

# Demonstration and Evaluation of U.S. Postal Service Electric Mail Delivery Vehicles

Quarterly Report, March 2001

AQMD CONTRACT #00192

**Project Number: TC-00-0101**

**Report Number: TC-00-0101-TR03**



An *EDISON INTERNATIONAL*<sup>SM</sup> Company

**Electric Vehicle Technical Center**

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## I. INTRODUCTION

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In December 1998 the Delivery and Customer Services Equipment Engineering division of the United States Postal Service (USPS) issued Specification USPS-E-PURC for the procurement of six Pilot Model [electric] vehicles “for examination and testing within the time frame specified by the Contraction Officer (CO), to prove that the production methods will produce methods will produce vehicles that meet the requirements specified herein”.

On December 22, 1999 the USPS announced that Ford had been selected to build the first 500 EVs of the demonstration program.

In April, 2000, the USPS and South Coast Air Quality Management District (AQMD) recognized Southern California Edison’s technical leadership position in the EV field and recommended that Baseline Performance and Accelerated Reliability Tests be performed at SCE’s Electric Vehicle Technical Center (EVTC) in Pomona, California, with oversight of the Department of Energy (DOE) Field Operations Program.

Under the terms of AQMD contract No. 00192, awarded on July 28<sup>th</sup>, 2000, SCE was to perform the following tasks:

- Task 1 – Baseline Performance Test Procedures Evaluation and Modification
- Task 2 – Accelerated Reliability Test Procedures Evaluation and Modification
- Task 3 – Conduct Baseline Performance Tests on two EVs
- Task 4 – Conduct Accelerated Reliability Tests on two EVs

Tasks number 1 and 2 were completed on August 10, 2000 when revision 0 of the Baseline Performance and Accelerated Reliability test Procedures were issued and forwarded to the USPS.

Tasks number 3 and 4 started in late August when SCE received USPS approval to operate the four vehicles delivered to the EVTC on July 5, 2000.

Task 3 was completed on November 15<sup>th</sup> of 2000 and vehicle Nos. 1240003 and 1240004 were returned to Ford.

This quarterly report presents the progress to date on Task 4, the Reliability Tests, as of the end of March 2001.

## II. ACCELERATED RELIABILITY TEST RESULTS TO DATE

### 2.1 Vehicle Mileage and Energy Usage Since Inception

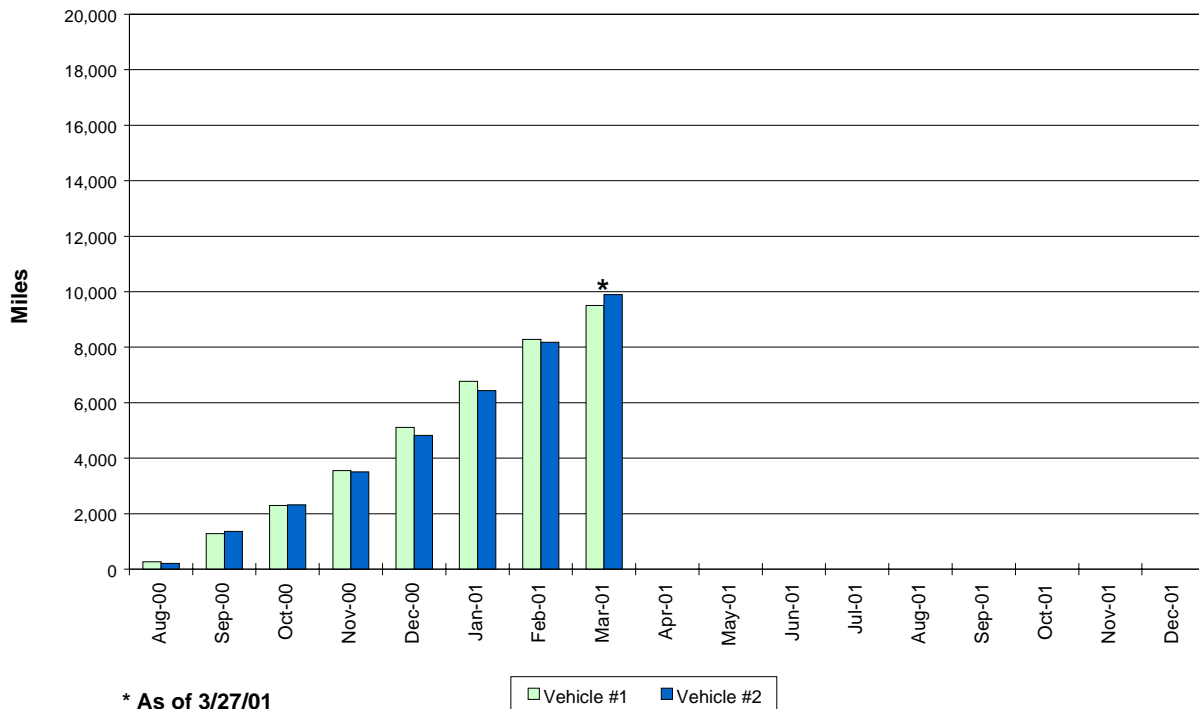
Postal vehicles 1240001 and 1240002 (also referred to as Vehicles #1 and #2) have been on an accelerated mileage regimen in which they are expected to achieve over 20,000 miles in a one-year period. During testing, all mileage, ambient temperature and energy usage is collected for each drive on log sheets (Appendix A). Energy is also recorded by a kilowatt-hour measuring device, which is downloaded periodically. Table 2.1-1, below, summarizes the cumulative mileage and energy usage recorded at the end of the first quarter 2001.

**Table 2.1-1 – Vehicle Mileage and Energy Usage – As of March 27, 2001**

	Vehicle #1	Vehicle #2
Start Odometer	153	143
Current Odometer	9503	9899
Total Miles Driven	9350	9756
Total ACkWh Used	6109.9	6534.2
AC kWh/mile	0.65	0.67

Please refer to Figure 2.1-1. It shows the growth of recorded miles since the beginning of the tests.

**Figure 2.1-1  
USPS EV Reliability Testing  
Cumulative Miles (end of month)**



## 2.2 Operating Cost Analysis

Steps are being taken to obtain maintenance cost data from Ford and subsequent quarterly reports will document these costs.

Energy costs have been calculated on the basis of a Schedule GS-2 electricity tariff, "General Service – Demand" (see Appendix B), with no additional demand charges. These assumptions are valid for the early introduction of electric mail carriers in the USPS fleet. Large numbers of vehicles at any given location may increase demand charges. Time of Day tariffs may also be applicable. These situations will be explored further with the USPS and reported later.

Table 2.2-1 below is based on the \$0.07692/ kWh cost of GS-2 for the energy usage shown on table 2.1-1.

**2.2-1 Table 2.2-1 – Energy Cost**

	Vehicle #1	Vehicle #2
Total AC kWh Cost	\$ 469.97	\$ 502.61
Electricity Cost per Mile	\$ 0.0499	\$ 0.0515

## 2.3 Vehicle Range

Range tests are being performed periodically with the accelerated reliability vehicles on the Pomona Urban Loop (See Pomona Loop Map in Appendix B). All tests are performed at maximum payload (1250lbs) with no auxiliary loads turned on (UR3).

The vehicles are driven until they reach the stop condition, which is the when the battery light begins to flash. The vehicles can be safely driven further past the stop condition for a few more miles until the Power Limit light comes on solid. When the Power Limit light begins to flash the vehicle's top speed will be reduced to 25 mph (to protect the battery pack).

Table 2.3-1, below, shows the range results obtained until March 28, 2001. As can be seen on the table, the vehicles generally complete in excess of 40 miles on the Pomona Loop. The most recent range test data sheets are included in Appendix C.

**Table 2.3-1 – Accelerated Reliability Vehicle Range Results**

	Date Tested	Average Ambient Temp °F	Odometer Start	Odometer End	Range at Stop Condition
Vehicle #1	08-30-00	74.0	215	261	45.3
	10-12-00	70.4	1410	1452	41.9
	12-06-00	70.7	3774	3811	41.1
	03-28-01	66.0	9458	9503	44.8 *
Vehicle #2	08-31-00	78.6	164	210	46.0
	10-12-00	70.4	1545	1584	38.5
	12-06-00	70.7	3791	3833	41.4
	03-27-01	68.2	9849	9899	48.6

\* Reconditioned battery pack installed on 3/13/01 – see Table 2.3-1.

## 2.4 Vehicle Incidents and Downtimes Since Inception

Table 2.4-1, below, shows the incidents that have been recorded with the accelerated reliability vehicles since the beginning of the tests.

On March 15, 2001, SCE sent to Ford an extensive set of data collected by the on-board data acquisition system along with the driving logs produced by the driver. This was prompted by battery problems experienced with the vehicles delivered to the USPS. An acid diffusion problem in the battery modules is suspected and Ford is using the data produced by the Accelerated Reliability Test vehicles to confirm their conclusions. Amendments to battery specifications may be needed to solve the problem.

**Table 2.4-1 – Vehicle Incidents and Downtimes**

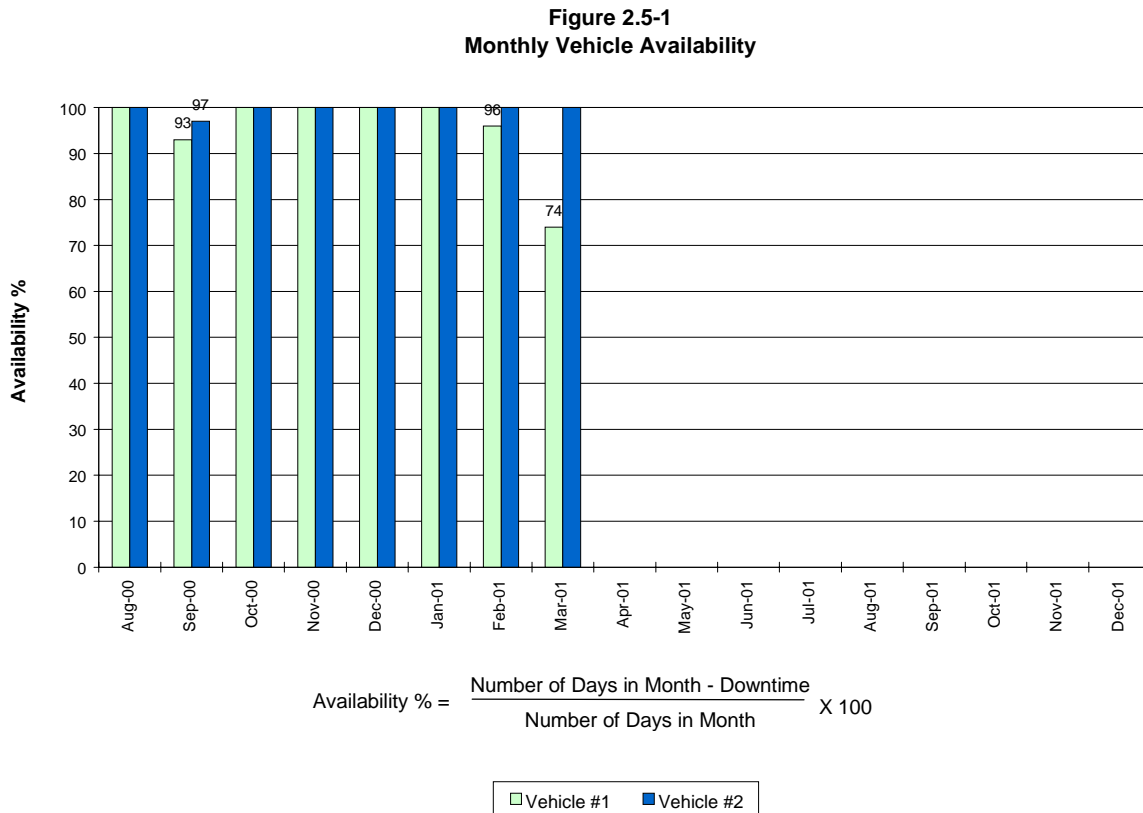
Vehicle	Date	Description	Downtime - Days
1240002	09-07-00	Vehicles need loading straps for payload, payload shifted abruptly without loading straps on vehicle 1240002. Loading straps obtained on 9-8-00.	0
1240001	09-08-00	Vehicle charger noticed to be charging abnormally, approximately 10 hours to charge. Charging profile showed that charger repeatedly charged for three minutes then turned off for seven minutes until the charge was complete. Ford is aware of the situation	0
1240001	09-11-00	Charger not functioning. Repaired 9-13-00. New charger installed. Charger cooling fan failed.	2
1240002	09-11-00	When vehicle was driven to power limit mode the power steering on the vehicle became hard. High voltage fuse may be the problem. Repaired 9-12-00. High voltage fuse and power steering replaced.	1
1240002	10-07-00	Power Limit light on at 27.8 miles. Drive ended at 34 miles.	0
1240002	10-13-00	Power steering upgraded. Requested by Ford.	NA
1240002	12-03-00	Vehicle showing power limit after only 27.4 miles, had to be towed back to EVTC. Previous day, vehicle was discharged completely. Weekend driver. Sunday drive.	0
1240001	12-10-00	Vehicle showing power limit lamp flashing after only 28.7 miles. Weekend Driver. Sunday drive.	0
1240002	12-12-00	Electric Vehicle Supply Equipment (EVSE) "Service Required" light came on. EVSE fuse box was cycled off then on. Charging now functioning normally.	0
1240001	02-05-01	At beginning of second drive of the day, the vehicle lost power and service and power limit lights came on. A faulty DC/DC converter was replaced. Odometer reading was 6,693.	1
1240001	03-10-01	After about one mile away from the EVTC, the vehicle lost power and main contactor clicking sounds could be heard. The battery pack was replaced by a reconditioned one. Odometer reading was 8,818.	4
1240001	03-14-01	At the end of the first drive of the day, the vehicle lost power and the service light came on. Odometer reading was 8,938. The Battery Control Module (BCM) was replaced.	4



## 2.5 Vehicle Availability

Please refer to Figure 2.5-1 for records of the monthly availability of vehicles No. 1 and 2 since the test started.

Note that the formula shown on Figure 2.5-1 does not qualify the Downtime Days, i.e. downtime during weekends has the same impact as downtime during working days since USPS vehicles deliver mail on Saturdays.



## APPENDIX A: DRIVER'S LOG SHEETS

### USPS DELIVERY VEHICLE TESTING

Vehicle Number	1
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Date	Driver	Start					End					Trip Dist.	AC meter#	AC kWh Start/End
		Time	Amb Temp	SOC	Odo	DTE	Time	Amb Temp	SOC	Odo	DTE			
8/28/00	Sanchez	3:35	85.3	100%	153	33	4:23	84.4	51.0%	170		16.8	01139878	10261/10273
8/29/00	solares	9:00		100%	170	33	9:27		100.0%	171	35	1.9	01139878	10273/10274
8/29/00	Sanchez	2:10	71.8	100%	171	33	3:52	71.6	0.0%	215	0	43.5	01139878	10274/10345
8/30/00	Sanchez	9:42	70	100%	215	38	11:30	77.9	0.0%	261	0	45.3	01139878	/
9/7/00													01139878	/
9/9/00	Barbour	7:15	59.7	100%	261	40	8:45	74.8	10.0%	294	6	32.9	01139878	10345/10370
9/10/00	Barbour	6:30	59.9	100%	294	39	8:20	65.7	0.0%	335	2	40.6	01139878	10370/10378
9/10/00	Barbour	11:40	80.6	40%	335	18	12:20	82.4	0.0%	350	3	15.6	01139878	10378/110407
9/11/00	Sanchez	3:10	98.1	100%	351	40	6:30	98.1	0.0%	403	0	52.6	01139878	10407/10450
9/13/00	Sanchez	2:10	93.1	100%	403	43	4:41	97.1	0.0%	453	0	50.2	01139878	10450/10486
9/14/00	Sanchez	9:50	81.3	100%	453	43	12:00	91.5	0.0%	493	0	40.8	01139878	10486/10518
9/15/00	Sanchez	10:20	87.1	100%	494	40	11:54	93.5	0.0%	535	0	40.7	01139878	10518/10561
9/15/00	Diaz	3:05		60%	535		4:00			557		22.4	01139878	/
9/16/00	Barbour	9:30	83.4	100%	557	40	11:15	89.8	0.0%	595	0	37.6	01139878	10561/10587
9/17/00	Barbour	8:20	76.2	100%	595	39	10:05	81.7	0.0%	634	0	39.0	01139878	10587/10615
9/18/00	Sanchez	9:00	81	100%	634	39	10:30	91.8	0.0%	674	0	40.7	01223620	1998/2016
9/18/00	Sanchez	2:35	99	97%	675	38	4:00	95	0.0%	708	0	33.5	01139878	10615/10641
9/19/00	Sanchez	8:50	73.2	100%	708	42	10:22	84.9	0.0%	744	0	40.8	01139878	10641/
9/19/00	Sanchez	2:40	87.1	80%	749	33	4:12	93	0.0%	786	0	37.0	01139878	10661/10690
9/20/00	Sanchez	8:30	68.5	100%	786	40	10:15	75.2	0.0%	828	0	41.7	01139878	10690/10710
9/20/00	Sanchez	2:10	85.6	90%	82.8	29	3:50	84.8	0.0%	866	0	38.3	01139878	10710/10740
9/21/00	Sanchez	8:50	77	100%	866	40	10:30		0.0%	904	0	38.4	01139878	10740/10760
9/21/00	Sanchez	2:36	70.8	100%	904	40	5:11	71.4	0.0%	945	0	40.8	01139878	10760/10793
9/23/00	Barbour	7:05	62.1	100%	945	44	8:35	63.3	0.0%	984	0	38.5	01139878	10793/10822
9/24/00	Barbour	11:06	82.4	100%	984	42	12:38	85.5	0.0%	1020	0	36.8	01139878	10822/10846

comments (dated) 9/12/00 vehicle only charged to 3/4 in the morning  
 9/18/00 11:30am stopped charge for 10min.



USPS DELIVERY VEHICLE TESTING

Vehicle Number	1
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Date	Driver	Start					End					Trip Dist.	AC meter#	AC kWh Start/End
		Time	Amb Temp	SOC	Odo	DTE	Time	Amb Temp	SOC	Odo	DTE			
10/23/00	Sanchez	9:35	65.8	100%	1824	38	11:00	77.4	0.0%	1865	0	40.9	01139878	11415/11444
10/24/00	Sanchez	8:30	61.7	100%	1865	38	10:30	76	0.0%	1906	0	41.2	01139878	11444/11461
10/24/00	Sanchez	1:30	78.1	60%	1906	23	2:00	78.4	0.0%	1931	0	24.9	01139878	11461/11487
10/25/00	Sanchez	8:20	61	100%	1931	38	9:00	62	72.0%	1940	38	8.9	01139878	11487/11488
10/25/00	Sanchez	9:00	63.9	75%	1940	27	1:00	73	0.0%	1966	4	25.9	01139878	11488/11508
10/25/00	Sanchez	2:00	80.2	100%	1966	38	3:30	81	15.0%	1997	9	31.6	01139878	11508/11530
10/26/00	Sanchez	8:10	54	100%	1997	38	9:56	60	0.0%	2034	0	36.4	01139878	11530/11550
10/26/00	Sanchez	1:45	65	100%	2034	36	3:22	66.2	0.0%	2073	0	39.4	01139878	11550/11578
10/27/00	Sanchez	8:55	56.1	100%	2073	36	10:45	61	0.0%	2109	0	36.2	01139878	11578/11598
10/27/00	Sanchez	2:45	80	100%	2109	36	4:07	70	0.0%	2146	0	36.8	01139878	11598/11640
10/30/00	Sanchez	8:45	62.4	100%	2146	38	10:29	68.9	0.0%	2177	0	30.9	01139878	11640/11660
10/30/00	Sanchez	2:35	71	80%	2177	31	4:40	64.6	0.0%	2216	0	38.6	01139878	11660/11687
10/31/00	Sanchez	8:06	53.1	100%	2216	38	9:40	68.9	0.0%	2252	0	36.4	01139878	11687/11710
10/31/00	Sanchez	2:50	72.1	100%	2252	38	4:23	69.1	0.0%	2292	1	39.6	01139878	11710/11736
11/1/00	Sanchez	8:30	59.5	100%	2292	38	9:55	65	0.0%	2325	0	33.9	01139878	11736/11756
*11/1/00	Sanchez	1:30	75.2	100%	2325	34	3:11	78.4	0.0%	2367	0	41.9	01139878	11756/11784
11/2/00	Sanchez	8:30	61.3	100%	2367	38	10:37	70	0.0%	2407	0	39.8	01139878	11784/11799
11/2/00	Sanchez	1:30	80	80%	2407	32	2:40	79	0.0%	2442	2	34.5	01139878	11799/11826
11/3/00	Sanchez	8:30	68	100%	2442	40	10:08	73	0.0%	2483	1	40.3	01139878	11826/11839
11/3/00	Sanchez	12:40	82.4	60%	2483	29	2:05	79.1	0.0%	2511	2	28.1	01139878	11839/11849
11/3/00	Sanchez	4:00	77	50%	2511	21	4:19	75	30.0%	2517	19	6.6	01139878	11849/11879
11/5/00	Barbour	7:20	48.8	100%	2517	40	9:00	59.9	0.0%	2558	0	40.6	01139878	11879/11902
11/6/00	Sanchez	8:20	57	100%	2558	40	10:30	61	0.0%	2590	0	40.4	01139878	11902/11924
11/6/00	Sanchez	2:40	71	100%	2598	40	3:49	67	0.0%	2637	0	38.5	01139878	11924/11954
11/7/00	Sanchez	9:50	69	100%	2637	39	10:27	72	70.0%	2049	26	12.7	01139878	11954/11961

Comments (Dated): \*11/1/00 payload moved to veh#3

USPS DELIVERY VEHICLE TESTING

Vehicle Number	1
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Date	Driver	Start					End					Trip Dist.	AC meter#	AC kWh Start/End
		Time	Amb Temp	SOC	Odo	DTE	Time	Amb Temp	SOC	Odo	DTE			
11/7/00	Sanchez	2:00	73.6	100%	2649	38	3:23	72.1	0.0%	2687	5	37.2	0113978	11961/11987
11/8/00	Sanchez	8:25	56	100%	2687	39	1:00	61	0.0%	2723	0	35.7	0113978	11987/11996
11/8/00	Sanchez	11:45	77	50%	2723	16	12:57	79	0.0%	2743	0	20.0	0113978	1996/12005
11/8/00	Sanchez	2:35	77	49%	2743	19	2:40	77	49.0%	2743	20	0.1	0171202	258/262
*11/09/00	Sanchez	11:10	64	100%	2743	38	12:27	62.3	0.0%	2783	2	40.0	01308606	2422/2434
11/9/00	Sanchez	3:10	60	65%	2783	30	4:12	57	0.0%	2811	0	28.4	0113978	12005/2508
11/13/00	Sanchez	10:15	68	100%	2811	41	11:54	78	0.0%	2851	4	39.9	01308606	2508/2511
11/13/00	Sanchez	2:45	80.1	95%	2851	37	4:00	66.3	0.0%	2887	3	35.4	01308606	2511/12100
11/14/00	Sanchez	9:10	61	100%	2887	42	11:10	65.4	0.0%	2927	0	40.1	01308606	12100/12132
11/16/00	Sanchez	9:30	58	100%	2927	41	10:50	60	0.0%	2954	0	27.7	01308606	12132/12148
11/16/00	Sanchez	1:30	64.2	100%	2954	38	3:00	62	0.0%	2994	0	40.1	01308606	12148/12175
11/17/00	Sanchez	9:20	58	100%	2994	38	10:50	65.2	0.0%	3030	0	33.2	01308606	12175/12195
11/17/00	Sanchez	3:20	65	100%	3030	35	4:35	64.7	0.0%	3068	0	38.4	01308606	12195/12222
11/18/00	Barbour	9:50	57.3	100%	3068	38	11:36	63.6	0.0%	3110	0	41.8	01308606	12222/12258
11/20/00	Sanchez	11:00	71	100%	3110	38	12:00	72.3	0.0%	3146	0	35.9	01308606	12258/12276
11/20/00	Sanchez	3:30	76	90%	3146	31	4:30	74	0.0%	3185	0	38.8	01308606	12276/12305
11/21/00	Sanchez	9:30	68	100%	3185	39	11:00	71	0.0%	3223	0	38.6	01308606	12305/12319
11/21/00	Sanchez	1:30	76	60%	3223	22	2:15	72	0.0%	3250	0	27.2	01308606	12319/12327
11/21/00	Sanchez	3:30	70	35%	3250	15	4:15	68	0.0%	3266	0	15.6	01308606	12327/12356
11/22/00	Sanchez	10:40	64	100%	3266	39	12:00	67	0.0%	3300	0	34.4	01308606	12356/
														/
														/
														/
														/
														/

Comments (Dated): \*note on 11/9/00 postal van#1 was charged on 01308606

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USPS DELIVERY VEHICLE TESTING

Vehicle Number	1
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Date	Driver	Start					End					Trip Dist.	AC meter#	AC kWh Start/End
		Time	Amb Temp	SOC	Odo	DTE	Time	Amb Temp	SOC		DTE			
11/27/00	Neil	3:15	83	100%	3301	39	4:15	77	33.0%	3323	10	21.9	01139878	/12437
11/28/00	Sanchez	7:50	59.6	100%	3327	39	9:14	65.9	0.0%	3358	0	34.6	01139878	12437/12457
11/28/00	Sanchez	1:05	76	100%	3358	31	2:35	75.5	0.0%	3398	0	40.1	01139878	12457/12483
11/29/00	Sanchez	9:20	59.3	100%	3398	32	10:35	60.4	0.0%	3432	0	34.5	01139878	12483/12501
11/29/00	Sanchez	2:00	67	75%	3432	30	3:30	66.3	0.0%	3472	0	39.7	01139878	12501/12531
11/30/00	Sanchez	9:30	60	100%	3472	32	10:30	62	0.0%	3505	0	33.0	01139878	12531/12550
11/30/00	Sanchez	2:06	69.4	97%	3505	29	3:40	68.5	0.0%	3545	0	39.8	01139878	12550/12580
12/1/00	Sanchez	8:50	59.9	100%	3545	32	10:00	62.2	0.0%	3584	0	39.2	01139878	12580/12603
12/1/00	Sanchez	3:00	59	100%	3616	10	4:25	57	0.0%	3616	0	32.2	01139878	12603/12642
12/4/00	Sanchez	9:25	61	100%	3616	38	11:10	73	0.0%	3652	0	35.6	01139878	12642/12659
12/4/00	Sanchez	12:30	70	80%	3652	29	2:30	74.6	0.0%	3692	0	40.0	01139878	12659/12688
12/5/00	Sanchez	9:15	69.8	100%	3692	29	10:30	73.4	0.0%	3732	0	39.9	01139878	12688/12706
12/5/00	Sanchez	1:45	78.4	75%	3732	22	3:00	80.1	0.0%	3772	0	40.0	01139878	12706/12736
12/6/00	Sanchez	8:30	68	100%	3772	35	8:50	98	37.0%	3773	0	0.1	01139878	12736/12736
*12/6/00	Sanchez	1:05	71.4	100%	3773	32	2:45	70	0.0%	3814	0	41.1	01139878	12736/12764
12/7/00	Sanchez	10:30	68	100%	3814	39	11:30	71	30.0%	3836	15	22.0	01139878	12764/12776
12/7/00	Sanchez	1:45	67	100%	3836	31	3:30	72.5	0.0%	3880	0	44.0	01139878	12776/12807
12/8/00	Sanchez	8:15	62.7	100%	3880	31	10:03	61.6	0.0%	3921	0	40.7	01139878	12807/12829
12/8/00	Sanchez	2:05	61.9	100%	3921	32	4:26	62.1	0.0%	3967	0	45.9	01139878	12829/12861
12/9/00	Barbour	8:30	54.7	100%	3967	34	10:04	57.4	2.0%	4007	4	39.6	01139878	12861/12889
12/10/00	Barbour	10:15	56.8	100%	4007	36	11:48	58.8	0.0%	4044	0	37.3	01139878	12889/12918
12/11/00	Sanchez	8:15	57	100%	4044	31	10:23	60.9	0.0%	4086	0	42.2	01139878	12918/12927
12/12/00	Sanchez	11:00	60	25%	4086	9	11:50	59.9	0.0%	4106	0	20.3	01139878	12927/12971
12/12/00	Sanchez	2:10	63	52%	4106	20	3:15	61.4	0.0%	4130	0	24.0	01139878	12940/12971
12/13/00	Sanchez	8:15	60	100%	4130	35	10:10	60	0.0%	4173	0	42.6	01139878	12971/12990

Comments (Dated): \*driven with no weight / 12/10/00 power limit light flashing@28.7 miles

USPS DELIVERY VEHICLE TESTING

Vehicle Number	1
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Date	Driver	Start					End					Trip Dist.	AC meter#	AC kWh Start/End
		Time	Amb Temp	SOC	Odo	DTE	Time	Amb Temp	SOC	Odo	DTE			
12/13/00	Sanchez	13:30	65.5	75%	4173	28	15:05	64.6	0.0%	4212	0	39.1	01139878	12990/13021
12/14/00	Sanchez	8:10	61	100%	4212	35	10:00	63.3	0.0%	4252	0	40.2	01139879	13021/13042
12/14/00	Sanchez	14:00	62	100%	4252	38	16:20	58.1	0.0%	4293	0	40.9	01139880	13042/13069
12/15/00	Sanchez	8:00	61	100%	4293	38	9:45	62	0.0%	4334	0	41.1	01139881	13069/130087
12/15/00	Sanchez	13:10	64	72%	4334	28	14:42	652	0.0%	4372	0	38.4	01139882	13087/13138
12/18/00	Sanchez	10:30	66	100%	4372	38	12:20	73.6	0.0%	4415	0	42.9	01139883	13138/13157
12/18/00	Barbour	15:50	73.2	85%	4415	31	17:16	65.7	0.0%	4453	0	37.3	01139884	13157/13184
12/19/00	Sanchez	7:50	62	100%	4453	39	9:55	62.9	50.0%	4474	20	21.3	01139885	13184/ 13197
12/19/00	Sanchez	11:25	71.5	100%	4474	39	3:35	75.1	0.0%	4523	0	49.2	01139886	13197/13227
12/20/00	Sanchez	8:10	64.1	100%	4523	39	10:00	63.8	0.0%	4564	0	41.5	01139887	13227/13249
12/20/00	Sanchez	2:00	70.3	100%	4564	39	3:44	70.1	0.0%	4606	0	41.1	01139888	13249/13279
12/21/00	Sanchez	8:10	59.6	100%	4606	40	9:48	65	0.0%	4647	0	41.1	01139889	13279/13301
12/21/00	Sanchez	1:50	72	100%	4647	39	3:40	70.9	0.0%	4688	0	41.0	01139890	13301/
12/22/00	Sanchez	8:40	52	100%	4688	40	10:20	61.2	0.0%	4731	0	43.2	01139891	/13354
12/22/00	Sanchez	2:30	67.6	90%	4731	30	5:00	64.2	0.0%	4777	0	48.2	01139892	13354/13389
12/23/00	Barbour	8:25	56.1	100%	4777	40	9:57	60	2.0%	4815	7	37.4	01139893	13389/13434
12/26/00	Sanchez	8:00	60	100%	4815	40	10:00	62	0.0%	4856	0	41.8	01139894	13434/13456
12/26/00	Sanchez	7:00	68.5	100%	4856	31	3:58	67.8	0.0%	4896	0	40.0	01139895	13456/13484
12/27/00	Sanchez	9:05	60	100%	4896	39	10:51	64	0.0%	4938	0	41.3	01139896	13484/13507
12/27/00	Sanchez	3:10	71	100%	4938	39	4:57	69.2	2.0%	4979	3	41.0	01139897	13507/13535
12/28/00	Sanchez	8:10	61.7	100%	4979	40	9:47	67	0.0%	5020	3	41.1	01139898	13535/13564
12/28/00	Sanchez	1:15	7.25	97%	5020	32	2:52	72.1	0.0%	5061	0	41.0	01139899	13564/13584
12/29/00	Sanchez	8:50	60	100%	5061	40	10:34	69	0.0%	5102	0	41.9	01139900	13584/13634
1/2/01	Sanchez	8:08	62	100%	5102	40	9:37	64	0.0%	5137	0	34.9	01139901	13634/13655
1/2/01	Sanchez	4:07	74.4	100%	5137	39	4:25	74.3	98.0%	5141	33	45.0	01139902	13655/13663

Comments (Dated): 12/15/00 van taken down below power limit..and drained. With AC all lights & fan on. Put back on charge at 4:30.  
 12/22/00 van driven down all lights left on AC&fan put back on charge at 5:30. 12/23-heater on ter on .  
 01/2/01 note van reached power limit at 27 miles the wrench tool on dash board came on.

USPS DELIVERY VEHICLE TESTING

Vehicle Number	1
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Date	Driver	Start					End					Trip Dist.	AC meter#	AC kWh Start/End
		Time	Amb Temp	SOC	Odo	DTE	Time	Amb Temp	SOC	Odo	DTE			
1/3/01	Sanchez	8:35	64.1	100%	5141	39	10:21	70.1	0.0%	5181	0	39.7	01139178	13663/13681
*1/3/01	Sanchez	1:45	74.8	80%	5181	29	3:27	76.8	0.0%	5220	0	39.3	01139178	13681/13712
1/4/01	Sanchez	8:10	59.5	100%	5220	36	3:27	68.5	0.0%	5263	0	42.5	01139178	13712/13734
1/4/01	Sanchez	2:10	79	100%	5263	31	10:05	76	0.0%	5306	0	43.2	01139178	13734/13764
1/5/01	Sanchez	8:00	65	100%	5306	37	4:00	67	0.0%	5348	0	42.0	01139178	13764/13784
1/5/01	Sanchez	2:05	68.5	95%	5348	30	10:10	69.2	0.0%	5387	0	49.0	01139178	13784/13813
1/6/01	Barbour	8:18	56	100%	5387	38	4:10	58	0.0%	5425	0	38.7	01139178	13813/13826
1/6/01	Barbour	12:08	67	70%	5425	25	10:02	71	0.0%	5450	0	24.7	01139178	13826/13861
1/8/01	Sanchez	8:10	64	100%	5450	38	1:16	53	0.0%	5480	0	29.8	01139178	13861/13880
1/8/01	Sanchez	1:45	54	100%	5480	32	9:34	59.7	0.0%	5519	0	39.0	01139178	13880/13907
1/9/01	Sanchez	7:40	55	100%	5519	30	3:45	64.3	0.0%	5552	0	33.3	01139178	13907/13927
1/9/01	Sanchez	12:45	68.5	100%	5552	29	9:13	63.8	0.0%	5592	0	40.3	01139178	13927/13955
1/10/01	Sanchez	8:25	60	100%	5292	30	2:26	62.7	0.0%	5630	0	37.5	01139178	13955/13979
1/10/01	Sanchez	1:35	60.1	100%	5630	30	10:00	57	27.0%	5658	19	28.5	01139178	13979/14008
1/12/01	Sanchez	7:45		100%	5658	31	2:45		26.0%	5681	19	23.0	01139178	14008/
1/12/01	Sanchez	2:10	52	100%	5681	31	9:10	50	0.0%	5721	0	40.1	01139178	/14051
1/13/01	Barbour	11:00	53	100%	5721	32	4:05	56	0.0%	5754	0	33.0	01139178	14051/14072
1/14/01	Sanchez	8:30	40	100%	5754	31	12:24	42	0.0%	5786	0	31.9	01139178	14072/14087
1/14/01	Sanchez	12:30	60	76%	5786	27	9:50	64	0.0%	5825	0	38.4	01139178	14087/14115
1/15/01	Sanchez	8:12	377	100%	5825	31	1:50		0.0%	5859	0	34.0	01139178	14115/14135
1/15/01	Sanchez	1:24	57	100%	5859	30	9:48	57	0.0%	5898	0	39.3	01139178	14135/14163
1/16/01	Sanchez	7:50	40	100%	5898	31	2:55	58	0.0%	5938	0	40.0	01139178	14163/14182
1/16/01	Sanchez	1:15		100%	5938	0	9:45		0.0%	5979	0	41.7	01139178	14182/14212
1/17/01	Sanchez	8:36	44	100%	5979	32	3:12	57	0.0%	6022	0	42.4	01139178	14212/14228
1/17/01	Sanchez	12:45		75%	6022	27	3:37	54	0.0%	6056	0	33.9	01139178	14228/14257

Comments (Dated): \*01/03/01 discharged at 3:27 to 4:50



USPS DELIVERY VEHICLE TESTING

Vehicle Number	1
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Date	Driver	Start					End					Trip Dist.	AC meter#	AC kWh Start/End
		Time	Amb Temp	SOC	Odo	DTE	Time	Amb Temp	SOC	Odo	DTE			
1/18/01	Sanchez	7:45	54	100%	6058	38	8:26	58	0.0%	6093	0	37.5	01139178	14257/14267
1/18/01	Sanchez	10:15	59	42%	6093	12		65	0.0%	6113	0	20.1	01139178	14267/14275
1/18/01	Sanchez	1:50	64	49%	6113	13	1:50	64	0.0%	6133	0	20.0	01139178	14275/14307
1/19/01	Sanchez	10:55	59	100%	6133	39	5:00	54	0.0%	6177	0	44.0	01139178	14307/14947
1/21/01	Babour	11:20	63	100%	6177	38	12:47	67	0.0%	6214	0	37.4	01139178	14947/14973
1/22/01	Sanchez	7:45	65	100%	6215	39	9:35	69	0.0%	6256	0	41.7	01139178	14973/14389
1/22/01	Sanchez	12:20	70	70%	6256	23	1:42	71	0.0%	6290	0	34.1	01139178	14389/14399
1/22/01	Sanchez	3:40	59	13%	6290	11	3:55	59	30.0%	6295	15	4.9	01139178	14399/14423
1/23/01	Sanchez	8:40	49	100%	6295	39	10:30	70	0.0%	6335	0	40.0	01139178	14423/14440
1/23/01	Sanchez	1:45	71	80%	6335	32	3:15	69	0.0%	6373	0	38.2	01139178	14440/14470
1/24/01	Sanchez	9:05	40	100%	6373	24	10:45	46	0.0%	6414	0	40.2	01139178	14470/14485
1/24/01	Sanchez	1:25		70%	6414	21	3:05		0.0%	6450	0	36.8	01139178	14485/14517
1/25/01	Sanchez	10:10		100%	6450	39	11:45		0.0%	6488	0	37.9	01139178	14517/14544
*1/26/01	Sanchez	1:37	48	100%	6488	37	3:10	48	0.0%	6525	0	37.3	01139178	14544/14580
1/28/01	Babour	6:20	46	100%	6525	37	7:38	47	0.0%	6555	0	29.5	01139178	14580/14595
1/28/01	Babour	10:10	51	75%	6555	23	11:19	56	0.0%	6583	0	28.5	01139178	14595/14622
1/29/01	Sanchez	12:30	56	100%	6583	37	2:10	56	0.0%	6621	0	37.7	01139178	14622/14647
1/30/01	Sanchez	8:45	46	100%	6621	31	1:05	50	0.0%	6665	0	43.8	01139178	14647/14661
1/30/01	Sanchez	1:45	60	60%	6665	21	2:32	61	0.0%	6689	0	24.2	01139178	14661/14670
1/30/01	Sanchez	4:07	61	27%	6684	10	5:00	58	0.0%	6708	0	18.8	01139178	14670/14699
1/31/01	Sanchez	1:00	51	100%	6708	33	11:45	51	0.0%	6746	0	38.0	01139178	14699/14711
1/31/01	Sanchez	1:55	60	51%	6746	19	3:05	61	20.0%	6764	17	16.9	01139178	14711/
														/
														/
														/

Comments (Dated): 1/19/01&1/26/01 van driven down, 1/28-heater&lights on(6:20).

USPS DELIVERY VEHICLE TESTING

Vehicle Number	1
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Date	Driver	Start					End					Trip Dist.	AC meter#	AC kWh Start/End
		Time	Amb Temp	SOC	Odo	DTE	Time	Amb Temp	SOC	Odo	DTE			
2/1/01	Sanchez	11:00	61	100%	6764	37	12:36	63	0.0%	6804	0	40.0	01139878	14736/14748
2/1/01	Sanchez	2:56	65	60%	6804	20	16:05	66	0.0%	6836	0	31.9	01139878	14748/14776
2/2/01	Sanchez	9:50	56	100%	6836	38	11:32	62	0.0%	6876	0	40.0	01139878	14776/14798
2/2/01	Sanchez	3:47	69	100%	6876	39	5:00	67	0.0%	6911	0	35.1	01139878	14798/14832
2/4/01	Barbour	10:01	68	100%	6911	39	11:56	77	0.0%	6952	0	41.2	01139878	14832/14856
2/5/01	Sanchez	8:10	59	100%	6952	38	9:55	68	0.0%	6992	0	40.0	01139878	14856/14875
2/5/01	Sanchez	1:27	79	100%	6992	38			0.0%		0		01139878	14875/14876
2/6/01	Sanchez	2:45	63	99%	6993	27	4:17	60	0.0%	7032	0	38.8	01139878	14876/14901
2/7/01	Sanchez	8:00	49	100%	7032	38	9:22	49	0.0%	7071	0	38.8	01139878	14901/14920
2/7/01	Sanchez	1:10	56	100%	7070	36	2:25	57	0.0%	7111	0	40.1	01139878	14920/14946
2/8/01	Sanchez	8:00	40	100%	7111	37	9:35	47	0.0%	7151	0	40.5	01139878	14946/14963
2/8/01	Sanchez	1:05	55	80%	7151	30	2:00	55	49.0%	7171	18	19.6	01139878	14963/14964
2/8/01	Sanchez	2:15	55	55%	7171	18	3:00	56	0.0%	7189	0	18.6	01139878	14964/14990
2/9/01	Sanchez	9:47	48	100%	7189	38		52	0.0%	7229	0	40.1	01139878	14990/15022
2/10/01	Sanchez	12:00	50	100%	7229	38	2:00	52	0.0%	7269	0	40.0	01139878	15022/15046
2/11/01	Barbour	9:08	47	100%	7269	40	10:32	50	0.0%	7306	0	36.4	01139878	15046/15072
2/12/01	Sanchez	10:15	48	100%	7306	38	12:15	49	0.0%	7348	0	41.8	01139878	15072/15090
2/12/01	Sanchez	3:27	49	100%	7348	29	4:40	48	0.0%	7368	0	20.0	01139878	15090/15112
2/13/01	Sanchez	9:52	49	100%	7368	34	11:25	49	0.0%	7400	0	32.3	01139878	15112/15131
2/13/01	Sanchez	3:07	48	100%	7400	31	4:35	48	0.0%	7440	0	40.0	01139878	15131/15158
2/14/01	Sanchez	10:05	49	100%	7440	32	12:02	53	0.0%	7481	0	41.1	01139878	15158/15172
2/14/01	Sanchez	3:07	57	100%	7481	24	4:40	54	0.0%	7521	0	40.0	01139878	15172/15202
2/15/01	Sanchez	10:15	50	100%	7521	39	11:50	52	0.0%	7561	0	40.4	01139878	15202/15222
2/15/01	Sanchez	3:32	57	100%	7561	39	5:10	53	0.0%	7609	0	47.3	01139878	15222/15250
2/16/01	Sanchez	10:00	54	100%	7609	40	11:47	61	0.0%	7650	0	41.5	01139878	15250/15272
Comments: 2/5/01 van malfunction . 2-8-01 stopped drive to attend safty meeting 2:00pm.														
2/9/01 van driven down &dis charged ,put back on charge at 5:00pm temp was 52. 2/11/01- heater on for 1st 20 miles.														

USPS DELIVERY VEHICLE TESTING

Vehicle Number	1
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Date	Driver	Start					End					Trip Dist.	AC meter#	AC kWh Start/End
		Time	Amb Temp	SOC	Odo	DTE	Time	Amb Temp	SOC	Odo	DTE			
2/16/01	Sanchez	3:55	64	100%	7650	40	5:12	60	25.0%	4690	10	40.2	01139878	12572/15296
2/17/01	Barbour	7:15	47	100%	7690	40	8:31	51	0.0%	7724	0	33.5	01139878	15296/15321
2/18/01	Barbour	8:35	56	100%	7724	39	9:57	58	0.0%	7754	0	30.5	01139878	15321/15349
2/20/01	Sanchez	10:00	57	100%	7754	38	11:53	61	0.0%	7797	0	42.9	01139878	15349/15366
2/20/01	Sanchez	3:12	62	75%	7797	24	4:37	59	0.0%	7837	0	40.0	01139878	15366/15395
2/21/01	Sanchez	10:10	51	100%	7837	37	11:32	60	0.0%	7878	0	40.5	01139878	15395/15421
2/22/01	Sanchez	10:15	61	100%	7878	39	11:37	64	0.0%	7918	0	40.1	01139878	15421/15439
2/22/01	Sanchez	3:10	61	75%	7918	29	4:37	60	0.0%	7958	0	40.1	01139878	15439/15469
2/23/01	Sanchez	10:15	46	100%	7958	39	12:30	47	0.0%	8000	0	42.0	01139878	15469/15506
2/24/01	Sanchez	3:00	48	100%	8000	38	4:30	48	0.0%	8040	0	40.0	01139878	15506/15538
2/26/01	Sanchez	9:50	60	100%	8080	37	11:12	62	0.0%	8080	0	40.3	01139878	15538/15554
2/26/01	Sanchez	2:30	64	75%	8040	25	4:26	61	0.0%	8120	0	40.0	01139878	15554/15584
2/27/01	Sanchez	10:30	58	100%	8120	39	12:05	54	0.0%	8160	0	40.3	01139878	15584/15607
2/27/01	Sanchez	4:25	43	100%	8160	40	5:45	48	0.0%	8200	0	40.0	01139878	15607/15635
2/28/01	Sanchez	10:45	55	100%	8200	38	12:20	54	0.0%	8240	0	40.0	01139878	15635/15654
2/28/01	Sanchez	3:50	54	100%	8240	30	5:15	51	0.0%	8281	0	40.6	01139878	15654/15683
3/1/01	Jr Ruiz	11:30	55	100%	8281	40	1:15		0.0%	8322	0	41.0	01139878	15683/15710
3/2/01	Sanchez	10:55	55	100%	8322	38	11:51	64	49.0%	8346	38	23.7	01139878	15710/15724
3/2/01	Sanchez	3:30	60	100%	8346	38	5:10	58	0.0%	8386	0	40.6	01139878	15724/15749
3/3/01	Barbour	7:03	50	100%	8386	39	8:19	53	0.0%	8417	0	31.3	01139878	15749/15774
3/4/01	Barbour	8:22	55	100%	8417	38	9:49	57	0.0%	8455	0	37.6	01139878	15774/15799
3/5/01	Sanchez	1:00	65	100%	8455	33	11:30	69	0.0%	8493	0	38.0	01139878	15799/15817
3/5/01	Sanchez	3:00	64	94%	8493	30	4:30	62	0.0%	8535	0	42.2	01139878	15817/15845
3/6/01	Sanchez	10:10	61	100%	8535	39	12:30	64	0.0%	8574	0	39.4	01139878	15845/15865
3/6/01	Sanchez	4:15	61	100%	8574	38	5:45	58	0.0%	8614	0	40.4	01139878	15865/15893

Comments (Dated): 2/17 -heater on.2/18-heater on 2/23/01 driven down and left on with AC.Hlights.heater a.nd put back on charge at 4:30  
 3/2/01 incomplete drive due to ISO meeting. 3/3/01 heater on. 3/4/01- intermittent heater use.

USPS DELIVERY VEHICLE TESTING

Vehicle Number	1
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Date	Driver	Start					End					Trip Dist.	AC meter#	AC kWh Start/End
		Time	Amb Temp	SOC	Odo	DTE	Time	Amb Temp	SOC	Odo	DTE			
3/7/01	Sanchez	9:45	56	100%	8614	39		58	0.0%	8654	2	40.0	011308606	15893/15910
3/7/01	Sanchez	3:05	63	95%	8654	35	4:40	61	0.0%	8695	0	40.3	011308606	15910/15940
3/8/01	Sanchez	10:20	66	100%	8695	40	11:45	67	0.0%	8735	0	40.4	011308606	15940/15959
3/8/01	Sanchez	3:30	68	901%	8735	32	4:50	66	0.0%	8775	0	40.0	011308606	15959/15988
3/9/01	Sanchez	10:20	61	100%	8795	40	12:10	63	0.0%	8837	3	42.3	011308606	15988/16019
3/10/01	Barbour	7:08	47	100%	8817	40	7:14	47	99.0%	8818	39	0.9	011308606	16019/16048
3/14/01	Sanchez	10:00	60	100%	8858	39	11:30	64	0.0%	8898	0	40.1	011308606	16048/16084
3/15/01	Sanchez	11:30	63	100%	8898	43	12:48	62	0.0%	8938	0	40.0	011308606	16084/16084
3/15/01	Sanchez	1:30	84	75%	9056	38	3:20	85	0.0%	9100	0	43.9	01712141	/483
3/20/01	Sanchez	11:40	80	100%	9100	44	1:10	82	0.0%	9140	0	40.2	01712141	483/486
3/20/01	Sanchez	3:45	81	70%	9140	23	5:00	79	0.0%	9171	0	30.5	01712141	486/490
3/21/01	Sanchez	9:50	64	100%	9171	40	11:55	73	0.0%	9211	0	40.0	01712141	490/493
3/21/01	Sanchez	3:00	75	75%	9211	25	9:25	72	0.0%	9251	0	40.1	01712141	493/498
3/22/01	Sanchez	10:00	58	100%	9251	0	12:20	58	0.0%	9291	0	40.2	01712141	498/501
3/23/01	Sanchez	10:00	66	70%	9291	29	11:21	66	0.0%	9326	0	34.5	01712141	501/507
2/24/01	Barbour	9:00	61	100%	9326	40	10:33	65	0.0%	9368	0	42.0	01712141	507/513
3/26/01	Barbour	9:10	65	100%	9368	39	11:02	69	0.0%	9415	0	47.1	01712141	513/516
3/26/01	Barbour	2:12	71	100%	9415	40	4:30	68	0.0%	9458	0	43.5	01712141	516/522
3/27/01	Barbour	2:35	75	100%	9458	45	4:18	73	0.0%	9503	0	44.8	01712141	522/526
3/28/01	Sanchez	10:15	64	100%	9503	42	12:15	68	0.0%	9546	0	42.7	01712141	526/

Comments (Dated): 3/9/01 discharged with AC.Hlights left on. 3/10-heater on 3/10-vehicle lost power @.6 miles (returned to evtech center)

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USPS DELIVERY VEHICLE TESTING

Vehicle Number	2
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Date	Driver	Start					End					Trip Dist.	AC meter#	AC kWh Start/End
		Time	Amb Temp	SOC	Odo	DTE	Time	Amb Temp	SOC	Odo	DTE			
8/30/00	Sanchez	1:25	78.1	100%	143	42	221	82.8	25.0%	164	15	21.1	01712275	722/725
8/31/00	Sanchez	1:20	77.4	100%	164	42	3:05	79.7	0.0%	210	0	46.0	01712275	725/730
9/1/00	Sanchez	9:05	68.1	100%	210	42	10:42	70.7	0.0%	254	0	43.9	01712275	730/739
9/5/00	Sanchez	1:05	85.1	100%	254	42	0:00	89.6	0.0%	298	0	44.1	01712275	739/753
9/6/00	Sanchez	9:30	77.2	100%	298	40	1:20				32.6			/
9/9/00	Barbour	9:10	74.8	100%	331	44	11:00	85.8	0.0%	372	7	41.4	01308606	753/781
9/10/00	Barbour	8:35	65.8	100%	372	44	10:20	73.4	0.0%	415	6	42.7	01308606	781/889
9/14/00	Sanchez	1:50	93.7	100%	518	43	3:30	96.4	0.0%	559	0	40.8	01308606	889/918
9/15/00	Sanchez	9:30	74.9	100%	559	43	10:10	86.4	0.0%	601	0	42.2	01308606	918/936
9/15/00	Sanchez	1:50	98	90%	601	31	3:10	96	0.0%	634	0	33.5	01308606	936/965
9/16/00	Barbour	6:50	72.7	100%	634	43	8:40	78.9	2.0%	675	6	40.8	01308606	965/993
9/17/00	Barbour	6:15	72.8	100%	675	44	8:06	75.8	0.0%	720	0	45.0	01308606	993/1010
9/17/00	Barbour	11:20	85.6	75%	720	32	12:25	94.3	0.0%	748	2	27.9	01308606	1010/
9/18/00	Diaz	8:50	87	100%	748	43	10:26	89		78.9	7	40.7	01308606	/
9/18/00	Diaz	2:00	9:10	100%	78.9	41	4:08	92.3	0.0%	830	1	40.6	01308606	/
9/19/00	Diaz	9:00	85.4	100%	830	43	10:26	87.3	0.0%	868	3	38.4	01308606	/
9/19/00	Diaz	2:40	92.1	100%	868	41	4:17	91	2.0%	906	7	37.8	01308606	/
9/20/00	Diaz	8:31	80	100%	906	43	10:15	82.6	2.0%	944	7	38.4	01308606	/
9/20/00	Diaz	2:00	85.4	100%	9:44	40	3:50	84.8	2.0%	982	7	38.4	01308606	/
9/21/00	Diaz	8:40	77	100%	982	43	10:30	82.3	0.0%	1020	6	38.6	01308606	/1204
9/21/00	Diaz	2:40	71	100%	1020	42	5:15	71.4	8.0%	1061	8	40.8	01308606	1204/1238
9/23/00	Barbour	11:30	75.9	100%	1061	44	1:25	77.1	0.0%	1105	0	43.8	01308606	1238/1265
9/24/00	Barbour	6:55	56.1	100%	1105	45	8:28	63.7	0.0%	1146	0	40.6	01308606	1265/
													01308606	/
														/

Comments (Dated): 9-11-00 steering wheel became hard when car went into power limit. Car was charged. 9-12-00 steering was still hard, no power steering, power steering pump replaced and high voltage fuse for same replaced. 9-24-00 vehicle range depleted rapidly after D T E REACHED 10. VEHICLE WENT INTO POWER LIMIT MODE.

USPS DELIVERY VEHICLE TESTING

Vehicle Number	2
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Date	Driver	Start					End					Trip Dist.	AC meter#	AC kWh Start/End
		Time	Amb Temp	SOC	Odo	DTE	Time	Amb Temp	SOC	Odo	DTE			
9/25/00	Sanchez	1:00	86.5	100%	1146	43	2:59	100	0.0%	1187	5	41.3	01308606	1295/
9/26/00	Diaz	2:00	87.9	100%	187	43	3:45		9.0%	1223	8	35.8	01308606	/1347
9/27/00	Sanchez	10:40	73.3	100%	1223	43	1:12	72.9	0.0%	1263	0	40.6	01308606	1347 /1378
9/28/00	Sanchez	3:37	84	100%	1263	60	4:14	72	25.0%	1277	25	13.5	01308606	1378 /1391
9/28/00	Sanchez	8:20	68	100%	1277	40	10:20	72.1	0.0%	1318	0	41.6	01308606	1391/1421
9/30/00	Barbour	8:00	63.1	100%	1318	40	9:48	64.6	0.0%	1358	2	40.0	01308606	1421/1450
10/1/00	Barbour	10:00	71.6	100%	1358	41	11:28	75.7	0.0%	1399	0	40.6	01308606	1450/1478
10/2/00	Sanchez	1:30	82.4	100%	1399	42	4:20	87.8	0.0%	1434	0	35.5	01308606	1478/1515
10/5/00	Ruiz	11:00	22.5	100%	1434	42	12:00	77.7	49.0%	1455	20	21.0	01308606	1515/
10/5/00	Ruiz	1:30	81	49%	1455	19	2:00	82.7	0.0%	1469	1	34.9	01308606	1514/1538
10/7/00	Barbour	7:30	64.3	100%	1469	40	9:05	66.9	0.0%	1503	0	34.0	01308606	1538/
10/10/00	Ruiz	3:35		100%	1503	38	4:35		48.0%	1524	18	21.1	01308606	1580/
10/11/00	Ruiz	4:00		100%	1524	38	4:55		47.0%	1545	18	21.1	01308606	1599/1545
10/12/00	Barbour	8:40	61.2	100%	1545	37	10:15	63.3	0.0%	1584	0	38.5	01308606	1545/1642
10/13/00	Sanchez	2:00	82.3	100%	1584	37	2:47	84.3	45.0%	1605	15	21.3	01308606	1642/1657
10/15/00	Barbour	8:40	61.7	100%	1605	37	10:39	66.9	0.0%	1652	0	47.3	01308606	1657/1686
10/16/00	Sanchez	8:20	60.4	100%	1652	40	9:47	73	0.0%	1686	0	33.6	01308606	1686/1701
10/16/00	Sanchez	12:35	92.1	75%	1686	30	1:45	89.1	1.0%	1717	2	31.1	01308606	1701/1728
10/17/00	Sanchez	10:25	87.4	100%	1717	40	11:40	88.2	0.0%	1717	2	34.8	01308606	1728/1755
10/18/00	Sanchez	12:40	71.6	100%	1752	37	2:15	73.8	1.0%	1786	4	34.3	01308606	1755/1780
10/19/00	Sanchez	11:10	68	100%	1786	37	14:15	81	0.0%	1823	0	36.8	01308606	1780/1798
10/19/00	Sanchez	4:20	85	80%	1823	38	5:21	78	48.0%	1841	17	18.0	01308606	1798/1816
10/20/00	Sanchez	10:15	84.7	100%	1841	37	11:40	77.9	0.0%	1876	0	34.7	01308606	1816/1835
10/20/00	Sanchez	3:10	84.7	100%	1876	31	4:08	80	15.0%	1897	0	21.6	01308606	1835/1855
10/21/00	Barbour	9:48	65.3	100%	1897	35	11:31	70.9	0.0%	1938	0	40.6	01308606	1855/1891

Comments (Dated): POWER LIMIT ON @27.8(1017)

USPS DELIVERY VEHICLE TESTING

Vehicle Number	2
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Date	Driver	Start					End					Trip Dist.	AC meter#	AC kWh Start/End
		Time	Amb Temp	SOC	Odo	DTE	Time	Amb Temp	SOC	Odo	DTE			
10/23/00	Sanchez	12:00	82.4	100%	1938	38	1:30	75.7	0.0%	1969	2	31.2	01308606	1891/1896
10/23/00	Sanchez	2:00	81	25%	1969	10	2:45	77	0.0%	1985	3	15.8	01308606	1896/1921
10/24/00	Sanchez	10:35	69.4	100%	1985	38	11:45	76.3	2.0%	2017	2	32.1	01308606	1921/1938
10/24/00	Sanchez	2:50	83.8	98%	2017	32	4:10	77.4	0.0%	2040	4	32.5	01308606	1938/1963
10/25/00	Sanchez	10:30	81.5	100%	2049	36	12:00	78	0.0%	2085	0	35.5	01308606	1963/1998
10/26/00	Sanchez	10:15	62	100%	2085	36	11:32	64	0.0%	2118	0	32.9	01308606	1998/2009
10/26/00	Sanchez	3:32	57	100%	2118	32	4:16	67	50.0%	2137	17	19.6	01308606	2009/2028
10/27/00	Sanchez	11:00	60	100%	2137	32	12:35	69.3	0.0%	2174	0	36.7	01308606	2028/2047
10/27/00	Sanchez	4:15	70.7	100%	2174	30	5:45	67	1.0%	2208	1	33.5	01308606	2047/2088
10/30/00	Sanchez	10:45	68.9	100%	2208	31	12:12	73	0.0%	2411	0	33.7	01308606	2088/2106
10/30/00	Sanchez	4:50	64	100%	2241	32	5:30	60.6	53.0%	2250	18	16.4	01308606	2106/2120
10/31/00	Sanchez	9:52	69.1	100%	2258	32	11:25	72.3	0.0%	2293	0	35.5	01308606	2120/2129
10/31/00	Sanchez	12:57	84.4	30%	2293	12	1:45	75.2	0.0%	2314	0	20.9	01308606	2129/2157
11/1/00	Sanchez	10:00	64	100%	2314	34	11:37	79	0.0%	2353	0	39.9	01308606	2157/2183
11/2/00	Sanchez	10:50	82	100%	2354	38	12:30	79.3	8.0%	2391	9	37.5	01308606	2183/2196
11/2/00	Sanchez	2:52	80	75%	2391	26	4:19	76	0.0%	2432	0	40.3	01308606	2196/2228
11/3/00	Sanchez	10:35	73	100%	2432	38	12:16	79.5	0.0%	2471	0	39.5	01308606	2228/2240
11/3/00	Sanchez	2:40	81.7	60%	2471	21	3:46	77	0.0%	2500	0	28.3	01308606	2240/2268
11/4/00	Barbour	7:20	53.2	100%	2500	37	9:16	62.5	0.0%	2551	0	51.6	01308606	2268/2300
11/5/00	Barbour	10:30	67.3	100%	2551	39	12:12	73.8	0.0%	2595	0	44.1	01308606	2300/2328
11/6/00	Sanchez	10:40	60.3	100%	2595	40	12:20	68.2	48.0%	2619	20	23.6	01308606	2328/2332
11/6/00	Sanchez	1:10	71	70%	2619	23	2:30	72	0.0%	2643	0	23.8	01308606	2332/2340
11/6/00	Sanchez	3:57	64.4	50%	2643	20	4:34	66.4	0.0%	2661	0	18.7	01308606	2340/2371
11/7/00	Sanchez	3:37	69	100%	2661	39	4:00	79	38.0%	2667	36	5.5	01308606	2371/2375
11/8/00	Sanchez	10:10	72	100%	2667	38	11:15	82	0.0%	2699	0	37.5	01308606	2375/2386

Comments (Dated):


USPS DELIVERY VEHICLE TESTING

Vehicle Number	2
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Date	Driver	Start					End					Trip Dist.	AC meter#	AC kWh Start/End
		Time	Amb Temp	SOC	Odo	DTE	Time	Amb Temp	SOC	Odo	DTE			
11/8/00	Sanchez	1:15	80	55%	2699	19	2:28	78	0.0%	2729	1	30.0	01308606	2386/2393
11/8/00	Sanchez	3:50	65	50%	2729	15	4:22	62	23.0%	2741	5	11.8	01308606	2393/2419
11/9/00	Sanchez	8:20	54	100%	2741	39	10:10		0.0%	2781	0	40.2	01712102	2419/2422
11/9/00	Sanchez	11:04	68	100%	2781	8	11:05			2781		0.0	01308606	2434/2482
11/9/00	Sanchez	1:30	66	75%	2781	23	3:00	64	0.0%	2813	1	31.8	01308606	2482/2509
11/21/00	Barbour	10:00	57.4	100%	2813	35	11:47	63.7	0.0%	2856	0	43.1	01308606	2509/2530
11/13/00	Sanchez	1:00	78	100%	2856	34	2:19	80.2	0.0%	2892	0	36.1	01308606	2530/2530
11/14/00	Sanchez	11:20	65	100%	2892	32	12:30	67.3	75.0%	2908	18	16.0	01308606	2553/2569
11/16/00	Sanchez	10:50	64	100%	2908	36	12:10	71	0.0%	2944	2	35.9	01308606	2569/2592
11/16/00	Sanchez	3:20	63	90%	2944	29	4:30	60	0.0%	2977	0	33.4	01308606	2592/2619
11/17/00	Sanchez	11:00	65	100%	2977	31	12:20	67.5	0.0%	3015	0	37.4	01308606	2619/2644
11/17/00	Sanchez	4:45	64	100%	3015	32	6:00	58	50.0%	3038	19	22.9	01308606	2644/2679
11/18/00	Barbour	8:50	66.2	100%	3038	32	10:22	74.8	0.0%	3079	0	41.8	01308606	2679/2706
11/20/00	Sanchez	12:30	75	100%	3080	38	3:00	76	0.0%	3123	2	43.4	01308606	2706/2718
11/21/00	Sanchez	11:00	71	100%	3123	38	12:05	75.2	0.0%	3161	0	38.8	01308606	2718/2750
11/21/00	Sanchez	2:30	72	50%	3161	20	3:30	70	0.0%	3191	0	29.8	01308606	2750/2770
11/22/00	Sanchez	9:30	60	100%	3191	39	10:30	63	0.0%	3230	0	39.0	01308606	2770/2821
11/22/00	Sanchez	2:15	62	100%	3230	32	4:15	60	0.0%	3275	0	44.8	01308606	2821
11/25/00	Barbour	8:55	59.2	100%	3275	35	10:16	68.8	0.0%	3312	0	37.5	01308606	/
														/
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Comments (Dated): 11-13-00 weights



USPS DELIVERY VEHICLE TESTING

Vehicle Number	2
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Date	Driver	Start					End					Trip Dist.	AC meter#	AC kWh Start/End
		Time	Amb Temp	SOC	Odo	DTE	Time	Amb Temp	SOC	Odo	DTE			
11/27/00	neil	4:25	76	100%	3312	39	5:30	60	35.0%	3335	17	22.4	01308606	/2877
11/28/00	Sanchez	9:30	65.9	100%	3335	32	11:21	72.7	0.0%	3375	0	40.7	01308606	2877/2896
11/28/00	Sanchez	2:55	74.4	75%	3375	29	4:21	70.5	0.0%	3416	0	40.2	01308606	2896/2927
11/29/00	Sanchez	10:40	60.4	100%	3416	39	12:00	64.7	0.0%	3456	0	39.0	01308606	2927/2947
11/29/00	Sanchez	3:35	67	100%	3455	32	5:04	64	0.0%	3495	0	40.1	01308606	2947/2977
11/30/00	Sanchez	10:45	64	100%	3495	34	11:45	66	0.0%	3531	0	35.7	01308606	2977/2998
11/30/00	Sanchez	3:55	68.5	100%	3531	31	5:10	65.1	0.0%	3510	0	40.0	01308606	2998/3026
12/1/00	Sanchez	10:45	63.3	100%	3570	32	12:28	66.9	0.0%	3613	0	42.9	01308606	3026/3068
12/3/00	Barbour	8:25	58.7	100%	3613	37	9:46	62.2	7.0%	3643	0	29.3	01308606	3068/3093
12/4/00	Sanchez	11:30	73	100%	3643	32	1:30	75.7	0.0%	3683	0	40.1	01308606	3093/3105
12/4/00	Sanchez	3:40	75.1	60%	3683	20	4:30	71	0.0%	3710	0	27.0	01308606	3105/3134
12/5/00	Sanchez	10:35	73	100%	3710	30	12:05	75.5	0.0%	3751	0	41.1	01308606	3134/3152
12/5/00	Sanchez	3:30	77.6	75%	3751	27	4:45	73.5	0.0%	3791	0	40.3	01308606	3152/3182
12/6/00	Sanchez	8:45		100%	3791	31	10:50	69.3	0.0%	3833	0	41.4	01308606	3182/3203
12/6/00	Sanchez	3:00	70.2	100%	3833	30	4:05	69.6	0.0%	3873	0	40.0	01308606	3203/3231
12/7/00	Sanchez	8:15	63.8	100%	3873	30	9:47	67.3	0.0%	3914	0	40.9	01308606	3231/3254
12/7/00	Sanchez	3:45		100%	3912	31	4:40	70.9	50.0%	3935	0	21.9	01308606	3254/3272
12/8/00	Sanchez	10:05	62	100%	3935	30	11:48	62.1	0.0%	3578	0	42.6	01308606	3272/3274
12/8/00	Sanchez	12:00	62.6	0%	3978	0	4:25	61.2	0.0%	3984	0	5.4	01308606	3274/3312
12/9/00	Barbour	10:10	57.5	100%	3984	32	11:37	58.1	0.0%	4021	4	37.3	01308606	3312/3339
12/10/00	Barbour	8:35	53.6	100%	4021	38	10:04	55.9	0.0%	4058	0	37.4	01308606	3339/3369
12/11/00	Sanchez	10:35	60	100%	4058	32	11:00	60	77.0%	4067	30	8.9	01308606	3369/3369
12/12/00	Sanchez	9:30	62.2	73%	4067	29	10:40	59.1	0.0%	4094	0	27.2	01308606	3369/3379
12/12/00	Sanchez	12:58	69	50%	4094	17	2:00	63.2	0.0%	4124	0	29.9	01308606	3379/3388
12/12/00	Sanchez	3:40	61	30%	4124	15	4:22	61.1	0.0%	4139	0	15.5	01308606	3388/3420

Comments (Dated): \*12-12-00 took the van down and left on 12/3 power limit on at 27.6 miles-vehicle towed to E V T C .

ON 12-12-00 charger "service required": light came on J.R.RUIZ RESET THE FUSE BOX BY TURNING IT OFF@ON charger is now charger is now working normal F.Sanchez.

USPS DELIVERY VEHICLE TESTING

Vehicle Number	2
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Date	Driver	Start					End					Trip Dist.	AC meter#	AC kWh Start/End
		Time	Amb Temp	SOC	Odo	DTE	Time	Amb Temp	SOC	Odo	DTE			
12/13/00	Sanchez	10:20	63.2	100%	4139	39	12:00	59.6	0.0%	4180	0	40.0	01308606	3420/3438
12/13/00	Sanchez	3:10	64	77%	4180	30	4:15	62	47.0%	4204	18	23.7	01308606	3438/3459
12/14/00	Sanchez	10:10	61	100%	4204	38	12:00	61.2	0.0%	4248	0	44.5	01308606	3490/3494
12/15/00	Sanchez	9:50	62	100%	4248	38	1:35	72	0.0%	4290	0	41.6	01308606	3494/3538
12/18/00	Sanchez	2:20	74	100%	4290	38	4:20	70	0.0%	4335	0	45.3	01308606	3538/3565
12/18/00	Sanchez	3:40	71.5	100%	4335	40	4:15	71.9	0.0%	4345	0	10.4	01308606	3565/3576
12/19/00	Sanchez	10:00	63.8	100%	4345	39	11:40	67.5	0.0%	4387	0	41.2	01308606	3576/3598
12/19/00	Sanchez	3:50	70.1	100%	4387	37	5:37	67.5	15.0%	4427	8	40.6	01308606	3598/3631
12/20/00	Sanchez	9:50	65	100%	4427	39	4:40	70.1	0.0%	4468	3	41.2	01308606	3631/3654
12/20/00	Sanchez	4:50		100%	4468	38	5:37	69	1.0%	4509	8	41.2	01308606	3654/3684
12/21/00	Sanchez	10:25	6.12	100%	4509	38	11:58	65.7	0.0%	4551	5	41.1	01308606	3684/3713
12/23/00	Barbour	6:40	49.6	100%	4551	38	8:04	54.6	0.0%	4583	0	32.4	01308606	3713/3725
12/23/00	Barbour	10:22	61.4	65%	4583	22	11:18	63.3	0.0%	4610	0	26.6	01308606	3725/3770
12/26/00	Sanchez	10:10	62	100%	4610	39	12:00	65.8	0.0%	4648	0	38.8	01308606	3770/3791
12/26/00	Sanchez	4:15	67.8	100%	4648	36	5:00	66.9	60.0%	4665	25	17.1	01308606	3791/3485
12/27/00	Sanchez	11:00	64	100%	4665	38	12:39	69.5	0.0%	4707	0	41.7	01308606	3485/3836
12/27/00	Sanchez	3:08			4707		3:08						01308606	3836/3836
12/28/00	Sanchez	9:55	66.5	100%	4704	39	11:25	67.9	0.0%	4748	0	41.0	01308606	3836/3855
12/28/00	Sanchez	3:00	63	99%	4748	31	4:38	69	0.0%	4789	0	41.0	01308606	3855/3885
12/29/00	Sanchez	10:45	69.1	100%	4789	39	12:00	82		4815		26.2	01308606	3855/3925
1/2/01	Sanchez	9:40	64	100%	4815	39	11:45	74.4	0.0%	4854	0	38.4	01308606	3925/3957
1/3/01	Sanchez	10:35	72	100%	4854	39	12:10	74.1	0.0%	4895	3	41.1	01308606	3957/3973
1/3/01	Sanchez	3:35	76.8	75%	4895	23	4:50	72.4	23.0%	4923	9	28.1	01308606	3973/4001
1/4/01	Sanchez	10:12	68.5	100%	4923	37	11:13	72.6	48.0%	4945	18	22.2	01308606	4001/4010
1/4/01	Sanchez	12:52	73.8	80%	4945	30	2:00	74.9	48.0%	4966	17	21.5	01308606	4010/4032

12-15-00 van driven down to power limit then left on with H.LIGHTS, FAN LEFT ON, PUT BACK ON CHARGE AT 4:30  
 12-23-00 HEATER ON DISCHARGED ON 12-26-00. ( 1-2-01 DISCHARGED AT 11:45 TO 4:15)

USPS DELIVERY VEHICLE TESTING

Vehicle Number	2
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Date	Driver	Start					End					Trip Dist.	AC meter#	AC kWh Start/End
		Time	Amb Temp	SOC	Odo	DTE	Time	Amb Temp	SOC	Odo	DTE			
1/5/01	Sanchez	10:31	65	100%	4956	35	12:11	67	0.0%	5006	0	39.8	01308606	4032/4066
1/6/01	Barbour	6:05	51	100%	5006	40	7:37	55	0.0%	5048	0	42.0	01308606	4066/4081
1/6/01	Barbour	10:25	61	60%	5048	22	11:46	66	0.0%	5076	0	27.4	01308606	4081/4121
1/8/01	Sanchez	9:25	43	100%	5076	39			0.0%	5111	0	35.5	01308606	4121/
1/9/01	Sanchez	9:20	64	100%	5111	39	10:53		0.0%	5148	0	37.3	01308606	4148/4168
1/9/01	Sanchez	2:35	63.8	100%	5148	30	4:10	62	0.0%	5179	0	30.4	01308606	4168/4192
1/10/01	Sanchez	10:20	50	100%	5179	33	11:47	52	0.0%	5215	0	36.0	01308606	4192/4230
1/12/01	Sanchez	9:15	47	100%	5215	37	11:45	48	0.0%	5249	0	34.1	01308606	4230/4267
1/13/01	Sanchez	8:10	51	100%	5249	36	9:55	53	0.0%	5292	0	42.3	01308606	4267/4297
1/14/01	Barbour	5:45	44	100%	5292	36	6:54	50	0.0%	5323	0	31.8	01308606	4297/4311
1/14/01	Barbour	10:20	45	60%	5323	20	12:12	64	0.0%	5363	0	40.0	01308606	4311/4326
1/14/01	Sanchez	3:00	63	63%	5363	23	4:00	60	0.0%	5397	0	33.3	01308606	4326/4362
1/15/01	Sanchez	9:55		100%	5397	39	11:33	57	2.0%	5438	3	41.2	01308606	4362/4381
1/15/01	Sanchez	3:09	57	100%	5438	36	4:30	50	3.0%	5478	3	40.0	01308606	4381/4412
1/16/01	Sanchez	9:57	53	100%	5478	40	11:36	58	0.0%	5519	3	41.0	01308606	4412/4432
1/16/01	Sanchez	3:20	52	100%	5519	36	4:15	50	53.0%	5538	21	19.3	01308606	4432/4451
1/17/01	Sanchez	9:45	71	100%	5538	38	11:37	76	0.0%	5579	0	41.2	01308606	4451/4466
1/17/01	Sanchez	2:30	68	75%	5579	28	4:03	65	0.0%	5620	0	40.6	01308606	4466/4500
1/18/01	Sanchez	8:30	43	100%	5620	40	10:00	59	0.0%	5662	0	42.1	01308606	4500/4508
1/18/01	Sanchez	11:35	63	90%	5662	15	12:41	64	0.0%	5689	0	27.0	01308606	4508/4514
1/18/01	Sanchez	1:55	64	25%	5689	13	2:30	63	0.0%	5702	0	12.5	01308606	4514/4548
1/19/01	Sanchez	8:10	56	100%	5702	40	10:50	59	9.0%	5743	0	41.4	01308606	4548/4571
1/19/01	Sanchez	3:15	56	100%	5743	40	5:20	55	0.0%	5774	0	30.9	01308606	4571/4601
1/21/01	Barbour	9:45	59	100%	5774	40	11:17	63	0.0%	5813	0	39.7	01308606	4601/4629
1/22/01	Sanchez	9:45	65	100%	5813	40	11:30	66	0.0%	5852	0	39.0	01308606	4629/4642

Comments (Dated): 1-5-01 DISCHARGED FROM 12:11 TO 4:15. 1-12-01 DISCHARGED AT 11:45 TO 4:10.

USPS DELIVERY VEHICLE TESTING

Vehicle Number 2

Table with columns: Date, Driver, Start (Time, Amb Temp, SOC, Odo, DTE), End (Time, Amb Temp, SOC, Odo, DTE), Trip Dist., AC meter#, AC kWh Start/End. Rows include dates from 1/21/01 to 1/31/01 with driver names Sanchez and Barbour.

Comments (Dated): 1/28-HEATER ON.

Horizontal lines for additional comments or data entry.

USPS DELIVERY VEHICLE TESTING

Vehicle Number	2
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Date	Driver	Start					End					Trip Dist.	AC meter#	AC kWh Start/End
		Time	Amb Temp	SOC	Odo	DTE	Time	Amb Temp	SOC	Odo	DTE			
2/1/01	Sanchez	9:14	54	100%	6427	38	10:47	64	2.0%	6467	2	40.3	01308606	5042/5056
2/1/01	Sanchez	1:25	64	75%	6646	24	2:45	66	0.0%	6507	0	40.0	01308606	5056/5063
2/1/01	Sanchez	4:05	66	48%	6507	20	4:26	66	0.0%	6515	0	7.9	01308606	5063/5091
2/2/01	Sanchez	8:00	46	100%	6515	40	9:37	56	0.0%	6556	0	41.2	01308606	5091/5114
2/2/01	Sanchez	2:00	68	100%	6556	40	3:40	69	0.0%	6601	0	44.4	01308606	5114/5152
2/4/01	Barbour	7:18	54	100%	6601	40	9:14	57	0.0%	6647	0	46.2	01308606	5152/5182
2/5/01	Sanchez	2:45	28	75%	6687	32	4:15	76	0.0%	6727	8	40.2	01308606	5198/5228
2/6/01	Sanchez	8:00	56	100%	6727	41	9:15	60	0.0%	6767	4	40.0	01308606	5228/5257
2/7/01	Sanchez	9:35	47	100%	6767	40	11:05	50	0.0%	6810	0	42.4	01308606	5257/5277
2/7/01	Sanchez	3:47	56	100%	6810	38	4:15	46	0.0%	6850	3	40.7	01308606	5277/5307
2/8/01	Sanchez	9:47	47	100%	6850	40	11:17	52	2.0%	6891	8	40.4	01308606	5307/5328
2/8/01	Sanchez	3:10	56	100%	6891	40	4:33	55	3.0%	6933	9	42.1	01308606	5328/5356
2/9/01	Sanchez	7:55	43	100%	6933	40	9:40	48	3.0%	6973	8	40.0	01308606	5356/5378
2/9/01	Sanchez	2:15	56	100%	6973	40	3:50	57	3.0%	7013	8	40.0	01308606	5378/5408
2/10/01	Sanchez	2:00	51	100%	7013	39	3:40	48	0.0%	7054	0	40.5	01308606	5408/5435
2/11/01	Barbour	7:43	44	100%	7054	40	9:04	46	0.0%	7085	0	31.8	01308606	5435/5462
2/12/01	Sanchez	8:10	47	100%	7085	38	10:05	49	0.0%	7119	0	33.8	01308606	5462/5480
2/12/01	Sanchez	1:32	48	100%	7119	30	3:20	49	0.0%	7159	0	40.0	01308606	5480/5511
2/13/01	Sanchez	8:07	48	100%	7159	31	10:00	49	0.0%	7193	0	33.9	01308606	5511/5532
2/13/01	Sanchez	1:35	48	100%	7193	28	3:00	48	0.0%	7234	0	40.6	01308606	5532/5564
2/14/01	Sanchez	8:10	42	100%	7234	31	10:00	48	0.0%	7274	0	40.2	01308606	5564/5591
2/15/01	Sanchez	8:10	42	100%	7274	37	1:00	50	0.0%	7314	0	40.2	01308606	5591/5610
2/15/01	Sanchez	1:35	52	100%	7314	32	3:17	57	0.0%	7364	0	50.4	01308606	5610/5641
2/16/01	Sanchez	8:10	45	100%	7364	41	9:51	54	0.0%	7406	10	42.0	01308606	5641/5662

Comments (Dated): 2-11-01 HEATER ON, 2-12-01 RAIN HEAVY FLOADING &TRAFFIC.

USPS DELIVERY VEHICLE TESTING

Vehicle Number	2
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Date	Driver	Start					End					Trip Dist.	AC meter#	AC kWh Start/End
		Time	Amb Temp	SOC	Odo	DTE	Time	Amb Temp	SOC	Odo	DTE			
2/16/01	Sanchez	1:49	64	100%	7406	42	3:40	64	0.0%	7458	8	51.8	01308606	5662/5691
2/17/01	Barbour	8:33	52	100%	7458	42	10:08	57	0.0%	7501	0	43.3	01308606	5691/5719
2/18/01	Barbour	7:12	51	100%	7501	42	8:31	56	0.0%	7536	0	34.2	01308606	5719/5750
2/20/01	Sanchez	8:07	51	100%	7536	41	9:55	57	0.0%	7576	5	40.2	01308606	5750/5769
2/20/01	Sanchez	1:30	64	100%	7576	39	3:02	61	0.0%	7621	2	45.6	01308606	5769/5797
2/21/01	Sanchez	8:30	54	100%	7621	40	10:00	56	0.0%	7662	4	40.6	01308606	5797/5816
2/21/01	Sanchez	1:32	68	100%	7662	39	2:10	68	60.0%	7680	30	18.2	01308606	5816/5833
2/22/01	Sanchez	8:45	55	100%	7680	42	10:10	61	0.0%	7721	0	40.0	01308606	5833/5851
2/22/01	Sanchez	1:30	63	90%	7721	32	3:00	61	0.0%	7760	0	39.6	01308606	5851/5879
2/23/01	Sanchez	8:40	49	100%	7760	41	10:00	46	0.0%	7800	0	40.2	01308606	5879/5898
2/23/01	Sanchez	1:45	52	75%	7800	30	4:01	54	0.0%	7854	0	54.1	01308606	5898/5938
2/24/01	Barbour	6:57	45	100%	7854	40	8:20	49	0.0%	7894	0	39.4	01308606	5938/5963
2/24/01	Sanchez	1:15	51	100%	7894	40	3:00	48	0.0%	7954	0	40.0	01308606	5963/5998
2/26/01	Sanchez	8:20	53	100%	7934	40	3:35	58	0.0%	7974	0	40.1	01308606	5998/6016
2/26/01	Sanchez	1:00	64	90%	7974	32	2:30	65	0.0%	8014	0	40.0	01308606	6016/6043
2/27/01	Sanchez	9:55	54	100%	8014	41	10:15	56	0.0%	8054	0	40.0	01308606	6043/6065
2/27/01	Sanchez	12:20	47	100%	8054	42	3:47	43	0.0%	8094	0	40.5	01308606	6065/6092
2/28/01	Sanchez	8:40	50	75%	8094	41	10:30	52	0.0%	8140	0	46.0	01308606	6092/6109
2/28/01	Sanchez	1:48	51	75%	8140	30	3:17	54	0.0%	8181	0	40.5	01308606	6109/6142
3/1/01	J.Ruiz	2:25	62	100%	8181	40	3:25	63	43.0%	8203	20	22.1	01308606	6142/6159
3/2/01	Sanchez	8:30	51	100%	8203	40	10:00	55	0.0%	8234	0	30.7	01308606	6159/6178
3/2/01	Sanchez	1:45	62	100%	8234	32	3:10		0.0%	8278	0	44.8	01308606	6178/6209
3/4/01	Barbour	6:35	51	100%	8278	38	7:48	53	0.0%	8310	0	31.8	01308606	6209/6225
3/4/01	Barbour	10:56	55	95%	8310	35	12:27	56	0.0%	8348	0	38.1	01308606	6225/6250
3/5/01	Sanchez	8:20	60	100%	8348	40	9:52	65	0.0%	8309	0	40.6	01308606	6250/6266

Comments (Dated): 17-Feb  
 heater On 1st 5 miles. 2/18 heater on. 3/4/01-heater on

USPS DELIVERY VEHICLE TESTING

Vehicle Number	2
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Date	Driver	Start					End					Trip Dist.	AC meter#	AC kWh Start/End
		Time	Amb Temp	SOC	Odo	DTE	Time	Amb Temp	SOC	Odo	DTE			
3/5/01	Sanchez	1:30	65	75%	8389	37	2:55	64	0.0%	8430	0	40.0	01308606	6266/6296
3/6/01	Sanchez	8:10	58	100%	8535	42	10:00	61	0.0%	8470	0	40.0	01308606	6296/6316
3/6/01	Sanchez	1:30	61	100%	8470	42	4:00	63	0.0%	8510	0	40.4	01308606	6316/6345
3/7/01	Sanchez	8:10	55	100%	8510	41	9:40	56	0.0%	8551	0	40.3	01308606	6345/6366
3/7/01	Sanchez	1:30	65	100%	8551	41	2:55	64	0.0%	8591	0	40.1	01308606	6366/6391
3/8/01	Sanchez	8:40	60	100%	8591	42	10:18	66	0.0%	8631	0	40.7	01308606	6391/6409
3/8/01	Sanchez	1:30	67	90%	8631	36	3:20	68	0.0%	8672	0	41.1	01308606	6409/6437
3/9/01	Sanchez	8:20	55	100%	8672	42	10:00	57	0.0%	8713	0	40.8	01308606	6437/6460
3/9/01	Sanchez	2:30	64	100%	8713	41	4:45	52	0.0%	8756	0	43.3	01308606	6460/6490
3/10/01	Barbour	8:10	51	100%	8756	41	9:52	57	0.0%	8799	0	42.3	01308606	6490/6516
3/11/01	Barbour	8:06	54	100%	8799	40	9:43	59	0.0%	8841	0	42.0	01308606	6516/6542
3/12/01	Sanchez	8:15	53	100%	8841	40	10:05	58	0.0%	8883	0	42.8	01308606	6542/6559
3/12/01	Sanchez	1:30	67	77%	8883	32	3:13	72	0.0%	8924	0	40.2	01308606	6559/6587
3/13/01	Sanchez	8:10	54	100%	8924	41	9:50	60	0.0%	8964	0	40.0	01308606	6587/6607
3/13/01	Sanchez	1:30	70	90%	8964	40	3:12	70	0.0%	9007	0	43.0	01308606	6607/6635
3/14/01	Sanchez	8:30	54	100%	9007	41	10:00	60	0.0%	9047	0	40.0	01308606	6635/6658
3/14/01	Sanchez	3:45	67	100%	9047	41	4:30	67	60.0%	9065	29	18.7	01308606	6658/6672
3/15/01	Sanchez	9:30	62	100%	9065	41	11:10	63	0.0%	9106	0	40.5	01308606	6672/6689
3/15/01	Sanchez	2:40	63	75%	9106	30	4:12	67	0.0%	9148	0	42.2	01308606	6689/6722
3/16/01	Sanchez	8:15	57	100%	9148	40	10:15	63	0.0%	9189	0	41.4	01308606	6722/6738
3/16/01	Sanchez	1:30	75	65%	9189	35	3:00	66	0.0%	9232	0	42.3	01308606	6738/6770
3/17/01	Barbour	8:16	56	100%	9232	43	9:58	63	0.0%	9274	0	42.0	01308606	6770/6795
3/18/01	Barbour	4:50	51	100%	9274	43	6:07	55	0.0%	9311	0	37.4	01308606	6795/6812
3/18/01	Barbour	9:05	65	75%	9311	30	10:17	71	20.0%	9341	15	29.9	01308606	0/6838

Comments (Dated):

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USPS DELIVERY VEHICLE TESTING

Vehicle Number 2

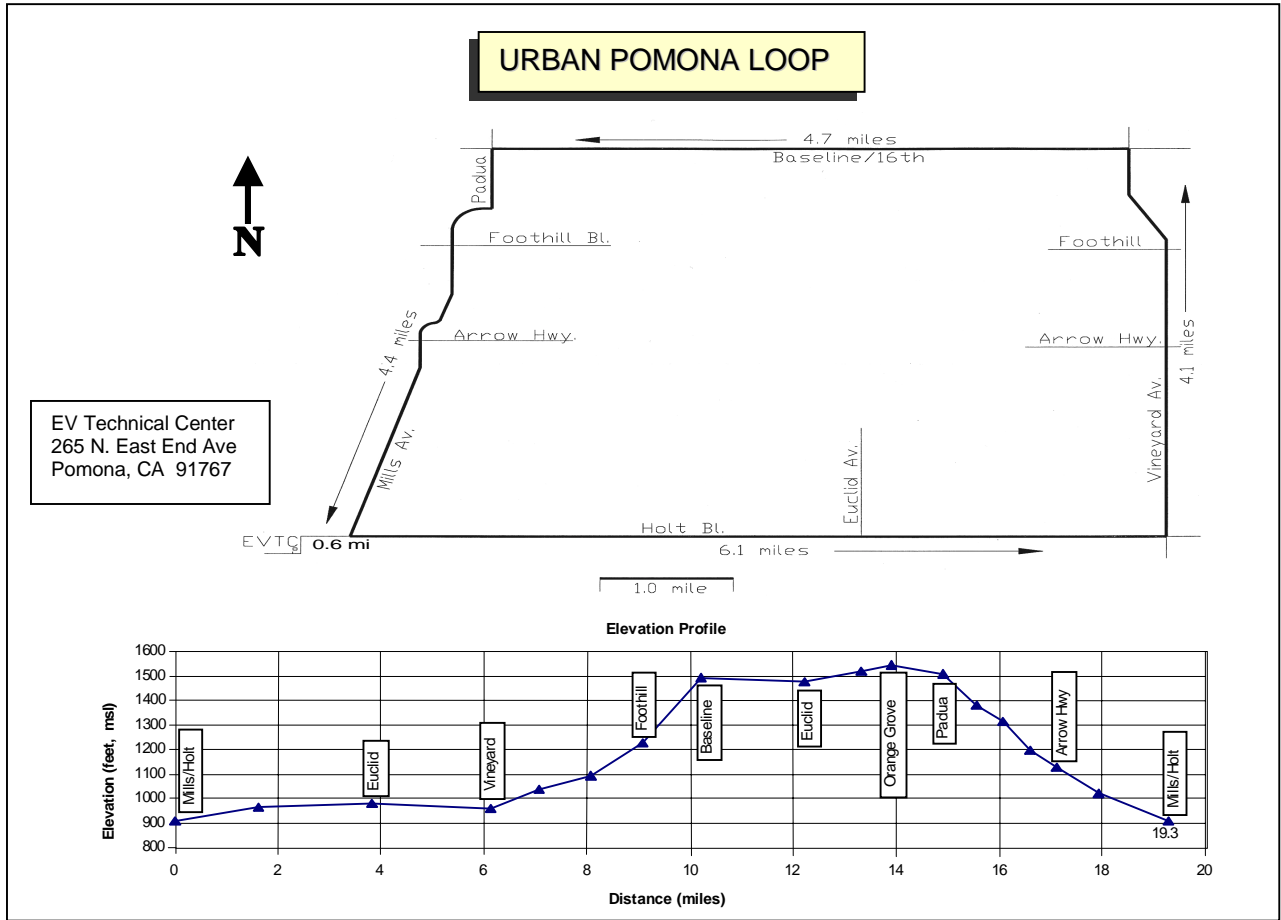
Date	Driver	Start					End					Trip Dist.	AC meter#	AC kWh Start/End
		Time	Amb Temp	SOC	Odo	DTE	Time	Amb Temp	SOC	Odo	DTE			
3/19/01	Sanchez	9:15	71	100%	9341	41	11:19	77	0.0%	9382	4	40.6	01308606	6838/6858
3/19/01	Sanchez	3:25	85	100%	9382	41	4:53	83	10.0%	9422	10	40.0	01308606	6858/6882
3/20/01	Sanchez	9:00	75	100%	9422	42	8:10	78	0.0%	9464	0	42.8	01378516	6882/3554
3/20/01	Sanchez	2:00	83	95%	9464	31	3:40	81	0.0%	9510	0	45.4	01378516	3554/3586
3/21/01	Sanchez	8:00	59	100%	9510	43	9:45	64	0.0%	9550	0	40.1	01378516	3586/3602
3/21/01	Sanchez	12:50	75	95%	9550	38	2:37	75	0.0%	9592	0	41.7	01378516	3602/3633
3/22/01	Sanchez	8:05	57	100%	9592	42	10:00	58	0.0%	9633	0	41.2	01378516	3633/3651
3/22/01	Sanchez	1:30		95%	9633	38	3:00		0.0%	9673	0	40.3	01378516	3651/3681
3/23/01	Sanchez	8:10		100%	9673	42	11:50	69	0.0%	9711	0	37.8	01378516	3681/3704
3/23/01	Sanchez	1:55	69	100%	9711	40	4:40	79	0.0%	9751	0	40.5	01378516	3704/3735
3/25/01	Barbour	11:15	70	100%	9751	42	1:19	77	0.0%	9790	0	38.6	01378516	3735/3760
3/26/01	Barbour	11:30	70	100%	9790	40	1:42	71	0.0%	9829	0	39.0	01378516	3760/3775
3/26/01	Barbour	4:30	68	95%	9829	39	5:41	65	50.0%	9849	28	20.3	01378516	3775/3793
3/27/01	Ruiz	9:45	64.5	100%	9849	42	12:15	72	0.0%	9899	0	49.3	01378516	3793/3822
3/28/01	Sanchez	8:15	61	100%	9899	42	10:00	63	0.0%	9939	0	40.1	01378516	3822/

Comments (Dated): 3/19/01 Fan on 3/25/01 Powe limit on @ 29.4 miles



**APPENDIX B: SCHEDULE GS-2 ELECTRICITY TARIFF**

# APPENDIX C: POMONA LOOP MAP



## APPENDIX D: RANGE TEST DATA SHEETS

### POMONA DRIVING TEST DATA

Date	Vehicle	VIN last 6	Test	Driver	Data File/Project	Volts	
03/28/2001	1240001		UR3	Sanchez		Start	
Road Cond	Tire Press	Payload				Stop	
Dry	41	1245				Net	

DRIVING	Time	Odom	% SOC	DC Ah	DC kWh	Amb temp	A/C temp	A/C>10 min
Start	10:15	9503	100%	n/a	n/a	64	n/a	n/a
Stop	12:15	9546	0%			68		Min. A/C
Net								n/a

Distance	State of Charge		Notes / Deviations / Traffic / Weather / Performance
Miles	Veh meter	Range meter	
0	4.0	n/a	
n/a	3.5	n/a	
n/a	3.0	n/a	
n/a	2.5	n/a	
n/a	2.0	n/a	
n/a	1.5	n/a	
n/a	1.0	n/a	
n/a	0.5	n/a	Light on @ 40.0 miles
42.7	0.0	n/a	Light flashing @ 42.7 miles

Accessories used: \_\_\_\_\_  
 Drive / Regen setting: Econ mode \_\_\_\_\_  
 Handling/Braking: \_\_\_\_\_  
 Other comments: \_\_\_\_\_  
 \_\_\_\_\_

Charger	Serial No.	AC meter#	BMI #					
EVC-007		01 712 140	n/a					
CHARGING	Date	Time	AC kWh in	BMI kWh in	DC kWh in	DC Ah in	Amb temp	Volts
Start	03/28/2001	12:20	526	n/a	n/a	n/a	68	n/a
Stop								
Net								

Comments: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

**POMONA DRIVING TEST DATA**

Date	Vehicle	VIN last 6	Test	Driver	Data File/Project	Volts	
03/27/2001	1240002		UR3	J.Ruiz		Start	
Road Cond	Tire Press	Payload				Stop	
Dry	41	1245				Net	

DRIVING	Time	Odom	% SOC	DC Ah	DC kWh	Amb temp	A/C temp	A/C>10 min
Start	9:45	9849	100%	n/a	n/a	64.5	n/a	n/a
Stop	12:15	9899	0%			72		Min. A/C
Net		50						n/a

Distance	State of Charge		Notes / Deviations / Traffic / Weather / Performance
Miles	Veh meter	Range meter	
0	4.0	42	
7.1	3.5		
9.7	3.0		
14.9	2.5	25	
22.6	2.0	23	
28.5	1.5	19	
31	1.0	10	
36.6	0.5	8	
43	0.0	5	Light on @ 44.0 miles
49.3	end	0	Light flashing @ 48.6 miles

Accessories used: Fan on  
 Drive / Regen setting: Econ mode  
 Handling/Braking: Bumpy road  
 Other comments: No incline on the seat

Charger	Serial No.	AC meter#	BMI #					
EVC-031		01 378 516	n/a					
CHARGING	Date	Time	AC kWh in	BMI kWh in	DC kWh in	DC Ah in	Amb temp	Volts
Start	03/27/2001	12:20	3793	n/a	n/a	n/a	72	n/a
Stop								
Net								

Comments: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_