

Use of Air Dispersion Modeling to Estimate the Time Potentially Available for Emergency Response Action Needed to Protect Public Safety From Chemical Releases

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ABSTACT

The Release Incorporating Terrain Effects (RITE) Emergency Response Software model was used to determine the amount of time potentially available for emergency response personnel to notify the public and convey instructions on the proper actions that should be taken in the event of a chemical release. The release that was modeled involved chemicals found on occasion in the major rail yard in Cincinnati, Ohio adjacent to Interstate 75. Three chemicals, hydrogen cyanide, chlorine, and ammonia, were used to simulate an accidental release. Meteorological conditions were input to the model to represent a variety of scenarios with each of the three chemicals. The plume travel distance was predicted for each of the chemicals at three concentrations related to occupational exposure, Permissible Exposure Limit (PEL), Threshold Limit Value (TLV), and Immediately Dangerous to Life or Health (IDLH). The distance the plume traveled, used in conjunction with the time frame in which it moved, was used to determine the amount of time available to notify the public.

Wind speed did effect the dispersion of the chemicals. Wind speeds below 18 mph, which represents the 95th percentile 24-hour average wind speed, result in the plume covering a greater area, thus exposing larger numbers of people to possibly hazardous conditions. Higher wind speeds, those above 18mph, tend to limit the development and area of the plume at the specified points and result in the plume dissipating at a faster rate. This is due to the increased mixing of the air and the dilution of the chemical at a much higher rate.

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1. Purpose

The purpose of this thesis is to estimate the potential amount of time available to emergency response personnel to notify the public and convey instructions on the proper actions that should be taken in the event of a chemical release. The Release Incorporating Terrain Effects (RITE) Emergency Response Software model was used to predict the plume travel of three chemicals, hydrogen cyanide, chlorine, and ammonia, in a simulation of accidental releases. A major rail yard in Cincinnati, Ohio was used as the site of the release. Weather variables were input to the model to determine the effects of various weather conditions on the predicted travel of the chemical plume. The distance of the plume travel and the time frame of the travel were used to determine the maximum amount of time potentially available to implement procedures needed to protect public safety.

Specific sites along the path of the plumes were inspected to determine the amount of time for the specified plume to reach these areas. The locations examined include: 1) where the plume is predicted to cross the rail yard boundary, at which point concerns shift from that for worker safety to public safety and potentially to others working at off-site locations, 2) where the plume crosses I-75, 3) where the plume enters the community of Clifton, and 4) the point where the plume is predicted to cross I-75 a second time, north of Clifton.

2. Background

2.1 Introduction

Air dispersion modeling is being developed for use in many different applications that directly effect health. Specifically, development and implementation are underway for emergency response situations. Air dispersion modeling can be used with real-time release and weather data to predict plume movement to facilitate the activities of emergency response personnel.¹⁻⁴ The most effective of these models also include topographical information of the area in which the release/event occurs and the areas where the plume will travel. With effective use, these models can increase the efficiency of emergency response operations by advance planning using realistic scenarios of chemical dispersion.

The uncertainties and limits of the computer models⁵ are being tested.^{6, 7} Real world, full-scale tests are being conducted using tracer gases and air-sampling batteries to test the efficacy of computer based dispersion models. These experiments are working to evaluate the limits of using air dispersion models to predict real-life events for emergency situations.

However, air dispersion models to predict the amount of time potentially available to emergency response personnel, especially the decision-making parties, to communicate warnings and instructions to the public after an event has started but before harmful atmospheres reach downwind populations has not been performed.

2.2 Emergency Response Procedures

In order to protect public safety in the event of an emergency, such as from an accident involving the release of hazardous chemicals, emergency response personnel must inform the public of what protective actions must be taken. Evacuation and in-place sheltering, often referred to as “shelter-in-place”, are the two leading strategies in protecting the public from chemical plumes.

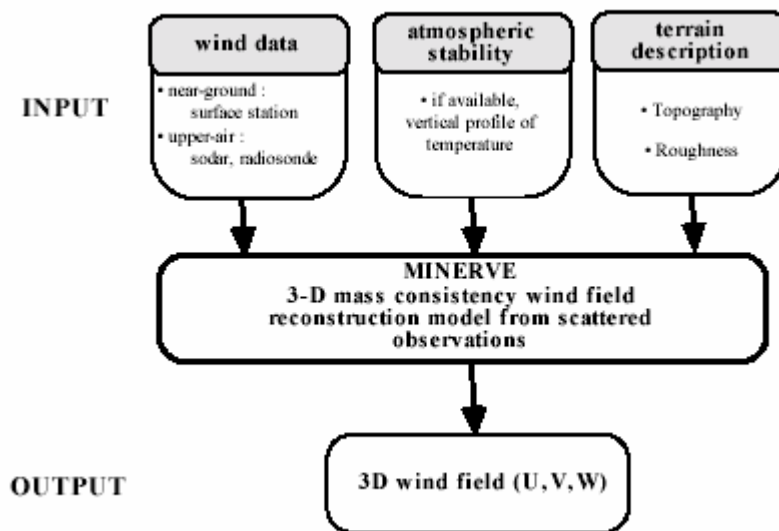
“Shelter-in-place” as defined by the Centers for Disease Control and Prevention, CDC, is “to make a shelter out of the place you are in. It is a way for you to make the building as safe as possible to protect yourself until help arrives.”⁸ The difference in the two strategies is that evacuation, if completed before the arrival of the plume, protects the public by avoiding exposure to the chemical, while “shelter-in-place” protects the public by protecting people from the exposure using the housing envelope as a barrier. If evacuation can be completed before the arrival of the plume then it may sometimes be a better alternative than in-place sheltering, due to the elimination of the exposure. However, evacuation has its own risks, particularly in moving those in poor health and otherwise incapacitated; and evacuation is rarely complete. Evacuation also results in the need for special measures for the protection of the property that has been vacated. In the event of a plume of low concentration, short duration or rapid movement, “sheltering-in-place” comes to the forefront as a superior option. It is the most viable option in scenarios in which there is little or no time to implement an evacuation.⁹

In order to protect the public in the event of an accidental chemical release, several factors must be considered. First, the decision to act must be made and the system for issuing the warning must be in place. Second, the public must understand the recommended response actions that they should take in response to the warning. Lastly, the time necessary to accomplish the required action must be available. Of these factors, receiving the warning and then the public’s response to the warning are the aspects that delay the execution of the protective action. The response of the public is the hardest factor to influence, yet it can be improved by providing the public with the information needed to ascertain that the response required by emergency personnel is the proper action to be taken. The other way to improve the effectiveness of emergency response actions is to increase the amount of time available to accomplish the action, which can be accomplished with early warning devices, faster communication time and increased preparedness on the part of the emergency response personnel.⁹

2.3 The RITE Emergency Response Software Model

The Release Incorporating Terrain Effects (RITE) Emergency Response model is designed to allow emergency response personnel and others to predict the dispersion of chemical plumes. The RITE model is designed to integrate topographical data from specific release areas, with three dimension (3D) chemical dispersion models, and 3D visualization tools to predict and display dispersion models. This incorporation allows the model to predict the movement and dispersion of a plume as it is affected by weather parameters, including wind speed, air and ground temperature, structures, atmospheric stability, topography, and surface roughness, chemical release parameters, which include molecular weight, boiling point, release temperature, location, rate, period, and action levels, as well as topographical features.¹⁰

The 3D wind field and chemical dispersion models, called MINERVE, were developed by ARIA Technologies. The purpose of MINERVE is to be able to predict the local and regional wind, which requires the analysis of near ground wind speed, topography and terrain roughness, atmospheric turbulence and weather variables, i.e. temperature. The program is intended to predict the behavior of wind fields. This incorporates the effects of weather conditions and atmospheric stability and topographical features. The variables input to MINERVE can be user-defined, actual measured weather conditions or forecasted weather conditions. The data output by the MINERVE program is a 3D wind field. The methodology for Input/Output is shown in Figure 1. The 3D wind field is purely meteorological, and is independent of any dispersion model.¹¹ It is this 3D wind field data that the RITE model combines with 3D dispersion models and 3D visualization capabilities to produce the 3D plume dispersion models.



(Adapted from ARIA Technologies (1995), "Theoretical Description of the Objective Analysis System MINERVE")

Figure 1 – Methodology of MINERVE Program, which leads to the production of a 3D wind field, using U, V, and W as the axes

2.31 Inputs Required by the RITE Model

The RITE model requires the user to input specific information about the release to be modeled to accurately predict the behavior of the plume. The information that is required for input is as follows:

- **Date and Time.** The model start date and time to the minute is required.
- **Meteorological Information.** Weather data is entered in this section of the program. The required parameters include a) air temperature, b) ground temperature, c) surface roughness length (value that relates the frontal area of an object in the wind path to the width of ground that it occupies), d) Pasquill-Gifford stability class, e) wind speed, and f) wind direction.
- **Release Information.** Required release parameters are a) substance, b) molecular weight, c) boiling point, d) release temperature, e) longitude, f) latitude, g) above-ground-level height, h) release period and l) release rate.

- **Alert Levels.** Alert levels can be set at the user's discretion, to any value of interest in order to suit whatever purpose is needed. Three levels can be set, which are designated by the colors blue, yellow, and red. The plume dispersion at the alert levels is predicted by the program and displayed as a running 3-dimensional model.
- **Computational Options.** The model can be customized using Dense Gas Simulation and Time Integrated Dose options. The model duration is also variable at this point.

3. Experimental Design and Methods

3.1 Hypothesis

Time available for communication of emergency information to the public by emergency response personnel varies with weather conditions due to increased travel of the plume during conditions of high wind and temperature. Based on computer modeling and real-world weather data the amount of time available to emergency response personnel to communicate information to the public was predicted to evaluate if the distance the plume travels changes as wind speed and temperature changes. In some cases the amount of time available may be too short for efficient responses to occur.

Weather data is archived by the National Climatic Data Center.¹² Weather records for Cincinnati, Ohio, based at the Cincinnati/Northern Kentucky International Airport, were obtained for the last six years. The weather records were reviewed and the selected representative data were extracted. Three temperature variables were utilized: 13°F represents the fifth percentile (5%) value for absolute temperatures, 55°F represents the median temperature value, and 95°F represents the ninety-fifth percentile (95%) value for the absolute temperatures recorded in Cincinnati over the last six years. For the wind speed variable five values were used: 3mph which is the fifth percentile (5%) value for daily average wind speed, 8mph represents the median value, 18mph represents the ninety-fifth percentile (95%) value for daily average wind speed, 48mph is the

maximum two-minute gust sustained in Cincinnati, and 61mph is the maximum five-second gust achieved in Cincinnati in the last six years. The wind direction was maintained at 210° for all runs and represents the median and mode for this variable. The meteorological conditions used in the runs that were conducted in the RITE model can be seen in Table 1 for hydrogen cyanide, chlorine, and ammonia.

TABLE 1 – Runs Completed for Hydrogen cyanide, Chlorine, and Ammonia in Rite Model to Predict Plume Dispersion

Run No.	Air Temperature	Wind Direction	Wind Speed
1	13°F	210°	3mph
2	13°F	210°	8mph
3	13°F	210°	18mph
4	13°F	210°	48mph
5	13°F	210°	61mph
6	55°F	210°	3mph
7	55°F	210°	8mph
8	55°F	210°	18mph
9	55°F	210°	48mph
10	55°F	210°	61mph
11	95°F	210°	3mph
12	95°F	210°	8mph
13	95°F	210°	18mph
14	95°F	210°	48mph
15	95°F	210°	61mph

The release parameters were standardized for all model runs. The release coordinates used were 39.1330° Latitude, -84.54279 ° Longitude, shown in Figure 2. 100 kilograms per minute was used as the rate of release for all three chemicals modeled, with release duration of one hour. The model duration was set at two hours, which included one hour of release, then one-hour post release to predict the dispersion of the plume. Three chemical concentrations were input to the model for each chemical to predict the plume: the American Conference of Government Industrial Hygienist (ACGIH) Threshold Limit Value (TLV)¹³, the Occupational Safety and Health Administration (OSHA) Permissible

Exposure Limit (PEL)¹⁴, and the National Institute of Occupational Safety and Health (NIOSH) Immediately Dangerous to Life or Health (IDLH)¹⁵ value. These values were chosen as representative values for the protection of public safety. These values are well recognized and created to provide a level of protection for working populations exposed to chemicals at the specified concentrations. It is because these values were devised for the working population that they may not be appropriate for the protection of public health. For hydrogen cyanide (HCN), the concentrations input to the model were the TLV at 4.7 parts per million (ppm), the PEL of 10ppm, and IDLH value of 50ppm. For chlorine (Cl₂), the values used were the TLV .5ppm, the PEL 1ppm, and the IDLH 10ppm. The values for ammonia (NH₃) were the TLV 25ppm, PEL 50ppm, and IDLH 300ppm.

Specific sites, shown in Figure 2, were inspected to determine the amount of time for the plume to reach these areas. The points inspected include where the plume is predicted to cross the rail yard boundary, at which point concerns for worker safety give way to public safety, where the plume crosses I-75, where the plume enters the community of Clifton, and lastly the point where the plume is predicted to cross I-75 near Clifton Avenue, north of Clifton.

3.2 Scenarios

The rail yard in Cincinnati, Ohio, located in western Cincinnati, adjacent to Interstate 75, bordered on the north by Hopple Street Viaduct and on the south by the Western Hills Viaduct, was used as the release point for use in the RITE model. Three different chemicals, which are hazardous to human health and safety, were used: hydrogen cyanide, chlorine, and ammonia were selected to simulate the accidental release of hazardous chemicals. Chlorine and ammonia were selected to represent potentially hazardous chemicals that are commonly transported in and around Cincinnati, while hydrogen cyanide was selected as a type of worst-case scenario release.

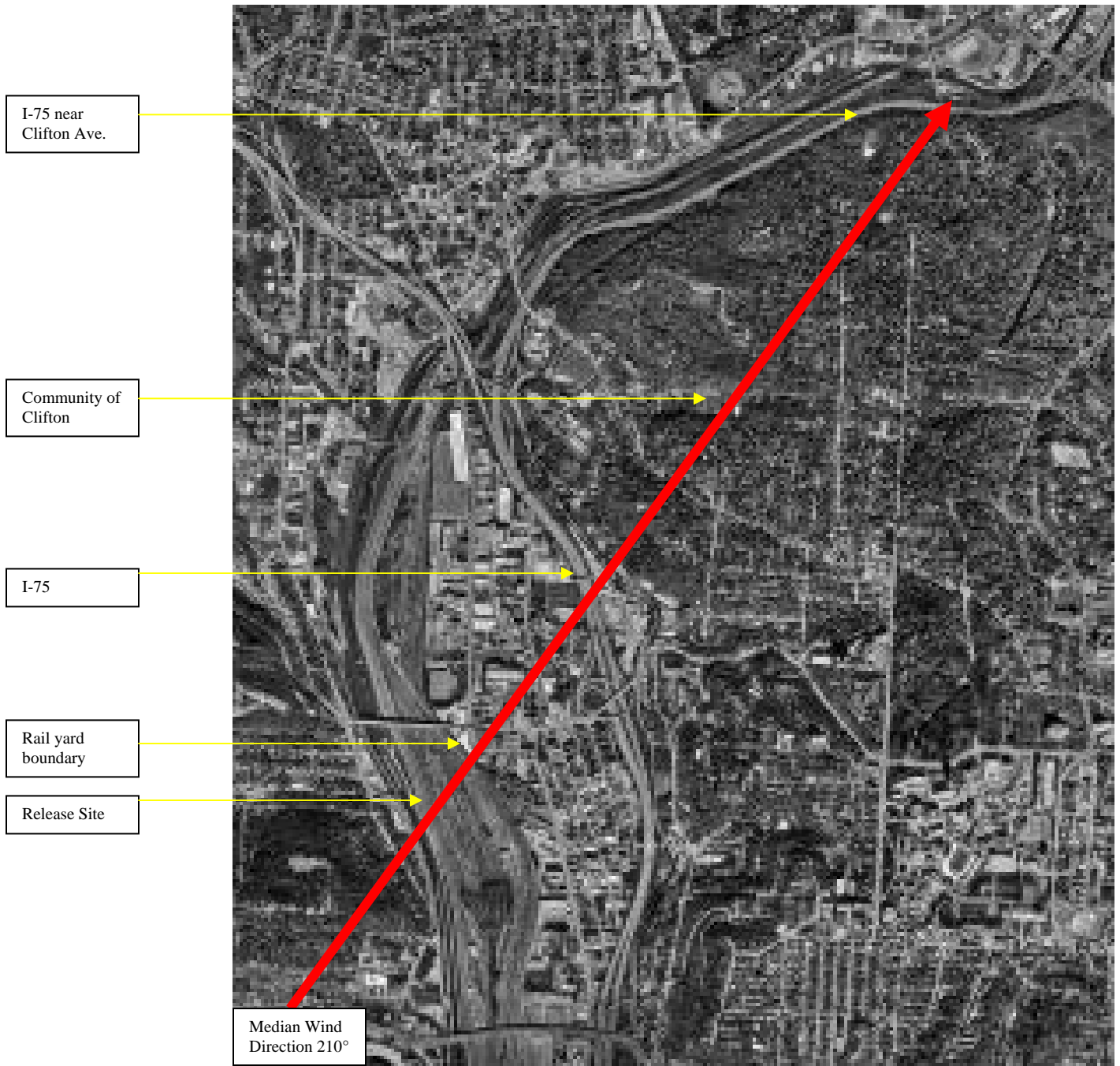


Figure 2 – Aerial Photograph of Area of Interest in Cincinnati, Ohio.¹⁶

4. Results

Fifteen models were run on each of the three chemicals, hydrogen cyanide, chlorine, and ammonia. The distance of plume travel was predicted, and displayed at three concentrations: the TLV, PEL, and IDLH. For example, the area affected by the plume in 10 minutes at TLV concentrations ranges from just outside the rail yard boundary, to crossing I-75 north of Clifton, while the IDLH concentrations do not reach the community of Clifton in that amount of time. The time taken for the plume to reach the areas of interest is displayed in the following tables: Table 2 displays the time in minutes for the hydrogen cyanide plume to reach points of interest at the TLV concentrations, Table 3 displays the time required for the chlorine plume to reach the specified areas at TLV levels, Table 4 shows the time required for the ammonia plume to spread at TLV concentrations, Table 5 shows the time of plume travel for HCN at PEL concentrations, Table 6 shows the time of plume travel for Cl₂ at PEL concentrations, Table 7 shows the time of plume travel for NH₃ at PEL levels, Table 8 displays the travel time of the HCN plume at the IDLH concentration, Table 9 displays the travel time of the Cl₂ plume at the IDLH concentration, and Table 10 displays the travel time of the NH₃ plume at the IDLH concentration.

The output from the RITE program is a 3D model of the predicted plume. The image produced using the 3D visualization capabilities were used to measure the distance traveled by the plume, at ground level, using the longitudinal and latitudinal coordinates of the leading edge of the plume for a given chemical concentration.

Figure 3 shows an example of the product produced by the RITE model. This image is the predicted plume dispersion of the release of hydrogen cyanide with 55°F air temperatures and an 8 mph wind. This image is the predicted location of the plume twenty minutes after release. This image shows that the plume has nearly reached I-75 near Clifton Ave, having already moved into the Clifton neighborhood at TLV concentrations, shown as blue. The plume, at PEL concentrations, shown as yellow, has reached I-75 and is nearing Clifton, while

the IDLH concentration, shown in red, is beyond the rail yard boundary and has reached the interstate.

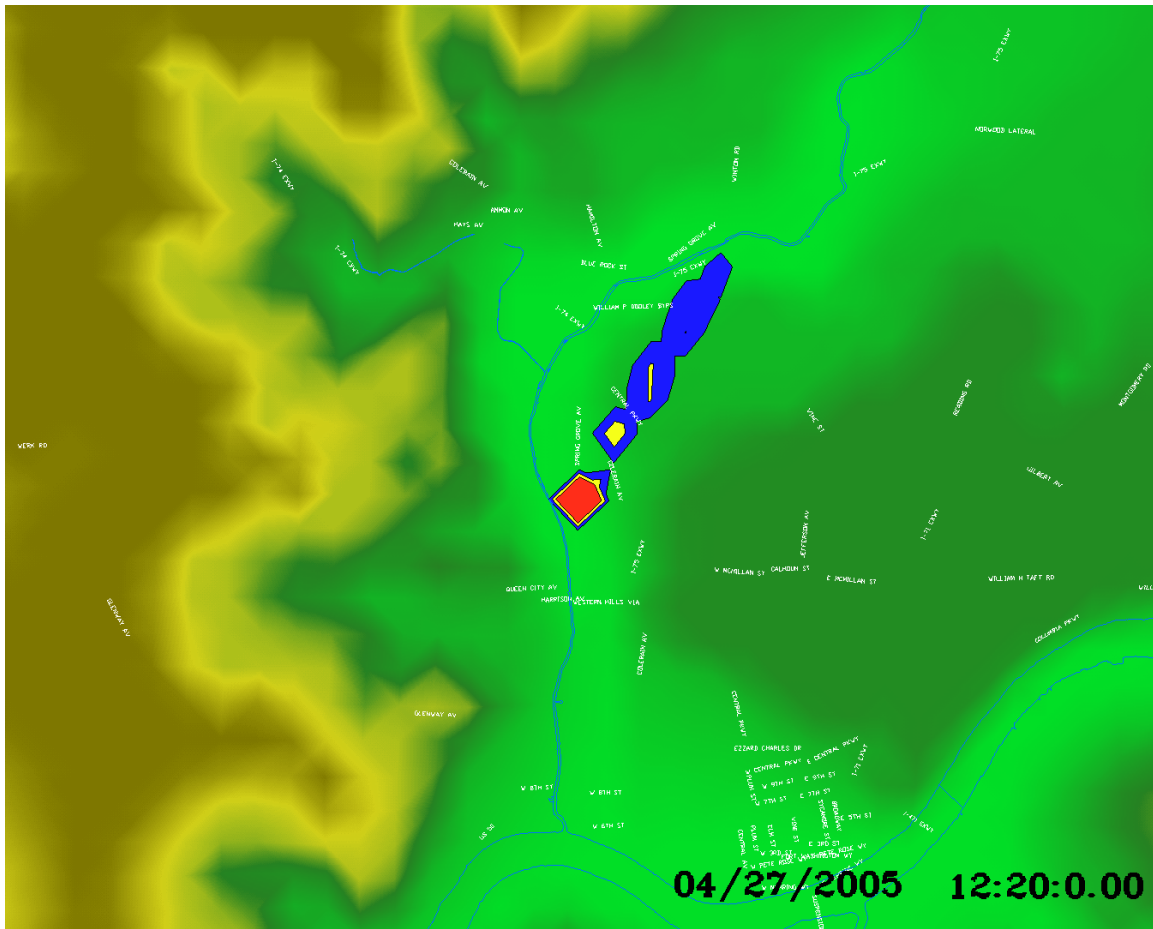


Figure 3 – RITE prediction of plume location twenty minutes after release of hydrogen cyanide at 55°F with 8 mph winds. Red represents the plume at IDLH concentrations, yellow represents PEL concentrations, and blue represents TLV concentrations.

4.1 Distance of Plume Travel at TLV Concentrations

The 3-mile per hour wind speed, used in runs 1, 6 and 11, as well as the 13 mph wind, used in runs 2, 7, and 12, produce the greatest distance of dispersion (Table 2). The 13 mph wind results in the shortest time for the plume to reach the areas of interest. Table 3 shows that under these conditions, with the release of chlorine, the 18-mile per hour wind, used in runs 3, 8 and 13, produces the greatest distance of dispersion. This scenario allows for the shortest amount of potential reaction time to the releases. The plume reaches all of the areas of interest in the initial 10 minutes of the release. Table 4 shows that ammonia will only reach the furthest area of interest with 3 mph winds.

TABLE 2 –Time in Minutes to Point of Interest for Hydrogen cyanide at TLV Concentration = 4.7ppm (wind direction = 210°)

Run Number and Conditions	Time for Plume to Reach (minutes)			
	Rail Yard Boundary	I-75	Clifton	I-75 near Clifton Ave.
#1 13°F, 3 mph	10	20	30	60
#2 13°F, 8 mph	10	10	10	20
#3 13°F, 18 mph	10	10	10	*
#4 13°F, 48 mph	10	10	*	*
#5 13°F, 61 mph	10	10	*	*
#6 55°F, 3 mph	10	20	20	60
#7 55°F, 8 mph	10	10	10	30
#8 55°F, 18 mph	10	10	10	*
#9 55°F, 48 mph	10	10	*	*
#10 55°F, 61 mph	10	10	*	*
#11 95°F, 3 mph	10	20	30	60
#12 95°F, 8 mph	10	10	10	30
#13 95°F, 18 mph	10	10	10	*
#14 95°F, 48 mph	10	10	*	*
#15 95°F, 61 mph	10	10	*	*

(* Does not reach this point at specified concentration)

**TABLE 3 –Time in Minutes to Point of Interest for Chlorine at TLV
Concentration= 0.5ppm (wind direction = 210°)**

Run Number and Conditions	Time for Plume to Reach (minutes)			
	Rail Yard Boundary	I-75	Clifton	I-75 near Clifton Ave.
#1 13°F, 3 mph	10	20	30	60
#2 13°F, 8 mph	10	10	10	20
#3 13°F, 18 mph	10	10	10	10
#4 13°F, 48 mph	10	10	10	*
#5 13°F, 61 mph	10	10	10	*
#6 55°F, 3 mph	10	20	30	50
#7 55°F, 8 mph	10	10	20	20
#8 55°F, 18 mph	10	10	10	10
#9 55°F, 48 mph	10	10	10	*
#10 55°F, 61 mph	10	10	10	*
#11 95°F, 3 mph	10	20	30	50
#12 95°F, 8 mph	10	10	10	20
#13 95°F, 18 mph	10	10	10	10
#14 95°F, 48 mph	10	10	10	*
#15 95°F, 61 mph	10	10	10	*

(* Does not reach this point at specified concentration)

**TABLE 4 –Time in Minutes to Point of Interest for Ammonia at TLV
Concentration = 25ppm (wind direction = 210°)**

Run Number and Conditions	Time for Plume to Reach (minutes)			
	Rail Yard Boundary	I-75	Clifton	I-75 near Clifton Ave.
#1 13°F, 3 mph	10	20	30	60
#2 13°F, 8 mph	10	10	*	*
#3 13°F, 18 mph	10	10	*	*
#4 13°F, 48 mph	10	*	*	*
#5 13°F, 61 mph	10	*	*	*
#6 55°F, 3 mph	10	20	30	*
#7 55°F, 8 mph	10	10	*	*
#8 55°F, 18 mph	10	10	*	*
#9 55°F, 48 mph	10	*	*	*
#10 55°F, 61 mph	10	*	*	*
#11 95°F, 3 mph	10	20	30	60
#12 95°F, 8 mph	10	10	*	*
#13 95°F, 18 mph	10	10	*	*
#14 95°F, 48 mph	10	*	*	*
#15 95°F, 61 mph	10	*	*	*

(* Does not reach this point at specified concentration)

4.2 Distance of Plume Travel at PEL Concentrations

In Table 5 it can be seen that hydrogen cyanide will only reach the furthest area of interest with 3 mph winds, the higher wind speeds reduce the distance of travel. Table 6 shows that the 3-mile per hour wind, used in runs 1, 6 and 11, as well as the 13 mph wind, used in runs 2, 7, and 12, produce the greatest distance of dispersion. The 13 mph wind results in the shortest time for the plume to reach the farthest area of interest. In Table 7 it is shown that the PEL concentrations of ammonia will not reach the furthest area of interest at any wind speed, but the 3 mph wind does produce the furthest dispersion.

TABLE 5 –Time to in Minutes Point of Interest for Hydrogen cyanide at PEL Concentration = 10ppm (wind direction = 210°)

Run Number and Conditions	Time for Plume to Reach (minutes)			
	Rail Yard Boundary	I-75	Clifton	I-75 near Clifton Ave.
#1 13°F, 3 mph	10	20	30	60
#2 13°F, 8 mph	10	10	*	*
#3 13°F, 18 mph	10	20	*	*
#4 13°F, 48 mph	10	*	*	*
#5 13°F, 61 mph	10	*	*	*
#6 55°F, 3 mph	10	20	30	60
#7 55°F, 8 mph	10	10	*	*
#8 55°F, 18 mph	10	10	*	*
#9 55°F, 48 mph	10	*	*	*
#10 55°F, 61 mph	10	*	*	*
#11 95°F, 3 mph	10	20	30	60
#12 95°F, 8 mph	10	10	20	*
#13 95°F, 18 mph	10	10	*	*
#14 95°F, 48 mph	10	*	*	*
#15 95°F, 61 mph	10	*	*	*

(* Does not reach this point at specified concentration)

**TABLE 6 –Time to in Minutes Point of Interest for Chlorine at PEL
Concentration = 1ppm (wind direction = 210°)**

Run Number and Conditions	Time for Plume to Reach (minutes)			
	Rail Yard Boundary	I-75	Clifton	I-75 near Clifton Ave.
#1 13°F, 3 mph	10	20	30	60
#2 13°F, 8 mph	10	10	20	30
#3 13°F, 18 mph	10	10	10	*
#4 13°F, 48 mph	10	10	10	*
#5 13°F, 61 mph	10	10	*	*
#6 55°F, 3 mph	10	20	30	60
#7 55°F, 8 mph	10	10	20	30
#8 55°F, 18 mph	10	10	10	*
#9 55°F, 48 mph	10	10	*	*
#10 55°F, 61 mph	10	10	*	*
#11 95°F, 3 mph	10	20	30	60
#12 95°F, 8 mph	10	10	20	30
#13 95°F, 18 mph	10	10	10	*
#14 95°F, 48 mph	10	10	10	*
#15 95°F, 61 mph	10	10	*	*

(* Does not reach this point at specified concentration)

**TABLE 7 –Time in Minutes to Point of Interest for Ammonia at PEL
Concentration = 50ppm (wind direction = 210°)**

Run Number and Conditions	Time for Plume to Reach (minutes)			
	Rail Yard Boundary	I-75	Clifton	I-75 near Clifton Ave.
#1 13°F, 3 mph	10	20	*	*
#2 13°F, 8 mph	10	*	*	*
#3 13°F, 18 mph	10	*	*	*
#4 13°F, 48 mph	10	*	*	*
#5 13°F, 61 mph	10	*	*	*
#6 55°F, 3 mph	10	20	*	*
#7 55°F, 8 mph	10	*	*	*
#8 55°F, 18 mph	10	*	*	*
#9 55°F, 48 mph	10	*	*	*
#10 55°F, 61 mph	10	*	*	*
#11 95°F, 3 mph	10	20	40	*
#12 95°F, 8 mph	10	10	*	*
#13 95°F, 18 mph	10	*	*	*
#14 95°F, 48 mph	10	*	*	*
#15 95°F, 61 mph	10	*	*	*

(* Does not reach this point at specified concentration)

4.3 Distance of Plume Travel at IDLH Concentrations

In Table 8 and 9, it can be seen that hydrogen cyanide will only reach I-75 with 3 mph wind; the higher wind speeds reduce the distance of travel. Table 10 shows the only condition that move the ammonia plume beyond the boundary of the rail yard are those with 8 mph wind.

TABLE 8 –Time in Minutes to Point of Interest for Hydrogen cyanide at IDLH Concentration = 50ppm (wind direction = 210°)

Run Number and Conditions	Time for Plume to Reach (minutes)			
	Rail Yard Boundary	I-75	Clifton	I-75 near Clifton Ave.
#1 13°F, 3 mph	10	20	*	*
#2 13°F, 8 mph	10	*	*	*
#3 13°F, 18 mph	20	*	*	*
#4 13°F, 48 mph	10	10	*	*
#5 13°F, 61 mph	10	*	*	*
#6 55°F, 3 mph	10	20	*	*
#7 55°F, 8 mph	10	*	*	*
#8 55°F, 18 mph	10	*	*	*
#9 55°F, 48 mph	10	*	*	*
#10 55°F, 61 mph	10	*	*	*
#11 95°F, 3 mph	10	20	*	*
#12 95°F, 8 mph	10	*	*	*
#13 95°F, 18 mph	10	*	*	*
#14 95°F, 48 mph	10	*	*	*
#15 95°F, 61 mph	10	*	*	*

(* Does not reach this point at specified concentration)

**TABLE 9 –Time in Minutes to Point of Interest for Chlorine at IDLH
Concentration = 10ppm (wind direction = 210°)**

Run Number and Conditions	Time for Plume to Reach (minutes)			
	Rail Yard Boundary	I-75	Clifton	I-75 near Clifton Ave.
#1 13°F, 3 mph	10	20	40	*
#2 13°F, 8 mph	10	10	*	*
#3 13°F, 18 mph	10	*	*	*
#4 13°F, 48 mph	10	*	*	*
#5 13°F, 61 mph	10	*	*	*
#6 55°F, 3 mph	10	20	30	*
#7 55°F, 8 mph	10	10	*	*
#8 55°F, 18 mph	10	*	*	*
#9 55°F, 48 mph	10	*	*	*
#10 55°F, 61 mph	10	*	*	*
#11 95°F, 3 mph	10	20	30	*
#12 95°F, 8 mph	10	10	*	*
#13 95°F, 18 mph	10	*	*	*
#14 95°F, 48 mph	10	*	*	*
#15 95°F, 61 mph	10	*	*	*

(* Does not reach this point at specified concentration)

**TABLE 10 –Time in Minutes to Point of Interest for Ammonia at IDLH
Concentration = 300ppm (wind direction = 210°)**

Run Number and Conditions	Time for Plume to Reach (minutes)			
	Rail Yard Boundary	I-75	Clifton	I-75 near Clifton Ave.
#1 13°F, 3 mph	*	*	*	*
#2 13°F, 8 mph	10	*	*	*
#3 13°F, 18 mph	*	*	*	*
#4 13°F, 48 mph	*	*	*	*
#5 13°F, 61 mph	*	*	*	*
#6 55°F, 3 mph	*	*	*	*
#7 55°F, 8 mph	10	*	*	*
#8 55°F, 18 mph	*	*	*	*
#9 55°F, 48 mph	*	*	*	*
#10 55°F, 61 mph	*	*	*	*
#11 95°F, 3 mph	*	*	*	*
#12 95°F, 8 mph	10	*	*	*
#13 95°F, 18 mph	*	*	*	*
#14 95°F, 48 mph	*	*	*	*
#15 95°F, 61 mph	*	*	*	*

(* Does not reach this point at specified concentration)

5. Discussion

5.1 Time for Plume Travel

Based on the predicted plume travel by the RITE model, wind speed did effect the dispersion of chemical. Wind speeds at or below 18 mph (the 95%tile level); result in the plume covering a greater area, thus exposing larger numbers of people to possibly hazardous conditions. Higher wind speeds, those above 18mph, tend to limit the development and travel of the TLV, PEL, and IDLH plume and result in the plume dissipating at a faster rate. This is likely due to the increased mixing of the air and the dilution of the chemical at a much higher rate. The RITE model only predicts the plume dispersion at set concentrations, therefore it did not display the total area covered by the chemical at other concentrations, for example at lower concentrations, which would be a much larger area for the higher wind speeds. Although the model has a 3-dimensional feature, only concentrations at ground level were estimated since this was assumed to be the elevation where most people would be exposed. While the highest wind speeds tend not to move the plume as far across the landscape as the wind speeds at and below 18mph, it may push the plume much higher into the atmosphere, which results in the plume having a smaller footprint on the surface. The concentration of the plume was only examined at ground level and therefore the concentration at other heights is unknown.

Changes in temperature showed little to no effect on the dispersion of the plume for the scenarios tested; the plume reached the same point of interest in the same amount of time without influence by the temperature. All of the air temperatures used in the models were above the boiling point of all three chemicals. The chemicals were in the gaseous state when released, so wind speed and not temperature produced the effects on dispersion. Had the chemicals being used to conduct the models had boiling points that were within the range of the temperatures being used in the model, then this variable would have shown a greater effect, as the dispersion would have been greater at temperatures above that needed to transform the chemical from a liquid to a gas.

5.2 Limitations

There were several limitations found in the conduction of the RITE model runs. The first is that the chemical concentration displayed was only at the levels specified. This created the situation in which the total area of dispersion could not be analyzed. This area would occur at much lower concentrations than those specified in the run. The second is that the model cannot predict the peak concentrations, which would be helpful in examining the emergency response actions that need to be taken and where the efforts may need to be concentrated. Thirdly, the program cannot differentiate time in smaller than 10-minute intervals. This reduces the precision of the analysis. The plume concentrations of interest can only be known to reach an area within a 10-minute window; there is no way to differentiate between the beginning and end of that time frame. Lastly, the RITE program will only model one chemical per run. This eliminates the possibility modeling the dispersion of a mixture of chemicals or of multiple releases.

The concentrations used for the models, TLV, PEL, IDLH, were developed to protect worker health for eight-hour exposures. These values were not designed to protect the public, which includes the very young and the very old, as well as those that may be more susceptible to injury or illness based on other physiological conditions. While these values used were not intended for this purpose, they are useful as predictors of hazardous conditions. These values are associated with health and safety hazards at or above the concentrations used and are well recognized.

6. Conclusions

Time available for communication of emergency information to the public by emergency response personnel varies with weather conditions due to increased travel of the plume during conditions of high wind and temperature.

This hypothesis is rejected. As it has been shown in the models, the low to 95thtile wind speeds increase the area affected by a chemical release and

reduce the amount of response time available. In most instances the plume traveled beyond the boundaries of the rail yard within 10-minutes at all concentrations. This would indicate that emergency response personnel would not have time to react and warn the public in the areas bordering the rail yard. High wind speeds reduced the area of effect at the concentrations used in the RITE model runs and dissipate the plume at a much faster rate. The air temperature had little or no effect on the plume dispersion or the time to travel.

7. Future Research Needs

Future research should continue computer modeling with a larger set of variables, with more chemicals and more plumes predicted. The determination of which wind speed creates the largest effect on the plume should be made. Another area that would be useful for future research would be to determine actual response and communication times for emergency responders and compare that to predicted plume travel times. This would allow the effectiveness of current emergency response procedures to be evaluated. For chemicals with a threshold of odor below the hazardous levels, it would be useful to predict the area affected by the plume at the threshold of odor level. This would predict the area in which individuals will be able to smell the chemical, which could create fear that they are in danger, even though the chemical concentrations are below the level that is hazardous to safety and health.

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Appendix A

Results of Weather Database

Temperature

Max	Min	Median	Mode	Avg	St Dev
101	-12	55	61	54.20358	20.557265
				5%ile	13.08905
				95%ile	95.31811

Wind Direction

Max	Min	Median	Mode	Avg	St Dev
36	0	21	21	19.88511	9.5198106
				5%ile	0.8454888
				95%ile	2.9247312

Wind Speed (daily average)

Max	Min	Median	Mode	Avg	St Dev
21.7	0.4	7.6	8.4	7.963754	3.254009

Max	Min	Median	Mode	Avg	St Dev
3.077312	0.91629	2.028148	2.128232	1.985495	0.4415445
21.7	0.4	7.6	8.4	7.282653	1.5551072

5%ile	1.1	3.004166
95%ile	2.86	17.461527

Wind Speed (5 sec Max)

Max	Min	Median	Mode	Avg	St Dev
61	7	21	20	22.59007	7.617353

5%ile	7.355364
95%ile	37.824776

Wind Speed (2 min Max)

Max	Min	Median	Mode	Avg	St Dev
48	6	17	15	18.14706	6.0980095

5%ile	5.951041
95%ile	30.343079

Appendix B

Weather Data Collected from 1999-2004

Weather Data from "http://cdo.ncdc.noaa.gov/ulcd/ULCD" for (CVG) Cincinnati/Northern KY International Airport
 Year 1999-2004

Date	Temperature (Fahrenheit)			Wind			Max Speed 5 sec (MPH)	Res Dir	Max Speed 2 min (MPH)	
	Max	Min	Avg	Resultant Speed (MPH)	Direction tens of deg.	Average Speed (MPH)				
01/01/04										
01/02/04										
01/03/04										
01/04/04										
01/05/04										
01/06/04										
01/07/04	27	12	20	6.8	25	M		20	28	17
01/08/04	30	23	27	4.3	19	6	1.7918	15	19	10
01/09/04	29	19	24	10.5	3	10.7	2.3702	22	2	18
01/10/04	22	9	16	3.4	2	4.5	1.5041	17	2	14
01/11/04	41	20	31	11.5	21	11.8	2.4681	32	19	23
01/12/04	41	32	37	9.7	26	10.4	2.3418	30	27	25
01/13/04	37	28	33	6.3	30	8.4	2.1282	21	33	17
01/14/04	44	16	30	7.3	25	10.8	2.3795	40	29	33
01/15/04	33	20	27	8.8	35	10.9	2.3888	33	34	28
01/16/04	33	23	28	7.3	11	8	2.0794	16	10	13
01/17/04	40	26	33	6.5	15	8	2.0794	15	9	14
01/18/04	41	21	31	11.4	35	12.2	2.5014	24	1	20
01/19/04	22	18	20	10	32	10.3	2.3321	18	30	16
01/20/04	26	12	19	3	35	4.7	1.5476	14	36	10
01/21/04	34	19	27	6.9	21	8.4	2.1282	21	23	15
01/22/04	34	13	24	14.2	30	16.1	2.7788	33	29	26
01/23/04	36	9	23	7.4	22	9.8	2.2824	23	19	18
01/24/04	39	17	28	7.4	1	12.1	2.4932	25	2	22
01/25/04	23	15	19	17.1	7	17.3	2.8507	32	8	29
01/26/04	43	23	33	3.6	8	5	1.6094	14	8	13
01/27/04	39	18	29	13.9	26	14.4	2.6672	37	27	29
01/28/04	26	11	19	10.9	25	11.4	2.4336	30	27	25
01/29/04	30	15	23	3.8	33	6.6	1.8871	18	1	14
01/30/04	15	-3	6	9.2	29	10.2	2.3224	21	31	18
01/31/04	20	-12	4	0.3	24	2.3	0.8329	10	6	9
02/01/04	34	12	23	9.9	8			20	9	16
02/02/04	40	22	31	5.9	12	7.5	2.0149	17	17	15
02/03/04	42	26	34	10.9	26	12.3	2.5096	32	29	24
02/04/04	35	22	29	3	5	6.7	1.9021	21	8	16
02/05/04	38	30	34	11.6	9	12.5	2.5257	24	6	21
02/06/04	43	28	36	6.4	29	8.7	2.1633	20	32	16
02/07/04	29	23	26	12.3	28	12.7	2.5416	23	27	20
02/08/04	29	17	23	4.7	20	7.5	2.0149	18	18	16
02/09/04	38	25	32	10.3	21	10.7	2.3702	24	22	17
02/10/04	41	26	34	9.4	26	10.9	2.3888	35	25	26
02/11/04	40	15	28	3.9	20	5	1.6094	15	22	12
02/12/04	37	26	32	6.7	29	8.2	2.1041	18	31	16
02/13/04	26	22	24	5.7	26	8.4	2.1282	17	22	15
02/14/04	43	21	32	3.7	25	6.9	1.9315	17	2	15

02/15/04	32	19	26	14.9	3	15.1	2.7147	29	4	25
02/16/04	36	15	26	8.2	6	8.6	2.1518	22	3	17
02/17/04	42	24	33	3.8	34	4.8	1.5686	13	32	9
02/18/04	45	17	31	3.8	23	5.3	1.6677	23	28	15
02/19/04	56	35	46	8.4	20	9	2.1972	18	23	14
02/20/04	54	38	46	12.9	22	16.3	2.7912	40	27	31
02/21/04	38	34	36	13.8	28	14.1	2.6462	33	27	26
02/22/04	45	32	39	0.2	31	3.8	1.335	10	12	9
02/23/04	53	29	41	3.2	12	4.7	1.5476	15	16	14
02/24/04	44	31	38	10.7	3	11.5	2.4423	28	5	23
02/25/04	44	26	35	14.4	6	14.9	2.7014	29	9	22
02/26/04	46	31	39	13.5	6	13.5	2.6027	25	6	22
02/27/04	53	30	42	7.6	4	8.1	2.0919	15	5	13
02/28/04	60	27	44	2.4	15	4.6	1.5261	15	14	12
02/29/04	64	35	50	7.5	19	8.4	2.1282	26	17	18
03/01/04	56	48	52	14.3	18	14.6	2.681	37	17	31
03/02/04	58	42	50	7.3	27	9.2	2.2192	24	28	21
03/03/04	50	34	42	3.4	16	4.2	1.4351	16	14	15
03/04/04	63	47	55	4.4	14	7.2	1.9741	21	18	15
03/05/04	70	52	61	15.3	21	16.1	2.7788	41	24	29
03/06/04	52	33	43	8.6	28	M		28	29	25
03/07/04	53	32	43	13.5	28	16.3	2.7912	45	30	38
03/08/04	41	34	38	10.4	29	10.9	2.3888	32	30	26
03/09/04	44	31	38	6.4	1	8.1	2.0919	24	3	21
03/10/04	48	24	36	1.1	8	5.4	1.6864	14	11	12
03/11/04	53	26	40	10.1	26	13.5	2.6027	36	26	29
03/12/04	39	19	29	11.2	30	11.6	2.451	36	30	28
03/13/04	46	20	33	5	11	6.8	1.9169	20	12	14
03/14/04	52	37	45	6.4	23	8.7	2.1633	29	28	22
03/15/04	54	24	39	4.4	6	5.6	1.7228	24	5	21
03/16/04	41	30	36	9.8	3	11.8	2.4681	30	6	25
03/17/04	39	26	33	2.6	20	4.4	1.4816	14	20	13
03/18/04	52	32	42	0.6	11	5.9	1.775	28	33	23
03/19/04	51	33	42	2.1	11	6.7	1.9021	16	13	15
03/20/04	69	39	54	8.4	25	13.3	2.5878	41	31	32
03/21/04	43	25	34	14.4	33	14.8	2.6946	35	33	28
03/22/04	37	21	29	4.9	33	6.7	1.9021	20	34	16
03/23/04	54	18	36	7.4	20	7.9	2.0669	22	20	20
03/24/04	67	43	55	11.5	20	11.8	2.4681	28	21	21
03/25/04	71	56	64	9.7	21	10.2	2.3224	24	25	18
03/26/04	71	56	64	6.7	21	8.4	2.1282	24	20	20
03/27/04	69	57	63	1.4	22	4.5	1.5041	13	25	9
03/28/04	78	55	67	9.3	15	9.8	2.2824	24	16	20
03/29/04	64	48	56	5	34	7.9	2.0669	22	32	17
03/30/04	55	45	50	0.2	24	5.5	1.7047	21	10	18
03/31/04	45	40	43	7.6	32	10.8	2.3795	24	1	20
04/01/04	47	38	43	12.2	33	12.9	2.5572	25	32	22
04/02/04	53	35	44	6.8	34	9	2.1972	23	33	18
04/03/04	62	34	48	13.4	31	14.4	2.6672	47	33	36
04/04/04	49	35	42	15.5	33	15.7	2.7537	33	32	28
04/05/04	51	26	39	3	34	5.5	1.7047	22	33	17
04/06/04	65	28	47	5.1	22	6	1.7918	20	27	16

04/07/04	71	50	61	1.3	25	4.1	1.411	21	31	16
04/08/04	70	47	59	9.7	30	11.8	2.4681	32	32	28
04/09/04	61	39	50	3.4	33	5.5	1.7047	17	2	14
04/10/04	62	45	54	7.6	4	9	2.1972	26	6	17
04/11/04	58	45	52	6.9	5	8.4	2.1282	21	4	18
04/12/04	46	38	42	15.6	3	16.1	2.7788	30	2	24
04/13/04	39	33	36	16.5	1	16.9	2.8273	40	2	33
04/14/04	58	33	46	9	35	9.4	2.2407	30	36	26
04/15/04	68	34	51	3.3	17	4.1	1.411	15	15	13
04/16/04	74	49	62	9	20	9.3	2.23	28	20	22
04/17/04	80	50	65	8.6	21	9.2	2.2192	28	25	21
04/18/04	81	58	70	11.4	20	11.7	2.4596	28	20	21
04/19/04	72	63	68	11.1	22	11.4	2.4336	32	21	20
04/20/04	71	56	64	5.9	16	9.6	2.2618	21	16	17
04/21/04	67	57	62	12.5	21	12.7	2.5416	29	20	22
04/22/04	61	54	58	2.9	9	5.5	1.7047	25	28	20
04/23/04	57	46	52	3.6	36	4.7	1.5476	13	3	10
04/24/04	68	44	56	8.3	10	9.3	2.23	23	8	18
04/25/04	73	55	64	8.1	24	11.3	2.4248	26	26	20
04/26/04	63	46	55	6.4	29	8.1	2.0919	36	28	25
04/27/04	53	35	44	9.6	31	11	2.3979	37	30	30
04/28/04	70	33	52	9.6	19	10	2.3026	29	20	22
04/29/04	75	50	63	9.7	20	10	2.3026	26	21	21
04/30/04	69	57	63	7.6	19	9	2.1972	20	20	16
05/01/04	73	54	64	5	23	8	2.0794	37	28	31
05/02/04	54	38	46	8.5	34	9	2.1972	28	1	22
05/03/04	55	36	46	7.5	36	8.5	2.1401	22	36	20
05/04/04	61	32	47	6	21	6.8	1.9169	21	20	16
05/05/04	74	52	63	4.1	26	6.2	1.8245	18	29	15
05/06/04	83	50	67	7.7	21	7.9	2.0669	25	18	18
05/07/04	79	56	68	1.3	4	10.2	2.3224	29	2	24
05/08/04	83	51	67	3.7	19	8	2.0794	21	22	16
05/09/04	84	55	70	6.4	22	7.4	2.0015	28	27	18
05/10/04	84	62	73	6.3	23	7.9	2.0669	31	31	26
05/11/04	80	58	69	4.4	20	6.1	1.8083	16	17	14
05/12/04	82	53	68	8	20	8.1	2.0919	21	19	15
05/13/04	77	63	70	9.8	19	9.9	2.2925	28	18	21
05/14/04	76	63	70	9.1	20	10.3	2.3321	26	19	22
05/15/04	63	53	58	7.4	1	7.9	2.0669	20	33	16
05/16/04	71	56	64	3.3	7	5	1.6094	13	13	12
05/17/04	81	58	70	5.8	19	8.4	2.1282	31	20	22
05/18/04	82	64	73	7	22	8.4	2.1282	25	31	17
05/19/04	81	63	72	2.5	21	5.8	1.7579	17	29	15
05/20/04	81	67	74	6.7	22	7.7	2.0412	21	26	16
05/21/04	84	71	78	6.9	21	8	2.0794	20	22	15
05/22/04	84	68	76	8.4	21	8.8	2.1748	26	23	17
05/23/04	84	68	76	10.2	21	10.5	2.3514	29	20	23
05/24/04	82	63	73	6.4	26	8.4	2.1282	29	29	21
05/25/04	83	62	73	7.6	23	9.7	2.2721	33	16	29
05/26/04	70	61	66	2	26	5	1.6094	29	31	24
05/27/04	81	61	71	8.8	22	10	2.3026	30	20	22
05/28/04	76	61	69	6.5	31	8.9	2.1861	23	32	18

05/29/04	75	56	66	6.5	11	7.9	2.0669	17	13	12
05/30/04	72	61	67	9.6	16	10.6	2.3609	40	31	31
05/31/04	76	59	68	10.6	25	12.7	2.5416	38	28	29
06/01/04	77	55	66	8	23	9.2	2.2192	44	27	31
06/02/04	78	57	68	8	27	10.7	2.3702	32	28	28
06/03/04	76	52	64	3.9	4	5.7	1.7405	15	6	12
06/04/04	74	57	66	8.7	7	9.6	2.2618	20	4	16
06/05/04	76	51	64	1.8	30	4.8	1.5686	18	3	14
06/06/04	78	57	68	5.2	19	6.5	1.8718	16	18	14
06/07/04	84	60	72	6.4	17	6.9	1.9315	20	18	15
06/08/04	86	65	76	4.4	20	6.3	1.8405	16	18	14
06/09/04	84	68	76	2.8	22	6.8	1.9169	38	30	33
06/10/04	81	68	75	2.2	21	3.4	1.2238	13	27	9
06/11/04	83	69	76	0.9	15	8.4	2.1282	30	36	25
06/12/04	74	67	71	4.8	14	7.6	2.0281	29	13	25
06/13/04	86	66	76	8.6	21	9.2	2.2192	24	22	18
06/14/04	86	70	78	6.3	22	7.1	1.9601	21	22	14
06/15/04	83	71	77	2.7	21	5.7	1.7405	21	34	18
06/16/04	84	70	77	4.7	18	6.9	1.9315	20	21	17
06/17/04	86	73	80	6.2	24	7.4	2.0015	21	26	16
06/18/04	84	70	77	5	30	6.5	1.8718	18	29	13
06/19/04	77	60	69	9.1	35	9.5	2.2513	23	1	17
06/20/04	75	54	65	1.2	12	4.7	1.5476	14	13	12
06/21/04	81	59	70	5.3	19	6.8	1.9169	20	18	15
06/22/04	82	67	75	7.3	30	9.4	2.2407	22	30	21
06/23/04	78	57	68	0.8	35	4.3	1.4586	14	33	12
06/24/04	86	55	71	4.4	23	7.2	1.9741	21	2	17
06/25/04	74	63	69	7.8	3	M		21	2	18
06/26/04	76	59	68	5.8	35	6.4	1.8563	18	2	15
06/27/04	80	53	67	1	28	3.7	1.3083	15	31	14
06/28/04	80	58	69	2	32	5.9	1.775	31	34	24
06/29/04	81	59	70	4.2	33	6.2	1.8245	18	33	15
06/30/04	84	59	72	2.5	14	4.1	1.411	15	13	10
07/01/04	86	65	76	1.1	22	3.7	1.3083	15	22	12
07/02/04	87	68	78	0.8	14	2.9	1.0647	23	22	16
07/03/04	87	68	78	8.2	17	9.3	2.23	24	16	21
07/04/04	86	71	79	8.8	23	9.5	2.2513	24	27	18
07/05/04	88	67	78	4.7	24	6.8	1.9169	23	31	20
07/06/04	90	66	78	7.4	21	8.6	2.1518	26	17	21
07/07/04	81	61	71	6.2	24	8.5	2.1401	25	28	18
07/08/04	82	61	72	6	27	6.8	1.9169	24	28	20
07/09/04	88	67	78	0.9	24	3.3	1.1939	22	32	20
07/10/04	88	67	78	0.8	25	5.3	1.6677	53	35	39
07/11/04	86	66	76	3.8	20	5.8	1.7579	24	29	21
07/12/04	85	70	78	5.5	26	7.3	1.9879	26	31	20
07/13/04	88	70	79	5.9	29	7.9	2.0669	38	30	31
07/14/04	81	65	73	11.5	29	12.7	2.5416	29	29	23
07/15/04	81	61	71	10	31	10.4	2.3418	24	30	20
07/16/04	82	57	70	2.1	26	4.4	1.4816	18	28	15
07/17/04	81	65	73	4.8	36	6.2	1.8245	23	35	20
07/18/04	76	61	69	5.2	35	6.7	1.9021	18	2	15
07/19/04	82	61	72	2.8	31	4.8	1.5686	15	29	12

07/20/04	84	59	72	1.8	21	4	1.3863	14	22	10
07/21/04	86	63	75	5.6	21	7.1	1.9601	35	34	31
07/22/04	90	69	80	5.5	27	8.7	2.1633	38	29	31
07/23/04	82	69	76	8	35	9.6	2.2618	21	1	17
07/24/04	78	61	70	12.4	6	12.7	2.5416	21	7	17
07/25/04	72	63	68	10.8	4	11	2.3979	20	2	17
07/26/04	66	62	64	6	1	7.5	2.0149	17	3	13
07/27/04	68	60	64	6.2	33	6.8	1.9169	17	31	13
07/28/04	75	57	66	2.4	4	5.3	1.6677	14	10	12
07/29/04	79	59	69	3	11	4.5	1.5041	14	14	12
07/30/04	84	64	74	6.1	17	M		37	20	26
07/31/04	82	67	75	4.7	26	7.2	1.9741	31	21	23
08/01/04	85	65	75	1.8	36	3.7	1.3083	14	34	10
08/02/04	87	62	75	1.4	32	3	1.0986	15	33	10
08/03/04	87	64	76	1.9	26	2.8	1.0296	13	29	10
08/04/04	80	68	74	1.3	2	6.8	1.9169	31	34	25
08/05/04	79	65	72	13.1	3	13.8	2.6247	29	3	24
08/06/04	74	54	64	8.1	3	9.3	2.23	29	2	23
08/07/04	77	50	64	2.6	31	3.9	1.361	17	33	14
08/08/04	80	55	68	0.8	23	2.1	0.7419	15	30	9
08/09/04	82	60	71	5.9	20	6.8	1.9169	17	19	14
08/10/04	82	65	74	6.8	26	8.6	2.1518	23	29	20
08/11/04	72	56	64	6.3	27	6.9	1.9315	18	28	15
08/12/04	69	54	62	6.2	34	7.2	1.9741	17	34	14
08/13/04	69	55	62	5.6	29	5.9	1.775	17	31	15
08/14/04	75	51	63	4.2	34	4.9	1.5892	16	1	13
08/15/04	77	50	64	3.1	35	3.9	1.361	15	36	12
08/16/04	79	54	67	0.7	31	3.1	1.1314	14	35	12
08/17/04	80	55	68	3.1	21	4.7	1.5476	18	20	14
08/18/04	85	61	73	8.9	21	9.1	2.2083	23	22	17
08/19/04	90	70	80	7.6	22	8.4	2.1282	30	21	21
08/20/04	75	65	70	5.1	21	7.7	2.0412	23	18	17
08/21/04	78	60	69	7	36	7.6	2.0281	20	1	16
08/22/04	81	60	71	3.1	16	4.7	1.5476	13	13	10
08/23/04	83	59	71	1.7	20	3.3	1.1939	14	17	10
08/24/04	82	65	74	6.8	17	7.5	2.0149	18	19	17
08/25/04	85	70	78	10	18	10.2	2.3224	23	20	20
08/26/04	79	69	74	7.8	20	9	2.1972	23	20	17
08/27/04	87	72	80	7.5	21	7.8	2.0541	18	21	14
08/28/04	90	70	80	5.6	22	7.5	2.0149	31	29	26
08/29/04	79	67	73	2	35	6.4	1.8563	23	33	18
08/30/04	77	62	70	5.6	36	6.7	1.9021	15	36	13
08/31/04	80	59	70	2.7	36	3.7	1.3083	17	34	13
09/01/04	81	60	71	6.2	8	6.8	1.9169	20	7	15
09/02/04	83	62	73	7.2	11	8.5	2.1401	17	16	15
09/03/04	78	67	73	5.1	17	6.4	1.8563	17	17	15
09/04/04	84	64	74	0.2	27	1.2	0.1823	9	13	7
09/05/04	85	65	75	5	11	5.7	1.7405	16	12	14
09/06/04	86	65	76	6	16	7	1.9459	20	16	16
09/07/04	74	68	71	9.2	2	9.7	2.2721	23	3	20
09/08/04	68	64	66	15.1	2	16.2	2.785	30	1	25
09/09/04	73	58	66	5.6	34	6.7	1.9021	18	33	15

09/10/04	86	54	70	1	9	2.1	0.7419	12	6	8
09/11/04	81	59	70	3.5	11	4.8	1.5686	14	10	10
09/12/04	82	61	72	2.9	12	4.6	1.5261	13	14	10
09/13/04	84	65	75	4	14	5	1.6094	15	16	13
09/14/04	84	61	73	4.9	17	6	1.7918	20	17	15
09/15/04	84	62	73	7.7	18	8.2	2.1041	23	18	18
09/16/04	82	64	73	5	18	7	1.9459	16	22	13
09/17/04	72	55	64	12.4	2	13.2	2.5802	32	1	25
09/18/04	77	50	64	9.8	3	10.6	2.3609	18	2	16
09/19/04	75	51	63	9	7	9.4	2.2407	20	7	16
09/20/04	80	50	65	5.5	11	7.1	1.9601	16	13	14
09/21/04	82	48	65	1	11	2.5	0.9163	12	15	8
09/22/04	85	52	69	1.1	12	2.3	0.8329	14	11	12
09/23/04	88	56	72	2	14	4.1	1.411	12	14	9
09/24/04	84	59	72	0.5	29	1.8	0.5878	12	35	8
09/25/04	76	59	68	3.9	36	5.2	1.6487	16	3	14
09/26/04	74	54	64	6	6	7.6	2.0281	16	10	14
09/27/04	77	55	66	6	4	8	2.0794	17	6	13
09/28/04	78	56	67	12.6	36	13.3	2.5878	29	35	24
09/29/04	63	52	58	6.2	36	8	2.0794	22	34	16
09/30/04	70	44	57	1.1	6	3.4	1.2238	15	22	10
10/01/04	74	49	62	4.6	19	6.1	1.8083	20	20	15
10/02/04	64	44	54	3.7	30	7.4	2.0015	20	36	16
10/03/04	68	41	55	0.7	21	4.4	1.4816	14	28	12
10/04/04	72	46	59	4.1	34	9.5	2.2513	23	1	17
10/05/04	63	39	51	3.7	2	5	1.6094	20	3	16
10/06/04	70	38	54	1.1	12	2.3	0.8329	15	8	9
10/07/04	75	44	60	4.8	13	M		16	14	14
10/08/04	75	52	64	7.1	20	7.3	1.9879	22	19	16
10/09/04	70	52	61	1.3	28	4.6	1.5261	22	1	16
10/10/04	70	49	60	7.4	5	8.6	2.1518	22	8	16
10/11/04	66	48	57	9.3	8	9.5	2.2513	18	11	14
10/12/04	65	46	56	6.8	8	8.4	2.1282	23	10	20
10/13/04	58	53	56	0.8	21	5.5	1.7047	17	28	15
10/14/04	60	51	56	4.5	25	6.5	1.8718	15	21	13
10/15/04	51	42	47	8.4	23	10.2	2.3224	24	21	18
10/16/04	49	41	45	11.5	26	12.3	2.5096	35	26	28
10/17/04	57	36	47	3.7	25	6.3	1.8405	21	28	17
10/18/04	58	37	48	5.2	11	8.2	2.1041	25	30	22
10/19/04	56	50	53	6.9	5	7.1	1.9601	12	4	10
10/20/04	59	54	57	5.8	4	6.6	1.8871	16	2	13
10/21/04	58	53	56	8.9	4	9.1	2.2083	16	4	14
10/22/04	57	49	53	5.8	10	6.9	1.9315	14	11	12
10/23/04	64	52	58	9.3	18	10.1	2.3125	22	18	18
10/24/04	68	47	58	4.2	29	5.5	1.7047	21	32	15
10/25/04	72	42	57	0.8	11	2.5	0.9163	10	33	9
10/26/04	70	49	60	4	12	4.7	1.5476	18	14	16
10/27/04	61	56	59	2.6	4	4.2	1.4351	14	14	13
10/28/04	69	51	60	2.7	15	5.5	1.7047	15	16	12
10/29/04	77	63	70	8.3	21	8.4	2.1282	20	20	16
10/30/04	78	61	70	12.9	23	13.9	2.6319	39	27	28
10/31/04	66	49	58	4.8	25	5.8	1.7579	21	28	18

11/01/04	68	52	60	6.7	13	7.4	2.0015	20	14	17
11/02/04	69	50	60	4.1	25	10.2	2.3224	24	34	21
11/03/04	50	47	49	11.5	7	13.1	2.5726	22	2	20
11/04/04	57	44	51	9.2	26	13	2.5649	38	28	32
11/05/04	54	36	45	8	27	8.9	2.1861	18	32	15
11/06/04	64	41	53	9.4	22	9.6	2.2618	23	23	17
11/07/04	68	45	57	7	29	11.7	2.4596	25	32	22
11/08/04	48	31	40	5.8	36	6.4	1.8563	18	34	15
11/09/04	51	30	41	1.8	9	4	1.3863	13	10	9
11/10/04	64	38	51	8.5	19	8.8	2.1748	20	20	16
11/11/04	51	43	47	5.4	7	9.3	2.23	25	4	22
11/12/04	50	36	43	16.3	3	16.4	2.7973	29	2	24
11/13/04	48	32	40	12.5	6	12.9	2.5572	24	6	21
11/14/04	54	31	43	8.1	8	8.3	2.1163	17	7	15
11/15/04	57	32	45	0.7	11	2.2	0.7885	9	17	7
11/16/04	52	42	47	1.5	17	2.7	0.9933	7	18	7
11/17/04	56	49	53	6.9	21	7.1	1.9601	15	24	12
11/18/04	62	54	58	2.6	22	4	1.3863	10	25	9
11/19/04	58	54	56	3.4	20	4.7	1.5476	17	23	13
11/20/04	58	52	55	5.9	23	6.5	1.8718	14	26	12
11/21/04	53	47	50	4.1	36	5.1	1.6292	16	1	13
11/22/04	51	47	49	1.4	9	3.6	1.2809	10	36	7
11/23/04	54	47	51	2.5	9	3.6	1.2809	10	5	9
11/24/04	64	42	53	5.4	18	11.7	2.4596	31	27	25
11/25/04	42	26	34	9.5	31	11.5	2.4423	30	33	25
11/26/04	50	27	39	10.2	19	10.5	2.3514	23	20	18
11/27/04	50	40	45	14.4	18	16.1	2.7788	33	19	28
11/28/04	43	31	37	7.1	28	8.3	2.1163	29	29	24
11/29/04	43	34	39	7.1	12	7.8	2.0541	22	14	17
11/30/04	52	40	46	5.5	14	8.3	2.1163	28	25	21
12/01/04	50	30	40	13.6	26	14.3	2.6603	44	26	32
12/02/04	46	27	37	6.5	23	6.9	1.9315	22	24	17
12/03/04	42	26	34	4.6	28	M		16	30	13
12/04/04	52	23	38	9.8	22	10.1	2.3125	30	24	22
12/05/04	54	33	44	6.4	17	7.7	2.0412	21	15	16
12/06/04	58	44	51	6.7	18	7.6	2.0281	23	14	20
12/07/04	65	47	56	13.1	23	17.7	2.8736	46	24	32
12/08/04	47	38	43	0.7	26	6.4	1.8563	21	30	18
12/09/04	47	38	43	4.4	15	6.9	1.9315	15	11	13
12/10/04	51	42	47	7.6	30	7.9	2.0669	25	31	21
12/11/04	42	34	38	13	30	13.6	2.6101	29	33	23
12/12/04	46	34	40	12.9	25	14.9	2.7014	35	29	29
12/13/04	40	24	32	19.9	29	20.1	3.0007	41	31	32
12/14/04	30	24	27	11.2	30	11.5	2.4423	23	30	18
12/15/04	34	15	25	6.1	20	6.9	1.9315	17	19	15
12/16/04	42	21	32	9.5	22	10.1	2.3125	22	24	18
12/17/04	41	22	32	0.6	14	3.4	1.2238	13	5	9
12/18/04	47	22	35	8.8	23	10.9	2.3888	31	27	22
12/19/04	38	8	23	13.6	34	15.5	2.7408	38	34	35
12/20/04	22	3	13	9.4	17	10.4	2.3418	26	14	23
12/21/04	49	20	35	8.6	22	9.2	2.2192	26	22	20
12/22/04	43	21	32	12.5	1	12.8	2.5494	32	1	25

12/23/04	24	9	17	12.9	32	14.6	2.681	33	33	28
12/24/04	14	-2	6	2.7	29	3.9	1.361	12	33	12
12/25/04	25	-2	12	5	15	5.8	1.7579	15	16	14
12/26/04	26	20	23	5.3	34	7	1.9459	20	36	15
12/27/04	25	8	17	3.3	8	5.7	1.7405	15	2	12
12/28/04	43	16	30	10.7	20	11.4	2.4336	23	21	18
12/29/04	46	38	42	8	21	8.3	2.1163	21	21	14
12/30/04	52	39	46	8.6	19	8.8	2.1748	23	19	17
12/31/04	54	50	52	11.7	21	12	2.4849	28	20	20
01/01/03	43	32	38	15	3	15.4	2.7344	28	3	24
01/02/03	34	29	32	6.3	3	7.5	2.0149	24	7	22
01/03/03	29	24	27	9	30	9.4	2.2407	20	31	15
01/04/03	33	20	27	5.5	21	8.4	2.1282	16	17	14
01/05/03	37	31	34	3.3	25	6.5	1.8718	17	28	15
01/06/03	34	28	31	14.4	32	15.2	2.7213	32	33	26
01/07/03	37	22	30	10.6	24	11.1	2.4069	30	25	21
01/08/03	53	37	45	11.5	24	11.6	2.451	25	26	18
01/09/03	52	34	43	12.7	28	13.8	2.6247	38	32	29
01/10/03	34	21	28	15.8	29	16.4	2.7973	36	29	29
01/11/03	26	14	20	10.3	27	11	2.3979	26	28	23
01/12/03	29	9	19	4	24	6	1.7918	16	31	13
01/13/03	37	22	30	6.9	27	9.3	2.23	21	32	17
01/14/03	29	14	22	7.5	30	8.7	2.1633	26	28	23
01/15/03	24	9	17	6.3	28	6.9	1.9315	21	30	17
01/16/03	22	16	19	4.6	5	8	2.0794	17	30	15
01/17/03	22	5	14	6.3	31	8	2.0794	23	1	20
01/18/03	22	-1	11	8.3	22	9.6	2.2618	26	29	23
01/19/03	33	10	22	10.6	23	11.2	2.4159	26	23	18
01/20/03	36	20	28	7.5	30	9.2	2.2192	24	32	21
01/21/03	24	14	19	8.4	1	8.7	2.1633	21	2	18
01/22/03	20	11	16	6.9	33	7.2	1.9741	20	32	15
01/23/03	12	4	8	13.7	30	14.1	2.6462	29	29	23
01/24/03	19	4	12	7	26	8	2.0794	21	28	17
01/25/03	29	15	22	7	22	7.7	2.0412	20	19	16
01/26/03	27	5	16	7.1	31	10.4	2.3418	24	35	21
01/27/03	18	-11	4	5.3	17	6.6	1.8871	20	16	17
01/28/03	39	14	27	7.8	20	7.9	2.0669	16	20	13
01/29/03	37	28	33	7.8	2	9.4	2.2407	22	2	16
01/30/03	34	22	28	1.8	14	4.7	1.5476	13	16	12
01/31/03	36	24	30	7.7	16	8.7	2.1633	16	14	14
02/01/03	35	32	34	6.7	27	7.8	2.0541	21	30	16
02/02/03	53	32	43	4.6	13	5.6	1.7228	15	12	10
02/03/03	57	41	49	11.7	20	13.1	2.5726	37	28	31
02/04/03	47	24	36	19.2	28	19.6	2.9755	38	27	31
02/05/03	31	15	23	3.5	30	5.2	1.6487	21	30	17
02/06/03	36	19	28	1.3	8	3.9	1.361	14	1	9
02/07/03	30	11	21	9.9	32	10.6	2.3609	25	28	20
02/08/03	27	2	15	10.2	21	10.5	2.3514	28	20	21
02/09/03	36	25	31	5.7	21	6.7	1.9021	17	23	13
02/10/03	33	20	27	7.7	27	8.9	2.1861	32	30	26
02/11/03	37	11	24	6.9	25	8	2.0794	35	26	23
02/12/03	37	9	23	13.3	28	14.1	2.6462	43	29	35

02/13/03	37	13	25	6.7	27	7.9	2.0669	28	30	25
02/14/03	34	20	27	7.4	10	8.5	2.1401	22	8	18
02/15/03	34	21	28	19	5	19.2	2.9549	36	5	29
02/16/03	27	20	24	18.3	4	18.4	2.9124	32	5	25
02/17/03	27	23	25	5.3	32	8.8	2.1748	21	2	17
02/18/03	31	24	28	7.1	23	7.8	2.0541	18	22	14
02/19/03	35	27	31	3.8	22	5	1.6094	14	22	12
02/20/03	41	25	33	3.7	11	4.7	1.5476	14	11	10
02/21/03	41	34	38	4.4	8	5.3	1.6677	12	4	9
02/22/03	38	30	34	9.7	2	11.1	2.4069	29	34	23
02/23/03	30	23	27	8.7	32	11.3	2.4248	32	31	26
02/24/03	29	18	24	7.5	30	11.7	2.4596	23	27	18
02/25/03	22	9	16	6.2	4	9.2	2.2192	21	33	17
02/26/03	29	18	24	5.1	7	6.7	1.9021	18	8	13
02/27/03	35	25	30	7.7	5	8.4	2.1282	15	4	14
02/28/03	38	28	33	1.6	36	3.2	1.1632	13	2	8
03/01/03	43	33	38	1.3	17	2.8	1.0296	9	20	8
03/02/03	38	21	30	10.1	30	10.9	2.3888	26	34	20
03/03/03	34	12	23	2.5	12	7.4	2.0015	20	34	16
03/04/03	54	27	41	8.1	20	8.4	2.1282	21	18	17
03/05/03	52	29	41	3.2	33	11.2	2.4159	28	29	23
03/06/03	31	23	27	6.7	3	9.2	2.2192	25	2	22
03/07/03	45	23	34	4.4	16	6.4	1.8563	16	15	14
03/08/03	69	28	49	7.8	22	11.3	2.4248	43	21	30
03/09/03	40	22	31	12.7	31	13.4	2.5953	28	33	23
03/10/03	32	14	23	5.4	32	7.4	2.0015	25	30	22
03/11/03	49	20	35	4.5	20	6.8	1.9169	20	19	16
03/12/03	55	40	48	4.6	19	5.7	1.7405	13	21	10
03/13/03	50	31	41	6.5	3	10.3	2.3321	31	30	25
03/14/03	56	27	42	5.7	7	7.6	2.0281	21	11	18
03/15/03	66	35	51	1.3	16	2.7	0.9933	14	16	12
03/16/03	73	40	57	0.4	10	1.8	0.5878	12	13	9
03/17/03	71	49	60	5.1	8	6	1.7918	16	9	14
03/18/03	72	58	65	9.8	6	10.1	2.3125	23	6	18
03/19/03	70	53	62	11.6	12	12.9	2.5572	39	14	31
03/20/03	69	51	60	8.5	14	10	2.3026	32	15	28
03/21/03	54	42	48	6.1	24	8.1	2.0919	24	29	21
03/22/03	58	35	47	7.2	25	8.5	2.1401	31	28	25
03/23/03	65	39	52	2.9	24	3.9	1.361	18	27	14
03/24/03	73	42	58	7.4	22	7.8	2.0541	22	21	17
03/25/03	73	46	60	4.3	25	10.7	2.3702	37	29	33
03/26/03	61	40	51	1.2	32	5.3	1.6677	15	27	13
03/27/03	68	38	53	9	15	9.7	2.2721	28	14	23
03/28/03	73	47	60	13.1	19	17	2.8332	35	19	28
03/29/03	47	33	40	9.6	29	10.7	2.3702	26	29	21
03/30/03	41	29	35	10.2	35	11.5	2.4423	24	34	18
03/31/03	52	27	40	7.1	26	9.4	2.2407	30	31	25
04/01/03	75	47	61	14.5	23	15	2.7081	31	22	24
04/02/03	72	55	64	12.2	21	12.5	2.5257	28	21	23
04/03/03	74	57	66	10.7	21	10.9	2.3888	29	20	22
04/04/03	74	61	68	11.9	21	12	2.4849	30	22	22
04/05/03	68	34	51	12.5	30	14.1	2.6462	33	28	29

04/06/03	44	32	38	13.5	7	14.4	2.6672	28	6	23
04/07/03	54	40	47	3.8	2	7.8	2.0541	20	9	17
04/08/03	46	37	42	10.1	2	10.4	2.3418	26	4	21
04/09/03	41	34	38	17.3	2	17.4	2.8565	32	4	26
04/10/03	56	35	46	16.2	2	16.5	2.8034	31	1	25
04/11/03	65	33	49	7.2	36	8	2.0794	26	36	18
04/12/03	67	38	53	7.5	34	9	2.1972	22	36	17
04/13/03	64	41	53	3.8	6	5.3	1.6677	16	6	13
04/14/03	76	45	61	4.2	19	5.2	1.6487	16	19	12
04/15/03	81	55	68	9	22	9.7	2.2721	35	22	24
04/16/03	78	54	66	7.4	19	8.3	2.1163	29	20	21
04/17/03	66	54	60	10.4	15	11.4	2.4336	35	15	28
04/18/03	65	53	59	4.5	18	5.2	1.6487	14	19	12
04/19/03	77	51	64	8.3	16	8.7	2.1633	23	17	18
04/20/03	75	58	67	8.3	21	10.4	2.3418	29	23	22
04/21/03	59	47	53	8.7	27	9.6	2.2618	26	28	22
04/22/03	50	40	45	9	31	9.5	2.2513	25	30	22
04/23/03	62	31	47	1	2	3.5	1.2528	16	1	10
04/24/03	62	41	52	9.1	11	9.5	2.2513	20	12	16
04/25/03	56	52	54	9.5	6	11.1	2.4069	22	4	18
04/26/03	67	47	57	11.9	2	12.2	2.5014	28	4	22
04/27/03	71	39	55	1.8	15	3.1	1.1314	14	14	13
04/28/03	77	40	59	4	24	5.8	1.7579	21	28	16
04/29/03	76	57	67	0.4	29	3.1	1.1314	12	10	9
04/30/03	78	57	68	4.6	19	5.7	1.7405	17	16	15
05/01/03	81	58	70	6.8	21	7.9	2.0669	40	24	26
05/02/03	71	53	62	4	34	6.1	1.8083	39	29	35
05/03/03	59	47	53	9	1	9.4	2.2407	21	2	16
05/04/03	61	41	51	5.9	10	10	2.3026	31	9	24
05/05/03	79	54	67	9.5	17	11.5	2.4423	38	14	31
05/06/03	77	64	71	4.4	21	6.2	1.8245	20	22	15
05/07/03	72	61	67	5	19	6.7	1.9021	23	18	20
05/08/03	73	59	66	2.2	29	5.4	1.6864	17	31	14
05/09/03	80	62	71	8.3	21	9.1	2.2083	26	19	18
05/10/03	75	63	69	4.6	18	8	2.0794	22	20	17
05/11/03	74	56	65	15.3	25	16.3	2.7912	38	27	32
05/12/03	65	52	59	17.9	28	18.4	2.9124	39	30	33
05/13/03	71	45	58	8.1	29	9.4	2.2407	29	31	25
05/14/03	73	46	60	2.8	17	4.6	1.5261	20	19	15
05/15/03	70	54	62	3.7	26	7	1.9459	25	32	22
05/16/03	74	52	63	3.4	6	5.8	1.7579	15	9	13
05/17/03	66	60	63	9.6	10	9.7	2.2721	23	11	18
05/18/03	70	62	66	10.5	10	10.9	2.3888	21	9	17
05/19/03	77	61	69	5.6	12	7.2	1.9741	20	8	16
05/20/03	70	53	62	4.1	28	8.7	2.1633	26	1	22
05/21/03	65	52	59	10.2	6	11.4	2.4336	24	7	21
05/22/03	68	50	59	6.5	4	7.9	2.0669	17	1	14
05/23/03	69	49	59	5.3	34	7.1	1.9601	20	36	15
05/24/03	69	40	55	5.2	28	6.4	1.8563	23	28	20
05/25/03	62	51	57	1.2	26	2.8	1.0296	13	34	8
05/26/03	66	49	58	1	23	2.2	0.7885	12	7	9
05/27/03	71	51	61	3.9	36	5.7	1.7405	22	3	18

05/28/03	74	51	63	3.3	25	5.5	1.7047	51	28	39
05/29/03	70	54	62	8.2	31	8.8	2.1748	24	30	20
05/30/03	69	47	58	4.3	21	5.8	1.7579	16	18	14
05/31/03	65	52	59	8.9	32	12.1	2.4932	31	30	25
06/01/03	65	45	55	5.8	2	7.4	2.0015	21	3	18
06/02/03	67	47	57	7.8	11	8.2	2.1041	20	11	16
06/03/03	60	53	57	4.2	6	8.1	2.0919	24	10	20
06/04/03	61	54	58	6.6	26	7.1	1.9601	18	28	16
06/05/03	71	47	59	6.4	28	9.2	2.2192	30	31	25
06/06/03	76	48	62	4.9	14	6.1	1.8083	24	12	18
06/07/03	76	61	69	1.7	10	3.8	1.335	16	3	9
06/08/03	76	58	67	6.9	22	8.1	2.0919	48	29	41
06/09/03	78	58	68	7.2	25	8.4	2.1282	25	28	20
06/10/03	79	56	68	10	20	10.2	2.3224	25	18	22
06/11/03	77	64	71	7.3	21	8.6	2.1518	22	19	16
06/12/03	73	62	68	7.9	20	9.7	2.2721	28	18	22
06/13/03	80	63	72	3.9	21	6.2	1.8245	21	22	16
06/14/03	81	67	74	1.3	5	5.1	1.6292	18	32	16
06/15/03	72	66	69	7.2	5	8	2.0794	17	4	16
06/16/03	79	67	73	7.7	5	8.1	2.0919	18	6	16
06/17/03	80	65	73	3.9	36	5.9	1.775	20	1	16
06/18/03	81	60	71	1.3	22	2.9	1.0647	12	31	9
06/19/03	73	62	68	3.9	2	7.7	2.0412	20	5	16
06/20/03	73	51	62	9	2	9.8	2.2824	24	3	21
06/21/03	77	49	63	5.2	36	6.3	1.8405	20	2	15
06/22/03	82	51	67	1	34	2.4	0.8755	15	33	12
06/23/03	84	53	69	0.6	29	2.2	0.7885	13	28	10
06/24/03	87	56	72	0.8	18	2.2	0.7885	14	23	10
06/25/03	86	60	73	4.4	21	5.3	1.6677	16	21	12
06/26/03	85	64	75	7.1	23	9	2.1972	26	24	18
06/27/03	77	59	68	2.7	30	5.4	1.6864	14	25	12
06/28/03	81	54	68	2.9	21	4.4	1.4816	12	21	9
06/29/03	85	62	74	6.8	22	7.2	1.9741	18	21	13
06/30/03	86	64	75	0.9	19	3.6	1.2809	14	20	12
07/01/03	84	66	75	3.5	19	5.8	1.7579	17	21	13
07/02/03	87	65	76	1.2	4	4	1.3863	14	5	13
07/03/03	90	64	77	2.6	22	3.7	1.3083	15	28	12
07/04/03	90	67	79	3.8	22	8.5	2.1401	40	1	35
07/05/03	89	66	78	2.1	24	7	1.9459	23	31	21
07/06/03	88	67	78	4	21	6.3	1.8405	26	19	22
07/07/03	88	67	78	4.7	21	8.3	2.1163	38	1	35
07/08/03	91	71	81	4.9	23	7.6	2.0281	30	25	21
07/09/03	86	68	77	4.3	25	7.7	2.0412	32	23	23
07/10/03	82	70	76	5.6	22	8.4	2.1282	25	30	21
07/11/03	79	63	71	10	27	11	2.3979	31	28	24
07/12/03	81	62	72	4.6	30	M		22	31	18
07/13/03	82	60	71	3.5	10	4.9	1.5892	15	10	13
07/14/03	84	64	74	4.1	12	5.8	1.7579	17	12	14
07/15/03	79	64	72	6	22	7.9	2.0669	47	31	39
07/16/03	82	70	76	5	35	6.5	1.8718	15	1	12
07/17/03	82	59	71	0.4	18	2.1	0.7419	14	28	10
07/18/03	83	66	75	3.5	28	5.6	1.7228	29	1	21

07/19/03	81	61	71	4.7	5	6.9	1.9315	18	7	15
07/20/03	85	56	71	3.1	22	4.4	1.4816	16	22	12
07/21/03	79	66	73	8.5	22	10.5	2.3514	49	27	39
07/22/03	79	66	73	6	29	7.4	2.0015	18	1	16
07/23/03	74	63	69	6.6	35	8	2.0794	20	35	16
07/24/03	81	55	68	0.7	25	2.1	0.7419	12	2	9
07/25/03	84	58	71	0.5	21	2.1	0.7419	14	23	10
07/26/03	85	61	73	3.2	22	4.6	1.5261	17	25	13
07/27/03	87	69	78	5.6	24	7.6	2.0281	23	22	17
07/28/03	79	68	74	2.7	33	6.6	1.8871	24	32	21
07/29/03	80	63	72	5.6	4	7	1.9459	17	5	14
07/30/03	84	61	73	1.2	8	2.4	0.8755	12	13	9
07/31/03	82	68	75	1.4	18	3.6	1.2809	13	28	10
08/01/03	86	63	75	3.9	21	4.8	1.5686	16	19	14
08/02/03	80	67	74	3.5	20	7.1	1.9601	30	17	24
08/03/03	80	67	74	5	20	6.1	1.8083	16	19	13
08/04/03	73	62	68	3.3	22	5.1	1.6292	30	28	24
08/05/03	80	63	72	2.2	32	3.9	1.361	13	28	12
08/06/03	82	61	72	3	36	3.7	1.3083	14	32	10
08/07/03	84	66	75	3.3	1	5.6	1.7228	22	11	18
08/08/03	84	63	74	3.1	2	4.8	1.5686	26	10	22
08/09/03	82	63	73	3.2	36	4.6	1.5261	32	1	26
08/10/03	82	65	74	3.1	3	4.9	1.5892	25	6	21
08/11/03	80	64	72	1.3	3	4.6	1.5261	18	7	15
08/12/03	82	61	72	3.1	8	4.6	1.5261	15	9	13
08/13/03	87	68	78	4.5	7	6.8	1.9169	17	12	15
08/14/03	90	70	80	0.4	12	2.6	0.9555	20	7	16
08/15/03	86	71	79	1.3	27	2.7	0.9933	15	17	12
08/16/03	89	70	80	5.3	30	6.5	1.8718	23	29	20
08/17/03	84	68	76	6.7	6	8.1	2.0919	23	2	18
08/18/03	81	61	71	5.8	6	7.3	1.9879	15	9	13
08/19/03	84	62	73	3.9	10	5.5	1.7047	14	12	13
08/20/03	88	62	75	1.3	16	2.8	1.0296	13	15	9
08/21/03	89	73	81	5.7	22	6.7	1.9021	18	26	14
08/22/03	84	69	77	2.5	18	6.1	1.8083	28	16	21
08/23/03	82	67	75	7	5	8.7	2.1633	21	6	17
08/24/03	82	62	72	2	8	5	1.6094	10	10	9
08/25/03	87	62	75	3.3	23	5	1.6094	15	27	14
08/26/03	90	69	80	7.2	23	8.2	2.1041	21	27	17
08/27/03	88	70	79	1.9	24	4.8	1.5686	24	29	21
08/28/03	89	66	78	3.4	21	4.6	1.5261	17	20	13
08/29/03	87	70	79	6.1	21	7	1.9459	22	34	20
08/30/03	76	70	73	6.2	6	8.4	2.1282	16	7	14
08/31/03	72	63	68	6.9	10	8.7	2.1633	17	6	15
09/01/03	83	68	76	5.3	21	8.3	2.1163	25	34	20
09/02/03	75	68	72	3.5	20	4.3	1.4586	16	19	13
09/03/03	79	66	73	2.1	31	3	1.0986	13	1	10
09/04/03	76	61	69	7.3	34	8.1	2.0919	23	34	21
09/05/03	73	56	65	4.6	5	6.2	1.8245	15	7	13
09/06/03	75	55	65	3.2	7	5.1	1.6292	16	7	14
09/07/03	76	55	66	1.8	9	3.2	1.1632	16	4	10
09/08/03	78	60	69	2.5	4	4.2	1.4351	13	9	10

09/09/03	82	63	73	3.1	7	4.7	1.5476	14	12	12
09/10/03	82	62	72	3.3	11	4.4	1.4816	14	12	10
09/11/03	79	63	71	7.2	9	7.5	2.0149	17	10	15
09/12/03	80	59	70	4.6	13	6.1	1.8083	14	13	12
09/13/03	82	59	71	2.5	16	4.5	1.5041	14	19	12
09/14/03	75	64	70	6.8	18	7.3	1.9879	18	18	16
09/15/03	74	54	64	6.9	28	7.2	1.9741	22	30	17
09/16/03	80	49	65	0.8	14	2.8	1.0296	13	14	12
09/17/03	79	56	68	6.3	11	7.2	1.9741	25	10	21
09/18/03	78	58	68	4	5	5.6	1.7228	15	7	13
09/19/03	72	50	61	5.3	28	6.7	1.9021	23	28	18
09/20/03	73	43	58	0.5	11	1.1	0.0953	10	8	7
09/21/03	77	52	65	4	12	4.9	1.5892	16	13	10
09/22/03	71	58	65	4.1	20	8.7	2.1633	26	15	22
09/23/03	68	47	58	6.7	28	8.1	2.0919	22	27	20
09/24/03	78	47	63	9.5	19	9.8	2.2824	20	22	15
09/25/03	69	50	60	3.4	29	5.2	1.6487	18	22	14
09/26/03	72	49	61	5.6	17	7.4	2.0015	22	19	17
09/27/03	72	52	62	4.9	28	7.5	2.0149	41	28	35
09/28/03	58	45	52	6.7	27	7.3	1.9879	24	28	21
09/29/03	58	41	50	5.7	28	6.6	1.8871	21	30	17
09/30/03	64	39	52	5.8	26	7.4	2.0015	24	29	20
10/01/03	59	36	48	3.8	28	5.5	1.7047	23	27	18
10/02/03	54	32	43	2.6	36	4.2	1.4351	21	1	16
10/03/03	60	31	46	8.3	21	8.8	2.1748	26	23	20
10/04/03	61	41	51	8.2	27	9.2	2.2192	24	22	20
10/05/03	70	42	56	3.6	27	6.3	1.8405	22	27	18
10/06/03	69	47	58	1.6	5	2.9	1.0647	12	36	10
10/07/03	74	44	59	0	0	0.4	-0.916	9	20	7
10/08/03	76	49	63	1.5	13	M		14	11	10
10/09/03	74	55	65	4.1	10	5.3	1.6677	17	10	15
10/10/03	75	61	68	4.3	11	5.7	1.7405	15	12	12
10/11/03	78	60	69	1.1	9	3.5	1.2528	13	20	12
10/12/03	71	48	60	3.5	33	5	1.6094	20	32	14
10/13/03	71	44	58	2.2	14	2.9	1.0647	15	11	14
10/14/03	63	51	57	11	27	14.8	2.6946	40	29	35
10/15/03	63	43	53	6.5	28	7.6	2.0281	28	32	21
10/16/03	69	42	56	1.7	25	7.2	1.9741	22	2	18
10/17/03	55	41	48	5.5	5	6.2	1.8245	16	2	14
10/18/03	62	34	48	4.3	22	4.5	1.5041	20	22	16
10/19/03	70	46	58	0.5	20	2.9	1.0647	13	35	12
10/20/03	76	45	61	6	21	7.1	1.9601	22	22	16
10/21/03	69	51	60	7.9	29	9.8	2.2824	29	29	23
10/22/03	54	37	46	7.4	34	7.7	2.0412	23	32	17
10/23/03	56	38	47	4.1	2	5.8	1.7579	21	35	15
10/24/03	59	35	47	5.7	14	M		18	17	14
10/25/03	73	49	61	4.1	22	9	2.1972	24	30	21
10/26/03	54	44	49	6.9	34	8.1	2.0919	23	34	17
10/27/03	52	33	43	1.2	26	3.1	1.1314	18	24	15
10/28/03	50	35	43	7.6	20	8.4	2.1282	21	19	16
10/29/03	56	37	47	3.7	25	6	1.7918	29	28	22
10/30/03	74	44	59	9.1	19	9.8	2.2824	33	18	25

10/31/03	75	60	68	10.3	21	10.8	2.3795	25	19	22
11/01/03	71	58	65	2.3	22	3.3	1.1939	15	21	12
11/02/03	77	53	65	4.9	21	M		21	26	15
11/03/03	77	50	64	5.5	20	5.8	1.7579	20	18	16
11/04/03	79	47	63	6.1	20	7.5	2.0149	23	20	16
11/05/03	72	50	61	3.8	32	9.1	2.2083	22	35	18
11/06/03	50	41	46	8.4	2	9.4	2.2407	20	2	14
11/07/03	47	30	39	5.2	35	5.8	1.7579	17	36	12
11/08/03	42	28	35	8.3	3	9.1	2.2083	21	1	17
11/09/03	45	28	37	8.4	7	9.3	2.23	17	6	14
11/10/03	58	32	45	4	16	5.9	1.775	15	20	13
11/11/03	60	53	57	10	21	10.2	2.3224	24	19	18
11/12/03	67	42	55	8.9	28	11.4	2.4336	45	29	37
11/13/03	42	29	36	18.5	29	18.8	2.9339	39	30	35
11/14/03	45	24	35	4.9	24	6.4	1.8563	20	24	14
11/15/03	44	35	40	7.7	19	7.8	2.0541	18	21	14
11/16/03	53	41	47	3.2	19	5	1.6094	15	26	12
11/17/03	58	31	45	5.9	14	6.5	1.8718	20	16	15
11/18/03	65	55	60	13.6	17	13.9	2.6319	31	17	26
11/19/03	60	44	52	9.8	30	12.9	2.5572	35	33	29
11/20/03	62	33	48	6.8	20	7.6	2.0281	18	19	16
11/21/03	66	43	55	6.6	19	6.9	1.9315	17	19	14
11/22/03	67	48	58	9.2	20	9.4	2.2407	24	21	18
11/23/03	67	52	60	15.2	18	15.3	2.7279	36	20	25
11/24/03	63	26	45	13.1	27	14.7	2.6878	32	30	25
11/25/03	39	22	31	6.3	17	6.9	1.9315	18	14	16
11/26/03	50	32	41	6.9	19	7.5	2.0149	17	15	15
11/27/03	49	44	47	2.8	15	5.1	1.6292	17	17	15
11/28/03	47	29	38	16	30	17.4	2.8565	36	29	31
11/29/03	36	27	32	11.9	26	14.2	2.6532	33	28	28
11/30/03	54	34	44	10.4	23	11.2	2.4159	25	24	18
12/01/03	48	31	40	13.4	29	14.1	2.6462	37	31	29
12/02/03	39	20	30	3.1	33	5.1	1.6292	12	5	9
12/03/03	37	33	35	12.3	10	12.4	2.5177	24	8	22
12/04/03	41	32	37	7.5	11	7.8	2.0541	16	11	13
12/05/03	42	34	38	5.5	28	M		20	27	17
12/06/03	42	34	38	8.3	35	9.4	2.2407	23	2	21
12/07/03	40	28	34	2.3	36	3.9	1.361	17	34	15
12/08/03	47	28	38	6.9	15	7.4	2.0015	20	15	16
12/09/03	53	45	49	8.8	18	9.3	2.23	20	15	16
12/10/03	51	36	44	9.7	17	13.4	2.5953	28	13	23
12/11/03	38	27	33	14	28	14.2	2.6532	30	27	25
12/12/03	31	19	25	3.6	33	6.5	1.8718	17	33	14
12/13/03	31	24	28	12.5	9	12.7	2.5416	23	9	21
12/14/03	31	27	29	4.4	30	8.1	2.0919	23	30	18
12/15/03	38	26	32	8.7	18	10.5	2.3514	21	17	17
12/16/03	49	31	40	10.1	23	14.5	2.6741	28	30	25
12/17/03	31	21	26	10.1	27	10.6	2.3609	23	28	20
12/18/03	33	24	29	3.2	31	5.8	1.7579	16	29	13
12/19/03	29	25	27	11.9	29	12.2	2.5014	28	30	23
12/20/03	30	13	22	5.3	27	6.9	1.9315	20	30	16
12/21/03	44	20	32	11.5	20	11.6	2.451	24	22	20

12/22/03	50	41	46	9.5	21	10.4	2.3418	24	22	18
12/23/03										
12/24/03										
12/25/03										
12/26/03										
12/27/03	50	25	38	5.6	14	6	1.7918	16	15	14
12/28/03										
12/29/03										
12/30/03										
12/31/03										
01/01/02	29	9	19	2.3	26	3.8	1.335	14	21	10
01/02/02	32	14	23	5.4	6	6.4	1.8563	20	7	15
01/03/02	35	19	27	6.8	33	7.9	2.0669	22	31	17
01/04/02	36	12	24	6.9	22	7.3	1.9879	23	19	18
01/05/02	40	27	34	7.7	21	7.9	2.0669	22	22	17
01/06/02	39	32	36	4.9	30	6.6	1.8871	17	31	14
01/07/02	33	17	25	9.1	32	10.2	2.3224	23	28	20
01/08/02	35	14	25	10.3	21	10.4	2.3418	23	21	18
01/09/02	48	33	41	9	22	9.1	2.2083	21	20	16
01/10/02	51	39	45	4.4	27	6.5	1.8718	23	30	18
01/11/02	43	28	36	7	28	7.9	2.0669	22	31	17
01/12/02	47	25	36	8.2	24	10.1	2.3125	35	28	29
01/13/02	44	25	35	6	23	7.4	2.0015	17	20	14
01/14/02	52	33	43	10.6	22	12.9	2.5572	32	25	26
01/15/02	39	25	32	11.2	27	12.2	2.5014	33	28	26
01/16/02	45	21	33	6	18	6.5	1.8718	18	17	16
01/17/02	45	27	36	8.9	29	9.6	2.2618	29	31	23
01/18/02	42	20	31	4.1	26	6	1.7918	21	27	17
01/19/02	33	20	27	4.1	2	6.3	1.8405	21	1	15
01/20/02	31	16	24	5.3	18	6.4	1.8563	16	18	14
01/21/02	45	31	38	9	24	9.7	2.2721	25	24	18
01/22/02	54	27	41	9.6	18	10	2.3026	29	20	20
01/23/02	57	46	52	7.7	19	7.8	2.0541	26	22	20
01/24/02	59	31	45	7.4	32	9.4	2.2407	25	32	21
01/25/02	47	22	35	5.3	24	6.3	1.8405	16	20	12
01/26/02	52	27	40	8.9	21	9.1	2.2083	18	19	16
01/27/02	57	34	46	8.3	20	8.6	2.1518	20	18	17
01/28/02	66	39	53	10.4	20	10.6	2.3609	26	20	22
01/29/02	66	56	61	8.2	22	9.3	2.23	28	32	23
01/30/02	56	45	51	7.8	5	8.7	2.1633	23	2	18
01/31/02	65	47	56	8	19	10.8	2.3795	31	22	23
02/01/02	61	26	44	12.8	28	14.4	2.6672	41	27	36
02/02/02	37	20	29	2	22	3.8	1.335	12	28	9
02/03/02	46	28	37	7	25	7.5	2.0149	20	31	17
02/04/02	35	19	27	13.7	32	15.1	2.7147	32	31	26
02/05/02	38	15	27	2.9	23	4.6	1.5261	21	22	13
02/06/02	37	23	30	0.4	10	3.1	1.1314	13	2	9
02/07/02	51	32	42	6.5	31	8.1	2.0919	21	29	17
02/08/02	55	25	40	6	22	6.7	1.9021	21	23	16
02/09/02	62	31	47	8.2	15	8.8	2.1748	23	20	17
02/10/02	55	35	45	9.1	24	13.8	2.6247	41	29	29
02/11/02	41	29	35	2.9	30	8	2.0794	30	34	24

02/12/02	50	30	40	11.3	26	12.9	2.5572	32	26	26
02/13/02	38	24	31	5	34	7.7	2.0412	23	33	17
02/14/02	47	18	33	6.3	20	6.6	1.8871	16	20	14
02/15/02	54	32	43	8.8	24	10.9	2.3888	26	24	22
02/16/02	54	30	42	8.1	26	11.3	2.4248	40	30	33
02/17/02	43	27	35	6.3	34	8.1	2.0919	25	33	21
02/18/02	50	23	37	8.4	16	8.7	2.1633	20	17	16
02/19/02	54	38	46	12.4	18	12.7	2.5416	25	17	21
02/20/02	59	44	52	12	21	14.8	2.6946	46	26	33
02/21/02	45	34	40	11.1	27	12.2	2.5014	26	28	23
02/22/02	36	24	30	6.9	31	7.5	2.0149	18	33	16
02/23/02	45	17	31	0.7	17	1.7	0.5306	10	14	9
02/24/02	57	27	42	6.3	18	6.9	1.9315	18	17	16
02/25/02	64	38	51	9.7	21	11.1	2.4069	26	23	20
02/26/02	46	17	32	12.3	27	13.3	2.5878	29	26	23
02/27/02	26	16	21	12.8	26	13.1	2.5726	26	27	23
02/28/02	35	14	25	6.8	22	7.4	2.0015	22	21	17
03/01/02	49	24	37	5.8	16	7.9	2.0669	21	13	17
03/02/02	49	37	43	9.7	15	11.2	2.4159	26	14	22
03/03/02	47	14	31	16.1	27	16.5	2.8034	30	27	23
03/04/02	23	7	15	9.2	25	10.8	2.3795	28	27	22
03/05/02	48	23	36	8.7	22	9.2	2.2192	22	26	17
03/06/02	60	40	50	11	21	11.2	2.4159	29	22	22
03/07/02	66	50	58	6.9	21	8.1	2.0919	23	18	18
03/08/02	71	49	60	12.5	19	12.7	2.5416	32	19	25
03/09/02	63	29	46	15.4	23	21.7	3.0773	56	28	45
03/10/02	39	23	31	13	28	14.5	2.6741	36	25	30
03/11/02	48	19	34	7	13	7.3	1.9879	18	12	16
03/12/02	51	39	45	3.5	6	6.6	1.8871	18	25	13
03/13/02	61	41	51	1.5	28	4.2	1.4351	15	27	13
03/14/02	63	34	49	8.3	18	8.7	2.1633	23	16	20
03/15/02	64	46	55	4.2	23	10.5	2.3514	31	32	28
03/16/02	47	37	42	11.3	3	12.7	2.5416	25	1	22
03/17/02	50	35	43	5.6	8	9.3	2.23	24	9	21
03/18/02	53	44	49	3.9	36	6.2	1.8245	17	32	15
03/19/02	48	44	46	9.6	8	10.1	2.3125	18	9	16
03/20/02	48	40	44	5.9	34	7.3	1.9879	23	34	18
03/21/02	47	20	34	10.9	31	12.2	2.5014	33	32	26
03/22/02	34	17	26	11.5	28	12.5	2.5257	29	26	23
03/23/02	49	24	37	9	23	9.2	2.2192	29	23	21
03/24/02	59	29	44	3	8	7.3	1.9879	22	6	18
03/25/02	53	32	43	12.9	6	14	2.6391	30	8	24
03/26/02	37	30	34	7.4	34	11.9	2.4765	25	31	21
03/27/02	44	30	37	3.1	31	6.6	1.8871	16	33	14
03/28/02	53	27	40	6.9	16	7.8	2.0541	24	16	20
03/29/02	68	40	54	5.3	21	9.6	2.2618	29	30	23
03/30/02	60	33	47	2.8	26	6.2	1.8245	17	31	15
03/31/02	55	41	48	2.6	3	6.8	1.9169	24	33	22
04/01/02	56	29	43	1.9	21	6.1	1.8083	23	30	15
04/02/02	75	45	60	9	24	13.8	2.6247	32	30	26
04/03/02	45	34	40	10.2	33	10.9	2.3888	28	31	21
04/04/02	45	28	37	3.6	35	5.4	1.6864	14	34	10

04/05/02	48	28	38	7.8	33	9	2.1972	26	2	23
04/06/02	44	27	36	5.8	3	9	2.1972	25	2	22
04/07/02	65	29	47	6.7	17	8.5	2.1401	18	19	16
04/08/02	73	55	64	17.1	19	17.4	2.8565	41	20	33
04/09/02	64	46	55	6.1	29	12.4	2.5177	29	19	22
04/10/02	64	37	51	6.3	6	7.8	2.0541	16	9	14
04/11/02	78	46	62	5.9	17	7.5	2.0149	21	22	15
04/12/02	72	60	66	9.2	21	11.2	2.4159	28	20	22
04/13/02	68	57	63	2.6	20	5.1	1.6292	14	27	12
04/14/02	68	58	63	5.6	21	6.6	1.8871	24	23	18
04/15/02	82	61	72	9.5	21	9.8	2.2824	22	21	18
04/16/02	83	62	73	8.4	20	8.7	2.1633	24	19	20
04/17/02	81	59	70	5.5	21	6.8	1.9169	28	22	24
04/18/02	83	56	70	6	20	6.7	1.9021	22	23	17
04/19/02	84	65	75	5.6	23	7.2	1.9741	54	28	45
04/20/02	72	58	65	2.9	2	6.9	1.9315	18	31	14
04/21/02	58	44	51	7.4	6	10.6	2.3609	26	31	20
04/22/02	55	41	48	13.6	30	14.1	2.6462	38	29	32
04/23/02	60	33	47	1	13	2.6	0.9555	12	25	9
04/24/02	72	44	58	9.9	16	10.8	2.3795	33	14	30
04/25/02	60	41	51	11.9	30	13.2	2.5802	38	32	30
04/26/02	61	40	51	2.8	32	5.8	1.7579	18	33	15
04/27/02	60	48	54	9.5	13	10.4	2.3418	21	14	17
04/28/02	76	46	61	15.4	27	18.6	2.9232	48	28	38
04/29/02	57	42	50	7.3	30	8.3	2.1163	22	34	18
04/30/02	71	40	56	1.7	4	7.4	2.0015	20	28	16
05/01/02	68	50	59	8.4	11	10.6	2.3609	24	16	21
05/02/02	71	45	58	10.5	29	12.6	2.5337	28	32	23
05/03/02	62	35	49	2	1	6	1.7918	22	1	15
05/04/02	67	46	57	4.7	7	7.1	1.9601	18	9	15
05/05/02	73	39	56	5.4	18	6.5	1.8718	17	17	14
05/06/02	67	52	60	7.9	19	8.5	2.1401	29	15	25
05/07/02	77	61	69	1	33	7.5	2.0149	31	32	28
05/08/02	79	62	71	4.2	13	7.9	2.0669	20	26	15
05/09/02	73	50	62	9	25	11.6	2.451	31	27	24
05/10/02	65	41	53	1.9	33	4	1.3863	15	34	12
05/11/02	72	47	60	9.6	11	10.7	2.3702	30	9	22
05/12/02	78	62	70	7.9	22	9.5	2.2513	31	33	28
05/13/02	62	46	54	6.9	30	9.6	2.2618	32	33	24
05/14/02	62	43	53	8.3	29	9.3	2.23	29	29	21
05/15/02	70	41	56	3.7	21	5.1	1.6292	18	19	15
05/16/02	77	50	64	8.1	21	9.1	2.2083	28	22	20
05/17/02	65	44	55	10.3	1	11.6	2.451	35	1	28
05/18/02	55	36	46	9.7	34	10.4	2.3418	25	32	21
05/19/02	57	30	44	3.2	35	5.2	1.6487	18	35	15
05/20/02	55	39	47	6.3	1	7.2	1.9741	21	32	17
05/21/02	53	39	46	5.4	7	7.9	2.0669	17	8	14
05/22/02	65	33	49	5.1	16	5.6	1.7228	17	14	13
05/23/02	74	42	58	8.3	21	8.5	2.1401	23	18	17
05/24/02	78	58	68	5.2	23	8.3	2.1163	20	26	15
05/25/02	80	61	71	6.3	21	9	2.1972	44	28	36
05/26/02	73	50	62	2.8	2	5.4	1.6864	17	34	15

05/27/02	81	59	70	1.1	9	3.7	1.3083	20	27	16
05/28/02	79	61	70	1.7	11	5	1.6094	23	11	21
05/29/02	80	61	71	0.3	17	4	1.3863	22	30	20
05/30/02	83	60	72	2.2	21	4.8	1.5686	16	21	13
05/31/02	85	63	74	5.1	25	6.9	1.9315	24	25	21
06/01/02	86	66	76	4.7	25	6.3	1.8405	23	27	17
06/02/02	81	67	74	4.7	7	7.9	2.0669	21	8	17
06/03/02	88	67	78	4.8	17	7.8	2.0541	17	19	14
06/04/02	88	71	80	8.1	21	8.4	2.1282	21	23	16
06/05/02	84	66	75	5.5	22	9.2	2.2192	36	30	31
06/06/02	66	60	63	8.3	2	8.8	2.1748	20	2	17
06/07/02	71	56	64	4.5	8	6.4	1.8563	17	14	14
06/08/02	82	55	69	0.6	21	3.5	1.2528	16	26	12
06/09/02	84	65	75	3.4	24	4.8	1.5686	15	28	12
06/10/02	85	64	75	2.9	21	4.4	1.4816	15	20	12
06/11/02	83	62	73	7.8	22	8.2	2.1041	23	21	17
06/12/02	82	68	75	6.6	26	7.8	2.0541	22	28	16
06/13/02	80	65	73	3.4	25	6.9	1.9315	23	30	18
06/14/02	74	56	65	9.3	27	9.8	2.2824	37	32	30
06/15/02	74	54	64	9.3	27	11	2.3979	37	34	29
06/16/02	75	54	65	6.2	30	7.9	2.0669	20	30	17
06/17/02	78	48	63	4.1	27	4.7	1.5476	18	28	16
06/18/02	80	54	67	3.7	12	5.6	1.7228	15	12	13
06/19/02	88	62	75	4.1	12	5.4	1.6864	15	13	10
06/20/02	90	68	79	0.6	19	2.6	0.9555	15	12	10
06/21/02	91	63	77	1.1	14	3.6	1.2809	15	10	12
06/22/02	89	64	77	2	13	4.6	1.5261	16	11	13
06/23/02	89	64	77	1.5	19	3	1.0986	13	18	10
06/24/02	88	65	77	1.5	23	2.9	1.0647	10	16	9
06/25/02	88	68	78	0.9	18	4.9	1.5892	26	18	22
06/26/02	86	66	76	4.9	23	6.6	1.8871	18	26	15
06/27/02	85	67	76	5.4	23	7.6	2.0281	35	36	26
06/28/02	83	67	75	3	31	5	1.6094	18	29	14
06/29/02	87	62	75	1.2	19	2.2	0.7885	14	16	9
06/30/02	88	67	78	1.5	24	3.1	1.1314	13	28	10
07/01/02	91	69	80	2.1	27	3.7	1.3083	14	27	12
07/02/02	94	70	82	3.5	35	5	1.6094	16	2	13
07/03/02	94	67	81	1.2	34	4.5	1.5041	14	7	12
07/04/02	95	67	81	2	33	3.9	1.361	15	30	13
07/05/02	92	72	82	7.2	2	8.6	2.1518	24	6	20
07/06/02	86	64	75	6.2	6	7.9	2.0669	20	3	17
07/07/02	89	64	77	2.5	7	4.3	1.4586	17	6	13
07/08/02	91	63	77	1.3	27	3.2	1.1632	16	25	12
07/09/02	89	66	78	5.3	24	7	1.9459	31	30	24
07/10/02	86	70	78	7.1	4	9.7	2.2721	24	2	20
07/11/02	83	64	74	11.5	7	11.8	2.4681	22	5	18
07/12/02	84	61	73	4.1	6	6	1.7918	16	7	14
07/13/02	77	66	72	5	12	5.8	1.7579	17	14	15
07/14/02	85	62	74	2.7	3	5	1.6094	14	1	12
07/15/02	91	62	77	2.1	29	3.3	1.1939	15	30	12
07/16/02	90	63	77	1	28	2.8	1.0296	20	29	14
07/17/02	87	65	76	3.3	22	3.7	1.3083	24	26	18

07/18/02	88	69	79	3.4	25	5.6	1.7228	16	27	13
07/19/02	88	68	78	4.3	25	6.3	1.8405	21	23	17
07/20/02	92	67	80	1.1	26	4.3	1.4586	20	14	17
07/21/02	93	68	81	2.2	21	4.1	1.411	12	22	9
07/22/02	91	73	82	5.6	22	7.3	1.9879	31	26	25
07/23/02	80	72	76	3.3	32	7.6	2.0281	20	30	17
07/24/02	86	66	76	7.1	3	8.4	2.1282	20	1	16
07/25/02	88	65	77	1.1	1	4.7	1.5476	15	27	12
07/26/02	87	64	76	6.6	24	7.1	1.9601	22	27	18
07/27/02	92	76	84	7.4	22	8.9	2.1861	21	21	17
07/28/02	93	75	84	8.6	23	9.2	2.2192	28	27	18
07/29/02	94	73	84	7.9	22	9.2	2.2192	47	29	37
07/30/02	90	69	80	4.7	29	6	1.7918	20	31	16
07/31/02	92	66	79	0.8	27	3	1.0986	15	21	10
08/01/02	95	69	82	0.8	18	3	1.0986	17	19	13
08/02/02	96	69	83	2.5	34	4.4	1.4816	30	34	23
08/03/02	97	73	85	3.8	9	5.9	1.775	16	10	12
08/04/02	97	73	85	0.9	34	4.5	1.5041	26	35	23
08/05/02	96	69	83	3.8	34	7	1.9459	22	32	18
08/06/02	83	66	75	14	6	14.3	2.6603	25	2	23
08/07/02	81	59	70	11	6	12.8	2.5494	22	5	18
08/08/02	83	62	73	7.5	7	9.2	2.2192	24	1	18
08/09/02	87	64	76	6.4	7	7.8	2.0541	17	8	14
08/10/02	92	60	76	1.2	26	3.2	1.1632	20	28	15
08/11/02	91	63	77	2.8	23	5.1	1.6292	32	20	26
08/12/02	91	69	80	2.9	21	4.4	1.4816	20	20	15
08/13/02	94	65	80	7.3	21	8.1	2.0919	26	18	21
08/14/02	86	69	78	6.5	21	7.4	2.0015	23	21	17
08/15/02	87	70	79	7.1	21	7.4	2.0015	32	20	18
08/16/02	88	71	80	8.4	22	8.8	2.1748	23	28	18
08/17/02	87	70	79	7.4	22	8.6	2.1518	22	23	17
08/18/02	82	68	75	3.5	22	5.7	1.7405	37	28	30
08/19/02	82	67	75	4.6	26	7.3	1.9879	24	28	20
08/20/02	81	64	73	4.4	6	6.6	1.8871	18	8	14
08/21/02	90	65	78	2.3	12	4.8	1.5686	14	20	10
08/22/02	94	68	81	7.2	25	8.1	2.0919	25	28	22
08/23/02	90	70	80	3.7	24	6.1	1.8083	29	30	24
08/24/02	86	69	78	5.8	30	6.9	1.9315	22	32	17
08/25/02	85	68	77	4.7	3	6.1	1.8083	17	2	15
08/26/02	85	66	76	7.6	6	8.7	2.1633	21	10	18
08/27/02	85	67	76	5.2	6	7.8	2.0541	20	4	16
08/28/02	82	65	74	7.2	5	8.4	2.1282	25	4	21
08/29/02	82	64	73	6.6	7	8	2.0794	16	7	14
08/30/02	85	65	75	7.1	6	8.2	2.1041	20	8	17
08/31/02	88	68	78	8.4	7	9.4	2.2407	23	7	15
09/01/02	87	68	78	3.5	15	5.4	1.6864	15	16	13
09/02/02	90	66	78	3.6	22	4.6	1.5261	16	23	13
09/03/02	94	69	82	5	26	7.9	2.0669	22	23	17
09/04/02	87	64	76	7	1	7.7	2.0412	18	3	15
09/05/02	88	60	74	5.7	6	7.7	2.0412	20	5	16
09/06/02	91	64	78	5.2	9	7.1	1.9601	16	6	13
09/07/02	95	62	79	0.5	13	3	1.0986	14	18	10

09/08/02	96	64	80	0.9	2	3.2	1.1632	17	3	12
09/09/02	95	64	80	3	6	4.3	1.4586	17	7	13
09/10/02	94	65	80	5.5	32	6.7	1.9021	20	31	16
09/11/02	79	64	72	12.3	1	12.9	2.5572	29	2	24
09/12/02	79	52	66	3.4	8	5.8	1.7579	20	7	16
09/13/02	87	57	72	2.4	11	4.7	1.5476	17	16	12
09/14/02	84	69	77	7.9	20	8.3	2.1163	24	17	21
09/15/02	81	68	75	2.2	24	5.2	1.6487	17	31	13
09/16/02	79	62	71	3.2	1	4.6	1.5261	17	1	13
09/17/02	80	59	70	3.6	12	5.4	1.6864	14	13	12
09/18/02	86	66	76	7.2	19	7.9	2.0669	22	16	20
09/19/02	89	70	80	7.8	20	8.8	2.1748	29	28	21
09/20/02	84	63	74	10.4	20	11.9	2.4765	38	30	36
09/21/02	77	62	70	0.9	31	2.7	0.9933	13	25	9
09/22/02	74	47	61	6.3	33	7.1	1.9601	29	33	24
09/23/02	71	42	57	0.3	4	1.6	0.47	13	4	9
09/24/02	75	45	60	2	1	3.3	1.1939	15	5	12
09/25/02	73	55	64	7.3	8	8.2	2.1041	16	13	13
09/26/02	65	60	63	9.1	9	9.8	2.2824	20	6	17
09/27/02	71	59	65	8.9	1	10.3	2.3321	28	5	23
09/28/02	73	56	65	4.6	9	5.3	1.6677	15	9	13
09/29/02	78	54	66	1.4	11	2.8	1.0296	13	13	10
09/30/02	82	58	70	4.9	20	5.7	1.7405	18	19	16
10/01/02	81	65	73	5.1	21	6.6	1.8871	15	20	12
10/02/02	83	64	74	3.4	21	5.6	1.7228	18	19	14
10/03/02	83	68	76	4.5	20	6	1.7918	15	26	10
10/04/02	81	66	74	9.3	19	12.7	2.5416	44	16	37
10/05/02	67	50	59	3.8	32	5.6	1.7228	24	32	20
10/06/02	72	49	61	3.5	16	8	2.0794	23	24	18
10/07/02	62	47	55	6.6	34	8.7	2.1633	22	33	18
10/08/02	62	46	54	6.6	9	7.2	1.9741	20	12	15
10/09/02	64	49	57	0.5	8	1.9	0.6419	12	2	9
10/10/02	60	55	58	6.7	8	7	1.9459	15	8	13
10/11/02	66	58	62	8.2	7	9	2.1972	18	6	15
10/12/02	72	56	64	0.6	14	3.8	1.335	13	1	9
10/13/02	61	41	51	10.1	33	10.7	2.3702	26	35	22
10/14/02	57	37	47	7.4	8	8.3	2.1163	18	7	15
10/15/02	56	40	48	0.9	2	2.6	0.9555	9	33	8
10/16/02	50	37	44	7	34	7.4	2.0015	20	34	15
10/17/02	52	36	44	2.8	29	4.9	1.5892	17	27	14
10/18/02	62	38	50	8.6	20	9.2	2.2192	24	20	20
10/19/02	59	49	54	5.2	24	7.9	2.0669	22	20	15
10/20/02	52	38	45	4.5	3	6.5	1.8718	15	3	13
10/21/02	60	41	51	4.2	7	5.3	1.6677	16	9	13
10/22/02	64	35	50	1.6	34	3.3	1.1939	15	35	10
10/23/02	57	39	48	8.3	4	8.8	2.1748	20	5	17
10/24/02	57	43	50	10.2	6	10.6	2.3609	20	9	16
10/25/02	59	43	51	2.4	9	8.9	2.1861	30	28	22
10/26/02	52	48	50	4.8	30	5.9	1.775	18	28	16
10/27/02	53	47	50	4.9	2	6	1.7918	16	7	15
10/28/02	55	44	50	10.7	7	11.3	2.4248	23	8	18
10/29/02	48	39	44	15.5	6	16	2.7726	32	7	28

10/30/02	43	37	40	7.4	1	8.4	2.1282	21	2	18
10/31/02	47	39	43	1.4	28	3.3	1.1939	14	27	12
11/01/02	46	31	39	10.3	29	10.9	2.3888	28	29	23
11/02/02	49	26	38	6.3	25	8.1	2.0919	24	28	18
11/03/02	43	28	36	3	21	3.7	1.3083	13	20	10
11/04/02	45	37	41	3.8	28	4.6	1.5261	15	28	12
11/05/02	47	42	45	2.8	10	8.5	2.1401	21	30	16
11/06/02	45	40	43	12.2	30	12.6	2.5337	25	29	22
11/07/02	55	34	45	5	22	6.9	1.9315	18	21	14
11/08/02	63	44	54	11.9	20	12.1	2.4932	28	18	21
11/09/02	66	55	61	15.5	19	15.9	2.7663	32	20	26
11/10/02	74	55	65	10.1	20	12.2	2.5014	41	29	31
11/11/02	57	40	49	7.2	28	9	2.1972	23	28	20
11/12/02	45	37	41	5.1	35	6.5	1.8718	20	2	13
11/13/02	55	35	45	7.3	23	7.8	2.0541	17	23	14
11/14/02	56	43	50	8.7	21	8.8	2.1748	21	20	17
11/15/02	49	39	44	3.4	6	8	2.0794	23	1	18
11/16/02	39	33	36	11.9	1	12.1	2.4932	24	2	21
11/17/02	38	29	34	8.1	32	8.9	2.1861	22	33	16
11/18/02	48	22	35	8.1	17	8.9	2.1861	23	18	20
11/19/02	54	31	43	8.8	24	10.4	2.3418	30	21	23
11/20/02	58	29	44	5.9	19	6.3	1.8405	18	20	15
11/21/02	54	35	45	7.9	24	9.7	2.2721	32	28	28
11/22/02	38	34	36	15.2	31	15.7	2.7537	32	32	25
11/23/02	44	27	36	5.7	22	7.1	1.9601	23	20	17
11/24/02	54	28	41	0.7	26	3	1.0986	15	18	10
11/25/02	40	33	37	8.1	36	9.5	2.2513	17	2	16
11/26/02	34	29	32	6.8	4	9.2	2.2192	21	7	17
11/27/02	34	21	28	3.8	36	5.5	1.7047	17	2	13
11/28/02	33	19	26	5.1	23	6.1	1.8083	17	27	15
11/29/02	53	29	41	12.1	23	12.5	2.5257	33	23	25
11/30/02	50	25	38	15.2	29	16.5	2.8034	44	28	37
12/01/02	32	17	25	8.9	25	10.7	2.3702	24	22	20
12/02/02	47	28	38	6	23	11.1	2.4069	29	2	23
12/03/02	30	20	25	13.1	5	14	2.6391	28	5	23
12/04/02	26	21	24	10.8	7	11.2	2.4159	22	5	17
12/05/02	28	21	25	7.7	35	10	2.3026	23	2	18
12/06/02	27	17	22	5.7	25	7.3	1.9879	16	33	13
12/07/02	39	19	29	9.3	22	9.5	2.2513	20	21	15
12/08/02	41	26	34	4.4	32	8.4	2.1282	20	36	16
12/09/02	36	20	28	2.8	8	3.5	1.2528	10	9	9
12/10/02	37	23	30	5	5	5.6	1.7228	15	2	12
12/11/02	35	32	34	3.2	4	4.5	1.5041	8	34	6
12/12/02	36	33	35	3.8	18	5	1.6094	13	16	12
12/13/02	36	33	35	10	5	12.1	2.4932	22	1	18
12/14/02	37	33	35	9.3	31	11.3	2.4248	25	32	21
12/15/02	49	30	40	8.1	23	9	2.1972	23	22	17
12/16/02	44	32	38	8.4	6	10.4	2.3418	22	31	17
12/17/02	40	32	36	10.8	10	11	2.3979	20	9	17
12/18/02	56	40	48	15.2	17	15.6	2.7473	32	18	26
12/19/02	53	41	47	8	20	12.2	2.5014	40	28	32
12/20/02	44	34	39	10.8	25	11.4	2.4336	31	31	25

12/21/02	48	35	42	11.4	24	12.3	2.5096	33	25	23
12/22/02	45	31	38	10.6	26	12.2	2.5014	35	28	30
12/23/02	38	28	33	7.7	25	8.3	2.1163	21	26	16
12/24/02	35	30	33	11.6	7	12.1	2.4932	26	6	22
12/25/02	31	26	29	13.5	29	13.7	2.6174	24	29	21
12/26/02	28	24	26	7.3	27	8.2	2.1041	22	29	18
12/27/02	32	24	28	1.9	21	3.5	1.2528	12	24	9
12/28/02	45	26	36	8.1	23	9	2.1972	23	26	17
12/29/02	52	27	40	5.2	18	6	1.7918	16	27	13
12/30/02	55	38	47	11.2	20	11.3	2.4248	24	19	18
12/31/02	54	43	49	2	10	9.8	2.2824	24	5	21
01/01/01	30	20	25	4.3	33	5.9	1.775	16	31	13
01/02/01	27	8	18	5.6	30	6.5	1.8718	15	30	14
01/03/01	25	3	14	8.3	23	8.7	2.1633	25	24	18
01/04/01	30	25	28	5.7	23	7.1	1.9601	20	21	15
01/05/01	41	30	36	12.1	26	14.1	2.6462	31	32	25
01/06/01	39	20	30	7.1	23	7.9	2.0669	21	22	16
01/07/01	46	27	37	5	27	6.9	1.9315	20	33	13
01/08/01	33	20	27	9	33	9.2	2.2192	23	31	18
01/09/01	30	15	23	7.2	31	8.6	2.1518	18	33	15
01/10/01	41	18	30	6	23	6.6	1.8871	16	24	14
01/11/01	41	17	29	1.1	19	2.5	0.9163	12	21	9
01/12/01	47	29	38	3.7	36	4.6	1.5261	13	36	10
01/13/01	50	21	36	1.8	12	4.2	1.4351	14	17	12
01/14/01	46	36	41	7.9	19	8.1	2.0919	21	19	17
01/15/01	45	34	40	10.5	26	11	2.3979	23	27	20
01/16/01	34	31	33	7.1	27	7.3	1.9879	21	26	18
01/17/01	33	30	32	1.6	35	4.5	1.5041	12	8	10
01/18/01	43	30	37	1.1	9	2.5	0.9163	9	21	8
01/19/01	36	29	33	10.2	1	10.2	2.3224	23	1	17
01/20/01	29	11	20	8.4	35	10.7	2.3702	24	1	21
01/21/01	28	0	14	4.3	21	4.9	1.5892	15	18	14
01/22/01	34	13	24	3.4	18	4.1	1.411	16	18	15
01/23/01	40	15	28	4.7	21	5.8	1.7579	15	20	12
01/24/01	39	26	33	9.2	29	10.2	2.3224	28	33	23
01/25/01	32	19	26	5.4	34	8.5	2.1401	26	34	21
01/26/01	37	18	28	9.2	20	11.7	2.4596	36	26	30
01/27/01	35	16	26	11.7	29	12.5	2.5257	35	29	28
01/28/01	32	16	24	2.2	19	4.2	1.4351	12	15	9
01/29/01	52	32	42	9.9	14	10.3	2.3321	33	15	25
01/30/01	49	34	42	8.3	23	10.8	2.3795	30	21	24
01/31/01	40	33	37	8.8	25	9	2.1972	18	26	15
02/01/01	41	30	36	6.2	24	7.7	2.0412	17	28	15
02/02/01	33	11	22	8.9	29	9.9	2.2925	30	31	24
02/03/01	35	13	24	6.5	19	6.9	1.9315	17	19	16
02/04/01	45	32	39	8.2	20	8.6	2.1518	23	20	20
02/05/01	34	31	33	7.3	26	8.1	2.0919	18	26	16
02/06/01	45	30	38	3.8	23	7.9	2.0669	20	32	14
02/07/01	44	25	35	6.5	8	7.3	1.9879	17	12	13
02/08/01	66	39	53	8.8	19	9.5	2.2513	23	21	20
02/09/01	67	33	50	17	22	19.8	2.9857	47	21	38
02/10/01	34	21	28	9.4	31	11.1	2.4069	35	30	28

02/11/01	35	20	28	10.2	7	11.1	2.4069	22	8	18
02/12/01	47	26	37	1.3	17	4.5	1.5041	16	21	13
02/13/01	49	40	45	3.7	15	5.4	1.6864	13	17	10
02/14/01	59	49	54	7.2	22	8.6	2.1518	24	33	20
02/15/01	49	40	45	5.5	2	7.3	1.9879	21	34	18
02/16/01	43	31	37	6.2	33	8.5	2.1401	24	33	20
02/17/01	31	16	24	10.2	32	10.8	2.3795	29	32	21
02/18/01	32	14	23	2.9	24	5	1.6094	20	21	13
02/19/01	53	23	38	9.6	21	9.9	2.2925	26	21	20
02/20/01	56	40	48	5.9	26	8.2	2.1041	18	28	16
02/21/01	40	25	33	8.8	2	11.4	2.4336	24	35	18
02/22/01	31	24	28	1.7	5	8.9	2.1861	21	6	18
02/23/01	45	30	38	3.4	26	6.6	1.8871	20	28	15
02/24/01	65	37	51	13.6	15	15.9	2.7663	37	18	30
02/25/01	63	36	50	14.8	24	18.5	2.9178	39	27	31
02/26/01	47	29	38	3.2	32	4.4	1.4816	23	28	20
02/27/01	44	30	37	7.3	2	8.3	2.1163	22	1	17
02/28/01	38	22	30	6.5	34	8.3	2.1163	20	1	17
03/01/01	46	19	33	4.4	26	5.1	1.6292	18	26	14
03/02/01	49	39	44	7.7	27	8.4	2.1282	21	27	17
03/03/01	50	37	44	3.6	4	6	1.7918	17	7	15
03/04/01	44	34	39	11.1	1	12.4	2.5177	24	1	20
03/05/01	34	24	29	17.4	30	17.7	2.8736	38	28	31
03/06/01	36	24	30	16.8	31	17.2	2.8449	35	30	28
03/07/01	46	26	36	7.7	30	9	2.1972	25	29	18
03/08/01	42	23	33	7.4	29	8.4	2.1282	26	32	22
03/09/01	39	22	31	6.3	30	6.9	1.9315	17	32	15
03/10/01	50	18	34	2.8	20	4.8	1.5686	21	18	15
03/11/01	60	36	48	0.8	15	8.5	2.1401	20	7	16
03/12/01	57	36	47	6.5	15	8.2	2.1041	23	18	18
03/13/01	55	40	48	15.4	26	16.6	2.8094	51	28	40
03/14/01	57	36	47	4.2	24	8.5	2.1401	25	29	20
03/15/01	55	42	49	9.2	9	10.1	2.3125	26	9	23
03/16/01	51	39	45	3.8	23	10.7	2.3702	26	26	22
03/17/01	39	31	35	9.9	29	10.7	2.3702	24	26	20
03/18/01	48	26	37	7.3	5	8.7	2.1633	21	4	16
03/19/01	53	28	41	11.2	8	11.7	2.4596	22	11	20
03/20/01	53	38	46	9.1	8	11.5	2.4423	26	4	21
03/21/01	56	40	48	12.3	3	12.9	2.5572	28	5	22
03/22/01	57	34	46	6.7	34	7.5	2.0149	18	33	16
03/23/01	60	32	46	9	29	9.8	2.2824	26	29	22
03/24/01	49	29	39	11.6	31	12.3	2.5096	31	30	26
03/25/01	35	21	28	10.6	30	11.4	2.4336	28	32	22
03/26/01	30	16	23	5.1	32	7.1	1.9601	18	33	16
03/27/01	44	21	33	1.6	20	5.6	1.7228	18	30	14
03/28/01	52	25	39	6.8	16	8	2.0794	23	14	16
03/29/01	52	39	46	5.7	6	7.8	2.0541	18	29	15
03/30/01	57	33	45	3.3	2	6.5	1.8718	16	7	14
03/31/01	56	41	49	0.9	16	5.1	1.6292	22	27	17
04/01/01	50	31	41	11.2	30	12.6	2.5337	37	28	28
04/02/01	59	27	43	3.5	20	5.5	1.7047	23	19	15
04/03/01	67	42	55	5.1	6	9.2	2.2192	29	5	23

04/04/01	63	38	51	11.5	7	11.7	2.4596	22	5	17
04/05/01	73	41	57	4.1	15	8.2	2.1041	18	20	16
04/06/01	77	61	69	8	21	8.8	2.1748	32	34	24
04/07/01	85	63	74	13.6	22	13.9	2.6319	35	21	26
04/08/01	80	68	74	9.3	22	10.2	2.3224	28	23	21
04/09/01	85	56	71	9.6	22	9.9	2.2925	24	21	18
04/10/01	75	62	69	2.8	12	6.8	1.9169	24	30	21
04/11/01	83	63	73	7.5	18	12.2	2.5014	29	20	22
04/12/01	81	60	71	14	23	16.3	2.7912	43	23	29
04/13/01	67	48	58	6.2	32	7.1	1.9601	20	27	16
04/14/01	76	40	58	4.8	25	7.2	1.9741	26	28	21
04/15/01	63	44	54	5.5	33	10.2	2.3224	36	30	30
04/16/01	54	33	44	11.4	30	12.9	2.5572	35	30	30
04/17/01	39	29	34	12.9	31	13.2	2.5802	28	28	23
04/18/01	54	26	40	7.1	31	8	2.0794	28	36	20
04/19/01	65	32	49	7.1	20	7.8	2.0541	23	18	18
04/20/01	62	48	55	9.5	20	10.9	2.3888	28	21	22
04/21/01	75	60	68	14.5	21	14.7	2.6878	38	22	29
04/22/01	80	64	72	8.5	20	9.6	2.2618	21	16	17
04/23/01	80	56	68	12	21	13.2	2.5802	37	28	30
04/24/01	61	43	52	10.7	31	11.7	2.4596	31	29	25
04/25/01	61	32	47	2.6	2	5.5	1.7047	18	1	15
04/26/01	68	35	52	1.7	25	4.3	1.4586	14	27	12
04/27/01	80	44	62	3.1	28	9.2	2.2192	24	8	22
04/28/01	67	47	57	10.8	6	10.9	2.3888	23	6	20
04/29/01	73	44	59	6.1	7	7.5	2.0149	16	5	14
04/30/01	82	45	64	2.4	21	4.3	1.4586	17	25	13
05/01/01	81	59	70	5.6	22	7.6	2.0281	20	21	15
05/02/01	82	53	68	3.4	20	5.7	1.7405	17	17	14
05/03/01	84	54	69	0.6	19	2.5	0.9163	12	23	9
05/04/01	85	56	71	2.7	26	3.8	1.335	18	27	14
05/05/01	83	55	69	5.2	7	6.9	1.9315	21	8	18
05/06/01	86	61	74	5.8	11	8.6	2.1518	22	28	17
05/07/01	79	60	70	9.4	18	10.6	2.3609	25	18	22
05/08/01	72	51	62	2.3	31	4.4	1.4816	21	34	20
05/09/01	77	48	63	2.9	14	4.6	1.5261	20	15	15
05/10/01	79	53	66	4.8	20	6.1	1.8083	17	20	14
05/11/01	83	60	72	6	21	7.9	2.0669	35	32	28
05/12/01	66	48	57	7.9	34	8.9	2.1861	22	1	17
05/13/01	67	43	55	1.8	1	4.9	1.5892	15	2	12
05/14/01	72	43	58	2.6	20	3.9	1.361	14	22	12
05/15/01	85	56	71	4.8	24	7.7	2.0412	26	27	20
05/16/01	79	65	72	2.7	21	5.7	1.7405	16	2	15
05/17/01	82	62	72	1.2	20	3.9	1.361	41	29	35
05/18/01	81	62	72	1	26	5.1	1.6292	30	35	25
05/19/01	71	60	66	6.9	5	7.7	2.0412	16	9	14
05/20/01	78	56	67	4.5	12	6.5	1.8718	16	17	14
05/21/01	77	60	69	8	21	11.2	2.4159	32	19	24
05/22/01	66	48	57	8.9	27	9.7	2.2721	26	28	22
05/23/01	62	45	54	4.6	19	5.8	1.7579	22	29	18
05/24/01	67	50	59	4	23	7.9	2.0669	21	27	18
05/25/01	63	43	53	5.9	22	7.9	2.0669	25	27	21

05/26/01	70	50	60	8.8	21	10	2.3026	38	29	31
05/27/01	65	48	57	5	24	7	1.9459	26	30	22
05/28/01	73	46	60	4.7	31	5.8	1.7579	17	28	15
05/29/01	75	48	62	5.4	33	6.8	1.9169	17	29	15
05/30/01	72	56	64	5.3	2	6.9	1.9315	16	2	13
05/31/01	65	51	58	11.4	11	11.7	2.4596	22	14	20
06/01/01	66	48	57	7.8	25	10.3	2.3321	25	28	22
06/02/01	71	47	59	9.1	24	11.6	2.451	32	30	25
06/03/01	67	50	59	6	28	7.7	2.0412	21	28	17
06/04/01	65	55	60	5.5	8	7.5	2.0149	24	10	22
06/05/01	80	58	69	2.7	17	6.9	1.9315	29	29	24
06/06/01	80	62	71	2.2	24	5.5	1.7047	26	32	21
06/07/01	76	62	69	3.4	36	4.8	1.5686	14	2	12
06/08/01	77	60	69	7.1	1	7.8	2.0541	22	1	15
06/09/01	78	52	65	1.8	36	3.2	1.1632	15	33	12
06/10/01	81	53	67	2.6	21	4.3	1.4586	16	20	13
06/11/01	85	59	72	5.7	22	6.4	1.8563	17	22	14
06/12/01	88	67	78	2.9	24	6.5	1.8718	26	32	21
06/13/01	88	64	76	0.2	15	2.8	1.0296	17	21	15
06/14/01	89	67	78	3.3	13	5.5	1.7047	21	9	20
06/15/01	89	68	79	6.1	20	7.7	2.0412	36	30	28
06/16/01	81	64	73	3.2	32	5.4	1.6864	15	33	12
06/17/01	84	61	73	4.2	36	5.9	1.775	20	4	16
06/18/01	86	56	71	5	18	5.4	1.6864	16	17	14
06/19/01	90	58	74	4.5	23	6.3	1.8405	24	35	20
06/20/01	77	65	71	3.4	25	5.8	1.7579	21	30	17
06/21/01	83	63	73	2.7	22	5.4	1.6864	56	27	41
06/22/01	68	57	63	5.6	32	6.1	1.8083	16	34	13
06/23/01	72	56	64	2.8	35	4.6	1.5261	30	7	24
06/24/01	80	52	66	1.9	3	3.6	1.2809	14	6	13
06/25/01	83	58	71	5.3	8	6	1.7918	21	9	15
06/26/01	82	60	71	5.8	14	7.5	2.0149	18	16	16
06/27/01	84	63	74	2	20	4	1.3863	20	21	15
06/28/01	85	63	74	1.1	1	4.1	1.411	22	15	17
06/29/01	84	63	74	2.1	21	4.4	1.4816	15	22	13
06/30/01	85	66	76	3.1	23	5.5	1.7047	15	28	12
07/01/01	84	59	72	5.3	28	8.5	2.1401	35	31	29
07/02/01	74	54	64	5.2	7	8.1	2.0919	21	8	17
07/03/01	81	55	68	1.3	24	4.8	1.5686	24	33	21
07/04/01	80	63	72	2.2	22	5.1	1.6292	16	22	15
07/05/01	82	60	71	8.4	31	10.5	2.3514	26	32	23
07/06/01	79	52	66	1.3	5	4.3	1.4586	13	3	10
07/07/01	81	60	71	6.3	20	7.4	2.0015	24	19	18
07/08/01	88	68	78	5.2	28	8.1	2.0919	61	31	45
07/09/01	85	67	76	2.5	25	3.6	1.2809	14	21	12
07/10/01	89	68	79	2.2	27	4.6	1.5261	16	28	14
07/11/01	78	58	68	8.5	36	9.4	2.2407	21	2	17
07/12/01	80	59	70	4.8	35	5.6	1.7228	21	1	15
07/13/01	80	57	69	8.3	35	8.5	2.1401	25	36	20
07/14/01	81	56	69	4.5	34	5.7	1.7405	22	33	16
07/15/01	84	55	70	0.7	26	2.1	0.7419	15	8	12
07/16/01	86	58	72	1.6	21	2.6	0.9555	14	21	10

07/17/01	86	71	79	4.9	22	7.3	1.9879	25	4	23
07/18/01	83	68	76	2.8	23	6	1.7918	30	5	25
07/19/01	86	71	79	1.5	30	2.3	0.8329	13	31	9
07/20/01	90	71	81	0.5	15	3.2	1.1632	35	10	31
07/21/01	87	68	78	0.7	18	2.6	0.9555	14	6	12
07/22/01	85	73	79	1.9	18	3.7	1.3083	18	17	16
07/23/01	90	71	81	1.6	21	3.3	1.1939	12	19	9
07/24/01	89	72	81	1.9	25	3.1	1.1314	12	33	10
07/25/01	89	73	81	3.5	23	6.1	1.8083	21	30	16
07/26/01	77	70	74	5.7	3	8.2	2.1041	20	3	16
07/27/01	82	64	73	9.1	8	9.8	2.2824	18	13	15
07/28/01	81	70	76	3.1	13	4.6	1.5261	12	18	10
07/29/01	85	72	79	3.2	33	6.3	1.8405	17	1	13
07/30/01	88	67	78	1.5	28	3.6	1.2809	14	13	10
07/31/01	91	69	80	1.9	32	4.2	1.4351	12	1	9
08/01/01	91	69	80	0.9	21	2.3	0.8329	13	18	10
08/02/01	91	71	81	2.7	25	4.1	1.411	15	29	13
08/03/01	84	72	78	1.1	32	6	1.7918	15	34	13
08/04/01	86	69	78	8	2	8.8	2.1748	21	4	18
08/05/01	88	66	77	3.7	5	5.2	1.6487	14	8	12
08/06/01	90	69	80	1.9	36	3.7	1.3083	10	5	9
08/07/01	90	71	81	3.1	27	3.4	1.2238	15	27	12
08/08/01	91	70	81	2	24	2.7	0.9933	13	29	12
08/09/01	89	73	81	4.7	20	6.3	1.8405	22	23	17
08/10/01	86	72	79	1.8	26	4.5	1.5041	30	34	26
08/11/01	85	70	78	1.4	14	4.4	1.4816	30	33	23
08/12/01	83	64	74	4.5	28	5.9	1.775	16	30	14
08/13/01	83	60	72	3.1	32	4.3	1.4586	14	35	10
08/14/01	80	63	72	6.7	5	8.1	2.0919	20	8	14
08/15/01	82	61	72	5.2	11	6.8	1.9169	14	10	12
08/16/01	80	65	73	7.3	22	8.9	2.1861	26	20	20
08/17/01	80	59	70	4.5	27	5.4	1.6864	21	28	16
08/18/01	81	60	71	5.5	20	6.6	1.8871	37	1	29
08/19/01	76	63	70	7	26	9	2.1972	22	26	18
08/20/01	77	60	69	6.3	29	6.9	1.9315	18	27	15
08/21/01	79	55	67	0.3	6	3	1.0986	15	31	10
08/22/01	84	64	74	6.6	17	8.3	2.1163	25	5	22
08/23/01	80	67	74	3.5	35	5.5	1.7047	35	29	25
08/24/01	84	67	76	3.8	8	5.8	1.7579	17	9	14
08/25/01	85	68	77	2.8	18	6.5	1.8718	38	28	32
08/26/01	82	70	76	4.6	22	6.7	1.9021	30	29	24
08/27/01	81	62	72	0.7	26	3.3	1.1939	10	23	9
08/28/01	84	64	74	1.5	27	4.2	1.4351	24	35	18
08/29/01	83	67	75	2.5	8	5	1.6094	17	9	15
08/30/01	85	65	75	4.1	21	5.6	1.7228	15	21	12
08/31/01	77	68	73	4.4	26	7.2	1.9741	28	34	21
09/01/01	77	61	69	4.4	4	6.7	1.9021	18	2	14
09/02/01	79	59	69	4.7	11	5.4	1.6864	14	14	12
09/03/01	82	62	72	2.1	14	4.3	1.4586	14	15	12
09/04/01	84	66	75	1.5	34	4.6	1.5261	14	2	10
09/05/01	80	63	72	6.9	7	7.8	2.0541	16	6	14
09/06/01	84	60	72	4.6	14	5.8	1.7579	15	14	12

09/07/01	86	69	78	6.6	21	8	2.0794	29	25	21
09/08/01	85	69	77	9.9	19	10	2.3026	33	25	22
09/09/01	84	66	75	6.4	20	8.9	2.1861	33	30	31
09/10/01	75	57	66	3.4	31	5.4	1.6864	18	31	15
09/11/01	80	53	67	2	5	3.5	1.2528	12	1	9
09/12/01	80	56	68	2.7	10	4.3	1.4586	13	12	10
09/13/01	82	56	69	5.7	1	6.9	1.9315	31	1	26
09/14/01	68	53	61	12.3	6	12.8	2.5494	25	5	21
09/15/01	70	49	60	9.8	7	10.1	2.3125	20	7	17
09/16/01	72	49	61	2.9	4	5.2	1.6487	15	5	12
09/17/01	77	49	63	1.4	15	3	1.0986	14	28	13
09/18/01	73	61	67	5.4	17	5.9	1.775	29	30	18
09/19/01	70	59	65	7.7	19	9	2.1972	21	19	18
09/20/01	73	55	64	4.7	26	6	1.7918	21	27	15
09/21/01	75	56	66	5.5	22	7	1.9459	20	20	15
09/22/01	74	56	65	2.1	31	3.3	1.1939	12	29	9
09/23/01	80	55	68	3.7	20	5.1	1.6292	22	31	17
09/24/01	63	48	56	8.9	34	9.6	2.2618	26	34	21
09/25/01	53	40	47	8.1	30	8.9	2.1861	22	31	17
09/26/01	64	41	53	5.2	26	8.1	2.0919	25	25	20
09/27/01	66	41	54	4.6	34	6.5	1.8718	26	1	22
09/28/01	62	42	52	7.2	1	7.7	2.0412	21	3	18
09/29/01	67	45	56	7	3	8.6	2.1518	18	2	15
09/30/01	70	44	57	7	2	8.1	2.0919	20	1	17
10/01/01	74	42	58	3.5	27	3.9	1.361	18	28	16
10/02/01	78	56	67	5.6	23	6.6	1.8871	20	26	15
10/03/01	78	54	66	6.9	21	7.8	2.0541	24	22	18
10/04/01	78	55	67	8.1	22	8.4	2.1282	24	20	17
10/05/01	74	44	59	6	23	12.6	2.5337	36	34	28
10/06/01	56	38	47	8.7	29	9.2	2.2192	26	28	23
10/07/01	57	31	44	0.5	30	2	0.6931	15	31	13
10/08/01	64	38	51	5.5	14	5.9	1.775	16	14	14
10/09/01	70	43	57	7.6	18	8.4	2.1282	22	20	18
10/10/01	74	48	61	10.8	19	11.1	2.4069	26	20	21
10/11/01	73	59	66	8.8	18	9.8	2.2824	21	19	17
10/12/01	72	61	67	8.7	18	9.6	2.2618	30	17	24
10/13/01	77	62	70	14.6	17	15	2.7081	37	19	32
10/14/01	67	49	58	5	23	9.6	2.2618	45	27	35
10/15/01	62	43	53	0.4	6	5.4	1.6864	17	11	15
10/16/01	54	40	47	12.3	26	14.2	2.6532	39	25	31
10/17/01	52	34	43	7.3	29	7.9	2.0669	26	29	22
10/18/01	61	31	46	7.2	18	7.4	2.0015	21	17	17
10/19/01	65	48	57	8	22	8.3	2.1163	24	22	18
10/20/01	70	42	56	4.6	20	5.8	1.7579	22	22	16
10/21/01	74	48	61	5.7	21	6.6	1.8871	22	24	16
10/22/01	73	50	62	4.1	19	5.5	1.7047	17	21	14
10/23/01	76	60	68	10.2	21	10.9	2.3888	32	20	23
10/24/01	74	33	54	6.5	20	11.2	2.4159	60	29	48
10/25/01	56	42	49	16.8	26	17.1	2.8391	41	27	33
10/26/01	45	31	38	16.3	28	16.8	2.8214	36	29	30
10/27/01	44	31	38	8.3	32	9.1	2.2083	20	32	17
10/28/01	51	28	40	0.5	34	2.8	1.0296	12	21	10

10/29/01	61	31	46	5.7	3	5.5	1.7047	14	20	10
10/30/01	63	45	54	5.4	5	3.5	1.2528	13	15	10
10/31/01	69	42	56	7.6	20	8.1	2.0919	29	21	21
11/01/01	71	52	62	11.6	20	11.7	2.4596	32	19	24
11/02/01	69	51	60	8	22	9.3	2.23	24	23	18
11/03/01	63	38	51	3.5	34	4.5	1.5041	18	33	15
11/04/01	70	37	54	5.3	32	7	1.9459	23	2	20
11/05/01	55	35	45	6.7	3	8.1	2.0919	20	2	16
11/06/01	58	33	46	1.7	11	3.3	1.1939	12	12	8
11/07/01	66	32	49	2.1	20	2.9	1.0647	14	19	10
11/08/01	72	36	54	6	29	10.3	2.3321	38	32	32
11/09/01	54	33	44	1	28	5.8	1.7579	18	2	15
11/10/01	64	40	52	7.1	25	9.1	2.2083	25	23	17
11/11/01	52	35	44	7.5	3	8.3	2.1163	20	2	17
11/12/01	56	30	43	2.5	11	4	1.3863	12	16	10
11/13/01	63	37	50	5.1	18	6.3	1.8405	16	19	13
11/14/01	65	42	54	5.8	21	6.1	1.8083	16	24	13
11/15/01	67	36	52	3.3	21	4.7	1.5476	14	27	12
11/16/01	71	46	59	2.2	27	4.1	1.411	13	33	10
11/17/01	65	43	54	2.8	7	3.5	1.2528	10	8	9
11/18/01	69	40	55	2	18	3.9	1.361	16	22	13
11/19/01	59	36	48	6.8	25	10.3	2.3321	28	30	23
11/20/01	43	27	35	2.9	31	5	1.6094	15	2	12
11/21/01	52	27	40	7.8	21	8.1	2.0919	20	19	17
11/22/01	57	32	45	6.5	19	6.9	1.9315	21	18	18
11/23/01	64	37	51	8.5	15	9.2	2.2192	18	13	15
11/24/01	66	56	61	17.7	16	18.2	2.9014	55	17	40
11/25/01	61	39	50	7.9	23	9.1	2.2083	29	23	22
11/26/01	59	36	48	6	10	6.8	1.9169	21	2	17
11/27/01	64	45	55	2.9	23	8.9	2.1861	23	23	17
11/28/01	45	38	42	7.9	4	9.2	2.2192	20	10	17
11/29/01	62	44	53	5.9	16	7.3	1.9879	29	19	23
11/30/01	60	43	52	11.9	22	13.3	2.5878	36	12	31
12/01/01	47	34	41	5.2	24	6	1.7918	23	23	18
12/02/01	54	34	44	2	13	2.4	0.8755	12	11	9
12/03/01	63	34	49	6.6	20	6.8	1.9169	17	21	14
12/04/01	63	49	56	8.5	20	8.7	2.1633	22	21	16
12/05/01	70	47	59	9.1	20	9.4	2.2407	23	19	17
12/06/01	60	47	54	3.4	22	8.3	2.1163	33	14	29
12/07/01	54	42	48	1.7	2	4.8	1.5686	15	6	12
12/08/01	47	38	43	5	1	8.8	2.1748	23	35	20
12/09/01	44	32	38	2.9	3	6.5	1.8718	16	3	13
12/10/01	46	26	36	1.8	2	3.5	1.2528	10	1	9
12/11/01	52	31	42	3.2	7	4.7	1.5476	14	9	12
12/12/01	54	37	46	6.3	16	7.1	1.9601	24	15	20
12/13/01	60	49	55	4.3	24	7.6	2.0281	21	27	17
12/14/01	61	41	51	4.8	25	13.4	2.5953	46	21	32
12/15/01	47	39	43	5.7	8	7.5	2.0149	18	9	15
12/16/01	49	41	45	6.5	12	7.6	2.0281	25	8	22
12/17/01	60	45	53	3.3	35	9.6	2.2618	25	31	21
12/18/01	47	32	40	6.1	27	8	2.0794	24	31	21
12/19/01	50	29	40	8.3	26	11.6	2.451	38	28	31

12/20/01	44	27	36	8	25	8.4	2.1282	25	27	21
12/21/01	46	22	34	0.4	17	2.4	0.8755	12	29	9
12/22/01	56	31	44	10.6	17	11.1	2.4069	26	17	23
12/23/01	48	30	39	10.6	25	13.3	2.5878	28	25	22
12/24/01	33	24	29	10.5	27	11.5	2.4423	25	27	21
12/25/01	26	15	21	6.5	26	7.2	1.9741	21	27	16
12/26/01	28	13	21	6.2	24	7.5	2.0149	23	28	18
12/27/01	33	21	27	9.1	23	9.3	2.23	25	22	17
12/28/01	40	29	35	9	26	10.5	2.3514	28	28	22
12/29/01	29	16	23	12	30	12.7	2.5416	28	30	24
12/30/01	24	9	17	7.5	26	7.7	2.0412	18	29	15
12/31/01	25	14	20	5.1	25	6.4	1.8563	14	27	13
01/01/00	59	28	44	4	19	4.7	1.5476	16	20	13
01/02/00	62	52	57	13.4	21	13.5	2.6027	38	21	31
01/03/00	59	52	56	8.5	19	12.1	2.4932	44	27	33
01/04/00	56	28	42	14.3	28	15.3	2.7279	34	27	28
01/05/00	31	24	28	2.6	23	8.1	2.0919	26	29	22
01/06/00	45	21	33	8	20	8.3	2.1163	18	20	15
01/07/00	39	21	30	6	27	7	1.9459	25	31	21
01/08/00	39	18	29	5.2	19	5.8	1.7579	14	19	11
01/09/00	47	34	41	5.4	17	6	1.7918	14	17	13
01/10/00	52	43	48	11.6	22	12.9	2.5572	36	25	25
01/11/00	50	31	41	15.7	27	16.9	2.8273	43	26	33
01/12/00	56	24	40	5.5	15	8.4	2.1282	28	20	20
01/13/00	54	25	40	13.4	31	15.3	2.7279	34	30	29
01/14/00	30	15	23	0.6	6	6	1.7918	22	36	17
01/15/00	49	21	35	9.4	20	9.8	2.2824	22	23	15
01/16/00	53	27	40	5.8	35	13.8	2.6247	28	3	24
01/17/00	29	18	24	13.3	9	14.2	2.6532	24	9	21
01/18/00	29	22	26	4.5	29	8.4	2.1282	20	29	16
01/19/00	31	16	24	3.3	18	5.6	1.7228	15	10	13
01/20/00	31	7	19	15.4	30	15.8	2.76	32	28	28
01/21/00	15	-5	5	7.9	28	8.4	2.1282	18	28	17
01/22/00	26	6	16	6.6	13	7.5	2.0149	17	13	13
01/23/00	31	20	26	4.2	29	6.2	1.8245	21	32	18
01/24/00	20	-1	10	4	32	5.3	1.6677	23	33	20
01/25/00	21	-4	9	6.4	30	7	1.9459	25	31	22
01/26/00	20	7	14	9	33	9.6	2.2618	24	36	20
01/27/00	19	-5	7	4.5	1	6	1.7918	17	1	11
01/28/00	24	-2	11	7.9	8	8.7	2.1633	20	8	15
01/29/00	29	18	24	11	9	11.5	2.4423	24	8	21
01/30/00	32	22	27	7	25	8.6	2.1518	24	27	18
01/31/00	31	23	27	10.4	25	10.5	2.3514	25	27	20
02/01/00	32	24	28	10.9	29	12	2.4849	23	30	20
02/02/00	32	9	21	4.6	24	6.8	1.9169	17	19	14
02/03/00	41	29	35	11.5	25	12.8	2.5494	45	29	32
02/04/00	31	27	29	13.6	29	13.7	2.6174	24	31	21
02/05/00	34	14	24	8.3	27	9.3	2.23	20	25	15
02/06/00	37	17	27	3.3	20	4.7	1.5476	13	20	11
02/07/00	47	28	38	2.9	29	7.1	1.9601	17	1	14
02/08/00	44	22	33	3	12	5.5	1.7047	15	10	11
02/09/00	56	30	43	7.6	21	8.5	2.1401	25	25	16

02/10/00	61	40	51	8.9	21	9.7	2.2721	24	18	20
02/11/00	53	31	42	8.7	35	11.1	2.4069	28	32	23
02/12/00	42	28	35	9.5	7	10	2.3026	20	6	17
02/13/00	50	30	40	3.8	17	7.1	1.9601	18	34	16
02/14/00	43	30	37	9.4	31	9.8	2.2824	20	29	17
02/15/00	50	31	41	7.8	18	9.2	2.2192	24	15	21
02/16/00	50	28	39	8.6	31	11.7	2.4596	30	33	21
02/17/00	40	24	32	9.1	8	10.2	2.3224	20	10	17
02/18/00	50	33	42	1.8	11	9	2.1972	28	30	23
02/19/00	39	30	35	8.6	31	9.7	2.2721	21	29	17
02/20/00	43	26	35	5.9	27	7.6	2.0281	24	26	18
02/21/00	52	21	37	5.9	18	6.3	1.8405	18	17	16
02/22/00	58	39	49	10.2	19	10.4	2.3418	25	20	20
02/23/00	68	46	57	9	19	9.4	2.2407	22	15	18
02/24/00	68	47	58	13.5	20	13.7	2.6174	32	19	24
02/25/00	75	50	63	8.8	20	9.4	2.2407	23	20	17
02/26/00	73	55	64	14.7	19	15.8	2.76	34	21	28
02/27/00	60	39	50	7.9	26	10.2	2.3224	38	28	33
02/28/00	56	26	41	2.7	29	4.4	1.4816	18	28	16
03/01/00	60	41	51	11.1	27	14.5	2.6741	33	30	29
03/02/00	49	32	41	7.1	34	9	2.1972	20	31	16
03/03/00	46	28	37	4.5	7	6.3	1.8405	20	10	16
03/04/00	57	28	43	4.3	34	6.5	1.8718	20	30	15
03/05/00	68	32	50	3.7	28	5.3	1.6677	22	28	16
03/06/00	69	35	52	1.5	19	3.4	1.2238	18	20	13
03/07/00	77	43	60	7.6	21	8.1	2.0919	21	23	15
03/08/00	77	51	64	9	20	9.3	2.23	28	22	22
03/09/00	70	43	57	12.1	26	15	2.7081	41	27	33
03/10/00	52	34	43	7.6	3	8.3	2.1163	23	4	20
03/11/00	37	28	33	11.6	2	14.2	2.6532	26	2	24
03/12/00	41	23	32*	6.5	31	8.3	2.1163	20	33	16
03/13/00	47	22	35	6.4	19	6.5	1.8718	18	21	14
03/14/00	58	32	45	2.6	20	5.2	1.6487	15	24	11
03/15/00	68	42	55	10.3	21	10.6	2.3609	28	20	22
03/16/00	61	33	47	2.7	1	11.4	2.4336	29	2	24
03/17/00	40	28	34	13.5	3	14.9	2.7014	30	7	25
03/18/00	48	25	37	9.1	9	10	2.3026	22	10	18
03/19/00	55	42	49	10.4	13	11.7	2.4596	24	17	20
03/20/00	56	47	52	5.9	13	9.3	2.23	24	10	21
03/21/00	56	35	46	3.9	35	6.4	1.8563	15	5	13
03/22/00	60	36	48	4.8	5	6.4	1.8563	18	5	13
03/23/00	63	39	51	6.8	8	8.1	2.0919	21	10	16
03/24/00	76	47	62	5.9	18	9.3	2.23	26	18	21
03/25/00	69	49	59	10.2	28	11.6	2.451	26	30	23
03/26/00	64	35	50	4.2	25	7.1	1.9601	21	30	16
03/27/00	56	42	49	7.8	28	11	2.3979	31	28	25
03/28/00	45	35	40	11	29	13.8	2.6247	36	29	30
03/29/00	55	31	43	5	29	7.2	1.9741	17	29	15
03/30/00	55	35	45	6.2	3	7.5	2.0149	18	4	14
03/31/00	60	30	45	2.2	5	4.1	1.411	13	6	11
04/01/00	70	34	52	2	18	5.3	1.6677	25	23	18
04/02/00	60	54	57	5.6	20	6.7	1.9021	38	27	28

04/03/00	61	48	55	5.4	25	7.2	1.9741	24	29	21
04/04/00	47	33	40	13.9	28	14.5	2.6741	39	27	31
04/05/00	56	31	44	8.9	22	10.3	2.3321	26	20	22
04/06/00	62	48	55	9.4	26	10.9	2.3888	31	24	23
04/07/00	67	47	57	5.1	17	10.5	2.3514	32	34	28
04/08/00	53	31	42	15.2	30	16	2.7726	40	30	31
04/09/00	58	23	41	9.5	25	10.3	2.3321	36	25	29
04/10/00	61	40	51	9.7	8	10.1	2.3125	23	7	21
04/11/00	55	42	49	3.2	35	6.9	1.9315	21	34	17
04/12/00	49	35	42	6.9	3	9.2	2.2192	21	1	16
04/13/00	61	34	48	6	11	7.1	1.9601	23	10	20
04/14/00	70	42	56	3.5	18	5.2	1.6487	18	18	16
04/15/00	75	47	61	1	26	2.4	0.8755	17	21	10
04/16/00	72	49	61	1.9	23	4	1.3863	17	26	14
04/17/00	64	46	55	6.8	34	9.5	2.2513	37	30	30
04/18/00	61	44	53	7	35	7.6	2.0281	20	1	16
04/19/00	68	52	60	6	15	8.1	2.0919	21	14	18
04/20/00	80	53	67	11.7	20	14.2	2.6532	41	17	33
04/21/00	54	41	48	13.2	27	14.1	2.6462	32	28	25
04/22/00	62	41	52	6.7	33	7.5	2.0149	23	34	18
04/23/00	65	34	50	1.1	31	3.1	1.1314	20	29	16
04/24/00	59	51	55	11	8	11.6	2.451	23	10	21
04/25/00	67	42	55	12.4	2	12.8	2.5494	28	4	23
04/26/00	62	35	49	6.4	1	7.4	2.0015	22	4	16
04/27/00	69	35	52	0.5	2	3.8	1.335	21	4	17
04/28/00	69	40	55	7.3	1	8.6	2.1518	18	33	15
04/29/00	70	39	55	4.2	34	6	1.7918	21	2	16
04/30/00	74	43	59	1.3	19	3.8	1.335	16	17	11
05/01/00	74	48	61	6.1	23	8.7	2.1633	24	26	17
05/02/00	71	49	60	7.3	6	8.2	2.1041	22	8	18
05/03/00	79	51	65	3.2	9	7.2	1.9741	25	20	20
05/04/00	77	59	68	5.3	20	7	1.9459	21	26	15
05/05/00	82	58	70	4.5	24	6.6	1.8871	20	24	16
05/06/00	84	57	71	4.7	21	6	1.7918	33	26	24
05/07/00	83	59	71	7.4	21	8.1	2.0919	31	28	24
05/08/00	83	67	75	11.7	21	11.9	2.4765	31	19	22
05/09/00	83	63	73	10.2	21	10.7	2.3702	26	20	20
05/10/00	70	50	60	11.4	29	12.1	2.4932	32	29	25
05/11/00	81	50	66	9.6	19	10.4	2.3418	23	17	20
05/12/00	81	73	77	8.9	22	9.6	2.2618	24	20	17
05/13/00	75	50	63	10	29	12.2	2.5014	32	28	26
05/14/00	63	39	51	6.6	30	7.6	2.0281	22	29	20
05/15/00	71	41	56	2.8	31	5	1.6094	25	31	20
05/16/00	72	48	60	7.6	17	8.9	2.1861	24	16	21
05/17/00	78	56	67	7.8	19	9.1	2.2083	25	14	22
05/18/00	79	65	72	9	22	10.3	2.3321	32	26	21
05/19/00	78	59	69	8.9	27	10.4	2.3418	40	26	32
05/20/00	60	54	57	3.7	29	5.4	1.6864	14	30	11
05/21/00	67	53	60	1.6	31	3.4	1.2238	10	29	9
05/22/00	74	51	63	3.8	20	5.4	1.6864	23	27	18
05/23/00	76	61	69	9.3	22	10.1	2.3125	25	27	18
05/24/00	85	62	74	6.6	26	8.1	2.0919	26	27	21

05/25/00	74	54	64	5.8	30	7	1.9459	20	28	17
05/26/00	75	47	61	2.2	13	4.4	1.4816	21	14	18
05/27/00	76	62	69	2.4	19	6	1.7918	25	29	22
05/28/00	70	58	64	7.6	28	10	2.3026	25	28	21
05/29/00	67	54	61	6.2	2	8.3	2.1163	20	3	17
05/30/00	72	50	61	3.6	17	5.1	1.6292	16	17	14
05/31/00	85	61	73	5.6	21	6.7	1.9021	20	26	16
06/01/00	86	62	74	4	23	5.8	1.7579	17	27	15
06/02/00	88	60	74	5.4	29	9.8	2.2824	34	31	24
06/03/00	72	52	62	6.5	3	7.6	2.0281	20	1	16
06/04/00	76	52	64	3.7	7	5.6	1.7228	18	8	15
06/05/00	74	53	64	4	33	11.8	2.4681	31	28	25
06/06/00	70	51	61	11.3	36	12	2.4849	31	2	28
06/07/00	76	45	61	1.3	20	2.8	1.0296	15	20	10
06/08/00	81	56	69	6.4	22	7.6	2.0281	22	25	16
06/09/00	86	58	72	5.4	22	6.8	1.9169	21	28	15
06/10/00	90	65	78	7.2	21	7.3	1.9879	18	23	14
06/11/00	88	67	78	4.4	25	5.8	1.7579	16	25	13
06/12/00	89	71	80	3.5	21	4.9	1.5892	17	22	13
06/13/00	88	69	79	5.2	22	7.2	1.9741	22	27	17
06/14/00	87	70	79	9.1	20	9.7	2.2721	39	20	28
06/15/00	80	67	74	7.6	21	8.4	2.1282	20	24	15
06/16/00	85	66	76	9.6	21	10.9	2.3888	39	30	33
06/17/00	74	66	70	1	16	6	1.7918	14	1	11
06/18/00	71	66	69	2.5	33	7.4	2.0015	18	21	13
06/19/00	78	61	70	3	7	5.6	1.7228	17	6	14
06/20/00	85	62	74	6.1	17	7.5	2.0149	22	19	17
06/21/00	80	68	74	8.8	24	9.9	2.2925	23	27	17
06/22/00	84	64	74	7.8	25	8.8	2.1748	30	27	24
06/23/00	86	62	74	2.2	23	4.5	1.5041	15	27	10
06/24/00	86	68	77	7.8	20	9.4	2.2407	30	25	18
06/25/00	83	68	76	4.3	27	6.9	1.9315	29	23	22
06/26/00	85	64	75	4.4	22	5.7	1.7405	21	20	16
06/27/00	74	63	69	1.2	35	4.2	1.4351	17	35	13
06/28/00	77	60	69	5	34	6.1	1.8083	16	31	14
06/29/00	78	54	66	5.3	31	5.9	1.775	23	32	17
06/30/00	78	55	67	1.7	36	3.7	1.3083	14	26	11
07/01/00	81	55	68	1.6	21	3.3	1.1939	13	19	10
07/02/00	85	60	73	6.8	21	7.1	1.9601	21	19	15
07/03/00	86	70	78	6.6	23	7.2	1.9741	24	25	18
07/04/00	87	69	78	3.3	26	5.3	1.6677	22	27	18
07/05/00	81	70	76	1.8	6	5.4	1.6864	20	2	17
07/06/00	83	67	75	3.1	7	5.8	1.7579	18	8	16
07/07/00	80	64	72	10.1	6	10.8	2.3795	22	5	20
07/08/00	82	60	71	1.8	10	5.2	1.6487	14	7	11
07/09/00	87	63	75	6	24	6.7	1.9021	22	27	17
07/10/00	86	71	79	3.4	26	7.5	2.0149	22	34	18
07/11/00	81	70	76	2.1	4	4.8	1.5686	17	3	15
07/12/00	83	67	75	6.7	8	7.9	2.0669	18	7	16
07/13/00	86	67	77	4.2	35	6	1.7918	17	31	11
07/14/00	85	61	73	5.7	29	8.2	2.1041	37	28	28
07/15/00	82	61	72	10.1	31	10.4	2.3418	23	31	20

07/16/00	81	57	69	5.6	30	6.8	1.9169	20	30	15
07/17/00	84	59	72	4.8	28	6	1.7918	21	28	15
07/18/00	84	66	75	1.2	29	4.1	1.411	14	28	13
07/19/00	77	59	68	7.1	4	9.8	2.2824	24	4	21
07/20/00	76	60	68	3.1	27	4.6	1.5261	17	26	13
07/21/00	79	60	70	6.6	30	7.8	2.0541	21	27	17
07/22/00	77	56	67	4.7	36	6.4	1.8563	16	30	13
07/23/00	80	57	69	4	6	5.9	1.775	16	9	13
07/24/00	80	62	71	8.7	8	9.1	2.2083	21	8	16
07/25/00	81	59	70	4.1	8	6.7	1.9021	14	12	11
07/26/00	84	66	75	2.6	12	4.5	1.5041	14	12	11
07/27/00	83	63	73	1.7	24	3.1	1.1314	14	25	11
07/28/00	84	66	75	6	23	7.4	2.0015	24	26	16
07/29/00	73	65	69	7	18	7.7	2.0412	17	17	15
07/30/00	77	67	72	6.3	19	8.4	2.1282	18	19	15
07/31/00	83	64	74	5.5	21	7.1	1.9601	38	27	28
08/01/00	83	64	74	4.9	24	5.9	1.775	17	25	14
08/02/00	85	64	75	4.8	23	5.7	1.7405	17	20	13
08/03/00	80	66	73	3.8	30	6.5	1.8718	21	29	16
08/04/00	79	63	71	6.1	1	7.3	1.9879	16	1	13
08/05/00	79	56	68	5.6	14	7.5	2.0149	18	15	15
08/06/00	87	70	79	8.2	21	9.1	2.2083	22	21	16
08/07/00	81	67	74	7.6	22	9	2.1972	30	31	24
08/08/00	76	68	72	4.7	21	6.4	1.8563	16	24	13
08/09/00	90	66	78	6.1	23	7.9	2.0669	38	34	29
08/10/00	82	64	73	6.3	34	7.1	1.9601	22	36	17
08/11/00	82	62	72	6.1	36	7.1	1.9601	21	1	17
08/12/00	79	60	70	5	35	6.2	1.8245	22	1	16
08/13/00	80	56	68	5	35	5.6	1.7228	16	1	13
08/14/00	83	58	71	0.4	27	1.8	0.5878	13	28	10
08/15/00	89	62	76	3.4	23	5.1	1.6292	17	22	13
08/16/00	85	65	75	5.8	35	7.9	2.0669	18	36	14
08/17/00	80	62	71	6.4	14	9.5	2.2513	53	29	41
08/18/00	76	59	68	4.9	33	9.4	2.2407	24	29	21
08/19/00	78	58	68	5.7	1	7.4	2.0015	20	35	15
08/20/00	76	58	67	8.9	7	9.2	2.2192	18	5	14
08/21/00	79	57	68	5	9	6.5	1.8718	14	10	11
08/22/00	79	64	72	5.7	20	5.8	1.7579	15	21	13
08/23/00	77	68	73	6.3	22	7.5	2.0149	16	26	13
08/24/00	80	67	74	5.3	27	7	1.9459	20	27	15
08/25/00	82	61	72	2.5	35	4.7	1.5476	11	28	9
08/26/00	82	56	69	3.5	18	4.7	1.5476	17	16	15
08/27/00	81	64	73	1.1	25	6.9	1.9315	24	5	20
08/28/00	81	62	72	1.9	13	4.2	1.4351	16	4	11
08/29/00	85	65	75	4.4	13	5.3	1.6677	15	16	10
08/30/00	88	69	79	6.8	10	7.2	1.9741	21	8	13
08/31/00	90	69	80	7.5	10	7.9	2.0669	18	9	15
09/01/00	86	71	79	2.7	12	4.2	1.4351	16	12	14
09/02/00	90	69	80	0.6	3	4.2	1.4351	17	35	15
09/03/00	88	68	78	2.8	3	4.4	1.4816	21	2	16
09/04/00	83	65	74	10.8	2	11.9	2.4765	32	34	25
09/05/00	73	58	66	14.9	5	15.2	2.7213	29	7	25

09/06/00	79	56	68	9.3	9	10.1	2.3125	21	13	16
09/07/00	84	56	70	3.5	15	5	1.6094	14	19	11
09/08/00	72	64	68	3.2	19	4.1	1.411	14	19	13
09/09/00	83	66	75	4.7	19	5	1.6094	20	19	15
09/10/00	78	69	74	5	20	5.4	1.6864	18	17	15
09/11/00	73	65	69	7	19	7.3	1.9879	18	20	17
09/12/00	77	66	72	3.9	24	8.8	2.1748	25	19	21
09/13/00	76	54	65	2.6	36	4.6	1.5261	15	1	13
09/14/00										
09/15/00	66	50	58	7.3	33	M		17	34	14
09/16/00	64	44	54	5.6	35	6.6	1.8871	20	33	15
09/17/00	71	41	56	3	21	4.2	1.4351	17	21	15
09/18/00	78	46	62	1.8	20	3.5	1.2528	13	18	9
09/19/00	82	50	66	7	21	7.5	2.0149	22	20	15
09/20/00	81	55	68	9.2	22	12.7	2.5416	36	30	30
09/21/00	65	48	57	3.1	26	6.1	1.8083	24	28	16
09/22/00	78	49	64	7.5	15	8.6	2.1518	17	17	15
09/23/00	81	68	75	5.6	22	8.1	2.0919	25	9	21
09/24/00	68	56	62	10	3	10.9	2.3888	20	3	17
09/25/00	56	46	51	14.1	4	15.8	2.76	36	2	29
09/26/00	64	44	54	5.6	34	6.1	1.8083	20	2	15
09/27/00	67	39	53	1.1	25	2.7	0.9933	15	27	13
09/28/00	66	44	55	7	4	7.5	2.0149	18	3	15
09/29/00	68	44	56	5	9	6.2	1.8245	16	7	14
09/30/00	73	44	59	1.6	21	3.1	1.1314	16	18	13
10/01/00	76	51	64	5.5	19	6	1.7918	17	19	15
10/02/00	80	59	70	8.5	21	9	2.1972	24	26	18
10/03/00	80	63	72	5.1	21	6.5	1.8718	14	19	12
10/04/00	81	62	72	2.6	24	7.3	1.9879	39	31	30
10/05/00	79	61	70	2.6	21	9	2.1972	23	20	20
10/06/00	61	40	51	11.5	32	11.8	2.4681	25	32	21
10/07/00	49	31	40	7.9	31	8.5	2.1401	22	29	18
10/08/00	49	29	39	8.4	30	8.9	2.1861	25	31	20
10/09/00	53	33	43	8.5	30	9	2.1972	23	29	20
10/10/00	61	33	47	6.9	27	7.4	2.0015	23	28	18
10/11/00	66	31	49	3.4	29	3.9	1.361	15	27	13
10/12/00	69	36	53	0.6	17	1.6	0.47	13	23	8
10/13/00	74	37	56	2.6	21	4.1	1.411	18	27	15
10/14/00	77	46	62	7.2	21	7.6	2.0281	20	19	14
10/15/00	73	54	64	3.9	22	5.7	1.7405	16	21	14
10/16/00	68	50	59	4.2	5	5.7	1.7405	15	4	13
10/17/00	61	53	57	6.2	2	7.9	2.0669	15	2	13
10/18/00	66	42	54	3.3	34	4.8	1.5686	17	34	12
10/19/00	70	38	54	0	0	1.3	0.2624	13	19	9
10/20/00	74	45	60	2.1	19	3.5	1.2528	18	21	14
10/21/00	71	53	62	1.1	20	1.6	0.47	12	19	10
10/22/00	74	56	65	2.1	9	3	1.0986	10	9	9
10/23/00	77	53	65	0.6	5	2.4	0.8755	10	26	8
10/24/00	77	59	68	0.3	6	2.7	0.9933	15	17	12
10/25/00	74	53	64	1.4	1	3	1.0986	12	5	8
10/26/00	78	50	64	2.8	20	3.6	1.2809	13	21	10
10/27/00	79	56	68	4.9	27	6.2	1.8245	18	30	14

10/28/00	61	44	53	10.4	3	11.2	2.4159	24	3	21
10/29/00	59	35	47	9.2	8	9.4	2.2407	18	8	16
10/30/00	64	38	51	2.8	9	4.5	1.5041	13	13	10
10/31/00	68	40	54	2.7	10	3.8	1.335	10	7	8
11/01/00	70	48	59	5.6	12	6	1.7918	14	12	12
11/02/00	78	52	65	3.9	17	5.9	1.775	23	27	18
11/03/00	67	52	60	3.7	30	4.8	1.5686	14	31	13
11/04/00	57	37	47	4.3	31	5.9	1.775	14	31	13
11/05/00	57	30	44	5.5	10	5.6	1.7228	22	12	15
11/06/00	59	36	48	10.3	12	10.5	2.3514	22	13	17
11/07/00	68	52	60	5.5	18	6.5	1.8718	21	16	16
11/08/00	59	54	57	3.4	3	5.3	1.6677	13	36	10
11/09/00	70	42	56	9.5	20	13.3	2.5878	45	26	32
11/10/00	42	38	40	13.5	28	13.9	2.6319	33	27	25
11/11/00	51	36	44	6.3	6	8.6	2.1518	21	9	17
11/12/00	53	36	45	5.5	11	6.7	1.9021	17	8	15
11/13/00	50	33	42	5.3	25	7.7	2.0412	20	26	15
11/14/00	37	30	34	8.9	25	9.5	2.2513	22	29	20
11/15/00	46	30	38	4.7	24	7.1	1.9601	17	27	14
11/16/00	51	31	41	9.2	22	11.6	2.451	30	32	23
11/17/00	34	28	31	10	28	10.6	2.3609	22	30	18
11/18/00	35	27	31	6.5	24	7.9	2.0669	17	22	14
11/19/00	44	24	34	8.8	21	9.1	2.2083	25	19	21
11/20/00	39	25	32	15.7	27	16	2.7726	32	28	26
11/21/00	26	17	22	12.7	28	13.3	2.5878	22	28	20
11/22/00	39	13	26	2.7	27	6	1.7918	17	25	14
11/23/00	38	20	29	4.5	9	5.6	1.7228	12	11	9
11/24/00	46	23	35	7	9	7.4	2.0015	18	9	15
11/25/00	50	39	45	8.5	11	10.4	2.3418	21	12	17
11/26/00	46	39	43	9.9	24	10.4	2.3418	22	24	17
11/27/00	46	31	39	7.1	25	8	2.0794	21	24	16
11/28/00	46	27	37	5.6	24	7	1.9459	17	23	15
11/29/00	46	29	38	11.3	27	12.9	2.5572	35	26	29
11/30/00	43	27	35	5.6	28	7.1	1.9601	20	29	16
12/01/00	38	26	32	6	6	7.1	1.9601	20	6	17
12/02/00	33	27	30	16.9	5	17.1	2.8391	30	4	25
12/03/00	37	21	29	9.5	6	10.1	2.3125	24	5	21
12/04/00	31	15	23	6.2	22	6.5	1.8718	22	24	17
12/05/00	34	17	26	8.5	29	11	2.3979	31	29	24
12/06/00	27	17	22	4.7	24	6.5	1.8718	22	27	16
12/07/00	41	25	33	9.7	23	10.7	2.3702	23	18	20
12/08/00	40	19	30	7	31	9.1	2.2083	21	30	17
12/09/00	36	18	27	6.3	8	7.4	2.0015	16	10	12
12/10/00	47	30	39	3.3	19	5.6	1.7228	13	23	10
12/11/00	52	24	38	6.5	20	11.8	2.4681	52	28	40
12/12/00	25	18	22	11.2	28	11.8	2.4681	41	27	33
12/13/00	32	18	25	7.8	10	8.2	2.1041	24	9	20
12/14/00	32	27	30	5	27	5.6	1.7228	17	29	14
12/15/00	38	27	33	6.2	13	6.8	1.9169	18	14	15
12/16/00	54	34	44	7.3	18	11.9	2.4765	31	30	26
12/17/00	34	7	21	15.7	27	16.4	2.7973	35	28	29
12/18/00	27	4	16	7.3	18	9	2.1972	21	25	17

12/19/00	27	10	19	12.8	26	12.9	2.5572	29	26	23
12/20/00	19	11	15	6.5	19	9.6	2.2618	20	15	17
12/21/00	28	6	17	8.4	25	11.6	2.451	25	28	22
12/22/00	12	0	6	7.2	26	7.8	2.0541	26	27	22
12/23/00	28	-1	14	5.3	16	6.3	1.8405	17	17	15
12/24/00	27	3	15	9.3	29	10.1	2.3125	25	30	20
12/25/00	21	-3	0	3.6	7	5	1.6094	14	6	12
12/26/00	24	9	17	1.6	10	3.2	1.1632	8	1	7
12/27/00	24	15	20	4.9	31	5.6	1.7228	18	32	15
12/28/00	21	10	16	8.2	6	9.2	2.2192	21	2	18
12/29/00	21	17	19	0.9	13	6.5	1.8718	16	8	15
12/30/00	20	11	16	9.6	26	9.7	2.2721	18	26	15
12/31/00	27	18	23	6.8	27	7.4	2.0015	16	29	14
01/01/99	21	3	12	6.1	8	8.5	2.1401	28	8	24
01/02/99	40	20	30	10.4	10	15.3	2.7279	34	9	32
01/03/99	27	14	21	14.5	25	14.7	2.6878	33	26	24
01/04/99	14	0	7	11.1	26	11.5	2.4423	24	27	20
01/05/99	18	-8	5	5.5	20	6.2	1.8245	18	19	15
01/06/99	34	18	26	10.4	23	12.1	2.4932	26	33	22
01/07/99	23	9	16	2.7	2	6	1.7918	18	34	15
01/08/99	33	19	26	6.2	5	7.5	2.0149	18	35	16
01/09/99	28	0	14	8.4	31	8.9	2.1861	20	30	16
01/10/99	20	-2	9	7.9	25	8.8	2.1748	25	28	22
01/11/99	42	4	23	7.7	21	10.1	2.3125	32	23	23
01/12/99	50	41	46	11.5	22	11.6	2.451	30	23	20
01/13/99	52	24	38	6	5	13.4	2.5953	24	4	22
01/14/99	24	16	20	5.2	35	7.6	2.0281	17	6	15
01/15/99	29	16	23	6.2	22	7.7	2.0412	17	18	13
01/16/99	48	29	39	6.9	22	8	2.0794	22	24	17
01/17/99	54	34	44	10	16	10.6	2.3609	29	18	23
01/18/99	56	35	46	15	25	15.9	2.7663	44	27	34
01/19/99	47	29	38	4.4	22	7.2	1.9741	24	27	17
01/20/99	57	37	47	4	13	6	1.7918	16	16	14
01/21/99	54	44	49	6.5	11	7.4	2.0015	23	13	18
01/22/99	68	53	61	8.8	18	10.5	2.3514	33	18	28
01/23/99	62	41	52	9	21	13.4	2.5953	38	14	30
01/24/99	41	30	36	8.1	28	9.7	2.2721	25	32	21
01/25/99	38	29	34	4.9	29	7.9	2.0669	24	30	20
01/26/99	49	23	36	2.6	14	3.9	1.361	11	18	9
01/27/99	66	37	52	10.8	23	12.1	2.4932	32	27	22
01/28/99	56	33	45	5.7	32	8.6	2.1518	20	2	17
01/29/99	40	32	36	7.8	6	9	2.1972	20	2	15
01/30/99	50	28	39	13.8	7	14	2.6391	26	7	21
01/31/99	42	33	38	12	9	12.7	2.5416	25	10	22
02/01/99	44	36	40	7.7	16	8.9	2.1861	18	13	15
02/02/99	46	31	39	7.4	24	9.5	2.2513	29	29	24
02/03/99	48	23	36	9.1	19	9.5	2.2513	25	18	21
02/04/99	47	27	37	10.8	28	12.3	2.5096	39	27	31
02/05/99	48	18	33	4.9	16	6.9	1.9315	18	16	15
02/06/99	60	42	51	4.5	28	9.6	2.2618	22	30	18
02/07/99	61	36	49	1.8	30	14.7	2.6878	43	26	32
02/08/99	52	34	43	5	17	6.1	1.8083	16	12	14

02/09/99	61	33	47	3.2	30	6	1.7918	16	34	13
02/10/99	61	29	45	5.9	12	6.8	1.9169	16	15	14
02/11/99	74	47	61	15.5	20	17.1	2.8391	46	27	36
02/12/99	53	24	39	14.7	27	16.1	2.7788	38	29	32
02/13/99	28	16	22	9.6	30	10.4	2.3418	28	29	23
02/14/99	39	14	27	4.9	20	5.8	1.7579	20	21	14
02/15/99	54	28	41	10.2	20	10.4	2.3418	21	21	17
02/16/99	59	35	47	9.6	22	11.5	2.4423	31	21	25
02/17/99	43	33	38	7.2	31	8.6	2.1518	20	30	16
02/18/99	39	30	35	7	5	8.3	2.1163	20	9	15
02/19/99	40	26	33	10.8	3	11.3	2.4248	24	1	21
02/20/99	35	24	30	7.7	2	9.4	2.2407	23	36	17
02/21/99	33	20	27	9.7	36	10.2	2.3224	26	34	20
02/22/99	31	14	23	6	6	8.6	2.1518	17	5	15
02/23/99	33	24	29	8.7	12	9	2.1972	16	11	14
02/24/99	41	30	36	4.8	18	6.8	1.9169	32	21	24
02/25/99	38	30	34	3.7	32	6.8	1.9169	18	29	15
02/26/99	46	20	33	4.9	14	5.4	1.6864	18	14	13
02/27/99	61	36	49	9	19	11.5	2.4423	26	28	24
02/28/99	50	34	42	13.4	28	13.8	2.6247	30	29	25
03/01/99	44	31	38	12.3	30	12.6	2.5337	26	32	22
03/02/99	51	26	39	4.9	14	6.7	1.9021	21	13	17
03/03/99	47	30	39	16.7	31	17.1	2.8391	34	31	28
03/04/99	43	29	36	8.2	29	10.3	2.3321	28	30	21
03/05/99	57	31	44	11.1	18	11.4	2.4336	30	19	22
03/06/99	44	25	35	9	31	13.6	2.6101	30	29	24
03/07/99	32	15	24	9.3	5	10.7	2.3702	20	7	17
03/08/99	34	19	27	14.8	9	15.1	2.7147	33	10	26
03/09/99	36	29	33	1.9	15	10.6	2.3609	24	11	21
03/10/99	33	21	27	10.3	35	10.7	2.3702	20	1	15
03/11/99	34	14	24	5.5	1	6.7	1.9021	16	36	14
03/12/99	40	18	29	7.8	3	8.8	2.1748	21	4	16
03/13/99	36	25	31	12.7	7	12.9	2.5572	22	8	18
03/14/99	35	27	31	16.9	4	17.6	2.8679	33	1	28
03/15/99	42	22	32	8.3	1	8.8	2.1748	26	1	22
03/16/99	58	21	40	8.7	21	8.9	2.1861	22	22	17
03/17/99	71	45	58	11.2	23	11.8	2.4681	30	24	22
03/18/99	60	36	48	14.4	31	15.5	2.7408	37	31	28
03/19/99	49	28	39	7.1	2	8.2	2.1041	18	4	13
03/20/99	55	30	43	4.7	9	5.9	1.775	16	8	13
03/21/99	51	29	40	8.7	32	10.4	2.3418	29	34	26
03/22/99	47	23	35	8.8	30	9.2	2.2192	26	29	23
03/23/99	42	35	39	4.5	14	6.5	1.8718	15	19	13
03/24/99	59	37	48	6.1	33	8.4	2.1282	25	27	21
03/25/99	49	26	38	9.3	3	10.9	2.3888	26	2	22
03/26/99	46	29	38	9.5	4	11.2	2.4159	25	4	20
03/27/99	55	26	41	3.7	2	5.1	1.6292	14	2	11
03/28/99	62	27	45	2.3	28	4.2	1.4351	16	31	13
03/29/99	63	40	52	5.8	34	7	1.9459	23	1	17
03/30/99	67	31	49	1.7	17	4.5	1.5041	21	16	16
03/31/99	63	42	53	8.3	17	9	2.1972	22	17	17
04/01/99	63	52	58	5.3	20	6.3	1.8405	17	18	14

04/02/99	70	52	61	6.4	19	6.7	1.9021	18	18	15
04/03/99	67	55	61	5.1	16	5.9	1.775	18	14	15
04/04/99	72	51	62	7.3	27	9.9	2.2925	26	27	21
04/05/99	72	43	58	7	9	8.7	2.1633	18	6	15
04/06/99	72	48	60	11.2	24	13.8	2.6247	36	28	30
04/07/99	70	38	54	4.9	20	6.6	1.8871	20	20	15
04/08/99	77	56	67	6	20	7.5	2.0149	18	17	15
04/09/99	71	43	57	9	27	16	2.7726	41	27	37
04/10/99	58	37	48	9.5	9	11	2.3979	26	11	18
04/11/99	67	47	57	14.6	27	16.8	2.8214	38	28	32
04/12/99	56	39	48	10.7	32	11.9	2.4765	30	29	24
04/13/99	61	34	48	5.2	32	6.6	1.8871	20	33	14
04/14/99	64	36	50	3.8	13	5.2	1.6487	17	20	14
04/15/99	58	47	53	6.2	16	12.2	2.5014	38	26	25
04/16/99	47	42	45	18.9	24	19.2	2.9549	41	22	30
04/17/99	42	37	40	11.8	25	11.8	2.4681	37	27	26
04/18/99	52	40	46	6.6	25	7.5	2.0149	23	28	20
04/19/99	62	39	51	5.4	22	7.1	1.9601	29	21	21
04/20/99	63	40	52	0.1	29	4.5	1.5041	14	18	11
04/21/99	75	50	63	7.1	17	9.6	2.2618	37	32	25
04/22/99	77	60	69	12.2	21	12.5	2.5257	34	20	26
04/23/99	78	44	61	6.8	30	16.6	2.8094	39	27	31
04/24/99	62	39	51	12.1	5	12.6	2.5337	25	4	18
04/25/99	65	37	51	4.4	7	6.2	1.8245	17	7	15
04/26/99	61	49	55	5.1	12	5.6	1.7228	15	11	13
04/27/99	63	56	60	10.1	10	10.4	2.3418	21	11	17
04/28/99	64	52	58	12.1	7	12.4	2.5177	25	9	22
04/29/99	67	48	58	17.1	6	17.5	2.8622	37	8	29
04/30/99	70	41	5	10.8	4	11	2.3979	24	3	20
05/01/99	73	46	60	6.7	4	7.8	2.0541	20	2	15
05/02/99	75	49	62	6.3	9	8.1	2.0919	21	6	17
05/03/99	77	49	63	2	14	4.1	1.411	18	19	13
05/04/99	81	51	66	5.7	15	6.3	1.8405	20	16	17
05/05/99	78	61	70	11.5	18	12.3	2.5096	29	19	23
05/06/99	74	49	62	10.5	20	13.5	2.6027	54	25	31
05/07/99	73	48	61	8.8	22	9.7	2.2721	29	21	24
05/08/99	69	46	58	5.6	26	6.9	1.9315	26	29	22
05/09/99	75	49	62	1.8	1	3.4	1.2238	16	1	14
05/10/99	79	52	66	4.4	11	6.2	1.8245	20	13	16
05/11/99	84	57	71	4.8	12	6.2	1.8245	17	15	16
05/12/99	83	55	69	1.4	21	4.6	1.5261	16	26	13
05/13/99	73	58	66	3.6	7	7.5	2.0149	18	26	14
05/14/99	68	54	61	6.8	4	8.3	2.1163	17	7	15
05/15/99	75	51	63	6.3	12	7.5	2.0149	17	11	13
05/16/99	82	62	72	5.3	19	6.4	1.8563	20	19	15
05/17/99	84	62	73	9.4	20	9.9	2.2925	39	26	30
05/18/99	70	53	62	4.4	27	7.1	1.9601	24	31	18
05/19/99	73	44	59	2.5	35	3.6	1.2809	15	1	11
05/20/99	75	53	64	5	13	6.4	1.8563	17	15	14
05/21/99	81	54	68	6	19	6.9	1.9315	20	20	15
05/22/99	71	54	63	6.8	27	9.4	2.2407	28	28	23
05/23/99	76	50	63	2.7	24	5.6	1.7228	37	30	31

05/24/99	60	46	53	11.4	28	11.9	2.4765	32	29	26
05/25/99	68	42	55	7.2	26	8.6	2.1518	31	28	25
05/26/99	68	42	55	4.5	32	6.3	1.8405	21	31	16
05/27/99	74	38	56	1.3	29	3.4	1.2238	15	29	13
05/28/99	82	44	63	1.2	30	3.2	1.1632	14	28	11
05/29/99	84	50	67	0.7	19	2.8	1.0296	16	14	14
05/30/99	85	58	72	4.2	19	5	1.6094	18	18	16
05/31/99	78	66	72	7.8	20	8.7	2.1633	24	23	16
06/01/99	80	64	72	10	20	10.2	2.3224	24	23	17
06/02/99	80	61	71	8.5	25	10.4	2.3418	26	27	22
06/03/99	78	57	68	4	35	5.9	1.775	17	35	14
06/04/99	81	58	70	3.9	10	6.3	1.8405	16	17	14
06/05/99	87	62	75	3.4	20	5	1.6094	20	14	16
06/06/99	91	65	78	6.3	20	7.1	1.9601	16	17	13
06/07/99	87	69	78	6.6	23	7.5	2.0149	20	28	15
06/08/99	94	68	81	4.5	30	5.9	1.775	16	28	14
06/09/99	91	65	78	0.9	36	2.8	1.0296	33	24	24
06/10/99	93	65	79	0.6	21	2.9	1.0647	17	18	15
06/11/99	90	67	79	3	18	6.8	1.9169	26	13	23
06/12/99	89	66	78	1.4	36	4	1.3863	22	9	16
06/13/99	88	67	78	1.5	29	6.2	1.8245	24	23	18
06/14/99	81	65	73	5.6	31	9.2	2.2192	26	19	20
06/15/99	74	57	66	9.9	3	10.7	2.3702	22	2	16
06/16/99	75	52	64	7.9	3	9.8	2.2824	25	5	20
06/17/99	73	55	64	9.6	1	10.4	2.3418	23	2	18
06/18/99	75	49	62	6	7	7.3	1.9879	20	7	17
06/19/99	78	54	66	5.8	12	6.9	1.9315	20	15	16
06/20/99	84	59	72	2.2	5	4.8	1.5686	16	5	14
06/21/99	85	64	75	1.9	9	4.8	1.5686	17	11	14
06/22/99	88	63	76	1.8	10	4.2	1.4351	14	34	11
06/23/99	88	62	75	5.8	21	6.4	1.8563	17	20	15
06/24/99	79	69	74	7.9	15	9.5	2.2513	25	17	20
06/25/99	86	69	78	4	3	5.8	1.7579	18	2	14
06/26/99	88	68	78	2.2	17	3.8	1.335	16	13	13
06/27/99	80	71	76	5.6	20	6.1	1.8083	16	21	13
06/28/99	88	69	79	5.1	22	6.9	1.9315	32	26	24
06/29/99	76	57	67	6.1	33	8.4	2.1282	20	1	17
06/30/99	80	56	68	1	18	3.8	1.335	13	24	10
07/01/99	84	68	76	9	20	10.2	2.3224	28	21	20
07/02/99	85	70	78	4	22	6.3	1.8405	15	21	11
07/03/99	90	72	81	6	22	7.1	1.9601	18	20	14
07/04/99	92	74	83	3.9	24	6.3	1.8405	18	25	15
07/05/99	91	72	82	4	26	5.1	1.6292	20	24	14
07/06/99	94	71	83	5.9	28	7.6	2.0281	22	27	18
07/07/99	87	62	75	6.1	1	8.3	2.1163	21	2	18
07/08/99	87	60	74	0.7	24	3.6	1.2809	15	26	11
07/09/99	92	66	79	9	24	10.2	2.3224	45	33	37
07/10/99	79	65	72	5.3	35	8.2	2.1041	25	1	21
07/11/99	79	56	68	10.1	7	10.6	2.3609	26	7	22
07/12/99	82	61	72	6.6	7	9	2.1972	18	6	15
07/13/99	83	61	72	1.5	8	4.9	1.5892	14	11	11
07/14/99	87	58	73	0.3	28	2.2	0.7885	13	26	10

07/15/99	88	61	75	1	27	3.3	1.1939	16	24	13
07/16/99	89	65	77	1.5	23	3.5	1.2528	18	21	13
07/17/99	91	67	79	2	26	4.4	1.4816	23	26	17
07/18/99	87	69	78	5.4	27	7.4	2.0015	20	31	16
07/19/99	93	63	78	3.3	26	4.6	1.5261	18	26	15
07/20/99	90	72	81	1.5	27	5.3	1.6677	26	31	22
07/21/99	94	71	83	4.4	25	6.5	1.8718	28	31	26
07/22/99	96	72	84	7.2	28	8	2.0794	21	28	17
07/23/99	96	73	85	4.6	28	5.6	1.7228	20	28	16
07/24/99	95	73	84	6.3	31	7.8	2.0541	21	33	16
07/25/99	97	68	83	6.3	31	7.4	2.0015	20	30	16
07/26/99	94	69	82	1.7	27	6.8	1.9169	44	2	37
07/27/99	87	70	79	1.7	28	3	1.0986	14	27	11
07/28/99	86	70	78	3	23	5.4	1.6864	23	30	18
07/29/99	93	74	84	3.9	29	6.6	1.8871	17	32	14
07/30/99	101	79	90	6.6	27	7.5	2.0149	18	26	14
07/31/99	97	76	87	6.9	26	8.1	2.0919	26	32	21
08/01/99	88	74	81	7.3	33	8.4	2.1282	31	26	24
08/02/99	85	67	76	8.3	2	9.5	2.2513	21	1	17
08/03/99	84	58	71	2.4	4	5.4	1.6864	17	8	13
08/04/99	88	63	76	3.7	30	5.8	1.7579	18	27	15
08/05/99	85	63	74	5.7	34	7.4	2.0015	20	29	16
08/06/99	85	56	71	1.8	32	3.7	1.3083	17	1	15
08/07/99	93	61	77	5	23	6.2	1.8245	23	25	17
08/08/99	81	68	75	4.3	30	7.8	2.0541	29	27	23
08/09/99	79	62	71	3.6	7	6.6	1.8871	18	8	16
08/10/99	87	58	73	3.4	21	4.9	1.5892	23	26	17
08/11/99	86	67	77	4.1	33	6	1.7918	14	31	11
08/12/99	85	68	77	5.5	15	6.5	1.8718	14	13	13
08/13/99	92	63	78	8.6	26	11.8	2.4681	31	30	25
08/14/99	69	61	65	7.2	34	8.8	2.1748	18	1	17
08/15/99	81	58	70	2.6	6	6.4	1.8563	16	9	14
08/16/99	85	56	71	1	9	2.8	1.0296	10	20	9
08/17/99	93	60	77	5.6	29	7	1.9459	22	28	18
08/18/99	88	61	75	4.9	3	7.9	2.0669	22	32	16
08/19/99	76	66	71	7	8	9.1	2.2083	24	10	20
08/20/99	81	58	70	8.2	1	9.2	2.2192	23	1	18
08/21/99	84	54	69	3.7	2	5.8	1.7579	20	33	14
08/22/99	85	58	72	1	6	3.2	1.1632	13	8	11
08/23/99	90	65	78	4.2	14	6.2	1.8245	16	9	14
08/24/99	80	64	72	4.6	18	7.6	2.0281	25	28	22
08/25/99	74	62	68	2.2	21	4.4	1.4816	14	28	13
08/26/99	79	61	70	2.9	28	4.2	1.4351	13	30	11
08/27/99	83	61	72	2.7	32	4.5	1.5041	14	31	11
08/28/99	87	60	74	1.5	31	2.7	0.9933	15	33	10
08/29/99	87	64	76	8.8	3	10	2.3026	28	5	22
08/30/99	76	56	66	12.9	7	13.8	2.6247	26	6	23
08/31/99	84	54	69	6.1	9	8	2.0794	18	9	15
09/01/99	86	54	70	1.7	9	3.5	1.2528	14	6	10
09/02/99	90	52	71	1.4	8	3.3	1.1939	15	7	13
09/03/99	90	59	75	2.5	5	5	1.6094	16	3	10
09/04/99	95	64	80	3.4	7	5.8	1.7579	21	6	17

09/05/99	91	64	78	6.4	7	7.7	2.0412	25	6	17
09/06/99	93	63	78	5.5	33	7.4	2.0015	24	36	18
09/07/99	83	53	68	2.9	33	4.5	1.5041	15	33	11
09/08/99	91	54	73	2.1	27	4.6	1.5261	24	29	21
09/09/99	82	56	69	8.8	29	9.8	2.2824	28	29	24
09/10/99	78	46	62	3.9	31	5.5	1.7047	22	28	18
09/11/99	89	46	68	2.2	21	4.6	1.5261	20	29	15
09/12/99	92	56	74	6	19	6.9	1.9315	25	18	20
09/13/99	77	53	65	4.9	28	6.7	1.9021	18	28	17
09/14/99	76	45	61	3.4	31	5.2	1.6487	23	32	17
09/15/99	79	44	62	3.5	2	5.2	1.6487	18	35	18
09/16/99	75	49	62	10.5	36	10.8	2.3795	33	1	23
09/17/99	75	43	59	2.3	3	4.5	1.5041	17	2	14
09/18/99	77	46	62	0.4	13	2.9	1.0647	20	16	11
09/19/99	85	52	69	0.3	17	3.3	1.1939	17	18	14
09/20/99	74	58	66	3.8	31	7.8	2.0541	24	32	18
09/21/99	68	51	60	9.9	2	11	2.3979	26	2	22
09/22/99	70	36	53	2.1	32	4.7	1.5476	18	31	15
09/23/99	78	39	59	5.3	22	6.6	1.8871	23	20	16
09/24/99	83	52	68	6.1	23	8.9	2.1861	25	25	18
09/25/99	87	50	69	3	21	4.4	1.4816	21	20	15
09/26/99	87	54	71	6.9	20	7.6	2.0281	26	20	22
09/27/99	81	60	71	8.8	16	9.3	2.23	25	16	22
09/28/99	89	64	77	4	16	6.6	1.8871	29	23	22
09/29/99	70	46	58	6.4	28	9.5	2.2513	29	31	22
09/30/99	67	40	54	2.9	28	5.3	1.6677	18	26	15
10/01/99	75	45	60	2.9	27	6.2	1.8245	23	27	17
10/02/99	79	44	62	3.2	27	8.3	2.1163	26	25	20
10/03/99	76	53	65	4.2	9	9.5	2.2513	28	36	24
10/04/99	54	47	51	7.3	35	7.4	2.0015	20	36	15
10/05/99	63	44	54	1.7	35	4.9	1.5892	13	26	9
10/06/99	71	39	55	1.4	4	5.8	1.7579	18	1	13
10/07/99	71	45	58	9.3	10	9.8	2.2824	17	12	15
10/08/99	72	52	62	7.3	19	7.7	2.0412	22	19	18
10/09/99	70	61	66	6.4	15	8.1	2.0919	17	10	15
10/10/99	69	54	62	4.3	27	6.2	1.8245	16	31	13
10/11/99	70	53	62	8	5	8.4	2.1282	21	4	18
10/12/99	74	46	60	3.6	13	6.6	1.8871	15	7	13
10/13/99	76	46	61	6.9	27	13.2	2.5802	39	31	33
10/14/99	59	43	51	4.5	5	6.8	1.9169	18	1	14
10/15/99	74	43	59	6	17	7	1.9459	18	17	14
10/16/99	77	55	66	7.9	20	8.1	2.0919	22	22	16
10/17/99	63	44	54	8.5	36	8.8	2.1748	22	36	16
10/18/99	55	35	45	4.1	35	4.8	1.5686	18	35	15
10/19/99	53	35	44	0.5	27	3	1.0986	15	26	10
10/20/99	60	33	47	2.8	30	4.8	1.5686	16	32	14
10/21/99	62	29	46	6.3	21	6.4	1.8563	20	20	17
10/22/99	61	47	54	11.6	29	14.2	2.6532	33	28	28
10/23/99	48	39	44	15.1	31	15.4	2.7344	32	29	28
10/24/99	49	31	40	6.4	32	6.8	1.9169	28	34	22
10/25/99	59	28	44	6.2	21	6.4	1.8563	18	19	16
10/26/99	70	41	56	5.9	25	7.7	2.0412	22	30	20

10/27/99	65	34	50	1.3	5	3.1	1.1314	9	3	8
10/28/99	76	39	58	3.9	19	5.1	1.6292	15	20	11
10/29/99	78	45	62	4.4	18	5.6	1.7228	16	18	13
10/30/99	73	50	62	7.3	19	7.5	2.0149	20	21	15
10/31/99	75	51	63	3.8	21	4.6	1.5261	14	25	11
11/01/99	77	49	63	0.7	16	2.8	1.0296	13	21	10
11/02/99	65	35	50	12.9	32	15	2.7081	32	36	26
11/03/99	45	28	37	10.9	27	11.5	2.4423	31	29	28
11/04/99	61	29	45	8.4	20	8.6	2.1518	24	18	20
11/05/99	69	41	55	9.6	22	9.9	2.2925	24	22	18
11/06/99	69	53	61	5.8	30	9.1	2.2083	18	31	15
11/07/99	58	40	49	7.1	6	8.5	2.1401	21	4	17
11/08/99	70	41	56	2.6	17	4.6	1.5261	11	20	9
11/09/99	73	47	60	7.9	22	8.2	2.1041	26	24	21
11/10/99	70	56	63	9.5	22	9.7	2.2721	26	22	20
11/11/99	59	42	51	7	36	8	2.0794	26	1	21
11/12/99	52	33	43	1.2	22	2.8	1.0296	11	20	9
11/13/99	68	39	54	5.4	21	6.4	1.8563	17	20	14
11/14/99	64	40	52	8.6	32	12.6	2.5337	30	34	24
11/15/99	49	28	39	6.9	33	7.7	2.0412	22	32	18
11/16/99	47	27	37	6	35	7.5	2.0149	22	34	17
11/17/99	45	24	35	1.1	3	3.5	1.2528	8	27	7
11/18/99	63	30	47	8.8	19	9.1	2.2083	20	19	17
11/19/99	68	40	54	12.9	20	13.1	2.5726	32	20	25
11/20/99	57	45	51	1.3	22	3.9	1.361	18	22	16
11/21/99	66	50	58	5.6	16	6.4	1.8563	17	18	14
11/22/99	69	50	60	5.8	20	6.8	1.9169	20	19	16
11/23/99	71	50	61	8.5	19	9.1	2.2083	31	19	23
11/24/99	63	37	50	7.6	32	8.8	2.1748	29	28	24
11/25/99	48	35	42	8.8	6	9.5	2.2513	24	9	21
11/26/99	45	35	40	5.4	25	7.5	2.0149	22	28	18
11/27/99	56	35	46	2.7	23	7	1.9459	15	21	11
11/28/99	48	30	39	2.6	35	4.8	1.5686	15	36	9
11/29/99	44	23	34	9.2	31	9.6	2.2618	25	31	21
11/30/99	39	18	29	4.6	2	6	1.7918	17	1	14
12/01/99	41	18	30	5.7	16	6.2	1.8245	15	15	13
12/02/99	57	26	42	9.4	20	9.7	2.2721	21	22	16
12/03/99	59	45	52	9.9	19	10	2.3026	23	22	18
12/04/99	63	47	55	8.5	20	8.7	2.1633	21	20	17
12/05/99	59	47	53	10.6	20	11.3	2.4248	25	19	20
12/06/99	48	27	38	8.8	30	10.2	2.3224	29	26	23
12/07/99	43	21	32	4.7	17	4.9	1.5892	17	18	13
12/08/99	52	26	39	3.1	19	4.6	1.5261	15	20	13
12/09/99	54	30	42	5.7	17	6.1	1.8083	16	18	13
12/10/99	54	28	41	6.1	33	10.2	2.3224	32	35	23
12/11/99	43	26	35	6.1	9	7	1.9459	14	9	11
12/12/99	44	35	40	2.3	11	4.6	1.5261	16	16	14
12/13/99	43	39	41	12.8	5	13.7	2.6174	34	7	28
12/14/99	46	38	42	6.2	22	9.6	2.2618	28	24	23
12/15/99	47	33	40	11.4	22	13	2.5649	36	26	25
12/16/99	40	30	35	11.4	25	11.8	2.4681	34	27	25
12/17/99	53	28	41	2.5	22	6.9	1.9315	21	25	16

12/18/99	36	27	32	8.5	4	9	2.1972	17	3	14
12/19/99	45	29	37	4.3	8	5.9	1.775	13	8	11
12/20/99	49	20	35	6.9	27	10.4	2.3418	29	27	23
12/21/99	26	18	22	5	33	5.9	1.775	17	31	15
12/22/99	33	8	21	3.9	21	5.2	1.6487	16	19	14
12/23/99	33	18	26	7.4	28	8.4	2.1282	21	31	16
12/24/99	25	4	15	5.6	3	8.2	2.1041	21	3	18
12/25/99	26	0	13	6.6	21	6.7	1.9021	20	22	15
12/26/99	40	22	31	13	27	15.4	2.7344	33	30	28
12/27/99	25	19	22	6.8	29	7.8	2.0541	17	27	13
12/28/99	29	9	19	6.5	24	8.2	2.1041	24	22	17
12/29/99	39	25	32	8.3	22	9.1	2.2083	22	22	17
12/30/99	51	35	43	5.5	23	7.2	1.9741	21	22	15
12/31/99	51	25	38	1.8	26	3.3	1.1939	14	30	10

Appendix C

Distance of Plume Dispersion (km) in 10 minute Time Intervals

Condition	Time	TLV			PEL			IDLH		
		Longitude	Latitude	Distance	Longitude	Latitude	Distance	Longitude	Latitude	Distance
HCN 13F 61mph	1200	-84.5428	39.133		-84.5428	39.133		-84.5428	39.133	
HCN 13F 61mph	1210	-84.5372	39.14285	1.1816	-84.5414	39.13804	0.5683	-84.5414	39.13631	0.3892
HCN 13F 61mph	1220	-84.5372	39.14265	1.1816	-84.5414	39.13804	0.5683	-84.5414	39.13631	0.3892
HCN 13F 61mph	1230	-84.5372	39.14285	1.1816	-84.5407	39.13781	0.5508	-84.541	39.13594	0.3404
HCN 13F 61mph	1240	-84.5372	39.14265	1.1816	-84.5414	39.13804	0.5683	-84.5414	39.13659	0.4187
HCN 13F 61mph	1250	-84.5372	39.14265	1.1816	-84.541	39.1376	0.5143	-84.5414	39.13631	0.3892
HCN 13F 61mph	1300									
HCN 13F 61mph	1310									
HCN 13F 61mph	1320									
HCN 13F 61mph	1330									
HCN 13F 61mph	1340									
HCN 13F 61mph	1350									
HCN 13F 61mph	1400									

Condition	Time	TLV			PEL			IDLH		
		Longitude	Latitude	Distance	Longitude	Latitude	Distance	Longitude	Latitude	Distance
HCN 55F 3mph	1200	-84.5428	39.133		-84.5428	39.133		-84.5428	39.133	
HCN 55F 3mph	1210	-84.5407	39.13761	0.5215	-84.5407	39.13675	0.4348	-85.5414	39.13631	0.3892
HCN 55F 3mph	1220	-84.5352	39.14521	1.5041	-84.5359	39.14439	1.3999	-84.5359	39.14367	1.3168
HCN 55F 3mph	1230	-84.5296	39.16133	3.3433	-84.5313	39.15026	2.1507	-84.5359	39.14465	1.4278
HCN 55F 3mph	1240	-84.5262	39.15722	3.0453	-84.5268	39.1544	2.7525	-84.5359	39.14439	1.3999
HCN 55F 3mph	1250	-84.5213	39.16369	3.8633	-84.5219	39.16119	3.5975	-84.5362	39.14464	1.418
HCN 55F 3mph	1300	-84.5164	39.16878	4.5853	-84.5167	39.16636	4.3338	-84.5362	39.14437	1.3898
HCN 55F 3mph	1310	-84.5115	39.17431	5.2967	-84.5164	39.16932	4.639	-84.5362	39.14464	1.418
HCN 55F 3mph	1320	-84.5067	39.17963	6.0474	-84.5118	39.17252	5.1254			
HCN 55F 3mph	1330	-84.5024	39.18441	6.6821	-84.5102	39.17487	5.4374			
HCN 55F 3mph	1340	-84.4989	39.1899	7.3714	-84.5112	39.17486	5.4008			
HCN 55F 3mph	1350	-84.4956	39.19483	7.9691	-84.5109	39.17423	5.3334			
HCN 55F 3mph	1400	-84.4901	39.1991	8.6395	-84.5106	39.17424	5.3486			

Condition	Time	TLV			PEL			IDLH		
		Longitude	Latitude	Distance	Longitude	Latitude	Distance	Longitude	Latitude	Distance
HCN 95F 61mph	1200	-84.5428	39.133		-84.5428	39.133		-84.5428	39.133	
HCN 95F 61mph	1210	-84.5367	39.14331	1.2576	-84.5373	39.13972	0.882	-84.5414	39.13726	0.4782
HCN 95F 61mph	1220	-84.5367	39.14331	1.2576	-84.5373	39.13972	0.882	-84.5414	39.13726	0.4782
HCN 95F 61mph	1230	-84.5367	39.14331	1.2576	-84.5373	39.13972	0.882	-84.5414	39.13726	0.4782
HCN 95F 61mph	1240	-84.5367	39.14331	1.2576	-84.5373	39.13972	0.882	-84.5414	39.13726	0.4782
HCN 95F 61mph	1250	-84.5367	39.14331	1.2576	-84.5373	39.13972	0.882	-84.5414	39.13726	0.4782
HCN 95F 61mph	1300									
HCN 95F 61mph	1310									
HCN 95F 61mph	1320									
HCN 95F 61mph	1330									
HCN 95F 61mph	1340									
HCN 95F 61mph	1350									
HCN 95F 61mph	1400									

Condition	Time	TLV			PEL			IDLH		
		Longitude	Latitude	Distance	Longitude	Latitude	Distance	Longitude	Latitude	Distance
CL2 13F 3mph	1200	-84.5428	39.133		-84.5428	39.133		-84.5428	39.133	
CL2 13F 3mph	1210	-84.5414	39.13883	0.6591	-84.5414	39.13786	0.5382	-84.5414	39.13786	0.5382
CL2 13F 3mph	1220	-84.5368	39.14643	1.5645	-84.5368	39.14536	1.4482	-84.5368	39.14536	1.4482
CL2 13F 3mph	1230	-84.5309	39.15311	2.4492	-84.5316	39.15124	2.2231	-84.532	39.1479	1.8836
CL2 13F 3mph	1240	-84.5261	39.1592	3.2375	-84.5267	39.15756	3.0505	-84.5307	39.1517	2.3208
CL2 13F 3mph	1250	-84.5219	39.16504	3.2375	-84.5226	39.16252	3.7092	-84.5307	39.1517	2.3208
CL2 13F 3mph	1300	-84.5164	39.1713	4.8285	-84.5167	39.16878	4.5735	-84.5303	39.15144	2.3045
CL2 13F 3mph	1310	-84.5109	39.17709	5.2669	-84.5109	39.17331	5.2543	-84.5297	39.15141	2.3272
CL2 13F 3mph	1320	-84.5057	39.18281	6.3885	-84.506	39.18012	6.0986	-84.5303	39.15144	2.3045
CL2 13F 3mph	1330	-84.5008	39.18962	7.2601	-84.5015	39.1847	6.7586			
CL2 13F 3mph	1340	-84.4958	39.19406	7.9039	-84.4971	39.19058	7.4986			
CL2 13F 3mph	1350	-84.4913	39.20142	8.7896	-84.4916	39.1954	8.1973			
CL2 13F 3mph	1400	-84.4854	39.20644	9.5238	-84.4864	39.20184	9.0663			

Condition	Time	TLV			PEL			IDLH		
		Longitude	Latitude	Distance	Longitude	Latitude	Distance	Longitude	Latitude	Distance
CL2 55F 61mph	1200	-84.5428	39.133		-84.5428	39.133		-84.5428	39.133	
CL2 55F 61mph	1210	-84.5258	39.15517	2.8687	-84.5572	39.14285	1.6483	-84.5414	39.13731	0.4782
CL2 55F 61mph	1220	-84.5258	39.15517	2.8687	-84.5572	39.14285	1.6483	-84.5414	39.13731	0.4782
CL2 55F 61mph	1230	-84.5258	39.15517	2.8687	-84.5572	39.14285	1.6483	-84.5414	39.13731	0.4782
CL2 55F 61mph	1240	-84.5258	39.15517	2.8687	-84.5572	39.14285	1.6483	-84.5414	39.13731	0.4782
CL2 55F 61mph	1250	-84.5258	39.15517	2.8687	-84.5572	39.14285	1.6483	-84.5414	39.13731	0.4782
CL2 55F 61mph	1300	-84.5258	39.15517	2.8687						
CL2 55F 61mph	1310									
CL2 55F 61mph	1320									
CL2 55F 61mph	1330									
CL2 55F 61mph	1340									
CL2 55F 61mph	1350									
CL2 55F 61mph	1400									

Condition	Time	TLV			PEL			IDLH		
		Longitude	Latitude	Distance	Longitude	Latitude	Distance	Longitude	Latitude	Distance
CL2 95F 3mph	1200	-84.5428	39.133		-84.5428	39.133		-84.5428	39.133	
CL2 95F 3mph	1210	-84.542	39.13889	0.6521	-84.5419	39.13812	0.5602	-84.5421	39.13761	0.4961
CL2 95F 3mph	1220	-84.5362	39.14674	1.1694	-84.5362	39.14596	1.5317	-84.5362	39.14542	1.5031
CL2 95F 3mph	1230	-84.5313	39.15296	2.4294	-84.5316	39.15151	2.251	-84.532	39.14897	1.9917
CL2 95F 3mph	1240	-84.5244	39.15962	3.358	-84.5244	39.15756	3.1423	-84.5245	39.15332	2.752
CL2 95F 3mph	1250	-84.5211	39.16587	4.0929	-84.5209	39.16307	3.8326	-84.5259	39.15662	3.0026
CL2 95F 3mph	1300	-84.5167	39.1713	4.8173	-84.5167	39.16905	4.6004	-84.5259	39.15662	3.0026
CL2 95F 3mph	1310	-84.5112	39.17732	5.6153	-84.5112	39.1736	5.2682	-84.5259	39.15662	3.0026
CL2 95F 3mph	1320	-84.5063	39.18314	6.3796	-84.5073	39.18033	6.0762	-84.5259	39.15662	3.0026
CL2 95F 3mph	1330	-84.5008	39.19006	7.2869	-84.5015	39.18596	6.8637	-84.5259	39.15662	3.0026
CL2 95F 3mph	1340	-84.4947	39.19366	7.9006	-84.4946	39.19125	7.6914			
CL2 95F 3mph	1350	-84.4902	39.20052	8.7588	-84.4908	39.1972	8.4182			
CL2 95F 3mph	1400	-84.4847	39.20625	9.5349	-84.4856	39.20219	9.1309			

