0	30	304
30098	AVOCADO	69.0	1	1.0178	-13.0	21.0	4.3	.0	.0	.0	.0	.0	30	304
30099	B	69.0	1	1.0122	-12.4	80.8	16.4	.0	.0	.0	.0	.0	30	301
30101	BARRETLK69.0		1	1.0074	-17.4	2.8	.6	.0	.0	.0	.0	.0	30	308

SDG+E

BUS#	NAME	BSKV	CODE	VOLT	ANGLE	PLOAD	QLOAD	S	H	U	N	T	AREA	ZONE
30171	MURRAY	69.0	-2	.9993	-15.5	97.6	19.8	.0				.0	30	307
30172	N.GILA	500	1	1.0462	21.0	.0	.0	.0				.0	30	300
30173	NARROWS	69.0	1	1.0066	-22.9	.0	.0	.0		2.0		.0	30	305
30174	NATLCYTP	69.0	1	1.0172	-11.6	.0	.0	.0				.0	30	301
30175	NATNLCTY	69.0	1	1.0173	-11.6	3.5	.7	.0				.0	30	301
30176	NAVSTMTR	69.0	1	1.0170	-11.7	18.9	3.8	.0				.0	30	301
30177	OCEANSDE	69.0	1	1.0214	-12.6	22.1	4.5	.0				.0	30	304
30178	OCNSDETP	69.0	1	1.0224	-12.6	.0	.0	.0				.0	30	304
30179	OLDTWN	12.5	-2	.9907	-12.5	.0	.0	.0				.0	30	303
30180	OTAY	69.0	-2	1.0219	-10.8	34.2	6.9	.0				.0	30	302
30181	OTAY TP	69.0	1	1.0214	-10.9	.0	.0	.0				.0	30	302
30182	OTAYLAKE	69.0	1	1.0084	-11.0	.8	.2	.0				.0	30	302
30183	OTAYLKTP	69.0	1	1.0169	-11.0	.0	.0	.0				.0	30	302
30184	PACFCBCH	69.0	1	.9886	-14.7	50.4	10.2	.0				.0	30	301
30185	PALA	69.0	1	1.0426	-9.6	8.4	1.7	.0				.0	30	304
30187	PARADISE	69.0	1	1.0027	-11.5	37.3	7.6	.0				.0	30	309
30188	PENDLETN	69.0	1	1.0191	-13.0	18.1	3.7	.0				.0	30	304
30189	PENSOTOS	69.0	1	1.0137	-14.0	.0	.0	.0		100.0		.0	30	306
30190	POINTLMA	69.0	-2	.9922	-12.9	43.7	8.9	.0				.0	30	301
30193	R.SNTAFE	69.0	-2	.9905	-15.8	17.6	3.6	.0				.0	30	306
30194	R.SNTATP	69.0	1	1.0077	-14.7	.0	.0	.0				.0	30	306
30195	RINCON	69.0	-2	1.0047	-16.9	19.9	4.0	.0				.0	30	305
30196	ROSCYNTP	69.0	1	.9949	-15.9	.0	.0	.0				.0	30	306
30197	ROSE CYN	69.0	1	.9950	-15.9	45.5	9.2	.0				.0	30	306
30198	SANLUSRY	69.0	1	1.0277	-12.0	66.7	13.6	.0				.0	30	304
30199	SANLUSRY	230	1	.9926	-5.7	.0	.0	.0				.0	30	303
30200	SANMRCOS	69.0	-2	1.0086	-14.4	64.1	13.0	.0				.0	30	305
30201	SANTEE	69.0	1	.9940	-16.6	46.1	9.4	.0				.0	30	308
30202	SANTYSBL	69.0	1	1.0163	-19.0	6.5	1.3	.0				.0	30	308
30203	SANYSDRO	69.0	1	1.0160	-11.2	24.4	5.0	.0			.1	.0	30	302
30204	SCRAPDSP	69.0	1	1.0171	-11.6	1.3	.3	.0				.0	30	301
30205	SCRIPPS	69.0	1	.9974	-16.6	50.2	10.2	.0				.0	30	306
30207	SPRNGVLY	69.0	1	.9964	-13.1	26.7	5.4	.0				.0	30	309
30208	STREAMVW	69.0	1	1.0035	-12.8	42.3	8.6	.0				.0	30	309
30209	STUART	69.0	1	1.0188	-12.8	3.9	.8	.0				.0	30	304
30210	SUNYSIDE	69.0	1	1.0072	-10.9	9.0	1.8	.0				.0	30	309
30211	SWEETWTR	69.0	-2	1.0188	-11.4	42.2	8.6	.0				.0	30	302
30212	SWTWTRTP	69.0	1	1.0175	-11.6	.0	.0	.0				.0	30	301
30214	TOREYPNS	69.0	1	1.0090	-14.5	58.7	11.9	.0				.0	30	306
30215	UCSD	69.0	1	1.0060	-15.1	23.6	4.8	.0				.0	30	306
30216	URBAN	69.0	1	1.0141	-12.3	42.8	8.7	.0				.0	30	301
30217	WABASH	69.0	1	1.0125	-12.2	7.4	1.5	.0				.0	30	301
30218	WARCYNTP	69.0	1	1.0069	-14.9	.0	.0	.0				.0	30	305
30219	WARENCYN	69.0	1	1.0057	-14.9	3.8	.8	.0				.0	30	305
30220	WARNERS	69.0	1	1.0299	-20.4	4.4	.9	.0		25.0		.0	30	305
30221	ENCINAGT	12.5	-2	1.0331	-8.7	.0	.0	.0				.0	30	303
30222	GENESETP	69.0	1	1.0058	-15.1	.0	.0	.0				.0	30	306
30223	MARGARTA	138	1	1.0324	-8.3	15.8	3.2	.0				.0	30	303
30224	MIRAMRGT	12.5	-2	.9584	-15.8	.0	.0	.0				.0	30	306
30225	NOISLMT	69.0	1	1.0129	-12.4	.0	.0	.0				.0	30	301
30226	NOISLMTR	69.0	-2	1.0130	-12.3	20.9	4.2	.0				.0	30	301
30227	PALOMAR	138	1	1.0332	-9.0	27.2	5.5	.0				.0	30	303
30229	SOUTHBGT	12.5	-2	1.0023	-10.4	.0	.0	.0				.0	30	302
30326	DALEY	69.0	1	1.0050	-9.2	3.2	.6	.0				.0	30	309
30327	NORTHCTY	138	1	1.0337	-10.5	15.0	3.0	.0				.0	30	303
30328	OLDTWNT	69.0	1	.9986	-12.6	.0	.0	.0				.0	30	301
30329	PICO	138	1	1.0371	-7.3	13.0	2.6	.0				.0	30	303
30330	TELECYN	138	1	1.0244	-4.1	18.4	3.7	.0				.0	30	303
30331	MAIN	230	4	.9995	-6.6	.0	.0	.0				.0	30	303
30332	PALA	230	1	.9873	-7.5	.0	.0	.0				.0	30	304
30333	SBYRPW1	20.0	4	.9954	1.5	.0	.0	.0				.0	30	303
30334	SBYRPW2	20.0	4	.9955	1.5	.0	.0	.0				.0	30	303
30335	SBYRPW3	20.0	4	.9955	1.5	.0	.0	.0				.0	30	303
30991	MESAHGTS	69.0	1	.9980	-15.6	31.0	6.3	.0				.0	30	307
30992	POMERADO	69.0	1	1.0101	-14.7	16.9	3.4	.0				.0	30	305
30993	POWAY	69.0	1	1.0047	-15.3	41.5	8.4	.0				.0	30	305
30994	R.CARMEL	69.0	1	1.0025	-15.6	41.5	8.4	.0				.0	30	305
30995	SYCAMORE	69.0	-2	1.0169	-13.8	.0	.0	.0		50.0		.0	30	306

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E TUE, JUN 21 1994 11:53
 1998 HS2, SONGS 2&3 UNITS ON LINE, EOR=7490, SONGS23STB.SAV BUS DATA
 PLANTM.SAV MODIFIED, INC. SDG&E CHNGS & NOL & SCE BRPU

BUS#	NAME	BSKV	CODE	VOLT	ANGLE	PLOAD	QLOAD	S	H	U	N	T	AREA	ZONE
30996	RAINBOW	500	4	1.0078	-3.1	.0	.0	.0	.0	.0	.0	.0	30	303
30997	RAINB23	230	4	.9845	-3.9	.0	.0	.0	.0	.0	.0	.0	30	303
31996	N.GILA&2	500	1	1.0484	11.3	.0	.0	.0	.0	.0	.0	.0	30	300
31997	N.GILA&1	500	1	1.0600	30.7	.0	.0	.0	.0	.0	.0	.0	30	300
31998	IMPRLV&2	500	1	1.0560	7.9	.0	.0	.0	.0	.0	.0	.0	30	303
31999	IMPRLV&1	500	1	1.0540	19.3	.0	.0	.0	.0	.0	.0	.0	30	303

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E TUE, JUN 21 1994 11:53
 1998 HS2, SONGS 2&3 UNITS ON LINE, EOR-7490, SONGS23STB.SAV GENERATING
 PLANTM.SAV MODIFIED, INC. SDG&E CHNGS & NOL & SCE BRPU PLANT DATA

BUS#	NAME	BSKV	COD	MCNS	PGEN	QGEN	QMAX	QMIN	VSCHED	VACT.	REMOI	PCT	Q
30010	CORONADO	12.5	-2	1	.0	.0	.0	.0	1.0200	1.0236			
30014	DIVISION	69.0	-2	1	47.0	.0	.0	.0	1.0200	1.0172			
30015	DIVISNGT	12.5	-2	1	.0	.0	.0	.0	1.0000	.9838			
30021	ENCINA	114.4	2	1	105.0	13.9	70.0	-20.0	1.0030	1.0030			
30022	ENCINA	214.4	2	1	104.0	15.6	69.0	-20.0	1.0030	1.0030			
30023	ENCINA	314.4	2	1	110.0	15.4	71.0	-20.0	1.0040	1.0040			
30024	ENCINA	422.0	2	1	50.7	26.6	130.0	-40.0	.9930	.9930			
30025	ENCINA	524.0	-2	1	115.0	173.0	173.0	-40.0	.9910	.9818			
30035	KEARNYGT	12.5	-2	1	.0	.0	.0	.0	1.0200	.9871			
30066	SAMPSON	12.5	-2	1	11.0	.0	.0	.0	1.0200	.9561			
30084	SOUTHBY1	115.0	-2	1	147.0	58.0	58.0	-30.0	1.0250	1.0132			
30085	SOUTHBY2	115.0	2	1	150.0	48.4	71.0	-30.0	1.0160	1.0160			
30086	SOUTHBY3	20.0	2	1	224.0	93.1	120.0	-30.0	1.0260	1.0260			
30087	SOUTHBY4	20.0	2	1	100.0	96.1	164.0	-30.0	1.0170	1.0170			
30106	BOLVRDTP	69.0	-2	1	6.5	.0	.0	.0	1.0200	1.0077			
30110	BOULEVRD	69.0	-2	1	.5	.0	.0	.0	1.0200	1.0016			
30111	CABRILLO	69.0	-2	1	1.0	.0	.0	.0	1.0200	.9908			
30127	ELCAJNGT	12.5	-2	1	.0	.0	.0	.0	1.0000	1.0011			
30131	ESCO	69.0	-2	1	50.0	.0	.0	.0	1.0200	1.0161			
30150	KYOCERA	69.0	-2	1	.5	.0	.0	.0	1.0200	.9965			
30164	MIRAMAR	69.0	-2	1	.5	.0	.0	.0	1.0200	.9970			
30171	MURRAY	69.0	-2	1	.5	.0	.0	.0	1.0200	.9993			
30179	OLDTWNGT	12.5	-2	1	.0	.0	.0	.0	1.0000	.9907			
30180	OTAY	69.0	-2	1	3.5	.0	.0	.0	1.0200	1.0219			
30190	POINTLMA	69.0	-2	1	22.0	.0	.0	.0	1.0200	.9922			
30193	R.SNTAFE	69.0	-2	1	.5	.0	.0	.0	1.0200	.9905			
30195	RINCON	69.0	-2	1	.5	.0	.0	.0	1.0200	1.0047			
30200	SANMRCOS	69.0	-2	1	1.5	.0	.0	.0	1.0200	1.0086			
30211	SWEETWTR	69.0	-2	1	.5	.0	.0	.0	1.0200	1.0188			
30221	ENCINAGT	12.5	-2	1	.0	.0	.0	.0	1.0000	1.0331			
30224	MIRAMRGT	12.5	-2	1	.0	.0	.0	.0	1.0200	.9584			
30226	NOISLMTR	69.0	-2	1	33.0	.0	.0	.0	1.0200	1.0130			
30229	SOUTHBGT	12.5	-2	1	.0	.0	.0	.0	1.0000	1.0023			
30333	SBYRPW1	20.0	4	1	.0	.0	.0	.0	1.0000	1.0000	30083	34.0	
30334	SBYRPW2	20.0	4	1	.0	.0	.0	.0	1.0000	1.0000	30083	33.0	
30335	SBYRPW3	20.0	4	1	.0	.0	.0	.0	1.0000	1.0000	30083	33.0	
30995	SYCAMORE	69.0	-2	1	1.5	.0	.0	.0	1.0200	1.0169			

FROM	TO	CKT	NAME	NAME	LINE R	LINE X	CHRGING	TP	ST	RATA	RATB	RATC
104*	30172	1	N.GILAL	N.GILA	.0001	.0097	.0000	T	1	1533	0	0
203	30032*	1	IMPRLVL1	IMPRLVLY	.0030	.0902	.0000	F	1	125	0	0
2144	30172*	1	N.GILA	N.GILA	.0021	.1894	.0000	T	1	240	0	0
2166*	31997	1	PALOVREDE	N.GILA&1	.0000	.0001	.0000	Z	1	0	0	0
8022	30032*	1	ELCENTRO	IMPRLVLY	.0038	.0250	.0561		1	442	0	0
12252*	30032	1	ROA	IMPRLVLY	.0016	.0124	.0258		1	456	0	0
12286*	30047	1	TJI-230	MIGUEL	.0012	.0097	.0770		1	797	0	0
30001	30044*	1	BATIQTOS	MDWLRKTP	.0006	.0074	.0038		1	478	0	0
30001*	30227	1	BATIQTOS	PALOMAR	.0009	.0111	.0042		1	478	0	0
30003	30019*	1	CALAVRTP	ENCINA	.0018	.0136	.0076		1	274	0	0
30003	30029*	1	CALAVRTP	ESCND050	.0175	.0613	.0138		1	112	0	0
30003	30069*	1	CALAVRTP	SANLUSRY	.0021	.0160	.0047		1	274	0	0
30004*	30019	1	CANNON	ENCINA	.0000	.0004	.0002		1	478	0	0
30004*	30069	1	CANNON	SANLUSRY	.0033	.0269	.0081		1	274	0	0
30005	30036*	1	CAPSTRNO	LAGNA NL	.0044	.0115	.0033		1	137	0	0
30005	30093*	1	CAPSTRNO	TRABUCO	.0020	.0147	.0040		1	274	0	0
30005*	30113	1	CAPSTRNO	CAPSTRNO	.0246	.7347	.0000	T	1	25	0	0
30005	30329*	1	CAPSTRNO	PICO	.0050	.0260	.0068		1	204	0	0
30006*	30007	1	CARLTHTP	CARLTNHS	.0007	.0059	.0016		1	274	0	0
30006*	30008	1	CARLTHTP	CHCARITA	.0085	.0431	.0119		1	204	0	0
30006*	30037	1	CARLTHTP	LOSCOCHS	.0073	.0322	.0132		1	273	0	0
30007*	30052	1	CARLTNHS	MISSION	.0049	.0239	.0190		1	273	0	0
30008	30044*	1	CHCARITA	MDWLRKTP	.0086	.0473	.0131		1	204	0	0
30010*	30011	1	CORONADO	CORONADO	.0007	.1817	.0000	T	1	84	0	0
30011*	30067	1	CORONADO	SAMPSON	.0077	.0301	.0208		1	73	0	0
30011	30225*	1	CORONADO	NOISLMTP	.0000	.0001	.0000	Z	1	54	0	0
30011*	30226	1	CORONADO	NOISLMTR	.0036	.0064	.0033		1	54	0	0
30014	30015*	1	DIVISION	DIVISNGT	.0000	.3059	.0000	F	1	53	0	0
30014*	30067	1	DIVISION	SAMPSON	.0053	.0150	.0010		1	101	0	0
30014	30176*	1	DIVISION	NAVSTMTR	.0027	.0079	.0010		1	98	0	0
30016	30017*	1	DOUBLET	DOUBLTTP	.0014	.0050	.0014		1	137	0	0
30017	30052*	1	DOUBLTTP	MISSION	.0091	.0472	.0141		1	204	0	0
30017	30057*	1	DOUBLTTP	PENSQTOS	.0004	.0019	.0030		1	204	0	0
30019*	30021	1	ENCINA	ENCINA 1	.0030	.0902	.0000	T	1	125	0	0
30019*	30022	1	ENCINA	ENCINA 2	.0025	.0750	.0000	T	1	134	0	0
30019*	30023	1	ENCINA	ENCINA 3	.0030	.0890	.0000	T	1	125	0	0
30019*	30024	1	ENCINA	ENCINA 4	.0009	.0368	.0000	T	1	310	0	0
30019	30057*	1	ENCINA	PENSQTOS	.0082	.0606	.0354		1	382	0	0
30019	30221*	1	ENCINA	ENCINAGT	.0043	.6751	.0000	F	1	20	0	0
30019	30227*	1	ENCINA	PALOMAR	.0004	.0048	.0018		1	478	0	0
30019	30327*	1	ENCINA	NORTHCTY	.0039	.0370	.0245		1	359	0	0
30020*	30025	1	ENCINA	ENCINA 5	.0006	.0215	.0000	T	1	355	0	0
30020*	30028	1	ENCINA	ESCNDIDO	.0012	.0156	.0627		1	797	0	0
30020*	30058	1	ENCINA	PENSQTOS	.0016	.0187	.0037		1	797	0	0
30020	34182*	1	ENCINA	S.ONOFR	.0044	.0349	.0764		1	456	0	0
30028*	30090	1	ESCNDIDO	SYCAMORE	.0023	.0261	.0784		1	797	0	0
30028*	30130	1	ESCNDIDO	ESCNDIDO	.0017	.0648	.0000	T	1	224	0	0
30028*	30130	2	ESCNDIDO	ESCNDIDO	.0017	.0648	.0000	T	1	224	0	0
30028	30332*	1	ESCNDIDO	PALA	.0032	.0244	.0506		1	456	0	0
30028	30997*	1	ESCNDIDO	RAINB23	.0040	.0306	.0634		0	456	0	0
30028	30997*	2	ESCNDIDO	RAINB23	.0040	.0306	.0634		0	456	0	0
30029	30130*	2	ESCND050	ESCNDIDO	.0098	.2224	.0000	F	1	63	0	0
30030*	30044	1	ESCND051	MDWLRKTP	.0087	.0300	.0066		1	112	0	0
30030	30130*	1	ESCND051	ESCNDIDO	.0096	.2224	.0000	F	1	63	0	0
30032	30033*	0	IMPRLVLY	IMPRLVLY	.0003	.0264	.0000	F	1	535	0	0
30033	31998*	1	IMPRLVLY	IMPRLV&2	.0000	-.0099	.0000		1	1213	0	0
30033	31999*	1	IMPRLVLY	IMPRLV&1	.0000	-.0102	.0000		1	1067	0	0
30034	30035*	1	KEARNY	KEARNYGT	.0010	.0693	.0000	F	1	164	0	0
30034	30051*	2	KEARNY	MISSION	.0134	.0665	.0018		1	137	0	0
30034	30117*	1	KEARNY	CLARMTTP	.0084	.0408	.0015		1	101	0	0
30034	30139*	1	KEARNY	GENDYNTTP	.0012	.0081	.0002		1	137	0	0
30036*	30071	1	LAGNA NL	SANMTOTP	.0140	.0416	.0106		1	137	0	0
30037	30082*	1	LOSCOCHS	SOUTHBAY	.0288	.0905	.0300		1	204	0	0
30037	30155*	1	LOSCOCHS	LOSCOCHS	.0030	.0916	.0000	F	1	150	0	0
30037	30155*	2	LOSCOCHS	LOSCOCHS	.0032	.1005	.0000	F	1	140	0	0
30040*	30042	1	MAIN ST	MAINST50	.0017	.0584	.0000	T	1	224	0	0
30040*	30043	1	MAIN ST	MAINST51	.0017	.0584	.0000	T	1	224	0	0
30040*	30067	1	MAIN ST	SAMPSON	.0003	.0020	.0000		1	239	0	0

FROM	TO	CKT	NAME	NAME	LINE R	LINE X	CHRGING	TP	ST	RATA	RATB	RATC
30040*	30067	2	MAIN ST	SAMPSON	.0002	.0020	.0000		1	239	0	0
30040*	30099	1	MAIN ST	B	.0061	.0251	.0213		1	98	0	0
30040*	30099	2	MAIN ST	B	.0025	.0177	.0040		1	98	0	0
30040	30216*	1	MAIN ST	URBAN	.0050	.0154	.0049		1	98	0	0
30040*	30217	1	MAIN ST	WABASH	.0192	.0558	.0035		1	101	0	0
30042	30082*	1	MAINST50	SOUTHBAY	.0037	.0273	.0074		1	274	0	0
30043	30082*	1	MAINST51	SOUTHBAY	.0037	.0273	.0074		1	274	0	0
30045	30047*	1	MIGUEL	MIGUEL	.0010	.0907	.0000	F	1	224	0	0
30045	30047*	2	MIGUEL	MIGUEL	.0010	.0907	.0000	F	1	224	0	0
30045	30107*	1	MIGUEL	BORDER	.0227	.1414	.0033		1	137	0	0
30045	30143*	1	MIGUEL	GRANITTP	.0342	.1738	.0029		1	102	0	0
30045	30147*	1	MIGUEL	JAMACHA	.0157	.1068	.0026		1	137	0	0
30045	30147*	2	MIGUEL	JAMACHA	.0157	.1068	.0026		1	137	0	0
30045*	30163	1	MIGUEL	MIGUELTP	.0100	.0515	.0016		1	137	0	0
30045*	30187	1	MIGUEL	PARADISE	.0124	.0806	.0021		1	137	0	0
30045	30326*	1	MIGUEL	DALEY	.0174	.1088	.0025		1	137	0	0
30046*	30047	1	MIGUEL	MIGUEL	.0024	.0228	.0000	T	1	392	0	0
30046*	30060	1	MIGUEL	PRCTRVLY	.0004	.0028	.0013		1	408	0	0
30047	30053*	1	MIGUEL	MISSION	.0029	.0319	.1517		1	797	0	0
30047	30083*	1	MIGUEL	SOUTHBAY	.0010	.0110	.0425		0	912	0	0
30047	30090*	1	MIGUEL	SYCAMORE	.0023	.0261	.0784		1	797	0	0
30047	30162*	1	MIGUEL	MIGUELMP	.0000	.0088	.0000	F	1	1120	0	0
30048	30162*	1	MIGUEL	MIGUELMP	.0000	.0118	.0000		1	1067	0	0
30048*	31999	1	MIGUEL	IMPRLV&1	.0008	.0201	1.4783		1	1067	0	0
30051*	30052	1	MISSION	MISSION	.0047	.1021	.0000	T	1	100	0	0
30051*	30052	2	MISSION	MISSION	.0015	.0526	.0000	T	1	224	0	0
30051*	30052	3	MISSION	MISSION	.0015	.0526	.0000	T	1	224	0	0
30051*	30053	1	MISSION	MISSION	.0013	.0737	.0000	T	1	224	0	0
30051	30128*	1	MISSION	ELLIOTT	.0072	.0301	.0022		1	137	0	0
30051	30133*	1	MISSION	F	.0047	.0172	.0012		1	101	0	0
30051	30133*	2	MISSION	F	.0079	.0247	.0014		1	101	0	0
30051	30134*	1	MISSION	FASHNVLY	.0103	.0336	.0013		1	137	0	0
30051	30171*	1	MISSION	MURRAY	.0300	.0875	.0026		1	102	0	0
30051	30171*	2	MISSION	MURRAY	.0214	.0922	.0022		1	102	0	0
30051	30171*	3	MISSION	MURRAY	.0153	.0952	.0022		1	137	0	0
30051*	30991	1	MISSION	MESAHGTS	.0116	.0518	.0015		1	137	0	0
30052*	30053	1	MISSION	MISSION	.0006	.0230	.0000	T	1	392	0	0
30052*	30053	2	MISSION	MISSION	.0006	.0230	.0000	T	1	392	0	0
30052*	30082	1	MISSION	SOUTHBAY	.0068	.0470	.0181		1	274	0	0
30053*	30056	1	MISSION	OLD TOWN	.0007	.0055	.0113		1	797	0	0
30053*	30056	2	MISSION	OLD TOWN	.0007	.0055	.0113		1	797	0	0
30053*	30199	1	MISSION	SANLUSRY	.0065	.0500	.1044		1	456	0	0
30053*	30331	1	MISSION	MAIN	.0003	.0016	1.8428		0	732	0	0
30053	34182*	1	MISSION	S.ONOFRE	.0097	.0754	.1578		1	456	0	0
30055	30056*	1	OLD TOWN	OLD TOWN	.0016	.0649	.0000	F	1	224	0	0
30055	30056*	2	OLD TOWN	OLD TOWN	.0016	.0649	.0000	F	1	224	0	0
30055	30179*	1	OLD TOWN	OLDTWNGT	.0012	.1155	.0000	F	1	75	0	0
30055*	30184	1	OLD TOWN	PACFCBCH	.0076	.0567	.0262		1	98	0	0
30055	30190*	1	OLD TOWN	POINTLMA	.0070	.0501	.0010		1	108	0	0
30055	30190*	2	OLD TOWN	POINTLMA	.0082	.0406	.0050		1	137	0	0
30055	30328*	1	OLD TOWN	OLDTWNTP	.0011	.0072	.0007		1	239	0	0
30056*	30058	1	OLD TOWN	PENSQTOS	.0009	.0081	.0032		1	797	0	0
30057*	30189	1	PENSQTOS	PENSQTOS	.0032	.1056	.0000	T	1	140	0	0
30057*	30189	2	PENSQTOS	PENSQTOS	.0037	.1068	.0000	T	1	140	0	0
30057*	30189	3	PENSQTOS	PENSQTOS	.0030	.1061	.0000	T	1	140	0	0
30057*	30327	1	PENSQTOS	NORTHCTY	.0010	.0093	.0061		1	359	0	0
30058	30189*	1	PENSQTOS	PENSQTOS	.0011	.0657	.0000	F	1	224	0	0
30058	30189*	2	PENSQTOS	PENSQTOS	.0011	.0657	.0000	F	1	224	0	0
30060	30330*	1	PRCTRVLY	TELECYN	.0010	.0076	.0037		1	408	0	0
30066*	30067	1	SAMPSON	SAMPSON	.0000	.0880	.0000	T	1	132	0	0
30067	30114*	1	SAMPSON	CHOLASTP	.0095	.0265	.0017		1	101	0	0
30067*	30217	1	SAMPSON	WABASH	.0116	.0314	.0097		1	101	0	0
30069	30070*	1	SANLUSRY	SANMATEO	.0115	.0801	.0261		1	222	0	0
30069	30198*	2	SANLUSRY	SANLUSRY	.0018	.2340	.0000	F	1	63	0	0
30069	30198*	3	SANLUSRY	SANLUSRY	.0018	.2340	.0000	F	1	63	0	0
30069	30198*	4	SANLUSRY	SANLUSRY	.0018	.2340	.0000	F	1	63	0	0
30070*	30071	1	SANMATEO	SANMTOTP	.0022	.0084	.0055		1	222	0	0
30071*	30091	1	SANMTOTP	TALEGA	.0002	.0013	.0005		1	274	0	0

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E TUE, JUN 21 1994 11:53
 1998 HS2, SONGS 2&3 UNITS ON LINE, EOR=7490, SONGS23STB.SAV BRANCH DATA
 PLANTM.SAV MODIFIED, INC. SDG&E CHNGS & NOL & SCE BRPU

FROM	TO	CKT	NAME	NAME	LINE R	LINE X	CHRGING	TP	ST	RATA	RATB	RATC
30081	30082*	1	SOUTHBAY	SOUTHBAY	.0026	.0953	.0000	F	1	140	0	0
30081*	30084	1	SOUTHBAY	SOUTHBY1	.0035	.0700	.0000	T	1	0	0	0
30081	30146*	1	SOUTHBAY	IMPRLBCH	.0132	.0409	.0008		1	55	0	0
30081	30168*	1	SOUTHBAY	MONTGMRY	.0037	.0158	.0004		1	102	0	0
30081	30169*	1	SOUTHBAY	MONTGYTP	.0034	.0094	.0006		1	101	0	0
30081	30180*	1	SOUTHBAY	OTAY	.0109	.0300	.0022		1	101	0	0
30081	30180*	2	SOUTHBAY	OTAY	.0099	.0284	.0010		1	101	0	0
30081	30211*	1	SOUTHBAY	SWEETWTR	.0060	.0368	.0017		1	137	0	0
30081	30229*	1	SOUTHBAY	SOUTHBT	.0000	.6568	.0000	F	1	25	0	0
30082*	30085	1	SOUTHBAY	SOUTHBY2	.0035	.0700	.0000	T	1	0	0	0
30082*	30086	1	SOUTHBAY	SOUTHBY3	.0013	.0530	.0000	T	1	212	0	0
30082*	30087	1	SOUTHBAY	SOUTHBY4	.0011	.0364	.0000	T	1	240	0	0
30082*	30330	1	SOUTHBAY	TELECYN	.0026	.0194	.0094		1	408	0	0
30083	30331*	1	SOUTHBAY	MAIN	.0007	.0073	.0283		0	729	0	0
30083	30333*	1	SOUTHBAY	SBYRPW1	.0018	.0632	.0000	F	0	200	0	0
30083	30334*	1	SOUTHBAY	SBYRPW2	.0018	.0632	.0000	F	0	200	0	0
30083	30335*	1	SOUTHBAY	SBYRPW3	.0018	.0632	.0000	F	0	200	0	0
30090*	30995	1	SYCAMORE	SYCAMORE	.0012	.0649	.0000	T	1	224	0	0
30091*	30092	1	TALEGA	TALEGA	.0024	.0633	.0000	T	1	168	0	0
30091*	30092	2	TALEGA	TALEGA	.0018	.0613	.0000	T	1	150	0	0
30091*	30092	3	TALEGA	TALEGA	.0024	.0228	.0000	T	1	392	0	0
30091	30093*	1	TALEGA	TRABUCO	.0062	.0451	.0122		1	274	0	0
30091	30223*	1	TALEGA	MARGARTA	.0071	.0515	.0139		1	274	0	0
30091*	30329	1	TALEGA	PICO	.0005	.0040	.0011		1	274	0	0
30092*	30332	1	TALEGA	PALA	.0063	.0485	.1004		1	456	0	0
30092	30997*	1	TALEGA	RAINB23	.0055	.0423	.0876		0	456	0	0
30092	34182*	1	TALEGA	S.ONOFRE	.0012	.0097	.0211		1	518	0	0
30092	34182*	2	TALEGA	S.ONOFRE	.0012	.0097	.0211		1	518	0	0
30093*	30223	1	TRABUCO	MARGARTA	.0004	.0027	.0030		1	274	0	0
30094*	30155	1	ALPINE	LOSCOCHS	.0419	.1058	.0029		1	68	0	0
30094*	30156	1	ALPINE	LOVELAND	.0028	.0379	.0006		1	44	0	0
30095	30096*	1	ASH	ASH TP	.0048	.0207	.0004		1	102	0	0
30095*	30130	1	ASH	ESCNDIDO	.0108	.0465	.0010		1	102	0	0
30096*	30136	1	ASH	TP FELICITA	.0192	.0812	.0032		1	98	0	0
30096*	30195	1	ASH	TP RINCON	.0424	.1875	.0042		1	72	0	0
30097	30098*	1	AVCADOTP	AVOCADO	.0306	.0742	.0033		1	68	0	0
30097*	30188	1	AVCADOTP	PENDLETN	.0167	.0650	.0019		1	102	0	0
30098*	30167	1	AVOCADO	MONSRATE	.0260	.0622	.0048		1	68	0	0
30099*	30149	1	B	KETTNER	.0012	.0078	.0241		1	204	0	0
30099	30216*	1	B	URBAN	.0029	.0122	.0192		1	98	0	0
30099	30225*	1	B	NOISLMT	.0030	.0063	.0210		1	84	0	0
30101	30102*	1	BARRETLK	BARTLKTP	.1043	.1556	.0024		1	32	0	0
30101	30112*	1	BARRETLK	CAMERON	.0686	.1674	.0035		1	68	0	0
30102*	30123	1	BARTLKTP	DESCANSO	.1046	.1505	.0022		1	32	0	0
30102*	30156	1	BARTLKTP	LOVELAND	.0190	.0909	.0017		1	102	0	0
30103	30104*	1	BERNARDO	BERNDOTP	.0137	.0626	.0015		1	102	0	0
30103	30135*	1	BERNARDO	FELCTATP	.0154	.0833	.0020		1	102	0	0
30103	30994*	1	BERNARDO	R.CARMEL	.0170	.0428	.0037		1	68	0	0
30104*	30130	1	BERNDOTP	ESCNDIDO	.0223	.0991	.0022		1	102	0	0
30104*	30193	1	BERNDOTP	R.SNTAFE	.0507	.0658	.0010		1	27	0	0
30105	30123*	1	BOLDRCRK	DESCANSO	.1455	.2110	.0018		1	32	0	0
30105	30202*	1	BOLDRCRK	SANTYSBL	.0820	.1185	.0016		1	32	0	0
30106*	30110	1	BOLVRDTP	BOULEVRD	.2121	.2197	.0032		1	32	0	0
30106*	30112	1	BOLVRDTP	CAMERON	.0797	.0826	.0012		1	32	0	0
30106*	30112	2	BOLVRDTP	CAMERON	.0797	.0826	.0012		1	32	0	0
30106*	30141	1	BOLVRDTP	GLENCLIF	.1097	.1137	.0016		1	32	0	0
30106*	30141	2	BOLVRDTP	GLENCLIF	.1097	.1137	.0016		1	32	0	0
30107	30108*	1	BORDER	BORDERTP	.0050	.0329	.0009		1	137	0	0
30108*	30182	1	BORDERTP	OTAYLAKE	.0043	.0111	.0002		1	68	0	0
30108*	30183	1	BORDERTP	OTAYLKTP	.0317	.0818	.0015		1	68	0	0
30109	30173*	1	BORREGO	NARROWS	.1085	.1865	.0035		1	50	0	0
30111	30190*	1	CABRILLO	POINTLMA	.0178	.0377	.0088		1	54	0	0
30111*	30328	1	CABRILLO	OLDTWNT	.0233	.0676	.0188		1	54	0	0
30113	30119*	1	CAPSTRNO	CRSTNSTP	.0423	.1061	.0021		1	68	0	0
30114*	30115	1	CHOLASTP	CHOLLAS	.0117	.0825	.0019		1	137	0	0
30114*	30174	1	CHOLASTP	NATLCYTP	.0006	.0039	.0004		1	274	0	0
30115*	30187	1	CHOLLAS	PARADISE	.0093	.0289	.0015		1	101	0	0
30115	30207*	1	CHOLLAS	SPRNGVLY	.0074	.0462	.0011		1	137	0	0

FROM	TO	KCT	NAME	NAME	LINE R	LINE X	CHRGING	TP	ST	RATA	RATB	RATC
30115*	30208	1	CHOLLAS	STREAMVW	.0042	.0275	.0007		1	137	0	0
30116	30117*	1	CLAIRMNT	CLARMTP	.0045	.0126	.0002		1	50	0	0
30116	30134*	1	CLAIRMNT	FASHNVLY	.0087	.0544	.0013		1	137	0	0
30117*	30197	1	CLAIRMTP	ROSE CYN	.0097	.0274	.0018		1	101	0	0
30118	30155*	1	CREELMAN	LOSCOCHS	.1359	.2327	.0032		1	44	0	0
30118*	30202	1	CREELMAN	SANTYSBL	.1575	.2494	.0034		1	44	0	0
30118*	30995	1	CREELMAN	SYCAMORE	.0283	.1768	.0041		1	137	0	0
30119*	30120	1	CRSTNSTP	CRSTNTS	.0064	.0174	.0003		1	68	0	0
30119*	30148	1	CRSTNSTP	JAP MESA	.0607	.1251	.0020		1	55	0	0
30121	30122*	1	DEL MAR	DELMARTP	.0370	.1015	.0018		1	50	0	0
30121*	30129	1	DEL MAR	ENCNITAS	.0265	.1034	.0025		1	102	0	0
30121	30189*	1	DEL MAR	PENSQTOS	.0250	.0796	.0379		1	50	0	0
30121*	30194	1	DEL MAR	R.SNTATP	.0041	.0159	.0004		1	102	0	0
30122*	30124	1	DELMARTP	DOUBLTTP	.0013	.0102	.0004		1	137	0	0
30122*	30189	1	DELMARTP	PENSQTOS	.0013	.0086	.0002		1	137	0	0
30123	30141*	1	DESCANSO	GLENCLIF	.1987	.2041	.0030		1	32	0	0
30124*	30125	1	DOUBLTTP	DUNHILL	.0011	.0026	.0000		1	68	0	0
30125*	30214	1	DUNHILL	TOREYPNS	.0036	.0079	.0008		1	68	0	0
30126	30127*	1	EL CAJON	ELCAJNGT	.0010	.1813	.0000	F	1	84	0	0
30126	30142*	1	EL CAJON	GRANITE	.0092	.0571	.0006		1	137	0	0
30126	30147*	1	EL CAJON	JAMACHA	.0095	.0624	.0016		1	137	0	0
30126	30155*	1	EL CAJON	LOSCOCHS	.0495	.1320	.0025		1	55	0	0
30126*	30171	1	EL CAJON	MURRAY	.0101	.0427	.0010		1	102	0	0
30128	30201*	1	ELLIOTT	SANTEE	.0617	.1709	.0028		1	68	0	0
30128	30995*	1	ELLIOTT	SYCAMORE	.0464	.1123	.0024		1	68	0	0
30129	30189*	1	ENCNITAS	PENSQTOS	.0360	.1823	.0031		1	72	0	0
30130*	30131	1	ESCNDIDO	ESCO	.0064	.0272	.0007		1	102	0	0
30130*	30132	1	ESCNDIDO	ESCO2 TP	.0075	.0327	.0008		1	102	0	0
30130	30136*	1	ESCNDIDO	FELICITA	.0154	.0680	.0051		1	98	0	0
30130	30154*	1	ESCNDIDO	LILAC	.0514	.1259	.0082		1	68	0	0
30130	30200*	1	ESCNDIDO	SANMRCOS	.0113	.0739	.0019		1	137	0	0
30131*	30218	1	ESCO	WARCYNTP	.0301	.1284	.0031		1	102	0	0
30132	30135*	1	ESCO2 TP	FELCTATP	.0066	.0284	.0007		1	102	0	0
30135	30136*	1	FELCTATP	FELICITA	.0003	.0007	.0004		1	73	0	0
30137*	30164	1	FENTON	MIRAMAR	.0030	.0200	.0005		1	137	0	0
30137*	30165	1	FENTON	MIRAMRGT	.0040	.0265	.0007		1	137	0	0
30138	30139*	1	GEN DYNM	GENDYNTP	.0012	.0029	.0000		1	44	0	0
30139*	30151	1	GENDYNTP	KYOCRATP	.0006	.0038	.0000		1	137	0	0
30140*	30189	1	GENESEE	PENSQTOS	.0081	.0434	.0004		1	137	0	0
30140	30215*	1	GENESEE	UCSD	.0008	.0054	.0012		1	98	0	0
30140	30222*	1	GENESEE	GENESETP	.0009	.0048	.0052		1	98	0	0
30142	30143*	1	GRANITE	GRANITTP	.0046	.0298	.0019		1	98	0	0
30143*	30155	1	GRANITTP	LOSCOCHS	.0163	.0838	.0014		1	102	0	0
30144	30145*	1	HORNO	HORNO TP	.0238	.0574	.0012		1	68	0	0
30145	30148*	1	HORNO TP	JAP MESA	.0550	.0790	.0012		1	32	0	0
30145*	30153	1	HORNO TP	LASPULGS	.0247	.0356	.0005		1	32	0	0
30146	30181*	1	IMPRLBCH	OTAY TP	.0183	.0540	.0004		1	55	0	0
30147	30207*	1	JAMACHA	SPRNGVLY	.0175	.0512	.0009		1	50	0	0
30149*	30328	1	KETTNER	OLDTWNTP	.0021	.0144	.0014		1	239	0	0
30150*	30151	1	KYOCERA	KYOCRATP	.0017	.0114	.0003		1	137	0	0
30151*	30991	1	KYOCRATP	MESAHGTS	.0016	.0108	.0015		1	98	0	0
30152	30196*	1	LA JOLLA	ROSCYNTP	.0161	.0322	.0105		1	54	0	0
30152	30197*	1	LA JOLLA	ROSE CYN	.0163	.0278	.0141		1	54	0	0
30153	30209*	1	LASPULGS	STUART	.0608	.0874	.0013		1	32	0	0
30154*	30195	1	LILAC	RINCON	.0555	.1430	.0030		1	55	0	0
30155	30156*	1	LOSCOCHS	LOVELAND	.0356	.1441	.0044		1	68	0	0
30155	30201*	1	LOSCOCHS	SANTEE	.0453	.1250	.0020		1	68	0	0
30157	30158*	1	MELROSE	MELRSETP	.0116	.0490	.0012		1	102	0	0
30157	30198*	1	MELROSE	SANLUSRY	.0161	.0722	.0049		1	102	0	0
30157	30198*	2	MELROSE	SANLUSRY	.0109	.0680	.0016		1	137	0	0
30158*	30198	1	MELRSETP	SANLUSRY	.0138	.0610	.0017		1	98	0	0
30158*	30200	1	MELRSETP	SANMRCOS	.0197	.0842	.0020		1	102	0	0
30159	30164*	1	MESA RIM	MIRAMAR	.0066	.0437	.0050		1	98	0	0
30159*	30189	1	MESA RIM	PENSQTOS	.0012	.0845	.0105		1	98	0	0
30161	30162*	1	MIGUEL	MIGUELMP	.0000	.0545	.0000	F	1	180	0	0
30163*	30210	1	MIGUELTP	SUNYSIDE	.0007	.0027	.0000		1	101	0	0
30163*	30211	1	MIGUELTP	SWEETWTR	.0123	.0682	.0179		1	98	0	0
30164	30189*	1	MIRAMAR	PENSQTOS	.0174	.1262	.0078		1	137	0	0

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E TUE, JUN 21 1994 11:53
 1998 HS2, SONGS 2&3 UNITS ON LINE, EOR=7490, SONGS23STB.SAV BRANCH DATA
 PLANTM.SAV MODIFIED, INC. SDG&E CHNGS & NOL & SCE BRPU

FROM	TO	CKT	NAME	NAME	LINE R	LINE X	CHRGING	TP	ST	RATA	RATB	RATC
30164	30205*	1	MIRAMAR	SCRIPPS	.0044	.0027	.0006		1	137	0	0
30165	30166*	1	MIRAMRGT	MIRAMRTP	.0218	.0573	.0012		1	68	0	0
30165	30224*	1	MIRAMRGT	MIRAMRGT	.0030	.3081	.0000	F	1	50	0	0
30166*	30189	1	MIRAMRTP	PENSQTOS	.0071	.0327	.0055		1	98	0	0
30166*	30197	1	MIRAMRTP	ROSE CYN	.0102	.0666	.0017		1	137	0	0
30167	30170*	1	MONSRATE	MOROHILL	.0243	.1099	.0024		1	72	0	0
30167	30185*	1	MONSRATE	PALA	.0177	.1102	.0025		1	137	0	0
30168	30169*	1	MONTGMRY	MONTGYTP	.0004	.0012	.0000		1	102	0	0
30169*	30211	1	MONTGYTP	SWEETWTR	.0052	.0326	.0008		1	137	0	0
30170	30198*	1	MOROHILL	SANLUSRY	.0163	.0747	.0048		1	102	0	0
30172	31996*	1	N.GILA	N.GILA&2	.0000	.0135	.0000		1	0	0	0
30172*	31998	1	N.GILA	IMPRLV&2	.0008	.0193	1.4381		1	1213	0	0
30173	30220*	1	NARROWS	WARNERS	.2285	.4225	.0063		1	32	0	0
30174*	30175	1	NATLCYTP	NATNLCTY	.0020	.0085	.0002		1	102	0	0
30174*	30211	1	NATLCYTP	SWEETWTR	.0039	.0110	.0007		1	101	0	0
30175	30212*	1	NATNLCTY	SWTWTRTP	.0014	.0062	.0000		1	101	0	0
30176*	30204	1	NAVSTMTR	SCRAPDSP	.0009	.0028	.0016		1	98	0	0
30177*	30178	1	OCEANSDE	OCNSDETP	.0082	.0161	.0055		1	54	0	0
30177*	30198	1	OCEANSDE	SANLUSRY	.0322	.0885	.0027		1	54	0	0
30178	30198*	1	OCNSDETP	SANLUSRY	.0256	.0711	.0015		1	68	0	0
30178	30209*	1	OCNSDETP	STUART	.0429	.0616	.0009		1	32	0	0
30180	30181*	1	OTAY	OTAY TP	.0011	.0068	.0001		1	137	0	0
30180	30183*	1	OTAY	OTAYLKTP	.0127	.0371	.0006		1	50	0	0
30181*	30203	1	OTAY TP	SANYSDDRO	.0194	.0540	.0010		1	50	0	0
30183*	30203	1	OTAYLKTP	SANYSDDRO	.0100	.0273	.0005		1	50	0	0
30184*	30196	1	PACFCBCH	ROSCYNTP	.0153	.1088	.0025		1	137	0	0
30185*	30332	1	PALA	PALA	.0013	.0737	.0000	T	1	224	0	0
30187	30210*	1	PARADISE	SUNYSIDE	.0103	.0281	.0020		1	101	0	0
30188	30198*	1	PENDLETN	SANLUSRY	.0232	.1042	.0026		1	102	0	0
30189*	30194	1	PENSQTOS	R.SNTATP	.0153	.0596	.0014		1	102	0	0
30189	30214*	1	PENSQTOS	TOREYPNS	.0102	.0344	.0005		1	68	0	0
30189	30215*	1	PENSQTOS	UCSD	.0067	.0378	.0016		1	98	0	0
30189	30222*	1	PENSQTOS	GENESETP	.0079	.0493	.0011		1	137	0	0
30195*	30220	1	RINCON	WARNERS	.2188	.3350	.0052		1	32	0	0
30196	30197*	1	ROSCYNTP	ROSE CYN	.0002	.0013	.0000		1	137	0	0
30197	30222*	1	ROSE CYN	GENESETP	.0302	.0767	.0013		1	137	0	0
30198	30199*	1	SANLUSRY	SANLUSRY	.0015	.0630	.0000	F	1	224	0	0
30199	34182*	1	SANLUSRY	S.ONOFRE	.0012	.0123	.0478		1	797	0	0
30202*	30220	1	SANTYSBL	WARNERS	.1307	.1855	.0029		1	32	0	0
30204	30212*	1	SCRAPDSP	SWTWTRTP	.0015	.0042	.0007		1	101	0	0
30205*	30995	1	SCRIPPS	SYCAMORE	.0139	.0870	.0020		1	137	0	0
30208*	30217	1	STREAMVW	WABASH	.0052	.0355	.0008		1	137	0	0
30211*	30212	1	SWEETWTR	SWTWTRTP	.0039	.0126	.0007		1	101	0	0
30218*	30219	1	WARCYNTP	WARENCYN	.0249	.0365	.0006		1	44	0	0
30218*	30993	1	WARCYNTP	POWAY	.0096	.0409	.0010		1	102	0	0
30225*	30226	1	NOISLMTP	NOISLMTR	.0036	.0064	.0033		1	54	0	0
30992*	30993	1	POMERADO	POWAY	.0033	.0204	.0005		1	137	0	0
30992	30995*	1	POMERADO	SYCAMORE	.0065	.0408	.0009		1	137	0	0
30992*	30995	2	POMERADO	SYCAMORE	.0065	.0408	.0009		1	137	0	0
30993	30994*	1	POWAY	R.CARMEL	.0032	.0105	.0004		1	137	0	0
30994*	30995	1	R.CARMEL	SYCAMORE	.0240	.1496	.0035		1	137	0	0
30996*	30997	1	RAINBOW	RAINB23	.0000	.0088	.0000	F	0	1120	0	0
30996	34204*	1	RAINBOW	VALLEYSC	.0002	.0061	.4413		0	1040	0	0
31996	31997*	1	N.GILA&2	N.GILA&1	.0011	.0269	.0000		1	1386	0	0

SDG+E

BUS#	NAME	BSKV	CODE	VOLT	ANGLE	PLOAD	QLOAD	S	H	U	N	T	AREA	ZONE
30001	BATIQTOS	138	1	1.0135	-10.5	36.2	7.4	.0	.0	.0	.0	.0	30	303
30003	CALAVRTP	138	1	1.0170	-10.4	.0	.0	.0	.0	.0	.0	.0	30	303
30004	CANNON	138	1	1.0226	-9.8	23.6	4.8	.0	.0	.0	.0	.0	30	303
30005	CAPSTRNO	138	1	.9931	-14.1	43.6	8.9	.0	40.0	.0	.0	.0	30	303
30006	CARLTHTP	138	1	1.0064	-11.1	.0	.0	.0	.0	.0	.0	.0	30	303
30007	CARLTNHS	138	1	1.0055	-11.0	27.0	5.5	.0	.0	.0	.0	.0	30	303
30008	CHCARITA	138	1	1.0063	-11.2	25.6	5.2	.0	.0	.0	.0	.0	30	303
30010	CORONADO	12.5	-2	1.0020	-15.3	26.7	5.4	.0	.0	.0	.0	.0	30	301
30011	CORONADO	69.0	1	.9918	-12.6	.0	.0	.0	.0	.0	.0	.0	30	301
30014	DIVISION	69.0	-2	.9964	-12.0	.0	.0	.0	.0	.0	.0	.0	30	301
30015	DIVISNGT	12.5	-2	.9628	-19.3	40.2	8.2	.0	.0	.0	.0	.0	30	301
30016	DOUBLET	138	1	1.0138	-11.4	.0	.0	.0	.0	.0	.0	.0	30	303
30017	DOUBLTTP	138	1	1.0138	-11.4	.0	.0	.0	.0	.0	.0	.0	30	303
30019	ENCINA	138	1	1.0227	-9.8	.0	.0	.0	.0	.0	.0	.0	30	303
30020	ENCINA	230	1	.9670	-8.8	.0	.0	.0	.0	.0	.0	.0	30	303
30021	ENCINA	114.4	2	1.0030	-4.8	.0	.0	.0	.0	.0	.0	.0	30	303
30022	ENCINA	214.4	2	1.0030	-6.0	.0	.0	.0	.0	.0	.0	.0	30	303
30023	ENCINA	314.4	2	1.0040	-6.0	.0	.0	.0	.0	.0	.0	.0	30	303
30024	ENCINA	422.0	2	.9930	-6.9	.0	.0	.0	.0	.0	.0	.0	30	303
30025	ENCINA	524.0	-2	.9541	-6.3	.0	.0	.0	.0	.0	.0	.0	30	303
30028	ESCNDIDO	230	1	.9557	-8.7	.0	.0	.0	.0	.0	.0	.0	30	303
30029	ESCND050	138	1	.9916	-10.9	.0	.0	.0	.0	.0	.0	.0	30	303
30030	ESCND051	138	1	.9968	-10.9	.0	.0	.0	.0	.0	.0	.0	30	303
30032	IMPRLVLY	230	1	.9964	14.7	.0	.0	.0	.0	.0	.0	.0	30	303
30033	IMPRLVLY	500	1	1.0291	18.0	.0	.0	.0	.0	.0	.0	.0	30	303
30034	KEARNY	69.0	1	.9702	-16.1	69.4	14.1	.0	.0	.0	.0	.0	30	307
30035	KEARNYGT	12.5	-2	.9615	-16.1	.0	.0	.0	.0	.0	.0	.0	30	307
30036	LAGNA NL	138	1	.9913	-14.1	53.7	10.9	.0	.0	.0	.0	.0	30	303
30037	LOSCOCHS	138	1	1.0106	-11.6	.0	.0	.0	.0	.0	.0	.0	30	303
30040	MAIN ST	69.0	1	.9994	-12.1	.0	.0	.0	100.0	.0	.0	.0	30	301
30042	MAINST50	138	1	1.0059	-8.1	.0	.0	.0	.0	.0	.0	.0	30	303
30043	MAINST51	138	1	1.0059	-8.1	.0	.0	.0	.0	.0	.0	.0	30	303
30044	MDWLRKTP	138	1	1.0102	-10.7	.0	.0	.0	.0	.0	.0	.0	30	303
30045	MIGUEL	69.0	1	.9810	-8.7	.0	.0	.0	100.0	.0	.0	.0	30	309
30046	MIGUEL	138	1	.9968	-2.7	.0	.0	.0	.0	.0	.0	.0	30	303
30047	MIGUEL	230	1	.9606	.5	.0	.0	.0	.0	.0	.0	.0	30	303
30048	MIGUEL	500	1	.9972	11.5	.0	.0	.0	.0	.0	.0	.0	30	303
30051	MISSION	69.0	1	.9866	-13.9	93.1	18.9	.0	50.0	.0	.0	.0	30	307
30052	MISSION	138	1	1.0046	-10.1	.0	.0	.0	.0	.0	.0	.0	30	303
30053	MISSION	230	1	.9490	-8.4	.0	.0	.0	.0	.0	.0	.0	30	303
30055	OLD TOWN	69.0	1	.9712	-12.7	74.0	15.0	.0	.0	.0	.0	.0	30	301
30056	OLD TOWN	230	1	.9492	-9.0	.0	.0	.0	.0	.0	.0	.0	30	303
30057	PENSQTOS	138	1	1.0141	-11.5	.0	.0	.0	.0	.0	.0	.0	30	303
30058	PENSQTOS	230	1	.9505	-9.8	.0	.0	.0	.0	.0	.0	.0	30	306
30060	PRCTRVLY	138	1	.9989	5.1	18.1	3.7	.0	.0	.0	.0	.0	30	303
30066	SAMPSON	12.5	-2	.9363	-15.4	68.8	14.0	.0	.0	.0	.0	.0	30	301
30067	SAMPSON	69.0	1	.9985	-12.2	.0	.0	.0	.0	.0	.0	.0	30	301
30069	SANLUSRY	138	1	1.0163	-11.0	.0	.0	.0	80.0	.0	.0	.0	30	303
30070	SANMATEO	138	1	.9979	-12.9	33.8	6.8	.0	.0	.0	.0	.0	30	303
30071	SANMTOTP	138	1	.9967	-12.9	.0	.0	.0	.0	.0	.0	.0	30	303
30081	SOUTHBAY	69.0	1	1.0081	-10.5	.0	.0	.0	.0	.0	.0	.0	30	302
30082	SOUTHBAY	138	1	1.0238	-6.3	.0	.0	.0	.0	.0	.0	.0	30	303
30083	SOUTHBAY	230	4	1.0000	.0	.0	.0	.0	.0	.0	.0	.0	30	303
30084	SOUTHBY	115.0	-2	.9948	-5.1	.0	.0	.0	.0	.0	.0	.0	30	303
30085	SOUTHBY	215.0	2	1.0160	-.9	.0	.0	.0	.0	.0	.0	.0	30	303
30086	SOUTHBY	320.0	2	1.0260	-1.7	.0	.0	.0	.0	.0	.0	.0	30	303
30087	SOUTHBY	420.0	2	1.0170	-4.9	.0	.0	.0	.0	.0	.0	.0	30	303
30090	SYCAMORE	230	1	.9503	-6.5	.0	.0	.0	.0	.0	.0	.0	30	303
30091	TALEGA	138	1	.9966	-12.9	.0	.0	.0	.0	.0	.0	.0	30	303
30092	TALEGA	230	1	.9552	-11.3	.0	.0	.0	.0	.0	.0	.0	30	303
30093	TRABUCO	138	1	.9912	-14.2	91.1	18.5	.0	.0	.0	.0	.0	30	303
30094	ALPINE	69.0	1	.9823	-16.3	12.6	2.6	.0	.0	.0	.0	.0	30	308
30095	ASH	69.0	1	.9786	-15.1	44.2	9.0	.0	.0	.0	.0	.0	30	305
30096	ASH	TP69.0	1	.9782	-15.2	.0	.0	.0	.0	.0	.0	.0	30	305
30097	AVCADOTP	69.0	1	.9856	-16.4	.0	.0	.0	.0	.0	.0	.0	30	304
30098	AVOCADO	69.0	1	.9844	-16.3	20.5	4.2	.0	.0	.0	.0	.0	30	304
30099	B	69.0	1	.9909	-12.7	79.2	16.1	.0	.0	.0	.0	.0	30	301
30101	BARRETLK	69.0	1	.9772	-17.5	2.7	.5	.0	.0	.0	.0	.0	30	308

Q... ADL-S00650

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E TUE, JUN 21 1994 12:04
 1998 HS2, SONGS OFF, VLY-RAINBW 500, SVC@SCE, SOFVRSVCS DG2.S BUS DATA
 BASED ON SONGSOFFCDSR.SAV, ADD SDG CHANGES ON 5/11 AND 5/17

BUS#	NAME	BSKV	CODE	VOLT	ANGLE	PLOAD	QLOAD	S	H	U	N	T	AREA	ZONE
30102	BARTLKTP69.0	1		.9818	-17.1	.0	.0	.0	.0	.0	.0	.0	30	308
30103	BERNARDO69.0	1		.9695	-15.5	76.7	15.6	.0	.0	.0	.0	.0	30	305
30104	BERNDOTP69.0	1		.9740	-15.1	.0	.0	.0	.0	.0	.0	.0	30	305
30105	BOLDRCRK69.0	1		.9765	-18.6	2.2	.5	.0	.0	.0	.0	.0	30	308
30106	BOLVRDTP69.0	-2		.9768	-17.6	.0	.0	.0	.0	.0	.0	.0	30	308
30107	BORDER 69.0	1		.9828	-11.0	26.8	5.4	.0	.0	.0	.0	.0	30	302
30108	BORDERTP69.0	1		.9866	-11.0	.0	.0	.0	.0	.0	.0	.0	30	302
30109	BORREGO 69.0	1		.9532	-24.2	10.2	2.1	.0	.0	.0	.0	.0	30	305
30110	BOULEVRD69.0	-2		.9706	-17.9	2.9	.6	.0	.0	.0	.0	.0	30	308
30111	CABRILLO69.0	-2		.9671	-13.4	27.7	5.6	.0	.0	.0	.0	.0	30	301
30112	CAMERON 69.0	1		.9764	-17.6	2.2	.4	.0	.0	.0	.0	.0	30	308
30113	CAPSTRNO69.0	1		.9910	-17.0	.0	.0	.0	.0	.0	.0	.0	30	304
30114	CHOLASTP69.0	1		.9960	-11.9	.0	.0	.0	.0	.0	.0	.0	30	301
30115	CHOLLAS 69.0	1		.9778	-12.7	47.7	9.7	.0	.0	.0	.0	.0	30	309
30116	CLAIRMNT69.0	1		.9711	-16.0	29.7	6.0	.0	.0	.0	.0	.0	30	307
30117	CLARMTTP69.0	1		.9706	-16.1	.0	.0	.0	.0	.0	.0	.0	30	306
30118	CREELMAN69.0	1		.9791	-16.2	31.6	6.4	.0	.0	.0	.0	.0	30	308
30119	CRSTNSTP69.0	1		.9847	-17.3	.0	.0	.0	.0	.0	.0	.0	30	304
30120	CRSTNTS 69.0	1		.9843	-17.3	4.7	1.0	.0	.0	.0	.0	.0	30	304
30121	DEL MAR 69.0	1		.9809	-15.4	32.8	6.7	.0	.0	.0	.0	.0	30	306
30122	DELMARTP69.0	1		.9873	-14.6	.0	.0	.0	.0	.0	.0	.0	30	306
30123	DESCANSO69.0	1		.9758	-17.9	4.4	.9	.0	.0	.0	.0	.0	30	308
30124	DOUBLTTP69.0	1		.9861	-14.8	.0	.0	.0	.0	.0	.0	.0	30	306
30125	DUNHILL 69.0	1		.9855	-14.9	2.6	.5	.0	.0	.0	.0	.0	30	306
30126	EL CAJON69.0	1		.9737	-15.8	.0	.0	.0	50.0	.0	.0	.0	30	308
30127	ELCAJNGT12.5	-2		.9727	-24.8	85.6	17.4	.0	.0	.0	.0	.0	30	308
30128	ELLIOTT 69.0	1		.9799	-14.5	41.3	8.4	.0	.0	.0	.0	.0	30	307
30129	ENCNITAS69.0	1		.9709	-16.7	43.0	8.7	.0	.0	.0	.0	.0	30	306
30130	ESCONDIDO69.0	1		.9890	-13.7	61.3	12.4	.0	.0	.0	.0	.0	30	305
30131	ESCO 69.0	-2		.9871	-13.5	29.0	5.9	.0	.0	.0	.0	.0	30	305
30132	ESCO2 TP69.0	1		.9836	-14.3	.0	.0	.0	.0	.0	.0	.0	30	305
30133	F 69.0	1		.9843	-14.2	44.6	9.0	.0	.0	.0	.0	.0	30	307
30134	FASHNVLY69.0	1		.9785	-14.8	7.8	1.6	.0	.0	.0	.0	.0	30	307
30135	FELCTATP69.0	1		.9790	-14.8	.0	.0	.0	.0	.0	.0	.0	30	305
30136	FELICITA69.0	1		.9790	-14.8	40.6	8.2	.0	.0	.0	.0	.0	30	305
30137	FENTON 69.0	1		.9713	-16.3	2.9	.6	.0	.0	.0	.0	.0	30	306
30138	GEN DYNM69.0	1		.9703	-16.1	15.8	3.2	.0	.0	.0	.0	.0	30	307
30139	GENDYNTTP69.0	1		.9705	-16.0	.0	.0	.0	.0	.0	.0	.0	30	307
30140	GENESEE 69.0	1		.9802	-15.6	95.5	19.4	.0	.0	.0	.0	.0	30	306
30141	GLENCLIF69.0	1		.9750	-17.8	3.2	.6	.0	.0	.0	.0	.0	30	308
30142	GRANITE 69.0	1		.9700	-16.0	61.6	12.5	.0	.0	.0	.0	.0	30	308
30143	GRANITTP69.0	1		.9749	-15.0	.0	.0	.0	.0	.0	.0	.0	30	308
30144	HORNO 69.0	1		.9795	-17.3	2.5	.5	.0	.0	.0	.0	.0	30	304
30145	HORNO TP69.0	1		.9804	-17.2	.0	.0	.0	.0	.0	.0	.0	30	304
30146	IMPRLBCH69.0	1		1.0011	-11.2	32.7	6.6	.0	.0	.0	.0	.0	30	302
30147	JAMACHA 69.0	1		.9720	-12.9	43.8	8.9	.0	.0	.0	.0	.0	30	309
30148	JAP MESA69.0	1		.9805	-17.3	4.1	.8	.0	.0	.0	.0	.0	30	304
30149	KETTNER 69.0	1		.9846	-12.8	44.8	9.1	.0	.0	.0	.0	.0	30	301
30150	KYOCERA 69.0	-2		.9707	-16.0	4.9	1.0	.0	.0	.0	.0	.0	30	301
30151	KYOCRATP69.0	1		.9709	-16.0	.0	.0	.0	.0	.0	.0	.0	30	307
30152	LA JOLLA69.0	1		.9673	-16.4	22.1	4.5	.0	.0	.0	.0	.0	30	306
30153	LASPULGS69.0	1		.9811	-17.1	3.0	.6	.0	.0	.0	.0	.0	30	304
30154	LILAC 69.0	1		.9698	-16.4	26.7	5.4	.0	.0	.0	.0	.0	30	305
30155	LOSCOCHS69.0	1		.9908	-15.2	49.7	10.1	.0	100.0	.0	.0	.0	30	308
30156	LOVELAND69.0	1		.9828	-16.4	8.1	1.6	.0	.0	.0	.0	.0	30	308
30157	MELROSE 69.0	1		.9857	-16.7	81.3	16.5	.0	.0	.0	.0	.0	30	304
30158	MELRSETP69.0	1		.9876	-16.2	.0	.0	.0	.0	.0	.0	.0	30	304
30159	MESA RIM69.0	1		.9731	-16.6	48.7	9.9	.0	.0	.0	.0	.0	30	306
30161	MIGUEL 12.0	1		.9408	3.5	.0	.0	.0	.0	.0	.0	.0	30	300
30162	MIGUELMP 500	1		.9878	3.5	.0	.0	.0	.0	.0	.0	.0	30	303
30163	MIGUELTP69.0	1		.9843	-10.8	.0	.0	.0	.0	.0	.0	.0	30	309
30164	MIRAMAR 69.0	-2		.9701	-16.5	71.8	14.6	.0	.0	.0	.0	.0	30	306
30165	MIRAMRGT69.0	1		.9732	-16.0	.0	.0	.0	.0	.0	.0	.0	30	306
30166	MIRAMRTP69.0	1		.9801	-15.3	.0	.0	.0	.0	.0	.0	.0	30	306
30167	MONSRATE69.0	1		.9912	-15.6	25.0	5.1	.0	.0	.0	.0	.0	30	304
30168	MONTGMRY69.0	1		1.0051	-10.8	42.9	8.7	.0	.0	.0	.0	.0	30	302
30169	MONTGYTP69.0	1		1.0051	-10.8	.0	.0	.0	.0	.0	.0	.0	30	302
30170	MOROHILL69.0	1		.9922	-15.8	11.4	2.3	.0	.0	.0	.0	.0	30	304

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E TUE, JUN 21 1994 12:04
 1998 HS2, SONGS OFF, VLY-RAINBW 500, SVC@SCE, SOFVRSVCS DG2.S BUS DATA
 BASED ON SONGSOFFCD SR.SAV, ADD SDG CHANGES ON 5/11 AND 5/17

BUS#	NAME	BSKV CODE	VOLT	ANGLE	PLOAD	QLOAD	S	H	U	N	T	AREA	ZONE
30171	MURRAY	69.0 -2	.9732	-15.7	95.6	19.4	.0	.0	.0	.0	.0	30	307
30172	N.GILA	500 1	1.0384	25.1	.0	.0	.0	.0	.0	.0	.0	30	300
30173	NARROWS	69.0 1	.9687	-23.1	.0	.0	.0	2.0	.0	.0	.0	30	305
30174	NATLCYTP69.0	1	.9964	-11.8	.0	.0	.0	.0	.0	.0	.0	30	301
30175	NATNLCTY69.0	1	.9965	-11.8	3.4	.7	.0	.0	.0	.0	.0	30	301
30176	NAVSTMTR69.0	1	.9962	-11.9	18.5	3.8	.0	.0	.0	.0	.0	30	301
30177	OCEANSDE69.0	1	.9894	-16.2	21.6	4.4	.0	.0	.0	.0	.0	30	304
30178	OCNSDETP69.0	1	.9902	-16.2	.0	.0	.0	.0	.0	.0	.0	30	304
30179	OLDTWNGT12.5	-2	.9670	-12.7	.0	.0	.0	.0	.0	.0	.0	30	303
30180	OTAY	69.0 -2	1.0018	-11.0	33.5	6.8	.0	.0	.0	.0	.0	30	302
30181	OTAY TP69.0	1	1.0013	-11.0	.0	.0	.0	.0	.0	.0	.0	30	302
30182	OTAYLAKE69.0	1	.9865	-11.0	.8	.2	.0	.0	.0	.0	.0	30	302
30183	OTAYLKT69.0	1	.9964	-11.2	.0	.0	.0	.0	.0	.0	.0	30	302
30184	PACFCBCH69.0	1	.9642	-15.0	49.4	10.0	.0	.0	.0	.0	.0	30	301
30185	PALA	69.0 1	1.0073	-12.5	8.2	1.7	.0	.0	.0	.0	.0	30	304
30187	PARADISE69.0	1	.9792	-11.6	36.5	7.4	.0	.0	.0	.0	.0	30	309
30188	PENDLETN69.0	1	.9866	-16.4	17.8	3.6	.0	.0	.0	.0	.0	30	304
30189	PENSQTOS69.0	1	.9886	-14.4	.0	.0	.0	100.0	.0	.0	.0	30	306
30190	POINTLMA69.0	-2	.9684	-13.2	42.9	8.7	.0	.0	.0	.0	.0	30	301
30193	R.SNTAFE69.0	-2	.9627	-15.7	17.3	3.5	.0	.0	.0	.0	.0	30	306
30194	R.SNTATP69.0	1	.9825	-15.2	.0	.0	.0	.0	.0	.0	.0	30	306
30195	RINCON	69.0 -2	.9731	-17.4	19.5	3.9	.0	.0	.0	.0	.0	30	305
30196	ROSCYNTP69.0	1	.9696	-16.2	.0	.0	.0	.0	.0	.0	.0	30	306
30197	ROSE CYN69.0	1	.9697	-16.2	44.6	9.1	.0	.0	.0	.0	.0	30	306
30198	SANLUSRY69.0	1	.9962	-15.5	65.4	13.3	.0	.0	.0	.0	.0	30	304
30199	SANLUSRY 230	1	.9546	-11.4	.0	.0	.0	.0	.0	.0	.0	30	303
30200	SANMRCOS69.0	-2	.9789	-16.2	62.9	12.8	.0	.0	.0	.0	.0	30	305
30201	SANTEE	69.0 1	.9668	-16.7	45.2	9.2	.0	.0	.0	.0	.0	30	308
30202	SANTYSBL69.0	1	.9792	-18.8	6.4	1.3	.0	.0	.0	.0	.0	30	308
30203	SANYSDRO69.0	1	.9956	-11.4	23.9	4.9	.0	.1	.0	.0	.0	30	302
30204	SCRAPDSP69.0	1	.9964	-11.9	1.2	.3	.0	.0	.0	.0	.0	30	301
30205	SCRIPPS 69.0	1	.9712	-16.4	49.2	10.0	.0	.0	.0	.0	.0	30	306
30207	SPRNGVLY69.0	1	.9723	-13.2	26.2	5.3	.0	.0	.0	.0	.0	30	309
30208	STREAMVW69.0	1	.9814	-13.0	41.5	8.4	.0	.0	.0	.0	.0	30	309
30209	STUART	69.0 1	.9852	-16.6	3.9	.8	.0	.0	.0	.0	.0	30	304
30210	SUNYSIDE69.0	1	.9838	-10.9	8.8	1.8	.0	.0	.0	.0	.0	30	309
30211	SWEETWTR69.0	-2	.9980	-11.6	41.3	8.4	.0	.0	.0	.0	.0	30	302
30212	SWTWTRTP69.0	1	.9967	-11.8	.0	.0	.0	.0	.0	.0	.0	30	301
30214	TOREYPNS69.0	1	.9839	-15.0	57.5	11.7	.0	.0	.0	.0	.0	30	306
30215	UCSD	69.0 1	.9808	-15.5	23.2	4.7	.0	.0	.0	.0	.0	30	306
30216	URBAN	69.0 1	.9931	-12.6	41.9	8.5	.0	.0	.0	.0	.0	30	301
30217	WABASH	69.0 1	.9913	-12.4	7.3	1.5	.0	.0	.0	.0	.0	30	301
30218	WARCYNTP69.0	1	.9794	-14.2	.0	.0	.0	.0	.0	.0	.0	30	305
30219	WARENCYN69.0	1	.9781	-14.3	3.7	.8	.0	.0	.0	.0	.0	30	305
30220	WARNERS	69.0 1	.9932	-20.5	4.3	.9	.0	25.0	.0	.0	.0	30	305
30221	ENCINAGT12.5	-2	1.0203	-9.8	.0	.0	.0	.0	.0	.0	.0	30	303
30222	GENESETP69.0	1	.9805	-15.5	.0	.0	.0	.0	.0	.0	.0	30	306
30223	MARGARTA 138	1	.9913	-14.2	15.4	3.1	.0	.0	.0	.0	.0	30	303
30224	MIRAMRGT12.5	-2	.9336	-16.0	.0	.0	.0	.0	.0	.0	.0	30	306
30225	NOISLMTP69.0	1	.9918	-12.6	.0	.0	.0	.0	.0	.0	.0	30	301
30226	NOISLMTR69.0	-2	.9919	-12.6	20.5	4.2	.0	.0	.0	.0	.0	30	301
30227	PALOMAR 138	1	1.0197	-10.1	26.7	5.4	.0	.0	.0	.0	.0	30	303
30229	SOUTHBGT12.5	-2	.9829	-10.5	.0	.0	.0	.0	.0	.0	.0	30	302
30326	DALEY	69.0 1	.9798	-8.9	3.1	.6	.0	.0	.0	.0	.0	30	309
30327	NORTHCTY 138	1	1.0156	-11.2	14.7	3.0	.0	.0	.0	.0	.0	30	303
30328	OLDTWNT69.0	1	.9753	-12.8	.0	.0	.0	.0	.0	.0	.0	30	301
30329	PICO	138 1	.9961	-13.1	12.7	2.6	.0	.0	.0	.0	.0	30	303
30330	TELECYN 138	1	1.0053	-4.1	18.0	3.7	.0	.0	.0	.0	.0	30	303
30331	MAIN	230 4	1.0000	.0	.0	.0	.0	.0	.0	.0	.0	30	303
30332	PALA	230 1	.9531	-10.1	.0	.0	.0	.0	.0	.0	.0	30	304
30333	SBYRPW1	20.0 4	1.0000	.0	.0	.0	.0	.0	.0	.0	.0	30	303
30334	SBYRPW2	20.0 4	1.0000	.0	.0	.0	.0	.0	.0	.0	.0	30	303
30335	SBYRPW3	20.0 4	1.0000	.0	.0	.0	.0	.0	.0	.0	.0	30	303
30991	MESAHGTS69.0	1	.9721	-15.8	30.4	6.2	.0	.0	.0	.0	.0	30	307
30992	POMERADO69.0	1	.9805	-13.8	16.5	3.4	.0	.0	.0	.0	.0	30	305
30993	POWAY	69.0 1	.9775	-14.4	40.7	8.3	.0	.0	.0	.0	.0	30	305
30994	R.CARMEL69.0	1	.9746	-14.8	40.7	8.3	.0	.0	.0	.0	.0	30	305
30995	SYCAMORE69.0	-2	.9882	-12.4	.0	.0	.0	50.0	.0	.0	.0	30	306

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 1998 HS2, SONGS OFF, VLY-RAINBW 500, SVC@SCE, SOFVRSVCS DG2.S BUS DATA
 BASED ON SONGSOFFCDSR.SAV, ADD SDG CHANGES ON 5/11 AND 5/17

BUS#	NAME	BSKV	CODE	VOLT	ANGLE	PLOAD	QLOAD	S	H	U	N	T	AREA	ZONE
30996	RAINBOW	500	1	.9804	-4.3	.0	.0	.0	.0	.0	.0	.0	30	303
30997	RAINB23	230	1	.9557	-6.5	.0	.0	.0	.0	.0	.0	.0	30	303
30998	TALEGSVC	230	4	.9552	-11.3	.0	.0	.0	.0	.0	.0	.0	30	100
31996	N.GILA&2	500	1	1.0253	16.4	.0	.0	.0	.0	.0	.0	.0	30	300
31997	N.GILA&1	500	1	1.0600	33.7	.0	.0	.0	.0	.0	.0	.0	30	300
31998	IMPRLV&2	500	1	1.0326	10.4	.0	.0	.0	.0	.0	.0	.0	30	303
31999	IMPRLV&1	500	1	1.0500	24.3	.0	.0	.0	.0	.0	.0	.0	30	303

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E TUE, JUN 21 1994 12:04
 1998 HS2, SONGS OFF, VLY-RAINBW 500, SVC@SCE, SOFVRSVCSHG2.S GENERATING
 BASED ON SONGSOFFCDJR.SAV, ADD SDG CHANGES ON 5/11 AND 5/17 PLANT DATA

BUS#	NAME	BSKV	COD	MCNS	PGEN	QGEN	QMAX	QMIN	VSCHED	VACT.	RELOT	PCT	Q
30010	CORONADO	12.5	-2	1	.0	.0	.0	.0	1.0200	1.0020			
30014	DIVISION	69.0	-2	1	47.0	.0	.0	.0	1.0200	.9964			
30015	DIVISNGT	12.5	-2	1	.0	.0	.0	.0	1.0000	.9628			
30021	ENCINA	114.4	2	1	105.0	28.8	70.0	-20.0	1.0030	1.0030			
30022	ENCINA	214.4	2	1	95.0	33.3	69.0	-20.0	1.0030	1.0030			
30023	ENCINA	314.4	2	1	80.0	29.2	71.0	-20.0	1.0040	1.0040			
30024	ENCINA	422.0	2	1	148.4	63.9	130.0	-40.0	.9930	.9930			
30025	ENCINA	524.0	-2	1	200.0	173.0	173.0	-40.0	.9910	.9541			
30035	KEARNYGT	12.5	-2	1	.0	.0	.0	.0	1.0200	.9615			
30066	SAMPSON	12.5	-2	1	11.0	.0	.0	.0	1.0200	.9363			
30084	SOUTHBY	115.0	-2	1	147.0	58.0	58.0	-30.0	1.0250	.9948			
30085	SOUTHBY	215.0	2	1	150.0	69.1	71.0	-30.0	1.0160	1.0160			
30086	SOUTHBY	320.0	2	1	171.0	117.1	120.0	-30.0	1.0260	1.0260			
30087	SOUTHBY	420.0	2	1	76.0	135.9	164.0	-30.0	1.0170	1.0170			
30106	BOLVRDTP	69.0	-2	1	6.5	.0	.0	.0	1.0200	.9768			
30110	BOULEVRD	69.0	-2	1	.5	.0	.0	.0	1.0200	.9706			
30111	CABRILLO	69.0	-2	1	1.0	.0	.0	.0	1.0200	.9671			
30127	ELCAJNGT	12.5	-2	1	.0	.0	.0	.0	1.0000	.9727			
30131	ESCO	69.0	-2	1	50.0	.0	.0	.0	1.0200	.9871			
30150	KYOCERA	69.0	-2	1	.5	.0	.0	.0	1.0200	.9707			
30164	MIRAMAR	69.0	-2	1	.5	.0	.0	.0	1.0200	.9701			
30171	MURRAY	69.0	-2	1	.5	.0	.0	.0	1.0200	.9732			
30179	OLDTWNGT	12.5	-2	1	.0	.0	.0	.0	1.0000	.9670			
30180	OTAY	69.0	-2	1	3.5	.0	.0	.0	1.0200	1.0018			
30190	POINTLMA	69.0	-2	1	22.0	.0	.0	.0	1.0200	.9684			
30193	R.SNTAFE	69.0	-2	1	.5	.0	.0	.0	1.0200	.9627			
30195	RINCON	69.0	-2	1	.5	.0	.0	.0	1.0200	.9731			
30200	SANMRCOS	69.0	-2	1	1.5	.0	.0	.0	1.0200	.9789			
30211	SWEETWTR	69.0	-2	1	.5	.0	.0	.0	1.0200	.9980			
30221	ENCINAGT	12.5	-2	1	.0	.0	.0	.0	1.0000	1.0203			
30224	MIRAMRG	12.5	-2	1	.0	.0	.0	.0	1.0200	.9336			
30226	NOISLMTR	69.0	-2	1	33.0	.0	.0	.0	1.0200	.9919			
30229	SOUTHBGT	12.5	-2	1	.0	.0	.0	.0	1.0000	.9829			
30333	SBYRPW1	20.0	4	1	.0	.0	.0	.0	1.0000	1.0000	30083	34.0	
30334	SBYRPW2	20.0	4	1	.0	.0	.0	.0	1.0000	1.0000	30083	33.0	
30335	SBYRPW3	20.0	4	1	.0	.0	.0	.0	1.0000	1.0000	30083	33.0	
30995	SYCAMORE	69.0	-2	1	1.5	.0	.0	.0	1.0200	.9882			
30996	RAINBOW	500	1	1	.0	.0	.0	.0	.9119	.9490	30053	100.0	
30997	RAINB23	230	1	1	.0	.0	.0	.0	.9342	.9670	30020	100.0	
30998	TALEGSVC	230	4	1	.0	.0	300.0	.0	.9737	.9552	30092	100.0	

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 1998 HS2, SONGS OFF, VLY-RAINBW 500, SVC@SCE, SOFVRSVCSGD2.S
 BASED ON SONGSOFFCDNR.SAV, ADD SDG CHANGES ON 5/11 AND 5/17

BRANCH DATA

FROM	TO	CKT	NAME	NAME	LINE R	LINE X	CHRGING	TP	ST	RATA	RATB	RATC
104*	30172	1	N.GILA1	N.GILA	.0001	.0097	.0000	T	1	1533	0	0
203	30032*	1	IMPRLVLI	IMPRLVLY	.0030	.0902	.0000	F	1	125	0	0
2144	30172*	1	N.GILA	N.GILA	.0021	.1894	.0000	T	1	240	0	0
2166*	31997	1	PALOVRDE	N.GILA&1	.0000	.0001	.0000	Z	1	0	0	0
2990*	30172	0	N.GILA	N.GILA	.0000	.0600	.0000	F	1	0	0	0
8022	30032*	1	ELCENTRO	IMPRLVLY	.0038	.0250	.0561		1	442	0	0
8932*	30032	0	IMPERIAL	IMPRLVLY	.0000	.0600	.0000	F	1	0	0	0
12252*	30032	1	ROA	IMPRLVLY	.0016	.0124	.0258		1	456	0	0
12286*	30047	1	TJI-230	MIGUEL	.0012	.0097	.0770		1	797	0	0
30001	30044*	1	BATIQTOS	MDWLRKTP	.0006	.0074	.0038		1	478	0	0
30001*	30227	1	BATIQTOS	PALOMAR	.0009	.0111	.0042		1	478	0	0
30003	30019*	1	CALAVRTP	ENCINA	.0018	.0136	.0076		1	274	0	0
30003	30029*	1	CALAVRTP	ESCND050	.0175	.0613	.0138		1	112	0	0
30003	30069*	1	CALAVRTP	SANLUSRY	.0021	.0160	.0047		1	274	0	0
30004*	30019	1	CANNON	ENCINA	.0000	.0004	.0002		1	478	0	0
30004*	30069	1	CANNON	SANLUSRY	.0033	.0269	.0081		1	274	0	0
30005	30036*	1	CAPSTRNO	LAGNA NL	.0044	.0115	.0033		1	137	0	0
30005	30093*	1	CAPSTRNO	TRABUCO	.0020	.0147	.0040		1	274	0	0
30005*	30113	1	CAPSTRNO	CAPSTRNO	.0246	.7347	.0000	T	1	25	0	0
30005	30329*	1	CAPSTRNO	PICO	.0050	.0260	.0068		1	204	0	0
30006*	30007	1	CARLTHTP	CARLTNHS	.0007	.0059	.0016		1	274	0	0
30006*	30008	1	CARLTHTP	CHCARITA	.0085	.0431	.0119		1	204	0	0
30006*	30037	1	CARLTHTP	LOSCOCHS	.0073	.0322	.0132		1	273	0	0
30007*	30052	1	CARLTNHS	MISSION	.0049	.0239	.0190		1	273	0	0
30008	30044*	1	CHCARITA	MDWLRKTP	.0086	.0473	.0131		1	204	0	0
30010*	30011	1	CORONADO	CORONADO	.0007	.1817	.0000	T	1	84	0	0
30011*	30067	1	CORONADO	SAMPSON	.0077	.0301	.0208		1	73	0	0
30011	30225*	1	CORONADO	NOISLMTP	.0000	.0001	.0000	Z	1	54	0	0
30011*	30226	1	CORONADO	NOISLMTR	.0036	.0064	.0033		1	54	0	0
30014	30015*	1	DIVISION	DIVISNGT	.0000	.3059	.0000	F	1	53	0	0
30014*	30067	1	DIVISION	SAMPSON	.0053	.0150	.0010		1	101	0	0
30014	30176*	1	DIVISION	NAVSTMTR	.0027	.0079	.0010		1	98	0	0
30016	30017*	1	DOUBLET	DOUBLTTP	.0014	.0050	.0014		1	137	0	0
30017	30052*	1	DOUBLTTP	MISSION	.0091	.0472	.0141		1	204	0	0
30017	30057*	1	DOUBLTTP	PENSQTOS	.0004	.0019	.0030		1	204	0	0
30019*	30021	1	ENCINA	ENCINA 1	.0030	.0902	.0000	T	1	125	0	0
30019*	30022	1	ENCINA	ENCINA 2	.0025	.0750	.0000	T	1	134	0	0
30019*	30023	1	ENCINA	ENCINA 3	.0030	.0890	.0000	T	1	125	0	0
30019*	30024	1	ENCINA	ENCINA 4	.0009	.0368	.0000	T	1	310	0	0
30019	30057*	1	ENCINA	PENSQTOS	.0082	.0606	.0354		1	382	0	0
30019	30221*	1	ENCINA	ENCINAGT	.0043	.6751	.0000	F	1	20	0	0
30019	30227*	1	ENCINA	PALOMAR	.0004	.0048	.0018		1	478	0	0
30019	30327*	1	ENCINA	NORTHCTY	.0039	.0370	.0245		1	359	0	0
30020*	30025	1	ENCINA	ENCINA 5	.0006	.0215	.0000	T	1	355	0	0
30020*	30028	1	ENCINA	ESCNDIDO	.0012	.0156	.0627		1	797	0	0
30020*	30058	1	ENCINA	PENSQTOS	.0016	.0187	.0037		1	797	0	0
30020*	30997	1	ENCINA	RAINB23	.0000	.0001	.0000	Z	0	0	0	0
30020	34182*	1	ENCINA	S.ONOFRE	.0044	.0349	.0764		1	456	0	0
30028*	30090	1	ESCNDIDO	SYCAMORE	.0023	.0261	.0784		1	797	0	0
30028*	30130	1	ESCNDIDO	ESCNDIDO	.0017	.0648	.0000	T	1	224	0	0
30028*	30130	2	ESCNDIDO	ESCNDIDO	.0017	.0648	.0000	T	1	224	0	0
30028	30332*	1	ESCNDIDO	PALA	.0032	.0244	.0506		1	456	0	0
30028	30997*	1	ESCNDIDO	RAINB23	.0040	.0306	.0634		1	456	0	0
30028	30997*	2	ESCNDIDO	RAINB23	.0040	.0306	.0634		1	456	0	0
30029	30130*	2	ESCND050	ESCNDIDO	.0098	.2224	.0000	F	1	63	0	0
30030*	30044	1	ESCND051	MDWLRKTP	.0087	.0300	.0066		1	112	0	0
30030	30130*	1	ESCND051	ESCNDIDO	.0096	.2224	.0000	F	1	63	0	0
30032	30033*	0	IMPRLVLY	IMPRLVLY	.0003	.0264	.0000	F	1	535	0	0
30033	31998*	1	IMPRLVLY	IMPRLV&2	.0000	-.0099	.0000		1	1213	0	0
30033	31999*	1	IMPRLVLY	IMPRLV&1	.0000	-.0102	.0000		1	1067	0	0
30034	30035*	1	KEARNY	KEARNYGT	.0010	.0693	.0000	F	1	164	0	0
30034	30051*	2	KEARNY	MISSION	.0134	.0665	.0018		1	137	0	0
30034	30117*	1	KEARNY	CLARMTP	.0084	.0408	.0015		1	101	0	0
30034	30139*	1	KEARNY	GENDYNT	.0012	.0081	.0002		1	137	0	0
30036*	30071	1	LAGNA NL	SANMTOT	.0140	.0416	.0106		1	137	0	0
30037	30082*	1	LOSCOCHS	SOUTHBAY	.0288	.0905	.0300		1	204	0	0
30037	30155*	1	LOSCOCHS	LOSCOCHS	.0030	.0916	.0000	F	1	150	0	0
30037	30155*	2	LOSCOCHS	LOSCOCHS	.0032	.1005	.0000	F	1	140	0	0

FROM	TO	CKT	NAME	NAME	LINE R	LINE X	CHRGING	TP	ST	RATA	RATB	RATC
30040*	30042	1	MAIN ST	MAINST50	.0017	.0584	.0000	T	1	224	0	0
30040*	30043	1	MAIN ST	MAINST51	.0017	.0584	.0000	T	1	224	0	0
30040*	30067	1	MAIN ST	SAMPSON	.0003	.0020	.0000		1	239	0	0
30040*	30067	2	MAIN ST	SAMPSON	.0002	.0020	.0000		1	239	0	0
30040*	30099	1	MAIN ST	B	.0061	.0251	.0213		1	98	0	0
30040*	30099	2	MAIN ST	B	.0025	.0177	.0040		1	98	0	0
30040	30216*	1	MAIN ST	URBAN	.0050	.0154	.0049		1	98	0	0
30040*	30217	1	MAIN ST	WABASH	.0192	.0558	.0035		1	101	0	0
30042	30082*	1	MAINST50	SOUTHBAY	.0037	.0273	.0074		1	274	0	0
30043	30082*	1	MAINST51	SOUTHBAY	.0037	.0273	.0074		1	274	0	0
30045	30047*	1	MIGUEL	MIGUEL	.0010	.0907	.0000	F	1	224	0	0
30045	30047*	2	MIGUEL	MIGUEL	.0010	.0907	.0000	F	1	224	0	0
30045	30107*	1	MIGUEL	BORDER	.0227	.1414	.0033		1	137	0	0
30045	30143*	1	MIGUEL	GRANITTP	.0342	.1738	.0029		1	102	0	0
30045	30147*	1	MIGUEL	JAMACHA	.0157	.1068	.0026		1	137	0	0
30045	30147*	2	MIGUEL	JAMACHA	.0157	.1068	.0026		1	137	0	0
30045*	30163	1	MIGUEL	MIGUELTP	.0100	.0515	.0016		1	137	0	0
30045*	30187	1	MIGUEL	PARADISE	.0124	.0806	.0021		1	137	0	0
30045	30326*	1	MIGUEL	DALEY	.0174	.1088	.0025		1	137	0	0
30046*	30047	1	MIGUEL	MIGUEL	.0024	.0228	.0000	T	1	392	0	0
30046*	30060	1	MIGUEL	PRCTRVLY	.0004	.0028	.0013		1	408	0	0
30047	30053*	1	MIGUEL	MISSION	.0029	.0319	.1517		1	797	0	0
30047	30053*	2	MIGUEL	MISSION	.0029	.0319	.1517		1	797	0	0
30047	30083*	1	MIGUEL	SOUTHBAY	.0010	.0110	.0425		0	912	0	0
30047	30090*	1	MIGUEL	SYCAMORE	.0023	.0261	.0784		1	797	0	0
30047	30162*	1	MIGUEL	MIGUELMP	.0000	.0088	.0000	F	1	1120	0	0
30047	30162*	2	MIGUEL	MIGUELMP	.0000	.0088	.0000	F	1	1120	0	0
30048	30162*	1	MIGUEL	MIGUELMP	.0000	.0118	.0000		1	1067	0	0
30048*	31999	1	MIGUEL	IMPRLV&1	.0008	.0201	1.4783		1	1067	0	0
30051*	30052	1	MISSION	MISSION	.0047	.1021	.0000	T	1	100	0	0
30051*	30052	2	MISSION	MISSION	.0015	.0526	.0000	T	1	224	0	0
30051*	30052	3	MISSION	MISSION	.0015	.0526	.0000	T	1	224	0	0
30051*	30053	1	MISSION	MISSION	.0013	.0737	.0000	T	1	224	0	0
30051	30128*	1	MISSION	ELLIOTT	.0072	.0301	.0022		1	137	0	0
30051	30133*	1	MISSION	F	.0047	.0172	.0012		1	101	0	0
30051	30133*	2	MISSION	F	.0079	.0247	.0014		1	101	0	0
30051	30134*	1	MISSION	FASHNVLY	.0103	.0336	.0013		1	137	0	0
30051	30171*	1	MISSION	MURRAY	.0300	.0875	.0026		1	102	0	0
30051	30171*	2	MISSION	MURRAY	.0214	.0922	.0022		1	102	0	0
30051	30171*	3	MISSION	MURRAY	.0153	.0952	.0022		1	137	0	0
30051*	30991	1	MISSION	MESAHGTS	.0116	.0518	.0015		1	137	0	0
30052*	30053	1	MISSION	MISSION	.0006	.0230	.0000	T	1	392	0	0
30052*	30053	2	MISSION	MISSION	.0006	.0230	.0000	T	1	392	0	0
30052*	30082	1	MISSION	SOUTHBAY	.0068	.0470	.0181		1	274	0	0
30053*	30056	1	MISSION	OLD TOWN	.0007	.0055	.0113		1	797	0	0
30053*	30056	2	MISSION	OLD TOWN	.0007	.0055	.0113		1	797	0	0
30053*	30199	1	MISSION	SANLUSRY	.0065	.0500	.1044		1	456	0	0
30053*	30331	1	MISSION	MAIN	.0003	.0016	1.8428		0	732	0	0
30053*	30996	1	MISSION	RAINBOW	.0000	.0001	.0000	Z	0	0	0	0
30053	34182*	1	MISSION	S.ONOFRE	.0097	.0754	.1578		1	456	0	0
30055	30056*	1	OLD TOWN	OLD TOWN	.0016	.0649	.0000	F	1	224	0	0
30055	30056*	2	OLD TOWN	OLD TOWN	.0016	.0649	.0000	F	1	224	0	0
30055	30179*	1	OLD TOWN	OLDTWNGT	.0012	.1155	.0000	F	1	75	0	0
30055*	30184	1	OLD TOWN	PACFCBCH	.0076	.0567	.0262		1	98	0	0
30055	30190*	1	OLD TOWN	POINTLMA	.0070	.0501	.0010		1	108	0	0
30055	30190*	2	OLD TOWN	POINTLMA	.0082	.0406	.0050		1	137	0	0
30055	30328*	1	OLD TOWN	OLDTWNTP	.0011	.0072	.0007		1	239	0	0
30056*	30058	1	OLD TOWN	PENSQTOS	.0009	.0081	.0032		1	797	0	0
30057*	30189	1	PENSQTOS	PENSQTOS	.0032	.1056	.0000	T	1	140	0	0
30057*	30189	2	PENSQTOS	PENSQTOS	.0037	.1068	.0000	T	1	140	0	0
30057*	30189	3	PENSQTOS	PENSQTOS	.0030	.1061	.0000	T	1	140	0	0
30057*	30327	1	PENSQTOS	NORTHCTY	.0010	.0093	.0061		1	359	0	0
30058	30189*	1	PENSQTOS	PENSQTOS	.0011	.0657	.0000	F	1	224	0	0
30058	30189*	2	PENSQTOS	PENSQTOS	.0011	.0657	.0000	F	1	224	0	0
30060	30330*	1	PRCTRVLY	TELECYN	.0010	.0076	.0037		1	408	0	0
30066*	30067	1	SAMPSON	SAMPSON	.0000	.0880	.0000	T	1	132	0	0
30067	30114*	1	SAMPSON	CHOLASTP	.0095	.0265	.0017		1	101	0	0
30067*	30217	1	SAMPSON	WABASH	.0116	.0314	.0097		1	101	0	0

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E TUE, JUN 21 1994 12:04
 1998 HS2, SONGS OFF, VLY-RAINBW 500, SVC@SCE, SOFVRSVCSHG2.S BRANCH DATA
 BASED ON SONGSOFFCDJR.SAV, ADD SDG CHANGES ON 5/11 AND 5/17

FROM	TO	CKT	NAME	NAME	LINE R	LINE X	CHRGING	TP	ST	RATA	RATB	RATC
30069	30070*	1	SANLUSRY	SANMATEO	.0115	.0801	.0261		1	222	0	0
30069	30198*	2	SANLUSRY	SANLUSRY	.0018	.2340	.0000	F	1	63	0	0
30069	30198*	3	SANLUSRY	SANLUSRY	.0018	.2340	.0000	F	1	63	0	0
30069	30198*	4	SANLUSRY	SANLUSRY	.0018	.2340	.0000	F	1	63	0	0
30070*	30071	1	SANMATEO	SANMTOTP	.0022	.0084	.0055		1	222	0	0
30071*	30091	1	SANMTOTP	TALEGA	.0002	.0013	.0005		1	274	0	0
30081	30082*	1	SOUTHBAY	SOUTHBAY	.0026	.0953	.0000	F	1	140	0	0
30081*	30084	1	SOUTHBAY	SOUTHBY1	.0035	.0700	.0000	T	1	0	0	0
30081	30146*	1	SOUTHBAY	IMPRLBCH	.0132	.0409	.0008		1	55	0	0
30081	30168*	1	SOUTHBAY	MONTGMRY	.0037	.0158	.0004		1	102	0	0
30081	30169*	1	SOUTHBAY	MONTGYTP	.0034	.0094	.0006		1	101	0	0
30081	30180*	1	SOUTHBAY	OTAY	.0109	.0300	.0022		1	101	0	0
30081	30180*	2	SOUTHBAY	OTAY	.0099	.0284	.0010		1	101	0	0
30081	30211*	1	SOUTHBAY	SWEETWTR	.0060	.0368	.0017		1	137	0	0
30081	30229*	1	SOUTHBAY	SOUTHBGT	.0000	.6568	.0000	F	1	25	0	0
30082*	30085	1	SOUTHBAY	SOUTHBY2	.0035	.0700	.0000	T	1	0	0	0
30082*	30086	1	SOUTHBAY	SOUTHBY3	.0013	.0530	.0000	T	1	212	0	0
30082*	30087	1	SOUTHBAY	SOUTHBY4	.0011	.0364	.0000	T	1	240	0	0
30082*	30330	1	SOUTHBAY	TELECYN	.0026	.0194	.0094		1	408	0	0
30083	30331*	1	SOUTHBAY	MAIN	.0007	.0073	.0283		0	729	0	0
30083	30333*	1	SOUTHBAY	SBYRPW1	.0018	.0632	.0000	F	0	200	0	0
30083	30334*	1	SOUTHBAY	SBYRPW2	.0018	.0632	.0000	F	0	200	0	0
30083	30335*	1	SOUTHBAY	SBYRPW3	.0018	.0632	.0000	F	0	200	0	0
30090*	30995	1	SYCAMORE	SYCAMORE	.0012	.0649	.0000	T	1	224	0	0
30090*	30995	2	SYCAMORE	SYCAMORE	.0012	.0649	.0000	T	1	224	0	0
30091*	30092	1	TALEGA	TALEGA	.0024	.0633	.0000	T	1	168	0	0
30091*	30092	2	TALEGA	TALEGA	.0018	.0613	.0000	T	1	150	0	0
30091*	30092	3	TALEGA	TALEGA	.0024	.0228	.0000	T	1	392	0	0
30091	30093*	1	TALEGA	TRABUCO	.0062	.0451	.0122		1	274	0	0
30091	30223*	1	TALEGA	MARGARTA	.0071	.0515	.0139		1	274	0	0
30091*	30329	1	TALEGA	PICO	.0005	.0040	.0011		1	274	0	0
30092*	30332	1	TALEGA	PALA	.0063	.0485	.1004		1	456	0	0
30092	30997*	1	TALEGA	RAINB23	.0055	.0423	.0876		1	456	0	0
30092*	30998	1	TALEGA	TALEGSVC	.0000	.0001	.0000	Z	0	0	0	0
30092	34182*	1	TALEGA	S.ONOFRE	.0012	.0097	.0211		1	518	0	0
30092	34182*	2	TALEGA	S.ONOFRE	.0012	.0097	.0211		1	518	0	0
30093*	30223	1	TRABUCO	MARGARTA	.0004	.0027	.0030		1	274	0	0
30094*	30155	1	ALPINE	LOSCOCHS	.0419	.1058	.0029		1	68	0	0
30094*	30156	1	ALPINE	LOVELAND	.0028	.0379	.0006		1	44	0	0
30095	30096*	1	ASH	ASH TP	.0048	.0207	.0004		1	102	0	0
30095*	30130	1	ASH	ESCNDIDO	.0108	.0465	.0010		1	102	0	0
30096*	30136	1	ASH	TP FELICITA	.0192	.0812	.0032		1	98	0	0
30096*	30195	1	ASH	TP RINCON	.0424	.1875	.0042		1	72	0	0
30097	30098*	1	AVCADOTP	AVOCADO	.0306	.0742	.0033		1	68	0	0
30097*	30188	1	AVCADOTP	PENDLETN	.0167	.0650	.0019		1	102	0	0
30098*	30167	1	AVOCADO	MONSRATE	.0260	.0622	.0048		1	68	0	0
30099*	30149	1	B	KETTNER	.0012	.0078	.0241		1	204	0	0
30099	30216*	1	B	URBAN	.0029	.0122	.0192		1	98	0	0
30099	30225*	1	B	NOISLMTP	.0030	.0063	.0210		1	84	0	0
30101	30102*	1	BARRETLK	BARTLKTP	.1043	.1556	.0024		1	32	0	0
30101	30112*	1	BARRETLK	CAMERON	.0686	.1674	.0035		1	68	0	0
30102*	30123	1	BARTLKTP	DESCANSO	.1046	.1505	.0022		1	32	0	0
30102*	30156	1	BARTLKTP	LOVELAND	.0190	.0909	.0017		1	102	0	0
30103	30104*	1	BERNARDO	BERNDOTP	.0137	.0626	.0015		1	102	0	0
30103	30135*	1	BERNARDO	FELCTATP	.0154	.0833	.0020		1	102	0	0
30103	30994*	1	BERNARDO	R.CARMEL	.0085	.0214	.0019		1	136	0	0
30104*	30130	1	BERNDOTP	ESCNDIDO	.0223	.0991	.0022		1	102	0	0
30104*	30193	1	BERNDOTP	R.SNTAFE	.0507	.0658	.0010		1	27	0	0
30105	30123*	1	BOLDRCRK	DESCANSO	.1455	.2110	.0018		1	32	0	0
30105	30202*	1	BOLDRCRK	SANTYSBL	.0820	.1185	.0016		1	32	0	0
30106*	30110	1	BOLVRDTP	BOULEVRD	.2121	.2197	.0032		1	32	0	0
30106*	30112	1	BOLVRDTP	CAMERON	.0797	.0826	.0012		1	32	0	0
30106*	30112	2	BOLVRDTP	CAMERON	.0797	.0826	.0012		1	32	0	0
30106*	30141	1	BOLVRDTP	GLENCLIF	.1097	.1137	.0016		1	32	0	0
30106*	30141	2	BOLVRDTP	GLENCLIF	.1097	.1137	.0016		1	32	0	0
30107	30108*	1	BORDER	BORDERTP	.0050	.0329	.0009		1	137	0	0
30108*	30182	1	BORDERTP	OTAYLAKE	.0043	.0111	.0002		1	68	0	0
30108*	30183	1	BORDERTP	OTAYLKTP	.0317	.0818	.0015		1	68	0	0

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E TUE, JUN 21 1994 12:04
 1998 HS2, SONGS OFF, VLY-RAINBW 500, SVC@SCE, SOFVRSVCSGD2.S BRANCH DATA
 BASED ON SONGSOFFCDJR.SAV, ADD SDG CHANGES ON 5/11 AND 5/17

FROM	TO	CKT	NAME	NAME	LINE R	LINE X	CHRGING	TP	ST	RATA	RATB	RATC
30109	30173*	1	BORREGO	NARROWS	.1085	.1865	.0035		1	50	0	0
30111	30190*	1	CABRILLO	POINTLMA	.0178	.0377	.0088		1	54	0	0
30111*	30328	1	CABRILLO	OLDTWNTP	.0233	.0676	.0188		1	54	0	0
30113	30119*	1	CAPSTRNO	CRSTNSTP	.0423	.1061	.0021		1	68	0	0
30114*	30115	1	CHOLASTP	CHOLLAS	.0117	.0825	.0019		1	137	0	0
30114*	30174	1	CHOLASTP	NATLCYTP	.0006	.0039	.0004		1	274	0	0
30115*	30187	1	CHOLLAS	PARADISE	.0093	.0289	.0015		1	101	0	0
30115	30207*	1	CHOLLAS	SPRNGVLY	.0074	.0462	.0011		1	137	0	0
30115*	30208	1	CHOLLAS	STREAMVW	.0042	.0275	.0007		1	137	0	0
30116	30117*	1	CLAIRMNT	CLARMTP	.0045	.0126	.0002		1	50	0	0
30116	30134*	1	CLAIRMNT	FASHNVLY	.0087	.0544	.0013		1	137	0	0
30117*	30197	1	CLARMTP	ROSE CYN	.0097	.0274	.0018		1	101	0	0
30118	30155*	1	CREELMAN	LOSCOCHS	.1359	.2327	.0032		1	44	0	0
30118*	30202	1	CREELMAN	SANTYSBL	.1575	.2494	.0034		1	44	0	0
30118*	30995	1	CREELMAN	SYCAMORE	.0283	.1768	.0041		1	137	0	0
30119*	30120	1	CRSTNSTP	CRSTNTS	.0064	.0174	.0003		1	68	0	0
30119*	30148	1	CRSTNSTP	JAP MESA	.0607	.1251	.0020		1	55	0	0
30121	30122*	1	DEL MAR	DELMARTP	.0370	.1015	.0018		1	50	0	0
30121*	30129	1	DEL MAR	ENCNITAS	.0265	.1034	.0025		1	102	0	0
30121	30189*	1	DEL MAR	PENSQTOS	.0250	.0796	.0379		1	50	0	0
30121*	30194	1	DEL MAR	R.SNTATP	.0041	.0159	.0004		1	102	0	0
30122*	30124	1	DELMARTP	DOUBLTTP	.0013	.0102	.0004		1	137	0	0
30122*	30189	1	DELMARTP	PENSQTOS	.0013	.0086	.0002		1	137	0	0
30123	30141*	1	DESCANSO	GLENCLIF	.1987	.2041	.0030		1	32	0	0
30124*	30125	1	DOUBLTTP	DUNHILL	.0011	.0026	.0000		1	68	0	0
30125*	30214	1	DUNHILL	TOREYPNS	.0036	.0079	.0008		1	68	0	0
30126	30127*	1	EL CAJON	ELCAJNGT	.0010	.1813	.0000	F	1	84	0	0
30126	30142*	1	EL CAJON	GRANITE	.0092	.0571	.0006		1	137	0	0
30126	30147*	1	EL CAJON	JAMACHA	.0095	.0624	.0016		1	137	0	0
30126	30155*	1	EL CAJON	LOSCOCHS	.0495	.1320	.0025		1	55	0	0
30126*	30171	1	EL CAJON	MURRAY	.0101	.0427	.0010		1	102	0	0
30128	30201*	1	ELLIOTT	SANTEE	.0617	.1709	.0028		1	68	0	0
30128	30995*	1	ELLIOTT	SYCAMORE	.0464	.1123	.0024		1	68	0	0
30129	30189*	1	ENCNITAS	PENSQTOS	.0360	.1823	.0031		1	72	0	0
30130*	30131	1	ESCNDIDO	ESCO	.0064	.0272	.0007		1	102	0	0
30130*	30132	1	ESCNDIDO	ESCO2 TP	.0075	.0327	.0008		1	102	0	0
30130	30136*	1	ESCNDIDO	FELICITA	.0154	.0680	.0051		1	98	0	0
30130	30154*	1	ESCNDIDO	LILAC	.0514	.1259	.0082		1	68	0	0
30130	30200*	1	ESCNDIDO	SANMRCOS	.0113	.0739	.0019		1	137	0	0
30131*	30218	1	ESCO	WARCYNTP	.0301	.1284	.0031		1	102	0	0
30132	30135*	1	ESCO2 TP	FELCTATP	.0066	.0284	.0007		1	102	0	0
30135	30136*	1	FELCTATP	FELICITA	.0003	.0007	.0004		1	73	0	0
30137*	30164	1	FENTON	MIRAMAR	.0030	.0200	.0005		1	137	0	0
30137*	30165	1	FENTON	MIRAMRGT	.0040	.0265	.0007		1	137	0	0
30138	30139*	1	GEN DYNM	GENDYNTP	.0012	.0029	.0000		1	44	0	0
30139*	30151	1	GENDYNTP	KYOCRATP	.0006	.0038	.0000		1	137	0	0
30140*	30189	1	GENESEE	PENSQTOS	.0081	.0434	.0004		1	137	0	0
30140	30215*	1	GENESEE	UCSD	.0008	.0054	.0012		1	98	0	0
30140	30222*	1	GENESEE	GENESETP	.0009	.0048	.0052		1	98	0	0
30142	30143*	1	GRANITE	GRANITTP	.0046	.0298	.0019		1	98	0	0
30143*	30155	1	GRANITTP	LOSCOCHS	.0163	.0838	.0014		1	102	0	0
30144	30145*	1	HORNO	HORNO TP	.0238	.0574	.0012		1	68	0	0
30145	30148*	1	HORNO TP	JAP MESA	.0550	.0790	.0012		1	32	0	0
30145*	30153	1	HORNO TP	LASPULGS	.0247	.0356	.0005		1	32	0	0
30146	30181*	1	IMPRLBCH	OTAY TP	.0183	.0540	.0004		1	55	0	0
30147	30207*	1	JAMACHA	SPRNGVLY	.0175	.0512	.0009		1	50	0	0
30149*	30328	1	KETTNER	OLDTWNTP	.0021	.0144	.0014		1	239	0	0
30150*	30151	1	KYOCERA	KYOCRATP	.0017	.0114	.0003		1	137	0	0
30151*	30991	1	KYOCRATP	MESAHGTS	.0016	.0108	.0015		1	98	0	0
30152	30196*	1	LA JOLLA	ROSCYNTP	.0161	.0322	.0105		1	54	0	0
30152	30197*	1	LA JOLLA	ROSE CYN	.0163	.0278	.0141		1	54	0	0
30153	30209*	1	LASPULGS	STUART	.0608	.0874	.0013		1	32	0	0
30154*	30195	1	LILAC	RINCON	.0555	.1430	.0030		1	55	0	0
30155	30156*	1	LOSCOCHS	LOVELAND	.0356	.1441	.0044		1	68	0	0
30155	30201*	1	LOSCOCHS	SANTEE	.0453	.1250	.0020		1	68	0	0
30157	30158*	1	MELROSE	MELRSETP	.0116	.0490	.0012		1	102	0	0
30157	30198*	1	MELROSE	SANLUSRY	.0161	.0722	.0049		1	102	0	0
30157	30198*	2	MELROSE	SANLUSRY	.0109	.0680	.0016		1	137	0	0

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E TUE, JUN 21 1994 12:04
 1998 HS2, SONGS OFF, VLY-RAINBW 500, SVC@SCE, SOFVRSVCS DG2.S BRANCH DATA
 BASED ON SONGSOFFCD SR.SAV, ADD SDG CHANGES ON 5/11 AND 5/17

FROM	TO	CKT	NAME	NAME	LINE R	LINE X	CHRGING	TP	ST	RATA	RATB	RATC
30158*	30198	1	MELRSETP	SANLUSRY	.0138	.0610	.0017		1	98	0	0
30158*	30200	1	MELRSETP	SANMRCOS	.0197	.0842	.0020		1	102	0	0
30159	30164*	1	MESA RIM	MIRAMAR	.0066	.0437	.0050		1	98	0	0
30159*	30189	1	MESA RIM	PENSQTOS	.0012	.0845	.0105		1	98	0	0
30161	30162*	1	MIGUEL	MIGUELMP	.0000	.0545	.0000	F	1	180	0	0
30163*	30210	1	MIGUELTP	SUNYSIDE	.0007	.0027	.0000		1	101	0	0
30163*	30211	1	MIGUELTP	SWEETWTR	.0123	.0682	.0179		1	98	0	0
30164	30189*	1	MIRAMAR	PENSQTOS	.0174	.1262	.0078		1	137	0	0
30164	30205*	1	MIRAMAR	SCRIPPS	.0044	.0027	.0006		1	137	0	0
30165	30166*	1	MIRAMRGT	MIRAMRTP	.0218	.0573	.0012		1	68	0	0
30165	30224*	1	MIRAMRGT	MIRAMRGT	.0030	.3081	.0000	F	1	50	0	0
30166*	30189	1	MIRAMRTP	PENSQTOS	.0071	.0327	.0055		1	98	0	0
30166*	30197	1	MIRAMRTP	ROSE CYN	.0102	.0666	.0017		1	137	0	0
30167	30170*	1	MONSRATE	MOROHILL	.0243	.1099	.0024		1	72	0	0
30167	30185*	1	MONSRATE	PALA	.0177	.1102	.0025		1	137	0	0
30168	30169*	1	MONTGMRY	MONTGYTP	.0004	.0012	.0000		1	102	0	0
30169*	30211	1	MONTGYTP	SWEETWTR	.0052	.0326	.0008		1	137	0	0
30170	30198*	1	MOROHILL	SANLUSRY	.0163	.0747	.0048		1	102	0	0
30172	31996*	1	N.GILA	N.GILA&2	.0000	.0135	.0000		1	0	0	0
30172*	31998	1	N.GILA	IMPRLV&2	.0008	.0193	1.4381		1	1213	0	0
30173	30220*	1	NARROWS	WARNERS	.2285	.4225	.0063		1	32	0	0
30174*	30175	1	NATLCYTP	NATNLCTY	.0020	.0085	.0002		1	102	0	0
30174*	30211	1	NATLCYTP	SWEETWTR	.0039	.0110	.0007		1	101	0	0
30175	30212*	1	NATNLCTY	SWTWTRTP	.0014	.0062	.0000		1	101	0	0
30176*	30204	1	NAVSTMTR	SCRAPDSP	.0009	.0028	.0016		1	98	0	0
30177*	30178	1	OCEANSDE	OCNSDETP	.0082	.0161	.0055		1	54	0	0
30177*	30198	1	OCEANSDE	SANLUSRY	.0322	.0885	.0027		1	54	0	0
30178	30198*	1	OCNSDETP	SANLUSRY	.0256	.0711	.0015		1	68	0	0
30178	30209*	1	OCNSDETP	STUART	.0429	.0616	.0009		1	32	0	0
30180	30181*	1	OTAY	OTAY TP	.0011	.0068	.0001		1	137	0	0
30180	30183*	1	OTAY	OTAYLKTP	.0127	.0371	.0006		1	50	0	0
30181*	30203	1	OTAY TP	SANYS DRO	.0194	.0540	.0010		1	50	0	0
30183*	30203	1	OTAYLKTP	SANYS DRO	.0100	.0273	.0005		1	50	0	0
30184*	30196	1	PACFCBCH	ROSCYNTP	.0153	.1088	.0025		1	137	0	0
30185*	30332	1	PALA	PALA	.0013	.0737	.0000	T	1	224	0	0
30187	30210*	1	PARADISE	SUNYSIDE	.0103	.0281	.0020		1	101	0	0
30188	30198*	1	PENDLETN	SANLUSRY	.0232	.1042	.0026		1	102	0	0
30189*	30194	1	PENSQTOS	R.SNTATP	.0153	.0596	.0014		1	102	0	0
30189	30214*	1	PENSQTOS	TOREYPNS	.0102	.0344	.0005		1	68	0	0
30189	30215*	1	PENSQTOS	UCSD	.0067	.0378	.0016		1	98	0	0
30189	30222*	1	PENSQTOS	GENESETP	.0079	.0493	.0011		1	137	0	0
30195*	30220	1	RINCON	WARNERS	.2188	.3350	.0052		1	32	0	0
30196	30197*	1	ROSCYNTP	ROSE CYN	.0002	.0013	.0000		1	137	0	0
30197	30222*	1	ROSE CYN	GENESETP	.0302	.0767	.0013		1	137	0	0
30198	30199*	1	SANLUSRY	SANLUSRY	.0015	.0630	.0000	F	1	224	0	0
30199	34182*	1	SANLUSRY	S.ONOFRE	.0012	.0123	.0478		1	797	0	0
30202*	30220	1	SANTYSBL	WARNERS	.1307	.1855	.0029		1	32	0	0
30204	30212*	1	SCRAPDSP	SWTWTRTP	.0015	.0042	.0007		1	101	0	0
30205*	30995	1	SCRIPPS	SYCAMORE	.0139	.0870	.0020		1	137	0	0
30208*	30217	1	STREAMVW	WABASH	.0052	.0355	.0008		1	137	0	0
30211*	30212	1	SWEETWTR	SWTWTRTP	.0039	.0126	.0007		1	101	0	0
30218*	30219	1	WARCYNTP	WARENCYN	.0249	.0365	.0006		1	44	0	0
30218*	30993	1	WARCYNTP	POWAY	.0096	.0409	.0010		1	102	0	0
30225*	30226	1	NOISLMTP	NOISLMTR	.0036	.0064	.0033		1	54	0	0
30992*	30993	1	POMERADO	POWAY	.0016	.0102	.0002		1	374	0	0
30992	30995*	1	POMERADO	SYCAMORE	.0065	.0408	.0009		1	137	0	0
30992*	30995	2	POMERADO	SYCAMORE	.0065	.0408	.0009		1	137	0	0
30993	30994*	1	POWAY	R.CARMEL	.0032	.0105	.0004		1	137	0	0
30994*	30995	1	R.CARMEL	SYCAMORE	.0240	.1496	.0035		1	137	0	0
30996*	30997	1	RAINBOW	RAINB23	.0000	.0088	.0000	F	1	1120	0	0
30996	34204*	1	RAINBOW	VALLEYSC	.0002	.0061	.4413		1	1040	0	0
31996	31997*	1	N.GILA&2	N.GILA&1	.0011	.0269	.0000		1	1386	0	0

RULE 74.3 - COMPUTER MODEL EQUATIONS, INPUT,
AND DOCUMENTATION

PART 3ii:

A complete description of how
the model operated and its logic

Refer to description given in Workpapers, SCE 8/Transmission/Vol:4/
Chapter II/Appendix A, pages 425-434 of A.93-11-025. In addition,
refer to APPENDIX D of this joint study Report.

APPENDIX B

POWER FLOW RESULTS SUMMARIES

RULE 74.3 - COMPUTER MODEL EQUATIONS, INPUT,
AND DOCUMENTATION

PART 4:

A complete set of output files relied on to prepare or
support the testimony or exhibits

Refer to APPENDIX C of this joint study Report for
stability output.

SCE Power Flow Results

Magunden Workbook

Summary of Contingency Load Flow Analysis for the Integration of SONGS replacement Resources in the Big Creek Area.

The following N-1 line outages were performed in the Big Creek area because of the fact that majority of the SONGS replacement resources are expected to come on line in the Magunden area.

Big Creek-Rector #1 230 kV
Big Creek-Rector #2 230 kV
Magunden-Antelope 230 kV
Magunden-Tejon 230 kV
Magunden-Pastoria #3 230 kV
Magunden-Pastoria # E 230 kV
Magunden-Pastoria #W 230 kV
Antelope-Vincent 230 kV

Magunden-Tejon 230 kV line outage is the most critical case and for this outage Magunden-Antelope 230 kV line loads upto 92% of its rating. This loading is acceptable and within the criteria.

The following N-2 line outages were also performed in the Big Creek area .

Big Creek-Rector #1 and Big Creek-Springville #1 230 kV lines
Magunden-Antelope and Magunden-Tejon 230 kV lines
Magunden-Pastoria #3 and Magunden-Pastoria #E 230 kV lines
Patoria-Pardee #3 and Patoria-Pardee #4 230 kV lines

Magunden-Pastoria #3 and Magunden-Pastoria #E 230 kV lines outage is the most critical outage and for this outage Magunden-Patoria #W 230 kV line loads to 89% of its rating. This loading is acceptable and within the criteria.

**Impact of Shutting Down SONGS Units 2 & 3
on the SCE and SDG&E Transmission Systems**

**SUMMARY OF POWER FLOW SIMULATION RESULTS
FOR SCE SYSTEM NETWORK ANALYSIS**

TABLE B-1

Contingency/Scenario	Loading on the No. 2 Serrano 500/230 kV bank	Allowable Loading
Pre-Shutdown Analysis Outage of No.1 Serrano 500/230 kV bank	102%	120%
Post-Shutdown Analysis Outage of No.1 Serrano 500/230 kV bank	125%	120%

Impact of Shutting Down SONGS Units 2 & 3 on the SCE and SDG&E Transmission Systems														
SUMMARY OF POWER FLOW SIMULATION RESULTS FOR SCE SYSTEM LOSS ANALYSIS														
TABLE B.2														
Case	Contingency/Scenario (1)	Post-Disturbance Power Flows (MW)					Lowest Bus Voltages (3)			SCE System Loss				
		WOR	SCIT (2) Total	Midway- Vincent	PDCI	IPP	North of Lugo	COB	LADWP	Bus Location / SDG&E	Voltage (pu)	SCE	System Loss (MW) / Net (MW-%)	
Pre-Shutdown Analysis														
1	No Outage Benchmark	6,984	8,295	13,178	1,161	1,001	1,914	905	3,060	Sta HLD 0.9790	Sampsn 0.9603	Cahuila 0.9889	Victor 0.9534	349 --
Post-Shutdown Analysis														
2	No Outage DRA Scenario w/ IFAS	6,987	8,588	13,339	1,029	1,001	1,914	905	3,062	Sta HLD 0.9757	Sampsn 0.9442	Cahuila 0.9749	Victor 0.9452	420 71 - 20.3

1 The "No Outage" case reflects pre-disturbance power flows for all subsequent outage cases in the respective analysis.

2 SCIT Total is defined as the sum of flows on five paths: Midway-Vincent, PDCI, IPP, North of Lugo and WOR.

3 Load bus identification: Sta HLD 138 - LADWP; Sampsn 12.5 - SDG&E; Cahuila 92 - IID; Victor 115 - SCE.

**Impact of Shutting Down SONGS Units 2 & 3
on the SCE and SDG&E Transmission Systems**

**SUMMARY OF POWER FLOW SIMULATION RESULTS
FOR NON-SIMULTANEOUS N-1 EOR ANALYSIS**

TABLE B.3

Case	Contingency/Scenario (1)	Post-Disturbance Power Flows (MW) (2)					Lowest Bus Voltages (4)				Highest Loading (%/A) Line Location / %-Actual-Max. Rating			
		WOR	SCIT (3) Total	Midway- Vincent	PDCI	IPP	North of Lugo	COB	LADWP	SDG&E		IID	SCE	
Pre-Shutdown Analysis														
1	No Outage Benchmark	6,984	8,295	13,178	1,161	1,001	1,914	905	3,060	Sta Hld 0.9790	Sampsn 0.9603	Cahuila 0.9889	Victor 0.9534	Palo Verde-Devers 92.4-1756-1900
2	Navajo-McCullough 500 kV line Benchmark	6,809	8,182	13,175	1,271	1,001	1,914	904	3,087	Sta Hld 0.9774	Sampsn 0.9586	Cahuila 0.9855	Victor 0.9515	Palo Verde-Devers 77.5-1883-2430
3	Moenkopi-Eldorado 500 kV line Benchmark	6,869	8,177	13,174	1,275	1,001	1,914	904	3,097	Sta Hld 0.9775	Sampsn 0.9581	Cahuila 0.9840	Victor 0.9518	Navajo-McCullough 70.0-1923-2750
4	Devers-Palo Verde 500 kV line Benchmark	6,766	8,156	13,281	1,401	1,001	1,914	907	3,134	Sta Hld 0.9608	Sampsn 0.9468	Cahuila 0.9419	Victor 0.9272	IV-Miguel 92.4-1709-1850
5	Palo Verde-N. Gila 500 kV line Benchmark	6,783	8,143	13,241	1,377	1,001	1,914	905	3,106	Sta Hld 0.9630	Sampsn 0.9713	Cahuila 0.9926	Victor 0.9311	Palo Verde-Devers 95.0-2307-2430
6	IV-Miguel-ROA lines Benchmark	6,885	8,161	13,288	1,406	1,001	1,914	905	3,105	Sta Hld 0.9621	Sampsn 0.9503	Cahuila 0.9354	Victor 0.9288	Palo Verde-Devers 91.7-2229-2430

1 Marketplace and Adelanto SVC's may not be available after the transient period and therefore are not represented in the cases.
 2 The "No Outage" case reflects pre-disturbance power flows for all subsequent outage cases in the respective analysis.
 3 SCIT Total is defined as the sum of flows on five paths: Midway-Vincent, PDCI, IPP, North of Lugo and WOR.
 4 Load bus identification: Sta Hld 138 - LADWP; Sampson 12.5 - SDG&E; Cahuila 92 - IID; Victor 115 - SCE.

Impact of Shutting Down SONGS Units 2 & 3 on the SCE and SDG&E Transmission Systems														
SUMMARY OF POWER FLOW SIMULATION RESULTS FOR NON-SIMULTANEOUS N-1 EOR ANALYSIS														
TABLE B.3														
Case	Contingency/Scenario (1)	Post-Disturbance Power Flows (MW) (2)					Lowest Bus Voltages (4)				Highest Loading (%/A)			
		WOR	SCIT (3) Total	Midway-Vincent	PDCI	IPP	North of Lugo	COB	LADWP	SDG&E	IID	SCE	Line Location / %-Actual-Max. Rating	
Post-Shutdown Analysis														
7	No Outage DRA Scenario	6,989	8,592	13,339	1,024	1,001	1,914	905	3,061	Sta Hld 0.9739	Sampsn 0.9392	Cahuila 0.9769	Victor 0.9432	IV-Miguel 112.0-1568-1400
8	Devers-Palo Verde 500 kV line DRA Scenario	6,739	8,418	13,514	1,374	1,001	1,914	903	3,149	Sta Hld 0.9405	Sampsn 0.8517	Cahuila 0.8964	Victor 0.8891	IV-Miguel 104.0-2072-1650
9	Palo Verde-N. Gila 500 kV line DRA Scenario	6,786	8,432	13,394	1,242	1,001	1,914	903	3,112	Sta Hld 0.9531	Talega 0.9356	Coachila 0.9680	Padua 0.9029	Palo Verde-Devers 99.3-2413-2430
10	IV-Miguel-ROA lines DRA Scenario				*** No Convergence ***					Sta Hld	Sampsn	Cahuila	Victor	Westwing-Mead 93.5-1805-1930
<p>1 Marketplace and Adelanto SVC's may not be available after the transient period and therefore are not represented in the cases.</p> <p>2 The "No Outage" case reflects pre-disturbance power flows for all subsequent outage cases in the respective analysis.</p> <p>3 SCIT Total is defined as the sum of flows on five paths: Midway-Vincent, PDCI, IPP, North of Lugo and WOR.</p> <p>4 Load bus identification: Sta Hld 138 - LADWP; Sampson 12.5, Talega 230 - SDG&E; Cahuila 92, Coachella 230 - IID; Victor 115, Padua 230 - SCE.</p>														

SDG&E Power Flow Results

APPENDIX B

Table B.4 shows a comparison of the two base cases used in the studies. The first base case has San Onofre Units 2 and 3 in-service (referred to as the "Benchmark Case" in the report). The second base case represents the scenario with SONGS Units 2 and 3 replaced by the generation suggested by DRA (referred to as the "DRA Scenario" in the report). Please refer to the Assumptions section for a complete list of replacement generation assumed in the studies. The following paragraphs describe the overload conditions associated with the DRA Scenario and propose solutions to prevent the overloads.

Overloads in DRA Scenario Base Case (All Lines In-Service)

The base case for the DRA Scenario reveals an overload of about 20% on the Imperial Valley - La Rosita 230 kV line, even with all lines in-service. The line loading is 1168 amps which exceeds the line thermal rating and trip relay setting of 1025 amps. The purpose of the relay is to trip the line to prevent overloading of this and other 230 kV lines located in the CFE system. The overload is caused by changes in the power flow pattern caused by absence of the SONGS units, as well as changes caused by injection of power at new sites, such as Imperial Valley and North Gila. In order to prevent the overload, a 230/500 kV transformer at Imperial Valley Substation is required to deliver the SONGS replacement generation located at Imperial Valley directly to the 500 kV bus. This transformer should not be connected in parallel to the existing transformer to prevent the power flow to the Imperial Valley - La Rosita 230 kV line.

The 500 kV series capacitors between Imperial Valley and North Gila are also overloaded by about 2% in the base case for the DRA Scenario. The overload condition is aggravated by the addition of the second 500/230 kV transformer at Miguel and the new Miguel - Mission 230 kV line (see following paragraphs). Therefore, the series capacitors should be upgraded with a continuous and emergency ratings of 1700 amps and 2300 amps, respectively. The emergency rating of 2300 amp is needed to accommodate the loss of the Palo Verde - Devers 500 kV line and subsequent overloading and tripping of the Imperial Valley - La Rosita 230 kV line.

The Sycamore Canyon 230/69 kV transformer is also overloaded by about 2.7% in the base case with SONGS replacements; since this overload exceeds the maximum continuous rating of the transformer, it is not acceptable. Also, Table XX shows ten contingencies that further overload this bank above its maximum contingency rating of 120%. A second 230/69 kV transformer is, therefore, required at Sycamore Canyon.

Overloads Caused By Contingencies

The DRA Scenario case also shows an overload of the Miguel 500/230

kV transformer for the outage of the Palo Verde - Devers 500 kV line and subsequent overloading and tripping of the Imperial Valley - La Rosita 230 kV line. The transformer is also overloaded by the outage of the Tijuana - Miguel 230 kV line (see Table B.5). A second transformer is, therefore, needed to prevent the overload.

The addition of the new transformers at Miguel and Imperial Valley, and the addition of the Miguel - Mission 230 kV line, increases the loading of the 500 kV series capacitors between Imperial Valley and Miguel. Therefore, the series capacitors should be upgraded with a continuous and emergency ratings of 1600 amps and 2500 amps, respectively. The emergency rating of 2500 is needed to accommodate the loss of the Palo Verde - Devers 500 kV line and subsequent overloading and tripping of the Imperial Valley - La Rosita 230 kV line.

Comprehensive contingency analysis of the SDG&E system using the DRA scenario show overloads of several 69 kV, 138 kV, and 230 kV transmission lines and transformers (see Tables B.6 and B.7). One alternative to prevent the overloads is to build a 230 kV line from Miguel to Mission. Another alternative would be to upgrade at least four 69 kV lines, three 138 kV line, one 230 kV lines, and three transformers. A preliminary analysis shows that it would be more economical to build a new 230 kV line from Miguel to Mission than upgrading the lines and transformers.

The outage of the Encina - Escondido and Sycamore - Escondido 230 kV lines causes overloading of the Pomerado - Poway 69 kV and Rancho Carmel - Bernardo 69 kV lines. In order to relieve the overloads the Pomerado - Poway line requires bundling and the Rancho Carmel - Bernardo line requires reconductoring.

BASE CASE COMPARISON

SDG&E AREA ONLY

TABLE B.4

CASE WITH SONGS	CASE WITH SONGS REPLACEMENT												
No Overloads	<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%;">N. Gila-IV</td> <td style="width: 50%; text-align: right;">1426 Amps*</td> <td style="width: 50%; text-align: right;">101.86%</td> </tr> <tr> <td>IV-La Rosita</td> <td>1229 Amps**</td> <td>119.90%</td> </tr> <tr> <td>Sycamore 230/69</td> <td>***</td> <td>102.70%</td> </tr> <tr> <td>Miguel 500/230</td> <td>***</td> <td>100.00%</td> </tr> </table>	N. Gila-IV	1426 Amps*	101.86%	IV-La Rosita	1229 Amps**	119.90%	Sycamore 230/69	***	102.70%	Miguel 500/230	***	100.00%
N. Gila-IV	1426 Amps*	101.86%											
IV-La Rosita	1229 Amps**	119.90%											
Sycamore 230/69	***	102.70%											
Miguel 500/230	***	100.00%											

* The continuous rating for the series capacitors is 1400 Amps

** The line trips at 1025 Amps

*** 100% is the transformer's nameplate rating

N-1 CONTINGENCY ANALYSIS

SDG&E AREA ONLY

TABLE B.5

MAJOR CONTINGENCIES	CASE WITH SONGS REPLACEMENT AND WITH RAINBOW-VALLEY 500 KV, SERRANO 500/230 KV 3th TRANSFORMER, AND 500/230 KV TRANSFORMER AT IMPERIAL VALLEY
Palo Verde-Devers 500 I V-La Rosita 230	*** Miguel 500/230 N. Gila-IV current IV-Miguel 500 157.10% 1635 Amps* 116.79% 1872 Amps**
Rainbow-Valley 500 I V-La Rosita 230	*** Miguel 500/230 IV-Miguel 500 131.20% 1569 Amps**
Miguel-Mission 230 Miguel-Tijuana 230 (common breaker)	*** Miguel 500/230 IV-Miguel 500 128.00% 1520 Amps**
Tijuana-Miguel 230	*** Miguel 500/230 IV-Miguel 500 137.30% 1637 Amps**
I V-La Rosita 230	*** Miguel 500/230 120.30%

* The continuous rating for the series capacitors is 1400 Amps

** Limited first by the Miguel 500/230 transformer and second by the series capacitors

*** 100% is the transformer's nameplate rating; 118% is the maximum load rating (12 hours)

N-1 CONTINGENCY ANALYSIS

SDG&E AREA ONLY

TABLE B.6

CONTINGENCY	CASE WITH SONGS	CASE WITH SONGS REPLACEMENT
Sycamore-Esccondido 230	No Overloads	Sycamore 230/69 137.9%*
Miguel-Tijuana 230	No Overloads	Non-Convergent
Miguel-Mission 230	No Overloads	Sycamore 230/69 Miguel 230/69 (bank 71 & 70) B-Main 69 Chollas-Paradise 69 Miguel-Proctor Valley 138 Proctor V- Telegraph Cy 138 126.7%* 117.5%** 100.1% 107.8% 106.8% 102.6%
Miguel 230/69 (bank 70 or 71)	No Overloads	Miguel 230/69 (bank 71 or 70) 133.6%**

* 120% is the Maximum Load Rating for the Sycamore 230/69 transformer

** 116% is the Maximum Load Rating for the Miguel 230/69 transformers

N-2 CONTINGENCY ANALYSIS

SDG&E AREA ONLY

TABLE B.7

CONTINGENCY	CASE WITH SONGS	CASE WITH SONGS REPLACEMENT
Imperial Valley-Miguel 500 Imperial Valley-La Rosita 230	Encina- San Onofre 230 111.4%	Non-Convergent
Escondido-Encina 230 Sycamore-Escondido 230	No Overloads	Sycamore 230/69 Pomerado-Poway 69 Bernardo- R. Carmel 69 142.3%* 102.1% 123.4%
Miguel-Sycamore 230 Miguel-Mission 230	Chollas-Paradise 69 101.1%	Non-Convergent
Miguel-Mission 230 Carlton Hill Tap 138	No Overloads	Sycamore 230/69 Proctor V- Telegraph Cy 138 B-Main 69 Chollas-Paradise 69 Miguel-Proctor V 138 126.6%* 101.9% 101.8% 108.2% 106.2%
Sycamore-Escondido 230 Carlton Hill Tap 138	No Overloads	Sycamore 230/69 138.0%*
Sycamore-Escondido 230 Meadow Lark Tap 138	No Overloads	Sycamore 230/69 138.2%*

* 120% is Maximum Load Rating for the Sycamore 230/69 kV transformer

N-2 CONTINGENCY ANALYSIS

SDG&E AREA ONLY

TABLE B.7

CONTINGENCY	CASE WITH SONGS	CASE WITH SONGS REPLACEMENT
Miguel-Mission 230 Los Coches-South Bay 138	No Overloads ⊕	Sycamore 230/69 130.5%* Miguel 230/69 (both banks) 118.7%** B-Main 69 108.4% Chollas-Paradise 69 106.3% El Cajon-Jamacha 69 107.9% Granite Tap- Miguel 69 102.8% Mission-South Bay 138 104.60%
Sycamore-Escondido 230 Calavera Tap 138	No Overloads	Sycamore 230/69 138.4%*
Main- South Bay 1381 Main- South Bay 1382	No Overloads	South Bay 138/69 122.0%*** Chollas-Paradise 69 101.1%
Miguel-Mission 230 Mission-Carlton Hill 138	No Overloads	Sycamore 230/69 126.7%* Proctor V- Telegraph Cy 138 102.4% Miguel 230/69 (banks 70 & 71) 117.6%** B-Main 69 100.7% Chollas-Paradise 69 107.8% Miguel-Proctor Valley 138 107.6%

- * 120% is Maximum Load Rating for the Sycamore 230/69 kV transformer
- ** 116% is Maximum Load Rating for the Miguel 230/69 transformers
- *** 117% is Maximum Load Rating for the South Bay 138/69 transformer

N-2 CONTINGENCY ANALYSIS

SDG&E AREA ONLY

TABLE B.7

CONTINGENCY	CASE WITH SONGS	CASE WITH SONGS REPLACEMENT
Miguel 230/69 (bank 71) Miguel-Sycamore 230	Miguel 230/69 (bank70) 127.2%	Miguel 230/69 (bank70) 155.4%** Miguel-Mission 230 116.4% Miguel-Proctor Valley 138 102.3%
Sycamore-Escondido 230 Escondido-Talega 230	No Overloads	Sycamore 230/69 138.3%*

* 120% is Maximum Load Rating for the Sycamore 230/69 kV transformer

** 116% is Maximum Load Rating for the Miguel 230/69 transformers

APPENDIX C

STABILITY RESULTS SUMMARIES

RULE 74.3 - COMPUTER MODEL EQUATIONS, INPUT,
AND DOCUMENTATION

PART 3iii:

A description of a diagnostic and output report formats as
necessary to understand the models operation

Refer to description given in Workpapers, SCE 8/Transmission/Vol:4/
Chapter II/Appendix A, pages 437-438 of A.93-11-025. In addition,
refer to following page for stability format.

Sample Stability Plot Output

VOLTAGE PERFORMANCE PARAMETERS

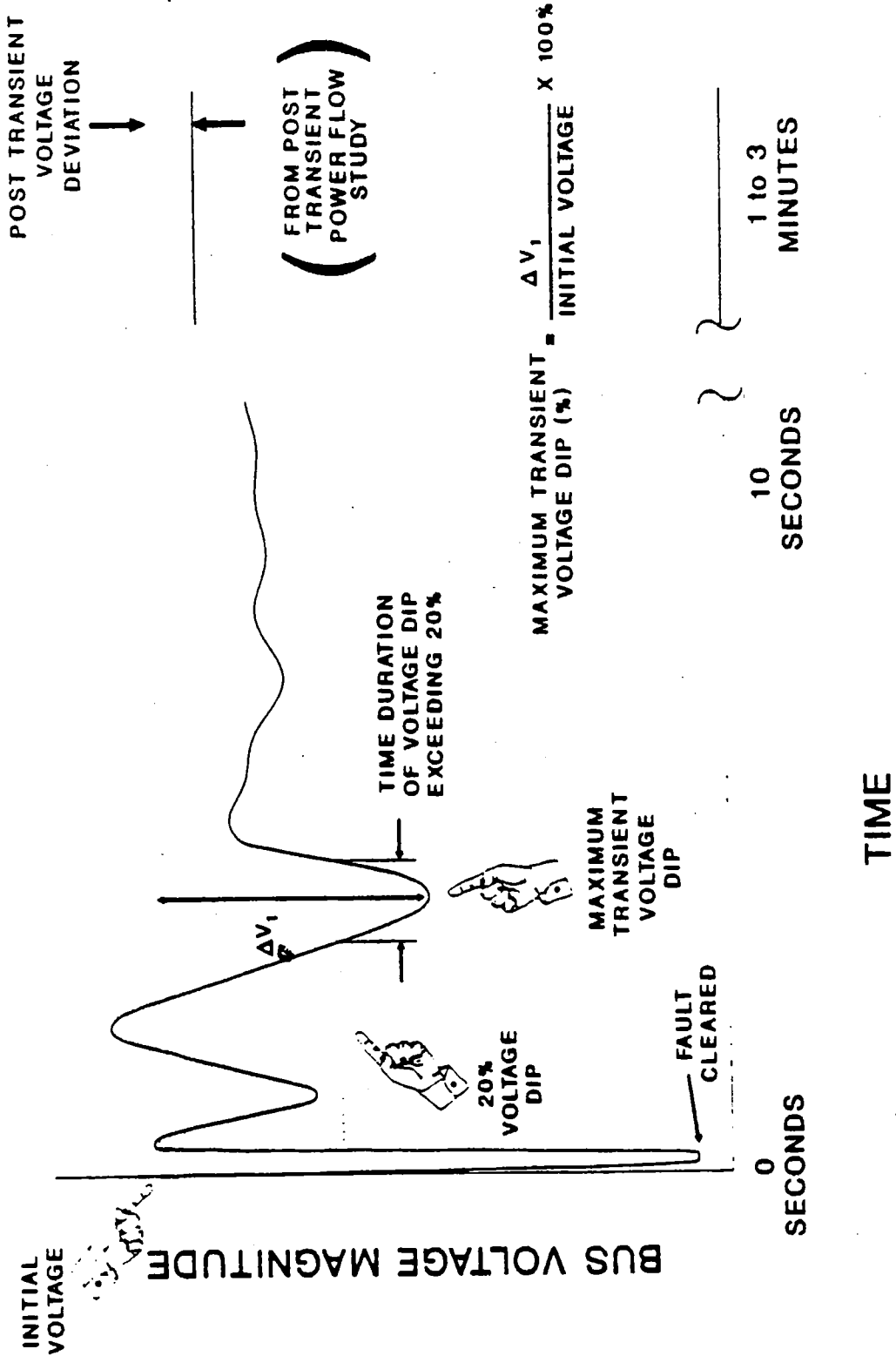


Figure 1

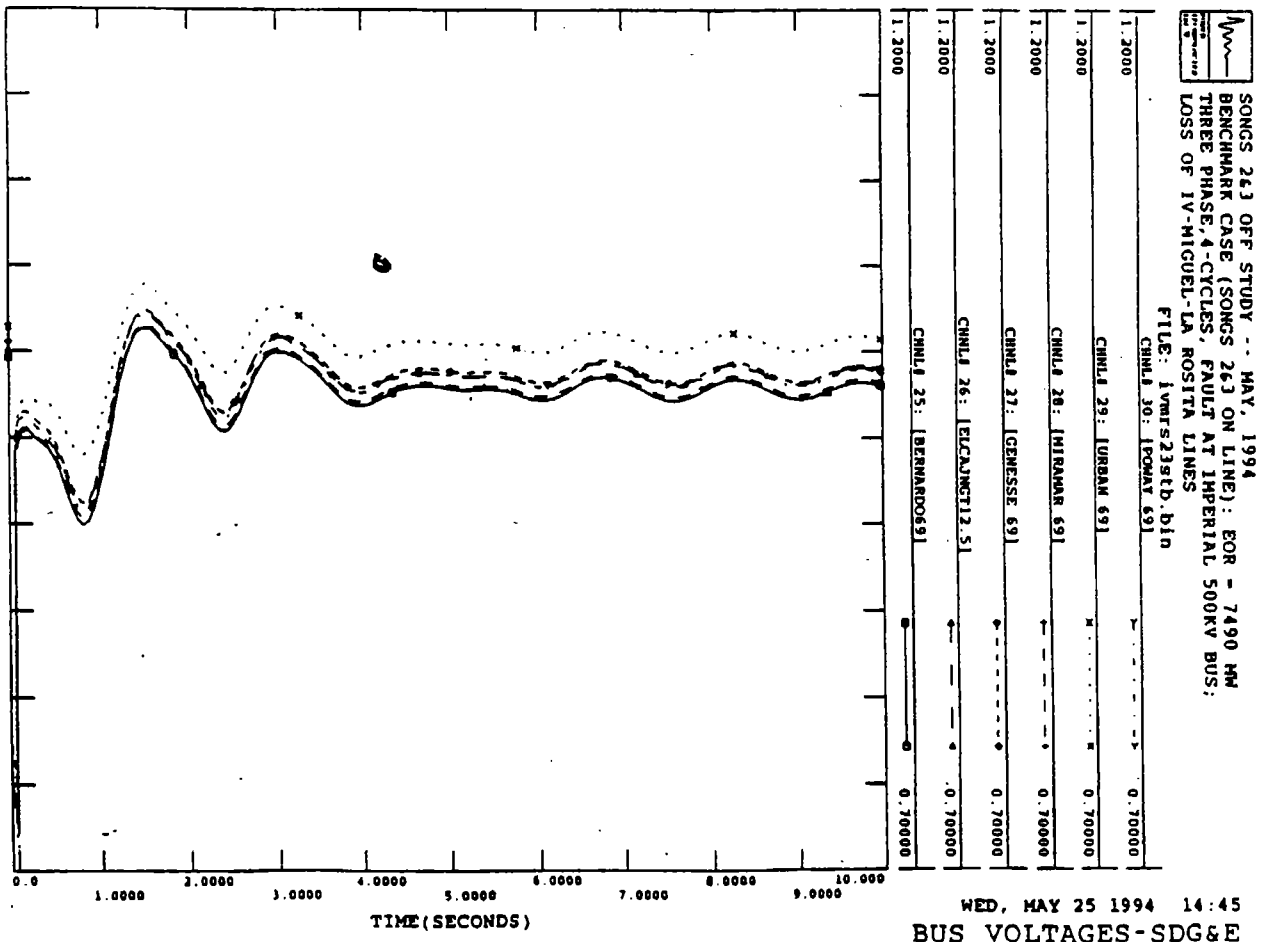
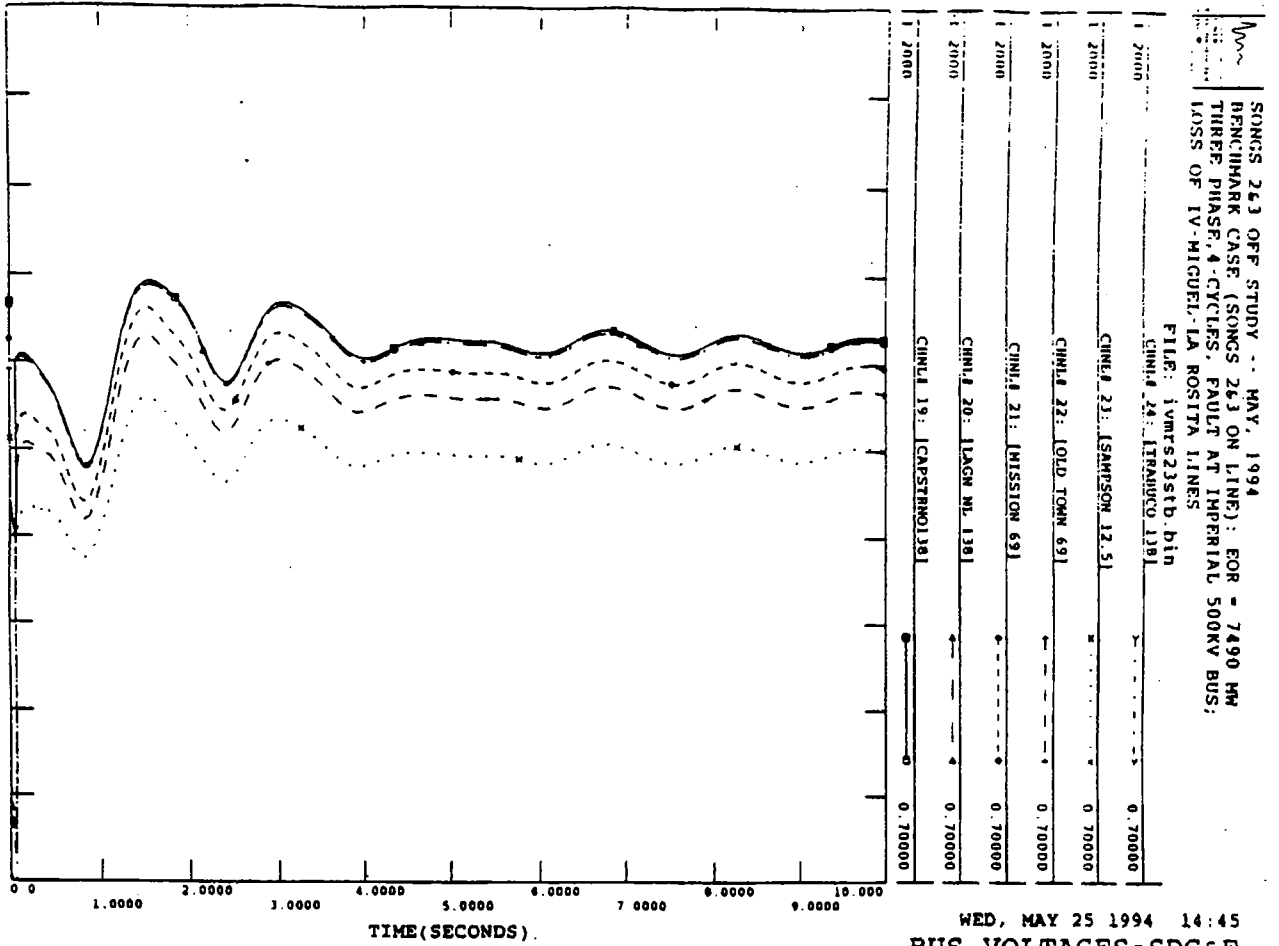
STABILITY RESULTS

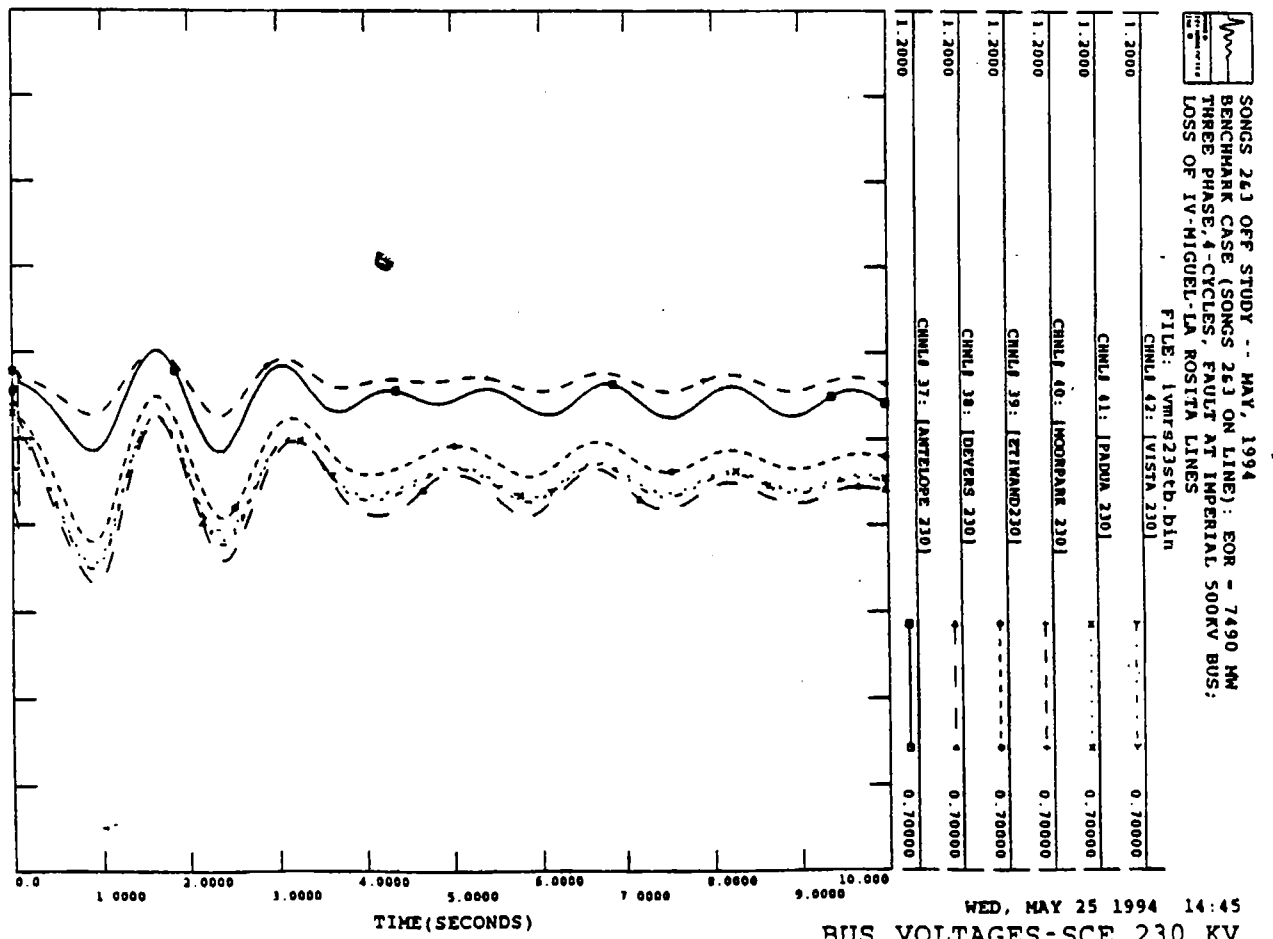
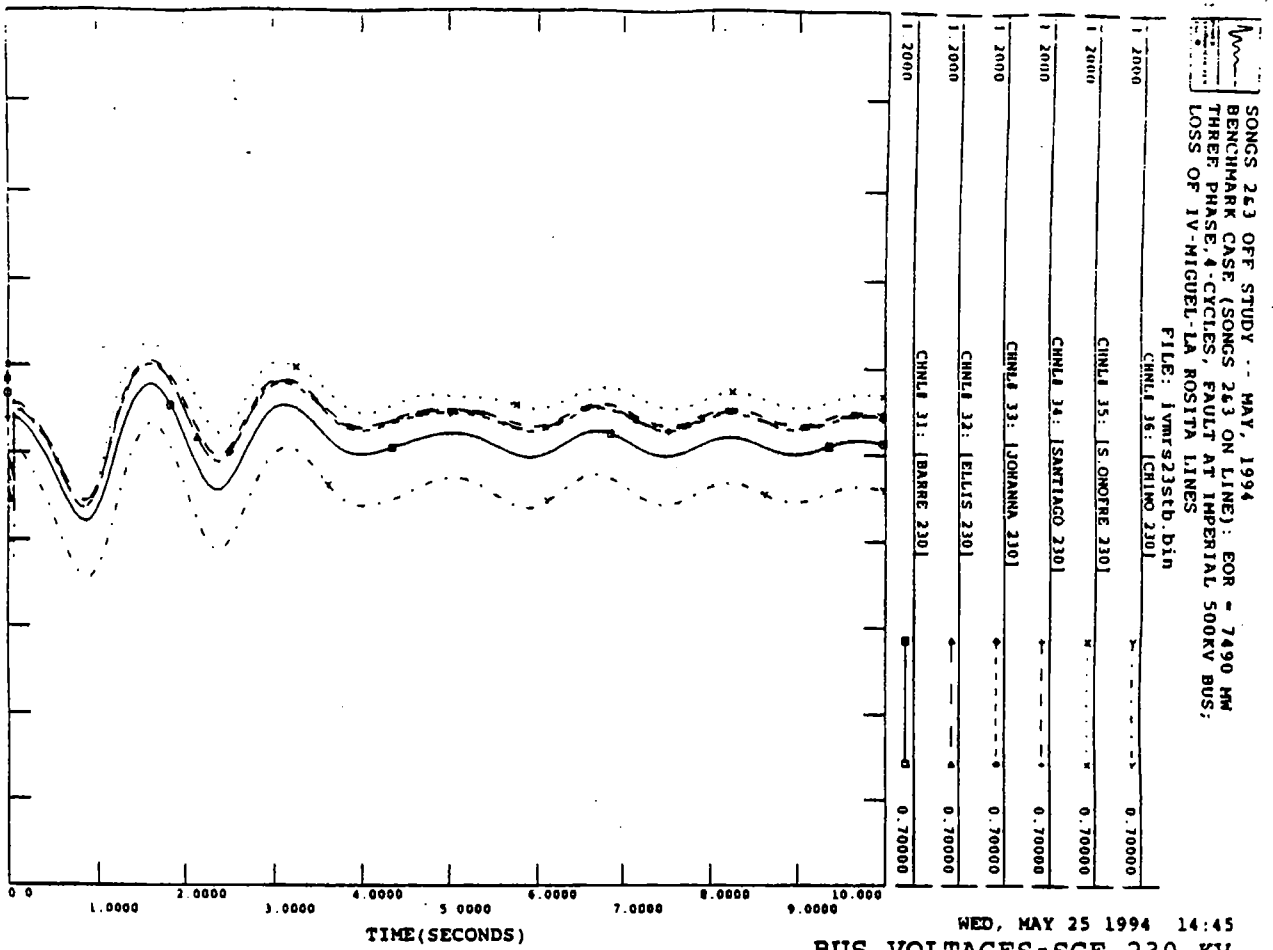
CASES	DESCRIPTION	OUTAGES	VOLTAGE DIP	TIME DURATION	DAMPING
1. Base Case: (songs23sib.sav) SDG&E MW/MVAR = 5:1	EOR=7490, S. Cal Inertia = 109,019 MW.Sec SONGS 2&3 on Line.	PV - N. GILA 500 LUGO = MIRA LOMA	Devers 230: 23.5 V at Antelop 230:	20	0 0
(sofslbstdg2.sav) SDG&E MW/MVAR = 5:1	EOR=7490, S. Cal Inertia = 102,661 MW.Sec SONGS 2&3 off Line.	IV - MIGUEL - ROSITA	Voltage Collapsed at t = 2.5835 Sec.		
(sofer6387sdg2.sav) Reduce EOR by 1103 MW	EOR=6387, S. Cal Inertia = 102,661 MW.Sec SONGS 2&3 off Line.	IV - MIGUEL - ROSITA	Capstrno 138: 23.9 Lagn NL 138: 23.9	20 20	> 0 > 0
2. SVC in SCE and SDG&E: (sofsvcsdg2.sav)	SONGS off Line Base Case. SVC IN SCE&SDG: 500 MVAR at Chino 230 450 MVAR at Devers 230 400 MVAR at Santiago 230 550 MVAR at Talega 230 550 MVAR at Escandido 230 200 MVAR Shunt Caps. each at Devers 230, Chino 230 and Santiago 230.	IV - MIGUEL - ROSITA	Chino 230: 21.3 Devers 230: 22.5 Santiago 230: 24.0 Capstrno 138: 24.7 Lagn NL 138: 24.7	18.5 17.8 17.5 16.6 16.6	> 0 > 0 > 0 > 0 > 0
3. Two Synchronous Condenser Units: (sofcdsrdg2.sav)	SONGS off Line Base Case. Convert Unit 2&3 to two 550 MVAR Synchronous condensers. SVC IN SCE: 500 MVAR at Devers 230 550 MVAR at Chino 230 300 MVAR at Santiago 230 200 MVAR Shunt Caps. each at Devers 230, Chino 230 and Santiago 230.	IV - MIGUEL - ROSITA	Chino 230: 22.9 Devers 230: 22.6 Santiago 230: 22.1 Johanna 230: 22.3 Vista 230: 22.6 V at Antelop 230 :	20 18.7 16.7 17.7 19	> 0 > 0 > 0 > 0 > 0 0
4. Valley-Rainbow 500 Line w/ SVC: (sofvrsvcsdg2.sav)	SONGS off Line Base Case. Add 27 Miles Valley-Rainbow 500 Ln. 250 MVAR SVC at Devers 230.	IV - MIGUEL - ROSITA	Devers 230: 22.5	19.6	> 0

STABILITY PLOTS

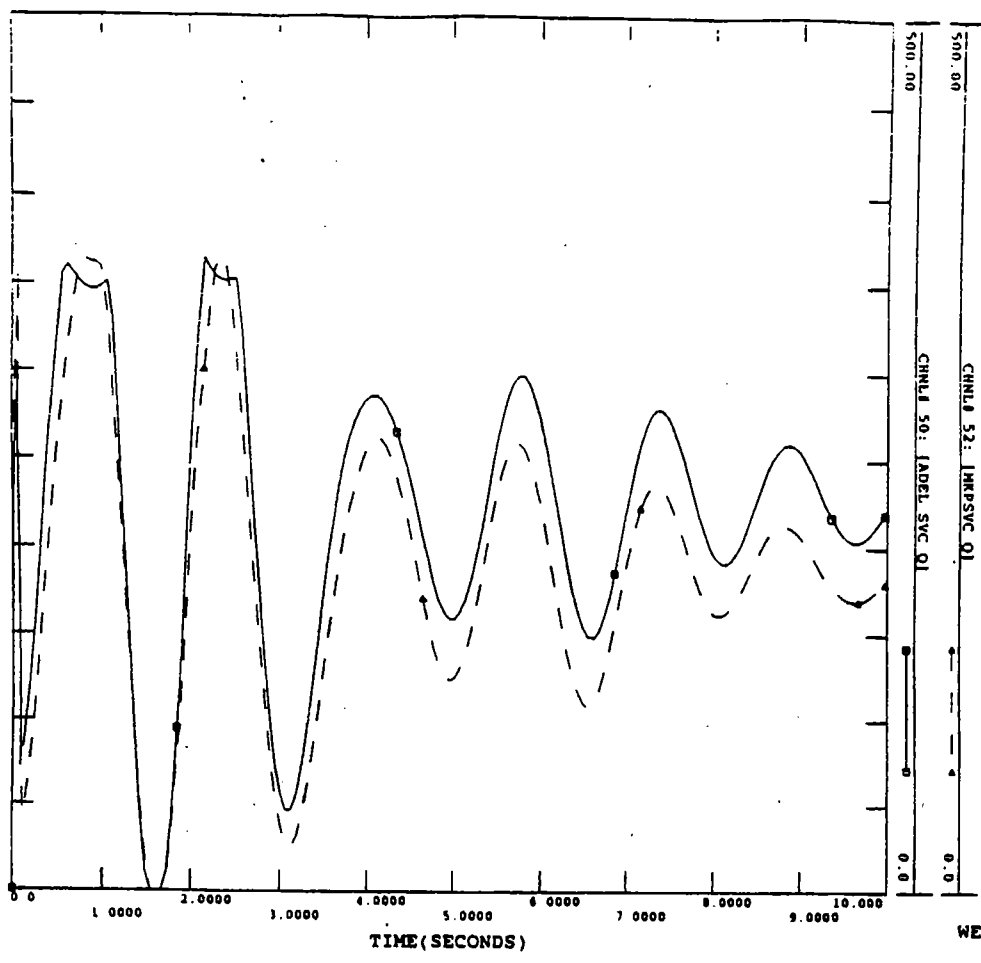
**BENCHMARK CASE
(SONGS 2&3 ON LINE; EOR = 7490 MW):**

Page 1 — Page 3	IV - Miguel - Rosita	N-1
Page 4 — Page 6	Palo Verde - N. Gila	N-1
Page 7 — Page 9	Palo Verde - Devers	N-1
Page 10 — Page 12	Lugo - Mira Loma	N-2

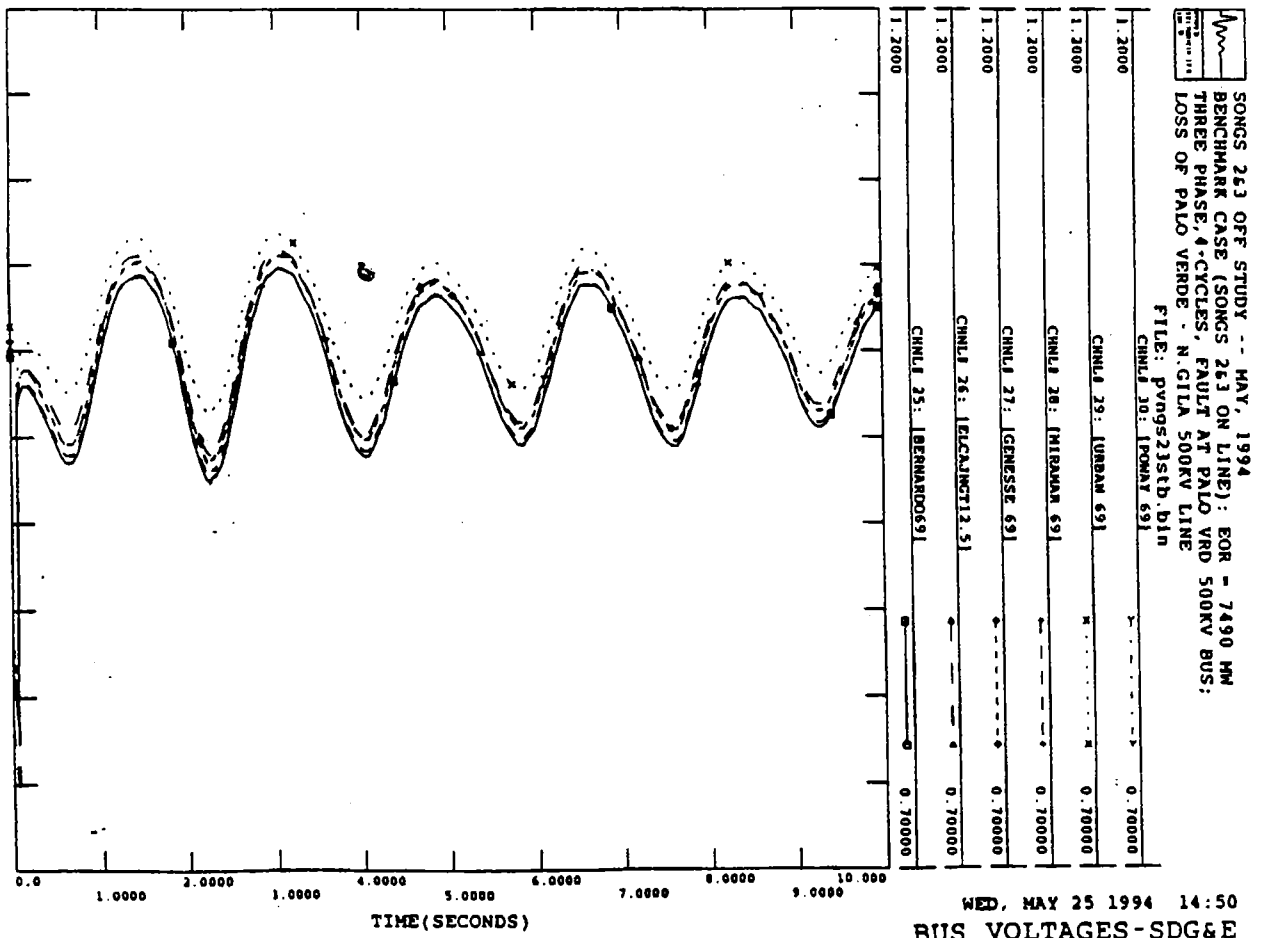
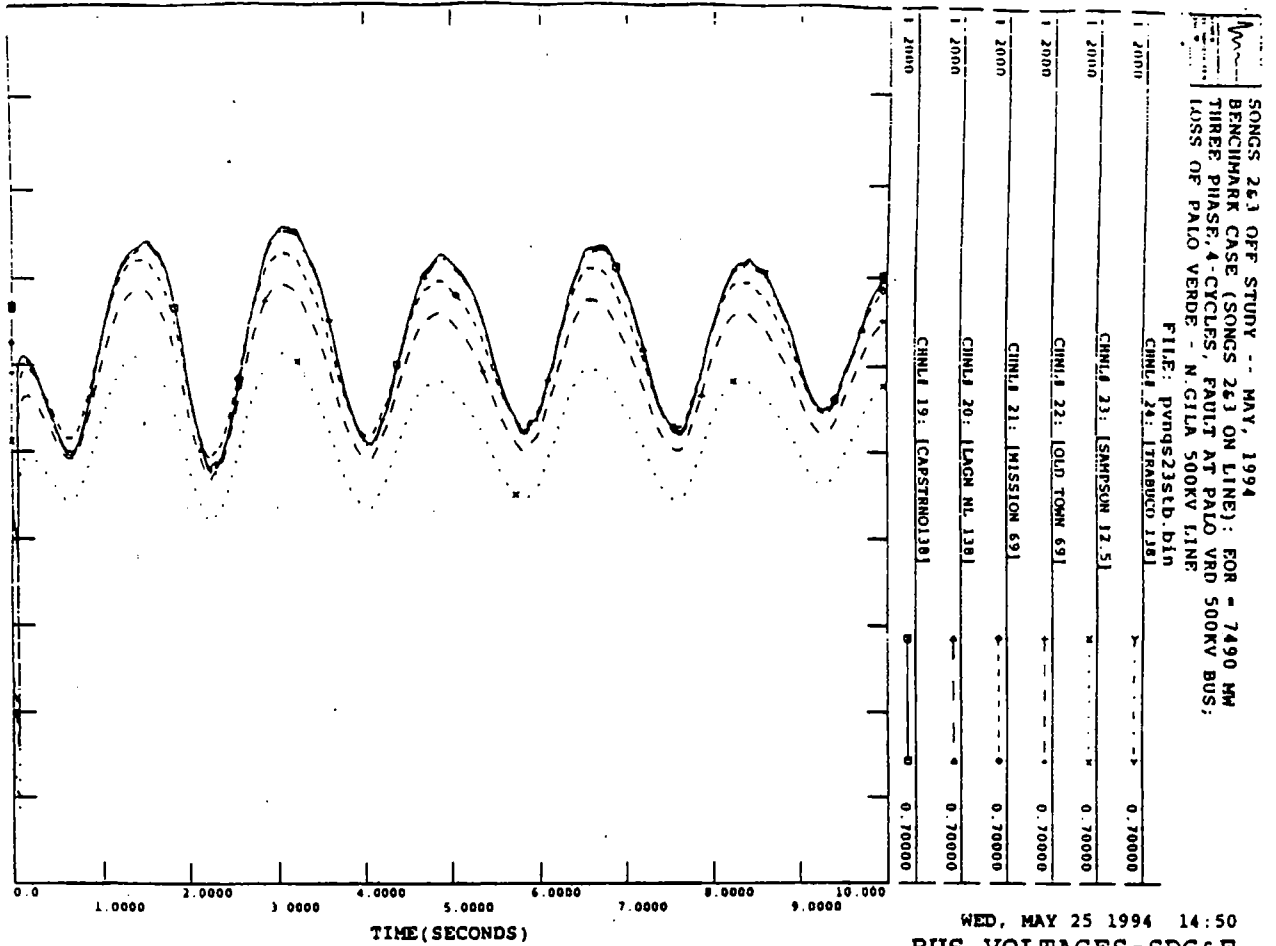


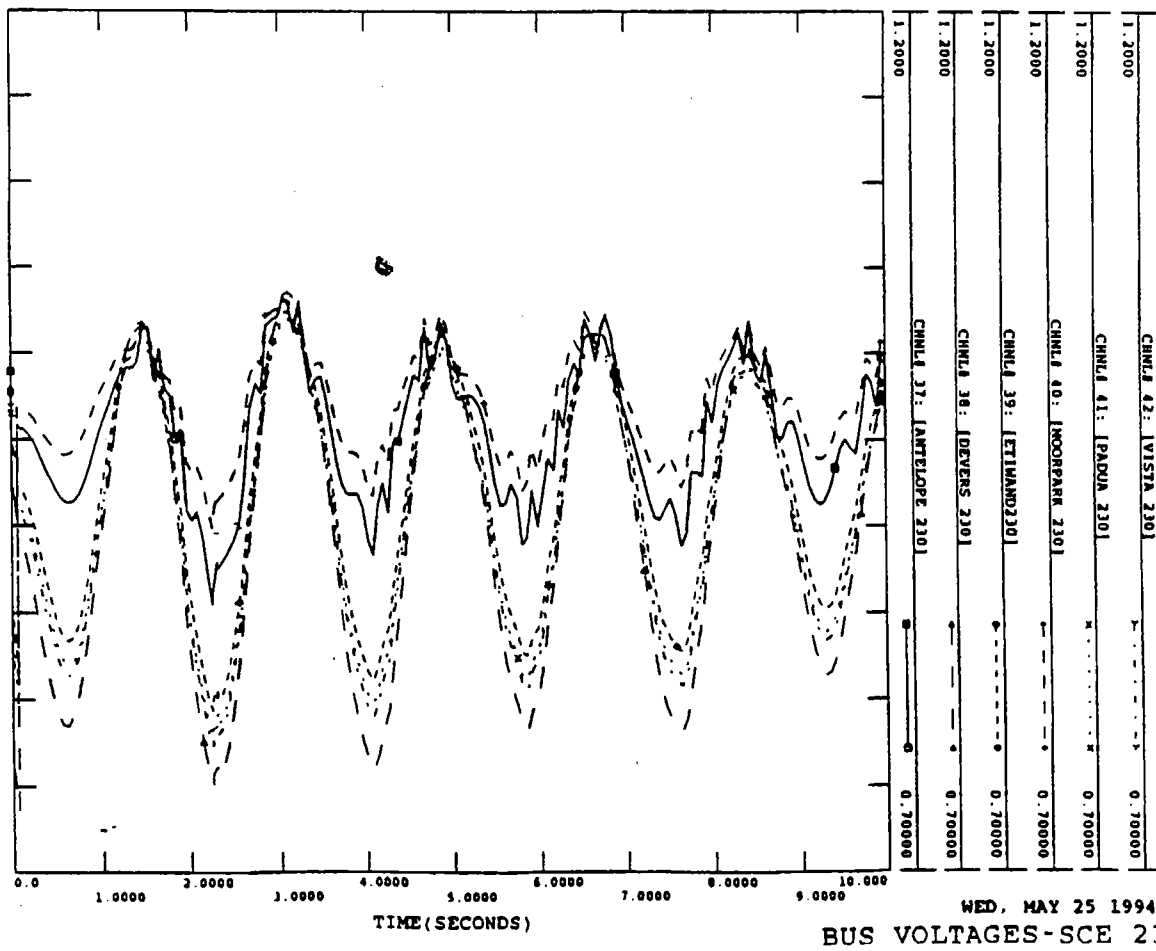
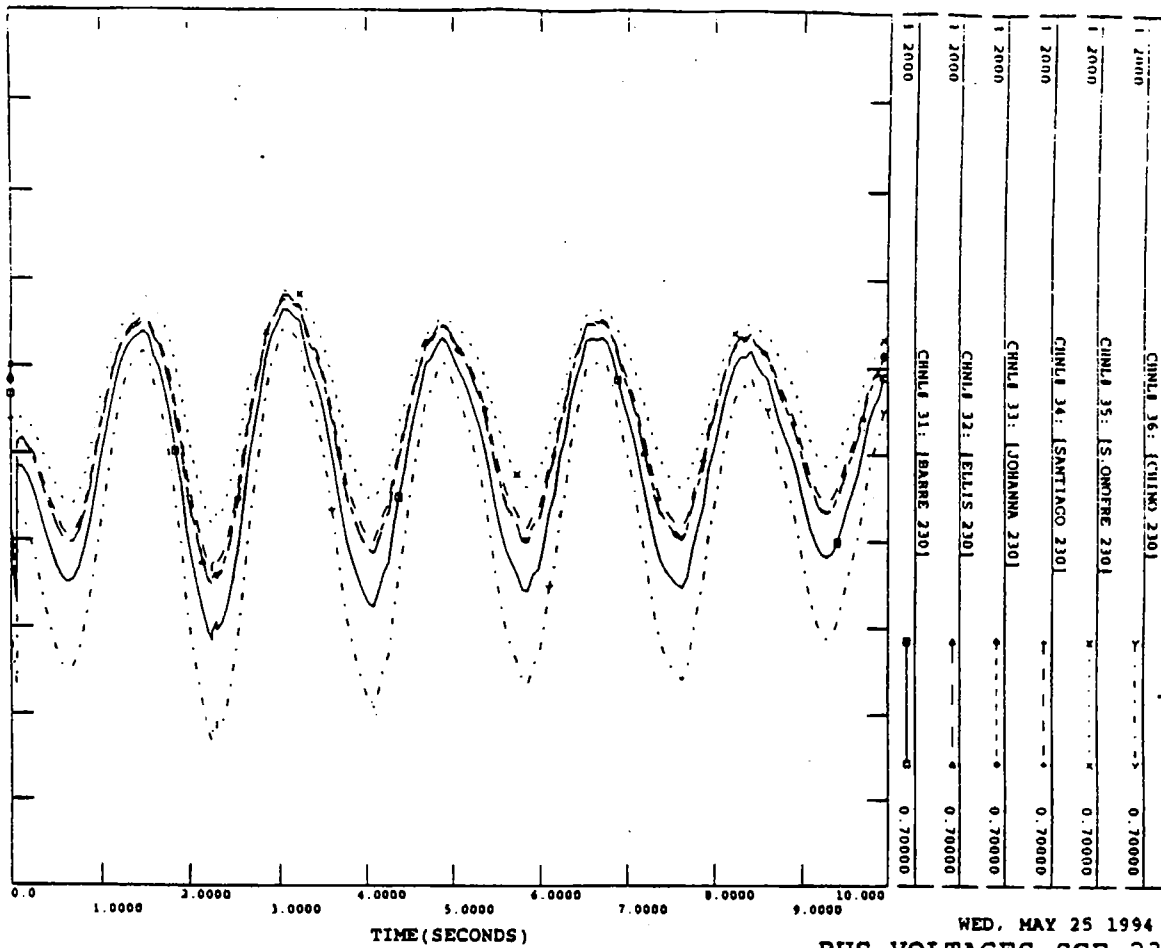


SONGS 263 OFF STUDY -- MAY, 1994
BENCHMARK CASE (SONGS 263 ON LINE): FOR = 7490 MW
THREE PHASE, 4-CYCLES, FAULT AT IMPERIAL 500KV BUS:
LOSS OF IV-MIGUEL-LA ROSITA LINES
FILE: lwms2jstb.din

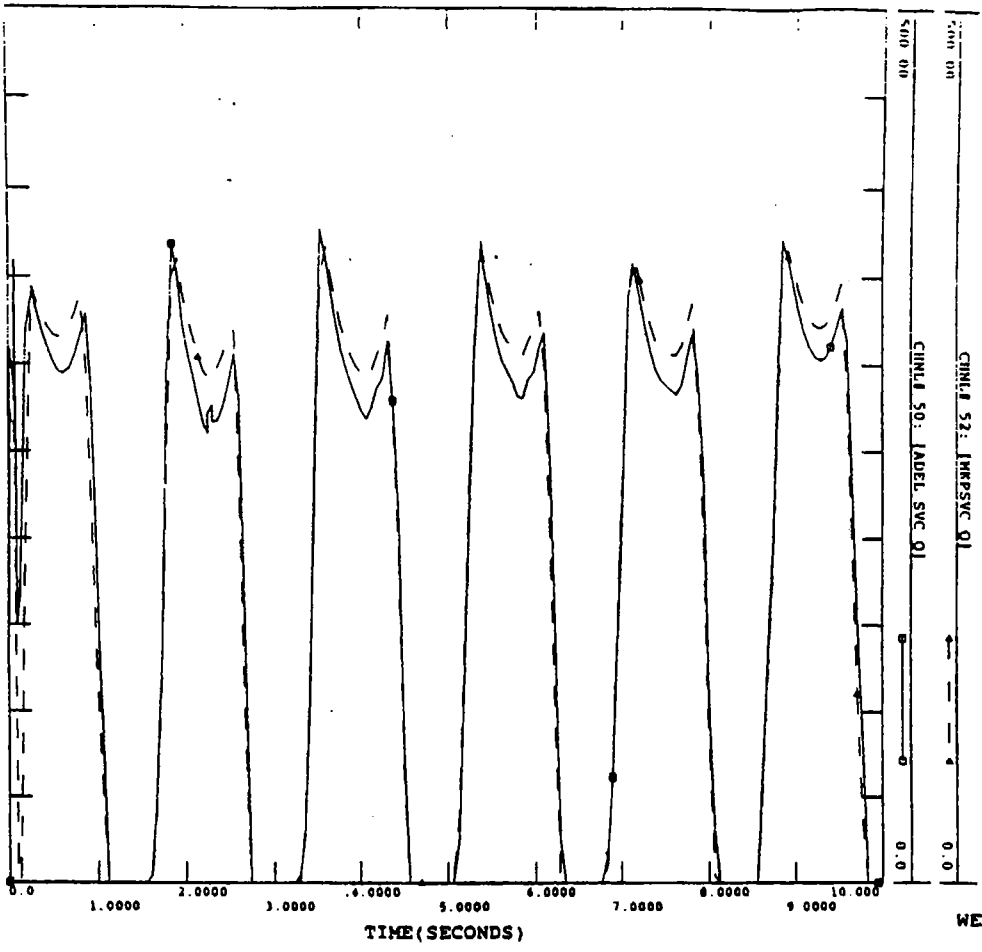


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SVC IN LADWP

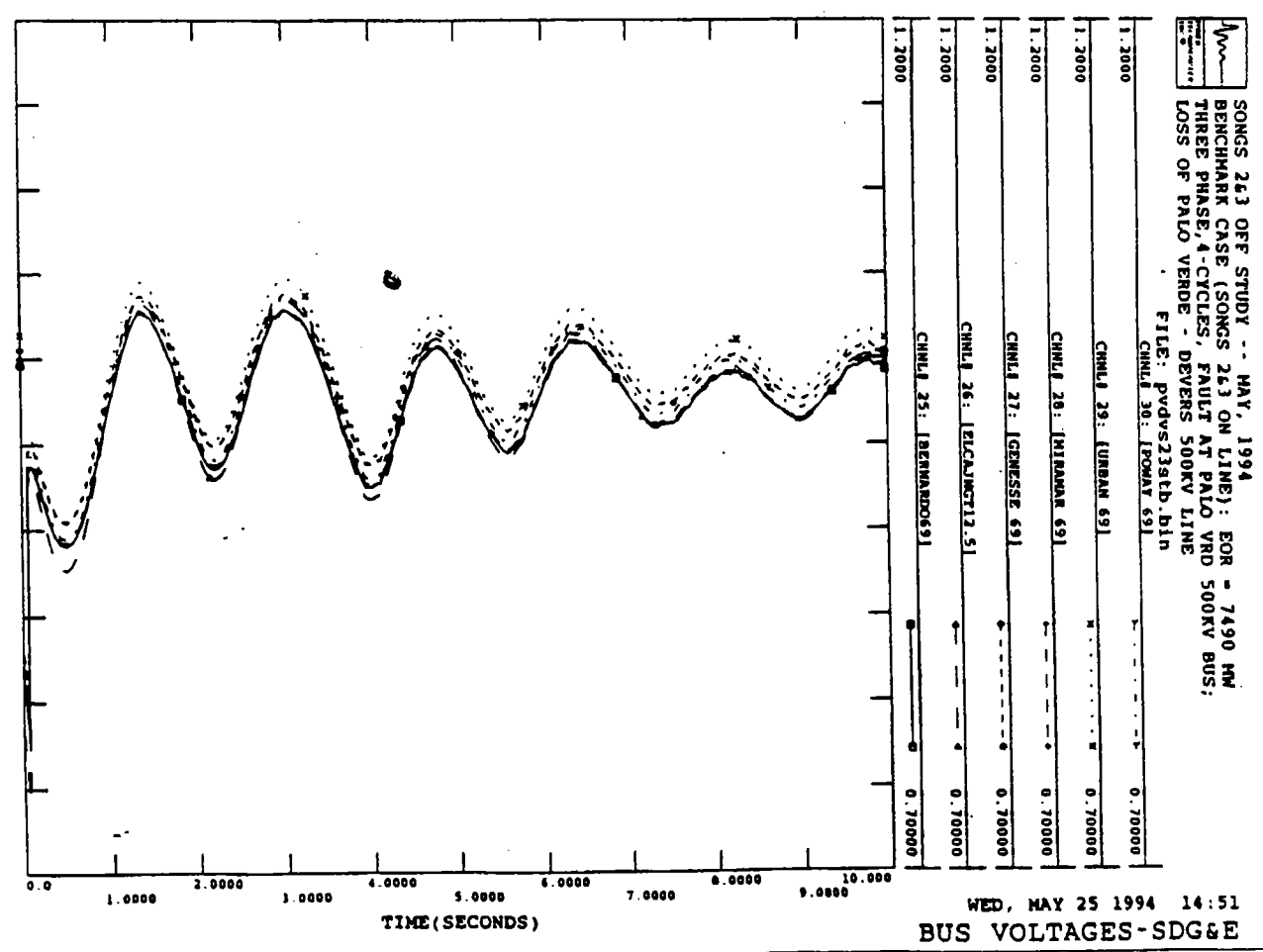
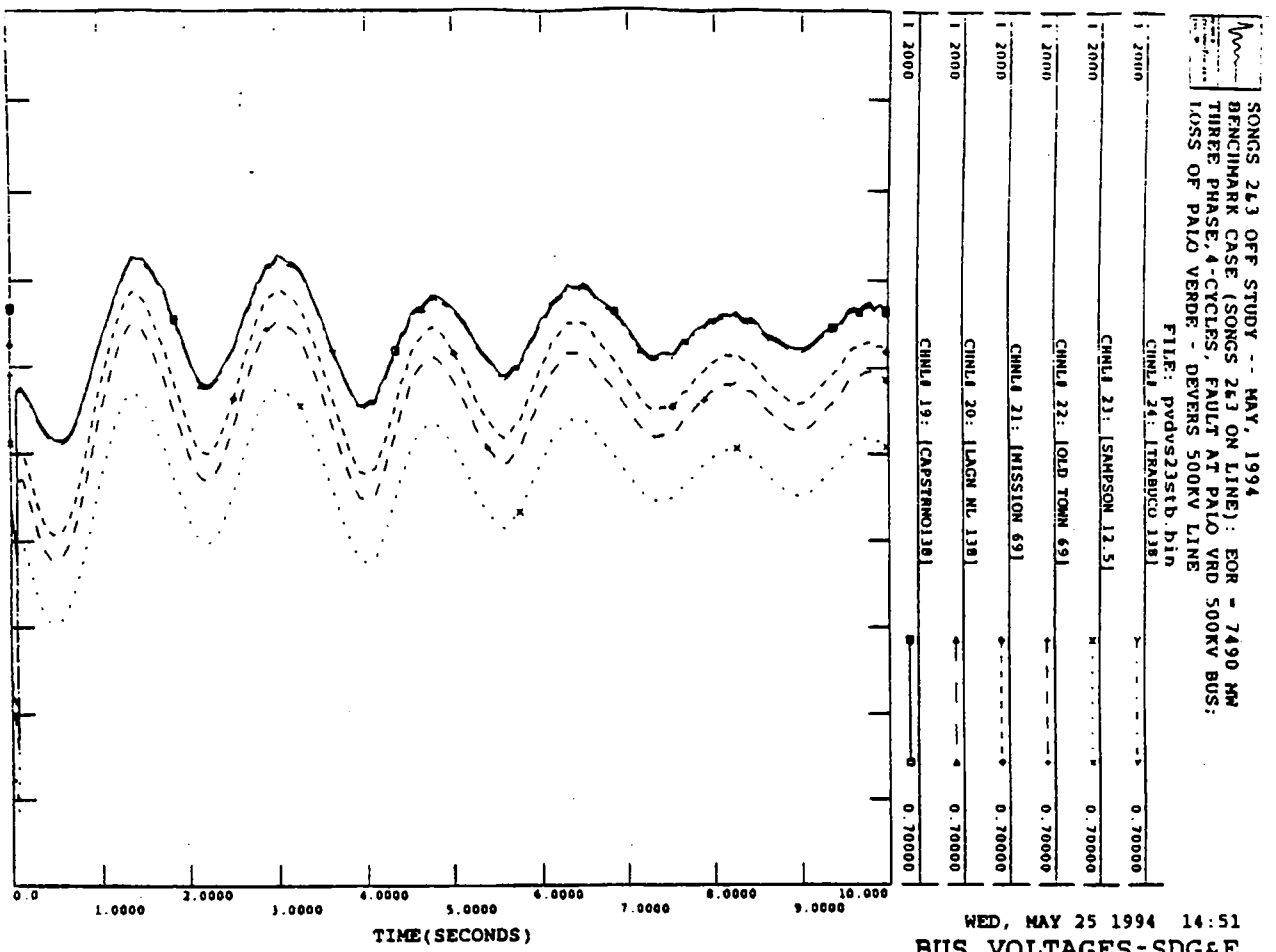


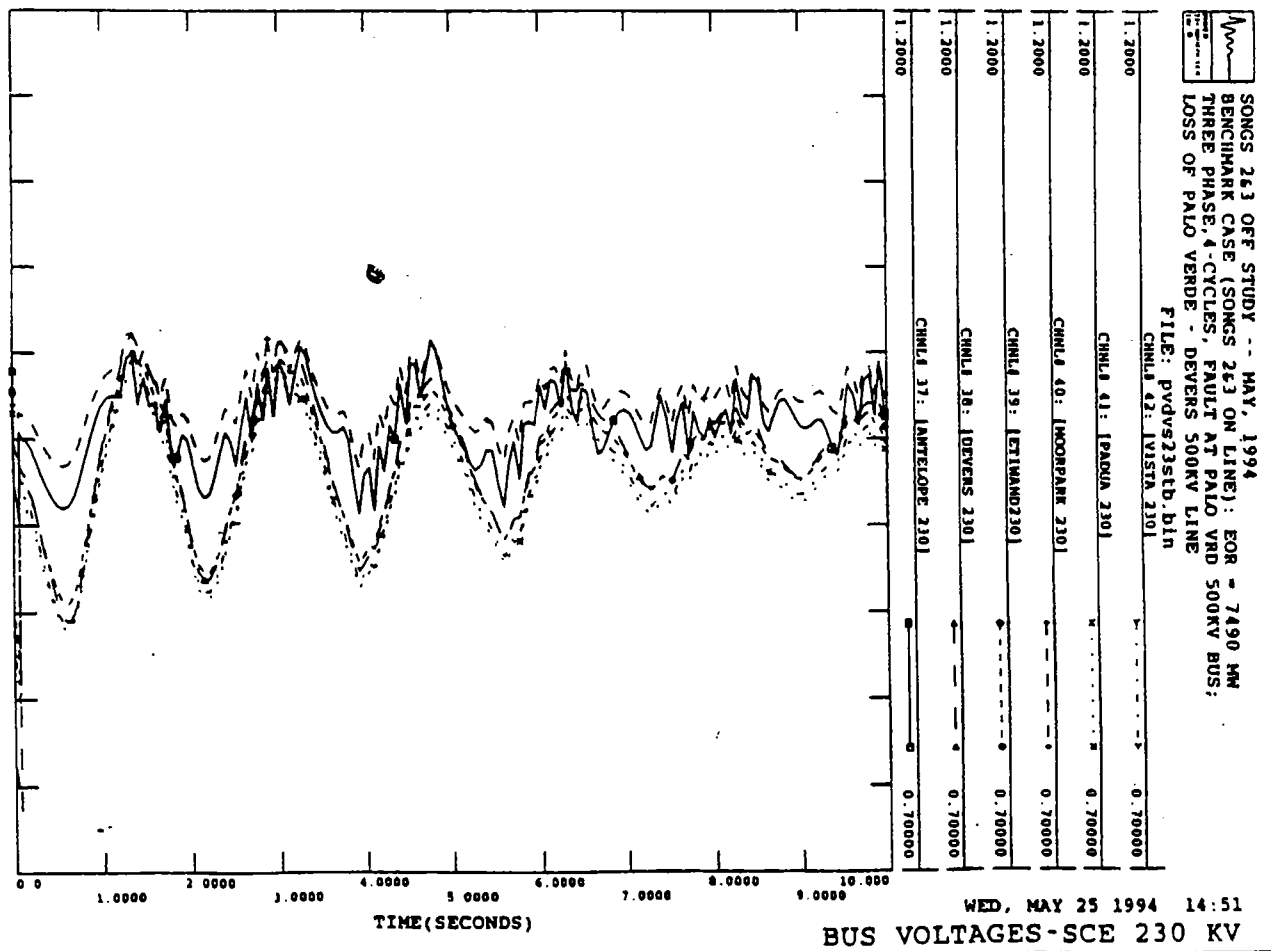
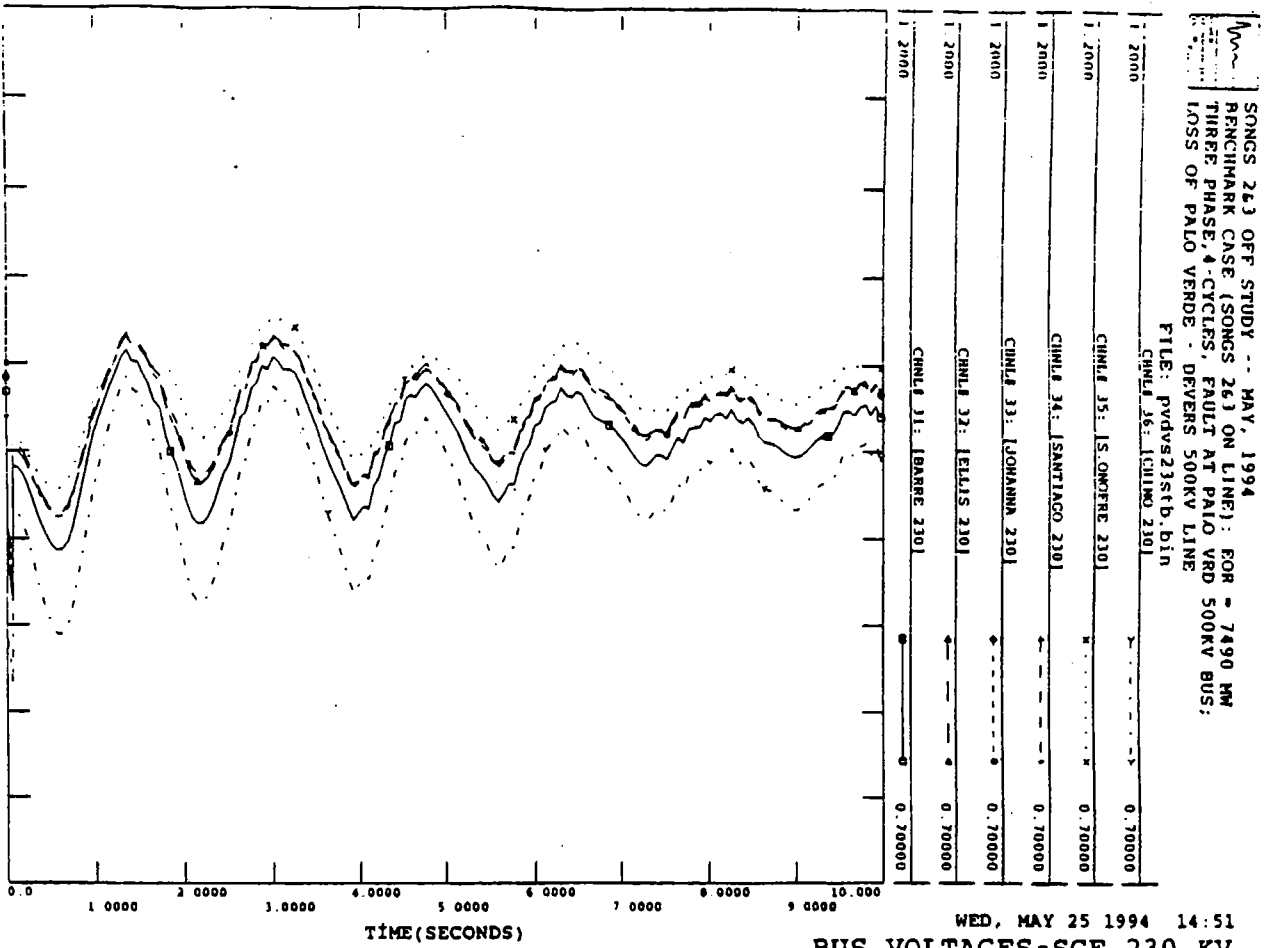


SONGS 263 OFF STUDY -- MAY, 1994
BENCHMARK CASE (SONGS 263) ON LINE: EOR - 7490 MW
THREE PHASE 4-CYCLES, FAULT AT PAILO VRD 500KV BUS;
LOSS OF PAILO VERDE - N. CILA 500KV LINE
FILE: pvngs23stb.din

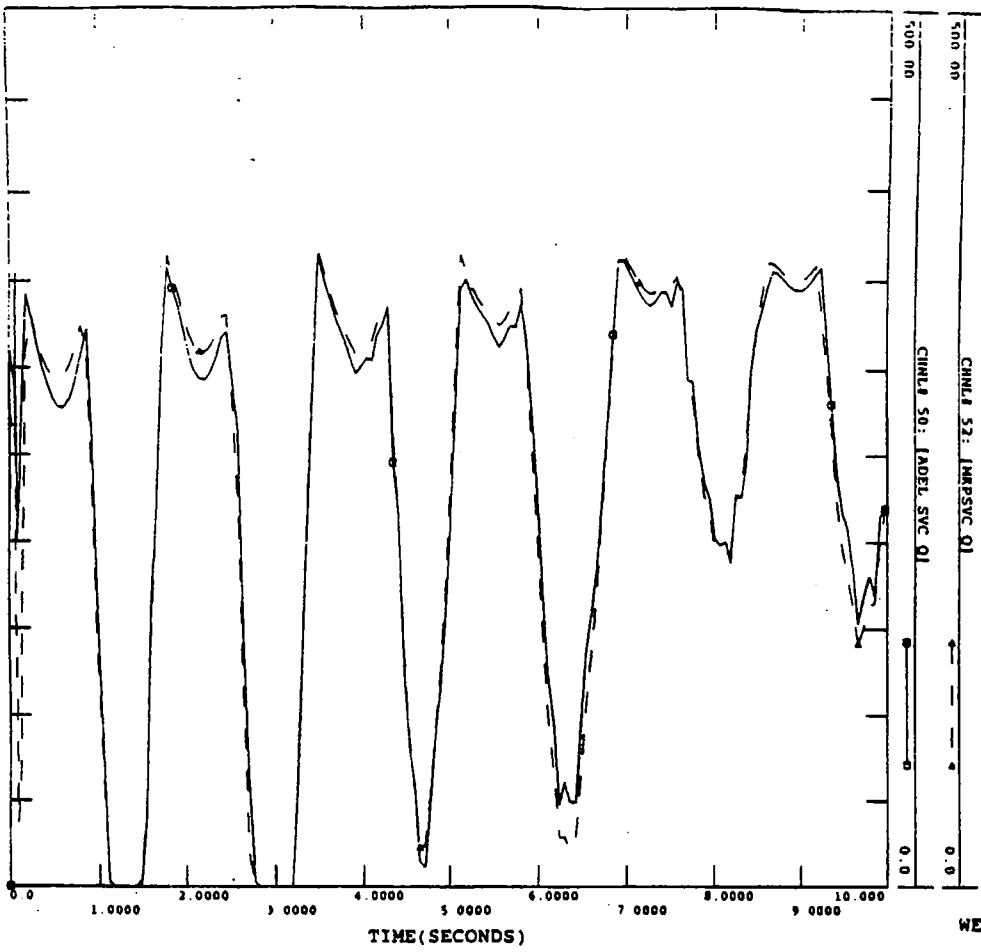


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SVC IN LADWP



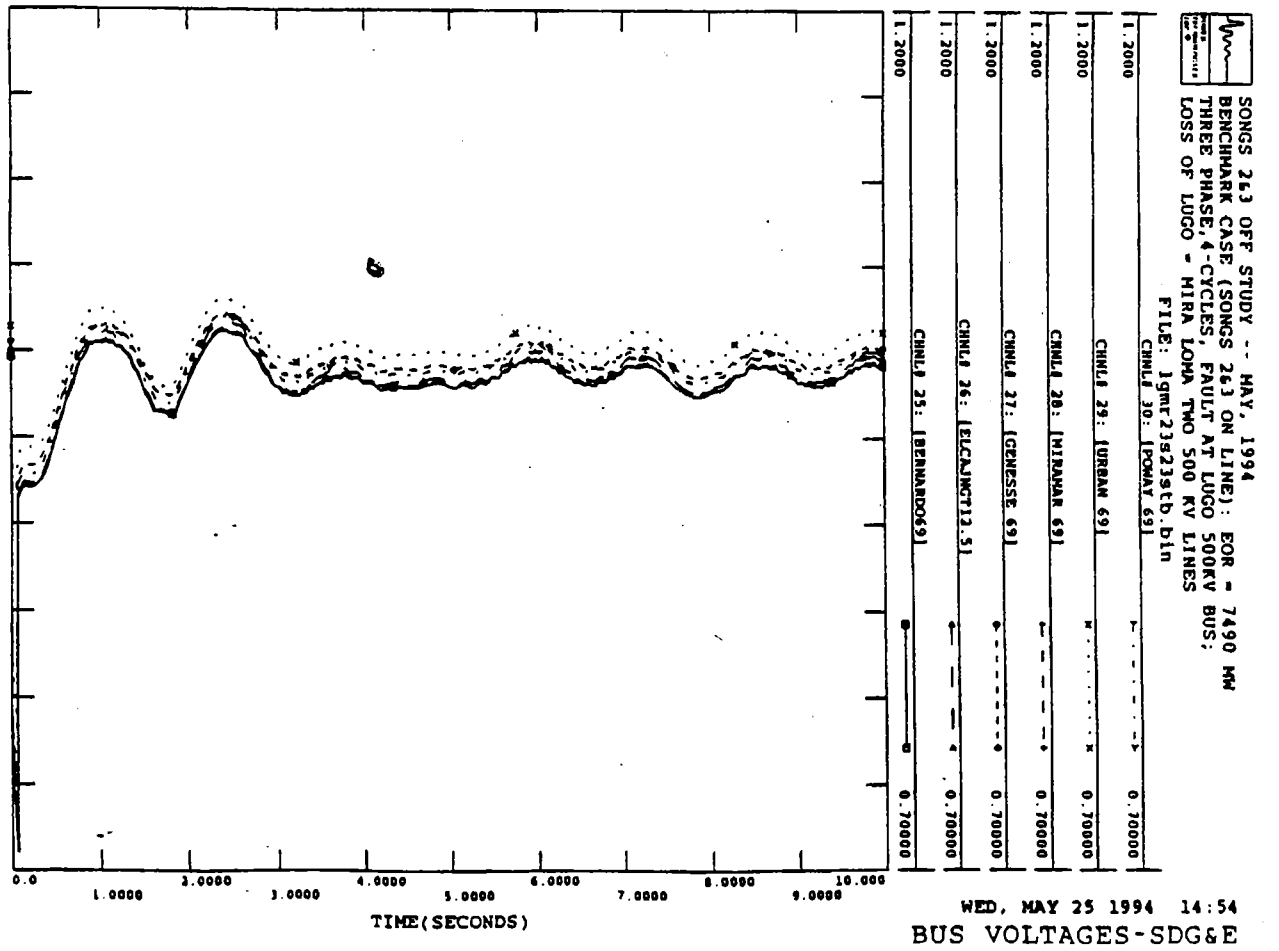
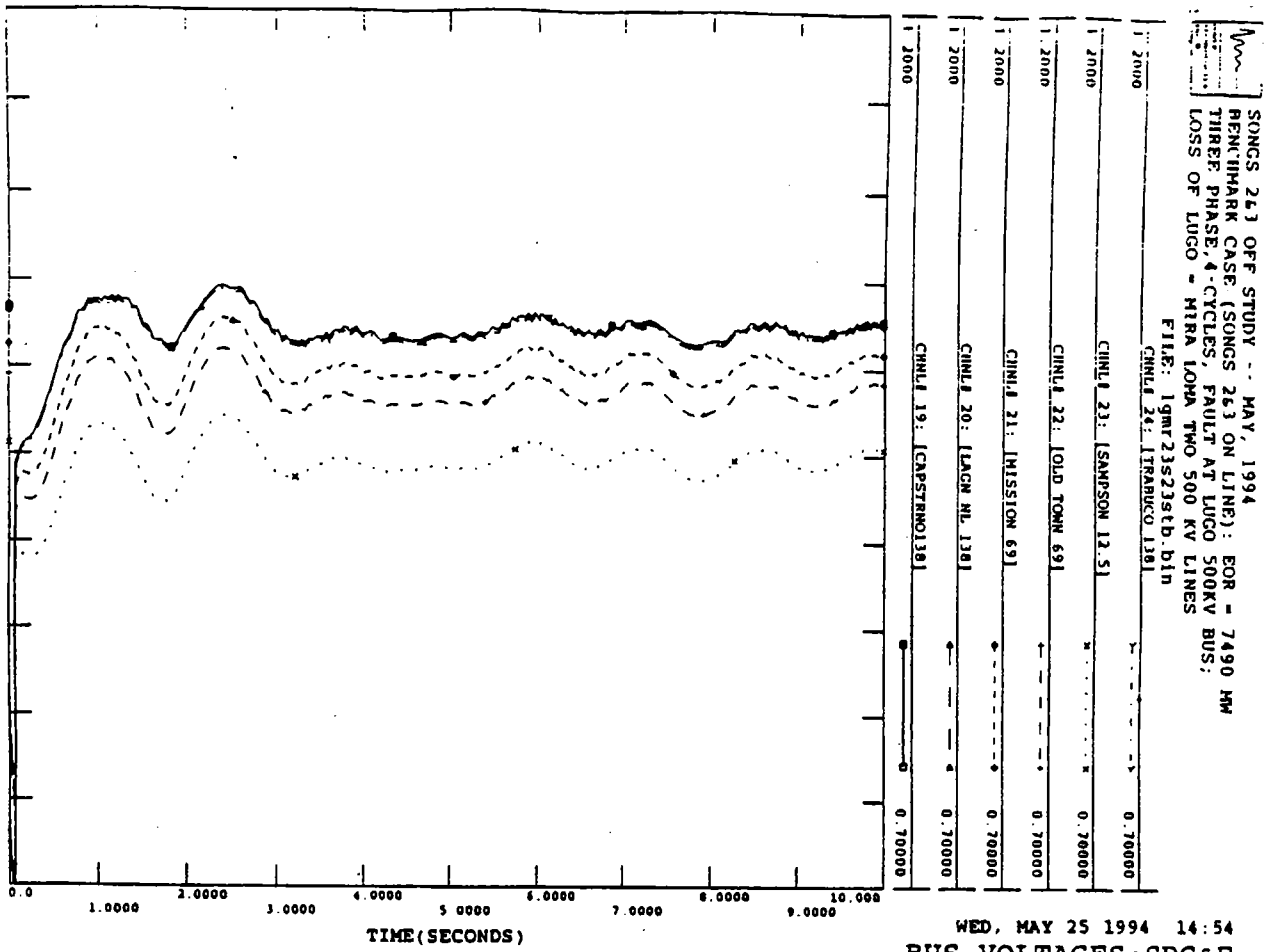


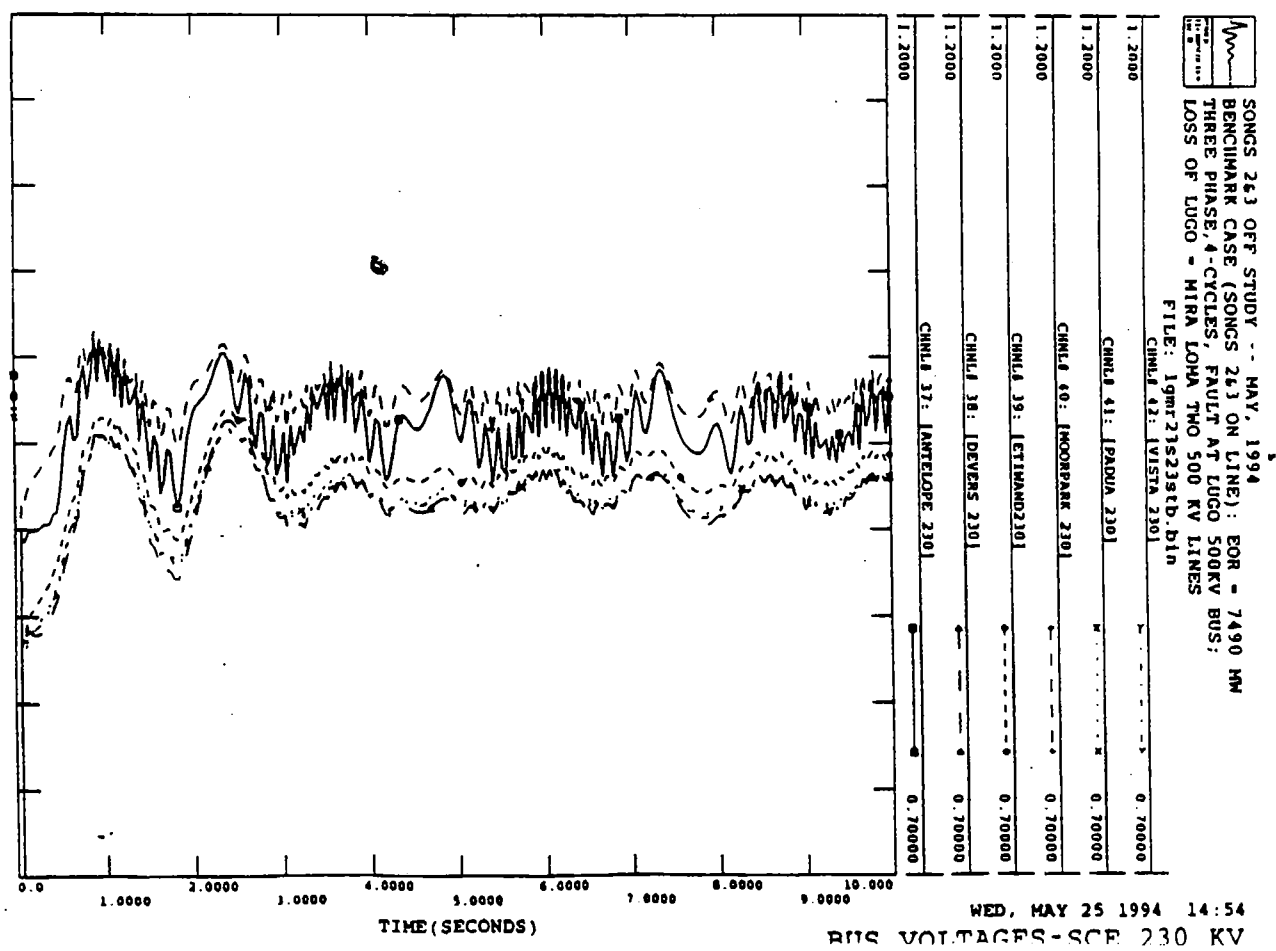
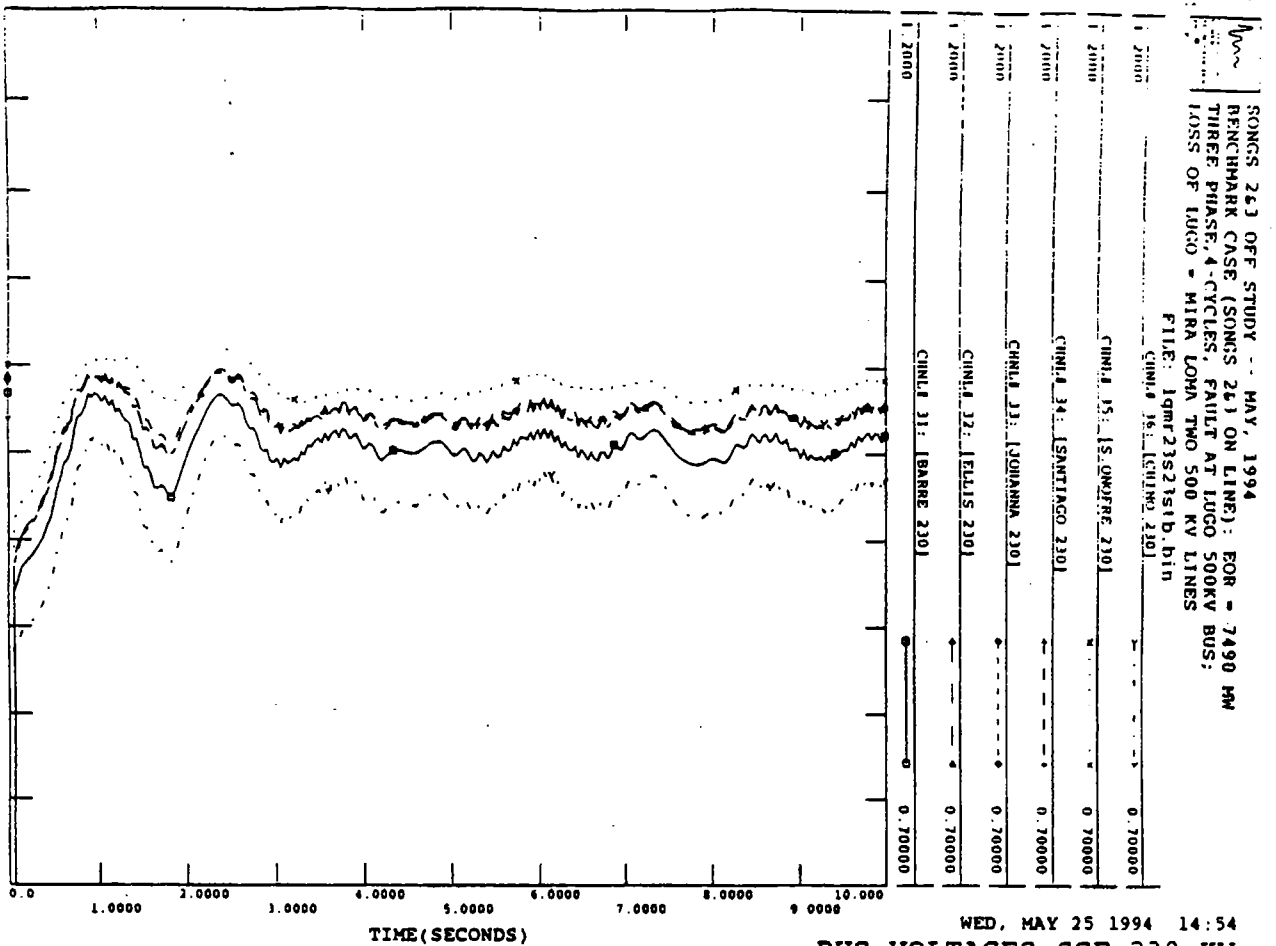
SONGS 263 OFF STUDY -- MAY, 1994
BENCHMARK CASE (SONGS 263 ON LINE): FOR = 7490 MW
THREE PHASE, 4-CYCLES, FAULT AT PALO VRD 500KV BUS;
LOSS OF PALO VERDE - REVERS 500KV LINE
FILE: pduv231sb.bin



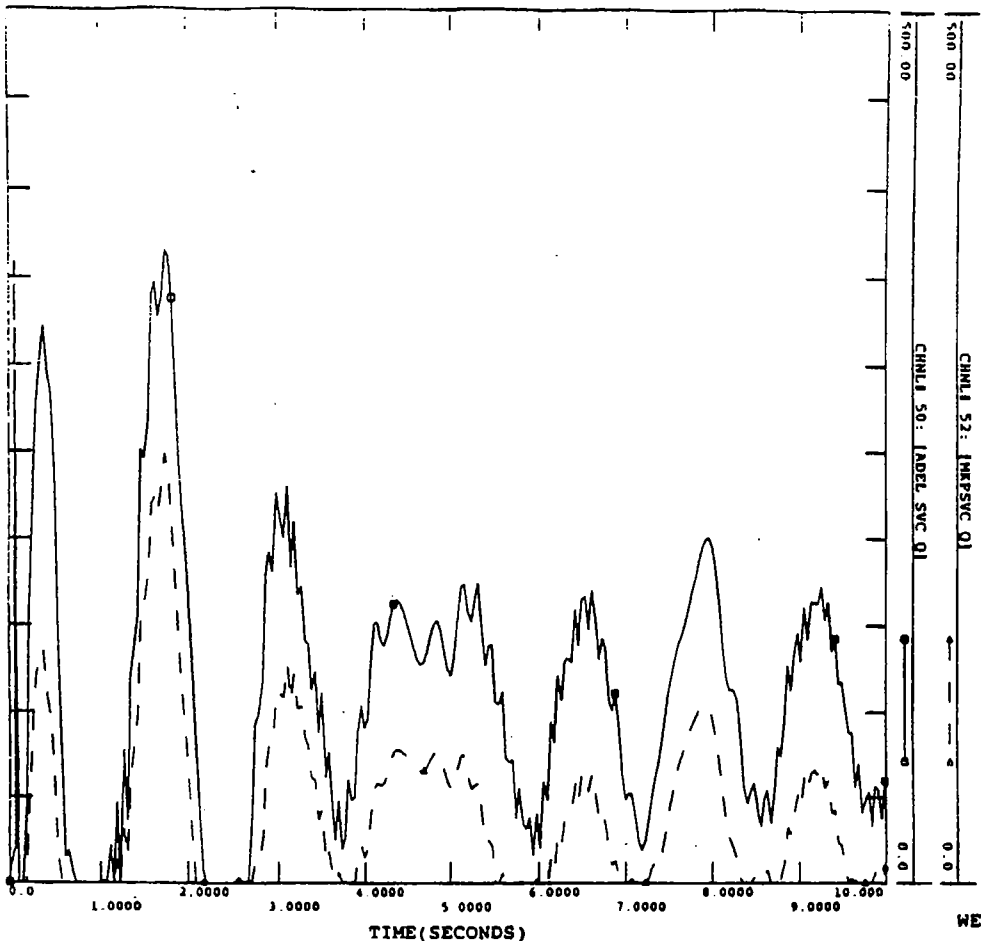
WED, MAY 25 1994 14:51
SVC IN LADWP

6





SONGS 263 OFF STUDY -- MAY, 1994
 BENCHMARK CASE (SONGS 263) ON LINE: BOR = 7490 MW
 THREE PHASE, 4-CYCLES, FAULT AT LUGO 500KV BUS:
 LOSS OF LUGO - MIRA LOMA TWO 500 KV LINES
 FILE: 19mr23s23std.bin



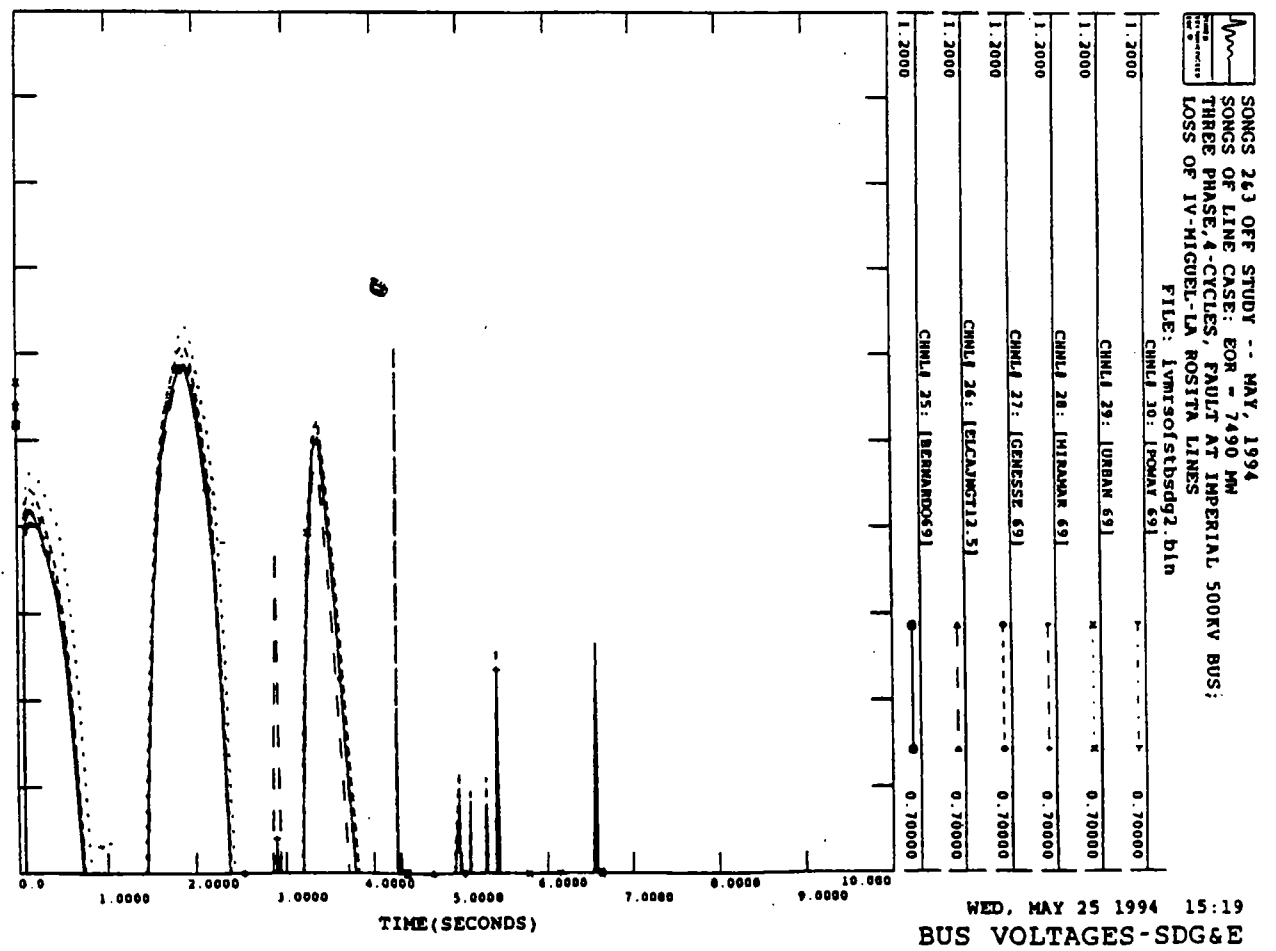
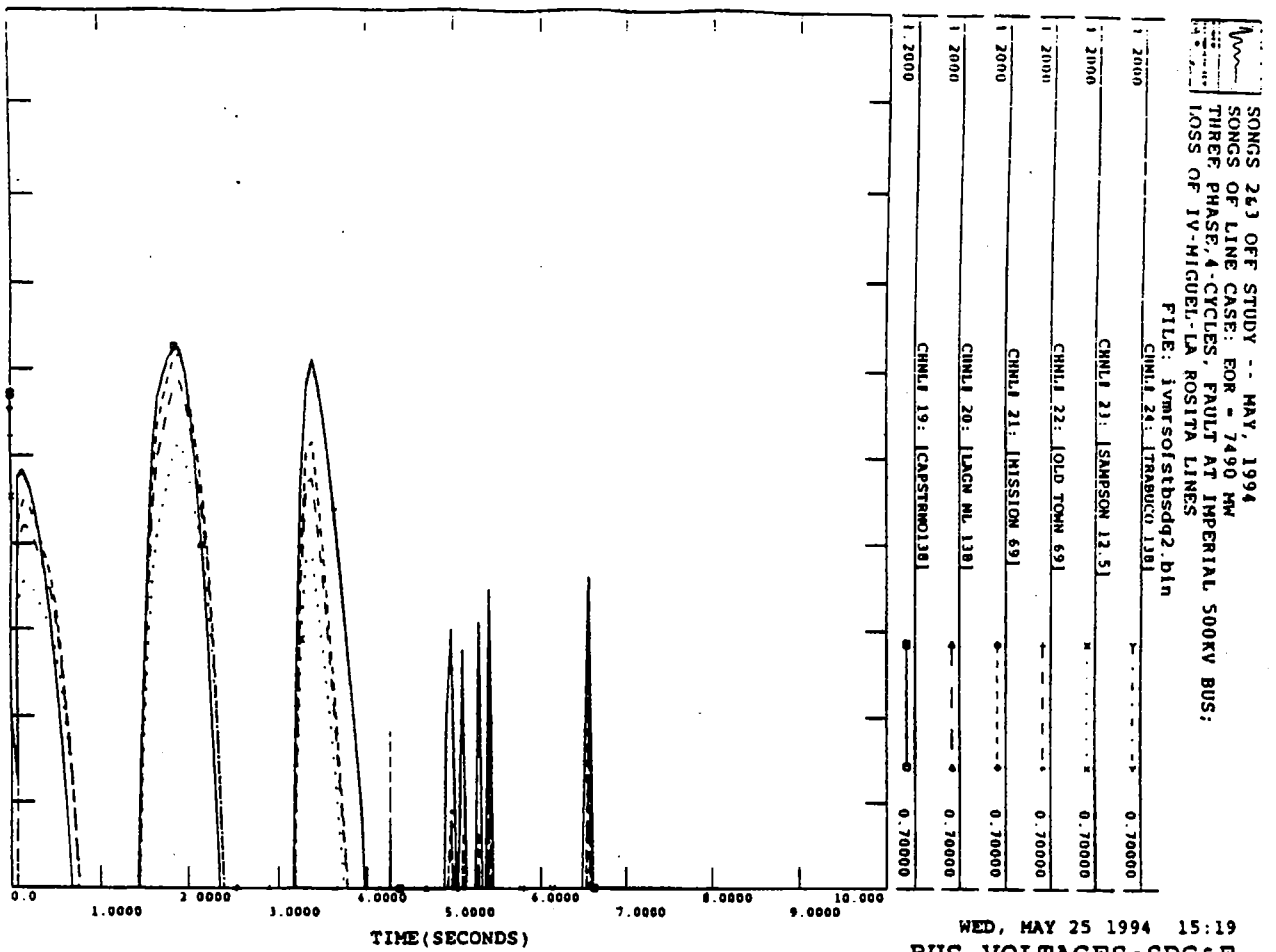
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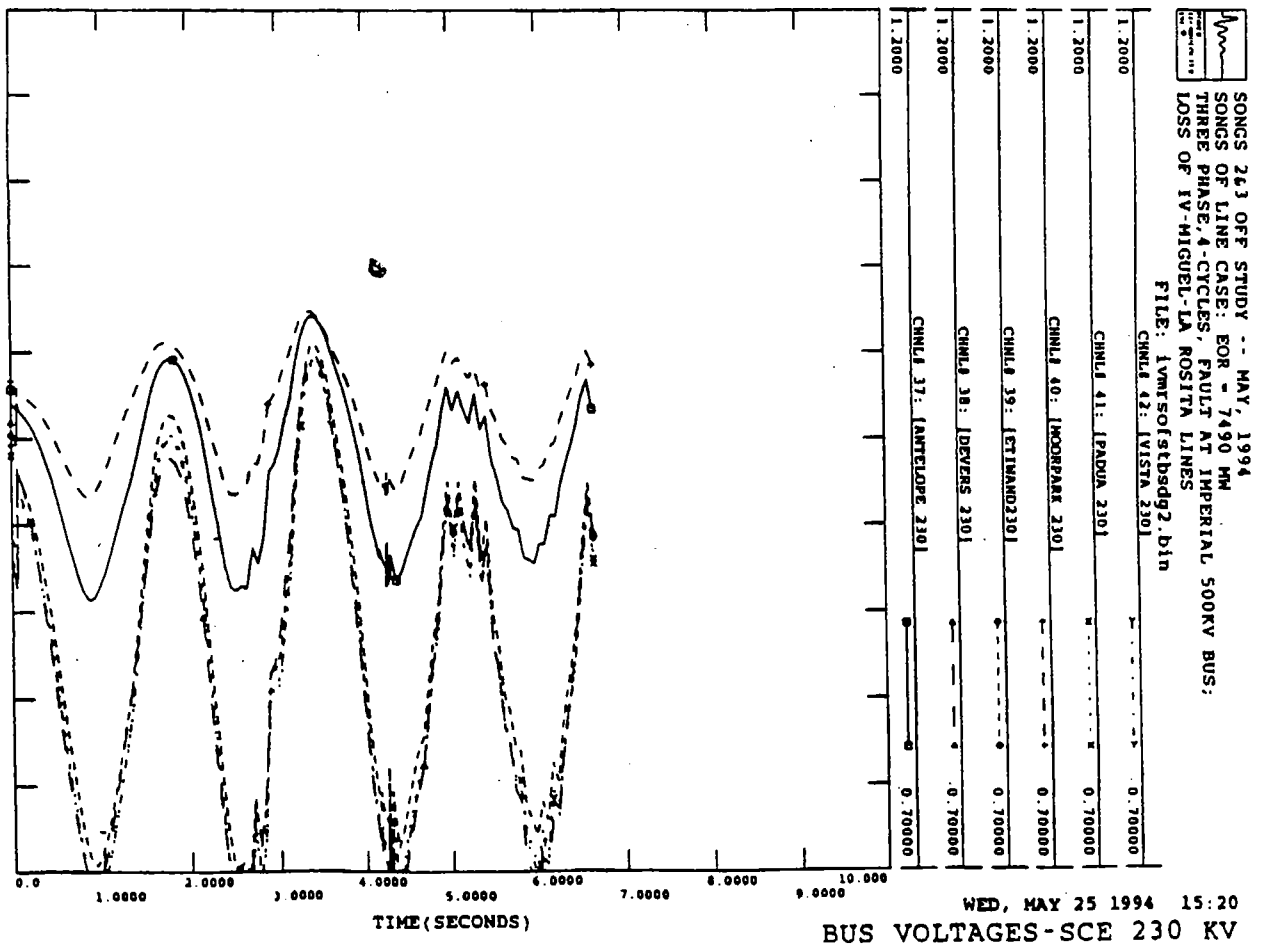
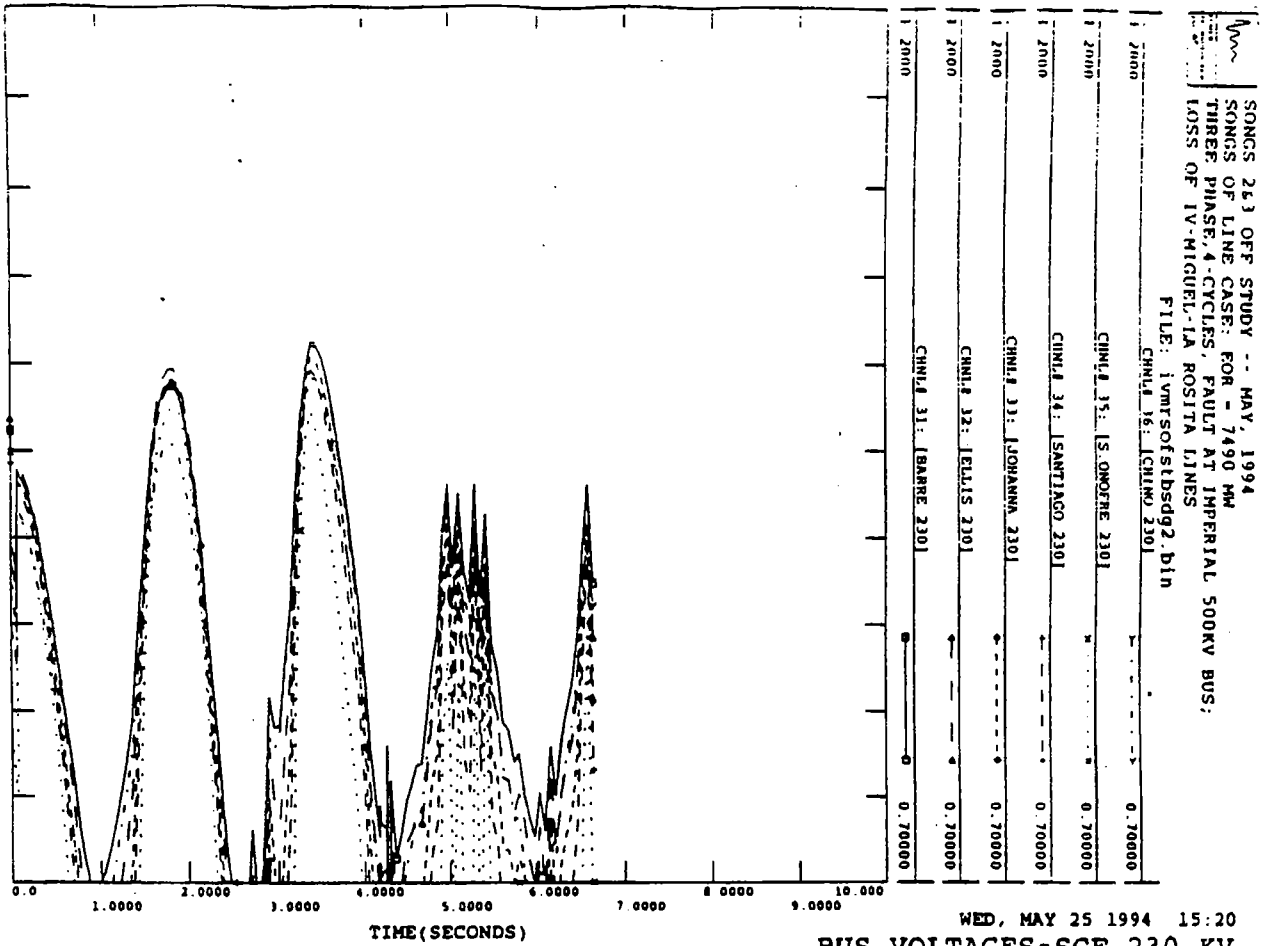
STABILITY PLOTS

SONGS 2&3 OFF LINE CASE:

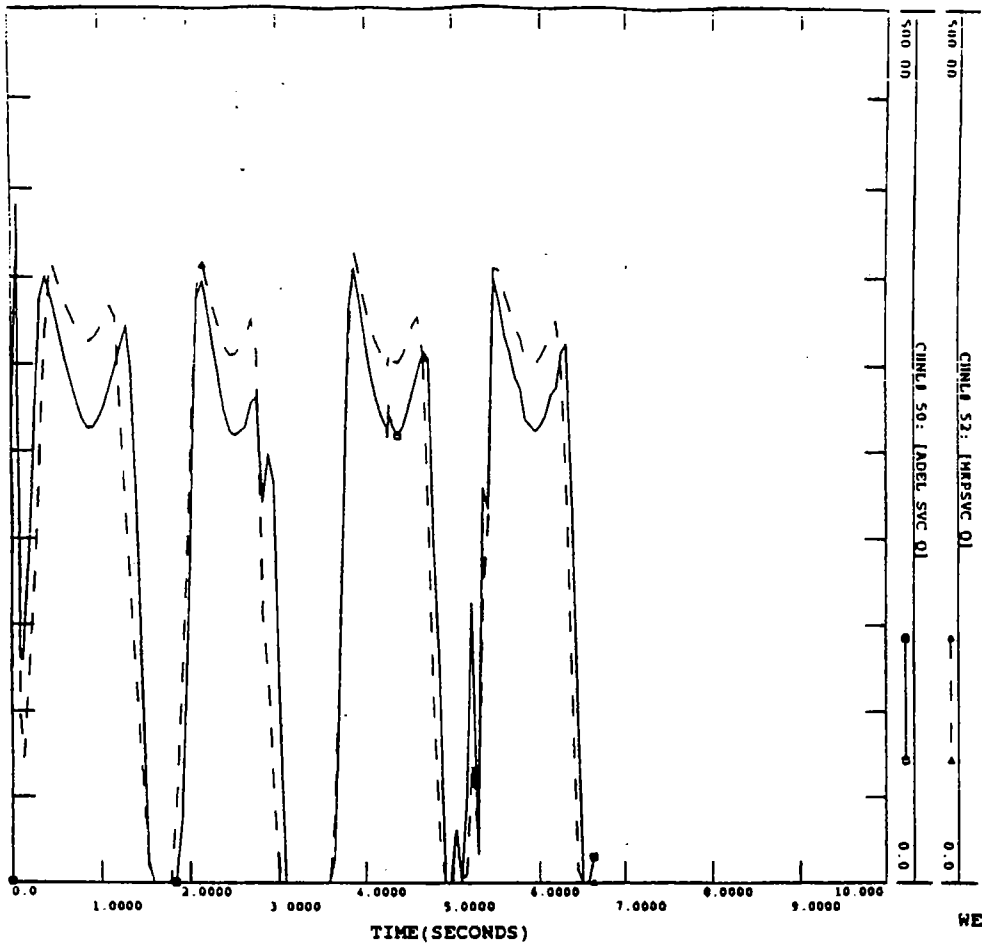
(EOR = 7490 MW)

Page 13 — Page 15	IV - Miguel - Rosita	N-1
Page 16 — Page 18	Palo Verde - N. Gila	N-1
Page 19 — Page 21	Palo Verde - Devers	N-1
Page 22 — Page 24	Lugo - Mira Loma	N-2



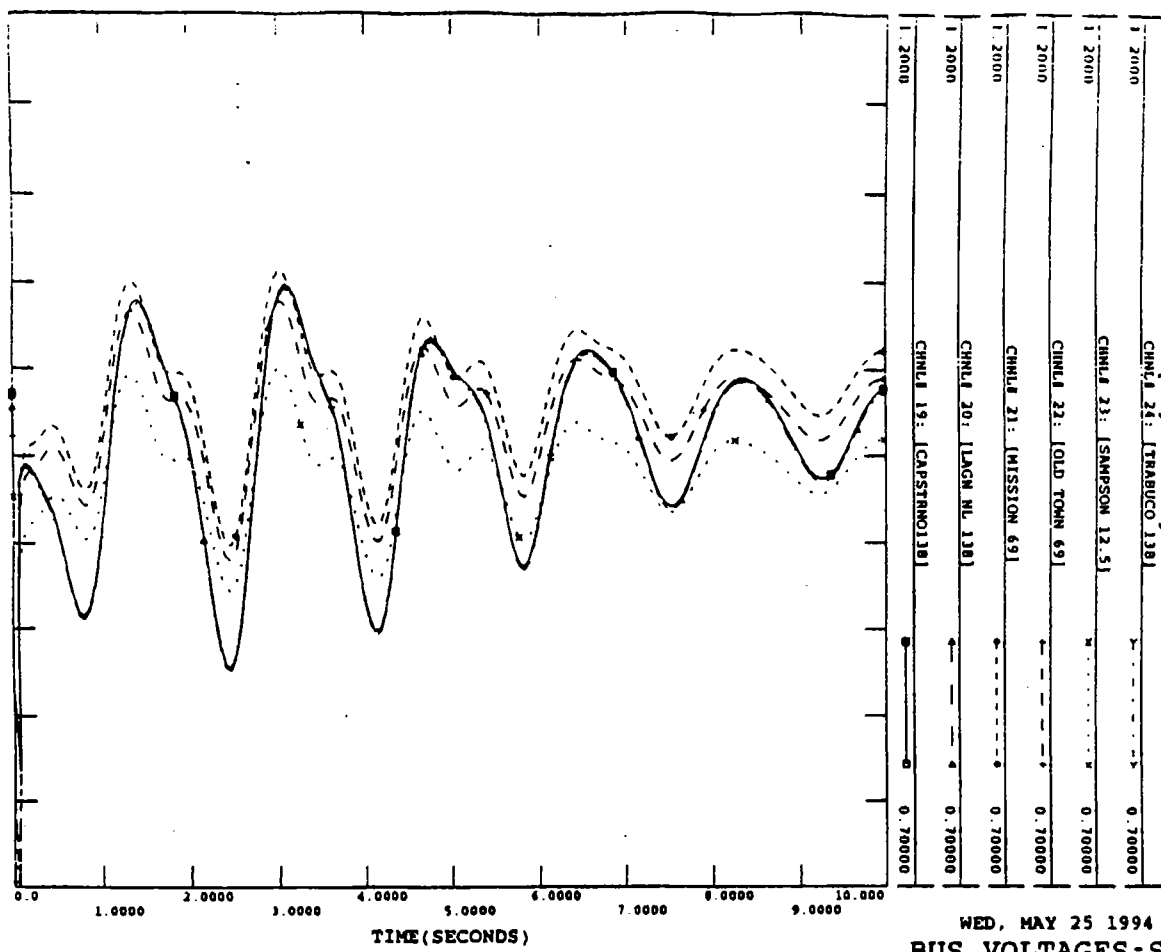


SONGS 243 OFF STUDY -- MAY, 1994
SONGS OF LINE CASE: FOR - 7490 MW
THREE PHASE, 4-CYCLES, FAULT AT IMPERIAL 500KV BUS:
LOSS OF IV-MIGUEL-LA ROSITA LINES
FILE: lvmsoftsbtdg2.bin



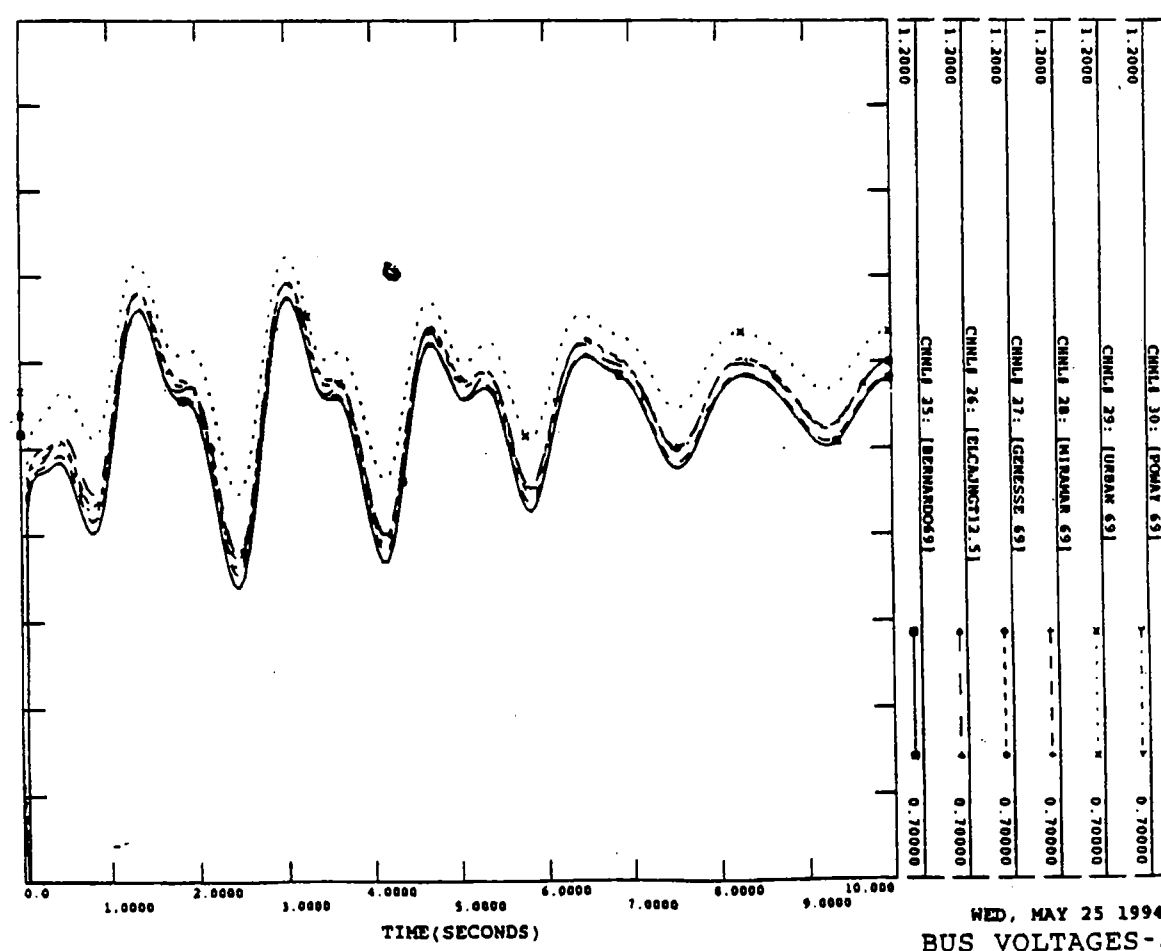
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SVC IN LADWP

SONGS 2&3 OFF STUDY -- MAY, 1994
 SONGS OF LINE CASE: FOR - 7490 MW
 THREE PHASE, 4-CYCLES, FAULT AT PALO VRD 500KV BUS;
 LOSS OF PALO VERDE - N.GILA 500 KV LINE
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 CHNL 24: [TRABUCO 138]

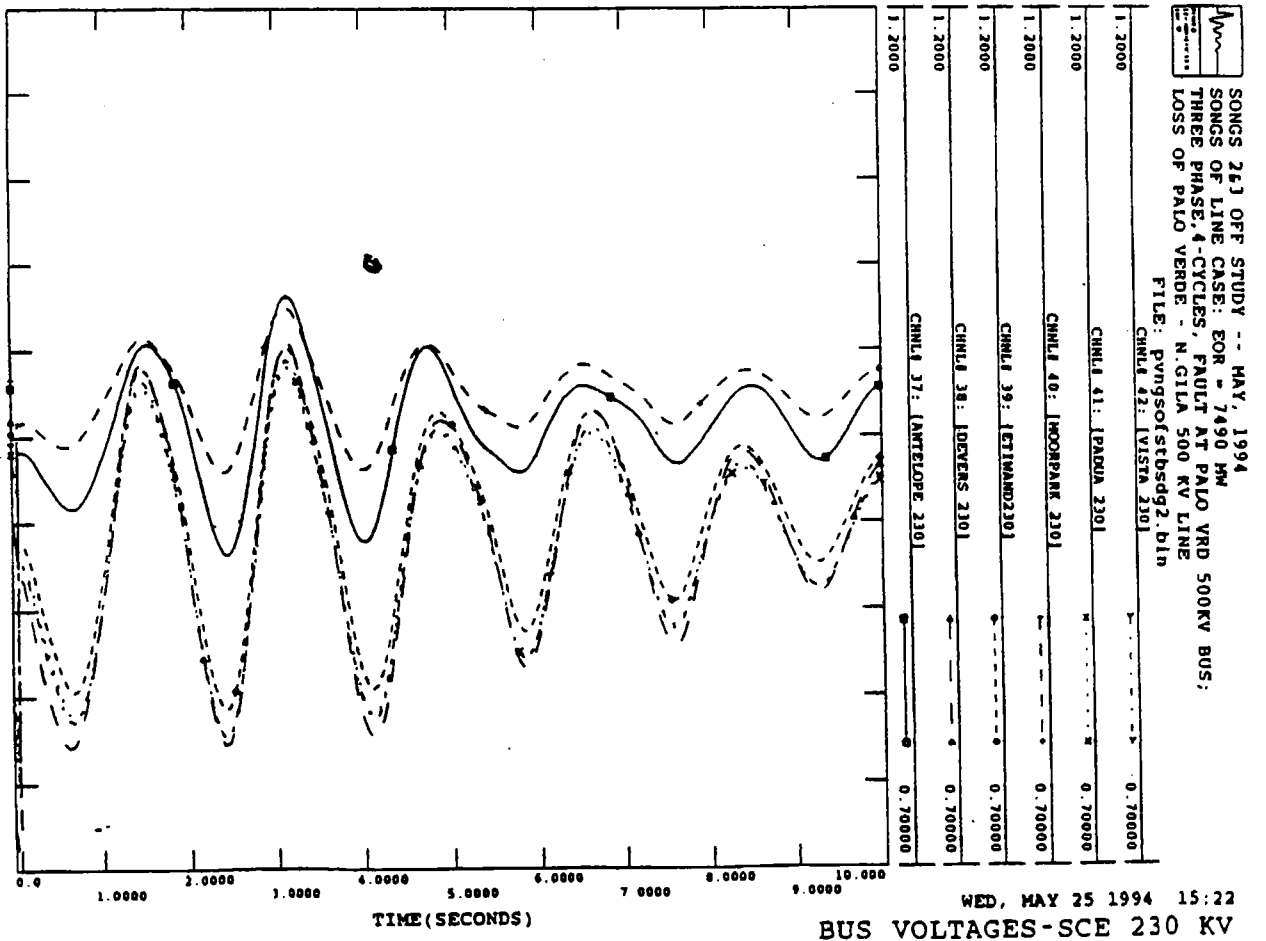
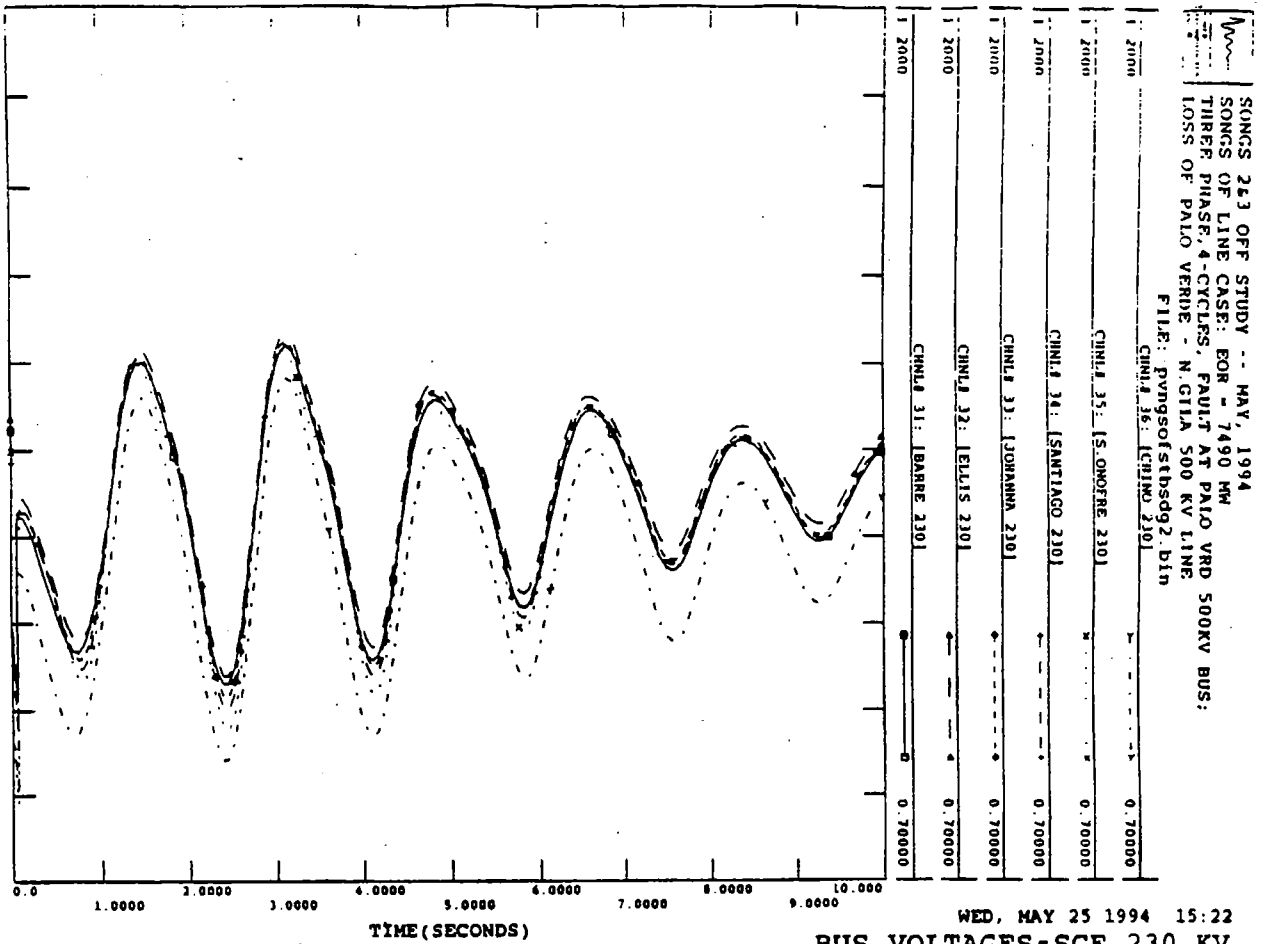


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 BUS VOLTAGES - SDG&E

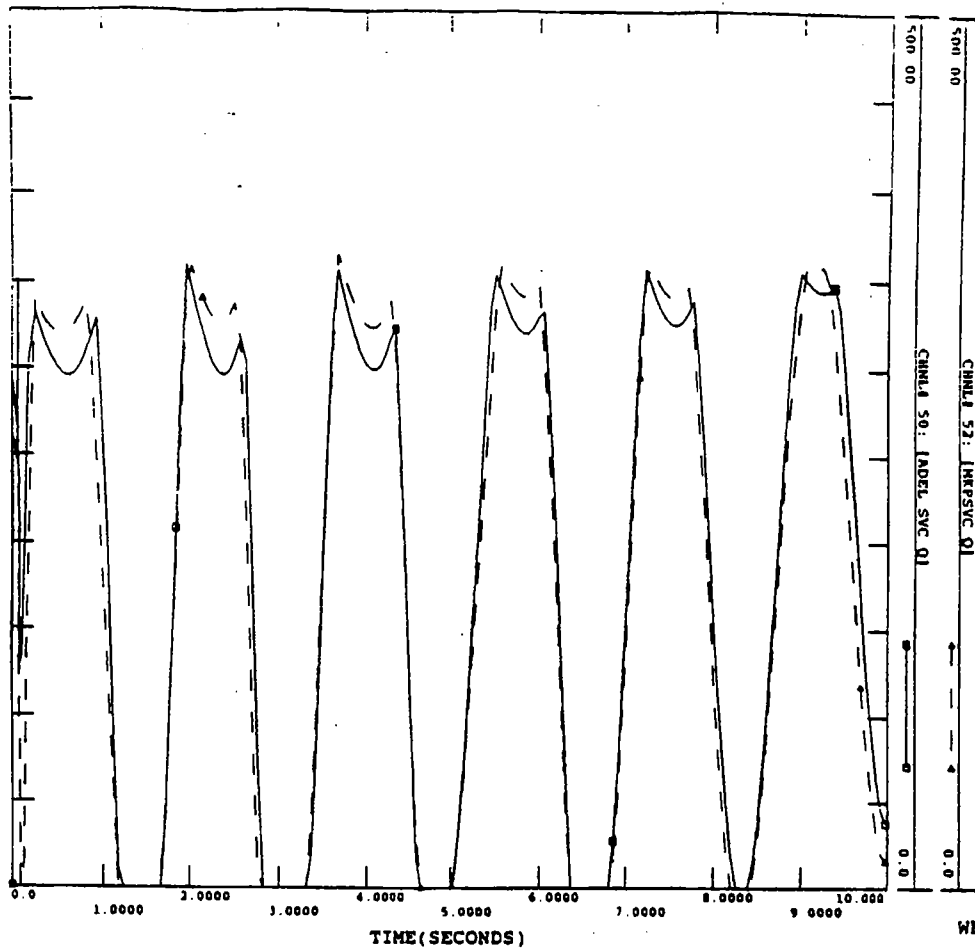
SONGS 2&3 OFF STUDY -- MAY, 1994
 SONGS OF LINE CASE: FOR - 7490 MW
 THREE PHASE, 4-CYCLES, FAULT AT PALO VRD 500KV BUS;
 LOSS OF PALO VERDE - N.GILA 500 KV LINE
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 CHNL 29: [URBAN 69]



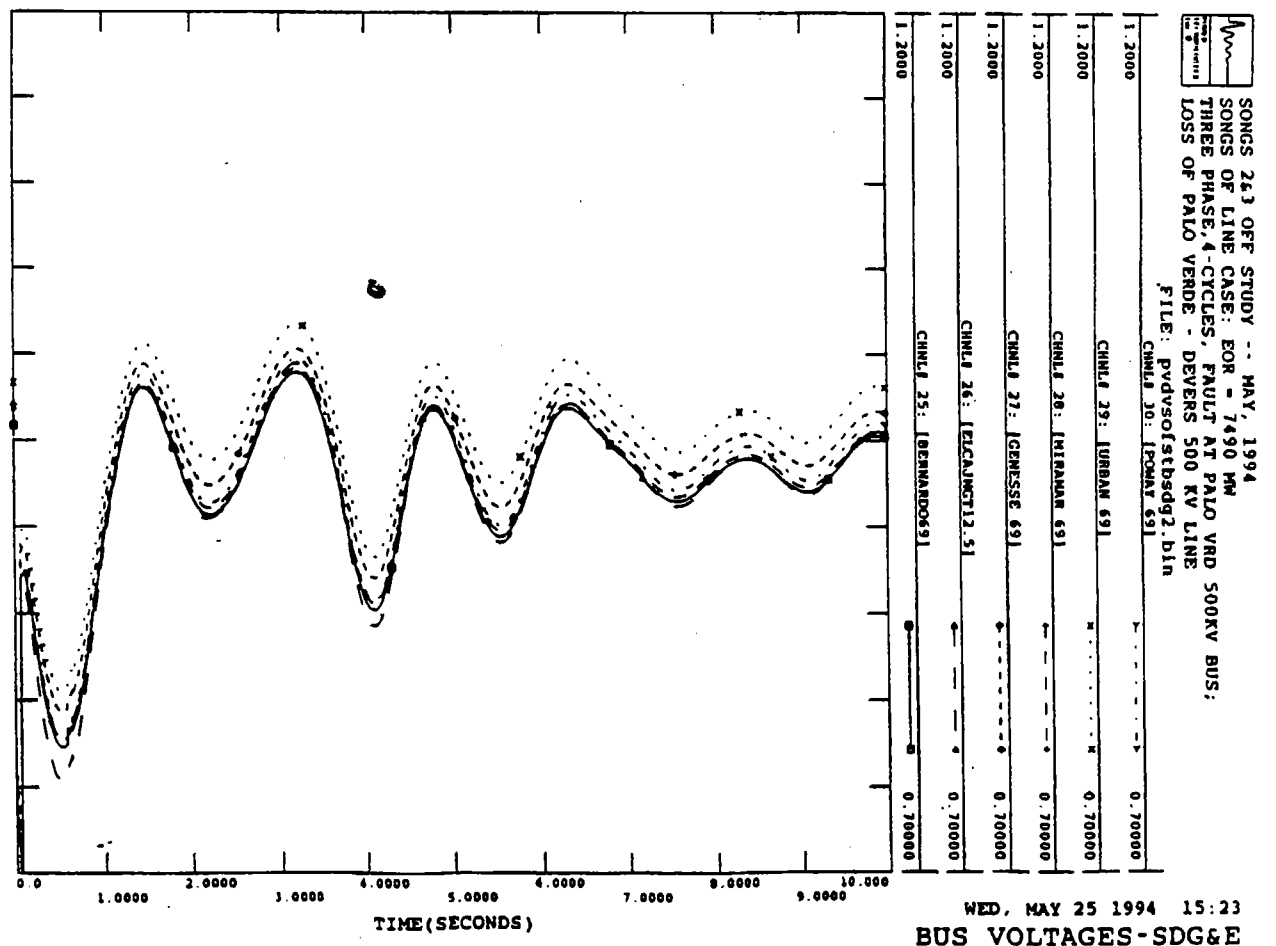
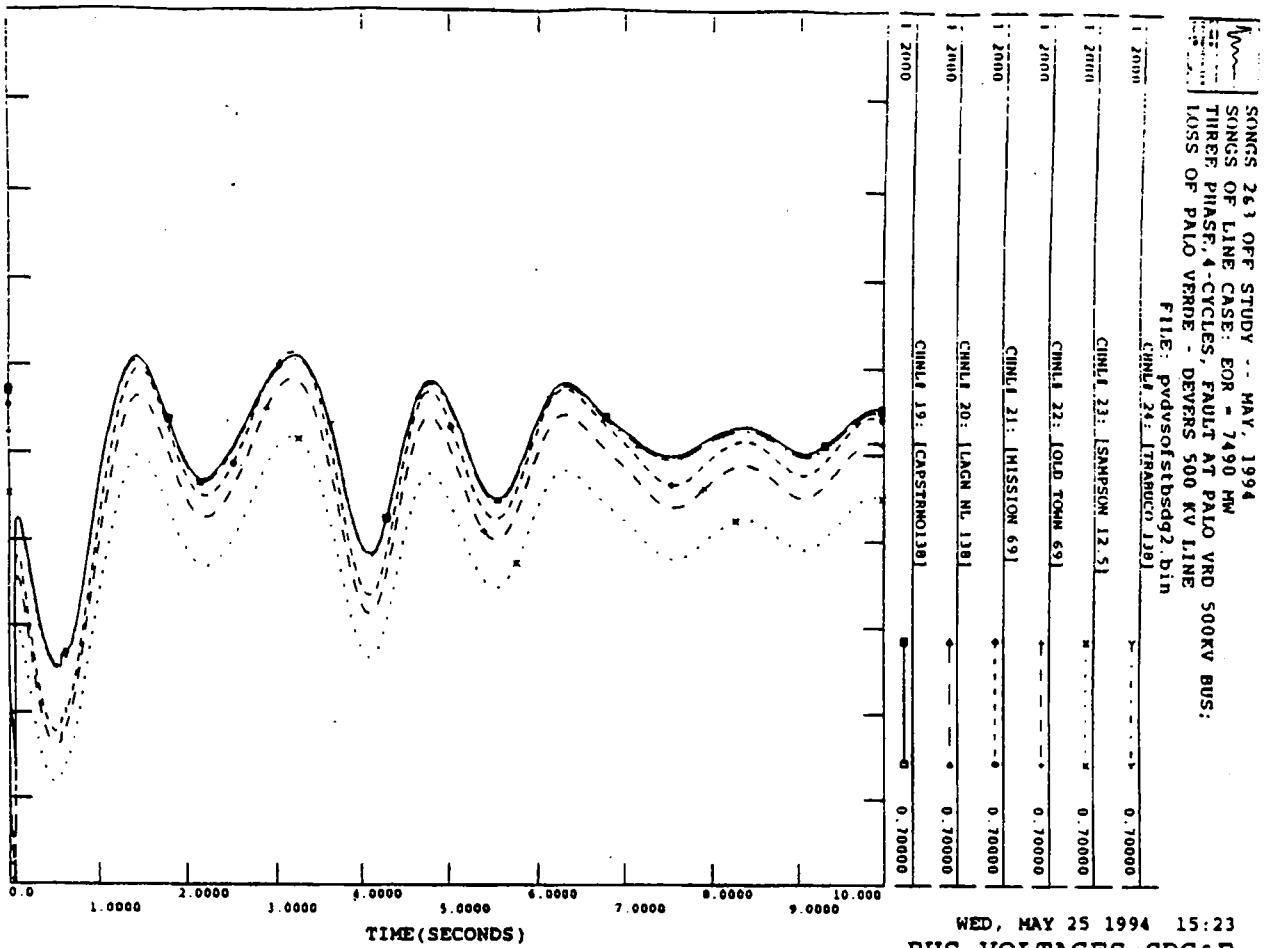
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 BUS VOLTAGES - SDG&E

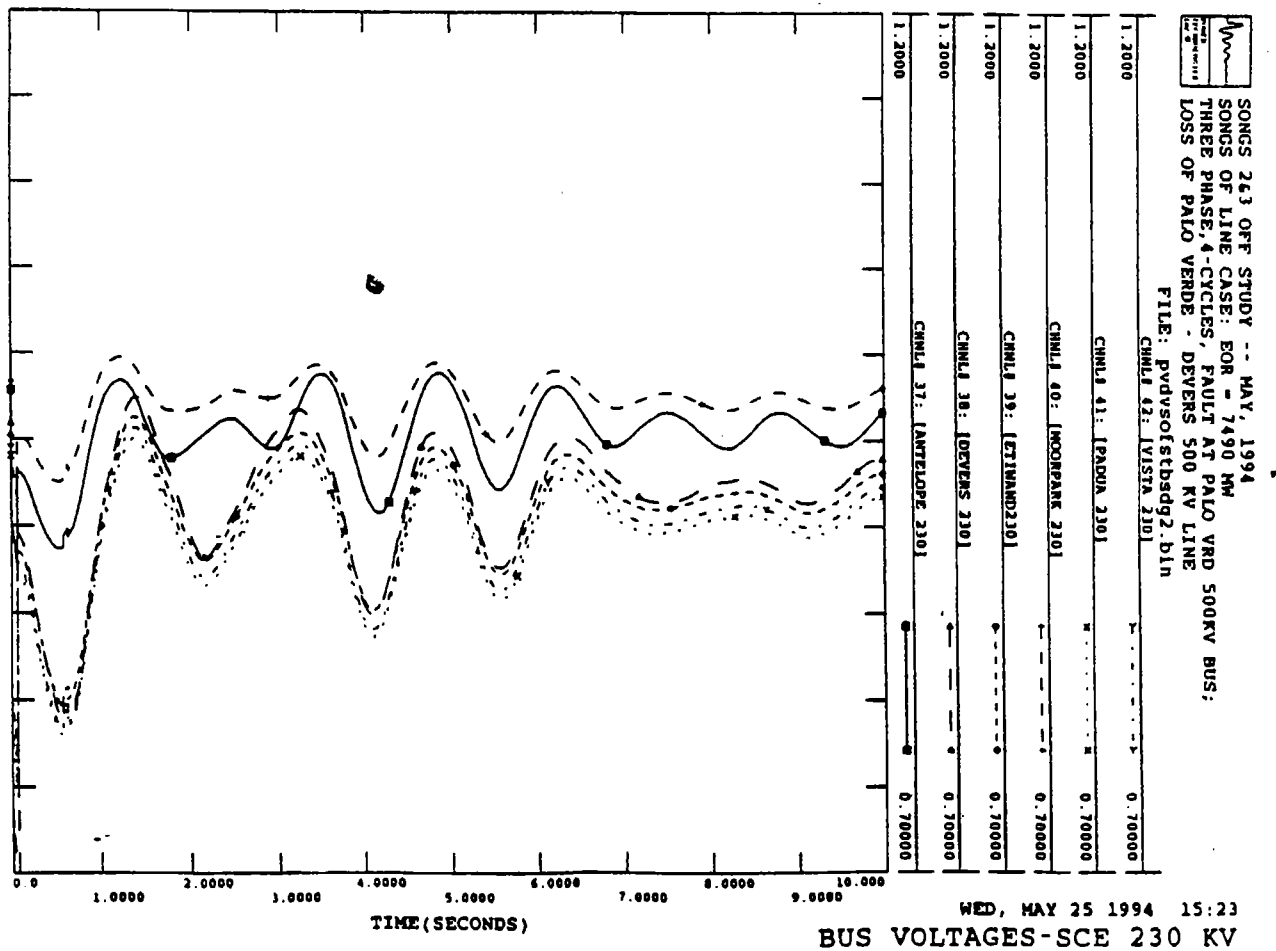
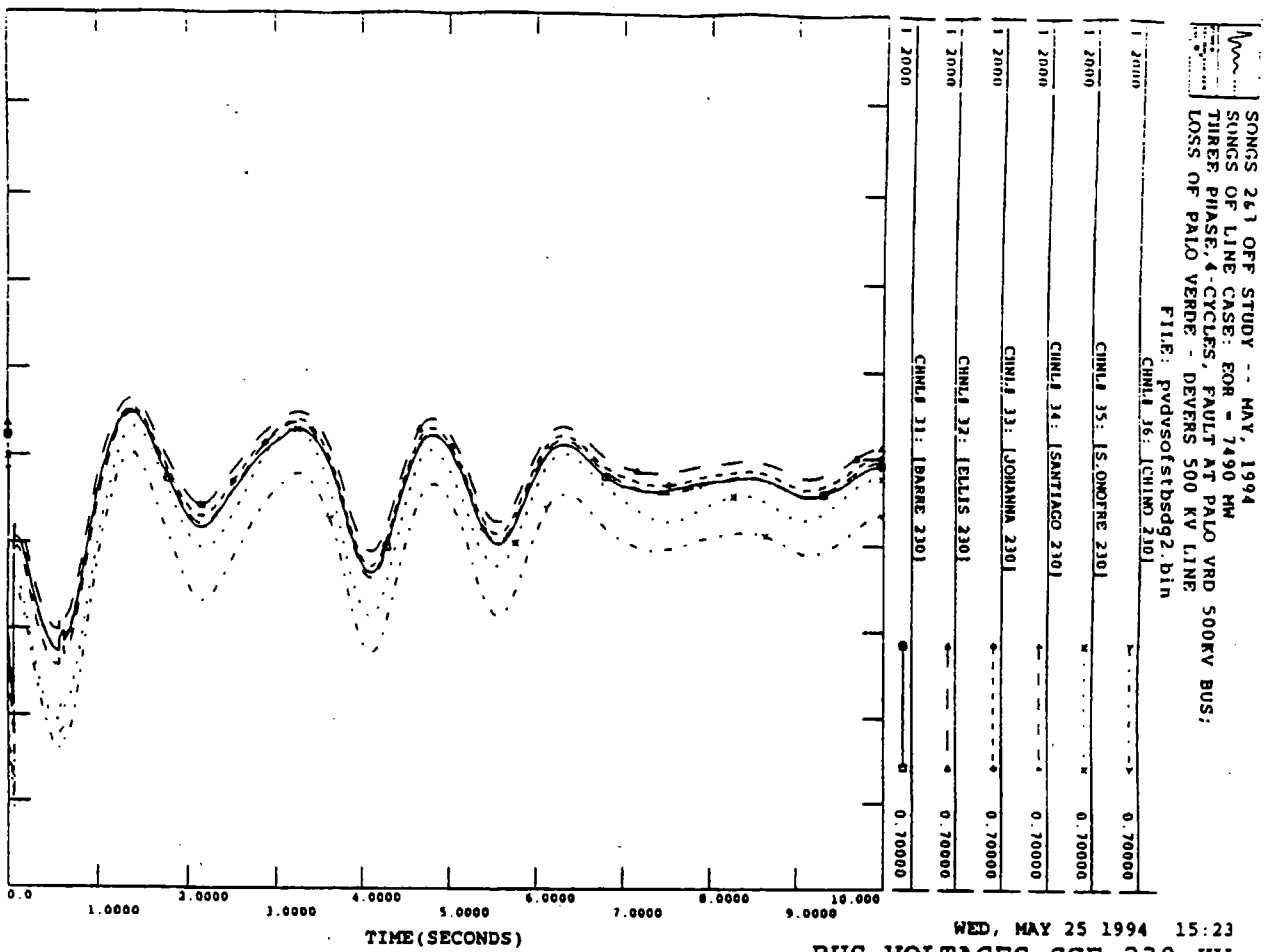


SONGS 263 OFF STUDY -- MAY, 1994
THREE PHASE 4-CYCLES; FAULT AT PALO VERDE 500KV BUS;
LOSS OF PALO VERDE - N. GILA 500 KV LINE
FILE: pvnsfstbdsdg2.bin

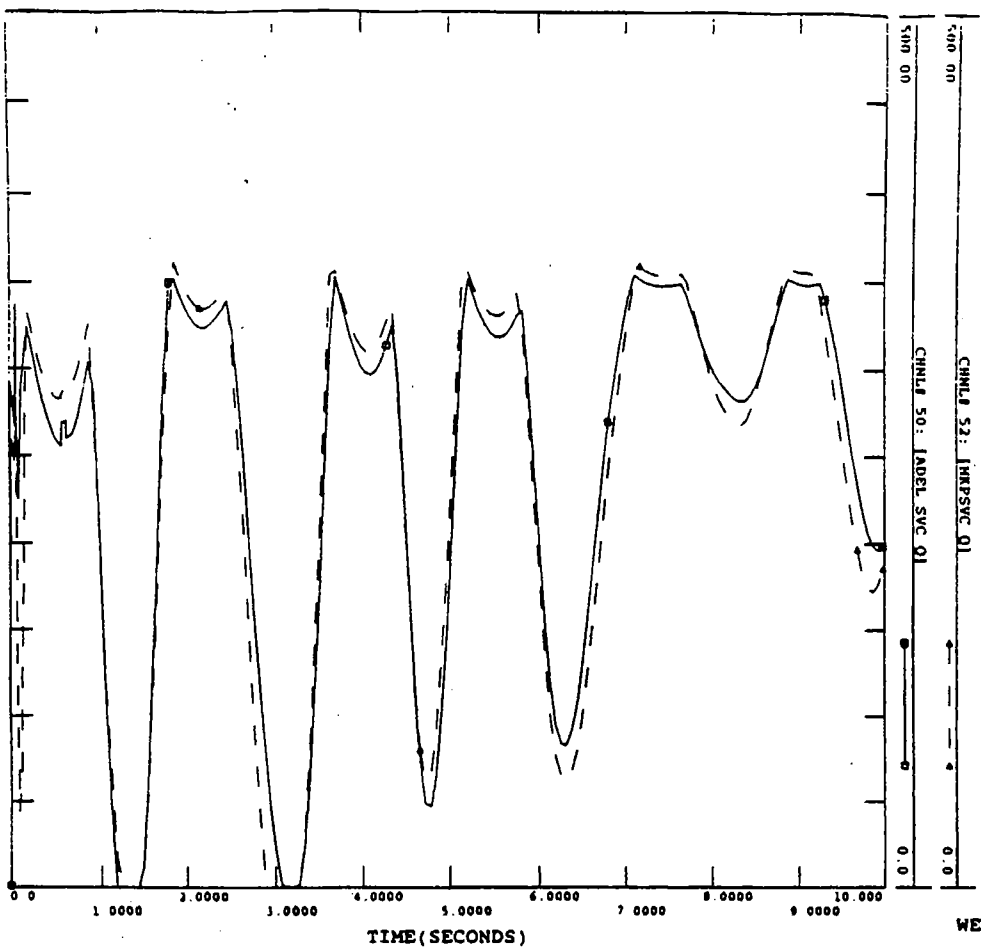


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SVC IN LADWP

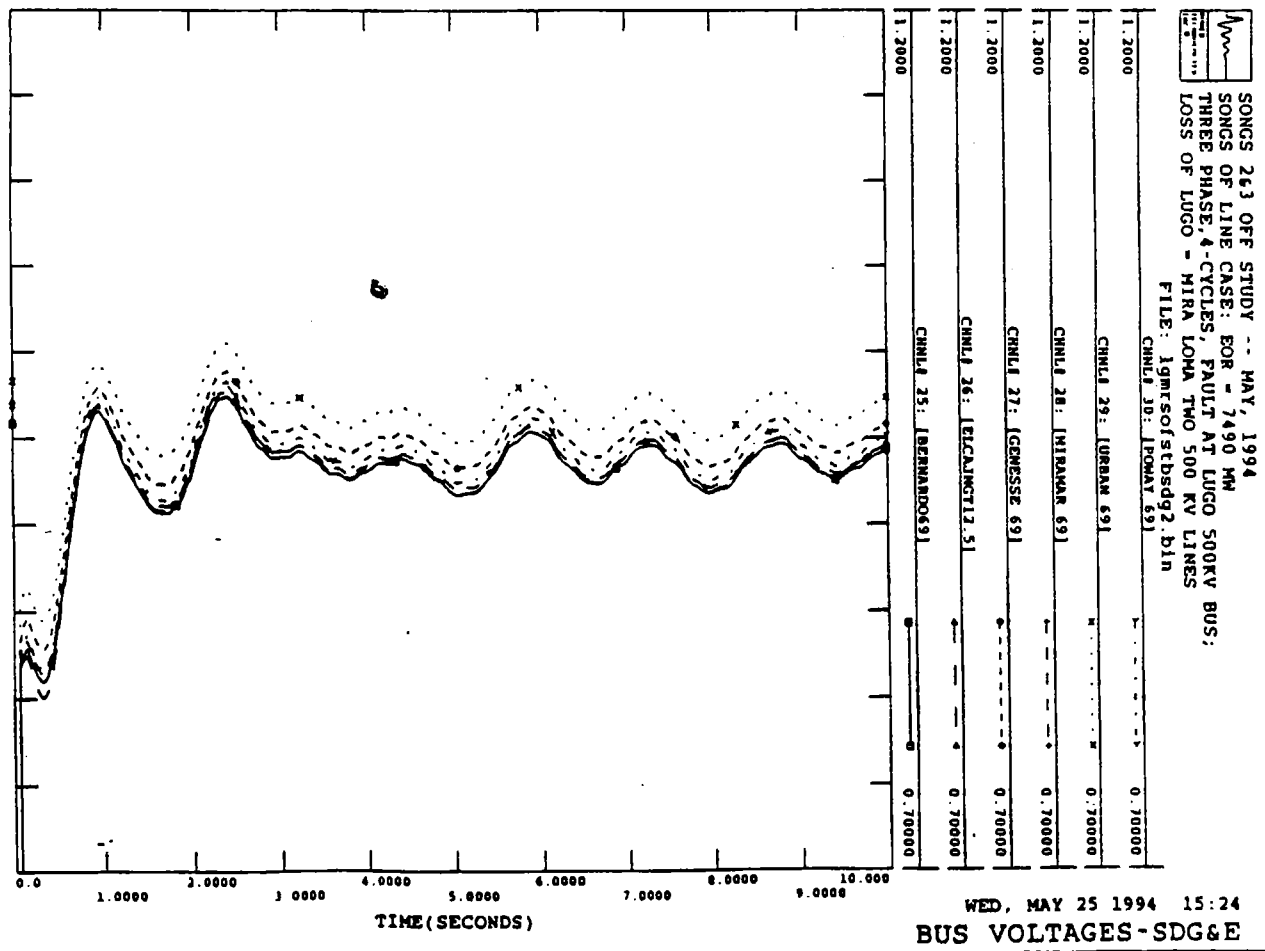
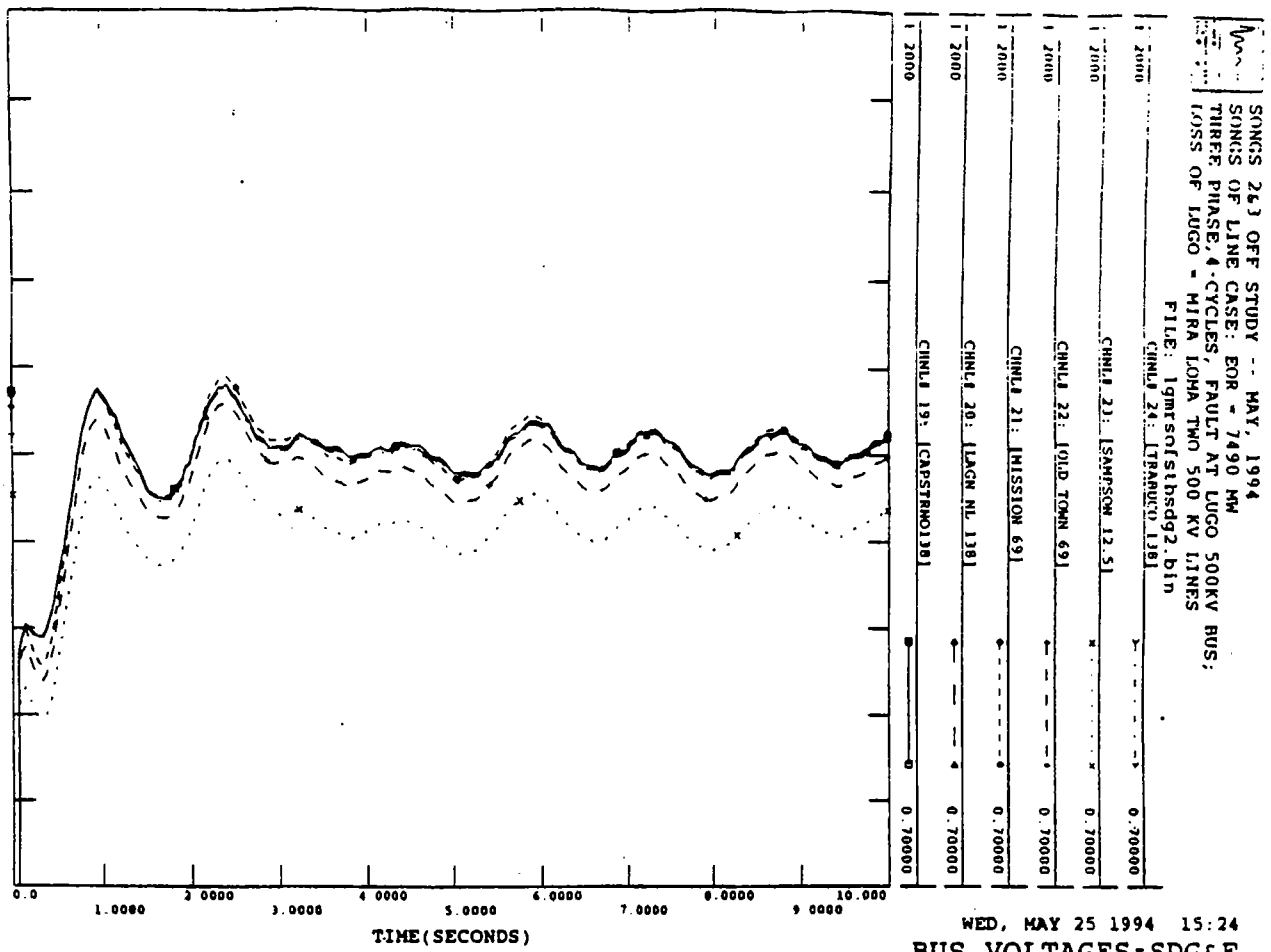




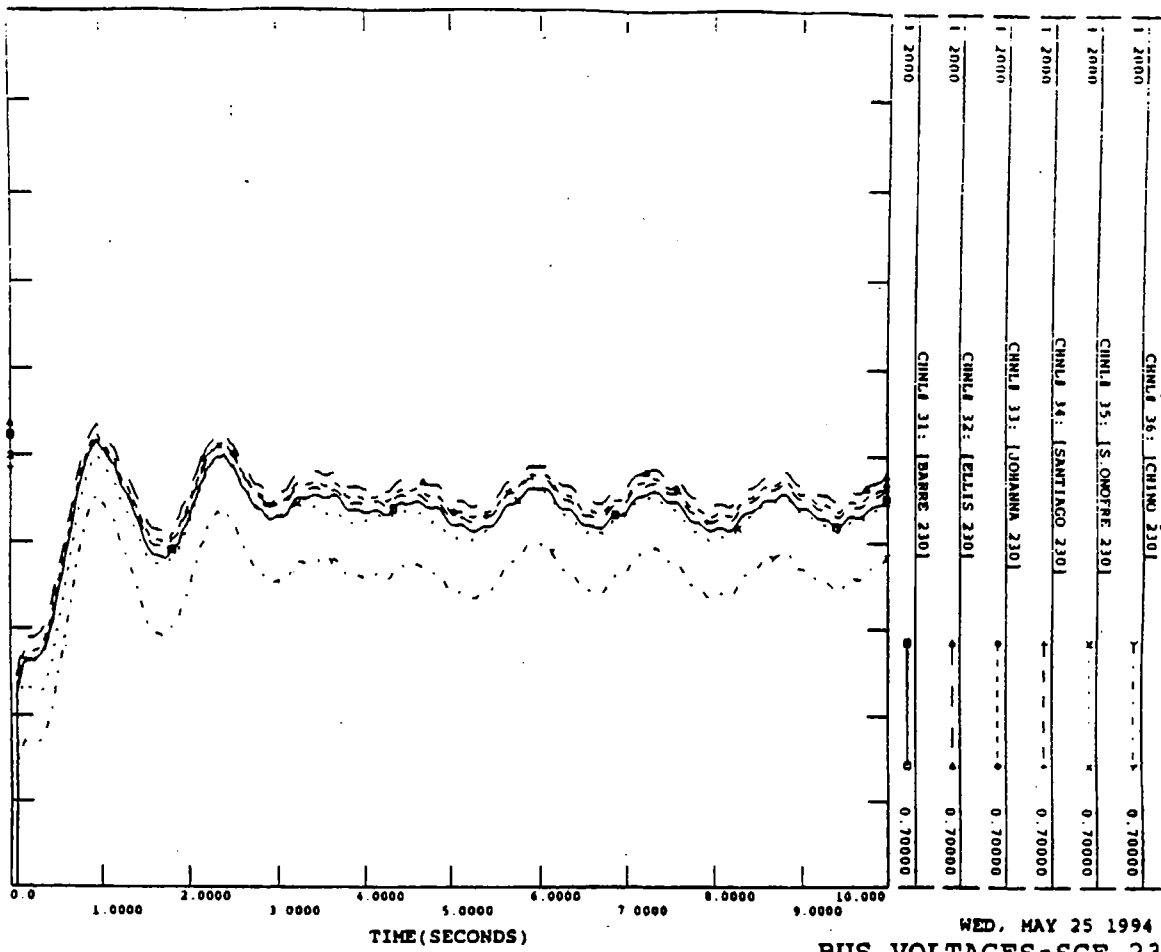
SONGS 2.1 OFF STUDY -- MAY, 1994
 THREE OF LINE CASE: BOR - 7490 HM
 THREE PHASE, 4-CYCLES, FAULT AT PALO VRD 500KV BUS;
 LOSS OF PALO VERDE - DEVERNS 500 KV LINE
 FILE: pvdvsofstbdsd92.bin



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 SVC IN LADWP

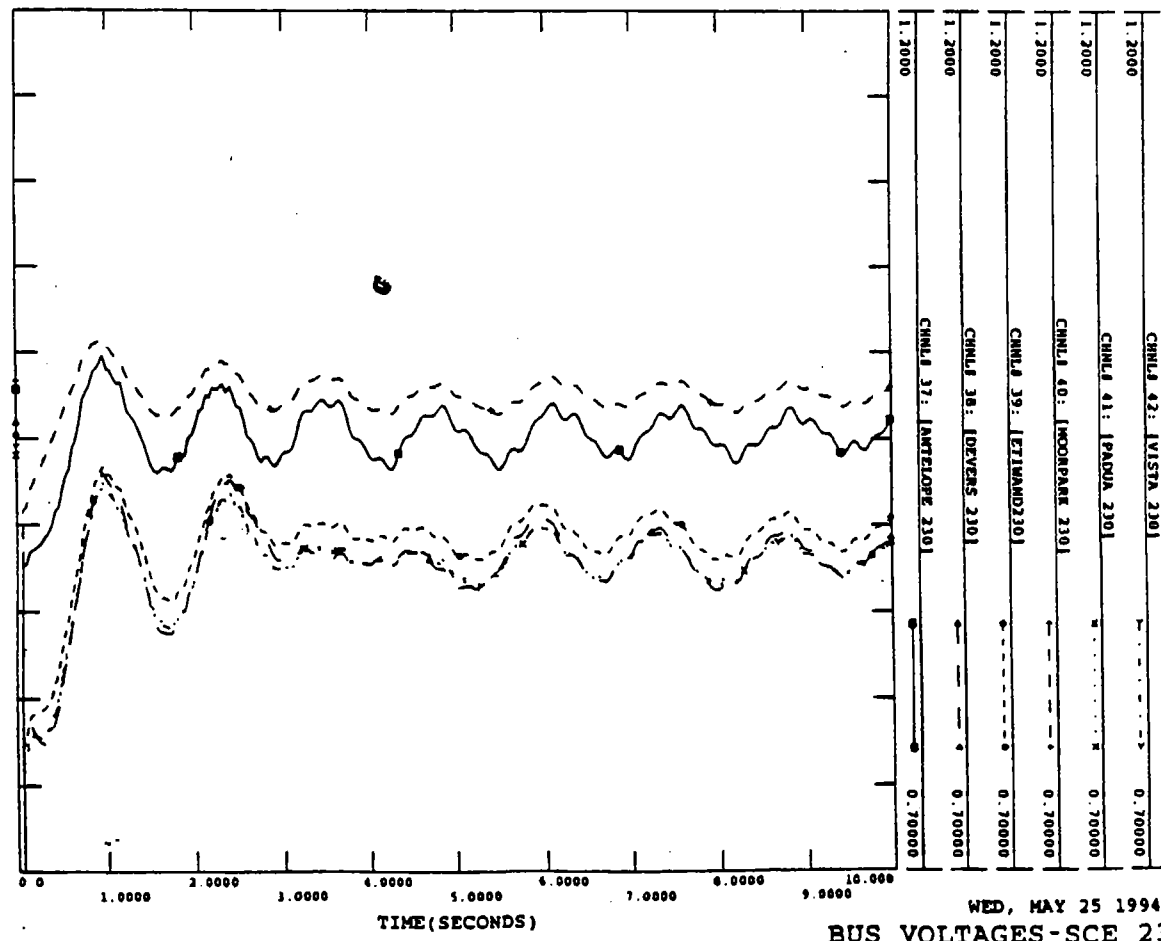


SONGS 263 OFF STUDY -- MAY, 1994
 SONGS OF LINE CASE: EOR - 7490 MW
 THREE PHASE, 4-CYCLES, FAULT AT LUGO 500KV BUS;
 LOSS OF LUGO - MIRA LOMA TWO 500 KV LINES
 FILE: 1qmrsofstbdsdg2.din



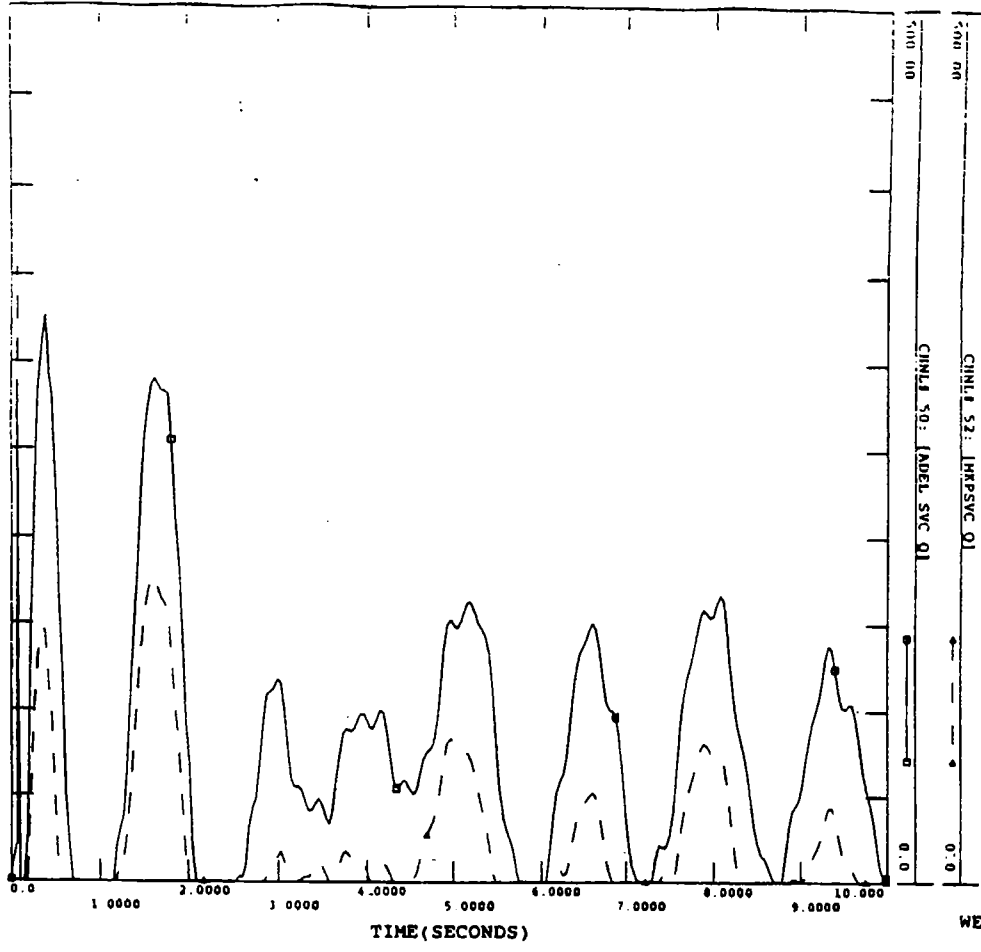
WED, MAY 25 1994 15:24
 BUS VOLTAGES - SCE 230 KV

SONGS 263 OFF STUDY -- MAY, 1994
 SONGS OF LINE CASE: EOR - 7490 MW
 THREE PHASE, 4-CYCLES, FAULT AT LUGO 500KV BUS;
 LOSS OF LUGO - MIRA LOMA TWO 500 KV LINES
 FILE: 1qmrsofstbdsdg2.din



WED, MAY 25 1994 15:24
 BUS VOLTAGES - SCE 230 KV

SONGS 26.1 OFF STUDY -- MAY, 1994
SONGS OF LINE CASE: FOR - 7490 MW
THREE PHASE, 4-CYCLES, FAULT AT LUGO 500KV BUS;
LOSS OF LUGO - MIRA LOMA TWO 500 KV LINES
FILE: 1qmrsofstbsdq2.bin



WED, MAY 25 1994 15:24
SVC IN LADWP

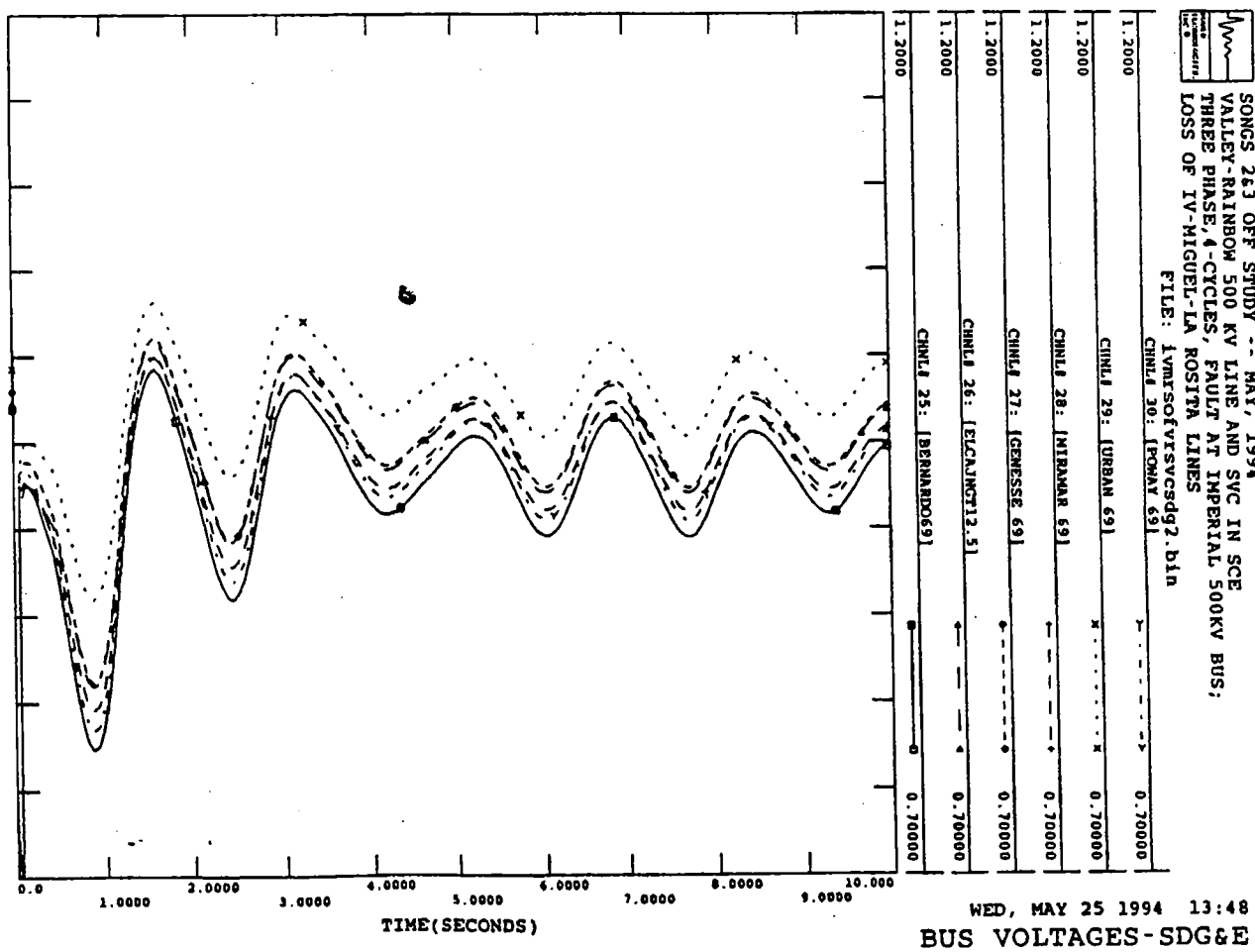
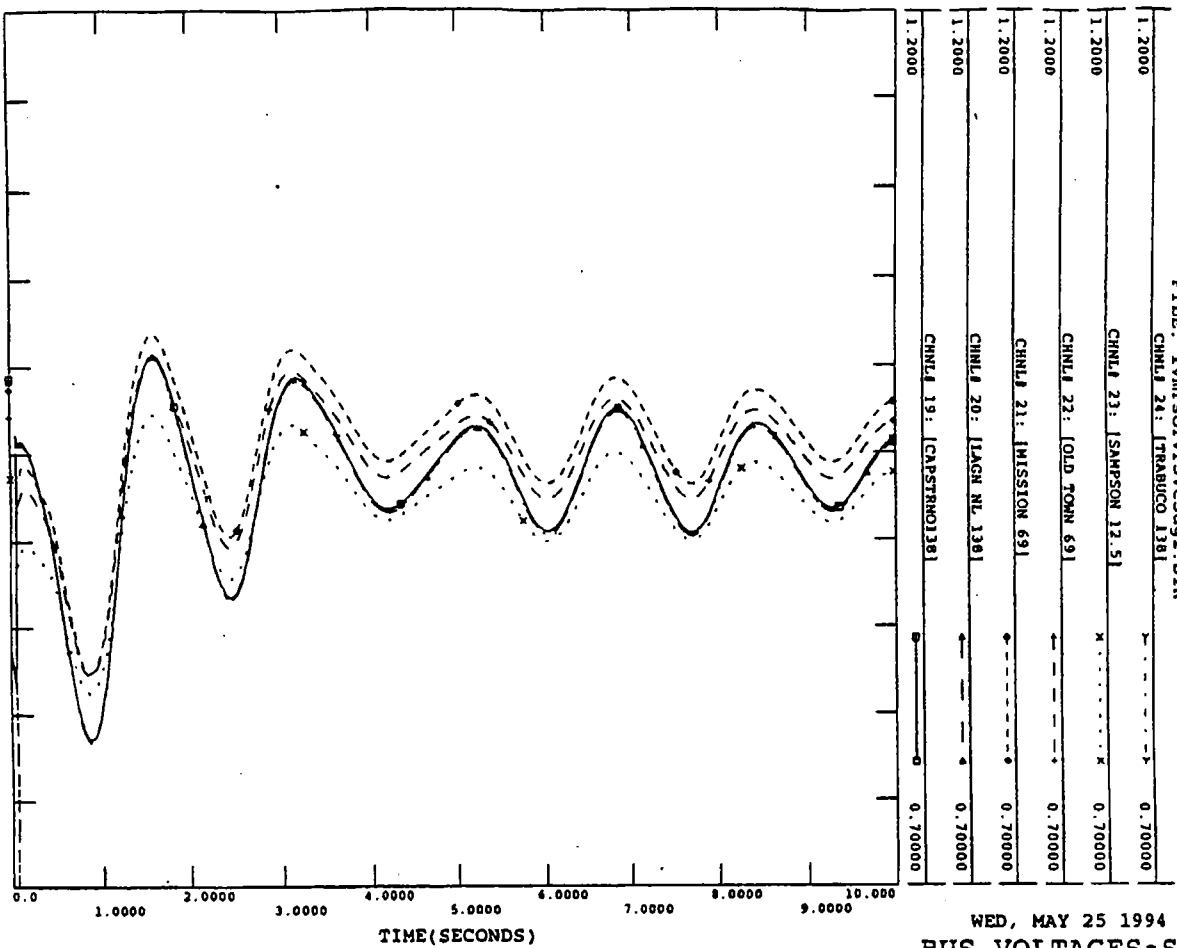
STABILITY PLOTS

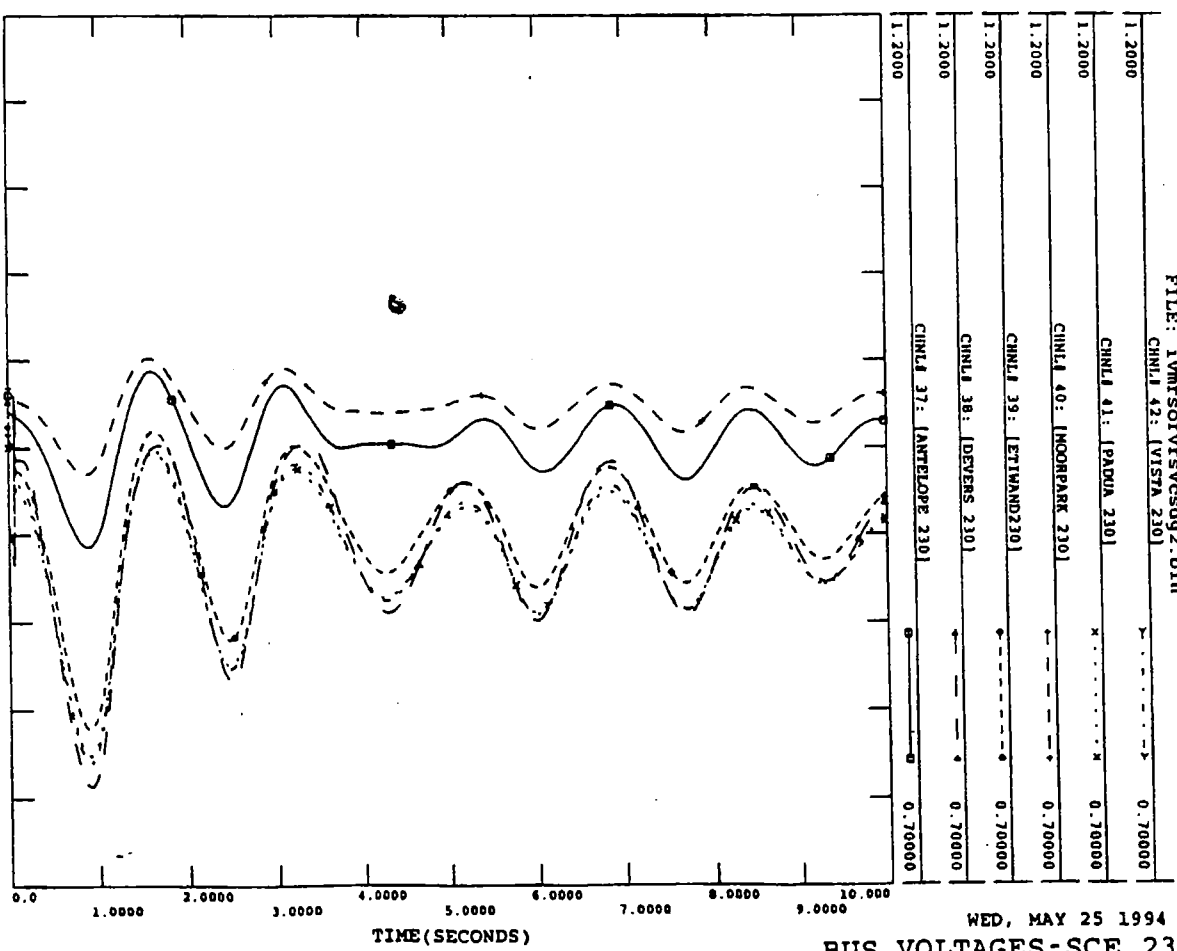
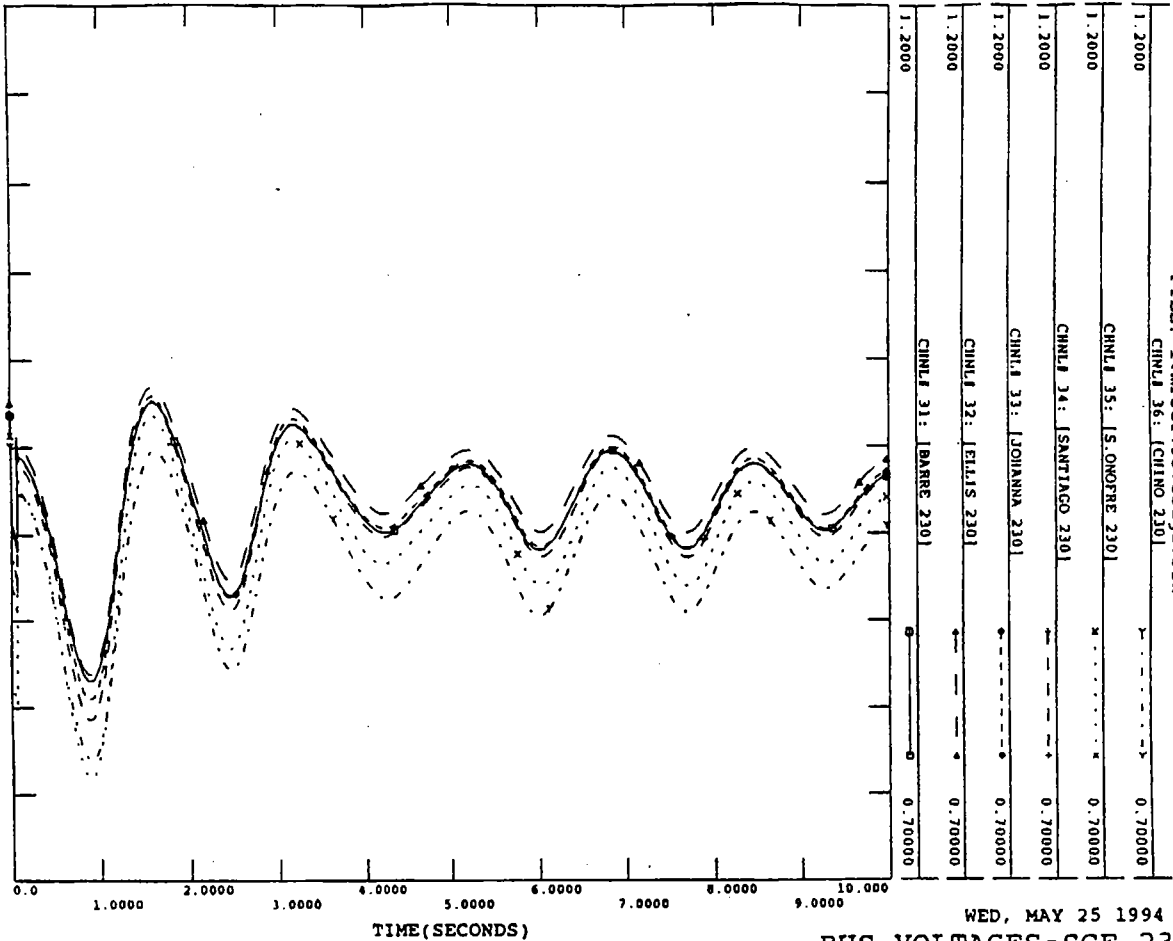
SONGS 2&3 OFF LINE CASE:

ADD A NEW INTERTIE BETWEEN SCE AND SDG&E:
27 Milles Valley - Rainbow 500 kV Line

ADD SVC IN SCE : 250 MVAR at Devers 230

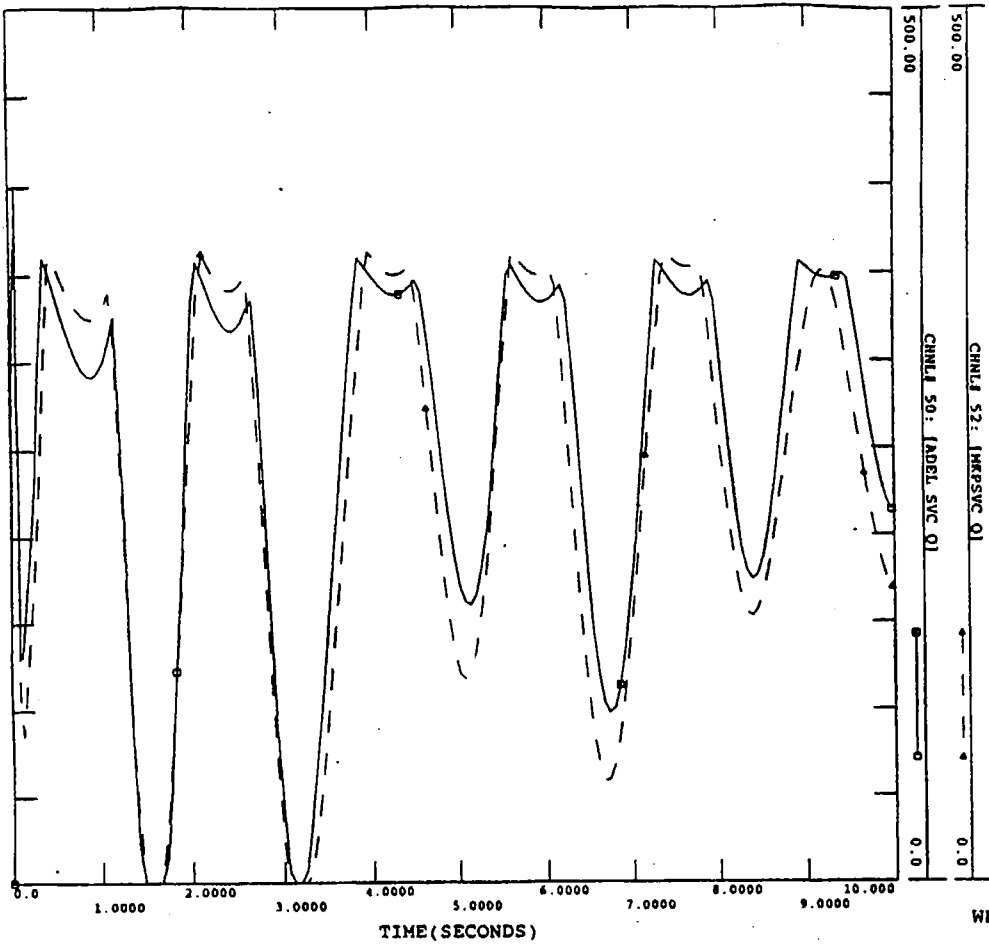
Page 25 --- Page 27	IV - Miguel - Rosita	N-1
Page 28 --- Page 30	Palo Verde - N. Gila	N-1
Page 31 -- Page 33	Palo Verde - Devers	N-1
Page 34 --- Page 36	Lugo - Mira Loma	N-2







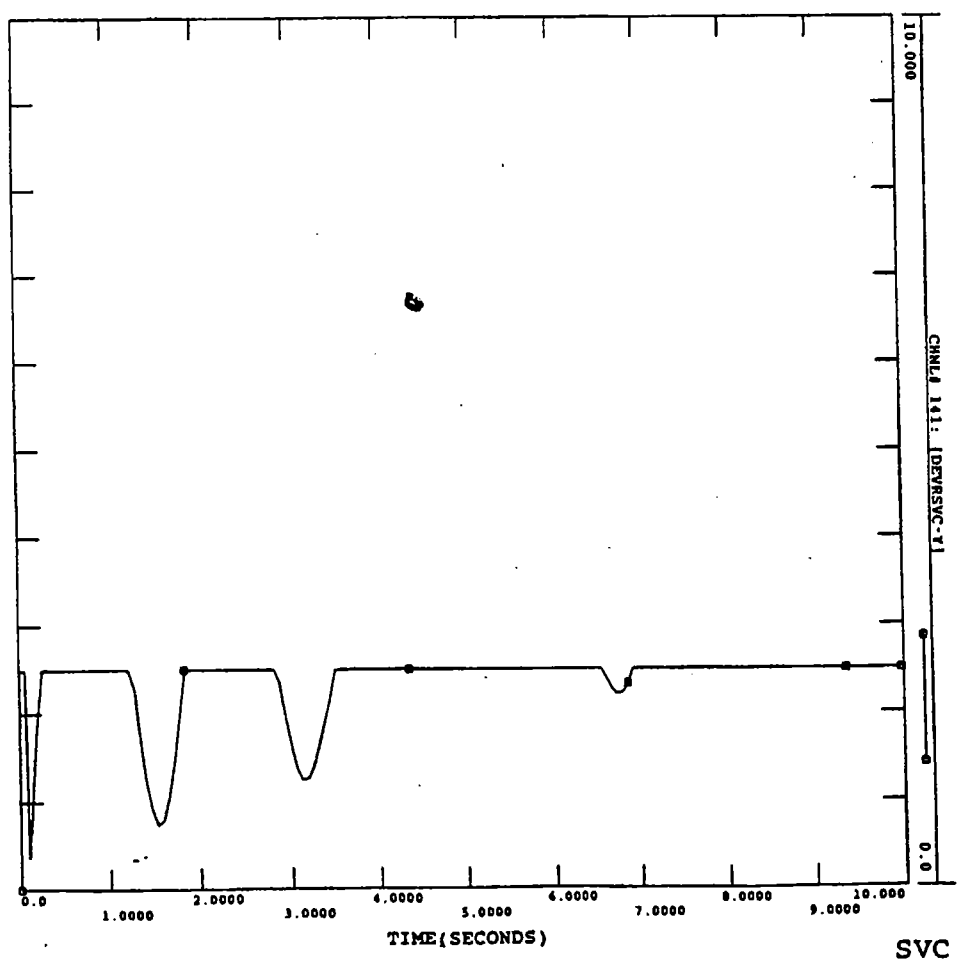
SONGS 263 OFF STUDY -- MAY, 1994
VALLEY-RAINBOW 500 KV LINE AND SVC IN SCE
THREE PHASE, 4-CYCLES, FAULT AT IMPERIAL 500KV BUS;
LOSS OF IV-MIGUEL-LA ROSITA LINES
FILE: iymrsofvsvcsdq2.din



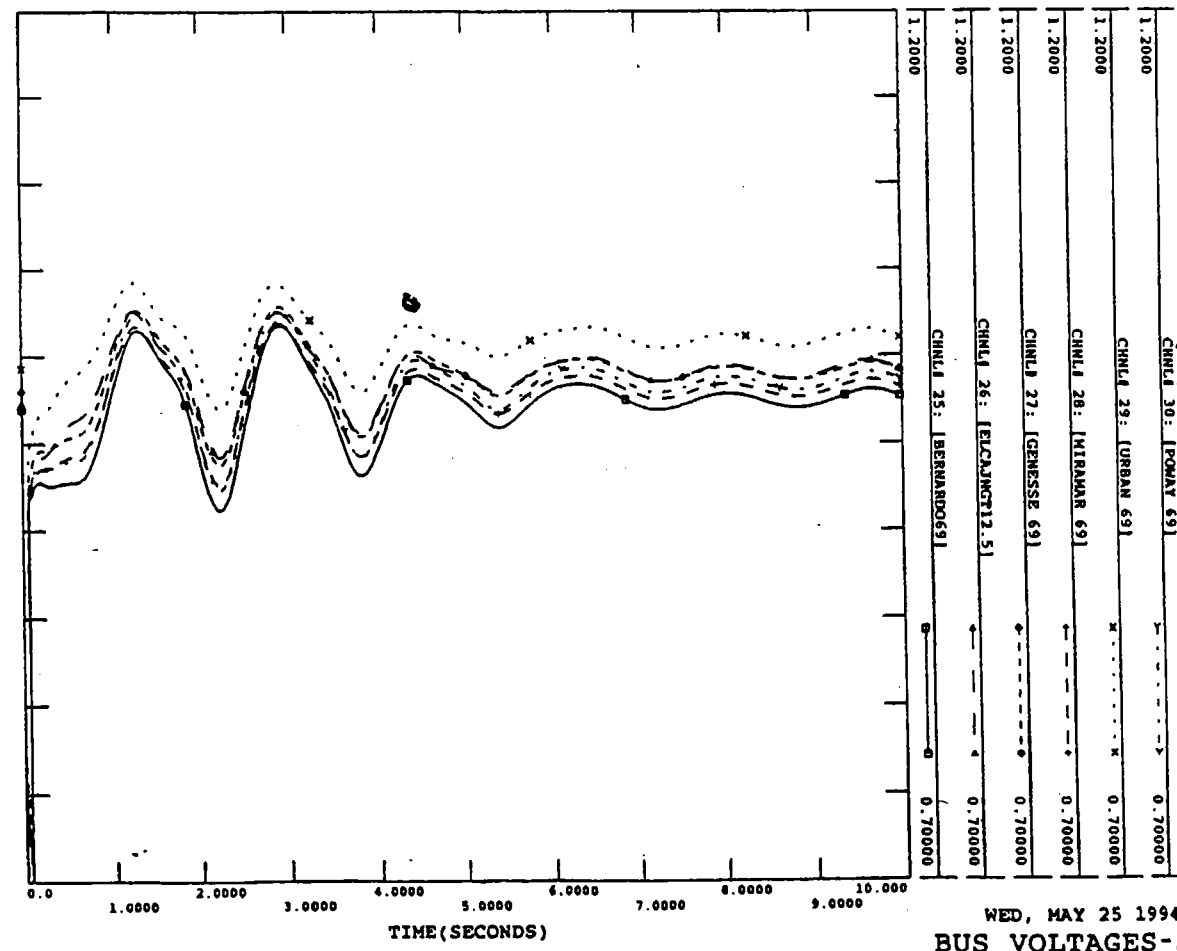
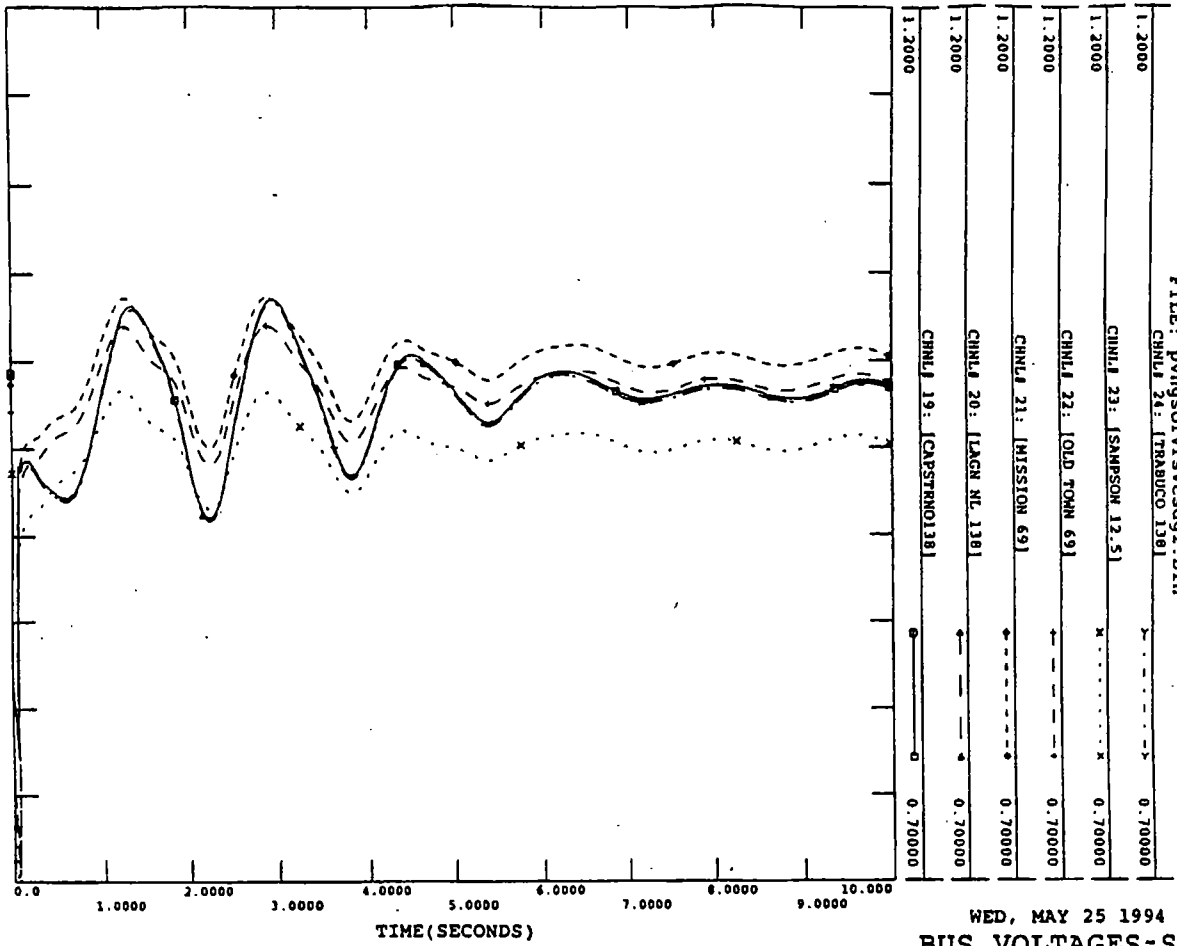
WED, MAY 25 1994 13:48
SVC IN LADWP

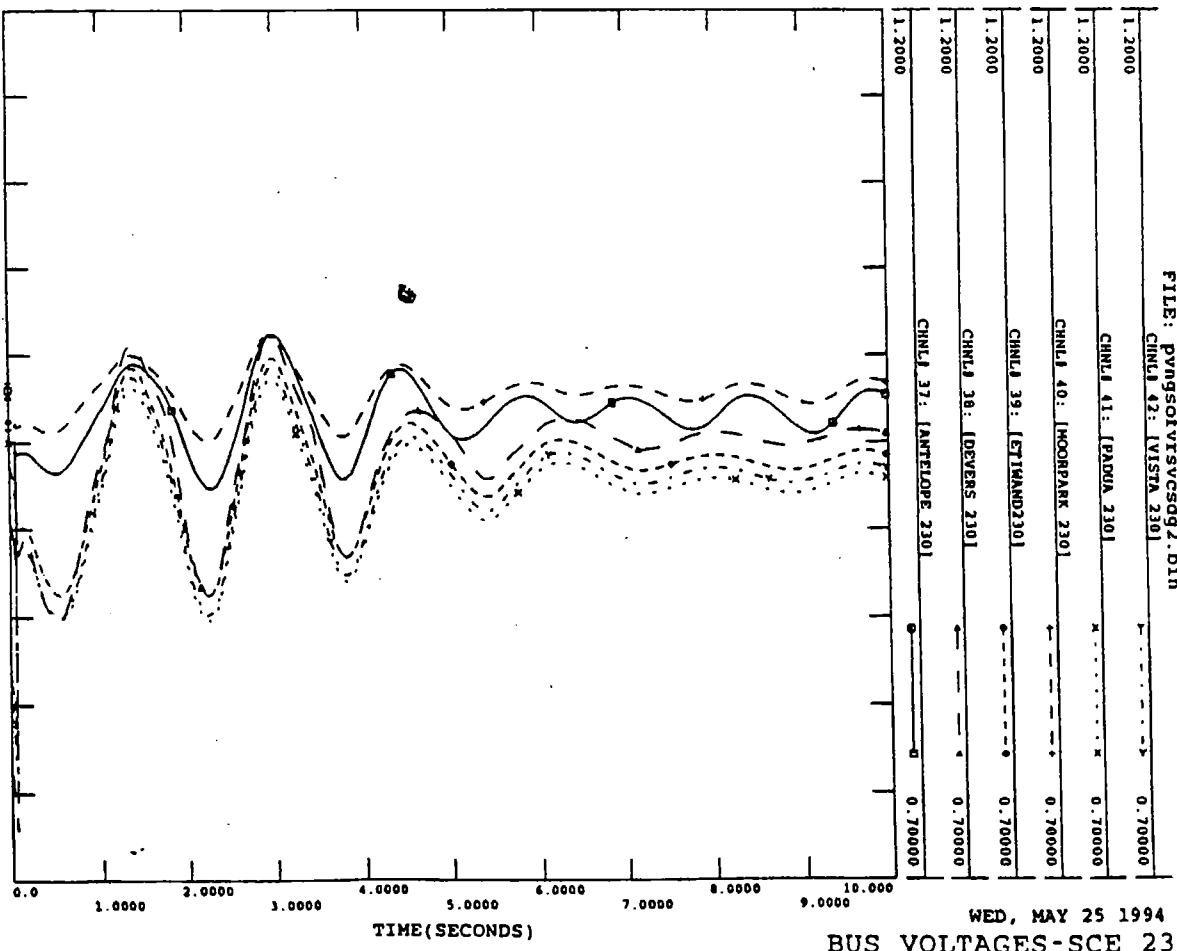
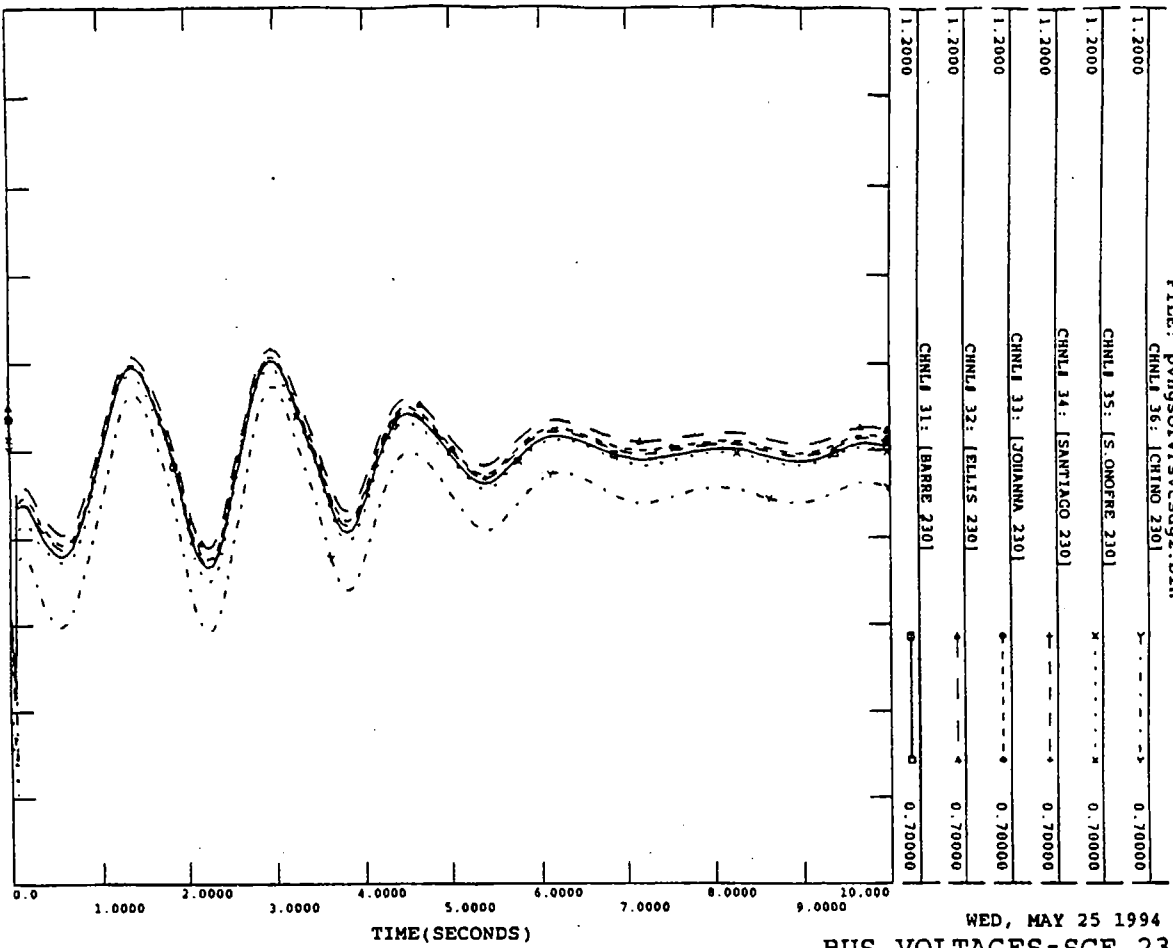


SONGS 263 OFF STUDY -- MAY, 1994
VALLEY-RAINBOW 500 KV LINE AND SVC IN SCE
THREE PHASE, 4-CYCLES, FAULT AT IMPERIAL 500KV BUS;
LOSS OF IV-MIGUEL-LA ROSITA LINES
FILE: iymrsofvsvcsdq2.din



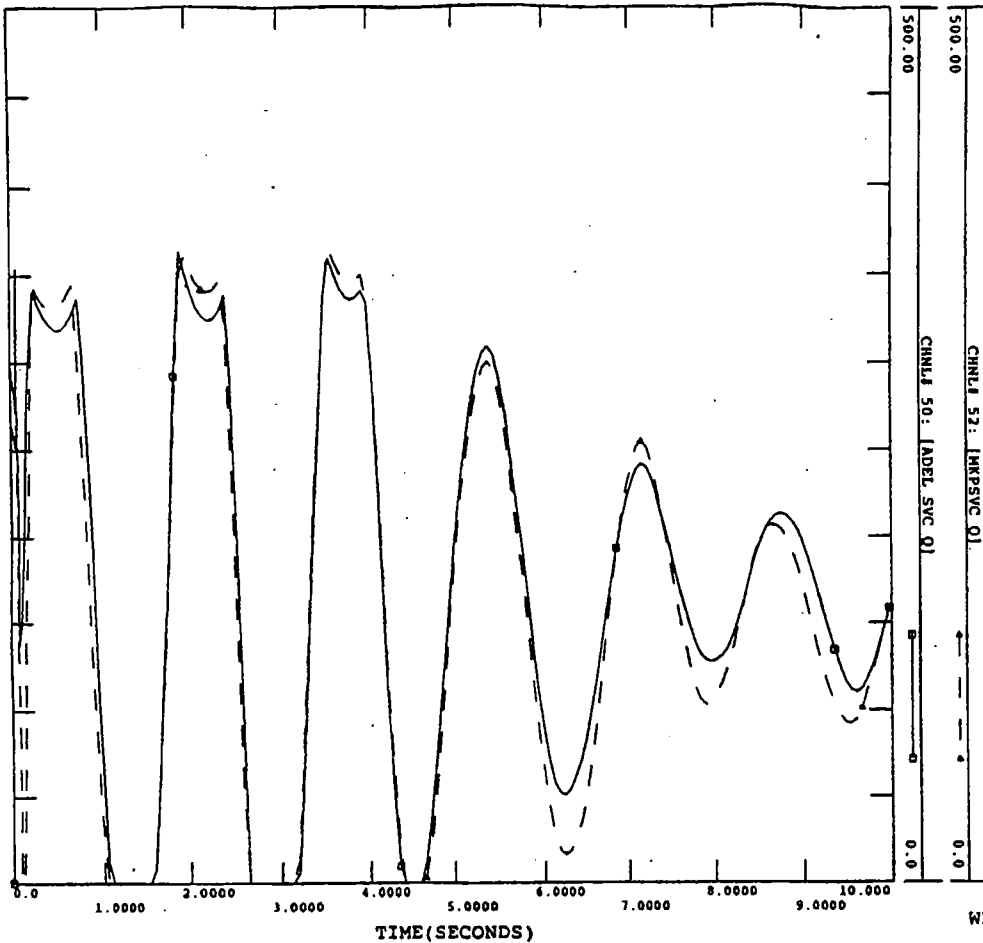
WED, MAY 25 1994 13:48
SVC IN SCE AND SDG&E







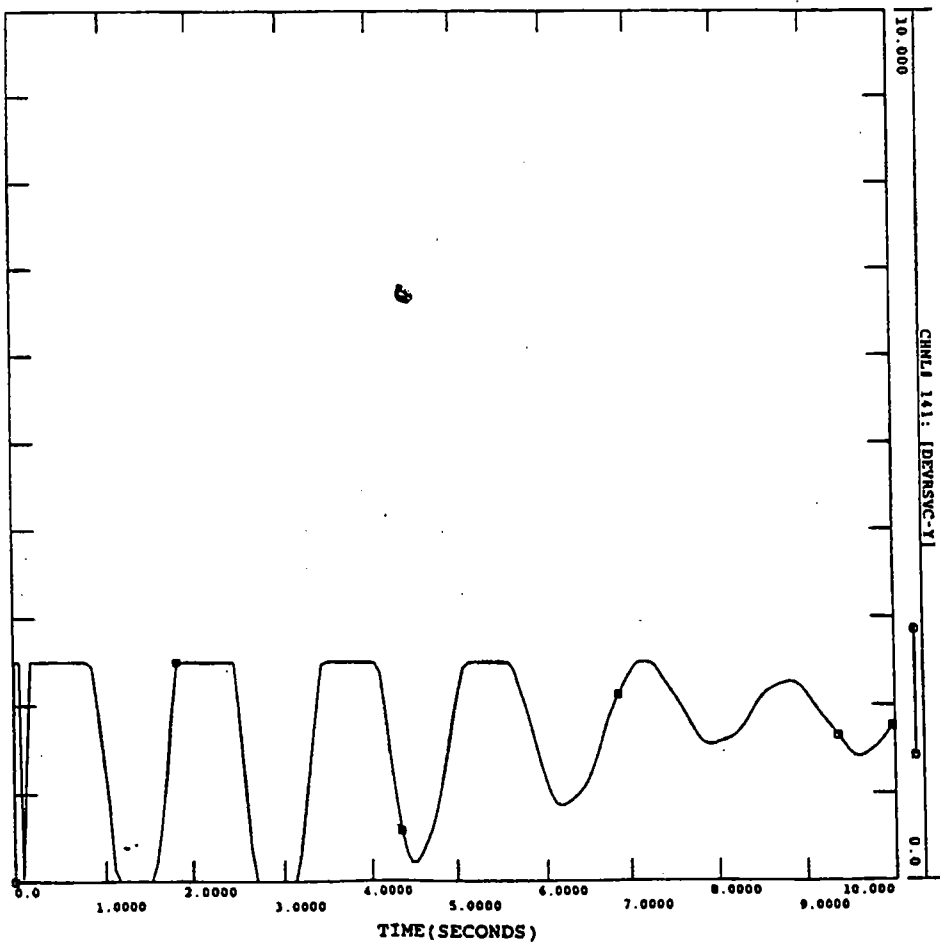
SONGS 243 OFF STUDY -- MAY, 1994
 VALLEY-RAINBOW 500 KV LINE AND SVC IN SCE
 THREE PHASE, 4-CYCLES, FAULT AT PALO VRD 500KV BUS:
 LOSS OF PV - N.GILA 500 KV LINE
 FILE: pvngsofvtsvcsgd92.bin



WED, MAY 25 1994 13:56
 SVC IN LADWP

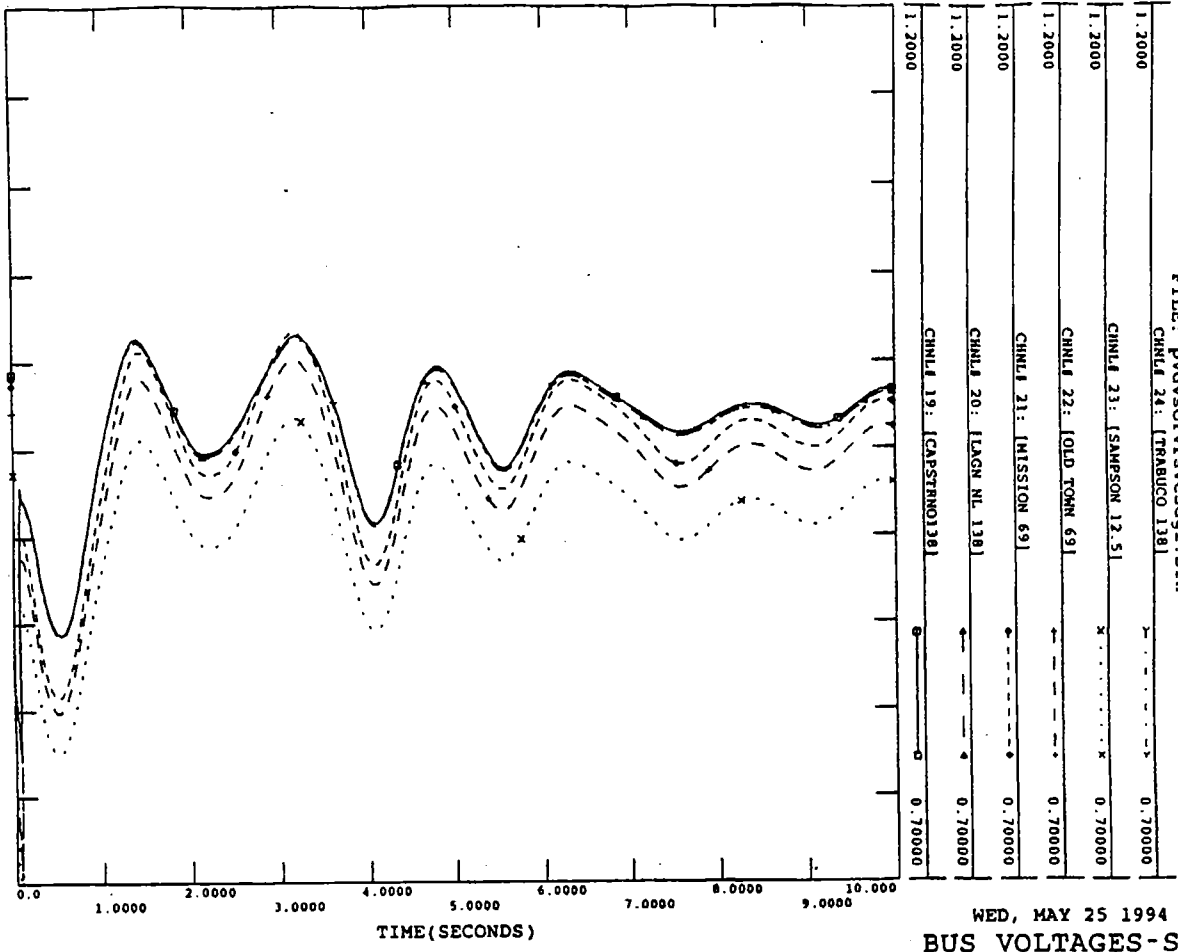


SONGS 243 OFF STUDY -- MAY, 1994
 VALLEY-RAINBOW 500 KV LINE AND SVC IN SCE
 THREE PHASE, 4-CYCLES, FAULT AT PALO VRD 500KV BUS:
 LOSS OF PV - N.GILA 500 KV LINE
 FILE: pvngsofvtsvcsgd92.bin

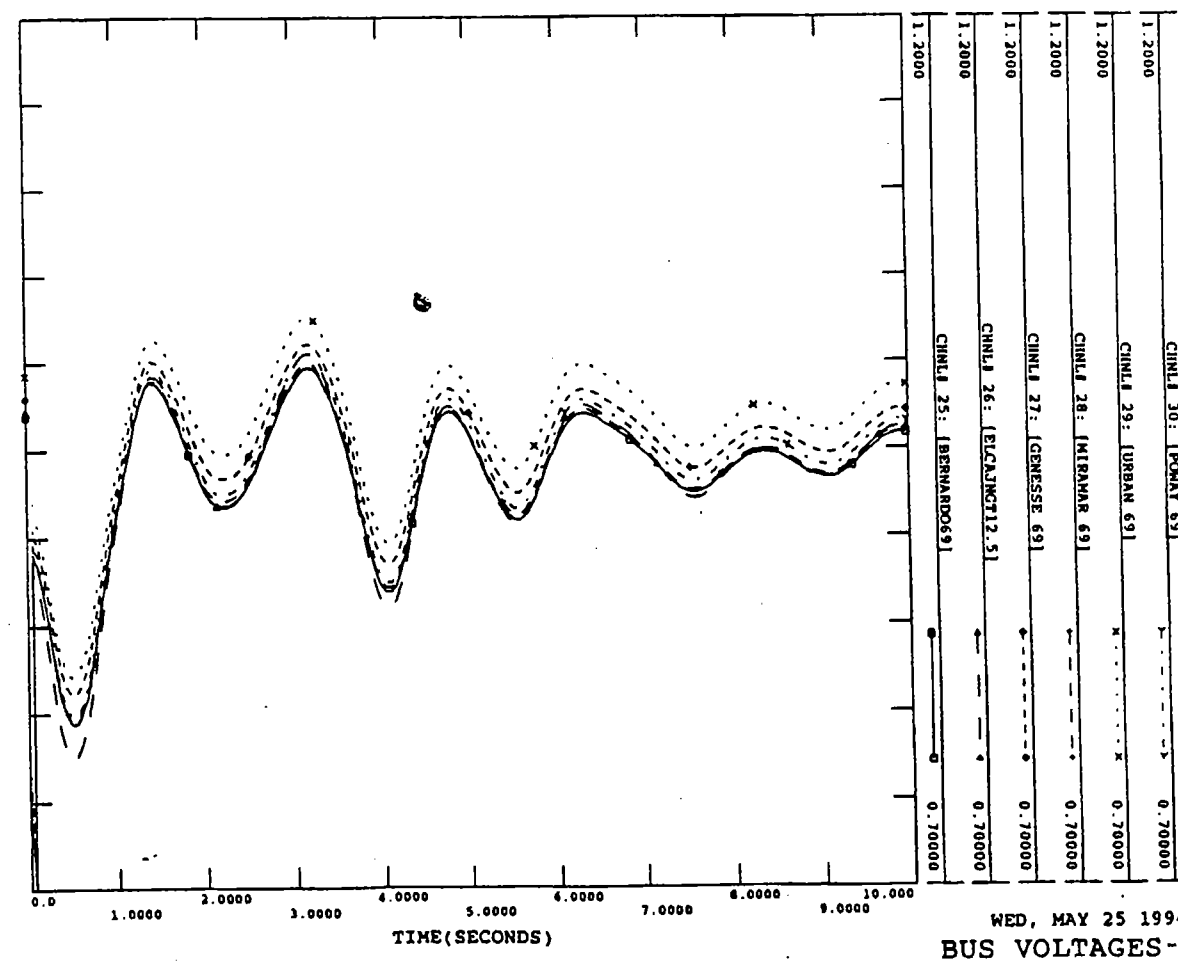


WED, MAY 25 1994 13:56
 SVC IN SCE

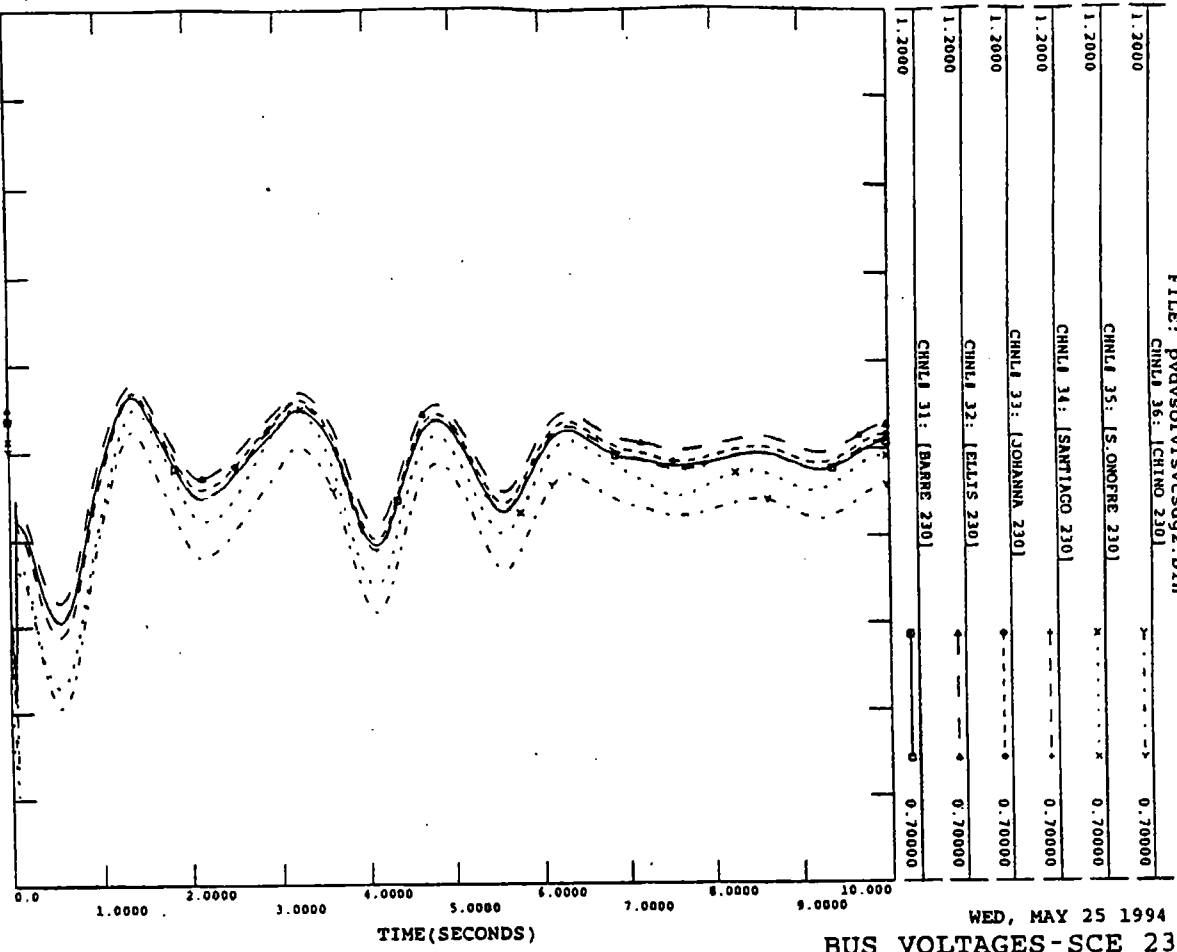
SONGS 2&3 OFF STUDY -- MAY, 1994
 VALLEY-RAINBOW 500 KV LINE AND SVC IN SCE
 THREE PHASE, 4-CYCLES, FAULT AT PALO VRD 500KV BUS;
 LOSS OF PV - DEVERS 500 KV LINE
 FILE: pvdvs0fvsvcsdq2.bin



SONGS 2&3 OFF STUDY -- MAY, 1994
 VALLEY-RAINBOW 500 KV LINE AND SVC IN SCE
 THREE PHASE, 4-CYCLES, FAULT AT PALO VRD 500KV BUS;
 LOSS OF PV - DEVERS 500 KV LINE
 FILE: pvdvs0fvsvcsdq2.bin

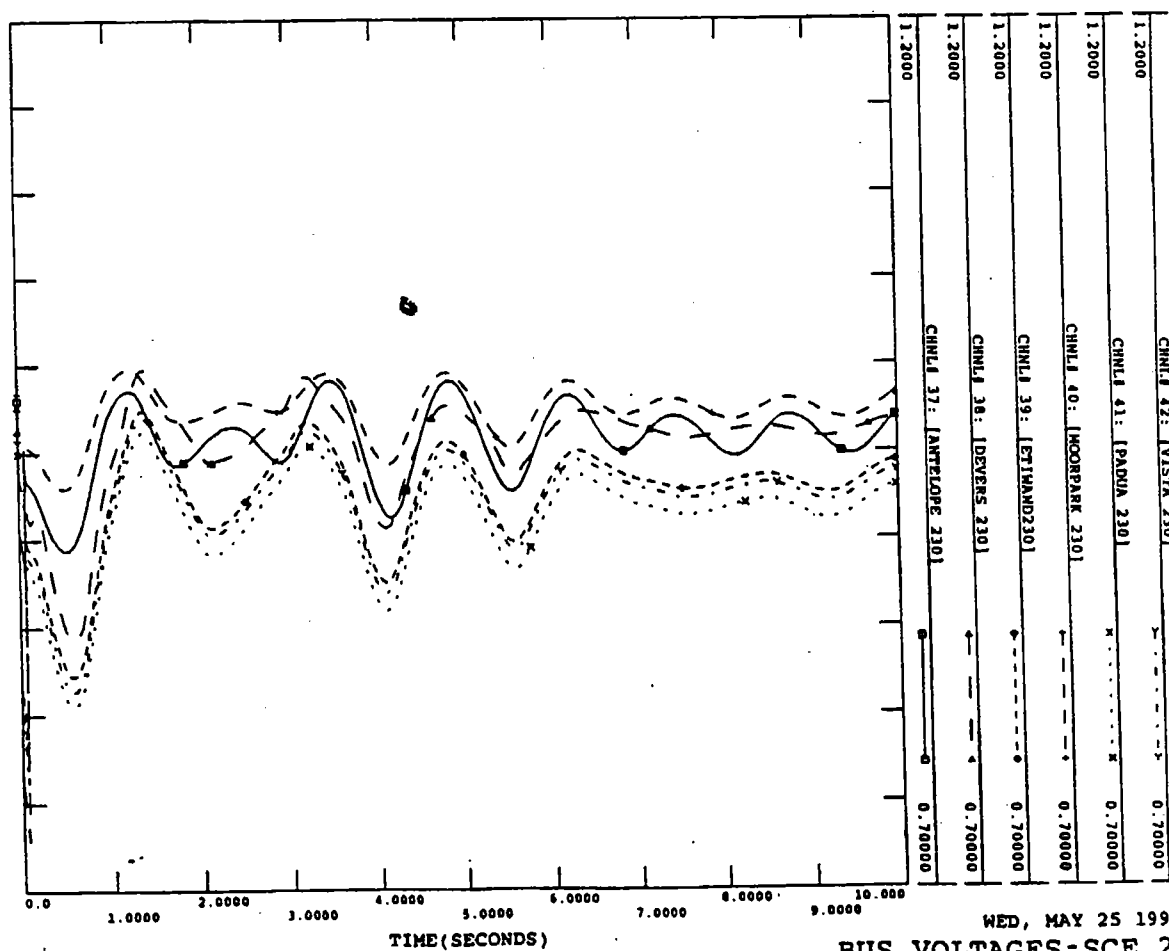


SONGS 263 OFF STUDY -- MAY, 1994
 VALLEY-RAINBOW 500 KV LINE AND SVC IN SCE
 THREE PHASE, 4-CYCLES, FAULT AT PALO VRD 500KV BUS;
 LOSS OF PV - DEVERS 500 KV LINE
 FILE: pvdvs0fvrsvcsgd2.dln



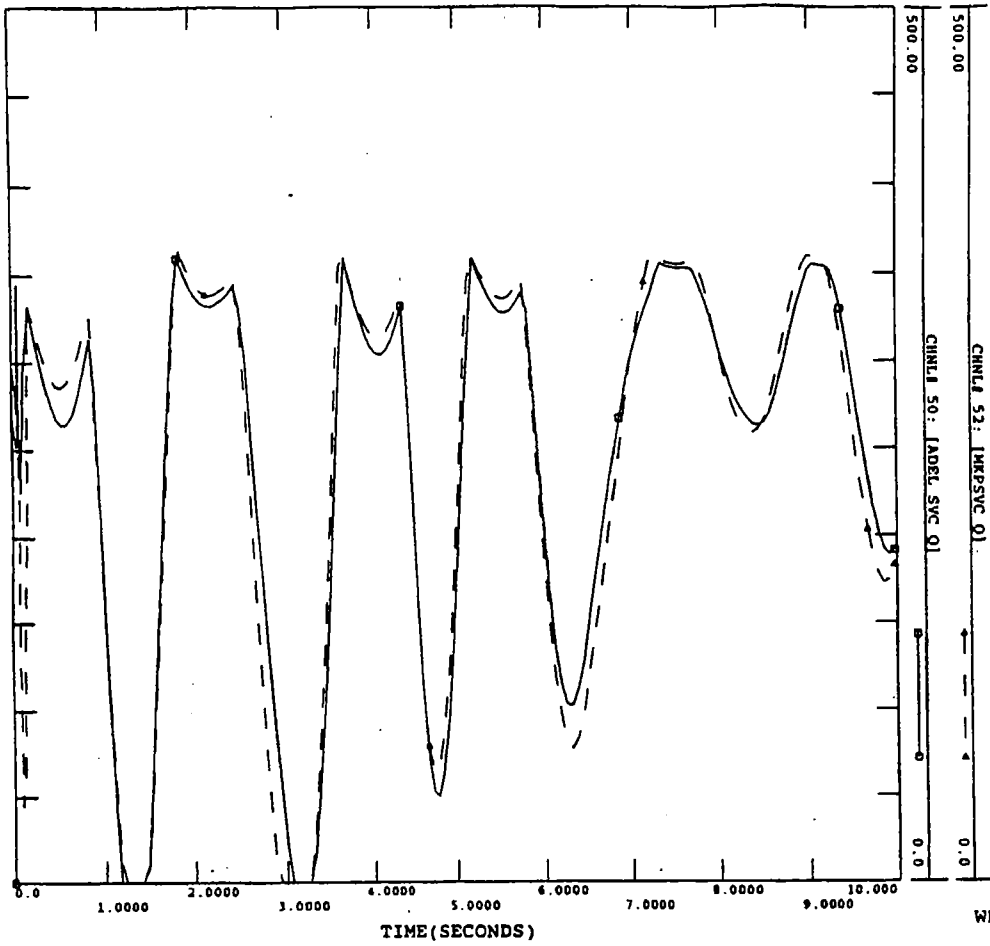
WED, MAY 25 1994 13:58
 BUS VOLTAGES-SCE 230 KV

SONGS 263 OFF STUDY -- MAY, 1994
 VALLEY-RAINBOW 500 KV LINE AND SVC IN SCE
 THREE PHASE, 4-CYCLES, FAULT AT PALO VRD 500KV BUS;
 LOSS OF PV - DEVERS 500 KV LINE
 FILE: pvdvs0fvrsvcsgd2.dln



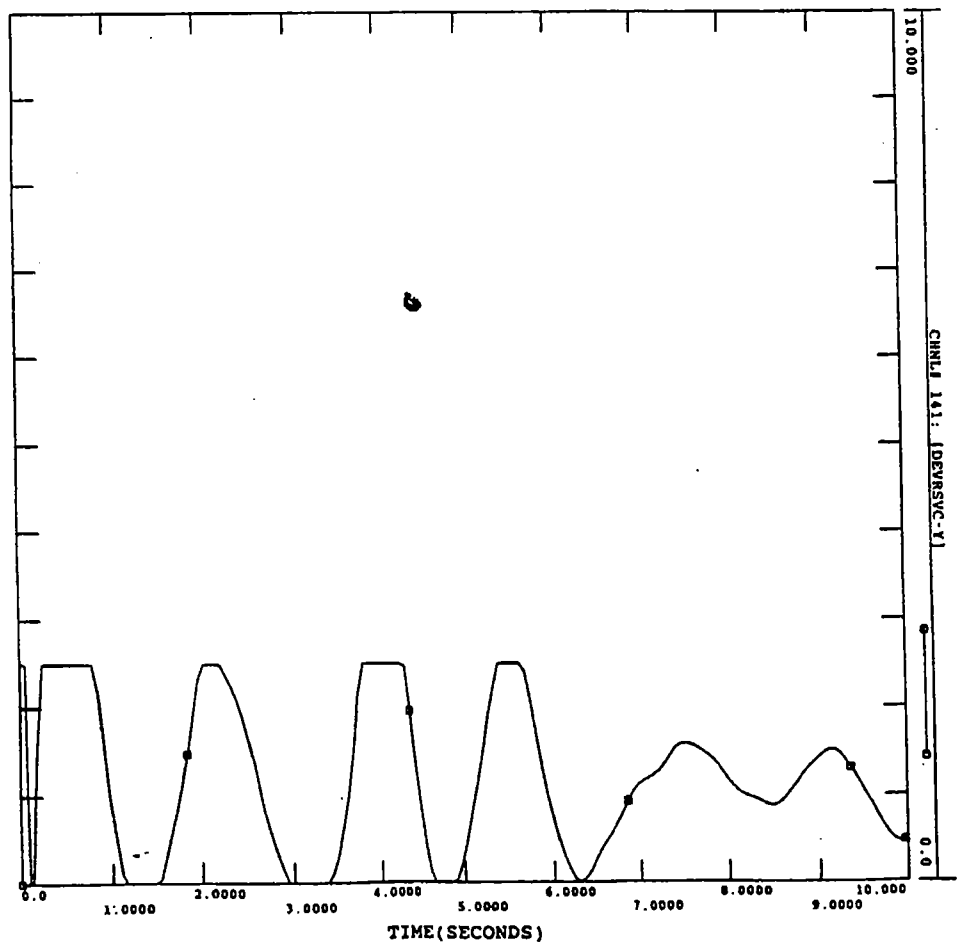
WED, MAY 25 1994 13:58
 BUS VOLTAGES-SCE 230 KV

SONGS 263 OFF STUDY -- MAY, 1994
 VALLEY-RAINBOW 500 KV LINE AND SVC IN SCE
 THREE PHASE, 4-CYCLES, FAULT AT PALO VRD 500KV BUS;
 LOSS OF PV - DEVERS 500 KV LINE
 FILE: pvdvs0fvrsvcsgd92.bin



WED, MAY 25 1994 13:58
 SVC IN LADWP

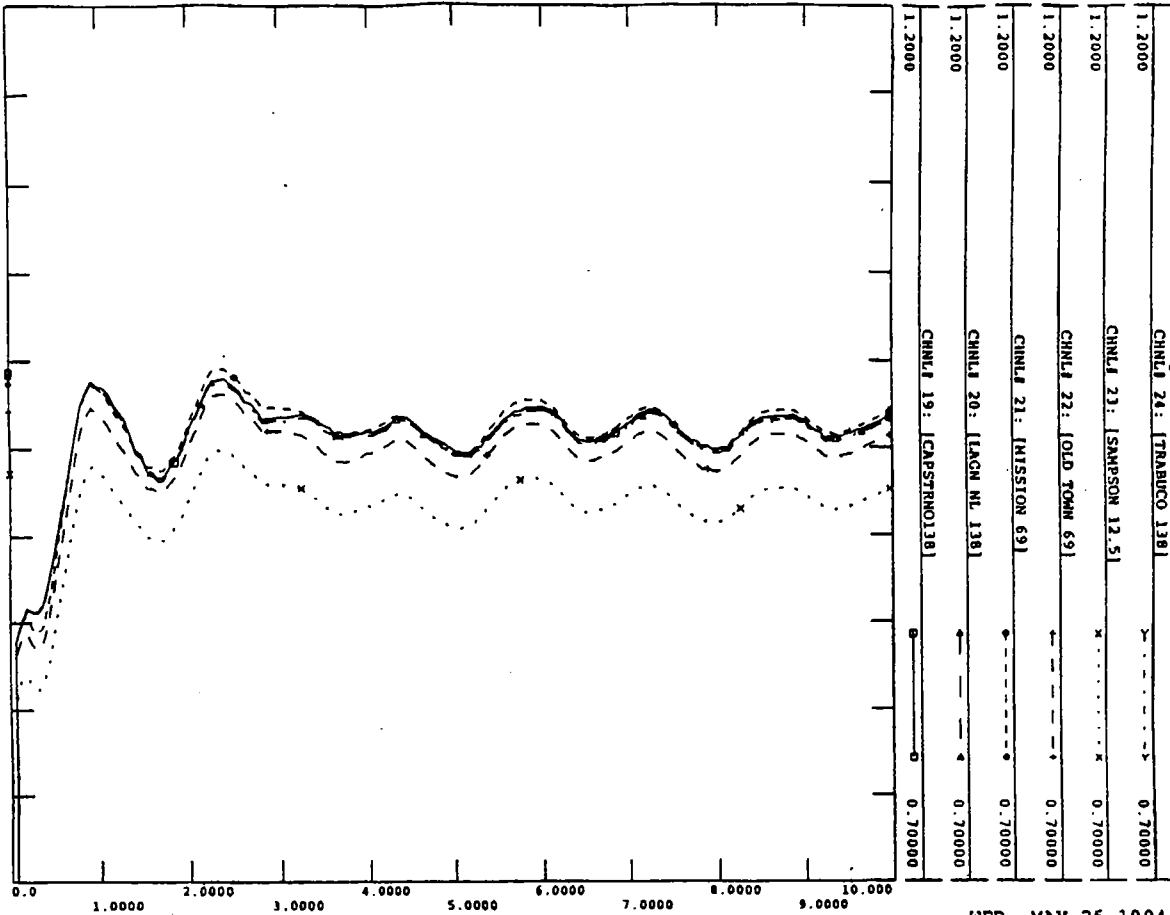
SONGS 263 OFF STUDY -- MAY, 1994
 VALLEY-RAINBOW 500 KV LINE AND SVC IN SCE
 THREE PHASE, 4-CYCLES, FAULT AT PALO VRD 500KV BUS;
 LOSS OF PV - DEVERS 500 KV LINE
 FILE: pvdvs0fvrsvcsgd92.bin



WED, MAY 25 1994 13:58
 SVC IN SCE



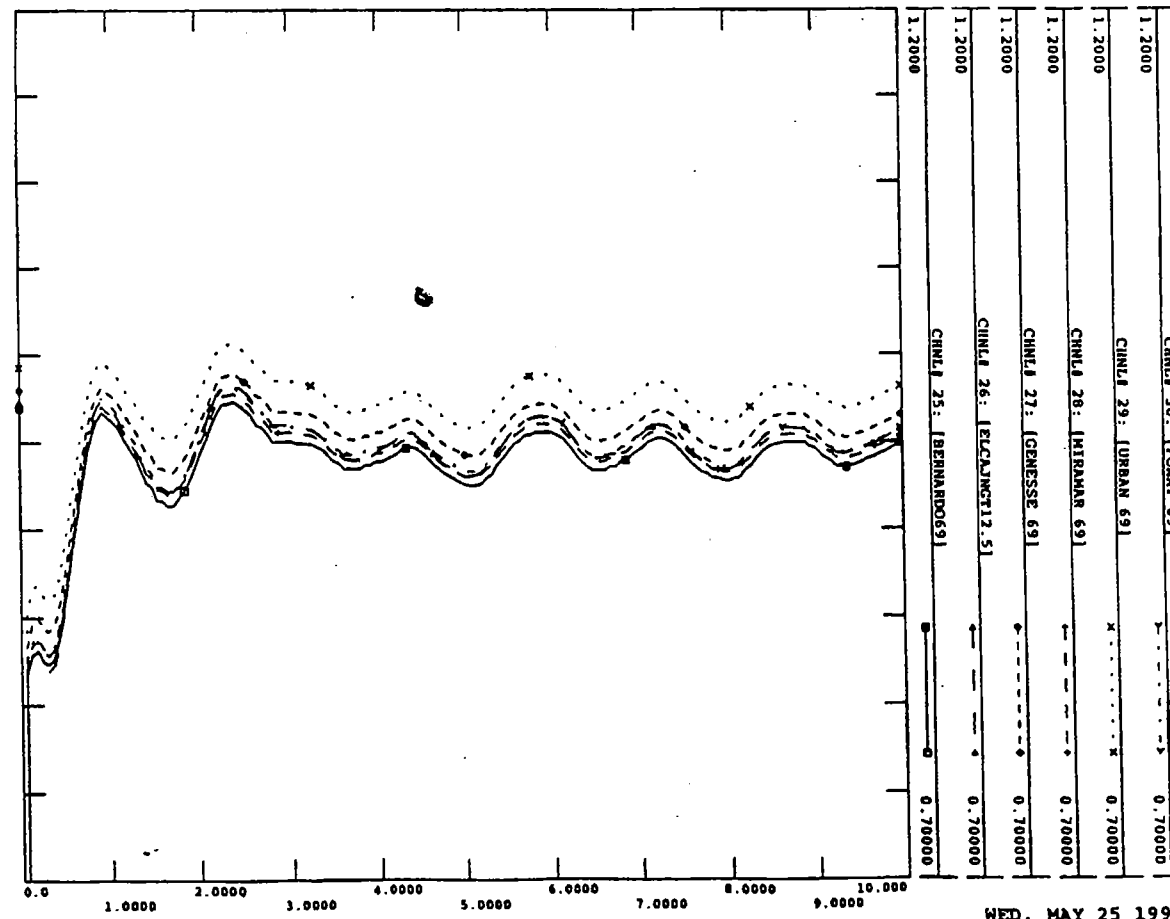
SONGS 263 OFF STUDY -- MAY, 1994
 VALLEY-RAINBOW 500 KV LINE AND SVC IN SCE
 THREE PHASE, 4-CYCLES, FAULT AT LUGO 500KV BUS;
 LOSS OF LUGO - MIRA LOMA TWO 500 KV LINES
 FILE: 1gmtsofvsvcsdq2.din



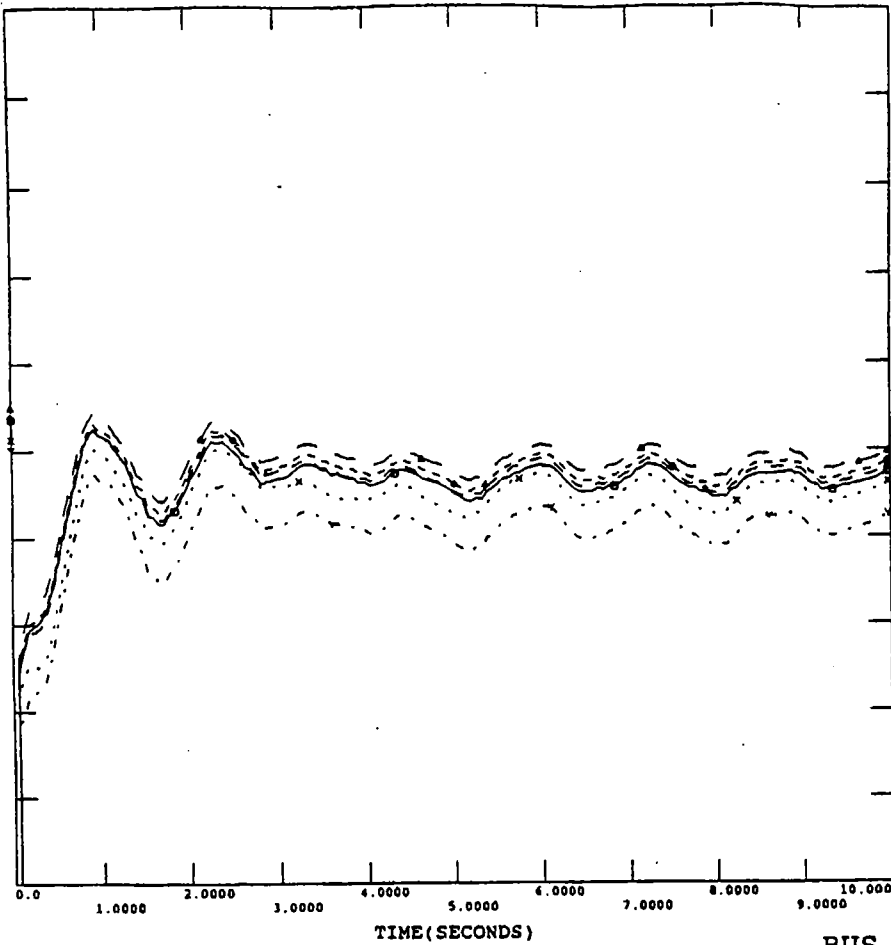
WED, MAY 25 1994 14:02
 BUS VOLTAGES - SDG&E



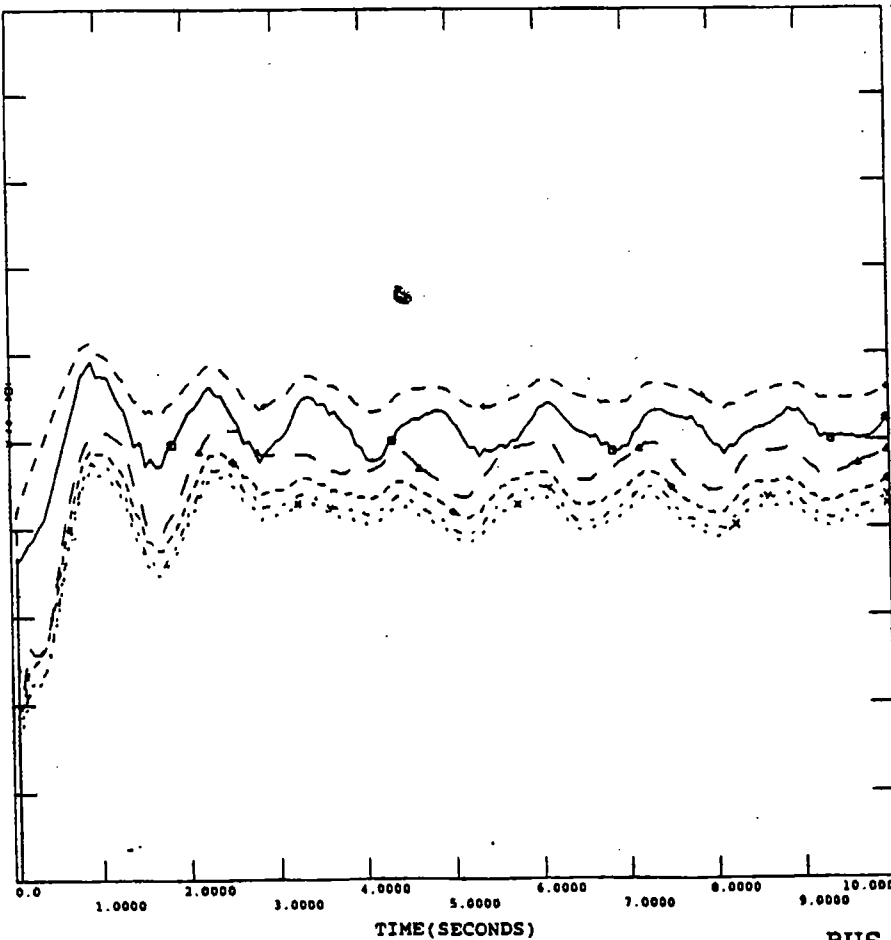
SONGS 263 OFF STUDY -- MAY, 1994
 VALLEY-RAINBOW 500 KV LINE AND SVC IN SCE
 THREE PHASE, 4-CYCLES, FAULT AT LUGO 500KV BUS;
 LOSS OF LUGO - MIRA LOMA TWO 500 KV LINES
 FILE: 1gmtsofvsvcsdq2.din



WED, MAY 25 1994 14:02
 BUS VOLTAGES - SDG&E

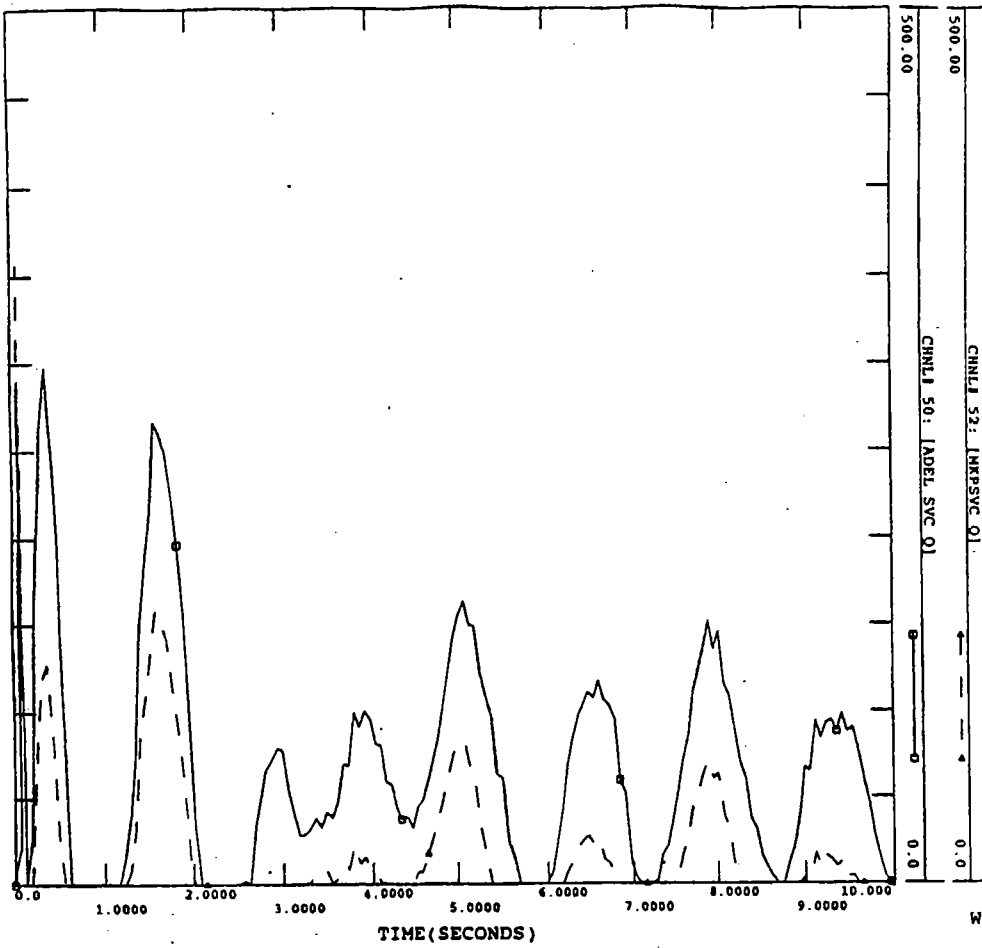


WED, MAY 25 1994 14:02
 BUS VOLTAGES-SCE 230 KV



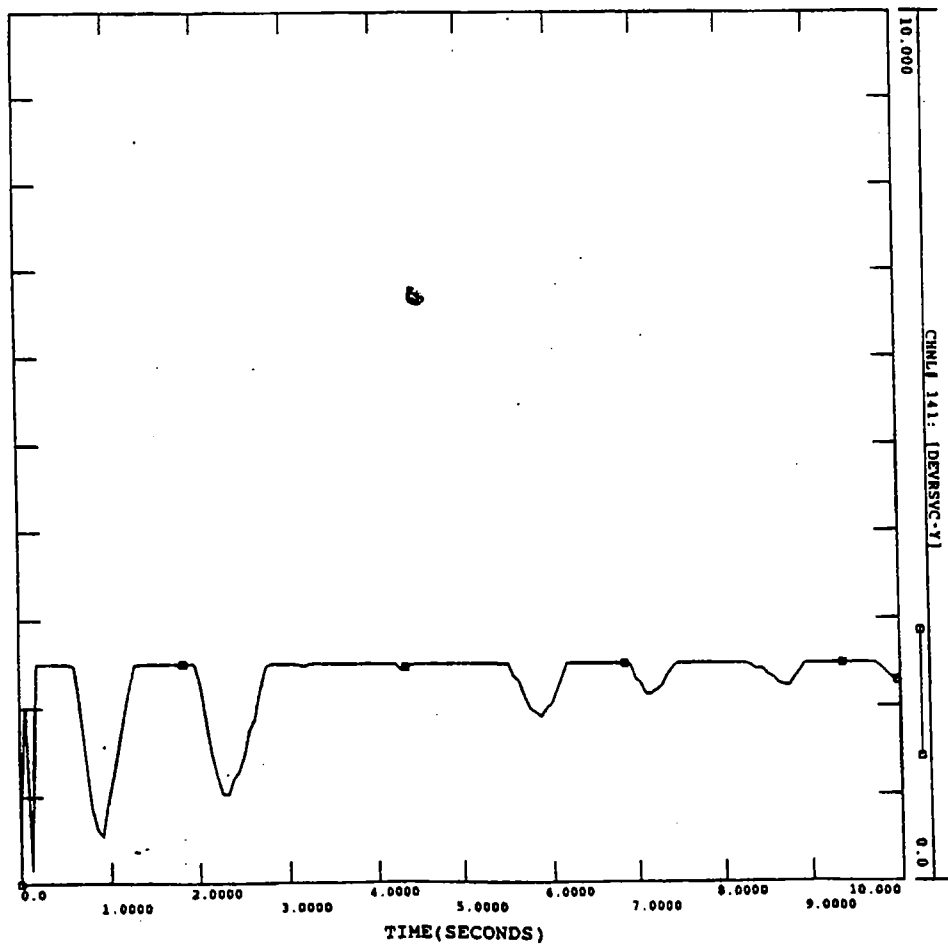
WED, MAY 25 1994 14:02
 BUS VOLTAGES-SCE 230 KV

SONGS 263 OFF STUDY -- MAY, 1994
 VALLEY-RAINBOW 500 KV LINE AND SVC IN SCE
 THREE PHASE, 4-CYCLES, FAULT AT LUGO 500KV BUS:
 LOSS OF LUGO - MIRA LOMA TWO 500 KV LINES
 FILE: 1gmrsofvsvcsdq2.bin



WED, MAY 25 1994 14:02
 SVC IN LADWP

SONGS 263 OFF STUDY -- MAY, 1994
 VALLEY-RAINBOW 500 KV LINE AND SVC IN SCE
 THREE PHASE, 4-CYCLES, FAULT AT LUGO 500KV BUS:
 LOSS OF LUGO - MIRA LOMA TWO 500 KV LINES
 FILE: 1gmrsofvsvcsdq2.bin



WED, MAY 25 1994 14:02
 SVC IN SCE

APPENDIX D

DYNAMIC STABILITY MODELS & SWITCHING SEQUENCES

SCE Data

34000	'GENROU'	1	8.0000	.50000E-01	1.5000	.60000E-01
	5.3906		.00000E+00	1.9500	1.8700	.34000
	.34000		.29000	.21750	.19350	.68000
34000	'EXAC1'	1	.00000E+00	2.6400	.70000	85.000
	.50000E-01		18.700	-15.000	.84000	.10000E-03
	1.0000		.18000	1.8600	1.0000	5.8200
	.89000E-01		7.7600	.34600		
34001	'GENROU'	1	8.0000	.50000E-01	1.5000	.60000E-01
	5.3906		.00000E+00	1.9500	1.8700	.34000
	.34000		.29000	.21750	.19350	.68000
34001	'EXAC1'	1	.00000E+00	2.6400	.70000	85.000
	.50000E-01		18.700	-15.000	.84000	.10000E-03
	1.0000		.18000	1.8600	1.0000	5.8200
	.89000E-01		7.7600	.34600		
34004	'GENROU'	H	5.2000	.50000E-01	.50000	.77000E-01
	2.4385		.00000E+00	1.6000	1.5500	.23500
	.37300		.17000	.95000E-01	.10500	.41100
34004	'IEEEVC'	H	.00000E+00	.93500E-01/		
34004	'ST2CUT'	H	5 0	1 0	.00000E+00	1.3600
	.00000E+00		.17800	10.000	10.000	1.4000
	.11000		1.4000	.11000	.00000E+00	.00000E+00
	.50000E-01		-.50000E-01	.00000E+00	.00000E+00/	
34004	'IEEEX1'	H	.00000E+00	25.000	.20000	.00000E+00
	.00000E+00		1.0000	-1.0000	.00000E+00	.60300
	.96000E-01		1.0000	.00000E+00	2.8012	.82000E-01
	3.7350		.32200			
34004	'IEEEG1'	H	34004 L	34.225	.20000	.00000E+00
	.10000		.17112	-.34225	1.7112	.00000E+00
	.50000E-01		.29000	.00000E+00	11.000	.22000
	.00000E+00		.30000	.00000E+00	.49000	.00000E+00
	.00000E+00		.00000E+00/			
34004	'GENROU'	L	7.0000	.50000E-01	.36000	.68000E-01
	7.0820		.00000E+00	1.5800	1.5100	.33500
	.50000		.22500	.14000	.12200	.46100
34004	'IEEEVC'	L	.00000E+00	.91500E-01/		
34004	'ST2CUT'	L	5 0	1 0	.00000E+00	3.1000
	.20000E-02		.35100	10.000	10.000	130.00
	.79100		1.3000	.79100	.00000E+00	.00000E+00
	.50000		-.50000	.00000E+00	.00000E+00/	
34004	'IEEEX1'	L	.00000E+00	25.000	.20000	.00000E+00
	.00000E+00		1.0000	-1.0000	.00000E+00	.60800
	.97000E-01		1.0000	.00000E+00	2.7787	.83000E-01
	3.7050		.32400			
34005	'GENROU'	H	5.2000	.50000E-01	.50000	.77000E-01
	2.4385		.00000E+00	1.6000	1.5500	.23500
	.37300		.17000	.95000E-01	.10500	.41100
34005	'IEEEVC'	H	.00000E+00	.93500E-01/		
34005	'ST2CUT'	H	5 0	1 0	.00000E+00	1.3600
	.00000E+00		.17800	10.000	10.000	1.4000
	.11000		1.4000	.11000	.00000E+00	.00000E+00
	.50000E-01		-.50000E-01	.00000E+00	.00000E+00/	
34005	'IEEEX1'	H	.00000E+00	25.000	.20000	.00000E+00
	.00000E+00		1.0000	-1.0000	.00000E+00	.60300
	.96000E-01		1.0000	.00000E+00	2.8012	.82000E-01
	3.7350		.32200			
34005	'IEEEG1'	H	34005 L	34.225	.20000	.00000E+00
	.10000		.17112	-.34225	1.7112	.00000E+00
	.50000E-01		.29000	.00000E+00	11.000	.22000
	.00000E+00		.30000	.00000E+00	.49000	.00000E+00
	.00000E+00		.00000E+00/			
34005	'GENROU'	L	7.0000	.50000E-01	.36000	.68000E-01
	7.0820		.00000E+00	1.5800	1.5100	.33500
	.50000		.22500	.14000	.12200	.46100
34005	'IEEEVC'	L	.00000E+00	.91500E-01/		
34005	'ST2CUT'	L	5 0	1 0	.00000E+00	2.3100
	.00000E+00		.35000E-01	10.000	10.000	1.1300
	.79000E-01		1.1300	.79000E-01	.00000E+00	.00000E+00
	.50000E-01		-.50000E-01	.00000E+00	.00000E+00/	
34005	'IEEEX1'	L	.00000E+00	25.000	.20000	.00000E+00

STABILITY
MODELS -
SCE

	.00000E+00	1.0000	-1.0000	.00000E+00	.60800
	.97000E-01	1.0000	.00000E+00	2.7787	.83000E-01
	3.7050	.32400 /			
34006	'GENROU' H	5.4000	.50000E-01	1.5000	.15000
	1.6691	.00000E+00	1.6750	1.6480	.31100
	.97900	.23100	.17325	.12490	.50800 /
34006	'IEEEVC' H	.00000E+00	.13900 /		
34006	'IEEEX1' H	.00000E+00	245.00	.50000E-01	.00000E+00
	.00000E+00	3.0000	-3.0000	.00000E+00	1.3700
	.40000E-01	1.0000	.00000E+00	2.6775	.22000
	3.5700	.95000 /			
34006	'IEEEG1' H	34006 L	34.532	.25000	.00000E+00
	.10000	.17266	-.34532	1.7266	.00000E+00
	.16100	.29000	.00000E+00	12.000	.25000
	.00000E+00	.30000	.00000E+00	.46000	.00000E+00
	.00000E+00	.00000E+00/			
34006	'GENROU' L	5.3900	.53000E-01	1.5000	.13500
	6.3784	.00000E+00	1.5810	1.5310	.38000
	.95500	.25200	.18900	.90500E-01	.34500 /
34006	'IEEEVC' L	.00000E+00	.11050 /		
34006	'IEEEX1' L	.00000E+00	245.00	.50000E-01	.00000E+00
	.00000E+00	3.0000	-3.0000	.00000E+00	1.3700
	.40000E-01	1.0000	.00000E+00	2.6775	.22000
	3.5700	.95000 /			
34008	'GENROU' H	5.4000	.50000E-01	1.5000	.15000
	1.6691	.00000E+00	1.6750	1.6480	.31100
	.97900	.23100	.17325	.12490	.50800 /
34008	'IEEEVC' H	.00000E+00	.13900 /		
34008	'IEEEX1' H	.00000E+00	245.00	.50000E-01	.00000E+00
	.00000E+00	3.0000	-3.0000	.00000E+00	1.3700
	.40000E-01	1.0000	.00000E+00	2.6775	.22000
	3.5700	.95000 /			
34008	'IEEEG1' H	34008 L	34.532	.25000	.00000E+00
	.10000	.17266	-.34532	1.7266	.00000E+00
	.16100	.29000	.00000E+00	12.000	.25000
	.00000E+00	.30000	.00000E+00	.46000	.00000E+00
	.00000E+00	.00000E+00/			
34008	'GENROU' L	5.3900	.53000E-01	1.5000	.13500
	6.3784	.00000E+00	1.5810	1.5310	.38000
	.95500	.25200	.18900	.90500E-01	.34500 /
34008	'IEEEVC' L	.00000E+00	.11050 /		
34008	'IEEEX1' L	.00000E+00	245.00	.50000E-01	.00000E+00
	.00000E+00	3.0000	-3.0000	.00000E+00	1.3700
	.40000E-01	1.0000	.00000E+00	2.6775	.22000
	3.5700	.95000 /			
34011	'IEELCB'	.42000	.00000E+00	.58000	.42000
	.00000E+00	.58000	1.0000	-1.0000	2.0000
	1.0000	.00000E+00	2.0000	1.0000	.00000E+00/
34012	'IEELCB'	.34000	.00000E+00	.66000	.34000
	.00000E+00	.66000	1.0000	-1.0000	2.0000
	1.0000	.00000E+00	2.0000	1.0000	.00000E+00/
34012	'LDSD3'	0 '0'	0		
	58.700	.10000	.50000E-01	1.0000	.00000E+00
	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00
	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00
	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00
	.00000E+00/				
34013	'GENROU' 1	3.1400	.50000E-01	.31000	.74000E-01
	5.8444	.00000E+00	2.0210	1.9470	.39900
	.68000	.27700	.22600	.15200	.31000 /
34013	'EXST1' 1	.00000E+00	.10000	-.10000	1.0000
	10.000	200.00	.50000E-01	5.4000	-5.4000
	.10000	.00000E+00	10.000 /		
34022	'IEELCB'	.34000	.00000E+00	.66000	.34000
	.00000E+00	.66000	1.0000	-1.0000	2.0000
	1.0000	.00000E+00	2.0000	1.0000	.00000E+00/
34022	'IEELCB'	.34000	.00000E+00	.66000	.34000

	.00000E+00	.66000	1.0000	-1.0000	2.0000
	1.0000	.00000E+00	2.0000	1.0000	.00000E+00/
34022 'LDSHD3'	0 '0'	0	0	0	0
	59.300	.10000	.50000E-01	.70200	.00000E+00
	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00
	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00
	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00
	.00000E+00/				
34023 'IEELCB'	.46000	.00000E+00	.54000	.46000	.46000
	.00000E+00	.54000	1.0000	-1.0000	2.0000
	1.0000	.00000E+00	2.0000	1.0000	.00000E+00/
34023 'LDSHD3'	0 '0'	0	0	0	0
	58.000	.10000	.50000E-01	1.0000	.00000E+00
	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00
	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00
	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00
	.00000E+00/				
34024 'GENSAL' 1	7.1000	.50000E-01	.60000E-01	4.4785	4.4785
	.00000E+00	.76310	.47380	.26650	.21610
	.16000	.15000	.43000	/	
34024 'IEEEX4' 1	.00000E+00	20.000	.50000E-01	5.4000	5.4000
	.00000E+00	.76000	1.0000	2.0700	.22000
	2.7600	.95000	/		
34024 'IEEEG2' 1	20.000	25.000	4.0000	4.0000	.40000
	1.0000	.00000E+00	.60000	/	
34026 'IEELCB'	.70000	.00000E+00	.30000	.70000	.70000
	.00000E+00	.30000	1.0000	-1.0000	2.0000
	1.0000	.00000E+00	2.0000	1.0000	.00000E+00/
34027 'GENROU' 1	4.9400	.50000E-01	.54000	.78000E-01	.78000E-01
	4.0108	.00000E+00	2.2100	2.1000	.25800
	.50000	.19700	.12000	.19000	.67600
					/
34027 'EXAC1' 1	.50000E-01	.00000E+00	.00000E+00	200.00	200.00
	.50000E-01	6.0000	-3.0000	1.0000	.50000E-01
	1.0000	.10000	.20000	1.0000	3.0000
	.10000	4.0000	.40000	/	
34029 'IEELCB'	1.0000	.00000E+00	.00000E+00	1.0000	1.0000
	.00000E+00	.00000E+00	1.0000	-1.0000	2.0000
	1.0000	.00000E+00	2.0000	1.0000	.00000E+00/
34035 'GENROU' 1	4.9400	.50000E-01	.54000	.78000E-01	.78000E-01
	4.0303	.00000E+00	2.2100	2.1000	.25800
	.50000	.19700	.12000	.19000	.67600
					/
34035 'EXAC1' 1	.50000E-01	.00000E+00	.00000E+00	200.00	200.00
	.50000E-01	6.0000	-3.0000	1.0000	.50000E-01
	1.0000	.10000	.20000	1.0000	3.0000
	.10000	4.0000	.40000	/	
34036 'IEELCB'	.32000	.00000E+00	.68000	.32000	.32000
	.00000E+00	.68000	1.0000	-1.0000	2.0000
	1.0000	.00000E+00	2.0000	1.0000	.00000E+00/
34037 'IEELCB'	.44000	.00000E+00	.56000	.44000	.44000
	.00000E+00	.56000	1.0000	-1.0000	2.0000
	1.0000	.00000E+00	2.0000	1.0000	.00000E+00/
34037 'LDSHD3'	0 '0'	0	0	0	0
	58.900	.10000	.50000E-01	.57500	57.800
	.10000	.50000E-01	.42500	.00000E+00	.00000E+00
	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00
	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00
	.00000E+00/				
34039 'IEELCB'	.48000	.00000E+00	.52000	.48000	.48000
	.00000E+00	.52000	1.0000	-1.0000	2.0000
	1.0000	.00000E+00	2.0000	1.0000	.00000E+00/
34039 'IEELCB'	.48000	.00000E+00	.52000	.48000	.48000
	.00000E+00	.52000	1.0000	-1.0000	2.0000
	1.0000	.00000E+00	2.0000	1.0000	.00000E+00/
34039 'LDSHD3'	0 '0'	0	0	0	0
	58.500	.10000	.50000E-01	1.0000	.00000E+00
	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00
	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00

	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00
	.00000E+00/				
34041 'IEELCB'	.70000	.00000E+00	.30000	.70000	
	.00000E+00	.30000	1.0000	-1.0000	2.0000
	1.0000	.00000E+00	2.0000	1.0000	.00000E+00/
34045 'GENROU' 1	5.7900	.59000E-01	.50000	.60000E-01	
	6.7619	.00000E+00	1.7790	1.7360	.33600
	.53800	.17500	.13125	.16330	.63200 /
34045 'EXAC1' 1	.00000E+00	.00000E+00	.00000E+00	400.00	
	.20000E-01	7.1000	-7.1000	.80000	.30000E-01
	1.0000	.00000E+00	.00000E+00	1.0000	2.8433
	.50000	3.7910	.86000 /		
34046 'GENROU' 1	7.1300	.60000E-01	.70000	.60000E-01	
	3.4211	.00000E+00	1.8210	1.7730	.26200
	.42130	.13600	.10200	.12760	.50000 /
34046 'EXAC1' 1	.00000E+00	.00000E+00	.00000E+00	400.00	
	.20000E-01	6.6000	-6.6000	.80000	.30000E-01
	1.0000	.00000E+00	.00000E+00	1.0000	2.6723
	.50000	3.5630	.86000 /		
34048 'IEELCB'	.70000	.00000E+00	.30000	.70000	
	.00000E+00	.30000	1.0000	-1.0000	2.0000
	1.0000	.00000E+00	2.0000	1.0000	.00000E+00/
34052 'IEELCB'	.70000	.00000E+00	.30000	.70000	
	.00000E+00	.30000	1.0000	-1.0000	2.0000
	1.0000	.00000E+00	2.0000	1.0000	.00000E+00/
34053 'IEELCB'	.70000	.00000E+00	.30000	.70000	
	.00000E+00	.30000	1.0000	-1.0000	2.0000
	1.0000	.00000E+00	2.0000	1.0000	.00000E+00/
34054 'IEELCB'	.41000	.00000E+00	.59000	.41000	
	.00000E+00	.59000	1.0000	-1.0000	2.0000
	1.0000	.00000E+00	2.0000	1.0000	.00000E+00/
34054 'LDSD3'	0 '0'	0			
	58.900	.10000	.50000E-01	1.0000	.00000E+00
	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00
	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00
	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00
	.00000E+00/				
34055 'IEELCB'	.25000	.75000	.00000E+00	.25000	
	.75000	.00000E+00	1.0000	-1.0000	2.0000
	1.0000	.00000E+00	2.0000	1.0000	.00000E+00/
34055 'LDSD3'	0 '0'	0			
	59.100	.10000	.50000E-01	1.0000	.00000E+00
	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00
	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00
	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00
	.00000E+00/				
34057 'GENCLS' 1	2.3127	2.0000 /			
34059 'IEELCB'	.32000	.00000E+00	.68000	.32000	
	.00000E+00	.68000	1.0000	-1.0000	2.0000
	1.0000	.00000E+00	2.0000	1.0000	.00000E+00/
34060 'IEELCB'	.10000E-01	.99000	.00000E+00	.10000E-01	
	.99000	.00000E+00	1.0000	-1.0000	2.0000
	1.0000	.00000E+00	2.0000	1.0000	.00000E+00/
34063 'IEELCB'	.37000	.00000E+00	.63000	.37000	
	.00000E+00	.63000	1.0000	-1.0000	2.0000
	1.0000	.00000E+00	2.0000	1.0000	.00000E+00/
34063 'IEELCB'	.37000	.00000E+00	.63000	.37000	
	.00000E+00	.63000	1.0000	-1.0000	2.0000
	1.0000	.00000E+00	2.0000	1.0000	.00000E+00/
34063 'LDSD3'	0 '0'	0			
	58.000	.10000	.50000E-01	.39800	.00000E+00
	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00
	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00
	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00
	.00000E+00/				
34067 'IEELCB'	.90000E-01	.91000	.00000E+00	.90000E-01	
	.91000	.00000E+00	1.0000	-1.0000	2.0000

	1.0000	.00000E+00	2.0000	1.0000	.00000E+00/
34067 'LDSHD3'	0 '0'	0	0		
	57.800	.10000	.50000E-01	.39200	.00000E+00
	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00
	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00
	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00
	.00000E+00/				
34070 'GENROU' H	5.3000	.50000E-01	.50000		.77000E-01
	2.4127	.00000E+00	1.6200	1.5700	.24500
	.37600	.17500	.95000E-01	.10700	.46100 /
34070 'IEEEVC' H	.00000E+00	.94500E-01/			
34070 'ST2CUT' H	5 0	1 0	.00000E+00		1.2400
	.00000E+00	.27000E-01	10.000	10.000	1.1870
	.98000E-01	1.1870	.98000E-01	.00000E+00	.00000E+00
	.50000E-01	-.50000E-01	.00000E+00	.00000E+00/	
34070 'IEEEX1' H	.00000E+00	25.000	.20000		.00000E+00
	.00000E+00	1.0000	-1.0000	.00000E+00	.60000
	.96000E-01	1.0000	.00000E+00	2.8125	.82000E-01
	3.7500	.32000 /			
34070 'IEEEG1' H	34070 L	35.450	.20000		.00000E+00
	.10000	.17725	-.35450	1.7725	.00000E+00
	.50000E-01	.29000	.00000E+00	11.000	.22000
	.00000E+00	.30000	.00000E+00	.49000	.00000E+00
	.00000E+00	.00000E+00/			
34070 'GENROU' L	6.8000	.50000E-01	.37000		.67000E-01
	6.8010	.00000E+00	1.6500	1.5700	.35000
	.52000	.23500	.15000	.10840	.44100 /
34070 'IEEEVC' L	.00000E+00	.95500E-01/			
34070 'ST2CUT' L	5 0	1 0	.00000E+00		1.1700
	.00000E+00	.25000E-01	10.000	10.000	1.2120
	.10600	1.2120	.10600	.00000E+00	.00000E+00
	.50000E-01	-.50000E-01	.00000E+00	.00000E+00/	
34070 'IEEEX1' L	.00000E+00	25.000	.20000		.00000E+00
	.00000E+00	1.0000	-1.0000	.00000E+00	.59700
	.96000E-01	1.0000	.00000E+00	2.8238	.82000E-01
	3.7650	.31900 /			
34072 'GENROU' H	5.3000	.50000E-01	.50000		.77000E-01
	2.4127	.00000E+00	1.6200	1.5700	.24500
	.37600	.17500	.95000E-01	.10700	.46100 /
34072 'IEEEVC' H	.00000E+00	.94500E-01/			
34072 'ST2CUT' H	5 0	1 0	.00000E+00		1.2400
	.00000E+00	.27000E-01	10.000	10.000	1.1870
	.98000E-01	1.1870	.98000E-01	.00000E+00	.00000E+00
	.50000E-01	-.50000E-01	.00000E+00	.00000E+00/	
34072 'IEEEX1' H	.00000E+00	25.000	.20000		.00000E+00
	.00000E+00	1.0000	-1.0000	.00000E+00	.60000
	.96000E-01	1.0000	.00000E+00	2.8125	.82000E-01
	3.7500	.32000 /			
34072 'IEEEG1' H	34072 L	35.450	.20000		.00000E+00
	.10000	.17725	-.35450	1.7725	.00000E+00
	.50000E-01	.29000	.00000E+00	11.000	.22000
	.00000E+00	.30000	.00000E+00	.49000	.00000E+00
	.00000E+00	.00000E+00/			
34072 'GENROU' L	6.8000	.50000E-01	.37000		.67000E-01
	6.8010	.00000E+00	1.6500	1.5700	.35000
	.52000	.23500	.15000	.10840	.44100 /
34072 'IEEEVC' L	.00000E+00	.95500E-01/			
34072 'ST2CUT' L	5 0	1 0	.00000E+00		1.1700
	.00000E+00	.25000E-01	10.000	10.000	1.2120
	.10600	1.2120	.10600	.00000E+00	.00000E+00
	.50000E-01	-.50000E-01	.00000E+00	.00000E+00/	
34072 'IEEEX1' L	.00000E+00	25.000	.20000		.00000E+00
	.00000E+00	1.0000	-1.0000	.00000E+00	.59700
	.96000E-01	1.0000	.00000E+00	2.8238	.82000E-01
	3.7650	.31900 /			
34074 'GENROU' H	5.2000	.50000E-01	.50000		.77000E-01
	2.4385	.00000E+00	1.6000	1.5500	.23500

	.37300	.17000	.95000E-01	.10600	.41100	/
34074	'IEEEVC' H	.00000E+00	.93500E-01/			
34074	'ST2CUT' H	5 0	2 0	.00000E+00	3.7000	
	.00000E+00	.25000E-01	10.000	10.000	1.2200	
	.93000E-01	1.2200	.93000E-01	.00000E+00	.00000E+00	
	.50000E-01	-.50000E-01	.00000E+00	.00000E+00/		
34074	'IEEEX1' H	.00000E+00	25.000	.20000	.00000E+00	
	.00000E+00	1.0000	-1.0000	.00000E+00	.60300	
	.96000E-01	1.0000	.00000E+00	2.8012	.83000E-01	
	3.7350	.32200				/
34074	'IEEEG1' H	34074 L	34.759	.20000	.00000E+00	
	.10000	.17380	-.34759	1.7380	.00000E+00	
	.50000E-01	.29000	.00000E+00	11.000	.22000	
	.00000E+00	.30000	.00000E+00	.49000	.00000E+00	
	.00000E+00	.00000E+00/				
34074	'GENROU' L	7.0000	.50000E-01	.36000	.68000E-01	
	7.0765	.00000E+00	1.5800	1.5100	.33500	
	.50000	.22500	.14000	.12320	.46000	/
34074	'IEEEVC' L	.00000E+00	.91500E-01/			
34074	'ST2CUT' L	5 0	2 0	.00000E+00	1.0700	
	.00000E+00	.25000E-01	10.000	10.000	1.2200	
	.95000E-01	1.2200	.95000E-01	.00000E+00	.00000E+00	
	.50000E-01	-.50000E-01	.00000E+00	.00000E+00/		
34074	'IEEEX1' L	.00000E+00	25.000	.20000	.00000E+00	
	.00000E+00	1.0000	-1.0000	.00000E+00	.60800	
	.97000E-01	1.0000	.00000E+00	2.7787	.83000E-01	
	3.7050	.32400				/
34076	'GENROU' H	5.2000	.50000E-01	.50000	.77000E-01	
	2.4385	.00000E+00	1.6000	1.5500	.23500	
	.37300	.17000	.95000E-01	.10600	.41100	/
34076	'IEEEVC' H	.00000E+00	.93500E-01/			
34076	'ST2CUT' H	5 0	2 0	.00000E+00	3.7000	
	.00000E+00	.25000E-01	10.000	10.000	1.2200	
	.93000E-01	1.2200	.93000E-01	.00000E+00	.00000E+00	
	.50000E-01	-.50000E-01	.00000E+00	.00000E+00/		
34076	'IEEEX1' H	.00000E+00	25.000	.20000	.00000E+00	
	.00000E+00	1.0000	-1.0000	.00000E+00	.60300	
	.96000E-01	1.0000	.00000E+00	2.8012	.83000E-01	
	3.7350	.32200				/
34076	'IEEEG1' H	34076 L	34.759	.20000	.00000E+00	
	.10000	.17380	-.34759	1.7380	.00000E+00	
	.50000E-01	.29000	.00000E+00	11.000	.22000	
	.00000E+00	.30000	.00000E+00	.49000	.00000E+00	
	.00000E+00	.00000E+00/				
34076	'GENROU' L	7.0000	.50000E-01	.36000	.68000E-01	
	7.0765	.00000E+00	1.5800	1.5100	.33500	
	.50000	.22500	.14000	.12320	.46000	/
34076	'IEEEVC' L	.00000E+00	.91500E-01/			
34076	'ST2CUT' L	5 0	2 0	.00000E+00	1.0700	
	.00000E+00	.25000E-01	10.000	10.000	1.2200	
	.95000E-01	1.2200	.95000E-01	.00000E+00	.00000E+00	
	.50000E-01	-.50000E-01	.00000E+00	.00000E+00/		
34076	'IEEEX1' L	.00000E+00	25.000	.20000	.00000E+00	
	.00000E+00	1.0000	-1.0000	.00000E+00	.60800	
	.97000E-01	1.0000	.00000E+00	2.7787	.83000E-01	
	3.7050	.32400				/
34078	'IEELCB'	.35000	.00000E+00	.65000	.35000	
	.00000E+00	.65000	1.0000	-1.0000	2.0000	
	1.0000	.00000E+00	2.0000	1.0000	.00000E+00/	
34080	'IEELCB'	.00000E+00	.00000E+00	1.0000	.00000E+00	
	.00000E+00	1.0000	1.0000	-1.0000	2.0000	
	1.0000	.00000E+00	2.0000	1.0000	.00000E+00/	
34080	'LDSHD3'	0 '0'	0			
	59.300	.10000	.50000E-01	1.0000	.00000E+00	
	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00	
	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00	
	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00	

		.00000E+00/			
34082	'IEELCB'	.42000	.00000E+00	.58000	.42000
		.00000E+00	.58000	1.0000	2.0000
		1.0000	.00000E+00	2.0000	1.0000
34083	'IEELCB'	.50000E-01	.95000	.00000E+00	.50000E-01
		.95000	.00000E+00	1.0000	-1.0000
		1.0000	.00000E+00	2.0000	1.0000
34083	'LDSHD3'	0 '0'	0		
		59.100	.10000	.23333	.91000E-01
		.10000	.23333	.10500	58.700
		.23333	.92000E-01	58.500	.10000
		.12300	.00000E+00	.00000E+00	.00000E+00
		.00000E+00/			
34083	'LDSHD3'	0 '0'	0		
		58.200	.10000	.23333	1.0000
		.00000E+00	.00000E+00	.00000E+00	.00000E+00
		.00000E+00	.00000E+00	.00000E+00	.00000E+00
		.00000E+00	.00000E+00	.00000E+00	.00000E+00
		.00000E+00/			
34084	'IEELCB'	.50000E-01	.95000	.00000E+00	.50000E-01
		.95000	.00000E+00	1.0000	-1.0000
		1.0000	.00000E+00	2.0000	1.0000
34084	'LDSHD3'	0 '0'	0		
		58.700	.10000	.50000E-01	1.0000
		.00000E+00	.00000E+00	.00000E+00	.00000E+00
		.00000E+00	.00000E+00	.00000E+00	.00000E+00
		.00000E+00	.00000E+00	.00000E+00	.00000E+00
		.00000E+00/			
34086	'GENROU' 1	3.1400	.50000E-01	.31000	.74000E-01
		5.8444	.00000E+00	2.0210	1.9470
		.68000	.27700	.22600	.15200
34086	'EXST1' 1	.00000E+00	.10000	-.10000	1.0000
		10.000	200.00	.50000E-01	5.4000
		.10000	.00000E+00	10.000	-5.4000
34090	'IEELCB'	.38000	.00000E+00	.62000	.38000
		.00000E+00	.62000	1.0000	-1.0000
		1.0000	.00000E+00	2.0000	1.0000
34091	'IEELCB'	.38000	.00000E+00	.62000	.38000
		.00000E+00	.62000	1.0000	-1.0000
		1.0000	.00000E+00	2.0000	1.0000
34092	'IEELCB'	.70000	.00000E+00	.30000	.70000
		.00000E+00	.30000	1.0000	-1.0000
		1.0000	.00000E+00	2.0000	1.0000
34093	'GENROU' H	5.8900	.50000E-01	.60000	.80000E-01
		2.3828	.00000E+00	1.6800	1.6100
		.32000	.17100	.95000E-01	.12100
34093	'IEEEVC' H	.00000E+00	.64000E-01/		
34093	'ST2CUT' H	5 0	1 0	.00000E+00	1.2500
		.00000E+00	.20000E-01	10.000	10.000
		.10500	1.4250	.10500	.00000E+00
		.50000E-01	-.50000E-01	.00000E+00	.00000E+00/
34093	'IEEEX1' H	.60000E-01	25.000	.20000	.00000E+00
		.00000E+00	1.0000	-1.0000	.00000E+00
		.91000E-01	.35000	.00000E+00	2.9700
		3.9600	.30400		.78000E-01
34093	'IEEEG1' H	34093 L	33.594	.20000	.00000E+00
		.10000	.16797	-.33594	1.6797
		.30000	.31000	.00000E+00	10.000
		.00000E+00	.30000	.00000E+00	.49000
		.00000E+00	.00000E+00/		
34093	'GENROU' L	5.1000	.50000E-01	.33000	.70000E-01
		6.2266	.00000E+00	1.6600	1.5900
		.56500	.25000	.14000	.11220
34093	'IEEEVC' L	.00000E+00	.64000E-01/		
34093	'ST2CUT' L	5 0	1 0	.00000E+00	1.1200
		.00000E+00	.20000E-01	9.7000	9.7000
		.10500	1.3400	.10500	.00000E+00

	.50000E-01	-.50000E-01	.00000E+00	.00000E+00/	
34093	'IEEEX1' L	.60000E-01	25.000	.20000	.00000E+00
	.00000E+00	1.0000	-1.0000	.00000E+00	.77800
	.91000E-01	.35000	.00000E+00	2.9700	.78000E-01
	3.9600	.30400 /			
34098	'GENROU' H	5.8900	.50000E-01	.60000	.80000E-01
	2.3828	.00000E+00	1.6800	1.6100	.23200
	.32000	.17100	.95000E-01	.12100	.61000 /
34098	'IEEEVC' H	.00000E+00	.64000E-01/		
34098	'ST2CUT' H	5 0	1 0	.00000E+00	1.2500
	.00000E+00	.20000E-01	10.000	10.000	1.4250
	.10500	1.4250	.10500	.00000E+00	.00000E+00
	.50000E-01	-.50000E-01	.00000E+00	.00000E+00/	
34098	'IEEEX1' H	.60000E-01	25.000	.20000	.00000E+00
	.00000E+00	1.0000	-1.0000	.00000E+00	.56800
	.91000E-01	.35000	.00000E+00	2.9700	.78000E-01
	3.9600	.30400 /			
34098	'IEEEG1' H	34098 L	33.594	.20000	.00000E+00
	.10000	.16797	-.33594	1.6797	.00000E+00
	.30000	.31000	.00000E+00	10.000	.20000
	.00000E+00	.30000	.00000E+00	.49000	.00000E+00
	.00000E+00	.00000E+00/			
34098	'GENROU' L	5.1000	.50000E-01	.33000	.70000E-01
	6.2266	.00000E+00	1.6600	1.5900	.36900
	.56500	.25000	.14000	.11220	.43300 /
34098	'IEEEVC' L	.00000E+00	.64000E-01/		
34098	'ST2CUT' L	5 0	1 0	.00000E+00	1.1200
	.00000E+00	.20000E-01	9.7000	9.7000	1.3400
	.10500	1.3400	.10500	.00000E+00	.00000E+00
	.50000E-01	-.50000E-01	.00000E+00	.00000E+00/	
34098	'IEEEX1' L	.60000E-01	25.000	.20000	.00000E+00
	.00000E+00	1.0000	-1.0000	.00000E+00	.77800
	.91000E-01	.35000	.00000E+00	2.9700	.78000E-01
	3.9600	.30400 /			
34106	'IEELCB'	.70000	.00000E+00	.30000	.70000
	.00000E+00	.30000	1.0000	-1.0000	2.0000
	1.0000	.00000E+00	2.0000	1.0000	.00000E+00/
34107	'GENCLS' 1	2.0657	2.0000 /		
34109	'GENCLS' 1	2.3424	2.0000 /		
34111	'IEELCB'	.10000	.00000E+00	.90000	.10000
	.00000E+00	.90000	1.0000	-1.0000	2.0000
	1.0000	.00000E+00	2.0000	1.0000	.00000E+00/
34111	'LDSD3'	0 '0'	0		
	58.900	.10000	.50000E-01	.39200	.00000E+00
	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00
	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00
	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00
	.00000E+00/				
34112	'IEELCB'	.70000	.00000E+00	.30000	.70000
	.00000E+00	.30000	1.0000	-1.0000	2.0000
	1.0000	.00000E+00	2.0000	1.0000	.00000E+00/
34113	'IEELCB'	.70000	.00000E+00	.30000	.70000
	.00000E+00	.30000	1.0000	-1.0000	2.0000
	1.0000	.00000E+00	2.0000	1.0000	.00000E+00/
34114	'IEELCB'	.70000	.00000E+00	.30000	.70000
	.00000E+00	.30000	1.0000	-1.0000	2.0000
	1.0000	.00000E+00	2.0000	1.0000	.00000E+00/
34116	'IEELCB'	.40000	.00000E+00	.60000	.40000
	.00000E+00	.60000	1.0000	-1.0000	2.0000
	1.0000	.00000E+00	2.0000	1.0000	.00000E+00/
34116	'IEELCB'	.40000	.00000E+00	.60000	.40000
	.00000E+00	.60000	1.0000	-1.0000	2.0000
	1.0000	.00000E+00	2.0000	1.0000	.00000E+00/
34116	'LDSD3'	0 '0'	0		
	59.100	.10000	.50000E-01	.35700	.00000E+00
	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00
	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00

	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00
	.00000E+00/				
34118 'IEELCB'	.38000	.00000E+00	.62000	.38000	
	.00000E+00	.62000	1.0000	-1.0000	2.0000
	1.0000	.00000E+00	2.0000	1.0000	.00000E+00/
34118 'IEELCB'	.38000	.00000E+00	.62000	.38000	
	.00000E+00	.62000	1.0000	-1.0000	2.0000
	1.0000	.00000E+00	2.0000	1.0000	.00000E+00/
34118 'LDSHD3'	0 '0'	0			
	59.100	.10000	.50000E-01	.32000E-01	58.900
	.10000	.50000E-01	.19000E-01	58.700	.10000
	.50000E-01	.47700	58.500	.10000	.50000E-01
	.17000E-01	.00000E+00	.00000E+00	.00000E+00	.00000E+00
	.00000E+00/				
34118 'LDSHD3'	0 '0'	0			
	58.000	.10000	.50000E-01	.10330	.00000E+00
	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00
	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00
	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00
	.00000E+00/				
34123 'IEELCB'	.37000	.00000E+00	.63000	.37000	
	.00000E+00	.63000	1.0000	-1.0000	2.0000
	1.0000	.00000E+00	2.0000	1.0000	.00000E+00/
34123 'LDSHD3'	0 '0'	0			
	57.800	.10000	.50000E-01	1.0000	.00000E+00
	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00
	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00
	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00
	.00000E+00/				
34124 'IEELCB'	.30000E-01	.97000	.00000E+00	.30000E-01	
	.97000	.00000E+00	1.0000	-1.0000	2.0000
	1.0000	.00000E+00	2.0000	1.0000	.00000E+00/
34124 'LDSHD3'	0 '0'	0			
	59.100	.10000	.50000E-01	.10600	58.900
	.10000	.50000E-01	.89000E-01	58.700	.10000
	.50000E-01	.14400	58.500	.10000	.50000E-01
	.40000E-01	.00000E+00	.00000E+00	.00000E+00	.00000E+00
	.00000E+00/				
34124 'LDSHD3'	0 '0'	0			
	58.000	.10000	.50000E-01	.22222	.00000E+00
	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00
	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00
	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00
	.00000E+00/				
34124 'LDSHD3'	0 '0'	0			
	57.800	.10000	.50000E-01	.42630	.00000E+00
	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00
	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00
	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00
	.00000E+00/				
34126 'IEELCB'	.38000	.00000E+00	.62000	.38000	
	.00000E+00	.62000	1.0000	-1.0000	2.0000
	1.0000	.00000E+00	2.0000	1.0000	.00000E+00/
34126 'IEELCB'	.38000	.00000E+00	.62000	.38000	
	.00000E+00	.62000	1.0000	-1.0000	2.0000
	1.0000	.00000E+00	2.0000	1.0000	.00000E+00/
34126 'LDSHD3'	0 '0'	0			
	58.700	.10000	.50000E-01	.54000	58.000
	.10000	.50000E-01	.46000	.00000E+00	.00000E+00
	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00
	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00
	.00000E+00/				
34127 'IEELCB'	.39000	.00000E+00	.61000	.39000	
	.00000E+00	.61000	1.0000	-1.0000	2.0000
	1.0000	.00000E+00	2.0000	1.0000	.00000E+00/
34139 'GENROU' H	5.8900	.50000E-01	.60000	.80000E-01	
	2.3516	.00000E+00	1.6800	1.6100	.23200

	.32000	.17100	.95000E-01	.12840	.61200 /
34139	'IEEEVC' H	.00000E+00	.64000E-01/		
34139	'ST2CUT' H	5 0	1 0	.00000E+00	1.2500
	.00000E+00	.20000E-01	10.000	10.000	1.4250
	.10500	1.4250	.10500	.00000E+00	.00000E+00
	.50000E-01	-.50000E-01	.00000E+00	.00000E+00/	
34139	'IEEEX1' H	.60000E-01	25.000	.20000	.00000E+00
	.00000E+00	1.0000	-1.0000	.00000E+00	.56400
	.90000E-01	.35000	.00000E+00	2.9925	.78000E-01
	3.9900	.30100 /			
34139	'IEEEG1' H	34139 L	33.594	.20000	.00000E+00
	.10000	.16797	-.33594	1.6797	.00000E+00
	.50000E-01	.32000	.00000E+00	6.6000	.21000
	.00000E+00	.30000	.00000E+00	.47000	.00000E+00
	.00000E+00	.00000E+00/			
34139	'GENROU' L	5.1000	.50000E-01	.33000	.70000E-01
	6.2266	.00000E+00	1.6600	1.5900	.36900
	.56500	.25000	.14000	.11170	.43300 /
34139	'IEEEVC' L	.00000E+00	.64000E-01/		
34139	'ST2CUT' L	5 0	1 0	.00000E+00	1.1200
	.00000E+00	.20000E-01	9.7000	9.7000	1.3400
	.10500	1.3400	.10500	.00000E+00	.00000E+00
	.50000E-01	-.50000E-01	.00000E+00	.00000E+00/	
34139	'IEEEX1' L	.60000E-01	25.000	.20000	.00000E+00
	.00000E+00	1.0000	-1.0000	.00000E+00	.56800
	.91000E-01	.35000	.00000E+00	2.9700	.78000E-01
	3.9600	.30000 /			
34140	'GENROU' H	5.8900	.50000E-01	.60000	.80000E-01
	2.3516	.00000E+00	1.6800	1.6100	.23200
	.32000	.17100	.95000E-01	.12840	.61200 /
34140	'IEEEVC' H	.00000E+00	.64000E-01/		
34140	'ST2CUT' H	5 0	1 0	.00000E+00	1.2500
	.00000E+00	.20000E-01	10.000	10.000	1.4250
	.10500	1.4250	.10500	.00000E+00	.00000E+00
	.50000E-01	-.50000E-01	.00000E+00	.00000E+00/	
34140	'IEEEX1' H	.60000E-01	25.000	.20000	.00000E+00
	.00000E+00	1.0000	-1.0000	.00000E+00	.56400
	.90000E-01	.35000	.00000E+00	2.9925	.78000E-01
	3.9900	.30100 /			
34140	'IEEEG1' H	34140 L	33.594	.20000	.00000E+00
	.10000	.16797	-.33594	1.6797	.00000E+00
	.50000E-01	.32000	.00000E+00	6.6000	.21000
	.00000E+00	.30000	.00000E+00	.47000	.00000E+00
	.00000E+00	.00000E+00/			
34140	'GENROU' L	5.1000	.50000E-01	.33000	.70000E-01
	6.2266	.00000E+00	1.6600	1.5900	.36900
	.56500	.25000	1.4000	.11170	.43300 /
34140	'IEEEVC' L	.00000E+00	.64000E-01/		
34140	'ST2CUT' L	5 0	1 0	.00000E+00	1.1200
	.00000E+00	.20000E-01	9.7000	9.7000	1.3400
	.10500	1.3400	.10500	.00000E+00	.00000E+00
	.50000E-01	-.50000E-01	.00000E+00	.00000E+00/	
34140	'IEEEX1' L	.60000E-01	25.000	.20000	.00000E+00
	.00000E+00	1.0000	-1.0000	.00000E+00	.56800
	.91000E-01	.35000	.00000E+00	2.9700	.78000E-01
	3.9600	.30000 /			
34141	'GENROU' 1	7.1300	.50000E-01	.70000	.60000E-01
	3.4060	.00000E+00	1.8210	1.7730	.26200
	.42130	.23750	.21300	.10600	.50000 /
34141	'EXAC1' 1	.00000E+00	.00000E+00	.00000E+00	400.00
	.50000E-01	6.6000	-6.6000	.80000	.30000E-01
	1.0000	.00000E+00	.00000E+00	1.0000	2.6700
	.50000	3.5600	.86000 /		
34141	'IEELCB'	.70000	.00000E+00	.30000	.70000
	.00000E+00	.30000	1.0000	-1.0000	2.0000
	1.0000	.00000E+00	2.0000	1.0000	.00000E+00/
34143	'IEELCB'	.44000	.00000E+00	.56000	.44000

	.00000E+00	.56000	1.0000	-1.0000	2.0000
	1.0000	.00000E+00	2.0000	1.0000	.00000E+00/
34143 'LDSHD3'	0 '0'	0	0		
	58.000	.10000	.50000E-01	1.0000	.00000E+00
	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00
	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00
	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00
	.00000E+00/				
34144 'IEELCB'	.25000	.75000	.00000E+00	.25000	
	.75000	.00000E+00	1.0000	-1.0000	2.0000
	1.0000	.00000E+00	2.0000	1.0000	.00000E+00/
34144 'LDSHD3'	0 '0'	0	0		
	59.100	.10000	.50000E-01	1.0000	.00000E+00
	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00
	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00
	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00
	.00000E+00/				
34147 'IEELCB'	.48000	.00000E+00	.52000	.48000	
	.00000E+00	.52000	1.0000	-1.0000	2.0000
	1.0000	.00000E+00	2.0000	1.0000	.00000E+00/
34150 'GENROU' 1	6.5900	.50000E-01	.50000	.60000E-01	
	5.0000	.00000E+00	1.6030	1.5140	.21500
	.41300	.12250	.10000	.10000	.40000 /
34150 'EXAC1' 1	.50000E-01	.00000E+00	.00000E+00	200.00	
	.50000E-01	6.0000	-6.0000	1.0000	.50000E-01
	1.0000	.10000	.20000	1.0000	3.0000
	.10000	4.0000	.40000 /		
34151 'GENROU' H	3.7000	.50000E-01	.48000	.60000E-01	
	1.3106	.00000E+00	1.8000	1.7200	.28500
	.49000	.22000	.16000	.87000E-01	.41000 /
34151 'ST2CUT' H	5 0	2 0	.00000E+00	2.2600	
	.00000E+00	.28000E-01	2.4000	2.4000	.38000
	.10000	.38000	.10000	.00000E+00	.00000E+00
	.50000E-01	-.50000E-01	.00000E+00	.00000E+00/	
34151 'EXAC4' H	.00000E+00	.10000	-.10000	1.0000	
	13.500	200.00	.50000E-01	5.1500	-5.1500
	.13000 /				
34151 'IEEEG1' H	34151 L	33.872	.20000	.00000E+00	
	.10000	.16936	-.33872	1.6936	.00000E+00
	.50000E-01	.28000	.00000E+00	12.000	.25000
	.00000E+00	.30000	.00000E+00	.47000	.00000E+00
	.00000E+00	.00000E+00/			
34151 'GENROU' L	8.4000	.50000E-01	.46000	.70000E-01	
	5.9601	.00000E+00	1.7600	1.5800	.28500
	.48500	.20500	.15500	.10500	.41200 /
34151 'ST2CUT' L	5 0	2 0	.00000E+00	8.9500	
	.00000E+00	.28000E-01	.4000	2.4000	.38000
	.10000	.38000	.10000	.00000E+00	.00000E+00
	.50000E-01	-.50000E-01	.00000E+00	.00000E+00/	
34151 'EXAC4' L	.00000E+00	.10000	-.10000	1.0000	
	6.0000	200.00	.50000E-01	5.1500	-5.1500
	.14000 /				
34152 'GENROU' H	3.7000	.50000E-01	.48000	.60000E-01	
	1.3106	.00000E+00	1.8000	1.7200	.28500
	.49000	.22000	.16000	.87000E-01	.41000 /
34152 'ST2CUT' H	5 0	2 0	.00000E+00	2.2600	
	.00000E+00	.28000E-01	2.4000	2.4000	.38000
	.10000	.38000	.10000	.00000E+00	.00000E+00
	.50000E-01	-.50000E-01	.00000E+00	.00000E+00/	
34152 'EXAC4' H	.00000E+00	.10000	-.10000	1.0000	
	13.500	200.00	.50000E-01	5.1500	-5.1500
	.13000 /				
34152 'IEEEG1' H	34152 L	33.872	.20000	.00000E+00	
	.10000	.16936	-.33872	1.6936	.00000E+00
	.50000E-01	.28000	.00000E+00	12.000	.25000
	.00000E+00	.30000	.00000E+00	.47000	.00000E+00
	.00000E+00	.00000E+00/			

34152	'GENROU'	L	8.4000	.50000E-01	.46000	.70000E-01
	5.9601		.00000E+00	1.7600	1.5800	.28500
	.48500		.20500	.15500	.10500	.41200 /
34152	'ST2CUT'	L	5 0	2 0	.00000E+00	8.9500
	.00000E+00		.28000E-01	2.4000	2.4000	.38000
	.10000		.38000	.10000	.00000E+00	.00000E+00
	.50000E-01		-.50000E-01	.00000E+00	.00000E+00/	
34152	'EXAC4'	L	.00000E+00	.10000	-.10000	1.0000
	6.0000		200.00	.50000E-01	5.1500	-5.1500
	.14000 /					
34154	'IEELCB'		.42000	.00000E+00	.58000	.42000
	.00000E+00		.58000	1.0000	-1.0000	2.0000
	1.0000		.00000E+00	2.0000	1.0000	.00000E+00/
34154	'LDSHD3'		0 '0'	0		
	58.700		.10000	.50000E-01	1.0000	.00000E+00
	.00000E+00		.00000E+00	.00000E+00	.00000E+00	.00000E+00
	.00000E+00		.00000E+00	.00000E+00	.00000E+00	.00000E+00
	.00000E+00		.00000E+00	.00000E+00	.00000E+00	.00000E+00
	.00000E+00/					
34155	'IEELCB'		.43000	.00000E+00	.57000	.43000
	.00000E+00		.57000	1.0000	-1.0000	2.0000
	1.0000		.00000E+00	2.0000	1.0000	.00000E+00/
34155	'LDSHD3'		0 '0'	0		
	58.900		.10000	.50000E-01	1.0000	.00000E+00
	.00000E+00		.00000E+00	.00000E+00	.00000E+00	.00000E+00
	.00000E+00		.00000E+00	.00000E+00	.00000E+00	.00000E+00
	.00000E+00		.00000E+00	.00000E+00	.00000E+00	.00000E+00
	.00000E+00/					
34157	'GENROU'	1	3.1400	.50000E-01	.31000	.74000E-01
	5.8444		.00000E+00	2.0210	1.9470	.39900
	.68000		.27700	.22600	.15200	.31000 /
34157	'EXST1'	1	.00000E+00	.10000	-.10000	1.0000
	10.000		200.00	.50000E-01	5.4000	-5.4000
	.10000		.00000E+00	10.000 /		
34163	'GENROU'	1	4.3000	.50000E-01	.43000	.66000E-01
	2.8683		.00000E+00	1.7900	1.7150	.22000
	.40000		.18000	.13500	.80000E-01	.40000 /
34163	'ST2CUT'	1	5 0	1 0	.00000E+00	2.0000
	.00000E+00		.50000E-01	3.0000	3.0000	.10000
	.30000E-01		.10000	.30000E-01	.00000E+00	.00000E+00
	.50000E-01		-.50000E-01	.00000E+00	.00000E+00/	
34163	'EXAC4'	1	.00000E+00	.10000	-.10000	1.0000
	10.000		200.00	.50000E-01	5.3200	-5.3200
	.15000 /					
34163	'IEEEG1'	1	0 0	18.080	.00000E+00	.00000E+00
	.35000E-01		.90402E-01	-.18080	.90402	.00000E+00
	.10000		.32000	.00000E+00	8.7200	.24000
	.00000E+00		.30000	.44000	.00000E+00	.00000E+00
	.00000E+00		.00000E+00/			
34165	'IEELCB'		.70000	.00000E+00	.30000	.70000
	.00000E+00		.30000	1.0000	-1.0000	2.0000
	1.0000		.00000E+00	2.0000	1.0000	.00000E+00/
34166	'IEELCB'		.35000	.00000E+00	.65000	.35000
	.00000E+00		.65000	1.0000	-1.0000	2.0000
	1.0000		.00000E+00	2.0000	1.0000	.00000E+00/
34166	'LDSHD3'		0 '0'	0		
	58.500		.10000	.50000E-01	1.0000	.00000E+00
	.00000E+00		.00000E+00	.00000E+00	.00000E+00	.00000E+00
	.00000E+00		.00000E+00	.00000E+00	.00000E+00	.00000E+00
	.00000E+00		.00000E+00	.00000E+00	.00000E+00	.00000E+00
	.00000E+00/					
34167	'IEELCB'		.40000	.00000E+00	.60000	.40000
	.00000E+00		.60000	1.0000	-1.0000	2.0000
	1.0000		.00000E+00	2.0000	1.0000	.00000E+00/
34167	'IEELCB'		.40000	.60000	.00000E+00	.40000
	.60000		.00000E+00	1.0000	-1.0000	2.0000
	1.0000		.00000E+00	2.0000	1.0000	.00000E+00/

34168	'IEELCB'	.00000E+00	.00000E+00	1.0000	.00000E+00
	.00000E+00	1.0000	1.0000	-1.0000	2.0000
	1.0000	.00000E+00	2.0000	1.0000	.00000E+00/
34168	'LDSHD3'	0 '0'	0		
	59.300	.10000	.50000E-01	1.0000	.00000E+00
	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00
	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00
	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00
	.00000E+00/				
34169	'IEELCB'	.45000	.00000E+00	.55000	.45000
	.00000E+00	.55000	1.0000	-1.0000	2.0000
	1.0000	.00000E+00	2.0000	1.0000	.00000E+00/
34169	'LDSHD3'	0 '0'	0		
	58.900	.10000	.50000E-01	1.0000	.00000E+00
	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00
	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00
	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00
	.00000E+00/				
34170	'GENROU' 1	5.7000	.50000E-01	.49000	.77000E-01
	3.3281	.00000E+00	1.6500	1.5900	.23000
	.38000	.17000	.10000	.10690	.49500 /
34170	'ST2CUT' 1	5 0	1 0	.00000E+00	1.8900
	.00000E+00	.35000E-01	10.000	10.000	1.2000
	.79000E-01	1.2000	.79000E-01	.00000E+00	.00000E+00
	.50000E-01	-.50000E-01	.00000E+00	.00000E+00/	
34170	'IEEEX1' 1	.60000E-01	25.000	.20000	.00000E+00
	.00000E+00	1.0000	-1.0000	.00000E+00	.55800
	.89000E-01	.35000	.00000E+00	3.0262	.76000E-01
	4.0350	.29700 /			
34170	'IEEEG1' 1	0 0	18.229	.20000	.00000E+00
	.10000	.91146E-01	-.18229	.91146	.00000E+00
	.50000E-01	.26000	.00000E+00	8.0000	.37000
	.00000E+00	.30000	.37000	.00000E+00	.00000E+00
	.00000E+00	.00000E+00/			
34176	'IEELCB'	.30000E-01	.97000	.00000E+00	.30000E-01
	.97000	.00000E+00	1.0000	-1.0000	2.0000
	1.0000	.00000E+00	2.0000	1.0000	.00000E+00/
34176	'LDSHD3'	0 '0'	0		
	57.800	.10000	.50000E-01	1.0000	.00000E+00
	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00
	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00
	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00
	.00000E+00/				
34178	'IEELCB'	.42000	.00000E+00	.58000	.42000
	.00000E+00	.58000	1.0000	-1.0000	2.0000
	1.0000	.00000E+00	2.0000	1.0000	.00000E+00/
34178	'IEELCB'	.42000	.00000E+00	.58000	.42000
	.00000E+00	.58000	1.0000	-1.0000	2.0000
	1.0000	.00000E+00	2.0000	1.0000	.00000E+00/
34178	'LDSHD3'	0 '0'	0		
	58.700	.10000	.50000E-01	.29300	.00000E+00
	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00
	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00
	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00
	.00000E+00/				
34180	'GENROU' 1	8.0000	.50000E-01	1.5000	.60000E-01
	5.3906	.00000E+00	1.9500	1.8700	.34000
	.34000	.29000	.21750	.19350	.68000 /
34180	'EXAC1' 1	.00000E+00	2.6400	.70000	85.000
	.50000E-01	18.700	-15.000	.84000	.10000E-03
	1.0000	.18000	1.8600	1.0000	5.8200
	.89000E-01	7.7600	.34600 /		
34180	'IEEEG1' 1	0 0	18.211	.18000	.00000E+00
	.40000E-01	.91054E-01	-.18211	.91054	.00000E+00
	.20000	.30000	.00000E+00	5.0000	.40000
	.00000E+00	.30000	.30000	.00000E+00	.00000E+00
	.00000E+00	.00000E+00/			

34181	'GENROU'	1	8.0000	.50000E-01	1.5000	.60000E-01
	5.3906		.00000E+00	1.9500	1.8700	.34000
	.34000		.29000	.21750	.19350	.68000 /
34181	'EXAC1'	1	.00000E+00	2.6400	.70000	85.000
	.50000E-01		18.700	-15.000	.84000	.10000E-03
	1.0000		.18000	1.8600	1.0000	5.8200
	.89000E-01		7.7600	.34600 /		
34181	'IEEEG1'	1	0 0	18.211	.18000	.00000E+00
	.40000E-01		.91054E-01	-.18211	.91054	.00000E+00
	.20000		.30000	.00000E+00	5.0000	.40000
	.00000E+00		.30000	.30000	.00000E+00	.00000E+00
	.00000E+00		.00000E+00/			
34184	'IEELCB'		.41000	.00000E+00	.59000	.41000
	.00000E+00		.59000	1.0000	-1.0000	2.0000
	1.0000		.00000E+00	2.0000	1.0000	.00000E+00/
34184	'LDSHD3'		0 '0'	0		
	57.800		.10000	.50000E-01	1.0000	.00000E+00
	.00000E+00		.00000E+00	.00000E+00	.00000E+00	.00000E+00
	.00000E+00		.00000E+00	.00000E+00	.00000E+00	.00000E+00
	.00000E+00		.00000E+00	.00000E+00	.00000E+00	.00000E+00
	.00000E+00/					
34185	'IEELCB'		.11000	.89000	.00000E+00	.11000
	.89000		.00000E+00	1.0000	-1.0000	2.0000
	1.0000		.00000E+00	2.0000	1.0000	.00000E+00/
34185	'LDSHD3'		0 '0'	0		
	58.700		.10000	.50000E-01	1.0000	.00000E+00
	.00000E+00		.00000E+00	.00000E+00	.00000E+00	.00000E+00
	.00000E+00		.00000E+00	.00000E+00	.00000E+00	.00000E+00
	.00000E+00		.00000E+00	.00000E+00	.00000E+00	.00000E+00
	.00000E+00/					
34187	'IEELCB'		.70000	.00000E+00	.30000	.70000
	.00000E+00		.30000	1.0000	-1.0000	2.0000
	1.0000		.00000E+00	2.0000	1.0000	.00000E+00/
34188	'IEELCB'		.70000	.00000E+00	.30000	.70000
	.00000E+00		.30000	1.0000	-1.0000	2.0000
	1.0000		.00000E+00	2.0000	1.0000	.00000E+00/
34189	'IEELCB'		.70000	.00000E+00	.30000	.70000
	.00000E+00		.30000	1.0000	-1.0000	2.0000
	1.0000		.00000E+00	2.0000	1.0000	.00000E+00/
34190	'IEELCB'		.70000	.00000E+00	.30000	.70000
	.00000E+00		.30000	1.0000	-1.0000	2.0000
	1.0000		.00000E+00	2.0000	1.0000	.00000E+00/
34193	'IEELCB'		.40000	.00000E+00	.60000	.40000
	.00000E+00		.60000	1.0000	-1.0000	2.0000
	1.0000		.00000E+00	2.0000	1.0000	.00000E+00/
34196	'GENROU'	1	5.8200	.50000E-01	.74000	.60000E-01
	4.0272		.00000E+00	2.1284	2.0022	.24000
	.39440		.17190	.12790	.16670	.45500 /
34196	'EXAC1'	1	.50000E-01	.00000E+00	.00000E+00	200.00
	.50000E-01		6.0000	-3.0000	1.0000	.50000E-01
	1.0000		.10000	.20000	1.0000	3.0000
	.10000		4.0000	.40000 /		
34198	'GENROU'	1	3.1400	.50000E-01	.31000	.74000E-01
	5.8444		.00000E+00	2.0210	1.9470	.39900
	.68000		.27700	.22600	.15200	.31000 /
34198	'EXST1'	1	.00000E+00	.10000	-.10000	1.0000
	10.000		200.00	.50000E-01	5.4000	-5.4000
	.10000		.00000E+00	10.000 /		
34202	'IEELCB'		.70000	.00000E+00	.30000	.70000
	.00000E+00		.30000	1.0000	-1.0000	2.0000
	1.0000		.00000E+00	2.0000	1.0000	.00000E+00/
34204	'IEELCB'		.40000	.00000E+00	.60000	.40000
	.00000E+00		.60000	1.0000	-1.0000	2.0000
	1.0000		.00000E+00	2.0000	1.0000	.00000E+00/
34204	'LDSHD3'		0 '0'	0		
	58.200		.10000	.50000E-01	1.0000	.00000E+00
	.00000E+00		.00000E+00	.00000E+00	.00000E+00	.00000E+00

	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00
	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00
	.00000E+00/				
34205 'IEELCB'	.37000	.00000E+00	.63000	.37000	
	.00000E+00	.63000	1.0000	-1.0000	2.0000
	1.0000	.00000E+00	2.0000	1.0000	.00000E+00/
34206 'IEELCB'	.70000	.00000E+00	.30000	.70000	
	.00000E+00	.30000	1.0000	-1.0000	2.0000
	1.0000	.00000E+00	2.0000	1.0000	.00000E+00/
34208 'IEELCB'	.30000E-01	.97000	.00000E+00	.30000E-01	
	.97000	.00000E+00	1.0000	-1.0000	2.0000
	1.0000	.00000E+00	2.0000	1.0000	.00000E+00/
34208 'LDSD3'	0 '0'	0			
	58.500	.10000	.50000E-01	1.0000	.00000E+00
	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00
	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00
	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00
	.00000E+00/				
34209 'IEELCB'	.00000E+00	.00000E+00	1.0000	.00000E+00	
	.00000E+00	1.0000	1.0000	-1.0000	2.0000
	1.0000	.00000E+00	2.0000	1.0000	.00000E+00/
34209 'LDSD3'	0 '0'	0			
	59.300	.10000	.50000E-01	1.0000	.00000E+00
	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00
	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00
	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00
	.00000E+00/				
34212 'IEELCB'	.40000	.00000E+00	.60000	.40000	
	.00000E+00	.60000	1.0000	-1.0000	2.0000
	1.0000	.00000E+00	2.0000	1.0000	.00000E+00/
34212 'IEELCB'	.40000	.00000E+00	.60000	.40000	
	.00000E+00	.60000	1.0000	-1.0000	2.0000
	1.0000	.00000E+00	2.0000	1.0000	.00000E+00/
34212 'IEELCB'	.40000	.00000E+00	.60000	.40000	
	.00000E+00	.60000	1.0000	-1.0000	2.0000
	1.0000	.00000E+00	2.0000	1.0000	.00000E+00/
34212 'LDSD3'	0 '0'	0			
	58.000	.10000	.50000E-01	.46600	.00000E+00
	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00
	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00
	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00
	.00000E+00/				
34212 'LDSD3'	0 '0'	0			
	58.000	.10000	.50000E-01	.46600	.00000E+00
	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00
	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00
	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00
	.00000E+00/				
34214 'IEELCB'	.10000E-01	.99000	.00000E+00	.10000E-01	
	.99000	.00000E+00	1.0000	-1.0000	2.0000
	1.0000	.00000E+00	2.0000	1.0000	.00000E+00/
34214 'LDSD3'	0 '0'	0			
	59.100	.10000	.50000E-01	1.0000	.00000E+00
	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00
	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00
	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00
	.00000E+00/				
34216 'GENCLS' 1	6.0000	.00000E+00/			
34217 'GENCLS' 1	5.7571	.00000E+00/			
34219 'GENROU' 1	5.7900	.59000E-01	.50000	.60000E-01	
	6.7619	.00000E+00	1.7790	1.7360	.33600
	.53800	.17500	.13125	.16330	.63200 /
34219 'EXAC1' 1	.00000E+00	.00000E+00	.00000E+00	400.00	
	.20000E-01	7.1000	-7.1000	.80000	.30000E-01
	1.0000	.00000E+00	.00000E+00	1.0000	2.8433
	.50000	3.7910	.86000 /		
34220 'GENROU' -1	7.1300	.60000E-01	.70000	.60000E-01	

	3.4211	.00000E+00	1.8210	1.7730	.26200
	.42130	.13600	.10200	.12760	.50000 /
34220	'EXAC1' 1	.00000E+00	.00000E+00	.00000E+00	400.00
	.20000E-01	6.6000	-6.6000	.80000	.30000E-01
	1.0000	.00000E+00	.00000E+00	1.0000	2.6723
	.50000	3.5630	.86000 /		
34222	'GENROU' 1	4.3000	.50000E-01	.43000	.66000E-01
	2.8683	.00000E+00	1.7900	1.7150	.22000
	.40000	.18000	.13500	.80000E-01	.40000 /
34222	'ST2CUT' 1	5 0	1 0	.00000E+00	2.0000
	.00000E+00	.50000E-01	3.0000	3.0000	.10000
	.30000E-01	.10000	.30000E-01	.00000E+00	.00000E+00
	.50000E-01	-.50000E-01	.00000E+00	.00000E+00/	
34222	'EXAC4' 1	.00000E+00	.10000	-.10000	1.0000
	10.000	200.00	.50000E-01	5.3200	-5.3200
	.15000 /				
34222	'IEEEG1' 1	0 0	18.080	.00000E+00	.00000E+00
	.35000E-01	.90402E-01	-.18080	.90402	.00000E+00
	.10000	.32000	.00000E+00	8.7200	.24000
	.00000E+00	.30000	.44000	.00000E+00	.00000E+00
	.00000E+00	.00000E+00/			
34223	'IEELCB'	.90000E-01	.91000	.00000E+00	.90000E-01
	.91000	.00000E+00	1.0000	-1.0000	2.0000
	1.0000	.00000E+00	2.0000	1.0000	.00000E+00/
34224	'GENROU' 1	5.9000	.50000E-01	.54000	.78000E-01
	3.3021	.00000E+00	1.6510	1.5900	.23200
	.38000	.17100	.10200	.10680	.47700 /
34224	'ST2CUT' 1	5 0	1 0	.00000E+00	4.3700
	.00000E+00	.25000E-01	10.000	10.000	1.2250
	.96000E-01	1.2250	.96000E-01	.00000E+00	.00000E+00
	.50000E-01	-.50000E-01	.00000E+00	.00000E+00/	
34224	'IEEEX1' 1	.60000E-01	25.000	.20000	.00000E+00
	.00000E+00	1.0000	-1.0000	.00000E+00	.56900
	.91000E-01	.35000	.00000E+00	2.9700	.78000E-01
	3.9600	.30300 /			
34224	'IEEEG1' 1	0 0	18.229	.20000	.00000E+00
	.10000	.91146E-01	-.18229	.91146	.00000E+00
	.50000E-01	.26000	.00000E+00	8.0000	.37000
	.00000E+00	.30000	.37000	.00000E+00	.00000E+00
	.00000E+00	.00000E+00/			
34225	'GENROU' 1	5.9000	.50000E-01	.54000	.78000E-01
	3.3021	.00000E+00	1.6510	1.5900	.23200
	.38000	.17100	.10200	.10680	.47700 /
34225	'ST2CUT' 1	5 0	1 0	.00000E+00	4.3700
	.00000E+00	.25000E-01	10.000	10.000	1.2250
	.96000E-01	1.2250	.96000E-01	.00000E+00	.00000E+00
	.50000E-01	-.50000E-01	.00000E+00	.00000E+00/	
34225	'IEEEX1' 1	.60000E-01	25.000	.20000	.00000E+00
	.00000E+00	1.0000	-1.0000	.00000E+00	.56900
	.91000E-01	.35000	.00000E+00	2.9700	.78000E-01
	3.9600	.30300 /			
34225	'IEEEG1' 1	0 0	18.229	.20000	.00000E+00
	.10000	.91146E-01	-.18229	.91146	.00000E+00
	.50000E-01	.26000	.00000E+00	8.0000	.37000
	.00000E+00	.30000	.37000	.00000E+00	.00000E+00
	.00000E+00	.00000E+00/			
34226	'GENROU' 1	6.0000	.50000E-01	.54000	.78000E-01
	3.3333	.00000E+00	1.7200	1.6600	.23000
	.37800	.17100	.10000	.10800	.36300 /
34226	'IEEEX1' 1	.60000E-01	25.000	.20000	.00000E+00
	.00000E+00	1.0000	-1.0000	.00000E+00	.55800
	.89000E-01	.35000	.00000E+00	3.0262	.76000E-01
	4.0350	.29700 /			
34226	'IEEEG1' 1	0 0	17.708	.20000	.00000E+00
	.10000	.88542E-01	-.17708	.88542	.00000E+00
	.50000E-01	.26000	.00000E+00	8.0000	.37000
	.00000E+00	.30000	.37000	.00000E+00	.00000E+00

	.00000E+00	.00000E+00/			
34227	'GENROU' 1	5.7000	.50000E-01	.52000	.75000E-01
	3.1324	.00000E+00	1.7300	1.6700	.24000
	.39300	.18000	.11000	.72000E-01	.26100 /
34227	'IEEEX1' 1	.60000E-01	25.000	.20000	.00000E+00
	.00000E+00	1.0000	-1.0000	.00000E+00	.61400
	.98000E-01	.35000	.00000E+00	2.7450	.84000E-01
	3.6600	.32800 /			
34227	'IEEEG1' 1	0 0	17.647	.20000	.00000E+00
	.10000	.88235E-01	-.17647	.88235	.00000E+00
	.50000E-01	.26000	.00000E+00	8.0000	.37000
	.00000E+00	.30000	.37000	.00000E+00	.00000E+00
	.00000E+00	.00000E+00/			
34228	'GENCLS' 1	6.0000	.00000E+00/		
34229	'GENCLS' 1	6.0000	.00000E+00/		
34230	'GENCLS' 1	6.0000	.00000E+00/		
34231	'GENCLS' 1	6.0000	.00000E+00/		
34232	'GENCLS' 1	6.0000	.00000E+00/		
34233	'GENCLS' 1	6.0000	.00000E+00/		
34234	'GENCLS' 1	4.3818	.00000E+00/		
34235	'GENROU' 1	5.9000	.50000E-01	.52000	.77000E-01
	3.4792	.00000E+00	1.6500	1.5900	.23000
	.38000	.17100	.10000	.10720	.49500 /
34235	'ST2CUT' 1	5 0	1 0	.00000E+00	1.8900
	.00000E+00	.35000E-01	10.000	10.000	1.2000
	.79000E-01	1.2000	.79000E-01	.00000E+00	.00000E+00
	.50000E-01	-.50000E-01	.00000E+00	.00000E+00/	
34235	'IEEEX1' 1	.60000E-01	25.000	.20000	.00000E+00
	.00000E+00	1.0000	-1.0000	.00000E+00	.57700
	.92000E-01	.35000	.00000E+00	2.9250	.79000E-01
	3.9000	.30800 /			
34235	'IEEEG1' 1	0 0	18.229	.20000	.00000E+00
	.10000	.91146E-01	-.18229	.91146	.00000E+00
	.50000E-01	.26000	.00000E+00	8.0000	.37000
	.00000E+00	.30000	.37000	.00000E+00	.00000E+00
	.00000E+00	.00000E+00/			
34242	'GENROU' 1	5.8600	.50000E-01	.86000	.60000E-01
	7.1481	.00000E+00	2.0600	1.9300	.24000
	.39000	.19000	.16500	.14000	.43000 /
34242	'EXAC1' 1	.50000E-01	.00000E+00	.00000E+00	200.00
	.50000E-01	6.0000	-3.0000	1.0000	.50000E-01
	1.0000	.10000	.20000	1.0000	3.0000
	.10000	4.0000	.40000 /		
34244	'GENROU' H	5.4000	.50000E-01	1.5000	.15000
	1.6655	.00000E+00	1.6750	1.6480	.31100
	.97900	.23100	.18480	.12490	.50800 /
34244	'IEEEVC' H	.00000E+00	.13900 /		
34244	'IEEEX1' H	.00000E+00	245.00	.50000E-01	.00000E+00
	.00000E+00	3.0000	-3.0000	.00000E+00	1.3700
	.40000E-01	1.0000	.00000E+00	2.6775	.22000
	3.5700	.95000 /			
34244	'IEEEG1' H	34244 L	34.532	.25000	.00000E+00
	.10000	.17266	-.34532	1.7266	.00000E+00
	.50000E-01	.31000	.00000E+00	12.000	.25000
	.00000E+00	.30000	.00000E+00	.44000	.00000E+00
	.00000E+00	.00000E+00/			
34244	'GENROU' L	5.3900	.53000E-01	1.5000	.13500
	6.3919	.00000E+00	1.5810	1.5310	.38000
	.95500	.25200	.20160	.90500E-01	.34200 /
34244	'IEEEVC' L	.00000E+00	.11000 /		
34244	'IEEEX1' L	.00000E+00	245.00	.50000E-01	.00000E+00
	.00000E+00	3.0000	-3.0000	.00000E+00	1.3700
	.40000E-01	1.0000	.00000E+00	2.6775	.22000
	3.5700	.95000 /			
34245	'GENROU' H	5.4000	.50000E-01	1.5000	.15000
	1.6655	.00000E+00	1.6750	1.6480	.31100
	.97900	.23100	.18480	.12490	.50800 /

34245	'IEEEVC'	H	.00000E+00	.13900	/		
34245	'IEEEEX1'	H	.00000E+00	245.00		.50000E-01	.00000E+00
			.00000E+00	3.0000	-3.0000	.00000E+00	1.3700
			.40000E-01	1.0000	.00000E+00	2.6775	.22000
			3.5700	.95000	/		
34245	'IEEEG1'	H	34245 L	34.532		.25000	.00000E+00
				.17266	-.34532	1.7266	.00000E+00
				.50000E-01	.31000	.00000E+00	12.000
				.00000E+00	.30000	.00000E+00	.44000
				.00000E+00	.00000E+00/		.00000E+00
34245	'GENROU'	L	5.3900	.53000E-01		1.5000	.13500
			6.3919	.00000E+00	1.5810	1.5310	.38000
			.95500	.25200	.20160	.90500E-01	.34200
34245	'IEEEVC'	L	.00000E+00	.11000	/		
34245	'IEEEEX1'	L	.00000E+00	245.00		.50000E-01	.00000E+00
			.00000E+00	3.0000	-3.0000	.00000E+00	1.3700
			.40000E-01	1.0000	.00000E+00	2.6775	.22000
			3.5700	.95000	/		
34292	'GENROU'	1	4.9400	.50000E-01		.54000	.78000E-01
			4.0000	.00000E+00	2.2100	2.1000	.25800
			.50000	.19700	.12000	.19000	.67600
34293	'GENROU'	1	4.9400	.50000E-01		.54000	.78000E-01
			4.0000	.00000E+00	2.2100	2.1000	.25800
			.50000	.19700	.12000	.19000	.67600
34294	'GENROU'	1	4.9400	.50000E-01		.54000	.78000E-01
			3.8951	.00000E+00	2.2100	2.1000	.25800
			.50000	.19700	.12000	.19000	.67600
34296	'GENROU'	1	6.5900	.50000E-01		.50000	.60000E-01
			5.0000	.00000E+00	1.6030	1.5140	.21500
			.41300	.12250	.10000	.10000	.40000
34297	'GENROU'	1	4.9400	.50000E-01		.54000	.78000E-01
			4.0000	.00000E+00	2.2100	2.1000	.25800
			.50000	.19700	.12000	.19000	.67600
34298	'GENROU'	1	4.9400	.50000E-01		.54000	.78000E-01
			3.8951	.00000E+00	2.2100	2.1000	.25800
			.50000	.19700	.12000	.19000	.67600
34299	'GENROU'	1	4.9400	.50000E-01		.54000	.78000E-01
			3.8951	.00000E+00	2.2100	2.1000	.25800
			.50000	.19700	.12000	.19000	.67600
34314	'GENROU'	1	5.8600	.50000E-01		.86000	.60000E-01
			5.6852	.00000E+00	2.0600	1.9300	.24000
			.39000	.19000	.16500	.14000	.43000
34315	'GENROU'	1	5.8600	.50000E-01		.86000	.60000E-01
			5.6852	.00000E+00	2.0600	1.9300	.24000
			.39000	.19000	.16500	.14000	.43000
34317	'GENROU'	1	9.6200	.50000E-01		.50000	.60000E-01
			6.0000	.00000E+00	1.7020	1.6200	.20600
			.50000	.11200	.80000E-01	.17600	.50800
34317	'EXAC1'	1	.00000E+00	.00000E+00		.00000E+00	400.00
			.50000E-01	7.1000	-7.1000	.80000	.30000E-01
			1.0000	.00000E+00	.00000E+00	1.0000	2.8425
			.50000	3.7900	.86000	/	
34318	'GENROU'	1	4.9400	.50000E-01		.54000	.78000E-01
			3.8951	.00000E+00	2.2100	2.1000	.25800
			.50000	.19700	.12000	.19000	.67600
34319	'GENROU'	1	4.9400	.50000E-01		.54000	.78000E-01
			3.8951	.00000E+00	2.2100	2.1000	.25800
			.50000	.19700	.12000	.19000	.67600
34320	'GENROU'	1	4.9400	.50000E-01		.54000	.78000E-01
			3.8951	.00000E+00	2.2100	2.1000	.25800
			.50000	.19700	.12000	.19000	.67600
34324	'GENROU'	1	9.6200	.50000E-01		.50000	.60000E-01
			6.0000	.00000E+00	1.7020	1.6200	.20600
			.50000	.11200	.80000E-01	.17600	.50800
34324	'EXAC1'	1	.00000E+00	.00000E+00		.00000E+00	400.00
			.50000E-01	7.1000	-7.1000	.80000	.30000E-01
			1.0000	.00000E+00	.00000E+00	1.0000	2.8425

	.50000	3.7900	.86000 /		
34329	'GENROU' 1	9.6200	.50000E-01	.50000	.60000E-01
	6.0000	.00000E+00	1.7020	1.6200	.20600
	.50000	.11200	.80000E-01	.17600	.50800 /
34329	'EXAC1' 1	.00000E+00	.00000E+00	.00000E+00	400.00
	.50000E-01	7.1000	-7.1000	.80000	.30000E-01
	1.0000	.00000E+00	.00000E+00	1.0000	2.8425
	.50000	3.7900	.86000 /		
34333	'GENROU' 1	9.6200	.50000E-01	.50000	.60000E-01
	6.0000	.00000E+00	1.7020	1.6200	.20600
	.50000	.11200	.80000E-01	.17600	.50800 /
34333	'EXAC1' 1	.00000E+00	.00000E+00	.00000E+00	400.00
	.50000E-01	7.1000	-7.1000	.80000	.30000E-01
	1.0000	.00000E+00	.00000E+00	1.0000	2.8425
	.50000	3.7900	.86000 /		
34344	'GENROU' 1	6.7900	.50000E-01	.86000	.60000E-01
	4.0000	.00000E+00	2.0600	1.9300	.24000
	.39000	.18500	.16500	.14000	.43000 /
34345	'GENROU' 1	6.7900	.50000E-01	.86000	.60000E-01
	4.0294	.00000E+00	2.0600	1.9300	.24000
	.39000	.18500	.16500	.14000	.43000 /
34348	'GENROU' 1	6.7900	.50000E-01	.86000	.60000E-01
	4.0000	.00000E+00	2.0600	1.9300	.24000
	.39000	.18500	.16500	.14000	.43000 /
34349	'GENROU' 1	6.7900	.50000E-01	.86000	.60000E-01
	4.0000	.00000E+00	2.0600	1.9300	.24000
	.39000	.18500	.16500	.14000	.43000 /
34350	'GENROU' 1	6.7900	.50000E-01	.86000	.60000E-01
	4.0000	.00000E+00	2.0600	1.9300	.24000
	.39000	.18500	.16500	.14000	.43000 /
34351	'GENROU' 1	4.6100	.50000E-01	.60000	.60000E-01
	4.0000	.00000E+00	2.2200	2.1000	.24000
	.40000	.15800	.10000	.20000	.48600 /
34352	'GENROU' 1	4.6100	.50000E-01	.60000	.60000E-01
	4.0000	.00000E+00	2.2200	2.1000	.24000
	.40000	.15800	.10000	.20000	.48600 /
34802	'GENROU' 1	3.1400	.50000E-01	.31000	.74000E-01
	5.8333	.00000E+00	2.0210	1.9470	.39900
	.68000	.27700	.22600	.15200	.31000 /
34802	'EXST1' 1	.00000E+00	.10000	-1.0000	1.0000
	10.000	200.00	.50000E-01	10.000	-10.000
	.10000	.00000E+00	1.0000 /		
34816	'GENCLS' 1	5.5958	2.0000 /		
34820	'GENCLS' 1	4.3497	2.0000 /		
34832	'GENCLS' 1	4.3000	2.0000 /		
34838	'GENCLS' 1	5.0657	2.0000 /		
34900	'GENROU' 1	5.7900	.50000E-01	.50000	.60000E-01
	6.7566	.00000E+00	1.7790	1.7360	.33600
	.53800	.29550	.25500	.14900	.61000 /
34900	'EXAC1' 1	.00000E+00	.00000E+00	.00000E+00	400.00
	.50000E-01	7.1000	-7.1000	.80000	.30000E-01
	1.0000	.00000E+00	.00000E+00	1.0000	2.8425
	.50000	3.7900	.86000 /		
34902	'GENROU' 1	5.7900	.50000E-01	.50000	.60000E-01
	6.7566	.00000E+00	1.7790	1.7360	.33600
	.53800	.29550	.25500	.14900	.61000 /
34902	'EXAC1' 1	.00000E+00	.00000E+00	.00000E+00	400.00
	.50000E-01	7.1000	-7.1000	.80000	.30000E-01
	1.0000	.00000E+00	.00000E+00	1.0000	2.8425
	.50000	3.7900	.86000 /		
34904	'GENROU' 1	5.7900	.50000E-01	.50000	.60000E-01
	6.7566	.00000E+00	1.7790	1.7360	.33600
	.53800	.29550	.25500	.14900	.61000 /
34904	'EXAC1' 1	.00000E+00	.00000E+00	.00000E+00	400.00
	.50000E-01	7.1000	-7.1000	.80000	.30000E-01
	1.0000	.00000E+00	.00000E+00	1.0000	2.8425
	.50000	3.7900	.86000 /		

34995	'CSVGN5'	1	34039	.00000E+00	.50000	.20000
			.60000E-01	.00000E+00	.00000E+00	80.000
			3.0000	.00000E+00	.00000E+00	.00000E+00
			.50000	3.0000	.00000E+00	.40000E-01
						/
34996	'CSVGN5'	1	34185	.00000E+00	.50000	.20000
			.60000E-01	.00000E+00	.00000E+00	80.000
			3.0000	.00000E+00	.00000E+00	.00000E+00
			.50000	3.0000	.00000E+00	.40000E-01
						/
34997	'CSVGN5'	1	34182	.00000E+00	.50000	.20000
			.60000E-01	.00000E+00	.00000E+00	80.000
			3.0000	.00000E+00	.00000E+00	.00000E+00
			.50000	3.0000	.00000E+00	.40000E-01
						/
34998	'CSVGN5'	1	34055	.00000E+00	.50000	.20000
			.60000E-01	.00000E+00	.00000E+00	80.000
			3.0000	.00000E+00	.00000E+00	.00000E+00
			.50000	3.0000	.00000E+00	.40000E-01
						/

SDG&E Data

30005	'LDSHD3'	0	'0'	0				
	57.800	.10000		.83333E-01	.98200	.00000E+00		
	.00000E+00	.00000E+00		.00000E+00	.00000E+00	.00000E+00		
	.00000E+00	.00000E+00		.00000E+00	.00000E+00	.00000E+00		
	.00000E+00	.00000E+00		.00000E+00	.00000E+00	.00000E+00		
	.00000E+00/							
30021	'GENROU' 1	5.9000		.50000E-01	.47000	.89000E-01		
	4.0868	.00000E+00		1.3100	1.2500	.17500		
	.31000	.15910		.75000E-01	.89900E-01	.39400		
30021	'IEEEX1' 1	.60000E-01		25.000	.20000	.00000E+00		
	.00000E+00	1.0000		-1.0000	.00000E+00	.66400		
	.10600	.60000		.00000E+00	2.5425	.92000E-01		
	3.3900	.35400						
30021	'IEEEG1' 1	0	0	21.038	.10000	.00000E+00		
	.20000	.10519		-.10519	1.0519	.00000E+00		
	.25000	.30000		.00000E+00	8.0000	.40000		
	.00000E+00	.40000		.30000	.00000E+00	.00000E+00		
	.00000E+00	.00000E+00/						
30022	'GENROU' 1	5.9000		.50000E-01	.47000	.89000E-01		
	4.0868	.00000E+00		1.3100	1.2500	.17500		
	.31000	.15910		.75000E-01	.89900E-01	.39400		
30022	'IEEEX1' 1	.60000E-01		25.000	.20000	.00000E+00		
	.00000E+00	1.0000		-1.0000	.00000E+00	.66400		
	.10600	.60000		.00000E+00	2.5425	.92000E-01		
	3.3900	.35400						
30022	'IEEEG1' 1	0	0	20.774	.10000	.00000E+00		
	.20000	.10387		-.10387	1.0387	.00000E+00		
	.25000	.30000		.00000E+00	8.0000	.40000		
	.00000E+00	.40000		.30000	.00000E+00	.00000E+00		
	.00000E+00	.00000E+00/						
30023	'GENROU' 1	5.9000		.50000E-01	.47000	.89000E-01		
	4.0868	.00000E+00		1.3100	1.2500	.17500		
	.31000	.15910		.75000E-01	.89900E-01	.39400		
30023	'IEEEX1' 1	.60000E-01		25.000	.20000	.00000E+00		
	.00000E+00	2.0000		-2.0000	.00000E+00	.66400		
	.10600	.60000		.00000E+00	2.5425	.92000E-01		
	3.3900	.35400						
30023	'IEEEG1' 1	0	0	21.132	.10000	.00000E+00		
	.20000	.10566		-.10566	1.0566	.00000E+00		
	.25000	.30000		.00000E+00	8.0000	.40000		
	.00000E+00	.40000		.30000	.00000E+00	.00000E+00		
	.00000E+00	.00000E+00/						
30024	'GENROU' 1	5.2600		.50000E-01	.59000	.14400		
	3.3547	.00000E+00		1.9270	1.8970	.36200		
	1.1300	.29400		.22300	.90900E-01	.36400		
30024	'ST2CUT' 1	5	0	2	0	.00000E+00		
	.00000E+00	.30000E-01		10.000	10.000	.42500		
	.10000	.42500		.25000E-01	.00000E+00	.00000E+00		
	.50000E-01	-.50000E-01		.00000E+00	.00000E+00/			
30024	'EXAC1' 1	.00000E+00		.00000E+00	.00000E+00	400.00		
	.20000E-01	7.6000		-6.8000	.58000	.80000E-01		
	1.0000	.00000E+00		.00000E+00	1.0000	3.3525		
	.54000	4.4700		.70000				
30024	'IEEEG1' 1	0	0	20.000	.18000	.30000E-01		
	.40000E-01	.10000		-.10000	1.0000	.00000E+00		
	.20000	.25000		.00000E+00	8.0000	.23000		
	.00000E+00	.50000		.30000	.00000E+00	.00000E+00		
	.00000E+00	.00000E+00/						
30025	'GENROU' 1	5.1100		.50000E-01	.57000	.68000E-01		
	3.4026	.00000E+00		1.7990	1.7790	.32450		
	.51600	.25970		.19270	.90900E-01	.36400		
30025	'ST2CUT' 1	5	0	2	0	.00000E+00		
	.00000E+00	.30000E-01		10.000	10.000	.42500		
	.10000	.42500		.25000E-01	.00000E+00	.00000E+00		
	.50000E-01	-.50000E-01		.00000E+00	.00000E+00/			
30025	'EXAC1' 1	.00000E+00		.00000E+00	.00000E+00	400.00		
	.20000E-01	5.1000		-4.6000	.24000	.80000E-01		

Stability
Models -
SDGT E

	1.0000	.00000E+00	.00000E+00	1.0000	2.4825
	.52000	3.3100	.53000 /		
30025 'IEEEG1' 1	0 0	20.000	.83000E-01	.00000E+00	
	.20000	.10000	-.10000	1.0000	.00000E+00
	.25000	.26500	.00000E+00	8.0000	.23900
	.00000E+00	.50000	.30000	.00000E+00	.00000E+00
	.00000E+00	.00000E+00/			
30051 'LDSHD3' 1	0 '0'	0			
	58.880	.10000	.83333E-01	.15600	58.710
	.10000	.83333E-01	.14600	58.100	.10000
	.83333E-01	.20600	57.800	.10000	.83333E-01
	.31700	.00000E+00	.00000E+00	.00000E+00	.00000E+00
	.00000E+00/				
30055 'LDSHD3' 1	0 '0'	0			
	58.930	.10000	.83333E-01	.20800	58.700
	.10000	.83333E-01	.98000E-01	58.510	.10000
	.83333E-01	.22700	.00000E+00	.00000E+00	.00000E+00
	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00
	.00000E+00/				
30070 'LDSHD3' 1	0 '0'	0			
	58.900	.10000	.83333E-01	.26500	58.480
	.10000	.83333E-01	.86000E-01	.00000E+00	.00000E+00
	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00
	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00
	.00000E+00/				
30084 'GENROU' 1	5.9000	.50000E-01	.54000	.76000E-01	
	3.9625	.00000E+00	1.7000	1.6400	.24500
	.38000	.18500	.11000	.12140	.61300 /
30084 'IEEEX1' 1	.60000E-01	25.000	.20000	.00000E+00	
	.00000E+00	2.0000	-2.0000	.00000E+00	.56000
	.90000E-01	.50000	.00000E+00	3.0150	.76000E-01
	4.0200	.29900 /			
30084 'IEEEG1' 1	0 0	20.000	.25000	.00000E+00	
	.10000	.10000	-.10000	1.0000	.00000E+00
	.25000	.30000	.00000E+00	8.0000	.40000
	.00000E+00	.40000	.30000	.00000E+00	.00000E+00
	.00000E+00	.00000E+00/			
30085 'GENROU' 1	8.0700	.54000E-01	1.5000	.15000	
	4.7900	.00000E+00	1.6500	1.6170	.17300
	.89400	.15650	.14000	.13550	.45700 /
30085 'ST2CUT' 1	5 0	2 0	.00000E+00	2.1000	
	.00000E+00	.25000E-01	10.000	10.000	.72000
	.14000	.72000	.14000	.00000E+00	.00000E+00
	.10000	-.10000	.00000E+00	.00000E+00/	
30085 'IEEEX1' 1	.00000E+00	400.00	.50000E-01	.00000E+00	
	.00000E+00	4.0000	-4.0000	.00000E+00	.95000
	.25000E-01	.33300	.00000E+00	3.3750	.22000
	4.5000	.95000 /			
30085 'IEEEG1' 1	0 0	14.286	.22000	.00000E+00	
	.20000	.10000	-.10000	1.0000	.00000E+00
	.20000	.28000	.00000E+00	5.0000	.39000
	.00000E+00	.50000	.33000	.00000E+00	.00000E+00
	.00000E+00	.00000E+00/			
30086 'GENROU' 1	3.8000	.50000E-01	.47000	.60000E-01	
	3.0788	.00000E+00	1.6600	1.5800	.26500
	.46500	.20500	.10200	.96500E-01	.51700 /
30086 'ST2CUT' 1	5 0	2 0	.00000E+00	4.3700	
	.00000E+00	.25000E-01	10.000	10.000	1.2250
	.96000E-01	1.2250	.96000E-01	.00000E+00	.00000E+00
	.50000E-01	-.50000E-01	.00000E+00	.00000E+00/	
30086 'IEEEX1' 1	.00000E+00	25.000	.20000	.00000E+00	
	.00000E+00	2.0000	-2.0000	.00000E+00	.87900
	.14100	1.0000	.00000E+00	1.9208	.12000
	2.5610	.46900 /			
30086 'IEEEG1' 1	0 0	20.099	.10000	.00000E+00	
	.20000	.10049	-.10049	1.0049	.00000E+00
	.25000	.30000	.00000E+00	8.0000	.40000

	.00000E+00	.40000	.30000	.00000E+00	.00000E+00
	.00000E+00	.00000E+00/			
30087 'GENROU' 1	5.3600	.50000E-01	1.5000	.15000	
	3.0049	.00000E+00	1.9440	1.9120	.31400
	1.1130	.28700	.21800	.13640	.58600
30087 'ST2CUT' 1	5 0	2 0	.00000E+00	.86000	
	.00000E+00	.30000E-01	10.000	10.000	.25000
	.56000E-01	.25000	.56000E-01	.00000E+00	.00000E+00
	.50000E-01	-.50000E-01	.00000E+00	.00000E+00/	
30087 'EXAC1' 1	.00000E+00	.00000E+00	.00000E+00	400.00	
	.20000E-01	8.2000	-7.4000	1.3000	.80000E-01
	1.0000	.00000E+00	.00000E+00	1.0000	2.9250
	.50000	3.9000	1.1000		
30087 'IEEG1' 1	0 0	20.000	.18000	.30000E-01	
	.40000E-01	.10000	-.10000	1.0000	.00000E+00
	.20000	.23000	.00000E+00	8.0000	.42000
	.00000E+00	.40000	.25000	.00000E+00	.00000E+00
	.00000E+00	.00000E+00/			
30093 'LDSHD3'	0 '0'	0			
	59.100	.10000	.83333E-01	.97400	.00000E+00
	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00
	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00
	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00
	.00000E+00/				
30099 'LDSHD3'	0 '0'	0			
	58.000	.10000	.83333E-01	.70800	.00000E+00
	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00
	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00
	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00
	.00000E+00/				
30130 'LDSHD3'	0 '0'	0			
	58.550	.10000	.83333E-01	.10500	58.470
	.10000	.83333E-01	.40000	58.000	.10000
	.83333E-01	.17600	.00000E+00	.00000E+00	.00000E+00
	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00
	.00000E+00/				
30147 'LDSHD3'	0 '0'	0			
	59.120	.10000	.83333E-01	.98000E-01	59.100
	.10000	.83333E-01	.11700	58.910	.10000
	.83333E-01	.13200	58.690	.10000	.83333E-01
	.13000	.00000E+00	.00000E+00	.00000E+00	.00000E+00
	.00000E+00/				
30155 'LDSHD3'	0 '0'	0			
	59.100	.10000	.83333E-01	.70000	58.100
	.10000	.83333E-01	.30000	.00000E+00	.00000E+00
	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00
	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00
	.00000E+00/				
30164 'LDSHD3'	0 '0'	0			
	59.110	.10000	.83333E-01	.13500	59.100
	.10000	.83333E-01	.27000	58.910	.10000
	.83333E-01	.18300	58.680	.10000	.83333E-01
	.15300	.00000E+00	.00000E+00	.00000E+00	.00000E+00
	.00000E+00/				
30171 'LDSHD3'	0 '0'	0			
	59.100	.10000	.83333E-01	.15800	.00000E+00
	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00
	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00
	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00
	.00000E+00/				
30198 'LDSHD3'	0 '0'	0			
	58.900	.10000	.83333E-01	.26500	58.480
	.10000	.83333E-01	.86000E-01	.00000E+00	.00000E+00
	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00
	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00
	.00000E+00/				
30211 'LDSHD3'	0 '0'	0			

	58.000	.10000	.83333E-01	.55400	57.600
	.10000	.83333E-01	.29200	.00000E+00	.00000E+00
	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00
	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00
	.00000E+00/				
30333 'GENROU' 1	5.3600	.50000E-01	1.5000	.15000	
3.0049	.00000E+00	1.9440	1.9120	.31400	
1.1130	.28700	.21800	.13640	.58600	/
30333 'ST2CUT' 1	5 0	2 0	.00000E+00	.86000	
.00000E+00	.30000E-01	10.000	10.000	.25000	
.56000E-01	.25000	.56000E-01	.00000E+00	.00000E+00	
.50000E-01	-.50000E-01	.00000E+00	.00000E+00/		
30333 'EXAC1' 1	.00000E+00	.00000E+00	.00000E+00	400.00	
.20000E-01	8.2000	-7.4000	1.3000	.80000E-01	
1.0000	.00000E+00	.00000E+00	1.0000	2.9250	
.50000	3.9000	1.1000	/		
30333 'IEEEG1' 1	0 0	20.000	.18000	.30000E-01	
.40000E-01	.10000	-.10000	1.0000	.00000E+00	
.20000	.23000	.00000E+00	8.0000	.42000	
.00000E+00	.40000	.25000	.00000E+00	.00000E+00	
.00000E+00	.00000E+00/				
30334 'GENROU' 1	5.3600	.50000E-01	1.5000	.15000	
3.0049	.00000E+00	1.9440	1.9120	.31400	
1.1130	.28700	.21800	.13640	.58600	/
30334 'ST2CUT' 1	5 0	2 0	.00000E+00	.86000	
.00000E+00	.30000E-01	10.000	10.000	.25000	
.56000E-01	.25000	.56000E-01	.00000E+00	.00000E+00	
.50000E-01	-.50000E-01	.00000E+00	.00000E+00/		
30334 'EXAC1' 1	.00000E+00	.00000E+00	.00000E+00	400.00	
.20000E-01	8.2000	-7.4000	1.3000	.80000E-01	
1.0000	.00000E+00	.00000E+00	1.0000	2.9250	
.50000	3.9000	1.1000	/		
30334 'IEEEG1' 1	0 0	20.000	.18000	.30000E-01	
.40000E-01	.10000	-.10000	1.0000	.00000E+00	
.20000	.23000	.00000E+00	8.0000	.42000	
.00000E+00	.40000	.25000	.00000E+00	.00000E+00	
.00000E+00	.00000E+00/				
30335 'GENROU' 1	5.3600	.50000E-01	1.5000	.15000	
3.0049	.00000E+00	1.9440	1.9120	.31400	
1.1130	.28700	.21800	.13640	.58600	/
30335 'ST2CUT' 1	5 0	2 0	.00000E+00	.86000	
.00000E+00	.30000E-01	10.000	10.000	.25000	
.56000E-01	.25000	.56000E-01	.00000E+00	.00000E+00	
.50000E-01	-.50000E-01	.00000E+00	.00000E+00/		
30335 'EXAC1' 1	.00000E+00	.00000E+00	.00000E+00	400.00	
.20000E-01	8.2000	-7.4000	1.3000	.80000E-01	
1.0000	.00000E+00	.00000E+00	1.0000	2.9250	
.50000	3.9000	1.1000	/		
30335 'IEEEG1' 1	0 0	20.000	.18000	.30000E-01	
.40000E-01	.10000	-.10000	1.0000	.00000E+00	
.20000	.23000	.00000E+00	8.0000	.42000	
.00000E+00	.40000	.30000	.00000E+00	.00000E+00	
.00000E+00	.00000E+00/				
30996 'CSVGN5' 1	30053	.00000E+00	.50000	.20000	
.60000E-01	.00000E+00	.00000E+00	80.000	.00000E+00	
3.0000	3.0000	.00000E+00	.00000E+00	.40000E-01	
.50000	/				
30997 'CSVGN5' 1	30020	.00000E+00	.50000	.20000	
.60000E-01	.00000E+00	.00000E+00	80.000	.00000E+00	
3.0000	3.0000	.00000E+00	.00000E+00	.40000E-01	
.50000	/				
30998 'CSVGN5' 1	30092	.00000E+00	.50000	.20000	
.60000E-01	.00000E+00	.00000E+00	80.000	.00000E+00	
3.0000	3.0000	.00000E+00	.00000E+00	.40000E-01	
.50000	/				

SWITCHING SEQUENCES

6

Switching Sequence for Loss of One Palo Verde - Devers 500kV Line

Time
(Cycles)

Switching Sequence

- 0 Three phase fault at Palo Verde 500 kV bus.
- Apply 98 MW fault damping each at 3 Palo Verde generation units.
- Flash series capacitors in the Palo Verde-Devers, Palo Verde-N. Gila, Moenkopi-Westwing, North Gila-IV-Miguel and Navajo-Westwing 500 KV lines.
- 4 Clear fault at Palo Verde 500 kV bus.
- Switch out one Palo Verde-Devers 500 kV line.
- Reinsert the series capacitors in the Palo Verde-N. Gila and N. Gila-IV-Miguel 500 kV lines.
- 8 Reinsert the series capacitors in the Moenkopi-Westwing and Navajo-Westwing 500 kV lines.

Switching Sequence for Loss of Palo Verde - N. Gila 500kV Line

Time
(Cycles)

Switching Sequence

- 0 Three phase fault at Palo Verde 500 kV bus.
- Apply 98 MW fault damping each at 3 Palo Verde generation units.
- Flash series capacitors in the Palo Verde-Devers, Palo Verde-N. Gila, Moenkopi-Westwing, North Gila-IV-Miguel and Navajo-Westwing 500 KV lines.
- 4 Clear fault at Palo Verde 500 kV bus.
- Switch out Palo Verde-N.Gila 500 kV line.
- Reinsert the series capacitors in the Palo Verde-Devers and N.Gila-IV-Miguel 500 kV lines.
- 8 Reinsert the series capacitors in the Moenkopi-Westwing and Navajo-Westwing 500 kV lines.

Switching Sequence for Loss of IV - Miguel - Rosita Lines (N-1)

<u>Time (Cycles)</u>	<u>Switching Sequence</u>
0	Three phase fault at Imperial Valley 500 kV bus. Flash series capacitors in the North Gila- IV, IV-Miguel 500 KV lines.
4	Clear fault at Imperial Valley 500 kV bus. Switch out IV - Miguel 500 kVline and IV - Rosita 230 kV line.
8	Reinsert the series capacitors in the Palo Verde- N. Gila and N. Gila-IV-Miguel 500 kV lines.

Switching Sequence for Loss of Two Lugo - Mira Loma 500kV Lines

<u>Time (Cycles)</u>	<u>Switching Sequence</u>
0	Three phase fault at Lugo 500 kV bus. Flash series capacitors in the McCullough - Victorville #1 and #2, Lugo - Eldorado and Mohave - Lugo 500 KV lines.
4	Clear fault at Lugo 500 kV bus. Switch out two Lugo - Mira Loma 500 kV lines.
8	Reinsert series capacitors in the McCullough - Victorville #1 and #2, Lugo - Eldorado and Mohave - Lugo 500 KV lines.

APPENDIX E

COST ANALYSIS WORKPAPERS

SCE Cost Analysis Workpapers

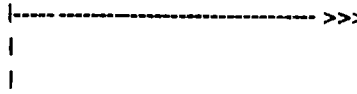
SONGS Shutdown Preliminary Evaluation
Calculation of 1995 Net Present Value of Transmission IFAs
Workpaper For Serrano Substation IFAs

1995 Net Present Value = \$44 million

o Assumptions

IFA Capital Cost (1994 \$million) = 36.00 (A)
 Annual Carrying Charge Rate (%) = 16.5%
 Annual O&M Expense = 2.0%
 First Year of Operation = 1998
 Discount Rate (%) = 10.0%
 GDP Rate (%) = 3.2%

IFA Capital Cost (1998 \$million) = 41



Year	Annual Levelized Cost (\$ million)
1995	0.0
1996	0.0
1997	0.0
1998	7.6
1999	7.6
2000	7.6
2001	7.6
2002	7.6
2003	7.6
2004	7.6
2005	7.6
2006	7.6
2007	7.6
2008	7.6
2009	7.6
2010	7.6
2011	7.6
2012	7.6
2013	7.6
NPV=	44.4

(A) From Section VI.A of the Report

SONGS Shutdown Preliminary Evaluation
Calculation of Line Loss Cost Due Overall Effect of SONGS Shutdown

losses: Kwatt=	71,000	Shaded area is input data Transm. = 0.43 LF and subtran. = 0.37 LF
loss factor=	0.43	
load growth (pu)=	0	
kW hr./yr.=	267,442,800	
BASE YEAR=	1995	
PERIOD (yrs.)=	19	
Cost of Money (pu)=	10.00%	
Present Worth Factor=	8.3649	
L. Cap. Cost (\$/kw-yr)=	\$55.58	
L. Engr. Cost (\$/kwh)=	\$0.0455	

Base Year Present Value of Energy Cost=	\$101,753,211	1995 PV	\$101,753,211
Base Year Present Value of Capacity Cost=	\$33,012,326	1995 PV	\$33,012,326
Total Cost of Losses=	\$134,765,537	TOTAL	\$134,765,537

YEAR	ENERGY COST	ANNUAL EN COST	PV at Base Yr	Cap. Value (\$/kw-yr)	ANNUAL CAP COST	Capacity PV at Base Yr
1987	-	-	-	-	-	-
1988	-	-	-	-	-	-
1989	-	-	-	-	-	-
1990	-	-	-	-	-	-
1991	-	-	-	-	-	-
1992	-	-	-	-	-	-
1993	2.71 ¢/kWh	\$7,247,700	\$0	\$6.47	\$459,370	\$0
1994	2.64 ¢/kWh	\$7,060,490	\$0	\$6.71	\$476,410	\$0
1995	2.77 ¢/kWh	\$7,408,166	\$6,734,696	\$6.97	\$494,870	\$449,882
1996	2.96 ¢/kWh	\$7,916,307	\$6,542,402	\$7.23	\$513,330	\$424,240
1997	3.11 ¢/kWh	\$8,317,471	\$6,249,039	\$7.51	\$533,210	\$400,609
1998	3.25 ¢/kWh	\$8,691,891	\$5,936,679	\$7.79	\$553,090	\$377,768
1999	3.40 ¢/kWh	\$9,093,055	\$5,646,072	\$8.09	\$574,390	\$356,651
2000	3.65 ¢/kWh	\$9,761,662	\$5,510,204	\$28.98	\$2,057,580	\$1,161,450
2001	3.95 ¢/kWh	\$10,563,991	\$5,420,998	\$87.14	\$6,186,940	\$3,174,878
2002	4.26 ¢/kWh	\$11,393,063	\$5,314,948	\$90.45	\$6,421,950	\$2,995,887
2003	4.59 ¢/kWh	\$12,275,625	\$5,206,063	\$93.89	\$6,666,190	\$2,827,115
2004	4.93 ¢/kWh	\$13,184,930	\$5,083,361	\$97.46	\$6,919,660	\$2,667,828
2005	5.41 ¢/kWh	\$14,468,655	\$5,071,175	\$101.16	\$7,182,360	\$2,517,373
2006	5.92 ¢/kWh	\$15,832,614	\$5,044,759	\$105.00	\$7,455,000	\$2,375,393
2007	6.47 ¢/kWh	\$17,303,549	\$5,012,222	\$108.99	\$7,738,290	\$2,241,507
2008	7.05 ¢/kWh	\$18,854,717	\$4,965,036	\$113.14	\$8,032,940	\$2,115,324
2009	7.67 ¢/kWh	\$20,512,863	\$4,910,616	\$117.44	\$8,338,240	\$1,996,108
2010	8.37 ¢/kWh	\$22,394,962	\$4,871,620	\$121.90	\$8,654,900	\$1,883,558
2011	9.10 ¢/kWh	\$24,337,295	\$4,815,004	\$126.53	\$8,983,630	\$1,777,363
2012	9.86 ¢/kWh	\$26,376,760	\$4,744,092	\$131.60	\$9,343,392	\$1,680,491
2013	10.69 ¢/kWh	\$28,587,133	\$4,674,225	\$136.87	\$9,717,562	\$1,588,899
2014	11.58 ¢/kWh	\$30,982,734	\$0	\$142.35	\$10,106,715	\$0
2015	12.56 ¢/kWh	\$33,579,087	\$0	\$148.05	\$10,511,453	\$0
2016	13.61 ¢/kWh	\$36,393,015	\$0	\$153.98	\$10,932,400	\$0
2017	14.75 ¢/kWh	\$39,442,750	\$0	\$160.14	\$11,370,203	\$0
2018	15.98 ¢/kWh	\$42,748,052	\$0	\$166.56	\$11,825,539	\$0

SONGS Shutdown Preliminary Evaluation
Calculation of 1995 Net Present Value of Transmission IFAs
Workpaper For EOR Capacity IFAs - SCE Share

1995 Net Present Value = \$48 million

o Assumptions

IFA Capital Cost (1994 \$million) = 46.50 (A)
 Annual Carrying Charge Rate (%) = 16.5%
 Annual O&M Expense = 2.0%
 First Year of Operation = 2000
 Discount Rate (%) = 10.0%
 GDP Rate (%) = 3.2%

IFA Capital Cost (2000 \$million) = 56 |----->>>

(A) From Section VI.E of the Report

Year	Annual Levelized Cost (\$ million)
1995	0.0
1996	0.0
1997	0.0
1998	0.0
1999	0.0
2000	10.4
2001	10.4
2002	10.4
2003	10.4
2004	10.4
2005	10.4
2006	10.4
2007	10.4
2008	10.4
2009	10.4
2010	10.4
2011	10.4
2012	10.4
2013	10.4
NPV=	47.5

SDG&E Cost Analysis Workpapers

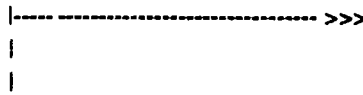
SONGS Shutdown Preliminary Evaluation
Calculation of 1995 Net Present Value of Transmission IFAs
Workpaper For SDG&E Network IFAs

1995 Net Present Value = \$107 million

o Assumptions

IFA Capital Cost (1994 \$million) = 96.17 (A)
 Annual Carrying Charge Rate (%) = 14.0%
 Annual O&M Expense = 2.0%
 First Year of Operation = 1998
 Discount Rate (%) = 9.5%
 GDP Rate (%) = 3.2%

IFA Capital Cost (1998 \$million) = 109



Year	Annual Levelized Cost (\$ million)
1995	0.0
1996	0.0
1997	0.0
1998	17.5
1999	17.5
2000	17.5
2001	17.5
2002	17.5
2003	17.5
2004	17.5
2005	17.5
2006	17.5
2007	17.5
2008	17.5
2009	17.5
2010	17.5
2011	17.5
2012	17.5
2013	17.5
NPV=	107.2

(A) From Section VI.B of the Report

TOTAL PROJECTED ANNUAL ECONOMIC IMPACT OF TRANSMISSION LOSSES

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013		
Losses Difference (MW)*	16.55	16.55	16.55	16.55	16.55	16.55	16.55	16.55	16.55	16.55	16.55	16.55	16.55	16.55	16.55	16.55	16.55	16.55	16.55	16.55	
Load Factor (LF)**	56.5%	56.5%	56.5%	56.5%	56.5%	56.5%	56.5%	56.5%	56.5%	56.5%	56.5%	56.5%	56.5%	56.5%	56.5%	56.5%	56.5%	56.5%	56.5%	56.5%	56.5%
Loss Factor 0.3(LF) + 0.7(LF)**2	0.393	0.393	0.393	0.393	0.393	0.393	0.393	0.393	0.393	0.393	0.393	0.393	0.393	0.393	0.393	0.393	0.393	0.393	0.393	0.393	0.393
Average Loss Savings(MW) (Loss Factor*Loss Difference)	6.503	6.503	6.503	6.503	6.503	6.503	6.503	6.503	6.503	6.503	6.503	6.503	6.503	6.503	6.503	6.503	6.503	6.503	6.503	6.503	6.503
Annual Energy Savings(MWH) (Average Loss Savings *Hours per Year)	56970	56970	56970	56970	56970	56970	56970	56970	56970	56970	56970	56970	56970	56970	56970	56970	56970	56970	56970	56970	56970
Annual Average Avoided Cost(\$/MWH***)	27.2	35.2	37.3	39	42.3	46	48.8	51.7	55	58.2	62.3	66.1	70.5	75.2	80.1	84.1	88.4	92.92	97.67		
Cost of Capacity (\$/KW-Year)****	71.68	73.26	75.02	76.89	78.97	81.34	83.78	86.37	89.14	92.08	95.12	98.45	101.9	105.5	109.2	113	116.9	121	125.1		
Annual Energy Savings(M\$) (Annual Energy Savings(MWH)* Annual Avoided Cost per MWH)	1.55	2.005	2.125	2.222	2.41	2.621	2.78	2.945	3.133	3.316	3.549	3.766	4.016	4.284	4.563	4.791	5.036	5.294	5.564		
Annual Capacity Savings(M\$) (Losses Difference *Cost of Capacity)	1.186	1.212	1.242	1.273	1.307	1.346	1.387	1.429	1.475	1.524	1.574	1.629	1.686	1.745	1.806	1.87	1.935	2.003	2.071		
Total Projected Annual Increase(M\$)	2.736	3.218	3.367	3.494	3.717	3.967	4.167	4.375	4.609	4.84	5.123	5.395	5.703	6.03	6.37	6.661	6.971	7.296	7.635		

*1998 was the year studied; the MW value represents the difference in losses between the case with San Onofre units in-service vs the case with no San Onofre units and the required transmission additions included. It is assumed that this difference applies to all years, from 1996 to 2013.

**This value previously used in development of loss factors in SDG&E's Transmission Cost Table (L-80-08-050)

***Avoided Energy Cost based on Long Range Avoided Cost(19/94 CEC ER 94 Uncommitted DSM filing)

****Avoided Capacity Cost based on 1994/5 ECAC Shortage Cost

*****Based on the Economic Assumptions Manual page dated 1/12/94, discount rate of 9.5%

Note: all costs shown are in dollars calculated for the year indicated

Energy savings in 1995 dollars 27.73 Millions of \$*****
Capacity savings in 1995 dollars 13.62 Millions of \$*****
Total savings in 1995 dollars: 41.36 Millions of \$*****

SONGS Shutdown Preliminary Evaluation
Calculation of 1995 Net Present Value of Transmission IFAs
Workpaper For EOR Capacity IFAs - SDG&E Share

1995 Net Present Value = \$43 million

o Assumptions

IFA Capital Cost (1994 \$million) = 46.50 (A)
 Annual Carrying Charge Rate (%) = 14.0%
 Annual O&M Expense = 2.0%
 First Year of Operation = 2000
 Discount Rate (%) = 9.5%
 GDP Rate (%) = 3.2%

IFA Capital Cost (2000 \$million) = 56

|----->>>

(A) From Section VI.E of the Report

Year	Annual Levelized Cost (\$ million)
1995	0.0
1996	0.0
1997	0.0
1998	0.0
1999	0.0
2000	9.0
2001	9.0
2002	9.0
2003	9.0
2004	9.0
2005	9.0
2006	9.0
2007	9.0
2008	9.0
2009	9.0
2010	9.0
2011	9.0
2012	9.0
2013	9.0
NPV=	43.2

9

RS TAB 9

ATTACHMENT A

SEE PAGE RS-21
OF SDG&E TESTIMONY
RE: PREVIOUS "ABSENCE OF SONGS" STUDIES

**SCREENING STUDY OF THE CAL-ISO GRID:
IMPACTS AND MITIGATIONS
Absent the
San Onofre Nuclear Generating Station
Interim Report**

**ISO STAKEHOLDER PROCESS JOINT STUDY:
California Independent System Operator,
Southern California Edison, San Diego Gas & Electric,
and Interested Stakeholders**

August 16, 1999

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INTRODUCTION

Cal-ISO (ISO) Management and other stakeholders expressed interest in the potential grid reliability impacts (and corresponding mitigation required) in the event that certain generating plants are absent in the 2000-2007 time frame. Because of the placement and effect that the San Onofre Nuclear Generating Station (SONGS) has on both the SCE and SDG&E systems, the CAL-ISO requested that SCE and SDG&E conduct a joint study to assess potential reliability impacts to the grid in the absence of SONGS. SONGS is a jointly owned plant of which 80% serves the SCE system (including small amounts for Anaheim and Riverside) and 20% serves the SDG&E system. The ISO coordinated with SCE, SDG&E, and other market participants through a stakeholder process to develop a Study Plan. SCE and SDG&E conducted analytical studies to assess the regional and local reliability impact of SONGS absence on their transmission systems and identify viable mitigation plans. The ISO also facilitated the distribution of information to and meetings with stakeholders, as well as the compilation of this report.

The focus of this study was to identify transmission system reliability issues, associated mitigation measures, and resource adequacy issues that result from the absence of SONGS.

The SONGS units are presently operating under a generation incentive mechanism, which was determined by the California Public Utilities Commission. This settlement agreement is known as Incremental Cost Incentive Pricing (ICIP), which covers SONGS operation and forecasted operational costs through December 31, 2003. Various "post-ICIP" outcomes were addressed from a transmission planning point-of-view in order to plan for the most efficient system operation. These scenarios are:

- SONGS will compete in the market.
- SONGS may be shut down for economic or other reasons sometime after the conclusion of the ICIP and therefore mitigation measures are required for the absence of this resource and related transmission reliability issues.
- SONGS may be needed to preserve local reliability and therefore may be awarded a contract (this may or may not resemble the current Reliability Must-Run (RMR) contracts) to assure continued operation until transmission and generation mitigations are in place.

EXECUTIVE SUMMARY

Limited studies were conducted to identify reliability impacts to the electric transmission system in the local and regional areas of Southern California with the absence of the SONGS units. Viable mitigation options for this study's time frame of 2004 were developed. Additional studies, investigations, and determinations are required to develop a detailed plan-of-service to mitigate these reliability impacts. Various types of mitigation measures were examined, including generation and transmission options. Load shedding was seen as an outcome of failing to meet system reliability and resource requirements absent SONGS, but is not seen as an acceptable "mitigation" response. Some mitigation measures were found to be viable and some were not. In some cases, more than one viable measure could be used to mitigate a particular reliability impact. Also, the different types of measures (such as generation and various transmission system facilities) may be combined to form multiple combinations of mitigation measures.

Benchmarking performed in this study, show that the system with SONGS in-service meets the ISO and WSCC reliability criteria. Within the assumptions used in this study and limited studies conducted, the need for the mitigations discussed, are caused by the absence of SONGS.

The adequacy of the various mitigation measures for years beyond 2004 was not part of the scope of these studies.

In evaluating the impact of SONGS' absence on the SCE and SDG&E electric transmission systems, the following issues and activities were not investigated since they were beyond the scope of this Study. There may be an interest in pursuing some or all of these activities as well as other related activities as needed at a later date.

- Investigate special operating contracts for SONGS in the future
- Study to optimize and integrate transmission line and generation solutions
- Study to assess proper allocation of the reactive power requirements for either SCE or SDG&E systems
- Perform competitive bidding and economic evaluation of wires and non-wires alternatives, including "length of life" analyses
- Determine assignment of cost responsibility
- Complete WSCC three-phase rating process
- Complete facility engineering design studies
- Assess ROW and environmental impacts of the mitigation plans, for either wires or non-wires alternatives

Highlights of the study findings are:

- 1. Within the system conditions and contingencies evaluated as part of this study effort, there were no reliability criteria violations found with SONGS on line.**
- 2. Reliability impacts on regional and local areas of the Cal-ISO grid in Southern California were identified under normal and emergency conditions in the absence of SONGS.**

Regional Transmission System Impacts

SONGS is located at the interface between the SCE and SDG&E systems, and supplies 2150 MW of real power and 1100 MVAR of reactive power (voltage support at the unit's rated capabilities) to both the SCE and SDG&E systems. The loss of base-loaded generation of this magnitude and in a strategic location adversely impacts system reliability and resource capability.

With the absence of SONGS there is a resource deficiency. To serve the assumed 2004 peak load prior to any system contingency, the studies represented all units in Southern California as being on line, along with 2000 MW of increased imports to replace SONGS. However, the increase in imports pushes the total amount of Southern California imports 2,200 MW higher than the existing 1999 summer Southern California Import Transmission (SCIT) Nomogram Limit. The 1999 Summer SCIT Nomogram import limit into Southern California is 13,320 MW. To bring the imports within the SCIT limit, either 2,200 MW of new generation or 2,200 MW of load shedding are required in the Southern California region.

Without SONGS, with all existing generation on line and within Southern California Import Transmission nomogram limits, there is a resource deficiency in the Southern California Area of 2,200 MW. Without additional import capability, either 2,200 MW of new generation or 2,220 MW of load shedding is required.

For the post-transient analysis, violations of the WSCC Voltage Stability criteria were identified for the following critical outages:

- Imperial Valley – Miguel 500 kV Line (and associated tripping of the Imperial Valley – La Rosita 230 kV Line);
- Ellis – Johanna and Ellis – Santiago 230 kV Lines; or
Lugo – Mira Loma Nos. 2 and 3 500 kV Lines.

Local Area Transmission System Impacts

SCE Area: Thermal overloads of 20% and 44% occurred on the Del Amo – Ellis 230 kV and Barre – Ellis 230 kV lines respectively, for the outage of the other line. For the post-transient analysis, violations of the WSCC Voltage Stability criteria were identified for the critical outage of the Ellis – Johanna and Ellis – Santiago 230 kV lines or the Lugo – Mira Loma Nos. 2 and 3 500 kV lines. For these outages, voltage collapse is a possibility with the absence of SONGS. No transient stability criteria violations were identified.

SDG&E Area: One 138 kV transformer bank and two 69 kV transmission line thermal overloads of 9%, 13%, and 1% respectively, were identified. SDG&E noted that these 138 kV and 69 kV overloads would be corrected by transmission projects associated with their Annual Transmission Assessment process. There were no transient stability violations.

3. Several measures involving transmission, generation and demand-side options, to viably mitigate reliability impacts in the absence of SONGS were identified.

Various combinations of mitigation measures were examined to determine their technical feasibility in mitigating reliability criteria impacts to the transmission grid in the absence of SONGS. This study did not assess the costs, evaluate the long-term viability, permitting and construction lead-times, or determine optimal combinations and locations of the mitigation measures. These factors, among others, should be considered in combination with other market solutions prior to selecting and pursuing a preferred set of alternatives.

Mitigation plans are required to ensure a balanced load and resource scenario and the meeting of all applicable reliability criteria associated with the following:

- Preventing local overloads; and
- Avoiding the potential for voltage collapse;
- Restoring and increasing the allowable import into Southern California based on the SCIT Nomogram through more efficient utilization of existing transmission lines by adding VAR support (examined in this study) or by adding another transmission line between Southern California and some external location (not examined in this study);
- Restoring EOR transfer capability that may be reduced due to the absence of SONGS.

Because replacement power for SONGS significantly loads the transmission system in the Southern California region differently (different lines, different location and direction

on lines) the mitigation measures for the absence of SONGS can be significant (for instance, the required reactive voltage support can be more than twice as much as the reactive capability of the SONGS units).

The following are five basic (but not all) viable mitigation options packaged to show some tradeoffs among different types of measures (e.g. generation & transmission). It should not be construed that these options represent an optimal or final package of mitigation measures. Indeed, there could be other combinations of "mixing and matching" that result in an optimal combination of mitigation measures. It is important to realize that each of these options does not result in similar system performance. One option may be suitable only for the year 2004, while another may provide a robust, long-term solution that has benefits besides mitigating the absence of SONGS. Since this study only addressed the year 2004, additional generation and/or transmission facilities may be required to determine a long-term solution to the absence of SONGS.

Mitigation Option 1 – Focus on Retaining SONGS on line

SONGS may continue to operate as a market resource after its ICIP expires on 12/31/03. An operational agreement may be warranted to ensure availability and to dispatch SONGS when required (this may or may not resemble an RMR contract).

Mitigation Option 2 – Focus on 230 kV Transmission System Facilities

- Install 4,460 MVAR reactive support, mostly dynamic, in both SCE and SDG&E systems. The amount consists of 750MVAR of switched shunt capacitors and 3,600 MVAR of dynamic VAR sources for the SCE system and 82.5 MVAR of switched shunt capacitors and 27.5 MVAR of dynamic VAR sources for the SDG&E system. (Plus common mitigation measures noted below)

Mitigation Option 3 – Focus on 500 kV Transmission System Facilities

- Construct a new 25-mile Valley-Rainbow 500kV line including 230 kV connection to SDG&E's system.
- Install 3,300 MVAR reactive power support in both SCE and SDG&E systems. The amount consists of 750 MVAR of switched shunt capacitors and 2,400 MVAR of dynamic VAR sources for SCE, and 120 MVAR of switched shunt capacitors and 30 MVAR of dynamic VAR sources for SDG&E. (Plus common mitigation measures noted below)

Mitigation Option 4a – New Merchant Generation North of SONGS

- Construction of up to 3,000 MW of new generation in the Orange County area. (Based on proposed generation repowering at specific locations. (Alamitos, Huntington Beach, and San Bernardino Power Plants))
- Install 2,100 MVAR reactive power support in both SCE and SDG&E systems. The amount consists of 750 MVAR of switched shunt capacitors and 1,200 MVAR of dynamic VAR sources in SCE's area, and 120 MVAR switched shunt capacitors and

30 MVARs of dynamic VAR sources in SDG&E's area. (Plus common mitigation measures noted below)

Mitigation Option 4b – New Merchant Generation South of SONGS (This option significantly reduces the import capability of SDG&E)

- Construction of the proposed Otay Mesa Power Plant near Miguel Substation.
 - Install shunt capacitors (25-75 MVAR for SDG&E and 100 MVAR for SCE).
- (Mitigation Option 4B requires the common mitigation noted below except bypassing the SWPL series capacitors)

Common Mitigation Measures:

- Upgrade the conductors on SCE's Del Amo - Ellis and Barre – Ellis 230 kV lines, and form a second Barre – Ellis 230 kV line through reconfiguration of the existing line. (Not required for Alternative 4A or 4B).
- Install 750 MVAR of shunt capacitors on the Edison system.
- Bypass the SWPL series compensation
- Install series compensation (75%) on the four 230kV lines North of SONGS or construct a new 15 mile Ellis-Santiago 230 kV line.

For Options 2-4a, the proper allocation of the reactive power requirements for SCE and SDG&E systems has not been determined.

Various types of reactive power devices to support voltage are available (shunt capacitors, static var devices, synchronous condensers, static VAR compensators (SVC's), and static condensers (STATCOM)). Additional studies are required to determine the optimum mix and the optimum location of the static and dynamic reactive power devices.

Merchant generation plants outside the LA Basin (except for Otay Mesa - Mitigation Option 4B) were also evaluated as mitigation for system impacts, but were found to be an ineffective solution for mitigating the system impacts due to the absence of SONGS.

Without new merchant generation in the LA Basin and/or in the San Diego area, and without other mitigation measures, there would be a potential inability to serve load under normal and contingency conditions at peak demand. Studies show that 2,200 MW of load in the Southern California region may not be served even with all existing generation facilities in-service. This is based on the operational requirement that the SCIT Nomogram not be exceeded.

Additional issues

At the time of development of the present ISO Tariff language regarding RMR generating units, it was understood by the parties that SONGS was a "Must Take" generator and would not be subject to the RMR language. Thus, specific language was not developed at that time to cover the special case of generation that is located at an electrical interface of two TO's and is jointly owned.

The WSCC procedures entitled "Procedures for Regional Planning Project Review and Rating Transmission Facilities", dated March 1996, provide that a reduction in a path's Accepted Rating is acceptable if caused by removing facilities (such as generation) from service when such facilities are not part of the path suffering a reduction. The parties to this study understand and agree that merely because the presence of SONGS has permitted one or more path ratings to be higher than they would have otherwise been rated, there is no obligation to maintain SONGS merely to maintain such path(s) at those previously-supported ratings. Process Scenario 6.0 in the WSCC procedures (pages 52-53) illustrates these principles. Similarly, any change in operating point or nomogram lines on the SCIT Nomogram due to the absence of SONGS was considered acceptable. Thus, the approach used in this study was to develop mitigation plans to ensure adequate transmission grid reliability, but not necessarily to maintain the EOR, WOR or SCIT transfer level to any particular value.

Additional studies are required to fine-tune the reactive power support identified in the various mitigation plans. The reactive power support requirement identified depends on interpretation and assumptions used to bring the performance of the SCE and SDG&E systems within the WSCC Voltage Stability Criteria. Interpretation and assumptions include whether generator tripping should be assumed due to overexcitation above the steady state maximum reactive power capability, voltage profile assumptions, and the needed mix of dynamic and static reactive power sources.

CONCLUSIONS

- No reliability criteria violations with SONGS on line were identified in this study.
- The power flow analysis identified that two SCE 230 kV lines in the Orange County area, Del Amo - Ellis and Barre – Ellis, would be overloaded under N-1 contingencies. To mitigate these overloads, it may be possible to upgrade these lines to a higher emergency thermal rating, in addition to forming two Barre – Ellis 230 kV lines through reconfiguration of the existing Barre-Ellis 230 kV line.
- In 2004 under Heavy Summer base case conditions, without any mitigation in the absence of SONGS, significant reactive power deficiencies will occur under critical contingencies in the SCE and SDG&E systems. Various mitigation plans were analyzed to bring the performance of the two systems within the WSCC Voltage Stability Criteria. Overall studies showed significant reactive power deficiencies in the SCE and SDG&E systems under critical contingencies, due to loss of the reactive power support of the SONGS units combined with higher VAR losses resulting from increased imports to replace SONGS. Absent mitigation, power flow cases were not able to reach convergence under the following contingency conditions.
 - N-1 of Imperial Valley-Miguel 500/Imperial Valley-La Rosita 230 kV line;
 - N-2 of Ellis-Johanna and Ellis-Santiago 230 kV lines; or
 - N-2 of Lugo-Mira Loma 500 kV lines.
- The SCIT Nomogram verification study indicated that a total of up to 3,000 MW of new generation in the Los Angeles Basin area (the sensitivity of repowering at Alamitos, Huntington Beach, and San Bernardino Power Plants was studied) coupled with reactive power support additions, provided sufficient generation to allow operation of the Southern California system to be within the current Southern California Import Transmission (SCIT) Nomogram with the absence of SONGS in year 2004 heavy summer season. The re-power projects also eliminated the overloading problems identified in the Orange County area of the SCE system. Without such re-power projects in the LA Basin, significant transmission reinforcements would be required to import SONGS replacement power into Southern California. The other mitigation plans identified in this report would raise the existing SCIT limit to allow imports to replace SONGS and to serve the projected peak load in the year 2004.
- A 500 kV line between Valley Substation (in SCE) and a new Rainbow Substation (in SDG&E) was evaluated in this study and can be part of a mitigation alternative for the

absence of SONGS. This new 500 kV line will not entirely resolve resource limitations into Southern California and will require additional transmission system facilities (as described in the Executive Summary, Mitigation Option #3) unless sufficient new generation is built within Southern California. The Rainbow-Valley Line could be part of a plan to increase transfer capability into the San Diego area by increasing the allowable import into Southern California (based on the SCIT Nomogram).

- Although upgrading the SWPL series capacitors to higher thermal ampacities was considered to mitigate normal system overload condition on the SWPL, other upgrades through Mexico and the southern SDG&E system would also be required to accommodate the increased flow. Bypassing the series capacitors was seen as a preferable option to minimize the incremental increase in flow on SWPL resulting from the absence of SONGS.
- The proposed 1000 MW Otay Mesa Power Plant, when studied as part of a mitigation option for the absence of SONGS, reduces the required reactive power support significantly. This method of mitigating the absence of SONGS results in reduced SDG&E import capability and therefore increases the reliance on local generation in the San Diego Area.
- This technical study regarding the possible absence of SONGS has identified potential grid system reliability concerns. Some alternative options and recommendations have been developed. Additional technical studies could describe other alternative mitigation alternatives. Nothing in this study is intended to commit SCE or SDG&E to any specific course of action, and the split of responsibility (financial or otherwise) has not been determined. In order to do least cost planning prior to the future absence of the SONGS units, additional studies and investigation should be conducted to develop a preferred mitigation alternative. Also, discussions between SCE and SDG&E will be necessary to determine the responsibility of each. It is envisioned that a plan-of-service (if or when required) will be developed by mutual agreement between SCE and SDG&E, within the ISO planning process, as part of this effort.
- It must be noted that there is no mutual agreement between SCE and SDG&E about cost-sharing or relative levels of responsibility associated with the absence of SONGS or the pursuance of any of the options identified in this study. Additional studies are contemplated that would test the relative effect of VAR source location within the Southern California area, to examine where VAR sources are most effective, and to determine whether such studies can shed insight into effectiveness and responsibility.

- At the time of development of the present ISO Tariff language regarding RMR generating units, it was understood by the parties that SONGS was a “Must Take” generator and would not be subject to the RMR language. Thus, specific language was not developed at that time to cover the special case of generation that is located at an electrical interface of two TO’s and is jointly owned.
- With the absence of SONGS there is a resource deficiency. To serve the assumed 2004 peak load prior to any system contingency, the studies represented all units in Southern California as being on line, along with 2000 MW of increased imports to replace SONGS. However, the increase in imports pushes the total amount of Southern California imports 2,200 MW higher than the existing 1999 summer Southern California Import Transmission (SCIT) Nomogram Limit. The 1999 Summer SCIT Nomogram import limit into Southern California is 13,320 MW. With all existing generation in the Southern California region on line, to bring the imports within the SCIT limit, either 2,200 MW of new generation or 2,200 MW of load shedding are required.
- Additional mitigation measures would be required to reduce the amount of generation assumed to be available from existing generating units. One mitigation plan would be the development and construction of merchant generation strategically located in both the SCE and SDG&E systems. However, if sufficient new merchant generation does not locate in these areas or if they cannot be relied upon to be operational at critical times, then other mitigation plans, including transmission reinforcements to increase the import capability into Southern California, are needed to provide adequate reliability and to provide access to generation resources outside Southern California.
- Absent SONGS, with all generation facilities in-service, reactive power losses increased by over 1700 MVAR in the SCE system and over 300 MVAR in the SDG&E system. Similarly, the combined SCE and SDG&E real power losses increased by 130 MW. This magnitude of increase in real and reactive power losses was due to assuming increased SCIT import (2200 MW) to serve the 2004 heavy summer peak load under base case (all facilities in-service) conditions.

RECOMMENDED NEXT STEPS

The study team has found that the absence of SONGS would result in reliability impacts to the systems of SCE and SDG&E. It is critical that adequate reliability be maintained whether the SONGS units remain in operation or not. With the stated ISO goal of eliminating present RMR requirements, it is not desirable that SONGS should become an RMR unit. Suitable mitigation measures should be put in place, in a timely manner, to assure reliability. Therefore, the following recommended next steps are:

- SCE and SDG&E to inform the CAL-ISO Board about plans and commitment for SONGS operation beyond December 31, 2003.
- With consideration to the project lead times for transmission system reinforcement, initiate an activity to determine a preferred plan of service "if" SONGS is shut down.

Associated with this activity:

- A timeline should be developed to target mitigations for the absence of SONGS to be in place by June 1, 2004 (coincides with meeting summer peak load conditions).
- Additional project planning studies should be performed in accordance with an agreed-upon schedule.
- Negotiations should take place between SCE and SDG&E to determine the proper responsibility and cost allocation for mitigations required for the absence of SONGS.

BASE CASE DEVELOPMENT, ASSUMPTIONS AND NOTES

The power flow base cases and stability data were developed in General Electric PSLF format. The following assumptions have been used in developing the base cases, and performing power flow, transient stability and other analyses.

Power flow base case development

The ISO coordinated the development of two power flow base cases, Heavy Summer (HS) and Heavy Autumn (HA), based on input from SCE, SDG&E, and other stakeholders. The power flow base cases and associated dynamic data used in this study were posted on the ISO's web page (www.caiso.com) for stakeholder access and comment.

One power flow base case reflects 2004 Heavy Summer conditions. This case originated from the ISO's 2003 HS Reliability Must-Run (RMR) case, with a detailed representation inside the ISO control area.

A second base case reflects 2004 Heavy Autumn conditions. This case was used in the "regional" analyses, specifically the Southern California Import Transmission (SCIT) Nomogram verification and the Arizona-California East-of-the-River (EOR) transfer path assessment. This case originated from the latest WSCC 2000 Heavy Autumn case ("00HA1"). The case has a 7550 MW flow on the EOR path.

For all areas outside California, the network topology and loads reflected information provided to WSCC by each respective area. SCE and SDG&E reviewed the two base cases and updated their respective area's information as needed.

The Load / Resource bubble diagrams in Appendix A illustrate the load resource picture for the SONGS "On" and SONGS "Off" cases under Heavy Summer and Heavy Autumn conditions.

The major flows for the Heavy Summer case with SONGS in-service follow:

EOR	3677 MW
Midway-Vincent	952 MW
IPP(Adelanto)	1758 MW
PDCI (Sylmar)	2728 MW
North of Lugo	806 MW
WOR	6198 MW
SCIT	12442 MW

To achieve the NO SONGS case, imports into Southern California were brought in from PG&E on the Midway-Vincent path and from WAPA (Griffith and South Point projects) on the WOR path. The major flows for the Heavy Summer case with NO SONGS in and without any system improvements follow:

EOR	3969 MW
Midway-Vincent	2128 MW
IPP(Adelanto)	1758 MW
PDCI (Sylmar)	2728 MW
North of Lugo	809 MW
WOR	7255 MW
SCIT	14678 MW

The major flows for the Heavy Autumn case with SONGS in-service follow:

EOR	7550 MW
Midway-Vincent	960 MW
IPP(Adelanto)	1683 MW
PDCI (Sylmar)	406 MW
North of Lugo	734 MW
WOR	7884 MW
SCIT	11667 MW

To achieve the NO SONGS case generation was brought up in the SCE and SDG&E area and some imports were also assumed. The major flows for the Heavy Autumn case with NO SONGS and without any system improvements follow:

EOR	7575 MW
Midway-Vincent	961 MW
IPP(Adelanto)	1683 MW
PDCI (Sylmar)	1002 MW
North of Lugo	842 MW
WOR	7909 MW
SCIT	12398 MW

Load assumptions

SCE/SDG&E Load Level -- Loads modeled in power flow cases representing peak summer load conditions represent a maximum anticipated coincident peak load for the SCE/SDG&E area, based upon a one-in-five-year ("80/20") heat wave. For 2004 Heavy

Summer load levels, SCE load was modeled at 21,370 MW (including pumps, Anaheim, and Pasadena) and roughly 400 MW of losses (with SONGS modeled as on line). SDG&E load was modeled at 4,589 MW and roughly 92 MW of losses. The remainder of the ISO Grid was modeled at a coincident one-in-five-year load level. For reactive power margin analysis, cases were scaled to average ("1-in-2") peak load levels, to meet the WSCC reliability criteria while avoiding overly conservative load assumptions.

Power Factor -- Load Watt/VAR ratios represented in the base cases reflect reasonable values for the operating conditions being studied. For 2004 Heavy Summer, SCE's overall power factor is modeled at 0.999 lagging (SCE's traditional 25:1 Watt:VAR methodology) at the 230 kV level. SDG&E's overall power factor is modeled at 0.992 lagging.

Municipality Loads -- Loads of a Non-Participating Transmission Owner that are within the SCE or SDG&E service area, and directly interconnected to their host utility's transmission or distribution facilities, has been modeled based on the most recent forecast available from the Non-Participating TO.

Neighboring Area Loads -- Loads located outside the SCE / SDG&E area (including LADWP, PG&E, IID, CFE and other WSCC member systems) have been modeled based on information provided to WSCC.

Generation assumptions

Reliability Must-Run Generation -- SCE and SDG&E incorporated applicable findings from the ISO's Long Term Must-Run Assessment into the study. The study considered and assumed the availability of the 1999-designated RMR units.

Qualified Facilities -- All QF generation was modeled consistent with WSCC criteria and study practices. QF generation located within SCE and SDG&E's service area was modeled at an output which reflects their historic dependable operating capacity (in the absence of such information, maximum contract value was used). For steady-state power flow analysis, all explicitly modeled QF generation had their reactive power capabilities represented according to contractual requirements; otherwise historical operating data was used. For transient stability analysis, actual reactive power capabilities (such as manufacturer data or field test data) was modeled as available. Those QFs expected to either reach the end of their contract or to be purchased by the year modeled in this study (2004) were regarded in the same fashion as other "merchant" or market-driven units.

Hydro and Public Power Utilities Sources -- These types of generation were modeled at

“typical” expected operating performance for the time period being studied.

Distribution-sited Generation -- All generation directly interconnected to the SDG&E distribution systems (not directly interconnected to the ISO Controlled Grid) was netted with the load represented at the nearest ISO Grid Take-Out Point. Most of generation directly interconnected to the SCE system was simulated in cases.

Merchant Generation – the base cases assumed that all market generation with connection agreements is available and on as needed to meet the system load requirements.

New Generation -- SCE and SDG&E included all planned generating resources in the study model that have signed interconnection agreements with either SCE or SDG&E as of May 1, 1999. The El Dorado Energy (EDE) generation project (450 MW) was simulated in the 2004 Heavy Summer and the Heavy Autumn base cases. The plant is expected to be on line by the end of 1999.

SONGS Replacement Power -- Replacement capacity during an absence of SONGS in the 2004 Heavy Summer season is assumed to rely on 100% SCIT import. The increased power import was scheduled through from Northern California (Midway-Vincent path) and North of Arizona (WOR path). Two new generation projects, South Point and Griffith (total 1048 MW), were simulated and delivered through the WOR path into Southern California. Replacement capacity during an absence of SONGS in the 2004 heavy autumn season is assumed to rely on local generation units.

Operating Reserve -- The study cases maintained a 5-7% operating reserve requirement within the ISO Controlled Grid, in accordance with the WSCC Minimum Operating Reliability Criteria (MORC). A determination of how the operating reserve requirement would be met, and what alternate dispatch scenarios merited evaluation, was a collaborative effort between the ISO, SCE, and SDG&E.

PG&E's Diablo Canyon Nuclear Plant was modeled on line for the study cases. Although a sensitivity analysis was not performed with Diablo Canyon generation assumed off line, virtually all resources in Southern California, in addition to maximized power import into Southern California beyond the existing SCIT Nomogram, are seen to be needed to meet load during the absence of SONGS. Thus, Southern California could not be relied upon to offer resources to the PG&E system to compensate for the absence of Diablo Canyon. If loss of Diablo Canyon were to limit the import capability into Southern California, the serving of load in Southern California may be further jeopardized. This topic is worthy of future study and consideration.

Regional Paths/ ISO Imports Assumptions

Flows on the California-Oregon Intertie (COI) path were represented no higher than the maximum operating capabilities studied in the present-year's (1999) season, as determined by WSCC's Operating Capability Study Group (OCSG). However, the flows on the SCIT paths were higher than the maximum level allowable based on the (1999) Southern California Import Transmission (SCIT) Nomogram for the base case without SONGS.

The following significant import flows into Southern California for the SONGS "On" case were kept within the following levels:

Path	Rating Assumption	Range of Actual Flows
SCIT	Current Operating Nomogram dated 4/21/99	Will maintain composite SCIT flow within Nomogram prior to absence of SONGS
WOR	10118 MW	Dictated by EOR and River-area resource availability
EOR	7550 MW	Dictated by resource availability from Arizona
SWPL	970 MW (SDG&E) 1273 MW (Total)	Will maintain SWPL flow within SDG&E Simultaneous Import Nomogram
Midway-Vincent	2600-3000 MW	Below 2800 MW
SDG&E-CFE	408 MW	0 MW (cannot be dependent on Mexico to maintain reliability in Southern California)
Liberty-Mead	450 MW	No phase shifter operation to be assumed for moderate EOR flow
Westwing (Perkins)-Mead	1300 MW	No phase shifter operation to be assumed for moderate EOR flow
PDCI	3100 MW (at Celilo)	400 - 3100 MW (at Celilo)
IPP DC	1920 MW (at Intermountain)	1820 MW (commonly-assumed level)
North of Lugo	1200 MW	800 - 900 MW

Other assumptions

Series Compensation – The major Extra High Voltage (EHV) lines will be represented at normal series compensation operating levels as shown below.

East of River (EOR) EHV Lines

Navajo-McCullough 500 kV [now w/Crystal]	70%
Moenkopi-Eldorado 500 kV	70%
Liberty-Mead 345 kV	70%
Palo Verde-Devers 500 kV	50%
Palo Verde-N. Gila 500 kV	50%
Westwing-Mead 500 kV	70%

West of River (WOR) EHV Lines

McCullough-Victorville 500kV #1 & #2	35%
Eldorado-Lugo 500 kV	35%
Mohave-Lugo 500 kV	26%
Marketplace-Adelanto 500 kV	45%
North Gila-Imperial Valley 500 kV	50%

Remedial Action Schemes (RAS) -- Existing RAS for Big Creek, North of Lugo, and the MWD/SCE and SDG&E interface will be assumed as operational (and simulated as such, if necessary). Other anticipated RAS (expected by the year-of-study) will also be included.

The SWIP Project -- The proposed 500kV between Idaho's Kinport/Midpoint and Nevada's Crystal Lake was not included in the base cases.

Planned Facility Additions -- Facility additions already planned by SCE and SDG&E were modeled in the cases.

1. Added Facilities in SCE System:

- a. 1455 MVAR shunt capacitors- at various 230 kV substations in both cases
- b. 525 MVAR shunt capacitors at various 230 kV substation in both cases
- c. Serrano 3rd AA bank
- d. Mira Loma 4th AA bank
- e. Moorpark 4th A bank

2. Added Facilities in SDG&E System

- a. 360 MVAR shunt capacitors at various 230 kV and 138 kV substations
- b. A new 230 kV transmission line: SONGS-Encina #2
- c. San Luis Rey 230/69 kV transformer #1 tapped into Mission-San Luis Rey 230 kV line

Upgrades would have occurred on SDG&E's system by 2004 such that the simultaneous import capability South-of-SONGS is expected to increase from 2450 to about 2850 MW, and the South-of-SONGS path rating is expected to increase from 1900 to about 2450 MW (for the case with SWPL out-of-service).

Sensitivity Analysis

Base on stakeholder suggestions, additional study scenarios were simulated.

The impact of using proposed new merchant power plants as an alternative to providing SONGS replacement capacity was evaluated. Below is a list of the new merchant plants assessed.

- Alamitos Re-power (740 MW)
- Huntington Beach Re-power (740 MW)
- Alamitos/Huntington Beach/ San Bernardino Re-power (total of 3,000 MW)
- Hi-Desert (740 MW)
- Pastoria (960 MW)
- Otay Mesa (1,000 MW)
- Blythe (400 MW)
- Antelope (1,000 MW)

POWER FLOW ANALYSIS

A "baseline" of existing reliability problems (if any) was established by performing an initial screening of the foundation case with SONGS on line. By applying the same screening to the "no SONGS" version of the same base case, new reliability problems that emerged could be directly associated with the absence of SONGS.

Power flow studies were performed for the 2004 Heavy Summer case with SONGS units on and with SONGS units off. Power flow studies determine the extent to which thermal overloading occurred on facilities due to the change in flow pattern resulting from the absence of the SONGS units and associated rescheduling of power. All-lines-in-service analysis, as well as credible contingency analysis, were performed in accordance with the ISO Grid Planning Criteria. Specific contingencies - previously known to be worst-case outages – included the following:

- N-1 of Imperial Valley – Miguel (and Imperial Valley – La Rosita if required);
- N-1 of the Palo Verde – Devers 500 kV Line;
- N-2 of the Ellis – Johanna and Ellis – Santiago 230 kV Lines;

- N-2 of the Lugo – Mira Loma #2 and #3 500 kV Lines; and
- other N-1, N-2 and N-1-1 outages may be studied as appropriate or as requested.

Power flow cases diverged under the following contingencies:

- N-1 of Imperial Valley-Miguel 500/Imperial Valley-La Rosita 230 kV line;
- N-2 of Ellis-Johanna and Ellis-Santiago 230 kV lines; and
- N-2 of Lugo-Mira Loma #2 and #3 500 kV lines.

Divergence of the power flow cases under these contingency conditions, absent SONGS and absent mitigation, was due to high imports of SONGS replacement capacity. This causes a significant increase in reactive power losses and is not an acceptable case since it assumes operation outside the SCIT Nomogram (which is not permissible).

Facility loading was monitored to ensure that overloads did not occur. Continuous ratings were used for "All Lines in Service" analysis, and emergency ratings were used for all contingency cases (in many cases, the emergency rating may be the same as the continuous rating). To the extent that unacceptable power flows were seen, upgrades or other remedial measures were developed.

Loss analysis was performed on SCE and SDG&E systems with and without SONGS.

SCE system power flow results

No thermal or voltage problems were identified in the Heavy Summer SONGS-On cases.

The SCE System losses increased in 2004 heavy summer case with SONGS off line:

<u>SONGS-On</u>	<u>SONGS-Off</u>	<u>Increased by</u>
403 MW	509 MW	106 MW
4145 MVAR	5864 MVAR	1719 MVAR

The power flow analysis with the absence of SONGS revealed two 230 kV lines in SCE's Orange County area overloaded above SCE's criteria limit of 115 % under N-1 contingencies:

<u>Outage</u>	<u>Overloaded Line</u>	<u>% Loading</u>
1. Barre-Ellis 230 kV	Del Amo-Ellis 230 kV	120
2. Del Amo-Ellis 230 kV	Barre-Ellis 230 kV	144
3. San Onofre-Serrano 230 kV	Barre-Ellis 230 kV	117

In addition to the line overloads identified above, voltage at SCE's Victor 230 kV

Substation was 2 kV below SCE's minimum operating standard under the N-1 contingency of Palo Verde-Devers 500 kV line.

SDG&E system power flow results

No thermal and voltage problems were identified in the Heavy Summer SONGS-On cases.

The SDG&E System losses increased in 2004 heavy summer case with SONGS off line:

<u>SONGS-On</u>	<u>SONGS-Off</u>	<u>Increased by</u>
92 MW	116 MW	24 MW
778 MVAR	1081 MVAR	303 MVAR

Results of the SDG&E power flow analysis are illustrated in the table entitled "SONGS STUDY Power Flow Analysis" on page 23; the results indicate that:

- Removing the SONGS units will overload the Palo Verde – North Gila 500 kV line, the N. Gila – Imperial Valley 500 kV line, and the Imperial Valley to La Rosita 230 kV line for base conditions. This occurs at significantly lower EOR levels when compared to having the SONGS units modeled on line. This results in a detrimental effect on the permissible Arizona-to-California power transfer capability.

To alleviate the thermal overloads on SWPL three alternatives were identified for the SDG&E system:

- Bypass the series capacitors in Palo Verde- North Gila and North Gila - Imperial portions of SWPL
- Upgrade the series capacitors in Palo Verde- North Gila and North Gila - Imperial portions of SWPL
- Build a new 500 kV line from SCE's Valley Substation to the Rainbow site, located in the SDG&E system. This option requires either upgrading or bypassing of the SWPL series capacitors. The option upgrading of the SWPL series capacitors was the one studied. The Rainbow site is located close to the Escondido - Talega 230 kV which facilitates the looping in of the line into the new 500/230 kV Rainbow Substation

Since there is a close relation, even more so absent SONGS, between the flow in SWPL and the EOR level during summer peak load conditions, the proposed upgrades were evaluated for different EOR levels. Results show that either bypassing series capacitors in the SWPL or building the Rainbow-Valley 500 kV line will allow higher EOR flows. Both options require reactive power support. The Voltage and Var Requirement Study section of this report illustrates how this reactive power support can be provided.

The following table illustrates some minor overloads at Escondido Substation and Main Street Substation transformers for base case conditions, and at Clairemont, Sycamore and Pomerado for N-1 conditions. The existing plans for the SDG&E system will add upgrades to the system that will alleviate these overloads.

SONGS STUDY				
June, 1999				
Power Flow Analysis				
Base Case Analysis				
			% Loading on Normal	
	CASE	LOADING	SONG*	NOSO**
	2600 MW IMPORT INTO SDG&E	P.VERDE-N.GILA 500 kV	89.08	123.77
		IMPRLVLY - N.GILA 500 kV	84.16	120.42
		IMPRLVLY - ROA 230 kV	79.9	104.26
		ESCONDIDO 138/69 bank	92.13	103.8
		MAIN 138/69 bank	95.04	100.99
		MIGUEL 500/230 bank	66.77	98.87
Contingency Analysis				
A total of 243 N-1, G-1				
Overloads		% Loading on Emergency		
	Contingency	OVERLOAD	SONG*	NOSO**
N-1	IMPRLVLY -MIGUEL 500 kV		None	Does not
	IMPRLVLY - ROA 230 kV			Solve
N-1	IMPRLVLY - N.GILA 500 kV		None	Does not
				Solve
N-1	PALO VERDE-N.GILA 500 kV		None	Does not
				Solve
N-1	PALO VERDE-DEVERS 500 kV	PALO VERDE-N.GILA 500 kV	None	111.99
		IMPRLVLY-N. GILA 500 kV		101.67
		IMPRLVLY-ROA 230 kV		OP. AC.
N-1	ENCINA-CALVR TAP-SHADOWRGD 138 kV	ESCONDIDO 138/69 (BK51)	None	109.00
N-1	PACIFIC BEACH-OLDTOWN 69 kV	CLAIRMONT-CLRMTAP 69 kV	None	113.00
N-1	POMERADO-SYCAMORE 69 kV #1 OR #2	POMR-SYCMR 69 kV #2 OR #1	None	101.00
	* EOR level 3677 MW			
	** EOR level 3969 MW			

TRANSIENT STABILITY ANALYSIS

Transient stability studies were performed for the following specific contingencies (previously known to be worst-case outages) using the 2004 Heavy Summer cases with and without SONGS:

- N-1 of Imperial Valley – Miguel (and Imperial Valley – La Rosita if required);
- N-1 of the Palo Verde – North Gila 500 kV Line;
- N-1 of the Palo Verde – Devers 500 kV Line;
- N-2 of the Ellis – Johanna and Ellis – Santiago 230 kV Lines;
- N-2 of the Lugo – Mira Loma #2 and #3 500 kV Lines;

SCE System results

There were no criteria violation identified both in SONGS-On and SONGS-Off cases for the contingencies listed above. The recovered transient voltage (at the end of 10 seconds) at Santiago 230 kV Substation was 6 kV below SCE minimum operating standard under N-1 of Imperial Valley-Miguel 500/Imperial Valley-Rosita 230 kV line and N-2 of Ellis-Johanna and Ellis-Santiago 230 kV lines.

SDG&E System

The following transient stability analyses were performed on the Heavy Summer case:

- A no disturbance case to validate data
- A three-phase fault at Palo Verde with opening of the Palo Verde – North Gila 500 kV line
- A three-phase fault at Palo Verde with opening of the Palo Verde – Devers 500 kV line.

The above cases were run to evaluate the absence of SONGS. For the heavy summer scenario studied, there were no stability problems with relatively high inertia levels and low EOR levels. All cases were within the applicable reliability criteria.

VOLTAGE AND VAR REQUIREMENTS STUDY

Detailed Description of Voltage Stability Studies

The purpose of a post-transient analysis is to evaluate the extent to which the system voltage recovers and how much reactive power margin exists after a system outage without overexcitation of generating units. While excessive post-transient voltage drops are not permitted by the reliability criteria, voltage collapse is an even more severe phenomenon, which may occur on a system. Voltage collapse may occur when a system

becomes so constrained – and so VAR deficient – that a slow voltage decay over time may become unstoppable, such that loss of load and generation becomes inevitable. The loss of load could be complete on a system, and could spread to other systems, unless corrected.

The system was assessed in accordance with the WSCC Voltage Stability Criteria which requires that each system must meet the required reactive power margin for Performance Levels A-D. A set of “V-Q” curves, sometimes called “nose curves”, were developed to illustrate cases with both SONGS units off line. Explanation of these V-Q curves are given to interpret their relationship to having a stable voltage and adequate reactive power margin, meeting the requirements of the reliability criteria.

Post transient contingency studies were performed for numerous cases to determine if a potential for voltage collapse would exist for the cases with and without SONGS on line. The General Electric governor power flow routines were used for this study. The studies were conducted for the critical contingencies in the SDG&E and SCE systems. V-Q curves were developed for several critical buses to monitor the reactive power reserves. SDG&E and SCE voltages and reactive power output of generators were also monitored for the contingencies. The curves are located in Appendix C.

V-Q curves were developed for the following contingency:

- N-1 of Imperial Valley - Miguel 500 kV with subsequent tripping of Imperial Valley - La Rosita 230 kV Lines
- N-1 of Palo Verde - Devers 500 kV Line
- N-2 of Lugo - Mira Loma 2&3 500 kV Lines
- N-2 of Ellis - Johanna 230 kV and Ellis - Santiago 230 kV Lines

V-Q curves were developed for the following buses:

- Padua 230 kV
- Santiago 230 kV
- San Onofre 230 kV
- Mission 230 kV

Study Results indicate that a potential for voltage collapse exists in the SDG&E system

and southern portion of SCE system in 2004 for the following contingencies if two San Onofre units are off line:

- N-1 of Imperial Valley - Miguel 500 kV and subsequent tripping of Imperial Valley - La Rosita 230 kV Lines
- N-2 of Ellis - Johanna 230 kV and Ellis - Santiago 230 kV Lines
- N-2 of Lugo - Mira Loma 2&3 500 kV Lines

The voltage stability analysis used the WSCC Voltage Stability criteria. Detailed technical studies were required to determine the reactive power margin requirements and voltage collapse levels. In the absence of SONGS and any suitable mitigation, such voltage collapse could occur if the system were subjected to a critical contingency at peak load.

Study results show that the worst case is when either Alamitos 6 or Encina 5 is off line and the Imperial Valley - Miguel and Imperial Valley - La Rosita line trips. The most reactive power deficient buses are Mission 230 kV and Santiago 230 kV for the SDG&E and SCE systems, respectively. The reactive power addition designed to correct for this worst-case outage will cover all other contingencies discussed above.

The need for additional reactive power support if SONGS were absent is due to the loss of generation to the SCE and SDG&E systems of approximately 2150 MW of real power and 1100 MVAR of reactive power. SONGS presently supports both SCE and SDG&E systems resource and import needs. The strategic location of SONGS at the SCE-SDG&E transmission boundary is very beneficial to both systems in providing real and reactive power.

SCE and SDG&E examined the following mitigation measures to prevent the potential for voltage collapse as identified:

1. Install reactive power support.
2. Construct a Rainbow – Valley 500 kV Line and install reactive power support.
3. Re-powering existing LA Basin power plants, along with the addition of reactive power support.

4. Constructing a new 1000 MW Otay Mesa Power Plant, along with the addition of reactive power support.

Study results show that reactive power support would be needed for all of the alternatives. The required reactive power support is based on V-Q curve analysis, the need to prevent exceeding the generators' maximum reactive power capability, and maintain the required reactive power reserves at critical buses to maintain the voltage stability of the system.

ABSENCE OF SONGS MITIGATION OPTIONS

Various combinations of mitigation measures were examined to determine their technical feasibility in mitigating reliability criteria impacts to the transmission grid in the absence of SONGS. This study did not assess the costs, evaluate the long-term viability, permitting and construction lead-times, or determine optimal combinations and locations of the mitigation measures. These factors, among others, should be considered in combination with other market solutions prior to selecting and pursuing a preferred set of alternatives.

Mitigation plans are required to ensure a balanced load and resource scenario, and the meeting of all applicable reliability criteria, through some combination of the following alternatives:

- Preventing local overloads; and
- Avoiding the potential for voltage collapse;
- Restoring and increasing the allowable import into Southern California based on the SCIT Nomogram through more efficient utilization of existing transmission lines by adding VAR support (examined in this study) or by adding another transmission line between Southern California and some external location (not examined in this study);
- Restoring EOR transfer capability that may be reduced due to the absence of SONGS.

Because replacement power for SONGS significantly loads the transmission system in the Southern California region differently (different lines, different location and direction on lines) the mitigation measures for the absence of SONGS can be significant (for instance, the required reactive voltage support can be more than twice as much as the reactive capability of the SONGS units).

The following are five basic (but not all) viable mitigation options packaged to show some tradeoffs among different types of measures (e.g. generation & transmission). It

should not be construed that these options represent an optimal or final package of mitigation measures. Indeed, there could be other combinations of “mixing and matching” that result in an optimal combination of mitigation measures. It is important to realize that each of these options does not result in similar system performance. One option may be suitable only for the year 2004, while another may provide a robust, long-term solution that has benefits besides mitigating the absence of SONGS. Since this study only addressed the year 2004, additional generation and/or transmission facilities may be required to determine a long-term solution to the absence of SONGS.

If no system mitigation is performed with the absence of SONGS, a potential 2,200 MW of load in the SCE and SDG&E systems may not be served under normal conditions, due to the need to operate within the SCIT Nomogram.

The following mitigation options will correct all the reliability criteria violations identified in this SONGS Operational Study for power flow, transient stability and post-transient analyses.

For the SCE system, the following mitigation measures are common among mitigation options 2,3,and 4A:

- Upgrade the conductors on SCE's Del Amo - Ellis and Barre – Ellis 230 kV lines, and form a second Barre – Ellis 230 kV line through reconfiguration of the existing line. (not required for Alternative 4A or 4B).
- Install 750 MVAR of shunt capacitors on the Edison system.
- Bypass the SWPL series compensation
- Install series compensation (75%) on the four 230kV lines North of SONGS or construct a new 15 mile Ellis-Santiago 230 kV line.

(Mitigation Option 4B requires the above mitigation measures except bypassing the SWPL series capacitors)

Mitigation Option 1 – Focus on Retaining SONGS on line

SONGS may continue to operate as a market resource after its ICIP expires on 12/31/03. An operational agreement may be warranted to ensure availability and to dispatch SONGS when required (this may or may not resemble an RMR contract).

Mitigation Option 2 – Focus on 230 kV Transmission System Facilities

- Install 4,460 MVAR reactive power support, in both the SCE and SDG&E systems. The amount consists of 750 MVAR of switched shunt capacitors and 3,600 MVAR of dynamic VAR sources for the SCE system and 80.0 MVAR of switched shunt capacitors and 30.0 MVAR of dynamic VAR sources for the SDG&E system.
- Bypass the SWPL series capacitors.
- Install series compensation (75%) on the four 230kV lines North of SONGS

- San Onofre – Serrano 230 kV
- San Onofre – Chino 230 kV
- San Onofre – Santiago #1 and #2 230 kV or construct a new 15 mile Ellis – Santiago 230 kV line.
- Upgrade conductors on the Del Amo - Ellis and Barre – Ellis 230 kV lines, and form a second Barre – Ellis 230 kV line through reconfiguration of the existing line.

In this mitigation option, the SWPL series capacitors are bypassed to prevent them from being overloaded. Also, to prevent the potential voltage collapse in SCE's Orange County region, two sub-options were evaluated:

1. Construct approximately 15 miles of new 230 kV line between Santiago and Ellis substations; or,
2. Install 75% series compensation on the following lines:

The V-Q analysis shows that the required reactive power margin is 188 MVARs and 550 MVARs for the SDG&E and SCE systems, respectively. The study results indicate that additional 3,710 MVAR of reactive power support is required for this alternative to satisfy the WSCC Voltage Stability Criteria. Study results indicate that the 3,600 MVAR would need be dynamic VAR sources for the SCE system. For the SDG&E system, 80.0 MVAR would need to be switched shunt capacitors and 30.0 MVAR dynamic VAR sources.

Tables 6.1 below shows the reactive power requirements in the SCE and SDG&E systems for Mitigation Option 2. These reactive power requirements are needed to prevent overexcitation of generators, including Qualifying Facilities (QFs) and to maintain the required reactive power margins in both systems. As Table 6.1 shows, a total of 3,600 MVARs and 110 MVARs of reactive power support are needed in the SCE and SDG&E system, respectively.

Additional future studies will be required to determine details of the coordinated upgrade requirements and address organizational responsibility for such upgrades.

**Table 6.1
(Mitigation Option 2)**

Reactive Power Requirements (MVARs)

<u>Substation</u>	<u>Amount</u>
Santiago 230	600
Serrano 230	600

Mira Loma 500	500
Chino 230	400
Lugo 500	500
Johanna 230	200
Vista 230	200
Ellis 230	600
Other	750
Total required for SCE	4,350
Encina 138	10
South Bay 69	50
South Bay 138	50
Total required for SDG&E	110

Mitigation Option 3 – Focus on 500 kV Transmission System Facilities

- Construct a new 25-mile Valley-Rainbow 500kV line including 230 kV connection to SDG&E's system.
- Install 3,300 MVAR reactive power support in both SCE and SDG&E systems. The amount consists of 750 MVAR of switched shunt capacitors and 2,400 MVAR of dynamic VAR sources for SCE, and 120 MVAR of switched shunt capacitors and 30 MVAR of dynamic VAR sources for SDG&E.
- Bypass the SWPL series capacitors
- Install series compensation (75%) on the four 230kV lines North of SONGS San
 - Onofre – Serrano 230 kV
 - San Onofre – Chino 230 kV
 - San Onofre – Santiago #1 and #2 230 kV or construct a new 15 mile Ellis-Santiago 230kV line.
- Upgrade conductors on the Del Amo - Ellis and Barre – Ellis 230 kV lines, and form a second Barre – Ellis 230 kV line through reconfiguration of the existing line.

In this mitigation option a new 25 mile 500 kV line would be constructed from SCE's existing Valley 500/115 kV Substation to a new 500 kV substation (including 230 kV facilities) at Rainbow located in the SDG&E service territory. Also, to prevent the potential voltage collapse in SCE's Orange County region, two sub-options were evaluated:

1. Construct approximately 15 miles of new 230 kV line between Santiago and Ellis substations; or,
2. Install 75% series compensation on the following lines:

The required reactive power margin is 127 MVARs and 500 MVARs for the SDG&E and SCE systems, respectively. The study results indicate that additional 2,550 MVAR

of reactive power support is required for this alternative to satisfy the WSCC Voltage Stability Criteria. Study results indicate that the 2,400 MVAR would need be dynamic VAR sources for the SCE system. For the SDG&E system, 120 MVAR would need to be switched shunt capacitors and 30 MVAR dynamic VAR sources.

Tables 6.2 below show the reactive power requirements in the SCE and SDG&E systems for Mitigation Option 3. These reactive power requirements are needed to prevent overexcitation of generators, including Qualifying Facilities (QFs) and to maintain the required reactive power margins in both systems. As Table 6.2 shows, a total of 2400 MVARs and 150 MVARs of reactive power support are needed in the SCE and SDG&E system, respectively.

Additional future studies will be required to determine details of the coordinated upgrade requirements and address organizational responsibility for such upgrades.

**Table 6.2
(Mitigation Option 3)**

Reactive Power Requirements (MVARs)

<u>Substation</u>	<u>Amount</u>
Santiago 230	600
Serrano 230	600
Mira Loma 500	500
Lugo 500	500
Johanna 230	200
Other	750
<i>Total required for SCE</i>	<i>3150</i>
Encina 138	50
South Bay 69	50
South Bay 138	50
<i>Total required for SDG&E</i>	<i>150</i>

Mitigation Option 4A – New Merchant Generation North of SONGS

- Construction of up to 3,000 MW of new generation in the Orange County area.
- Install 2,100 MVAR reactive power support in both SCE and SDG&E systems. The amount consists of 750 MVAR of switched shunt capacitors and 1,200 MVAR of dynamic VAR sources in SCE's area, and 120 MVAR switched shunt capacitors and 30 MVARs of dynamic VAR sources in SDG&E's area.
- Bypass the SWPL series compensation
- Install series compensation (75%) on the four 230kV lines North of SONGS or

construct a new 15 mile Ellis-Santiago 230 kV line.

Option 4A replaces SONGS with 3,000 MW of new merchant generation (assumed for study purposes to be re-power at Alamitos, Huntington Beach and San Bernardino power plants), thus allowing the system to be operated below the 1999 SCIT limit of 13,320 MW. As such, the system requirements to mitigate the identified reliability criteria violations are reduced.

In this option the SWPL series capacitors are bypassed to prevent them from being overloaded. Also, to prevent the potential voltage collapse in SCE's Orange County region, two sub-options were evaluated:

1. Construct approximately 15 miles of new 230 kV line between Santiago and Ellis substations; or,
2. Install 75% series compensation on the following lines:
 - San Onofre – Serrano 230 kV
 - San Onofre – Chino 230 kV
 - San Onofre – Santiago #1 and #2 230 kV

The required reactive power margin is 127 MVAR and 147 MVAR for the SDG&E and SCE systems, respectively. The study results indicate that additional 1,350 MVAR of reactive power support is required for this alternative to satisfy the WSCC Voltage Stability Criteria. Study results indicate that the 1,200 MVAR would need be dynamic VAR sources for the SCE system. For the SDG&E system, 120 MVAR would need to be switched shunt capacitors and 30 MVAR dynamic VAR sources.

Tables 6.3 below show the reactive power requirements in the SCE and SDG&E systems for Mitigation Option 4A. These reactive power requirements are needed to prevent overexcitation of generators, including Qualifying Facilities (QFs) and to maintain the required reactive power margins in both systems. As Table 6.3 shows, a total of 1,200 MVARs and 150 MVARs of reactive power support are needed in the SCE and SDG&E system, respectively.

Additional future studies will be required to determine details of the coordinated upgrade requirements and address organizational responsibility for such upgrades.

**Table 6.3
(Mitigation Option 4A)**

Reactive Power Requirements (MVARs)
Substation Amount

Chino 230 kV	100	
Ellis 230 kV	200	
Mira Loma 230 kV	200	
Lugo 230 kV	100	
Johanna 230 kV	100	
Serrano 230 kV	250	
Santiago 230 kV	250	
Total required for SCE		1200
Encina 138	50	
South Bay 69	50	
South Bay 138	50	
Total required for SDG&E		150

Mitigation Option 4B – New Merchant Generation South of SONGS (This option significantly reduces the import capability of SDG&E and therefore increases the reliance on local.)

- Construction of the proposed Otay Mesa Power Plant near Miguel Substation.
- Install shunt capacitors (25-75 MVAR for SDG&E and 100 MVAR for SCE).
- Install series compensation (75%) on the four 230kV lines North of SONGS or construct a new 15 mile Ellis-Santiago 230 kV line.

DYNAMIC / STATIC REACTIVE POWER MIX

The V-Q studies determine the total reactive power requirements to maintain sufficient reactive power reserve as dictated by the WSCC Voltage Stability Criteria. Adequate dynamic voltage support is needed to ensure that immediately after a contingency there is enough reactive power in the system to maintain acceptable voltages and prevent overloading of generators during transient conditions. In the absence of adequate dynamic reactive power, a large portion of motor loads could be stalled due to very low transient voltages increasing the load demand and drawing currents several times their rated value, subsequently overloading the generators, and causing angular instability. Dynamic sources of reactive power (such as synchronous condensers, SVCs, and generators) can immediately respond to a disturbance, maintain acceptable transient voltages, and prevent overloading of the generators reactive power capability.

The automatic and dynamic voltage control of the generators and synchronous condensers play an important role in a voltage collapse situation. If due to lack of sufficient dynamic reactive power the generator reactive power loading exceeds its capability, generator field protection will trip the voltage control from automatic to manual making the situation even worse and causing system-wide blackout. The July second and August 10, 1996 WSCC system-wide outages were related to tripping of many generators (particularly the McNary units) due to VAR overloading.

Another concern during a voltage collapse situation when voltages drop dangerously low, is the overload of transmission lines. The overload condition can cause line overload protection to operate and remove the line from the system. This can further aggravate the voltage collapse conditions, further reducing the already low voltages.

Although capacitors (which are static sources of reactive power) can provide voltage support under normal and contingency conditions, they will not be able to provide the much-needed reactive power as quickly as synchronous condensers. A time delay of several seconds would be required to switch the capacitors. This time delay is required to ensure that the capacitors are definitely needed and would not cause overvoltages in the system.

Section I, Subsection D of approved NERC Planning Standards on Voltage Support and Reactive Power states that:

“Sufficient reactive resources must be located throughout the electric systems, with a balance between static and dynamic characteristics. Both static and dynamic reactive power resources are needed to supply the reactive power requirements of customer demands and the reactive power losses in the transmission and distribution systems, and provide adequate system voltage support and control. They are also necessary to avoid voltage instability and widespread system collapse in the event of certain contingencies. Transmission systems cannot perform their intended functions without an adequate reactive power supply.

Dynamic reactive power support and voltage control are essential during power system disturbances. Synchronous generators, synchronous condensers, and static VAR compensators (SVCs and STATCOMs) can provide dynamic support. Transmission line charging and series and shunt capacitors are also sources of reactive support, but are static sources.

Standards

S1. Reactive power resources, with a balance between static and dynamic characteristics, shall be planned and distributed throughout the interconnected transmission systems to ensure system performance as defined in Categories A, B, and C of Table I in the I.A. Standards on Transmission Systems.”

The potential problems with capacitors are as follows:

1. It is possible that in some systems not all capacitors can be energized and remain energized during non-peak load conditions (i.e., with all elements in service) due to high voltage problems.
2. Automatically switched capacitors need to be switched on during contingency conditions, but they may be too slow and not in the right amount to prevent a voltage collapse.
3. To maintain voltage stability, an excessive number of capacitor switching events may occur which is undesirable and unacceptable and could lead to voltage collapse.
4. The timing requirement of capacitor switching actions may vary greatly depending on operating conditions. Slower switching actions may be needed due to normal interactions between changes in load, transformer load tap changers and generator reactive power output variations. Fast switching actions may be required during transient conditions immediately after a contingency, which are too rapid for operator intervention, or several minutes after a contingency. Such wide ranges of timing requirements and coordination makes it difficult to rely solely on shunt capacitors.

Another problem associated with switched capacitors is that they may not be switched as expected because the set point voltage may not be reached. For example; assume that the capacitors are set to switch on if the voltage goes below 0.92 P.U., and suppose that during a disturbance voltages drop to just slightly above 0.92 P.U., perhaps 0.925 P.U. In this case the voltages are still too low but the capacitors would not be switched on. Also, due to the oscillatory nature of the voltage decay during transient conditions, the capacitors may be switched on and off several times. This is not desirable since the number of times that a capacitor may be switched on and off is limited by the number of times that circuit breakers could be switched on and off due to the limitation on the duty cycle caused by interruption of high capacitive current.

Capacitors can make the system more vulnerable to voltage collapse if relied upon in excessive amounts. Because capacitors are static and are in shunt connection to ground, their reactive power output reduces by the square of the voltage. As the voltage decays, less reactive power is available when the reactive power support is needed most. Also, as the system load increases, adding more shunt capacitors to compensate for increase in load will eventually drive the voltage collapse point closer to the operating voltages.

The approved WSCC Voltage Stability Criteria (see WSCC report entitled "Voltage Stability Criteria, Undervoltage Load Shedding Strategy, and Reactive Power Reserve Monitoring Methodology", dated May 1998) state that:

"Proper mixture of static and dynamic reactive power support based on the methodology described in this report should be provided."

This report further recommends a V-Q method using a short-term load model to determine the static and dynamic reactive power requirements. Therefore, determination of the proper mix of dynamic and static resources is very important. For this study the following short-term load model was used:

Real part: 50% constant MVA and 50% constant current

Reactive part: 100% constant impedance.

Appendix C shows the V-Q curves for the immediate post-disturbance and steady state conditions for Alternative 1. The V-Q curves show that the total required reactive power from the nose point at Mission 230 kV Bus is 188 MVARs. Using the short-term load model, the required dynamic reactive power must be at least 23% of the total required reactive power ($43/188 = 0.23$)

Appendix C also shows the V-Q curves for the immediate post-disturbance and steady state conditions for Alternative 2. The V-Q curves show that the total required reactive power from the nose point at Mission 230 kV Bus is 127 MVARs. Using the short-term load model, the required dynamic reactive power must be at least 17% of the total required reactive power ($22/127 = 0.17$)

Generation Overexcitation Discussion

Power flow contingency analysis for loss of the Imperial Valley - Miguel 500 kV and Imperial Valley - La Rosita 230 kV lines were conducted for SDG&E and SCE systems with no San Onofre units on line as a part of the voltage / VAR assessment. The power flow contingency case would not solve. The result of the analysis shows that many SDG&E and SCE units exceed their steady state maximum reactive power capability. Encina 5 reactive power loading would be over 700% of its maximum rating. Encina 5 exceeds the maximum reactive power capability because it is the closest SDG&E generating plant to San Onofre and the SCE system. The VAR flow from Encina to the southern SCE system can be attributed to the higher voltage at Encina compared to the voltage in the southern SCE system.

The overexcitation of the generating units is undesirable since this could result in tripping of generating units if the condition is allowed to continue. Generators are equipped with excitation protection which would switch the voltage regulation from automatic to manual after approximately ten to thirteen seconds (timing varies with each unit) and reduce excitation to pre-disturbance settings to protect field windings (see the following table). Generating units in the SCE system are not set to trip due to overexcitation phenomenon. The units would be tripped if the thermal limit were exceeded.

In particular, the Voltage Stability Criteria¹ approved by WSCC includes the following provision.

Page 32: "The overexcitation limiter protecting the generator from thermal overload is an important controller in system voltage stability. It is important to ensure that an appropriate value of Q_{max} is used during post-transient periods for generators which are equipped with overexcitation limiters. Automatic control actions of overexcitation protection (e.g., tripping of generators due to exceeding their reactive power capability) should be modeled in the post-transient simulation."

The concern expressed in that paragraph is that generators may not be modeled in which their Q_{max} limits are exceeded. Any such simulations may not be valid, in that such generators may trip off line due to exceeding such limit. Such unit tripping would then increase the VAR requirements on other units, and may have a rapid cascading effect leading to voltage instability.

Simulation results show that the overexcitation causes further reduction in system voltages and potentially leading to voltage instability. If the switching to manual fails then the unit is tripped.

Several SDG&E and SCE units exceed their reactive power limit after loss of critical lines in SCE and SDG&E systems.

SENSITIVITY ANALYSIS

SCE System Analysis

A sensitivity analysis was performed to individually evaluate if new generation would help mitigate the system problems identified due to the absence of SONGS. The

¹ Please refer to the WSCC document entitled "Voltage Stability Criteria, Undervoltage Load Shedding Strategy, and Reactive Power Reserve Monitoring Methodology", dated May 1998.

following is the list of new generation tested:

Power Plant	Capacity Assumed
Alamitos Re-power	740 MW
Huntington Beach Re-power	740 MW
High Desert	740 MW
Pastoria	960 MW
Blythe	400 MW
Antelope	1,000 MW

The addition on a individual basis of each proposed generation plant listed above did not alone correct the system problems identified with the absence of SONGS.

SDG&E System Analysis

A sensitivity to placing generation at the Otay Mesa site in the SDG&E system, injecting the power into the Miguel 230 kV bus was run in the Heavy Summer case. Since this sensitivity study was not intended to serve as an interconnection study for a 1000 MW Otay Mesa Project, no analysis was performed to determine internal SDG&E requirements to accommodate the plant. Rather, the only assessment was to assess the effect of the Otay Mesa Project on the absence of SONGS impact.

With Otay Mesa, imports into the SDG&E's area were reduced from 2600 MW to 1600 MW by reducing imports from Northern California (PG&E). While this methodology helps mitigate for the absence of SONGS, by reducing the import capability into SDG&E, it increases the reliance on local generation in the San Diego Area. The results show that at this import level, the loading on the SWPL series capacitors is reduced below the existing continuous rating of 1400 Amps. The study did not look at the case where the Otay Mesa generation replaces internal generation, such as South Bay generation, and the same import level of 2600 MW into SDG&E is kept.

V-Q analysis was also performed with 1000 MW of generation at Otay Mesa and adding 75% of series compensation on all four SCE lines North of SONGS. It was assumed that the SDG&E import would be reduced by 1000 MW due to this additional internal generation. With the addition of 1000 MW of generation at Otay Mesa and series compensation described above, only 25-75 MVAR and 100 MVAR of additional reactive power support would be needed in the SDG&E and SCE system, respectively for the case studied. The amount of reactive support required in the SDG&E system is contingent on the WSCC Voltage Stability Criteria Qmax criteria and if meeting this criteria is mandatory.

Results of the Voltage Stability Analysis with the Otay Mesa Power Plant and without SONGS

1. V-Q Analysis indicate Mission 230 kV as the most deficient bus with 300 MVAR of margin for the outage of Imperial Valley-Miguel 500 kV line and subsequent tripping of Imperial Valley – La Rosita 230 kV line. The required VAR margin as determined from the 50/50 and 50/50+5 (No Encina 5) is 50 MVAR. Thus, there is sufficient VAR margin to satisfy Level A of WSCC Voltage Criteria. San Onofre 230 kV has a margin of 250 MVAR. Other buses in the SCE system were not monitored.
2. Post-transient studies indicate that Encina units 1 through 4 and all units at South Bay exceed their steady state reactive power capability for the outage of Imperial Valley-Miguel 500 kV line and subsequent tripping of Imperial Valley – La Rosita 230 kV line. Etiwanda units 1, 2, and 5 also exceed their steady state reactive power capability.
3. Sensitivity runs with imports into San Diego above 2000 MW indicate the need for reactive power support in SCE during the Imperial Valley-Miguel 500 kV line and subsequent tripping of Imperial Valley – La Rosita 230 kV line outage. The magnitude of reactive power support required depends on the import level.

Conclusion:

The 1000 MW Otay Mesa Plant may lower imports into SDG&E and therefore reduce the reactive power requirement to meet WSCC Voltage Criteria during system contingency. However, some additional reactive power support in the range of 25 - 75 MVAR in SDG&E and 100 MVAR in SCE is needed to avoid exceeding the steady state maximum reactive power capability of generating units during the worst contingency. The “benefit” of lower import requirement in the presence of the Otay Mesa Plant increases the reliance on local San Diego area generation and therefore impacts the RMR requirement in SDG&E's area.

EAST- OF-THE-RIVER (EOR) ANALYSIS

A Heavy Autumn base case starting with 7550 MW on the EOR path was used for the maximum non-simultaneous EOR analyses. The purpose of this analysis is to examine the impact of shutting down SONGS at the maximum non-simultaneous rating of the EOR. The results found are intended to be preliminary. Detailed path rating studies will be needed at such a time as the SONGS units are shut down.

The SONGS On case is used as base line for power flow and stability studies. Contingencies of the major 500 kV lines were run on the case to make sure that loading on the lines was acceptable. The limiting conditions for the SONGS case are:

- Base case condition the loading on the Palo Verde 500 kV line is 99.9 % of normal rating
- For N-1 Palo Verde - Devers 500 kV line, the Palo Verde - North Gila 500 kV line loads to 99.7 % of its Emergency rating
- For the N-1 Palo Verde - North Gila 500 kV line the Palo Verde - Devers 500 kV line loads to 100 % of its emergency rating.

Once the SONGS units are removed from the case, without any system readjustment, upgrade or improvements, the series capacitors on the Palo Verde - North Gila 500 kV line load to 118% normal rating and the EOR flow level increases to 7576 MW. To reduce the line loading to be within the normal rating, and accommodate possible contingencies, the EOR level had to be reduced from 7550 MW to 6169 MW (the non-simultaneous limit).

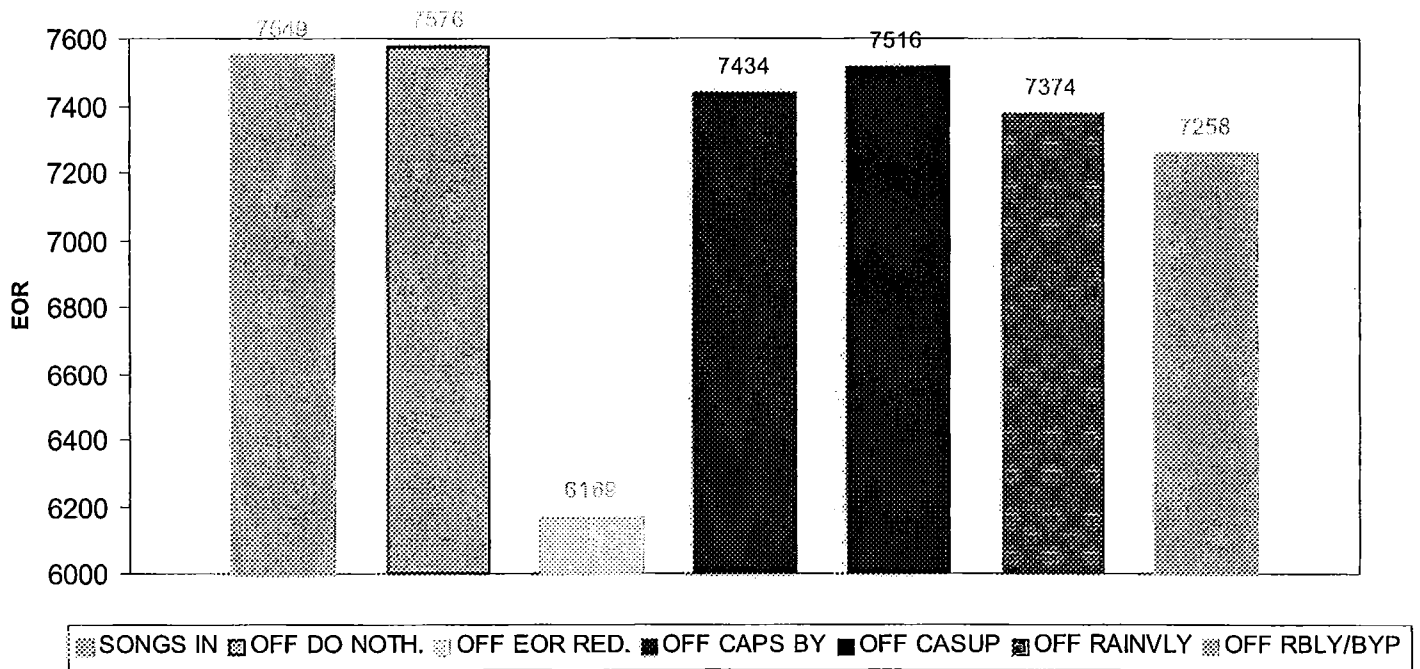
Power flow analysis was performed with each one of the alternative solutions identified in the Heavy Summer power flow analysis. The results are summarized in the bar chart shown in the next page.

Transient stability was run for the different alternatives for the following disturbances:

- A three phase fault at Palo Verde with opening of the Palo Verde - North Gila 500 kV line
- A three-phase fault at Palo Verde with opening of the Palo Verde - Devers 500 kV line.

The results of the transient stability analysis are summarized in the last column of the table contained in the bar chart figure. The transient stability analysis did not include the reactive power compensation proposed in the Voltage Stability section, however it is expected that the reactive power compensation will be enough to achieve acceptable transient stability behavior and therefore the different options will be limited thermally as indicated in the following bar chart.

EOR for Different Options Heavy Autumn



EOR	CASE	SWPL Current	POWER FLOW LIMIT	STABILITY LIMIT
7549	SONGS IN	1366 Amps	Base c. limit PV-DV, and PV-NG outage overtds PV-DV to emerg	Benchmark, PV-NG more limiting
7576	OFF DONOTH.	1657 Amps	Not a valid case	Not run
6169	OFF EOR RED.	1399 Amps	Base case limited by PV-NG	Comparable, PV-NG more limiting
7434	OFF CAPSBY	1325 Amps	Base case limited by PV-DV	Degraded, PV-NG more limiting
7516	OFF CASUP	1646 Amps	PV-NG Outage, overloads PV-DV to emergency limit	Degraded, PV-NG more limiting
7374	OFF RAINVLY	1531 Amps	PV-NG Outage, overloads PV-DV to emergency limit	Degraded, PV-NG more limiting
7258	OFF RBLY/BYP	1213 Amps	Base case limited by PV-DV	Degraded, PV-NG more limiting

SOUTHERN CALIFORNIA IMPORT TRANSMISSION (SCIT) ANALYSIS

The current 1999 summer SCIT Nomogram, shown on an upcoming page, was developed by the WSCC OSS study group and approved by the WSCC Board. The Nomogram shows the maximum SCIT limit with a range from 11,000 MW to 13,320 MW. One of the limiting outages is the N-1 of the Imperial Valley - Miguel 500 kV line with the subsequent tripping of the Imperial Valley – La Rosita 230 kV line. The limiting condition under this outage is that the steady state reactive power capability for Encina unit #5 is exceeded ($Q_{gen}=Q_{max}$).

Two cases were developed to benchmark the SONGS-On cases within the 13,320 MW SCIT limit:

Below is a tabulation of SCIT flows (MW) and Southern California inertia for both case, Heavy Summer and Heavy Autumn:

	<u>SONGS-On</u>	<u>SONGS-Off (Outside SCIT Limit)</u>	<u>SONGS-Off (Inside SCIT Limit)</u>
<u>2004 Heavy Summer Case</u>			
<u>SCIT MW</u>	<u>13,320</u>	<u>15,528</u>	<u>13,308</u>
<u>S. Cal. Inertia MW·Sec</u>	<u>121,263</u>	<u>107,765</u>	<u>118,271</u>
<u>2004 Heavy Autumn Case</u>			
<u>SCIT MW</u>	<u>13,320</u>	<u>13,320</u>	<u>13,316</u>
<u>S. Cal. Inertia MW·Sec</u>	<u>107,358</u>	<u>107,046</u>	<u>107,046</u>

Adding a total of 3000 MW of re-power projects at Alamitos, Huntington Beach, and San Bernardino to the two SONGS-off cases provided sufficient local generation to be able to operate the Southern California system within the existing 1999 SCIT nomogram limit. The re-power projects also were seen to eliminate the overloading problems identified in SCE's Orange County area.

APPENDIX A: Power Flow Case Summaries and Plots

Appendix information available in hard copy upon request.

APPENDIX B: Transient Stability Case Summaries and Plots

Appendix information available in hard copy upon request.

APPENDIX C: Post-transient Case Summaries and Plots

Appendix information available in hard copy upon request.

APPENDIX D: SCE and SDG&E Letters

July 30, 1999

Armie Perez
Director of Grid Planning
California ISO
151 Blue Ravine Road
Folsom, CA 95763-9014

Subject: The SONGS Operational Study

Dear Armie:

At the SONGS Operational Study stakeholder meeting on July 27, 1999, a lively discussion occurred among the stakeholders, IOUs and the ISO. SCE would like to emphasize its view of the study results as well as its view of the issues related to the continued operation of SONGS.

The SONGS Study identified a potential resource deficiency in the year 2004. The SONGS Study assumed new merchant generating plants as the replacement for SONGS. Two scenarios evaluated additions of new generation both outside of and within Southern California. Study results are critically different, depending on where and if new generation develops and the ISO does not know with any great certainty where or even if these resources will develop. In light of the importance of the location and magnitude of new resources on transmission requirements and in light of the potential resource deficiency, it seems appropriate to spend time addressing how best to respond to each scenario.

SCE believes the current ICIP mechanism provides adequate incentive for continued operation of SONGS through 12/31/03. It is SCE's belief no SONGS contract would be required during this ICIP period to assure availability of the facility.

For the post-ICIP time frame, the continued economic operation of SONGS should be considered as a viable scenario along with the other four alternatives developed in the study. SCE is not advocating the need for a contract post ICIP, however, SCE is willing to discuss possible development of an "availability type" contract for SONGS after 2003, as a potential least cost solution to mitigate identified concerns.

If the ISO needs information regarding a future shutdown of SONGS, SCE would be willing to discuss the type and timing of such information. SCE is willing to discuss the possibility of a notification period prior to any permanent SONGS shut-down. Such a notification would allow the construction lead time of transmission system reinforcements to be timed with any permanent shut-down.

We want to be clear that SCE supports the lowest cost market solution in the event of a SONGS shut down sometime after 2003. SCE is open to working with stakeholders to define how system transmission needs will be met, including the continued operation of SONGS. However, SCE considers the development of a competitive solicitation to reinforce the transmission grid or secure

RMR contracts to be premature at this time, since the timing, location and amounts of new merchant generation is not yet known.

The SONGS Operational Study provides a first step technical assessment, however, the policies embedded in the potential next steps should be adequately identified, discussed, and agreed upon. SCE is not yet satisfied that these matters have been adequately addressed. The ISO should communicate all the actions it would initiate to solve a resource deficiency problem. The ISO should communicate how it distinguishes the difference between a resource deficiency and a transmission reliability problem. The ISO should communicate how it will determine a “preferred” transmission alternative, if one is needed. The study did not optimize transmission alternatives and the results were skewed making it appear that more facilities were needed in the Edison area. Therefore, cost responsibility for any needed transmission facilities should not be based on the results of this study. The ISO should demonstrate that resources are available outside California, in the Arizona area, before it commits to transmission projects that attempt to access those resources. Edison believes these are important policy matters that should be clearly communicated to and understood by all participants.

SCE has additional comments to the SONGS report to reflect our views stated in this letter, which are being provided separately. SCE requests the ISO attach this letter to the final SONGS Operational Study report.

I appreciate the opportunity to share SCE’s view on the issues surrounding the continued operation of SONGS and the SONGS Study results.

Sincerely,

Patricia L. Mayfield

Attachments

cc: Ron Nunnally
Steve Mavis
Larry Tobias
Ali Yari



San Diego Gas & Electric
8316 Century Park Court
San Diego, CA 92123-1582

BY E-MAIL

August 11, 1999

Armie Perez
Director of Grid Planning
California ISO
151 Blue Ravine Road
Folsom, CA 95763-9014

Subject: ISO / SCE / SDG&E SONGS Stakeholder Study

Dear Armie:

SDG&E appreciates having been involved in the joint SONGS Stakeholder study with SCE and the ISO. The studies have been productive, and we are grateful for the stakeholder participation in the study. SDG&E is concerned, however, that its perspective, which is significantly different than SCE's on very important issues, may not be reflected in the Interim Report. For this reason, SDG&E requests that you include this correspondence with the Interim Report so that parties are fully aware of SDG&E's concerns.

SDG&E and SCE seem to agree that this joint SONGS study identified a potential resource deficiency and transmission system reliability impacts in the year 2004 absent SONGS. However, addressing the resource adequacy and reliability concerns identified in the report seems to be the subject of controversy.

SDG&E's interest in this question is far from academic. SDG&E's and SCE's respective ownership shares in SONGS are 20% and 75.05%. The Cities of Anaheim and Riverside own the remaining amount of this facility. As you are well aware, Section 5.2.8 of the ISO Tariff states that:

“[t]he costs incurred by the ISO under each Reliability Must-Run Contract shall be payable to the ISO by the Responsible Utility in whose Service Area the Reliability Must-Run Generating Units covered by such Reliability Must-Run Contract are located.”

If this provision remains unchanged and the ISO designated SONGS a Reliability Must Run (RMR) facility commencing in January 2004 (or when this facility is no longer a regulatory must-take facility), SDG&E would be allocated by the ISO substantially more cost of SONGS than its 20% ownership share. This is unacceptable to SDG&E. First, what is now Section 5.2.8 was adopted in a context that did not contemplate jointly owned RMR units that provide RMR services to more than the party in whose Service Area the unit was geographically located. Second, other more cost-effective alternatives exist, rather than continued operation of SONGS to provide RMR services. Action must be taken now to achieve implementation of a least-cost alternative.

There exist uncertainties regarding the length of SONGS' operational life. There is no assurance that SONGS will be competitive or even remain in operation past 2003, and no one can offer such a guarantee. In order to assure reliability and have any possibility that SONGS may be displaced as an RMR facility beginning in 2004, other potentially cost-effective alternatives must now, and not later, be considered for obvious reasons. Implementation of

such an alternative would not preclude SONGS remaining on line and competing in the market. These alternatives, such as the Rainbow-Valley transmission line, will require lengthy planning, siting and construction activities that on a most aggressive schedule might be in service by the summer of 2004. Of course, other alternatives that must also be considered include new generation, including distributed generation, and demand side management.

SDG&E's point is that waiting for more studies, assessing more uncertainties, and taking no present action on the assumption that SONGS will keep running past 2003 under some type of RMR contract will eliminate certain potentially cost-effective alternatives to operation of SONGS as an RMR facility. As a transmission owner whose local area customers will be exposed to a share of SONGS-related RMR costs, we find any approach that limits cost-effective options to operation of SONGS as an RMR facility to be unacceptable to SDG&E and its customers.

SCE also has stated in its July 30, 1999 letter to you that "We want to be clear that SCE supports the lowest cost market solution in the event of a SONGS shut down sometime after 2003." SDG&E fully supports low cost market solutions that will maintain reliability. However, we are concerned that a "do nothing" approach as alluded by SCE will eliminate the potential for low-cost approaches if we do not take action now.

Finally, SDG&E is concerned that the report may not make it perfectly clear to the readers that the "problems" seen in the study results are due to the absence of SONGS, not caused by certain outage conditions. Under those same outage conditions, with SONGS remaining in-service, the system meets all applicable reliability criteria. Therefore, required upgrades should not be attributed to being caused by outages studied.

SDG&E requests that this letter be attached or incorporated into the SONGS Interim Report in order to allow stakeholders, including the ISO's Board, to be fully informed of SDG&E's concerns.

We appreciate the continued opportunity to share SDG&E's perspective on these very important issues, and in particular we express our thanks to Larry Tobias for his tireless and extraordinary efforts in bringing the SONGS Interim Report to closure.

Sincerely yours,

Original Signed by Ali Yari

Ali Yari
Manager, Transmission Planning
(619) 654-1580

10

RS TAB 10



CALIFORNIA ISO

California Independent
System Operator

Memorandum

To: ISO Grid Reliability/Operations Committee
From: Kellan Fluckiger, Chief Operations Officer
Armando J. Perez, Director of Grid Planning
CC: ISO Board of Governors; ISO Officers
Date: June 9, 2000
Re: **San Onofre Nuclear Generating Station (SONGS) Phase 2 Study Report**

SEE PAGE RS-21
OF SDG&E
TESTIMONY
RE: PREVIOUS
ABSENCE OF SONGS
STUDIES

This memorandum requires Board action.

EXECUTIVE SUMMARY

As requested by the ISO Board, we are taking the following 3 steps to address reliability concerns related to operation of the ISO Grid in the absence of SONGS.

1. Phase 1 Study - identified transmission system reliability problems, associated mitigation measures, and resource adequacy issues that result from the absence of SONGS. The results of this study were presented to the Board in August 1999.
2. Phase 2 Study - identified preferred transmission projects plan of service to mitigate the transmission system reliability problems that result from the absence of SONGS.
3. Phase 3 Study - proposal to identify the preferred transmission plan to mitigate long-term transmission system reliability problems with SONGS in service.

This Board memo is a result of Step 2 above.

In conformance with the ISO Board-approved motion in August 1999, ISO Management initiated a joint Phase 2 study (Study) with Southern California Edison Company (SCE) and San Diego Gas & Electric (SDG&E) to identify the preferred transmission project plan of service that mitigates reliability problems in the absence of SONGS. The Study was conducted in an open stakeholder process that included three stakeholder meetings on February 25, April 17 and May 31 to discuss study findings and elicit stakeholder comments.

Responsibility for performing the joint Study was divided among SCE, SDG&E and the ISO. SCE and SDG&E assessed transmission alternatives to mitigate local reliability problems on their respective systems, while ISO Planning focussed on regional problems. Mitigation of local systems involved transmission-related facilities rated 230 kV and below. Regional reliability problems were mitigated primarily by 230 kV and 500 kV facilities. The selection of the preferred transmission alternative for each of the reliability problems was based predominantly on an evaluation of technical performance and plan of service costs.

The SONGS units are presently operating under a generation incentive mechanism known as Incremental Cost Incentive Pricing (ICIP), which covers SONGS operation and forecasted operational. The ICIP will expire December 31, 2003, at which point SONGS will need to recover its costs solely through the market absent other arrangements. The following "post-ICIP" scenarios highlight the uncertainty of continued operation of SONGS in future years.

- SONGS will be needed to preserve local reliability and may continue to compete in the market without the ICIP incentives.
- SONGS may be shut down for economic or other reasons sometime after the conclusion of the ICIP.

Like the Phase 1 study, two time frames were considered in this Study. System conditions in 2004 were evaluated since this is the first year after ICIP. Conditions in the year 2008 were also studied because of long lead-time requirements related to transmission alternatives needed to mitigate regional reliability problems. A key underlying assumption in these studies was that the Valley - Rainbow 500 kV project would be in service in 2004.

As shown in both Phase 1 and Phase 2 studies, operation in the absence of SONGS can expose the system to several negative reliability impacts during contingencies, including thermal overloads on lines and transformer banks, less dynamic stabilizing influence on the grid due to lower inertia, and unacceptably low voltages and reactive margins.

For the 2004 timeframe, this study indicated that the preferred transmission projects to mitigate reliability problems without SONGS include a new second Palo Verde – Devers 500 kV line, a new Rainbow – Miguel 500 kV line, related 230 kV transmission reinforcements and voltage support equipment. Since 500 kV lines typically require 7-10 years to be placed in service, these added facilities could be placed in service in the 2008 timeframe, but not 2004. Therefore, system conditions without SONGS in 2008 were also studied. Results of these 2008 studies identified the need for another new 500 kV line paralleling the existing Palo Verde – Miguel 500 kV line (i.e. Southwest Power Link) in addition to the Palo Verde – Devers and Rainbow – Miguel 500 kV projects. Since SCE and SDG&E transmission expansion plans (assuming SONGS in service) have not yet been performed for this timeframe, the ability to accurately distinguish between facilities needed under the normal expansion planning process with SONGS in service, with facilities required to mitigate problems in the absence of SONGS becomes difficult. However, extrapolating results of 2004 to 2008, though not perfect, should give reasonable results. It is also important to note that these results do not assume any new generation in the ISO grid, since the location, quantity and timing of such projects are uncertain. A summary of the regional study results is provided in Table 1 below.

**Table 1
Needed Transmission Project to Meet the Reliability Criteria With and Without SONGS**

<u>Proposed Transmission Projects</u>	<u>2004</u>		<u>2008</u>	
	<u>w/ SONGS</u>	<u>w/o SONGS</u>	<u>w/ SONGS</u>	<u>w/o SONGS</u>
1. Rainbow-Miguel & Devers-Palo Verde #2	N/R ¹	Yes	Yes ²	No
2. Southwest Power Link #2	N/R ¹	N/R ¹	Yes ²	No
3. Southwest Power Link #2 + Project 1	N/R ¹	N/R ¹	Yes ²	Yes

¹ Not Required.

² Results are extrapolated since the focus of this Study is on performance without SONGS; SCE and SDG&E's long-term expansion plans will provide a more comprehensive assessment of reliability needs and transmission mitigation alternatives.

A formal report entitled "San Onofre Nuclear Generating Station Operational Study - Phase-2 Report - Transmission Plan-Of-Service" documents the joint study effort. The Report has been posted on the ISO web site and is provided in **Attachment A**.

With the completion of the Study, attention must now be directed on the next steps. Several factors need to be considered so that well-informed decisions can be made on the proper course of action throughout these steps of meeting reliability needs for the area. Below are some key factors:

- SCE and SDG&E expansion plans to determine reliability needs and preferred transmission mitigation projects for the 2008 timeframe (assuming continued operation of SONGS) have not yet been performed. This Study assessed the reliability needs in the absence of SONGS.
- Though preferred transmission projects to meet reliability needs with SONGS in service may be different from preferred projects to meet the needs without SONGS, it is apparent, based on current study results, that major 500 kV transmission facilities are required to meet long-term reliability needs regardless of SONGS availability. The absence of SONGS creates the need for additional 500 KV facilities.
- The recognition by the ISO Board of the need for follow-up transmission planning activities as stated in its May 2000 motion requesting that SDG&E identify the "preferred long-term transmission alternative for the next stage of expansion after Valley-Rainbow."
- The preference of the ISO Board to employ the competitive solicitation process for selected transmission projects.
- The willingness of the ISO Board to have project sponsors pursue and expend limited amounts of capital for a transmission project potentially in parallel with the competitive solicitation process.
- The uncertainty over how and to what extent the RMR/LARS and Long-Term Grid Planning processes will be impacted by Congestion Reform.
- Results of both Phase 1 and Phase 2 SONGS studies indicated that SONGS units may be candidates for RMR designation after ICIP in 2004 depending on market conditions, operating conditions or other considerations. As previously stated, transmission projects to mitigate regional problems cannot be placed in service until the 2008 timeframe. Consequently, a new zone may have to be created around the local SONGS area to effect accurate locational price signals as contemplated in the Congestion Reform effort or an RMR-type contract may have to be awarded to ensure unit availability to preserve reliability beginning in 2004, again, depending on conditions.
- SCE's December 1999 letter to the ISO, regarding the SONGS owner's collective plans and commitments for operation of SONGS beyond December 31, 2003, stated "The owners expect that the SONGS unit can reliability and economically operate beyond 2003. In addition, if at any time continued SONGS operation does not appear to be economically attractive, the owners would be willing to commit to notifying the ISO in advance of a shutdown. The owners would be willing to contract with the ISO for continued operation, if possible, for a time period reasonably sufficient to mitigate any grid problems related to a pending shutdown."

Considering the aforementioned factors, it becomes apparent that the preferred transmission plan to meet SCE and SDG&E's reliability requirements in the 2008 timeframe should be expeditiously identified and pursued. Also, acknowledging the importance of taking a first step to ensure grid reliability in the face of possible closure of SONGS, ISO Management is presenting the following motion for board approval.

Move that the Committee recommend that the Board of Governors approve:

- ***the SONGS Phase 2 Study Report indicating the preferred transmission alternatives to address the identified reliability problems in the Southern California region in the absence of SONGS.***

- *the consideration of incorporating SONGS into the 2002-2004 RMR/LARS cycle for 2004.*
- *that SCE and SDG&E, with the assistance of ISO Planning Staff, determine the preferred transmission plan to meet their reliability requirements in the 2008 timeframe with SONGS in service for ISO Board approval by the November 2000 meeting. At that time, the ISO Board can choose whether to pursue a competitive solicitation.*

It is important to note that the vote does not approve a particular transmission line but rather the Study and its conclusions.

Considerations for Future Board Decisions

The following are some key considerations that need to be factored into decisions on pursuing possible next steps in the future.

- The SONGS units provide a technically viable solution to ensure system reliability.
- The SONGS units could offer over 20 years of additional service because of its decommissioning date of 2022.
- From a technical perspective, new generation of sufficient capacity and ideal location could preclude the need for additional transmission in the absence of SONGS.

BACKGROUND

In 1999, screening studies were completed by Southern California Edison Company (SCE) and San Diego Gas & Electric (SDG&E) to assess the impact of the closure of the San Onofre Nuclear Power Plant (SONGS) on grid reliability and to identify viable mitigation measures for reliable operation. Results of this Phase 1 study indicated that reliability impacts in the absence of SONGS included transmission facility overloads and voltage support deficiencies. Mitigation measures included constructing a new 500 kV line, re-conductoring existing 230 kV lines, installing shunt capacitors and static VAR devices, reducing area import capabilities, and dropping load. Re-powering of existing generation reduced the magnitude of the above mitigation measures, but it did not replace them. The extent of any benefits afforded by new generation would be dependent on their location within the grid.

The following are highlights of the reliability problems related to operation in the absence of SONGS as indicated in the Phase 1 study.

- Under normal system conditions (with all electric transmission facilities in service), the thermal capability of series capacitors in the Southwest Power Link (SWPL) was identified as being 18 percent overloaded.
- Within Southern California Import Transmission nomogram limits, with all existing generation on-line, there is a resource deficiency in the Southern California area of 2,200 MW.
- Thermal overloads of 20 percent and 44 percent occurred on the Del Amo – Ellis 230 kV and Barre – Ellis 230 kV lines respectively, for the outage of the other line.
- For the post-transient analysis, violations of the WSCC Voltage Stability criteria were identified for the critical outage of the Ellis – Johanna and Ellis – Santiago 230 kV lines or the Lugo – Mira Loma Nos. 2 and 3 500 kV lines. For these outages, voltage collapse is a possibility with the absence of SONGS.
- One 138 kV transformer bank and two 69 kV transmission line thermal overloads of 9 percent, 13 percent, and 1 percent respectively, were identified.

- For the post-transient analysis, violations of the WSCC Voltage Stability criteria were identified for the critical outage of the SWPL Imperial Valley – Miguel 500 kV line.

Owing to our responsibility for grid reliability, the ISO recognizes the need to pursue a proactive plan for transmission mitigation measures in the face of the possible closure of SONGS. To that end, ISO Management recommended a resolution for Board approval in August 1999. An excerpt of the motion that was approved by the ISO Board is provided below.

"Considering that average project lead times are two to seven years for transmission project reinforcement, the ISO shall initiate a process with all affected parties to determine a preferred plan of service if SONGS is shut down"

ISSUE STATEMENT

The joint Study, conducted in an open stakeholder process, identified Projects that are the preferred transmission alternatives to maintain system reliability in the absence of SONGS. Clearly, the Study performed was essentially an RMR-type of analysis; reliability problems occurring solely due to the absence of local generation. Once SONGS ICIP cost recovery expires at the end of 2003, SONGS units may be considered candidates for RMR designation depending on market conditions, operating conditions or other considerations. This means that at the time the ISO does the 2002-2204 RMR/LARS process, SONGS may be found to be effective in meeting RMR requirements. Moreover, the preferred transmission projects identified in the Study could be considered a competitive alternative to an RMR contract, not unlike the process in a LARS competitive solicitation where wires and non-wires proposals compete with RMR contracts. The issue before us now is what course of action should be taken in the near term and long term to ensure reliable operation once the SONGS generating units become candidates for RMR designation. An outline is presented below describing options for Board consideration.

OPTIONS TO SOLVE PROBLEM OR DEAL WITH THE ISSUE

Option 1: Approve the Study Report identifying the preferred transmission Projects. Consider incorporating SONGS into the 2002-2004 RMR/LARS cycle. Direct SCE and SDG&E, with the assistance of ISO Planning Staff, to determine the preferred transmission plan to meet their reliability requirements in the 2008 timeframe for ISO Board approval by the November 2000 meeting. At that time, the ISO Board can choose whether to pursue a competitive solicitation.

Option 2: Approve the Study Report identifying the preferred transmission Projects. Approve moving forward with construction of the preferred transmission Projects without a Competitive Solicitation. Approve the commencement of negotiations among SONGS owners and ISO Management to develop a special incentive-based contract for continued operation of SONGS beginning in 2004, but on an interim basis until the Projects are placed in service.

Option 3: Approve the Study Report identifying the preferred transmission Projects. Approve a Competitive Solicitation (as soon as practicable) to identify the preferred alternative among the preferred transmission projects and non-wires alternatives, including an incentive-based contract for continued operation of SONGS for 2004. Approve deferring action for years beyond 2004 until Congestion Reform, SCE, and SDG&E's long-term expansion plans are completed.

PROS AND CONS OF EACH OPTION

Option 1: Approve the Study Report identifying the preferred transmission Projects. Consider incorporating SONGS into the 2002-2004 RMR/LARS cycle. Direct SCE and SDG&E, with the assistance of ISO Planning Staff, to determine the preferred transmission plan to meet their reliability requirements

in the 2008 timeframe for ISO Board approval by the November 2000 meeting. At that time, the ISO Board can chose whether to pursue a competitive solicitation.

Pros – Would help insure that reliability solutions are addressed more efficiently and with less uncertainty by considering the synergy between the reliability needs with or without SONGS.

Cons – Would add about 4 months to final resolution.

Option 2: Approve the Study Report identifying the preferred transmission Projects. Approve moving forward with construction of the preferred transmission Projects without a Competitive Solicitation. Approve the commencement of negotiations among SONGS owners and ISO Management to develop a special incentive-based contract for continued operation of SONGS beginning in 2004, but on an interim basis until the Projects are placed in service.

Pros - Would help insure that reliability issues are addressed more timely and with more certainty.

Cons – Would foreclose the opportunity for potential savings that could result from going through a competitive solicitation and would increase exposure to stranded investment.

Option 3: Approve the Study Report identifying the preferred transmission Projects. Approve a Competitive Solicitation (as soon as practicable) to identify the preferred alternative among the preferred transmission projects and non-wires alternatives, including an incentive-based contract for continued operation of SONGS for 2004. Approve deferring action for years beyond 2004 until Congestion Reform, SCE, and SDG&E's long-term expansion plans are completed.

Pros - Would help insure that the lowest cost solution is selected and be pursued in a more timely fashion.

Cons – Would pose a potential conflict with transmission projects identified as part of the current cycle of PTO expansion plans and would add more time to final long-term resolution.

The selection of any of the above options is not expected to result in a significant change in the ISO's labor or capital budget.

POSITIONS OF THE PARTIES

SCE, SDG&E and ISO Management support the approval of the Projects identified in the Report as the preferred transmission Projects to meet reliability needs in the absence of SONGS. No party has expressed opposition for the need to mitigate anticipated criteria violations in the absence of SONGS beginning in 2004, or that the Projects identified in the Report are the preferred transmission alternatives to mitigate the criteria violations.

Attachment A

**SAN ONOFRE NUCLEAR GENERATING STATION
OPERATIONAL STUDY**

PHASE-2 REPORT

TRANSMISSION PLAN-OF-SERVICE

Final Report

**California Independent System Operator,
Southern California Edison, San Diego Gas & Electric,
And Interested Stakeholders**

June 12, 2000

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INTRODUCTION

Cal-ISO (ISO) Management and other stakeholders expressed interest in the potential grid reliability impacts (and corresponding mitigation required) in the event that certain generating plants become unavailable in the foreseeable future. The San Onofre Nuclear Generating Station (SONGS) is presently operating under a generation incentive mechanism, which was mutually agreed to by Southern California Edison (SCE) and the California Public Utilities Commission (CPUC). This settlement agreement is known as Incremental Cost Incentive Pricing (ICIP), which covers SONGS operation and forecasted operational costs through December 31, 2003. At the end of this agreement, SONGS will need to recover its costs in the market. To the extent that the market fails to cover the costs, a decision may be made to shutdown SONGS. Because of the location and effect that the SONGS has on both the SCE and SDG&E systems, the ISO initiated a study process to evaluate and mitigate reliability problems associated with its absence.

SONGS is a jointly owned plant of which 80% serves the SCE system (including small amounts for Anaheim and Riverside) and 20% serves the SDG&E system. There are presently two generating units with the combined output of over 2000 MW. Phase 1 of this study process was initiated and completed in 1999. Associated with the absence of SONGS, reliability problems and measures to mitigate them were identified. These measures were grouped into possible alternative projects. At the August 1999 ISO Board meeting, ISO Management presented recommendations for action based on the results of the SONGS Phase 1 Operational Study Report. Management stated that the ISO's responsibility for grid reliability requires a proactive plan for transmission mitigation measures in the face of the possible closure of SONGS. Concurring with Management's recommended action plan, the Board approved the following motion:

MOVED, that the Board approves Management's proposed actions in the face of the possible closure of SONGS. These actions include:

- *The ISO shall request SCE and SDG&E to provide information about plans and commitments for SONGS operation beyond December 31, 2003;*
- *Considering that average project lead times are two to seven years for transmission project reinforcement, the ISO shall initiate a process with all affected parties to determine a preferred plan of service if SONGS is shut down; and*
- *Evaluating and presenting for the Q4 filing any necessary RMR-related Tariff amendments.*

As a result of this directive from the ISO Board, Phase 2 of the SONGS Operational Study was initiated. The ISO coordinated with SCE, SDG&E, and other market participants through a stakeholder process to develop a Phase 2 Study Plan. While Phase 1 studies included the effect of possible new merchant generation, the purpose of these Phase 2 studies is to develop a preferred transmission-only project plan-of-service that will fully mitigate reliability problems associated with the absence of SONGS. The ISO, SCE and SDG&E conducted analytical studies to assess the regional and local reliability impacts on Southern California regional and local area transmission systems. Six alternative transmission projects were analyzed and a preferred plan-of-service has been developed.

EXECUTIVE SUMMARY

This second phase of SONGS operational studies focused on developing a preferred transmission-only plan-of-service to mitigate reliability impacts and loss of generation resource caused by the absence of SONGS. This activity was coordinated with the SDG&E Valley-Rainbow Interconnection Project Study so that these projects would complement each other where possible. SONGS supplies a total of 2150 MW of real power and 1100 MVAR of reactive power (voltage support at the unit's rated capabilities) to the SCE and SDG&E systems. The loss of base-loaded generation of this magnitude and in a strategic location adversely impacts system reliability and resource capability.

Reliability impacts on regional and local areas of the Cal-ISO grid in Southern California were identified under normal and emergency conditions in the absence of SONGS for the study assumption that the generation replacement for SONGS is located outside of Southern California. Benchmarking was performed and documented in the Phase 1 Study Report that was issued in 1999. This benchmarking demonstrated that the system with SONGS in-service meets the ISO Grid Planning Criteria (Criteria). With the absence of SONGS, significantly more power flows on the 500 kV Southwest Power Link (SWPL). The most limiting transmission system outage that defines the main reliability problem in the absence of SONGS was an outage of Encina generating unit #5 (system readjusted) followed by an outage of the SWPL between Imperial Valley and Miguel Substations. This outage is defined as a single contingency within the Criteria. With this single contingency and absent both SONGS generating units, as much as 2150 MW of additional power to supply load in the SCE and SDG&E areas will flow through the SCE and SDG&E transmission systems when replacement generation is assumed to be outside of Southern California. Under these conditions and upon an outage of a single 500 kV line, voltage collapse will occur in addition to numerous transmission line thermal overloads. A verification of reliability criteria violations absence SONGS was conducted in the Phase 2 studies. In addition to the significant regional reactive power support deficiency and local area thermal overloads that were found in the Phase 1 Study, an outage of the Palo Verde-North Gila 500 kV line caused instability between generators in Arizona and California under maximum power imports (7550 MW) from Arizona. These Phase 1 studies also demonstrated that if sufficient new generation is located near SONGS with sufficient transmission reinforcement to bring the new power to the load previously served by SONGS, 500 kV transmission reinforcement to possible new resources near Palo Verde or Midway Substations would not be required. The Phase 1 studies identified mitigation measures for reliability problems when importing power to replace SONGS generation and relied heavily on new reactive power support (up to 4000 Mvar). In addition, series compensation of 230 kV lines north of SONGS was included as a mitigation measure. It was later determined that series compensation of the 230 kV lines and that additional reactive power support in the order of thousands of Mvars were not feasible. Therefore, this Phase 2 Study was to develop a project plan-of-service that was supported mainly by new transmission lines.

Loss of customer load was seen as an outcome of failing to meet system reliability and resource requirements through reinforcement of the transmission system.

Due to the location of SONGS within the Southern California electric system, congestion

management is not a solution to reliability problems caused by the absence of SONGS. Generation dispatch to account for the resource deficiency caused by the absence of SONGS causes reliability problems by increasing the loading on lines not otherwise loaded to that extent.

Mitigation measures were required to meet the Criteria while ensuring a balanced load and resource scenario. Mitigation measures are associated with the following:

- Preventing local thermal overloads,
- Preventing thermal overloading of series capacitors on the SWPL,
- Avoiding the potential for voltage collapse and significant loss of load, and
- Restoring and increasing the allowable import into Southern California based on the SCIT Nomogram through more efficient utilization of existing transmission lines by adding VAR support or by adding another transmission line between Southern California and some external location.

Because replacement power for SONGS is assumed to be located outside of Southern California, loading on the transmission system in the Southern California regional area increases. Therefore, mitigation measures for the absence of SONGS can be significant. For example, the required reactive voltage support can be more than twice as much as the reactive capability of the SONGS units. These units provide as much as 1100 Mvar of reactive power support. As was shown in Phase 1 of these SONGS Operational Studies, the development of new merchant generation within Southern California and within the Los Angeles Basin can significantly mitigate the requirement to build a major new 500 kV transmission project.

A transmission project to mitigate insufficient generation resource and reliability criteria problems will require 7-10 years lead-time before becoming operation, therefore, the effectiveness of the preferred plan-of-service to mitigate future reliability problems was evaluated for the 2008 projected peak summer load conditions. Because the Annual Grid Assessments of SCE and SDG&E have only been conducted through 2004 and there are many proposals for new merchant generation within Southern California, identifying reliability problems directly associated with the absence of SONGS during the 2008 time-frame was not possible. However, one possible interpretation of study results of 2004 and 2008 indicates that a second 500 kV Southwest Power Link (SWPL) will be needed in 2008 in addition to the preferred transmission project for the absence of SONGS below.

To mitigate for reliability problems caused by the absence of SONGS, the following transmission project plan-of-service (referred to as Alternative 5, see attached Diagram 1) is recommended:

THE PLAN-OF-SERVICE BELOW IS PRELIMINARY – additional detailed studies are required to refine the required transmission facilities and reactive voltage support.

- Construct a second 500 kV line between Devers and Palo Verde Substations and a new 500 kV line between Rainbow and Miguel Substations
- Install Devers 500/230 kV transformer bank #2
- Construct a new 230 kV line between Miguel and Mission Substations

- Install 200 Mvar reactive power support each at 500 kV and 230 kV buses at Lugo Substation
- Install 200 Mvar reactive power support at Mira Loma 500 kV Substation
- Install 100 Mvar reactive power support each at Valley and Serrano 500 kV Substations
- Install 550 Mvar of dynamic reactive power support at San Onofre 230 kV Substation
- Implement 450 MW automatic load rolling from the Johanna/Santiago area to the Ellis and Villa Park areas
- Install a load dropping scheme in the San Bernardino area to drop up to 250 MW
- Upgrade conductor on the Del Amo - Ellis 230 kV line
- Upgrade conductor on the Barre – Ellis 230 kV line
- Solve the communications link limitation on SWPL
- By-pass SWPL series capacitors at the Palo Verde – North Gila and North Gila – Imperial Valley segments

The plan-of-service described above mitigates for reliability problems related to the absence of both SONGS generating units. This plan-of-service takes into account accessing up to 8000 MW of proposed new merchant generation near the Palo Verde Nuclear Power Plant as replacement of the SONGS 2150 MW generation.

This transmission project alternative was compared to two other technically viable alternatives (Alternative 2, a second SWPL 500 kV line and Alternative 4, a new 500 kV line between SCE's Serrano and PG&E's Midway Substations). These alternatives were 25% more costly than the preferred plan-of-service and include significantly greater difficulties in obtaining right-of-ways for the new 500 kV lines.

Additional studies are required to refine both the amount of and the split between static and dynamic reactive power support. Several types of devices are available to provide dynamic reactive power to support the voltage (synchronous condensers (SC), static var compensators (SVC), Unified Power Flow Controller (UPFC), and static condensers (STATCOM).

Series capacitors in the SWPL overload under normal system conditions in the absence of SONGS. Although upgrading the SWPL series capacitors to a higher thermal capability can mitigate normal system overload condition on the SWPL, other upgrades through Mexico and the southern SDG&E system would also be required to accommodate the increased flow. Bypassing the series capacitors is a preferable option to minimize the incremental increase in flow on SWPL resulting from the absence of SONGS. Bypassing of SWPL series capacitors at certain EOR levels under high SDG&E import conditions was assumed as part of the preferred transmission plan-of-service described above. These series capacitors are sometimes bypassed in present day operation to prevent thermal overloading of the SWPL.

In evaluating the impact of SONGS' absence on the SCE and SDG&E electric transmission systems, the following issues and activities have not been addressed at this time:

- Investigate special operating contracts for SONGS beyond 2003
- Study to optimize and integrate transmission line and generation solutions
- Study to optimize static and dynamic mix of reactive power support

- Study to specifically determine split of reactive power support for the absence of SONGS and increase in SDG&E import capability
- Perform competitive bidding for alternatives to a transmission-only project
- Determine assignment of cost responsibility
- Complete WSCC three-phase rating process
- Complete facility engineering design studies
- Detailed evaluation of the effectiveness of the preferred plan-of-service beyond 2004

It is anticipated that these issues will be covered if a determination is made to proceed with the preferred transmission plan-of-service into the detailed study and design phases of planning a project to mitigate for the absence of SONGS.

It is important to note that it was identified in the SONGS Phase 1 Operational Study that new merchant generation in the LA Basin and/or in the San Diego area could significantly reduce the need for a major transmission project in the absence of SONGS.

The owners of SONGS anticipate that SONGS will be competitive in the market after the end of the ICIP Agreement and that SONGS will remain in operation beyond 2003 (reference the 12-30-99 SCE letter). It would not be unreasonable for future reliability studies to consider scenarios both with and without SONGS.

The WSCC procedures entitled "Procedures for Regional Planning Project Review and Rating Transmission Facilities", dated March 1996, provide that a reduction in a path's Accepted Rating is acceptable if caused by removing facilities (such as generation) from service when such facilities are not part of the path suffering a reduction. The parties to this study understand and agree that merely because the presence of SONGS has permitted one or more path ratings to be higher than they would have otherwise been rated, there is no obligation to maintain SONGS merely to maintain such path(s) at those previously-supported ratings. Process Scenario 6.0 in the WSCC procedures (pages 52-53) illustrates these principles. Similarly, any change in operating point or nomogram lines on the SCIT Nomogram due to the absence of SONGS was considered acceptable. Thus, the approach used in this study was to develop mitigation plans to ensure adequate transmission grid reliability, but not necessarily to maintain the EOR, WOR or SCIT transfer level to any particular value.

Under autumn load conditions when it is possible to import power from the Southwest up to the maximum East-of-the-Colorado River 7550 MW limit, instability can occur between Arizona and California. Curtailing EOR by 300 MW can alleviate this instability before mitigation is in place. Historically, the EOR path has not been operated above 6000 MW. This translates into limiting the EOR flow to approximately 6800 MW when 7% margin associated with the rating is added in.

The present SCIT Nomogram is limited by a two-unit outage of SONGS. Without SONGS, SCIT would most likely be limited by instability (as stated above) following an outage of the Palo Verde – N. Gila 500 kV line. The impact of this outage is mitigated and the import capability within a SCIT Nomogram is increased by the second Palo Verde – Devers 500 kV line included in the preferred transmission project plan-of-service. As described within the plan-of-service for the

various alternatives, reliability problems caused by a double-line outage of the existing Palo Verde – Devers and the proposed second Palo Verde – Devers 500 kV line, would be mitigated through a load shedding remedial action scheme.

CONCLUSIONS

No reliability criteria violations with SONGS on-line were identified in the previous Phase 1 study. This Phase 2 Study's focus was on determining a preferred transmission project plan-of-service to mitigate for reliability problems caused by the absence of both SONGS generating units.

In 2004, under peak summer load conditions with the absence of both SONGS generating units, significant reactive power deficiencies and local area transmission line thermal overloading will occur under critical contingencies in the SCE and SDG&E systems. For a single contingency (SWPL outage) and absent both SONGS generating units, as much as 2150 MW of additional power to supply load in the SDG&E Area will flow through the SCE transmission system. Without measures to mitigate for these conditions, voltage collapse can occur and affect most of the Southern California Area.

Various mitigation plans were analyzed to bring the performance of the two systems within the ISO Grid Planning Criteria. A preferred transmission plan-of-service was developed that compliments increasing SDG&E import capability in the same time frame where the SONGS generating units may be shut down. SDG&E is proposing to build a 500 kV line from SCE's Valley Substation to a new Rainbow Substation within the SDG&E system. Associated with the SDG&E project is as much as 1350 Mvar of new reactive voltage support.

The lead time for permitting and construction of the preferred transmission plan-of-service to mitigate for the absence of SONGS is such that it cannot be fully constructed by 2004 to provide increased SDG&E import capability and also replace power being generated by SONGS. The owners of SONGS have expressed that there is every expectation that SONGS will be competitive in the market after the end of the ICIP Agreement, remain in operation beyond 2003 and therefore not require generation or transmission replacement projects.

With the absence of SONGS there is a resource deficiency. To serve the assumed 2004 peak load prior to any system contingency, the studies represented all existing units in Southern California as being on line, plus 2000 MW of increased imports to replace SONGS. The preferred transmission plan-of-service will accommodate increased import of power to replace SONGS generation.

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Under normal system conditions with the absence of SONGS and with all existing generation facilities in-service, reactive power losses increased by over 1700 MVAR in the SCE system and over 300 MVAR in the SDG&E system. The real power losses for the SCE and SDG&E systems increased by 130 MW. This magnitude of increase in real and reactive power losses was due to assuming increased import (2000 MW) to serve the 2004 heavy summer peak load under normal (all facilities in-service) conditions. The SONGS Phase 1 Operational Study showed that new merchant generation in the LA Basin and/or in the San Diego area could significantly reduce the need for a major transmission project in the absence of SONGS and would significantly reduce the

amount of reactive and real power losses.

The preferred transmission plan-of-service for the absence of both SONGS generating units is somewhat dependent on the solution to increase SDG&E import capability in 2004 (Valley-Rainbow 500 kV Project). In tandem, both were investigated, because both may occur during the 2004 time period. The solution for increasing SDG&E import capability has to include mitigation for the over-lapping outage of the SWPL and one SONGS generating unit. This SONGS Phase 2 study is an extension of that situation, but with both SONGS generating units out-of-service and investigating out to the 2008 time period. In the 2008 time-frame when a transmission project for the absence of SONGS can be operational, either a second SWPL 500 kV line (Alternative 2) or a second Palo Verde-Devers 500 kV line (Alternative 5 - the preferred alternative) will be needed with SONGS in-service. This additional transmission project is a possible next step beyond the Valley-Rainbow Project to increase SDG&E import capability. Therefore, both 500 kV lines (Alternative 3) will be needed in 2008.

Results of this Study in the 2004 timeframe indicated that the preferred transmission project to mitigate reliability problems without SONGS include a new second Palo Verde – Devers 500 kV line, a new Rainbow – Miguel 500 kV line, related 230 kV transmission reinforcements and voltage support equipment. Since 500 kV lines typically require 7-10 years to be placed in service, these added facilities could be placed in service in the 2008 timeframe, but not 2004. Therefore, system conditions without SONGS in 2008 were also studied. Results of these 2008 studies identified the need for another new 500 kV line paralleling the existing Palo Verde – Miguel 500 kV line (i.e. Southwest Power Link) in addition to the Palo Verde – Devers and Rainbow – Miguel 500 kV projects. Since SCE and SDG&E transmission expansion plans (assuming SONGS in service) have not yet been performed for this timeframe, the ability to accurately distinguish between facilities needed under the normal expansion planning process with SONGS in service, with facilities required to mitigate problems in the absence of SONGS becomes difficult. However, extrapolating results of 2004 to 2008, though not perfect, should give reasonable results. It is also important to note that these results do not assume any new generation in the ISO grid, since the location, quantity and timing of such projects are uncertain.

The Midway-Vincent-Serrano (Alternative 4) is not desirable because it requires automatic load dropping for a single-contingency. All alternatives require a second Miguel-Mission 230 kV line. All alternatives require upgrading of the communication link (to solve interference) parallel to the Palo Verde-North Gila section of the SWPL. All alternatives except alternative 3 require load dropping for a double-circuit outage. The Palo Verde-Devers plus Rainbow-Miguel (Alternative 5 - the preferred alternative) presents good regional and local area performance for future years. It is important to note that the requirement for 500+ Mvars of dynamic reactive power support in the various alternatives is indicative of the need for new merchant generation to be part of the mitigation for the absence of SONGS.

It is critical that adequate reliability be maintained whether the SONGS units remain in operation or not. With the stated ISO goal of eliminating present RMR requirements, it is not desirable that SONGS should become an RMR unit, although some means of assuring that SONGS remains operating until a transmission project can be constructed may be necessary.

BASE CASE DEVELOPMENT AND ASSUMPTIONS

The starting cases are the 2004 heavy summer and autumn without SONGS, used in the Cal-ISO 1999 Composite Study of the ISO Control Area. Changes to be included:

A. Power Flow Base Case Assumptions

1. The power flow base case(s) and stability data were developed in General Electric PSLF format.
2. The power flow base case(s) and associated data used in this study are posted on the ISO's web page (www.caiso.com) for stakeholder access and comment.
3. ISO coordinated the development of two power flow base cases, based on input from SCE, SDG&E, and other stakeholders.
4. One power flow base case reflects 2004 Heavy Summer conditions. This case was primarily used in analyzing the local area impacts, but was also used to evaluate impacts to the SCIT Nomogram. This case originated from the SDG&E's Valley-Rainbow Study.
5. A second base case was created to reflect a 2004 Heavy Autumn condition. This case was primarily used in the "regional" analyses (SCIT and the Arizona-California (EOR) transfer path).
6. For all areas outside California, the network topology and loads reflected information provided to WSCC by each respective area. (see also, Load Assumptions).
7. SCE and SDG&E reviewed the two base cases and revised them as needed.

The following reactive power support is included in SDG&E's proposed Valley-Rainbow 500 kV Project and has been included in this study:

- STATCOM or similar equipment with a dynamic reactive power response capability at the following locations:
 - Sycamore Substation 230 kV bus, +/- 100 MVAR capability;
 - Talega or Escondido Substation 230 kV bus, +/- 100 MVAR capability; and
 - Mission Substation 230 kV bus, +/- 150 MVAR capability;
- Two 100 MVAR shunt capacitor banks at the Rainbow or Pala Substation 500 kV bus;
- Three 69 MVAR shunt capacitor banks at the Rainbow or Pala Substation 230 kV bus;
- One 69 MVAR shunt capacitor bank at the San Luis Rey Substation 230 kV bus;
- Two 69 MVAR shunt capacitor banks at the Sycamore Canyon Substation 230 kV bus;
- One 43 MVAR shunt capacitor bank at the Telegraph Canyon Substation 138 kV bus;
- One 50 MVAR shunt capacitor banks at the Sweetwater Substation 69 kV bus (or alternative 69 kV bus at South Bay or Silvergate Substation);
- Two 69 MVAR shunt capacitor banks at the Mission Substation 230 kV bus;
- One 69 MVAR shunt capacitor bank at the Miguel Substation 230 kV bus; and
- One 69 MVAR shunt capacitor bank at the Escondido Substation 230 kV bus.

B. Load-Related Assumptions

1. **SCE/SDG&E Load Level.** Loads modeled in power flow cases representing peak summer load conditions were represent a maximum anticipated coincident peak load for the SCE/SDG&E area¹, based upon a one-in-five-year (“80/20”) heat wave. For 2004 Heavy Summer load levels, SCE has 21,320 MW load (includes pumps, Anaheim, and Pasadena) and roughly 450 MW of losses (with SONGS on-line); SDG&E has 4,575 MW of load plus roughly 105 MW of losses. The remainder of the ISO Grid modeled a coincident one-in-five-year load level. Consistent with WSCC criteria for post-transient analysis, the load level represented in reactive margin analysis were scaled to average (“1-in-2”) peak load levels. SCE and SDG&E areas used a one-in-five-year (“80/20”) load forecast when investigating local area reliability impacts. Because SDG&E uses a one-in-ten-year (“90/10”) load forecast in their 5-year annual transmission assessment, the absence of SONGS will also be investigated as a sensitivity in their year 2000 5-year assessment to assess local area impacts.
2. **Power Factor.** Reactive load Watt/VAR ratios represented in the base cases reflected reasonable values for the operating conditions being studied. For 2004 Heavy Summer, SCE’s overall power factor was “0.999 lagging” (SCE’s traditional 25:1 Watt/VAR methodology); SDG&E’s overall power factor are “0.992 lagging”.
3. **“Municipality” Loads.** Loads of a Non-Participating Transmission Owner that is within SCE/SDG&E’s service area and directly interconnected to their host utility’s transmission or distribution facilities, were modeled based on the most recent forecast available from the Non-Participating TO.
4. **Neighboring Area Loads.** Loads located outside the SCE / SDG&E area (including LADWP, PG&E, IID, CFE and other WSCC member systems) were modeled based on information provided to WSCC.

C. Generation-Related Assumptions

1. **Reliability Must-Run generation.** SCE and SDG&E incorporated applicable findings from the ISO’s Long Term Must-Run Assessment into the study.
2. **Qualified Facilities.** All QF generation was modeled consistent with WSCC criteria and study practices². QF generation located within SCE and SDG&E’s service area were modeled at an output which reflects their historic dependable operating capacity (in the absence of such information, maximum contract value will be used). For steady-state power flow analysis, all explicitly modeled QF generation had their reactive power capabilities represented according to contractual requirements; otherwise historical operating data was used. For dynamic stability analysis, actual reactive power capabilities (i.e. manufacturer data or field test data) was modeled as available. [Those QFs who are expected to either reach the end of their contract or be bought out by the study period was regarded in the same fashion as other “merchant” or market-driven units.]
3. **Hydro and Public Power Utilities sources.** These types of generation was modeled at “typical” expected operating performance for the time period being studied.

¹ SCE and SDG&E (with input from the Stakeholders) shall define this “local area” of influence, based on past load pattern experience.

² Similarly, this approach is consistent with the treatment of QFs in the ISO’s 1999-2003 RMR Study.

4. **Distribution-sited Generation.** All generation directly interconnected to SCE and SDG&E's distribution systems (i.e. not directly interconnected to the ISO Controlled Grid) was netted with the load represented at the nearest ISO Grid Take-Out Point.
5. **New Generation.** All new generation with an approved AFC from the California Energy Commission and do not have a significant impact on system reliability when studying the absence of SONGS.
6. **SONGS Replacement Power.** Replacement capacity during an absence of SONGS was a combination of RMR generation, internal market generation and imports.

D. ISO Network Assumptions

1. **Regional Paths / ISO Imports.** Imports into the ISO Controlled Grid were limited such that they do not exceed any known present-day operating constraints that are in effect for the time period that is being studied. For example, flows on the California Oregon Intertie (COI) path was represented no higher than the maximum operating capabilities studied in the present-year's (1999) season, as determined by WSCC's Operating Capability Study Group (OCSG). For example, the schedule on COI was limited to 4500 MW when the schedule on the Alturas 345 kV line is 300 MW. The flows on the Arizona-to-California path was represented no higher than the maximum level allowable based on the (1999) Southern California Import Transmission (SCIT) nomogram (This assumption on staying within the 1999 SCIT Nomogram applies to the SONGS-on case unless there is new LA Basin merchant generation or transmission reinforcements to support higher SCIT limits.). Imports included West of River (WOR), East of River (EOR), SCIT, Path 26 (Midway-Vincent), Southwest Power Link (SWPL), and Path 45 (SDG&E-CFE). These path flows were kept within the following levels:

Path	Rating Assumption	Range of Actual Flows
COI	4800 MW N-S	4400-4800 MW
SCIT	Current Operating Nomogram dated 4/21/99	Will maintain composite SCIT flow within Nomogram prior to absence of SONGS
WOR	10118 MW	Dictated by EOR and River-area resource availability
EOR	7550 MW	Dictated by resource availability from Arizona
SWPL	970 MW (SDG&E) 1273 MW (Total)	Will maintain SWPL flow within SDG&E Simultaneous Import Nomogram
Midway-Vincent	2600-3000 MW	Below 2800 MW
SDG&E-CFE	408 MW	0 MW (cannot be dependent on Mexico to maintain reliability in Southern California)
Liberty-Mead	450 MW	No phase shifter operation to be assumed for moderate EOR flow
Westwing (Perkins)-Mead	1300 MW	No phase shifter operation to be assumed for moderate EOR flow
PDCI	3100 MW (at Celilo)	400 - 3100 MW (at Celilo)
IPP DC	1920 MW (at Intermountain)	1820 MW (commonly-assumed level)
North of Lugo	1200 MW	800 - 900 MW

2. **Compensation.** Series compensation for the major Extra High Voltage (EHV) lines was represented at normal operating levels as shown below:

East of River (EOR) EHV Lines	Compensation
Navajo-McCullough 500kV [now w/Crystal]	70%
Moenkopi-Eldorado 500kV	70%
Liberty-Mead 345kV	70%
Palo Verde-Devers 500kV #1	50%
Palo Verde-N. Gila 500kV	50%
Westwing-Mead 500kV	70%
West of River (WOR) EHV Lines	
McCullough-Victorville 500kV #1 & #2	35%
Eldorado-Lugo 500kV	35%
Mohave-Lugo 500kV	26%
Marketplace-Adelanto 500kV	45%
North Gila-Imperial Valley 500kV	50%

3. **Remedial Action Schemes (RAS).** Existing RAS for Big Creek, North of Lugo, and the MWD/SCE and SDG&E interface were assumed as operational (and simulated as such, if necessary). Other anticipated RAS (expected by the year-of-study) was also included.
4. **The SWIP project.** The proposed 500kV between Idaho's Kinport/Midpoint and Nevada's Crystal Lake was not included in the power flow base case.

ABSENCE OF SONGS TRANSMISSION ALTERNATIVES

Various combinations of mitigation measures were examined to determine their technical feasibility in mitigating reliability criteria impacts to the transmission grid in the absence of SONGS. This study did not assess the costs, evaluate the long-term viability, permitting and construction lead-times, or determine optimal combinations and locations of the mitigation measures. These factors, among others, should be considered in combination with other market solutions prior to selecting and pursuing a preferred set of alternatives.

Mitigation plans are required to ensure a balanced load and resource scenario, and the meeting of all applicable reliability criteria, through some combination of the following alternatives:

- Preventing local overloads; and
- Avoiding the potential for voltage collapse;
- Restoring and increasing the allowable import into Southern California based on the SCIT Nomogram through more efficient utilization of existing transmission lines by adding VAR support (examined in this study) or by adding another transmission line between Southern

California and some external location (not examined in this study);

- Restoring EOR transfer capability that may be reduced due to the absence of SONGS.

Because replacement power for SONGS significantly loads the transmission system in the Southern California region differently (different lines, different location and direction on lines) the mitigation measures for the absence of SONGS can be significant (for instance, the required reactive voltage support can be more than twice as much as the reactive capability of the SONGS units).

The following are five viable transmission alternatives that, within the scope of these studies, fully mitigate for the absence of SONGS in 2004. It should not be construed that these alternatives represent an optimal or final package of mitigation measures. Although it is not expected that more detailed studies will significantly change the composition of the alternatives, the amount of reactive support required and the mix of dynamic and static could change. It is important to realize that each of these options does not result in similar system performance. One option may be suitable only for the year 2004, while another may provide a robust, long-term solution that has benefits besides mitigating the absence of SONGS. Since this study only addressed the year 2004, additional generation and/or transmission facilities may be required to determine a long-term solution to the absence of SONGS.

If no system mitigation is performed with the absence of SONGS, a potential 2,200 MW of load in the SCE and SDG&E systems may not be served under normal conditions, due to transmission facility thermal overloads and potential voltage collapse through importing replacement power.

Six transmission alternatives were analyzed for mitigation of reliability problems related to the absence of SONGS.

Alternative 1 - This alternative includes a new 500 kV line from Valley to Devers to Palo Verde Substations.

- Construct a second 500 kV line between Devers and Palo Verde Substations and a new 500 kV line between Rainbow and Miguel Substations
- Install Devers 500/230 kV transformer bank #2
- Construct a new 230 kV line between Miguel and Mission Substations
- Install 200 Mvar reactive power support each at Miguel, Lugo & Mira Loma Substations
- Install 140 Mvar reactive power support at Mission Substation
- Install 140 Mvar dynamic reactive power support each at South Bay and Encina Substations
- Install 550 Mvar of dynamic reactive power support at San Onofre 230 kV Substation
- Implement 450 MW automatic load rolling from the Johanna/Santiago area to the Ellis and Villa Park areas
- Install a load dropping scheme in the San Bernardino area to drop up to 250 MW
- Upgrade conductor on the Del Amo - Ellis 230 kV line
- Upgrade conductor on the Barre - Ellis 230 kV line

- Solve the communications link limitation on SWPL
- By-pass SWPL series capacitors at the Palo Verde – North Gila and North Gila – Imperial Valley segments
- Twin Imperial Valley – La Rosita 230 kV line

Alternative 1 is similar to the preferred alternative (Alternative 5), but includes dynamic reactive power support in the SDG&E Area in place of a new 500 kV Rainbow-Miguel line as shown in the preferred transmission plan (Alternative 5). Although Alternative 1 fully mitigates for the absence of SONGS, this reactive support is only a deferral of a new line and does not provide the thermal power transfer capability required in 2008 when a transmission project to mitigate for the absence of SONGS could be operational.

Alternative 2 – This alternative includes a second 500 kV Southwest Power Link (SWPL) from Miguel to Imperial Valley to Palo Verde Substation.

- Construct a new second 500 kV line between Miguel and Palo Verde Substations
- Install Miguel 500/230 Transformer bank #2
- Construct a new 230 kV line between Miguel and Mission Substations
- Install 200 Mvar reactive power support at Miguel Substation
- Install 1100 Mvar of dynamic reactive power support at San Onofre 230 kV Substation
- Add 80 Mvar reactive power support each at Johanna and Santiago 230 kV substations
- Implement 400 MW automatic load rolling from the Johanna/Santiago area to the Ellis and Villa Park areas.
- Install a load dropping scheme in the South of Lugo and San Bernardino areas to drop up to 450 MW
- Upgrade conductor on the Del Amo - Ellis 230 kV line
- Upgrade conductor on the Barre – Ellis 230 kV line or build a new Barre-Ellis 230 kV line
- Solve the communications link limitation on SWPL

Alternative 2 fully mitigates for reliability problems related to the absence of SONGS. This alternative is about 25% more expensive than the preferred alternative (Alternative 5) and has significantly more difficulty associated with acquiring right-of-way for the proposed new 500 kV lines. The amount of dynamic reactive support required indicates that this alternative is not as effective as the preferred alternative in mitigating the SCE local area impacts of the absence of SONGS.

Alternative 3 - This alternative includes a new 500 kV line between Devers and Palo Verde Substations, a new 500 kV line from Rainbow to Miguel Substation, and a second SWPL 500 kV line.

- Construct a second 500 kV line between Devers and Palo Verde Substations and a new 500 kV line between Rainbow and Miguel Substations

- Install Devers 500/230 kV transformer bank #2
- Construct a new 230 kV line between Miguel and Mission Substations
- Install 200 Mvar reactive power support each at Miguel, Lugo & Mira Loma Substations
- Install 550 Mvar of dynamic reactive power support at San Onofre 230 kV Substation
- Implement 450 MW automatic load rolling from the Johanna/Santiago area to the Ellis and Villa Park areas
- Install a dropping scheme in the San Bernardino area to drop up to 250 MW
- Upgrade conductor on the Del Amo - Ellis 230 kV line
- Upgrade conductor on the Barre – Ellis 230 kV line
- Solve the communications link limitation on SWPL

Alternative 3 fully mitigates for reliability problems associated with the absence of SONGS. This alternative is a combination of Alternatives 2 and 5. While this alternative has the possibility of not requiring reduction in imports into Southern California following the outage of a major 500 kV transfer path (SWPL or between Palo Verde and Devers) from Arizona, this alternative is twice as expensive as either alternatives 2 or 4. This alternative includes the significant right-of-way difficulties of both other alternatives. Studies to optimize the amount of reactive power support listed for this alternative were not conducted and therefore the amount listed may be more than required. This alternative also was investigated for the 2008 timeframe and was seen on a preliminary basis as a solution to SDG&E long-term import capability with or without SONGS. Additional discussion of this alternative is included in the report section titled “Sensitivity Analysis”.

Alternative 4 – This alternative includes a new 500 kV line from Serrano to Vincent to Midway Substation.

- Construct a new 500 kV line between Serrano and Vincent Substations and a fourth Midway to Vincent 500 kV line
- Install Vincent 500/230 kV transformer bank #4
- Install Lugo 500/230 kV transformer bank #3
- Install Serrano 500/230 kV transformer bank #4
- Construct a new 230 kV line between Miguel and Mission Substations
- Install 300 Mvar reactive power support each at the 500 kV and 230 kV buses at Lugo Substation
- Install 200 Mvar reactive power support at Mira Loma 500 kV Substation
- Install 200 Mvar reactive power support at Miguel 500 kV Substation
- Install 100 Mvar reactive power support each at Valley and Serrano 500 kV Substations
- Install 550 Mvar of dynamic reactive power support at San Onofre 230 kV Substation
- Implement 450 MW automatic load rolling from the Johanna/Santiago area to the Ellis and Villa Park areas.
- Install a load dropping scheme in the San Bernardino area to drop up to 250 MW
- Add a total of 158 Mvar reactive voltage support at Johanna and Santiago 230 kV substations
- Upgrade conductor on the Del Amo - Ellis 230 kV line

- Upgrade conductor on the Barre – Ellis 230 kV line or build a new Barre-Ellis 230 kV line
Solve the communications link limitation on SWPL
- By-pass SWPL series capacitors at the Palo Verde – North Gila and North Gila – Imperial Valley segments
- Twin Imperial Valley – La Rosita 230 kV line

Alternative 4 fully mitigates for reliability problems associated with the absence of SONGS. This alternative is 25% more expensive than the preferred alternative (Alternative 5). The right-of-way difficulty issues associated with this alternative are significantly more than the preferred alternative.

Alternative 5 - Recommended Preferred Plan-of-service for the absence of SONGS (see attached Diagram 1)

This alternative includes a new 500 kV line between Devers and Palo Verde Substations and a new 500 kV line from Rainbow to Miguel Substation.

- Construct a second 500 kV line between Devers and Palo Verde Substations and a new 500 kV line between Rainbow and Miguel Substations³
- Install Devers 500/230 kV transformer bank #2
- Construct a new 230 kV line between Miguel and Mission Substations
- Install 200 Mvar reactive power support each at 500 kV and 230 kV buses at Lugo Substation
- Install 200 Mvar reactive power support at Mira Loma 500 kV Substation
- Install 100 Mvar reactive power support each at Valley and Serrano 500 kV Substations
- Install 550 Mvar of dynamic reactive power support at San Onofre 230 kV Substation
- Implement 450 MW automatic load rolling from the Johanna/Santiago area to the Ellis and Villa Park areas
- Install a load dropping scheme in the San Bernardino area to drop up to 250 MW
- Upgrade conductor on the Del Amo - Ellis 230 kV line
- Upgrade conductor on the Barre – Ellis 230 kV line
- Solve the communications link limitation on SWPL
- By-pass SWPL series capacitors at the Palo Verde – North Gila and North Gila – Imperial Valley segments

Alternative 5 fully mitigates for the absence of SONGS. Alternative 5 is preferred over the other alternatives considered mainly due to lower cost and less difficulty associated with the acquisition of right-of-ways the proposed new 500 kV lines. This alternative fully mitigates for reliability problems associated with the absence of SONGS.

Alternative 6 - This alternative includes a new 500 kV line between Devers and Palo Verde Substations and a new 500 kV line from Rainbow to Miguel Substation. This alternative included the assumption that 2000 MW of proposed new merchant

³ It is possible that 500 Mvar of new dynamic reactive voltage support in SDG&E's Area could defer a Rainbow-Miguel.

generation would be built near Palo Verde Substation.

- Construct a second 500 kV line between Devers and Palo Verde Substations and a new 500 kV line between Rainbow and Miguel Substations³
- Install Devers 500/230 kV transformer bank #2
- Construct a new 230 kV line between Miguel and Mission Substations
- Install 200 Mvar reactive power support each at 500 kV and 230 kV buses at Lugo Substation
- Install 200 Mvar reactive power support at Mira Loma 500 kV Substation
- Install 100 Mvar reactive power support each at Valley and Serrano 500 kV Substations
- Install 550 Mvar of dynamic reactive power support at San Onofre 230 kV Substation
- Implement 450 MW automatic load rolling from the Johanna/Santiago area to the Ellis and Villa Park areas
- Install a load-dropping scheme in the Eastern SCE System to drop up to 700 MW.
- Upgrade conductor on the Del Amo - Ellis and Barre-Ellis 230 kV lines
- Solve the communications link limitation on SWPL
- By-pass SWPL series capacitors at the Palo Verde – North Gila and North Gila – Imperial Valley segments

Alternative 6 is Alternative 5, but includes the assumption of 2000 MW of proposed new merchant generation near Palo Verde Substation. This assumption requires additional load dropping in the SCE Area and reactive voltage support. It can be assumed that the difference in facilities between Alternatives is associated with the proposed new merchant generation near Palo Verde and not directly with the absence of SONGS.

Below is a table showing the relative comparison of the three main alternatives:

	Alt 5 Devers - Palo Verde	Alt. 2 Second SWPL	Alt. 4 Serrano - Midway
Approximate Mileage	238 mi.	280 mi.	213 mi.
Right-of-way difficulties	medium/high	high	very high
Timing	>2007	>2007	>2007
Planning Cost Estimate	1.0	1.26	1.24
Ranking	1	2	3

STUDY RESULTS

The results of a technical analysis of the forecasted 2004 transmission system and load level without SONGS generation results in significant contingency related regional and local transmission system thermal overload conditions and voltage collapse. This is primarily related to importing generation to replace SONGS in place of proposed new merchant generation as was studied in Phase 1 of the SONGS Operational Studies. Voltage collapse is highly likely without both dynamic and static reactive power support. This additional voltage support is required because of the absence of 1100 Mvar of reactive power from the SONGS units and to mitigate for increased reactive power losses due to the flow pattern change caused by SONGS replacement power flow over SCE's transmission system. Without SONGS, power flow across SCE's transmission system is higher than with SONGS generation.

A. Power Flow Analysis

A "baseline" of existing reliability problems (if any) was established by performing an initial screening of the foundation case with SONGS on line. By applying the same screening to the "no SONGS" version of the same base case, new reliability problems that emerged could be directly associated with the absence of SONGS. This benchmarking was conducted as part of the SONGS Phase 1 Study.

Power flow investigations in this Phase 2 Study were performed for the 2004 Heavy Summer case with SONGS units off. Power flow studies determine the extent to which thermal overloading occurred on facilities due to the change in flow pattern resulting from the absence of the SONGS units and associated rescheduling of power.

Facility loading was monitored to ensure that overloads did not occur. Continuous ratings were used for "All Lines in Service" analysis, and emergency ratings were used for all contingency cases (in many cases, the emergency rating may be the same as the continuous rating). To the extent that unacceptable power flows were seen, upgrades or other remedial measures were developed.

Regional Southern California System

The following outages were studied to investigate power flow thermal loading conditions in the absence of SONGS.

- N-1 of Imperial Valley – Miguel 500 kV line;
- Over-lapping N-1 & G-1 of Imperial Valley-Miguel 500 kV line and Encina Generator #5
- N-1 of the Palo Verde – North Gila 500 kV Line;
- N-1 of the Palo Verde – Devers 500 kV Line;
- N-1 of Eldorado – McCullough 500 kV line;
- N-1 of Eldorado-Mohave 500 kV line;

- N-1 Devers-Valley 500 kV line;
- N-1 Lugo-Eldorado 500 kV;
- N-1 Lugo-Mohave 500 kV;
- N-1 Serrano-Valley 500 kV;
- Bi-polar Intermountain Power Project DC line;
- Bi-polar Pacific Intertie DC
- N-2 of the Ellis – Johanna and Ellis – Santiago 230 kV Lines;
- N-2 of the Lugo – Mira Loma #2 and #3 500 kV Lines;
- N-2 Lugo-Eldorado and Lugo-Mohave 500 kV;
- N-2 Midway-Vincent 500 kV;
- N-2 Serrano-Lugo & Serrano-Mira Loma 500 kV;
- N-2 Lugo-Vincent 500 kV;
- N-2 SONGS-Chino & SONGS-Serrano 230 kV;
- N-2 SONGS-Santiago 230 kV

In addition, studies were performed to assess system performance for the outage of new 500 kV lines associated with the prospective transmission alternatives.

In addition to the information provided below within the sub-section titled “Local SCE System” and “SDG&E Local System”, an analysis of thermal line loading problems for 500 kV single-circuit and common-corridor double-circuit outages demonstrated that the transmission facilities and remedial actions identified with the various alternative transmission projects mitigated overload problems previously identified in Phase 1 of these SONGS Operational Studies. With the preferred transmission project (Alternative 5) the most limiting outage is a double-circuit outage of both Palo Verde-Devers 500 kV lines. For this outage, load dropping may be necessary under peak load conditions (as allowed by NERC Reliability Criteria) to reduce loading on the SWPL to within normal thermal limits within 30 minutes following the contingency.

Local SCE System

Line loading problems were identified in SCE’s Orange County area in the SONGS-Off case:

<u>Outage</u>	<u>Overloading Line</u>	<u>Line Loading % of Normal Rating</u>
Barre-Ellis 230kV	Del Amo-Ellis 230 kV	127
Del Amo-Ellis 230 kV	Barre-Ellis 230 kV	151
SONGS-Serrano 230 kV	Barre-Ellis 230 kV	124

The line loading violated SCE thermal loading criteria, which is 115% of its normal rating.

The following mitigation plan was developed to solve the line loading violations:

1. Upgrade existing 2B-1033 conductor on Del Amo-Ellis 230 kV line to 2B-1590 conductor.
2. Upgrade existing 2B-1033 conductor on Barre-Ellis 230 kV line to 3B-1590 conductor

The proposed new 500 kV lines will deliver about 2200 MW SONGS replacement power into Southern California through existing SCE 500 kV system. Therefore, existing 500/230 kV transformer banks at Devers, Vincent, and Serrano were overloaded in Alt. 1, Alt. 3, Alt. 5, and Alt. 6 under different 500kV line outages. Additional 500/230 kV transformer banks were proposed to mitigate the problems in these alternatives.

SONGS units also provide significant local voltage support to Orange County area and part of south-of-Lugo area. Therefore, system voltage collapsed under the N-2 of Ellis-Johanna/Ellis-Santiago 230 kV lines and Lugo-Mira Loma #2 and 33 500 kV lines in SONGS off case.

Local SDG&E System (also see attached Table 1)

Absence of the San Onofre units causes a change in the flow pattern in the SDG&E network. When the San Onofre units are in the system, the SDG&E system receives its imports from the North, directly from the San Onofre units, and from the EAST directly from the Palo Verde units. Even though the import could be schedule from any remote place, a displacement effect takes place given the location of the two plants right at the interconnection points -San Onofre and Palo Verde-

In the future, the Valley-Rainbow interconnection will also bring imports into San Diego and a Unified Power Flow Controller (UPFC) of phase shifter will control the flow on this line. The line rating is expected to be 1000 MW.

Both, the North and the East interconnections, are strong. The north, or San Onofre interconnection, consists of five bundled 230 kV lines. The east, or Palo Verde interconnection, consist of a 500 kV line –SWPL-. The 500 kV line has a low impedance and is connected to the Palo Verde nuclear plant capable of producing 4056 MW. When the San Onofre units are on line, the flows into San Diego are split fairly even between these two interconnections. Absent the San Onofre units, there is a significant flow increase on SWPL and therefore at Miguel 500 kV, 230 kV, 138 kV and 69 kV. This increase in flow can somewhat be decreased by bypassing the series capacitors at SWPL, but in some instances the flow increase is very high, requiring further upgrading of the line.

The three segments of SWPL are limited by the series capacitors continuous rating of 1400 Amperes. The Palo Verde to North Gila segment also has some limitations that restrict the continuous flow of the line to 1400 Amperes. Therefore, bypassing of the series capacitors can be used to limit the flow but does not change the 1400 Amps continuous rating of the line.

The limiting factor in the Palo Verde – North Gila segment involves the Southern Pacific Railroad communication link interference due to induced voltage, which occurs above a line loading of 1400 Amps. The upgrading of the communication link was estimated at \$1,000,000 in 1995. There is

also a telephone line induction problem but this can be easily mitigated at a low cost. This problem is located in the Heiter area.

Removing SONGS units increases the flow into Miguel. At Miguel the power is transformed from 500 kV to the different transmission voltage levels and disseminated to the different load centers. When more power is injected at Miguel, more transformation capacity or lines to move the power from Miguel to the load centers is needed. The contingency analyses concluded that all alternatives require at least a 230 kV line from Miguel to Mission substation.

Alternative 1. Second Palo Verde – Devers – Valley 500 kV line

The base case shows loading on Palo Verde – North Gila above 1400 Amps at an EOR of 4113 MW (without including the new Palo Verde – Devers line). The loading on the Palo Verde – North Gila line is 1415 Amps. At this border line level more work is required to evaluate what communications upgrades are required (it could range from none to the complete upgrade).

The most limiting contingencies for this alternative are the outage of one or both of the Palo Verde – Devers 500 kV lines. The outage of one of the lines causes SWPL to load above its normal rating, but below the half an hour emergency rating. Operator actions should take place to lower the imports from Arizona into Southern California to be able to decrease the line load within the continuous rating. Lowering the imports may be possible in the early years, however as the load increases from year to year without any new internal generation additions (internal to Southern California) it may not be possible. In such a case, manual load dropping will be required.

For the double Palo Verde – Devers outage, automatic load dropping is required to bring the line within its Emergency rating. Furthermore, operator actions should take place within half an hour to reduce the imports from Arizona into Southern California to decrease the line loading within the continuous rating. Lowering the imports may be possible in the early years, however as the load increases from year to year without any new internal generation additions (internal to Southern California) it may not be possible. In such a case, manual load dropping will be. If these two measures do not lower the Imperial Valley – La Rosita loading below 408 MW, CFE will have to take some actions, mainly re-dispatch generation, to lower the loading on the line.

For the double outage of Miguel – Mission, Miguel – Sycamore 230 kV lines, overloads are observed in the 230 kV, 138 kV, and 69 kV systems out of Miguel into the San Diego system. An existing RAS and 200 MW load dropping scheme do not reduce the loading levels below the applicable ratings. As a minimum, a line from Miguel to Mission 230 kV is proposed.

Alternative 2. Second SWPL 500 kV line

Base case shows overloads on the Miguel 230/69 kV transformers. It also shows very heavy loading at all voltage levels out of Miguel for various N-1 and N-2 contingencies. To alleviate these, as a minimum, a second Miguel – Mission line is required.

For the single outage of a segment of one of the SWPL lines, the remaining line overloads.

Loadings are within the half an hour emergency limits. After half an hour Southern California imports will have to be lowered to decrease the line loading within the continuous rating. Lowering the imports may be possible in early years, however as the load increases from year to year without any new internal generation additions (internal to Southern California) it may not be possible. In such a case manual load dropping will be required to decrease the loading on SWPL to values within the continuous rating. If this two measures do not lower Imperial Valley – La Rosita load below the 408 MW, CFE will have to take some actions, mainly re-dispatch generation, to lower the loading on the line.

For the double outage of Palo Verde – North Gila and Palo Verde – Imperial Valley, automatic load dropping is required to bring the Palo Verde – Devers 500 kV line within the emergency rating. Furthermore, operator actions should take place within half an hour to lower the imports from Arizona into Southern California to reduce the line loading within the continuous rating. Lowering the imports may be possible in early years, however as the load increases from year to year without any new internal generation additions (internal to Southern California) it may not be possible.

Alternative 4. New Midway-Vincent-Serrano 500 kV line

Base case shows loading on SWPL segments above their continuous rating at an EOR of 5049 MW, even after bypassing the series capacitors. The loading will require the upgrading of the communication link and the twinning of the Imperial Valley – La Rosita 230 kV line.

For the N-2, Miguel – Mission, Miguel – Sycamore the existing RAS, and subsequent automatic dropping of 200 MW does not alleviate the overloads. A new 230 kV line Miguel – Mission will alleviate the problems. All contingency analyses shown in the table for Alternative 4 were done including this line.

For the outage of the Palo Verde – Devers line, the Palo Verde – North Gila line will overload outside its Emergency rating, automatic load dropping is required to bring the line within the Emergency rating. Furthermore, operator actions should take place within half an hour to reduce the imports from Arizona into Southern California to decrease the line loading within the continuous rating. Lowering the imports may be possible in the early years, however as the load increases from year to year without any new internal generation additions (internal to Southern California) it may not be possible. In such a case, manual load dropping will be required to decrease the loading on SWPL to values within the continuous rating.

For the Valley-Rainbow outage, SWPL segments are loaded within the half an hour emergency rating. Operator actions should take place within half an hour to reduce the imports from Arizona into Southern California to decrease the line loading within the continuous rating. Lowering the imports may be possible in the early years, however as the load increases from year to year without any new internal generation additions (internal to Southern California) it may not be possible. In such a case, manual load dropping will be required to decrease the loading on SWPL to values within the continuous rating.

Alternative 5. Second Palo Verde – Devers 500 kV line & New Rainbow – Miguel 500 kV line

This case has been built under the assumption that the Valley – Rainbow 500 kV line will be rated at least 1400 MW. Currently SDG&E is planning to ask for a rating of 1000 MW; a re-rating procedure will have to be pursued to operate at 1400 MW.

No base case overloads are found in the San Diego area for this alternative. For the N-1 outage of the Palo Verde – Devers 500 kV line the remaining Palo Verde – Devers line loads to 99.7 % its continuous rating.

Outage of one of the Palo Verde – Devers 500 kV line loads Palo Verde – North Gila around 1450 Amperes at an EOR of 4047 MW (without including the new line). At this border line level more work is required to evaluate what communications upgrades are required (it could range from none to the complete upgrade). If no upgrades are done, operator actions should take place within half an hour to reduce the imports from Arizona into Southern California to decrease the line loading within the continuous rating. Lowering the imports may be possible in the early years, however as the load increases from year to year without any new internal generation additions (internal to Southern California) it may not be possible. In such a case, manual load dropping will be required to decrease the loading on SWPL to values within the continuous rating.

For the Valley-Rainbow outage, SWPL segments are loaded within the half an hour emergency rating. Operator actions should take place within half an hour to reduce the imports from Arizona into Southern California to decrease the line loading within the continuous rating. Lowering the imports may be possible in the early years, however as the load increases from year to year without any new internal generation additions (internal to Southern California) it may not be possible. In such a case, manual load dropping will be required to decrease the loading on SWPL to values within the continuous rating.

For the double Palo Verde – Devers outage, automatic load dropping is required to bring the Palo Verde-North Gila 500 kV line within its Emergency rating. Furthermore, operator actions should take place within half an hour to reduce the imports from Arizona into Southern California to decrease the line loading within the continuous rating. Lowering the imports may be possible in the early years, however as the load increases from year to year without any new internal generation additions (internal to Southern California) it may not be possible.

For the N-2, Miguel – Mission, Miguel – Sycamore the existing RAS, and subsequent automatic dropping of 200 MW does not alleviate the overloads. A new 230 kV line Miguel – Mission will alleviate the problems.

Alternative 6. Second Palo Verde – Devers 500 kV line & New Rainbow – Miguel 500 kV line with 2000 MW of proposed new merchant generation at Palo Verde

This case has been built under the assumption that the Valley – Rainbow 500 kV line will be rated at least 1400 MW. Currently SDG&E is planning to ask for a rating of 1000 MW. No base overloads are found in the San Diego area for this alternative.

For the outage of the Palo Verde – Devers line, the remaining Palo Verde – Devers loads to 100% its continuous rating, the Palo Verde – North Gila line will overload within the Emergency rating, operator actions should take place within half an hour to reduce the imports from Arizona into Southern California to decrease line loading within the continuous rating. Lowering the imports may be possible in the early years, however as the load increases from year to year without any new internal generation additions (internal to Southern California) it may not be possible. In such a case, manual load dropping will be required to decrease the loading on SWPL to values within the continuous rating

For the Valley-Rainbow outage, SWPL segments are loaded within the half an hour emergency rating. Operator actions should take place within half an hour to reduce the imports from Arizona into Southern California to decrease the line loading within the continuous rating. Lowering the imports may be possible in the early years, however as the load increases from year to year without any new internal generation additions (internal to Southern California) it may not be possible. In such a case, manual load dropping will be required to decrease the loading on SWPL to values within the continuous rating.

For the double Palo Verde – Devers outage, automatic load dropping is required to bring the Palo Verde-North Gila 500 kV line within its Emergency rating. Furthermore, operator actions should take place within half an hour to reduce the imports from Arizona into Southern California to decrease the line loading within the continuous rating. Lowering the imports may be possible in the early years, however as the load increases from year to year without any new internal generation additions (internal to Southern California) it may not be possible. In such a case, manual load dropping will be required to decrease the loading on SWPL to values within the continuous rating..

For the N-2, Miguel – Mission, Miguel – Sycamore the existing RAS, and subsequent automatic dropping of 200 MW does not alleviate the overloads. A new 230 kV line Miguel – Mission will alleviate the problems. All contingency analyses shown in the table for Alternative 6 were done including this line.

B. Transient Stability Analysis

Regional Southern California System

Transient stability studies were performed for the following specific contingencies using the 2004 Summer and Autumn peak load cases without SONGS:

- N-1 of Imperial Valley – Miguel 500 kV line;
- Over-lapping N-1 & G-1 of Imperial Valley-Miguel 500 kV line and Encina Generator #5
- N-1 of the Palo Verde – North Gila 500 kV Line;
- N-1 of the Palo Verde – Devers 500 kV Line;
- N-1 of Eldorado – McCullough 500 kV line;
- N-1 of Eldorado-Mohave 500 kV line;

- N-1 Devers-Valley 500 kV line;
- N-1 Lugo-Eldorado 500 kV;
- N-1 Lugo-Mohave 500 kV;
- N-1 Serrano-Valley 500 kV;
- Bi-polar Intermountain Power Project DC line;
- Bi-polar Pacific Intertie DC
- N-2 of the Ellis – Johanna and Ellis – Santiago 230 kV Lines;
- N-2 of the Lugo – Mira Loma #2 and #3 500 kV Lines;
- N-2 Lugo-Eldorado and Lugo-Mohave 500 kV;
- N-2 Midway-Vincent 500 kV;
- N-2 Serrano-Lugo & Serrano-Mira Loma 500 kV;
- N-2 Lugo-Vincent 500 kV;
- N-2 SONGS-Chino & SONGS-Serrano 230 kV;
- N-2 SONGS-Santiago 230 kV

In addition, studies were performed to assess system performance for the outage of new 500 kV lines associated with the respective transmission alternatives.

The only instability problem discovered within this study was under Autumn peak load conditions with the Arizona-California (East-of-the-Colorado-River(EOR)) power flow at it's maximum rating of 7550 MW. This reliability problem occurred with the absence of both SONGS units and without any of the transmission project alternatives represented. This instability is mitigated with the preferred transmission plan-of-service (Alternative 5) or through a 300 MW curtailment of the EOR power transfer. Additional discussion of this instability problem is included within the section on "Southern California Import Transmission (SCIT) Nomogram Analysis".

Local SCE System

There was no transient stability problem identified in local SCE system.

Local SDG&E System

There was no transient stability problem identified in local SDG&E system.

C. Post-transient Power Flow Analysis

Detailed Description of Voltage Stability Studies

The purpose of a post-transient analysis is to evaluate the extent to which the system voltage recovers and how much reactive power margin exists after a system outage without over-excitation of generating units. While excessive post-transient voltage drops are not permitted by the reliability criteria, voltage collapse is an even more severe phenomenon, which may occur on a system.

Voltage collapse may occur when a system becomes so constrained – and so VAR deficient – that a slow voltage decay over time may become unstoppable, such that loss of load and generation becomes inevitable. The loss of load could be complete on a system, and could spread to other systems, unless corrected.

The system was assessed in accordance with the WSCC Voltage Stability Criteria which requires that each system must meet the required reactive power margin for Performance Levels A-D. A set of “V-Q” curves, sometimes called “nose curves”, were developed to illustrate cases with both SONGS units off line. Explanation of these V-Q curves are given to interpret their relationship to having a stable voltage and adequate reactive power margin, meeting the requirements of the reliability criteria.

Post transient contingency studies were performed for numerous cases to determine if a potential for voltage collapse would exist for the cases with and without SONGS on line. The General Electric governor power flow routines were used for this study. The studies were conducted for the critical contingencies in the SDG&E and SCE systems. V-Q curves were developed for several critical buses to monitor the reactive power reserves. SDG&E and SCE voltages and reactive power output of generators were also monitored for the contingencies. The curves are located in Appendix C.

Regional Southern California System

The following outages were studied to investigate reactive power support requirements in the absence of SONGS.

- N-1 of Imperial Valley – Miguel 500 kV line;
- Over-lapping N-1 & G-1 of Imperial Valley-Miguel 500 kV line and Encina Generator #5
- N-1 of the Palo Verde – North Gila 500 kV Line;
- N-1 of the Palo Verde – Devers 500 kV Line;
- N-1 of Eldorado – McCullough 500 kV line;
- N-1 of Eldorado-Mohave 500 kV line;
- N-1 Devers-Valley 500 kV line;
- N-1 Lugo-Eldorado 500 kV;
- N-1 Lugo-Mohave 500 kV;
- N-1 Serrano-Valley 500 kV;
- Bi-polar Intermountain Power Project DC line;
- Bi-polar Pacific Intertie DC
- N-2 of the Ellis – Johanna and Ellis – Santiago 230 kV Lines;
- N-2 of the Lugo – Mira Loma #2 and #3 500 kV Lines;
- N-2 Lugo-Eldorado and Lugo-Mohave 500 kV;
- N-2 Midway-Vincent 500 kV;
- N-2 Serrano-Lugo & Serrano-Mira Loma 500 kV;

- N-2 Lugo-Vincent 500 kV;
- N-2 SONGS-Chino & SONGS-Serrano 230 kV;
- N-2 SONGS-Santiago 230 kV

In addition, studies were performed to assess system performance for the outage of new 500 kV lines associated with the prospective transmission alternatives.

The analysis showed that without the new reactive power support associated with each alternative, voltage collapse would occur due to insufficient reactive margin at critical locations within the Southern California Region. Reactive margin deficiencies were identified at Lugo, Mira Loma, Serrano, Valley, and Miguel buses. With the recommended additional reactive power support, sufficient reactive margin is maintained (see attached Diagram 3 where representative reactive margins are described).

Local SCE System

SONGS units are located right at the load centers: Orange County area and south-of-Lugo area. Therefore, the units also provide significant local reactive power support to keep adequate voltage level. Without such a center voltage support, the load centers are facing potential voltage collapse, which was identified as follows:

1. Voltage collapsed in SCE's Orange County area under the N-2 of Ellis-Johanna and Ellis-Santiago 230 kV lines due to the lack of reactive support in SONGS absence. The following mitigation plan was proposed to solve the voltage criteria violations:
 - a. Implement 450 MW automatic load rolling from Johanna/Santiago area to Ellis and Villa Park areas.
 - b. Add 160 MVAR shunt capacitors at Johanna 230 kV Sub (80 MVAR) and Santiago 230 kV Sub (80 MVAR).
2. Voltage collapsed in south-of-Lugo area under the N-2 of Lugo-Mira Loma 500 kV line outages. Total 450 MW load dropping was proposed in South of Lugo area to solve the voltage violation.

A significant amount of reactive support was also proposed in SONGS area and in the SCE 500 kV system in all alternatives to keep adequate system voltage and VAR margins. Of particular importance is the dynamic reactive support required in the SONGS area without SONGS. This reactive support (500-1000 Mvar) is indicative of importing SONGS replacement power from a great distance as compared to new merchant generation in the Los Angeles Basin as was shown in Phase 1 of the SONGS Operational Studies.

Local SDG&E System

There are no separate local SDG&E system post-transient concerns. The regional post-transient analysis addresses the regional concerns associated with the lost of mayor 500 kV lines in the absence of SONGS (including the SWPL into SDG&E's system).

DYNAMIC / STATIC REACTIVE POWER MIX

The V-Q studies determine the total reactive power requirements to maintain sufficient reactive power reserve as dictated by the WSCC Voltage Stability Criteria. Adequate dynamic voltage support is needed to ensure that immediately after a contingency there is enough reactive power in the system to maintain acceptable voltages and prevent overloading of generators during transient conditions. In the absence of adequate dynamic reactive power, a large portion of motor loads could be stalled due to very low transient voltages increasing the load demand and drawing currents several times their rated value, subsequently overloading the generators, and causing angular instability. Dynamic sources of reactive power (such as synchronous condensers, SVCs, Flexible AC Transmission System (FACTS) devices and generators) can immediately respond to a disturbance, maintain acceptable transient voltages, and prevent overloading of the generators reactive power capability.

The automatic and dynamic voltage control of the generators and synchronous condensers play an important role in a voltage collapse situation. If due to lack of sufficient dynamic reactive power the generator reactive power loading exceeds its capability, generator field protection will trip the voltage control from automatic to manual making the situation even worse and causing system-wide blackout. The July second and August 10, 1996 WSCC system-wide outages were related to tripping of many generators (particularly the McNary units) due to VAR overloading.

Another concern during a voltage collapse situation when voltages drop dangerously low, is the overload of transmission lines. The overload condition can cause line overload protection to operate and remove the line from the system. This can further aggravate the voltage collapse conditions, further reducing the already low voltages.

Although capacitors (which are static sources of reactive power) can provide voltage support under normal and contingency conditions, they will not be able to provide the much-needed reactive power as quickly as synchronous condensers. A time delay of several seconds would be required to switch the capacitors. This time delay is required to ensure that the capacitors are definitely needed and would not cause overvoltages in the system.

Section I, Subsection D of approved NERC Planning Standards on Voltage Support and Reactive Power states that:

"Sufficient reactive resources must be located throughout the electric systems, with a

balance between static and dynamic characteristics. Both static and dynamic reactive power resources are needed to supply the reactive power requirements of customer demands and the reactive power losses in the transmission and distribution systems, and provide adequate system voltage support and control. They are also necessary to avoid voltage instability and widespread system collapse in the event of certain contingencies. Transmission systems cannot perform their intended functions without an adequate reactive power supply.

Dynamic reactive power support and voltage control are essential during power system disturbances. Synchronous generators, synchronous condensers, and static VAR compensators (SVCs and STATCOMs) can provide dynamic support. Transmission line charging and series and shunt capacitors are also sources of reactive support, but are static sources.

Standards

S1. Reactive power resources, with a balance between static and dynamic characteristics, shall be planned and distributed throughout the interconnected transmission systems to ensure system performance as defined in Categories A, B, and C of Table I in the I.A. Standards on Transmission Systems.”

The potential problems with capacitors are as follows:

1. It is possible that in some systems not all capacitors can be energized and remain energized during non-peak load conditions (i.e., with all elements in service) due to high voltage problems.
2. Automatically switched capacitors need to be switched on during contingency conditions, but they may be too slow and not in the right amount to prevent a voltage collapse.
3. To maintain voltage stability, an excessive number of capacitor switching events may occur which is undesirable and unacceptable and could lead to voltage collapse.
4. The timing requirement of capacitor switching actions may vary greatly depending on operating conditions. Slower switching actions may be needed due to normal interactions between changes in load, transformer load tap changers and generator reactive power output variations. Fast switching actions may be required during transient conditions immediately after a contingency, which are too rapid for operator intervention, or several minutes after a contingency. Such wide ranges of timing requirements and coordination makes it difficult to rely solely on shunt

capacitors.

Another problem associated with switched capacitors is that they may not be switched as expected because the set point voltage may not be reached. For example; assume that the capacitors are set to switch on if the voltage goes below 0.92 P.U., and suppose that during a disturbance voltages drop to just slightly above 0.92 P.U., perhaps 0.925 P.U. In this case the voltages are still too low but the capacitors would not be switched on. Also, due to the oscillatory nature of the voltage decay during transient conditions, the capacitors may be switched on and off several times. This is not desirable since the number of times that a capacitor may be switched on and off is limited by the number of times that circuit breakers could be switched on and off due to the limitation on the duty cycle caused by interruption of high capacitive current.

Capacitors can make the system more vulnerable to voltage collapse if relied upon in excessive amounts. Because capacitors are static and are in shunt connection to ground, their reactive power output reduces by the square of the voltage. As the voltage decays, less reactive power is available when the reactive power support is needed most. Also, as the system load increases, adding more shunt capacitors to compensate for increase in load will eventually drive the voltage collapse point closer to the operating voltages.

The approved WSCC Voltage Stability Criteria (see WSCC report entitled "Voltage Stability Criteria, Undervoltage Load Shedding Strategy, and Reactive Power Reserve Monitoring Methodology", dated May 1998) state that:

"Proper mixture of static and dynamic reactive power support based on the methodology described in this report should be provided."

This report further recommends a V-Q method using a short-term load model to determine the static and dynamic reactive power requirements. Therefore, determination of the proper mix of dynamic and static resources is very important. For this study the following short-term load model was used:

Real part: 50% constant MVA and 50% constant current

Reactive part: 100% constant impedance.

Appendix C contains the V-Q curves for the immediate post-disturbance and steady state conditions for the preferred transmission project (Alternative 5). The V-Q curves demonstrate that the minimum reactive power margins of 150 Mvar and 250 Mvar in the SDG&E and SCE systems respectively.

SENSITIVITY ANALYSIS

Base on suggestions during the course of this study, the sensitivity of 2000 MW of proposed new merchant generation near Palo Verde Substation was analyzed for the preferred transmission plan-of-service.

Regional Southern California System

Alternative 6 is Alternative 5, but includes the assumption of 2000 MW of proposed new merchant generation near Palo Verde Substation. This assumption requires additional load dropping in the SCE Area and reactive voltage support. It can be assumed that the difference in facilities between Alternatives is associated with the proposed new merchant generation near Palo Verde and not directly with the absence of SONGS.

A sensitivity of the impact of load growth between the 2004 (when SONGS could be absence) and 2008 (when one of the transmission alternatives could be operational) was conducted. This sensitivity demonstrated that the preferred transmission project (Alternative 5) could mitigate reliability problems in 2008 associated with the absence of SONGS. Associated with this same time-frame is not only the continued support of 3600 MW SDG&E import capability established in 2004 (Valley-Rainbow 500 kV Project), but also transmission reinforcement projects between 2004 and 2008 that will be developed by SCE and SDG&E within their annual transmission assessments. Therefore, it appears that Alternative 3 (both a second Palo Verde-Devers 500 kV line and a second 500 kV SWPL are needed in 2008 to account for reliability problems with and without SONGS. For example, if a second SWPL 500 kV line becomes the next step in increasing SDG&E import capability beyond the Valley-Rainbow Project, a double-circuit outage of both SWPL lines will cause the existing Palo Verde-Devers 500 kV line to overload. This would require a significant reduction in SDG&E imports and associated load dropping without another 500 kV line between Palo Verde and Devers (Alternative 5 - the preferred transmission project for the absence of SONGS). These 2008 transmission requirements could be mitigated in whole or in part by the development of new merchant generation depending on the amount and location of the new generation.

Local SCE System

The following mitigation plan was proposed to solve thermal and voltage violations identified in the sensitivity study:

1. Palo Verde-Devers 500 kV line #2 -- 238 miles
 2. Devers 500/230 kV Bank #2
 3. Upgrade existing 2B-1033 conductor on Del Amo-Ellis 230 kV line to 2B-1590
 4. Upgrade existing 2B-1033 conductor on Barre-Ellis 230 kV line to 3B-1590
-
- a. Palo Verde-Devers 500 kV line #2 -- 238 miles
 - b. Devers 500/230 kV Bank #2
 - c. Upgrade existing 2B-1033 conductor on

- Del Amo-Ellis 230 kV line to 2B-1590
- d. Upgrade existing 2B-1033 conductor on Barre-Ellis 230 kV line to 3B-1590
 - e. 250-550 MVAR dynamic VAR support device (STATCOM) in SONGS area based on future system condition
 - f. 450 MW load rolling in Johanna/Santiago area with 250 MW temporary load drop-and-pick about 30-40 minutes
 - g. 300 MVAR shunt caps. at Lugo 230 kV Sub
300 MVAR shunt caps. at Lugo 500 kV Sub
200 MVAR shunt caps. at Mira Loma 500 kV Sub
 - h. 100 MVAR switchable shunt caps. at Valley 500 kV Sub
100 MVAR switchable shunt caps. at Serrano 500 kV Sub
 - i. 700 MW load dropping scheme in SCE eastern system

Local SDG&E System

The analysis of all six transmission alternatives analysis associated with the local SDG&E transmission system is included above in the section titled "Power Flow Analysis".

EAST- OF-THE-RIVER (EOR) ANALYSIS

A Heavy Autumn base case starting with 7550 MW on the EOR path was used for the maximum non-simultaneous EOR analyses. The purpose of this analysis is to examine the impact of shutting down SONGS at the maximum non-simultaneous rating of the EOR. Detailed path rating studies will be needed at such a time as the SONGS units are shut down.

Without any transmission reinforcement in the absence of SONGS, a Palo Verde – N. Gila 500 kV 3-phase fault and subsequent outage results in instability between Southern California and the Southwest. This was the only outage of major 500 kV lines within Southern California and between Southern California and the Southwest that resulted in instability. Curtailing the EOR transfer to 6800 MW during peak load periods can mitigate this instability. This curtailment includes consideration of the 7% margin associated with the EOR maximum rating. Historically, the EOR maximum transfer has been approximately 6000 MW. With the preferred transmission plan-of-service (Alternative 1), no instability results from this outage and no reduction in EOR transfer is required.

SOUTHERN CALIFORNIA IMPORT TRANSMISSION (SCIT) NOMOGRAM ANALYSIS

The only instability problem discovered within this study was under Autumn peak load conditions with the Arizona-California (East-of-the-Colorado-River(EOR)) power flow at it's maximum rating of 7550 MW. This reliability problem occurred with the absence of both SONGS units and without any of the transmission project alternatives represented. This instability is mitigated with the preferred transmission plan-of-service (Alternative 5) or through a 300 MW curtailment of the EOR power transfer. The present SCIT Nomogram (see attached Diagram 2) is limited by the outage of both SONGS generating units. In the absence of these units, it appears that the SCIT Nomogram could be limited by instability following an outage of the Palo Verde – North Gila 500 kV section of the 500 kV SWPL. This would be significantly less limiting than the present nomogram. Also, the EOR transfer capability could be increased due to the absence of SONGS preferred transmission project and therefore also increase the boundaries of the SCIT Nomogram.

Alternative 5 – Diagram 1

New 500 kV from Devers - Palo Verde & Rainbow - Miguel

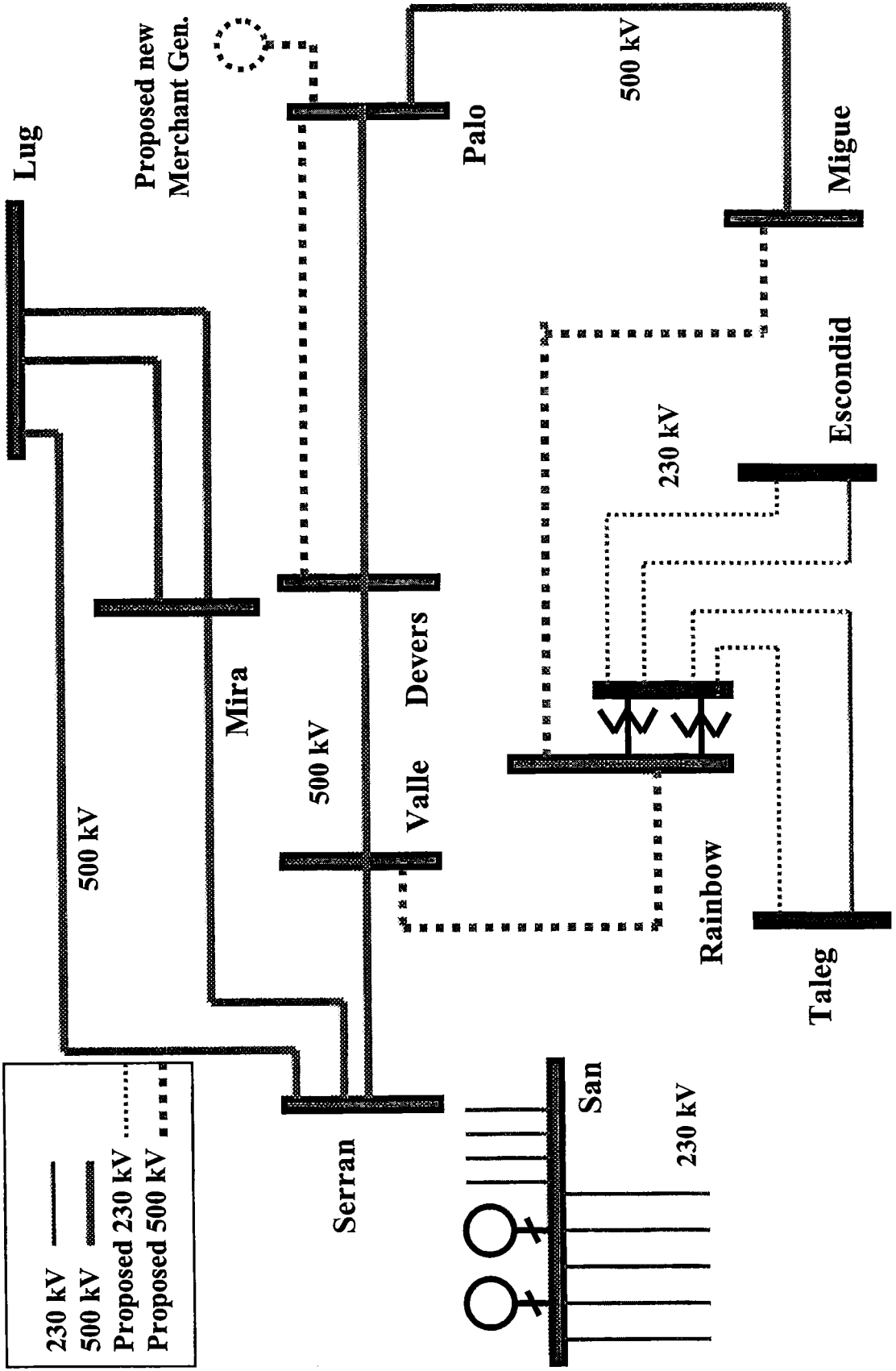


Diagram 2

East-of-River/Southern California Import Transmission Nomogram

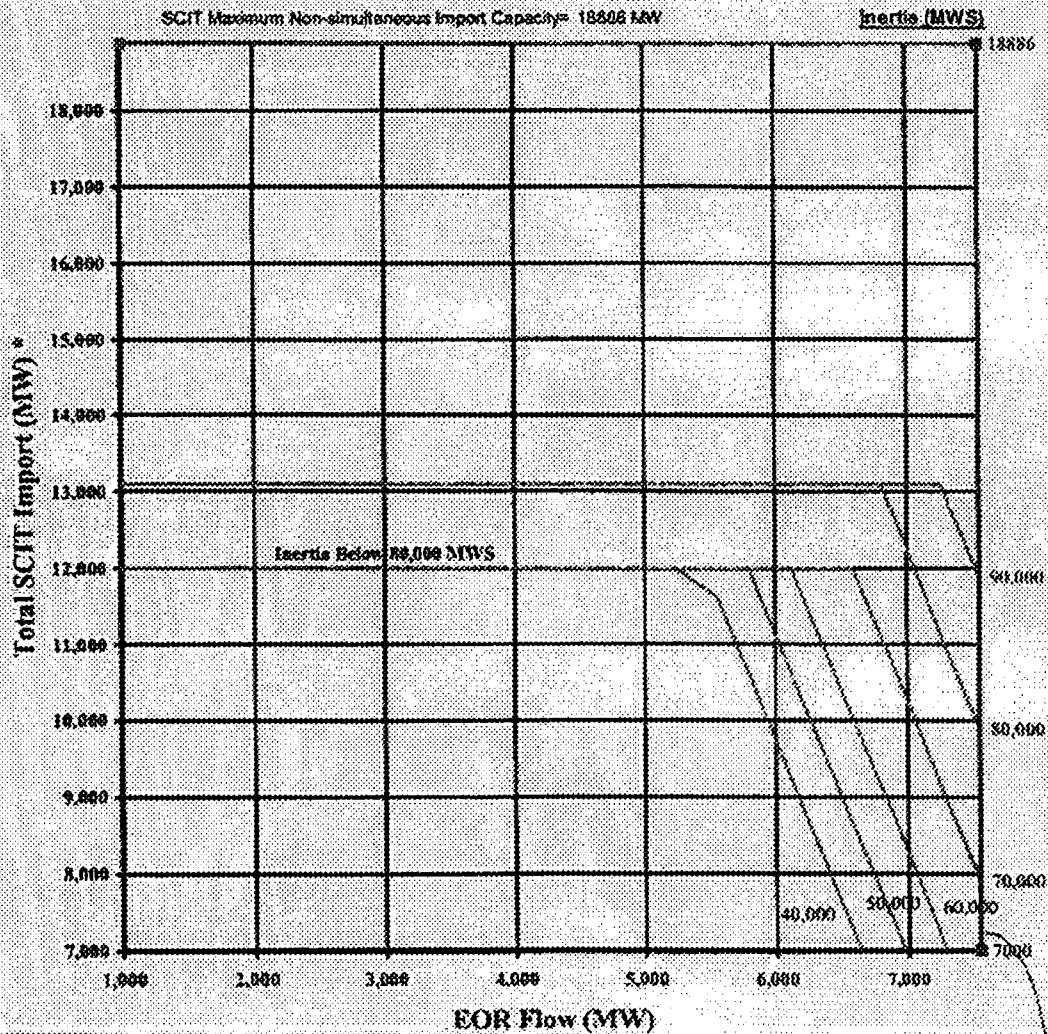


Based upon:
 Three Palo Verde units
 All transmission facilities in service

Reduction in SCIT Import Limit
 For Palo Verde Status:

3 units on Line	0 MW
2 units on Line	200 MW
1 unit on Line	400 MW
0 unit on Line	700 MW

500 MW Operating Margin Taken Normal to the Limits



Revised 4/21/99
 CAISO

EOR Maximum Non-simultaneous Rating = 7550 MW

*Sum of flows on Midway-Vincent, PDCI, IPP, North of Lugo, and WOR.

Diagram 3

Representative Reactive Margin Plot for Alternatives evaluated

Meets reactive margin criteria of

250 Mvar Margin for SCE

150 Mvar Margin for SDG&E

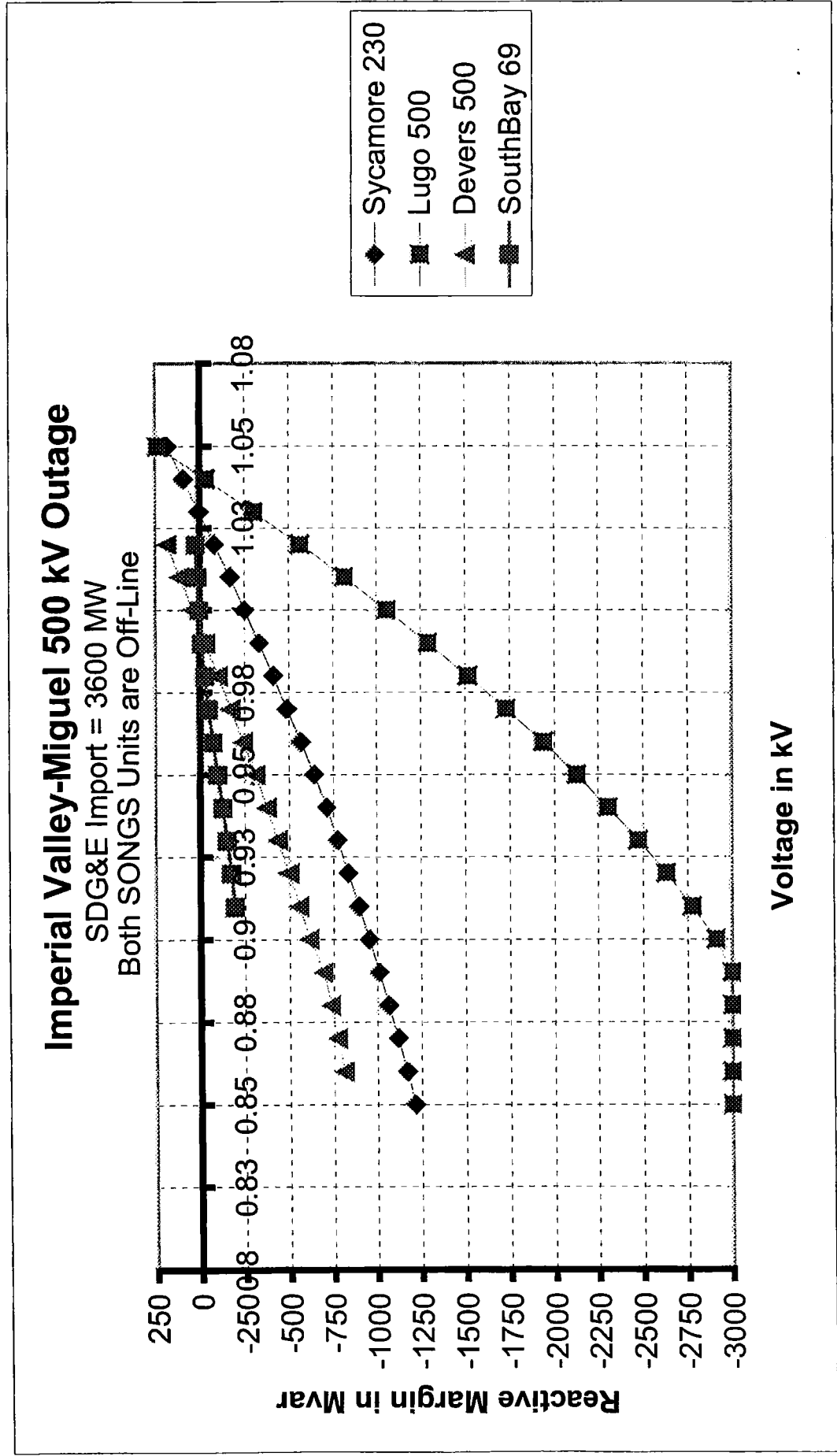


Table 1

	N-1 Outages					N-2 Outages		
	PV - NG	IV - MG - TJ	VL - RB	PV - DV	Both PV - DV or Both PV - NG	MG - MS MG - SY		
Alternative 1 2 nd PV-DV- VL	No concern	No concern	PV-NG loads above 1400 A but below 1/2 hr Emerg. Rating => Import reduction or communication link upgrade required	PV-NG loads above 1400 A but below 1/2 hr Emerg. Rating => Import reduction or communication link upgrade required	SWPL loads above 2000 A => Automatic load dropping and Import reduction or communication link upgrade required	RAS and 200 MW load dropping did not alleviate 138 kV overloads => 2nd MG-MS line needed		
Alternative 2 2 nd SWPL	Remaining PV-NG loads above 1400 A but below 1/2 hr Emerg. Rating => Import reduction or communication link upgrade required	No concern	No concern	No concern	PV-DV loads above 1/2 hr Emerg. Rating => Automatic load dropping and Import reduction or communication link upgrade required	Supports the need seen in N-0 for 2nd MG-MS line		
Alternative 4 Mid-Vin-Ser	PV-DV loads above 1900 A but below 1/2 hr Emerg. Rating => Import reduction required	PV-DV loads above 1900 A but below 1/2 hr Emerg. Rating => Import reduction required	PV-NG loads above 1400 A but below 1/2 hr Emerg. Rating => Import reduction or communication link upgrade required	PV-NG loads above 1400 A but below 1/2 hr Emerg. Rating => Automatic load dropping and Import reduction or communication link upgrade required	N/A	RAS and 200 MW load dropping did not alleviate 138 kV overloads => 2nd MG-MS line needed		
Alternative 5 2 nd PV-DV- VL + RB-MG	No concern	No concern	PV-NG loads above 1400 A but below 1/2 hr Emerg. Rating => Import reduction or communication link upgrade required	PV-NG loads above 1400 A but below 1/2 hr Emerg. Rating => Import reduction or communication link upgrade required	SWPL loads above 2000 A => Automatic load dropping and Import reduction or communication link upgrade required	RAS and 200 MW load dropping did not alleviate 138 kV overloads => 2nd MG-MS line needed		
Alternative 6 Alternative 5 + 2000 MW @ PV	No concern	No concern	PV-NG loads above 1400 A but below 1/2 hr Emerg. Rating => Import reduction or communication link upgrade required	PV-NG loads above 1400 A but below 1/2 hr Emerg. Rating => Import reduction or communication link upgrade required	SWPL loads above 2000 A => Automatic load dropping and Import reduction or communication link upgrade required	RAS and 200 MW load dropping did not alleviate 138 kV overloads => 2nd MG-MS line needed		

APPENDIX A: Power Flow Case Summaries and Diagrams

Appendix information available in hard copy upon request.

APPENDIX B: Transient Stability Case Summaries and Plots

Appendix information available in hard copy upon request.

APPENDIX C: Post-transient Case Summaries and Nose Curves

Appendix information available in hard copy upon request