General Information Requests

For each of the HECO witnesses who sponsor test period budgeted labor direct expense amounts, please provide the following information:

a. Identify each employee involved in preparation of budgeted staffing and associated labor direct expense amounts included in the witnesses' portion of the rate case test period budget.

b. Provide complete copies of all calculations, spreadsheet files, "pencil" work papers, surveys and other analyses performed by each of the employees identified in response to part (a), documenting all work done to determine required staffing levels and overtime hours by Department, RA, Activity and NARUC Account.

c. Describe the actual force level that existed at the date the budget was prepared or otherwise served as a base for purposes of preparing the budget level.

d. For each budgeted employee position that is added to existing actual force levels (as the date the budget was prepared), **explain** the analyses undertaken to determine that each added position was necessary and should be filled in order to meet present or anticipated work requirements. Also, please explain how the anticipated work requirements were defined and determined.

e. Describe and, to the extent possible, quantify the backlog of work, unfinished projects, deferred maintenance and other labor requirements unfulfilled at present staffing levels, that will be satisfied by adding the employee positions identified in your response to part (d).

f. Provide complete copies of all studies, analyses, work papers, projections, notes, correspondence, assumptions and other documents associated with your responses to parts (d) and (e) above.

HECO Response:

For additional responses to information requested please refer to Attachment A. Columns a-f on

Attachment A corresponds to the items noted above.

c	d	e	f
l force level t time of ecast = 1	No positions added	N/A	N/A
l force level t time of ecast = 1	No positions added	N/A	N/A
l force level t time of ecast = 6	No positions added	N/A	N/A
l force level t time of ecast = 1	No positions added	N/A	N/A
l force level t time of ecast = 2	No positions added	N/A	N/A
l force level t time of ecast = 1	No positions added	N/A	N/A
l force level t time of cast = 138	See Attachment B	See Attachment B	See Attachment B
l force level t time of cast = 128	See Attachment B	See Attachment B	See Attachment B
l force level t time of cast = 151	See Attachment B	See Attachment B	See Attachment B
l force level t time of cast = 23	See Attachment B	See Attachment B	See Attachment B
l force level t time of ecast = 2	No positions added	N/A	N/A
l force level t time of ecast = 2	No positions added	N/A	N/A
See achment C	See attachment C	See attachment C	See attachment C

Dept	RA	Resp Area	NARUC	Act	FY05	a	b	c	d	e	f
CID	PWA	Admin-CID	588	926	$ 9,242	See attachment C	See attachment C-1	See attachment C	See attachment C	See attachment C	See attachment C
CID	PWP	Planning & Design	584	464	$ 76,441	See attachment C	See attachment C-2	See attachment C	See attachment C	See attachment C	See attachment C
CID	PWX	Engineering & Meter	580	797	$ 7,931	See attachment C	See attachment C-3	See attachment C	See attachment C	See attachment C	See attachment C
CID	PWX	Engineering & Meter	586	465	$ 122,081	See attachment C	See attachment C-3	See attachment C	See attachment C	See attachment C	See attachment C
CID	PWX	Engineering & Meter	586	601	$ 142,385	See attachment C	See attachment C-3	See attachment C	See attachment C	See attachment C	See attachment C
CID	PWX	Engineering & Meter	586	602	$ 18,632	See attachment C	See attachment C-3	See attachment C	See attachment C	See attachment C	See attachment C
CID	PWX	Engineering & Meter	586	603	$ 28,035	See attachment C	See attachment C-3	See attachment C	See attachment C	See attachment C	See attachment C
CID	PWX	Engineering & Meter	587	600	$ 14,946	See attachment C	See attachment C-3	See attachment C	See attachment C	See attachment C	See attachment C
CID	PWX	Engineering & Meter	587	620	$ 4,399	See attachment C	See attachment C-3	See attachment C	See attachment C	See attachment C	See attachment C
CID	PWX	Engineering & Meter	588	701	$ 1,232	See attachment C	See attachment C-3	See attachment C	See attachment C	See attachment C	See attachment C
CID	PWX	Engineering & Meter	588	720	$ 12,056	See attachment C	See attachment C-3	See attachment C	See attachment C	See attachment C	See attachment C
CID	PWX	Engineering & Meter	588	722	$ 2,459	See attachment C	See attachment C-3	See attachment C	See attachment C	See attachment C	See attachment C
CID	PWX	Engineering & Meter	588	765	$ 409	See attachment C	See attachment C-3	See attachment C	See attachment C	See attachment C	See attachment C

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ATTACHMENT A
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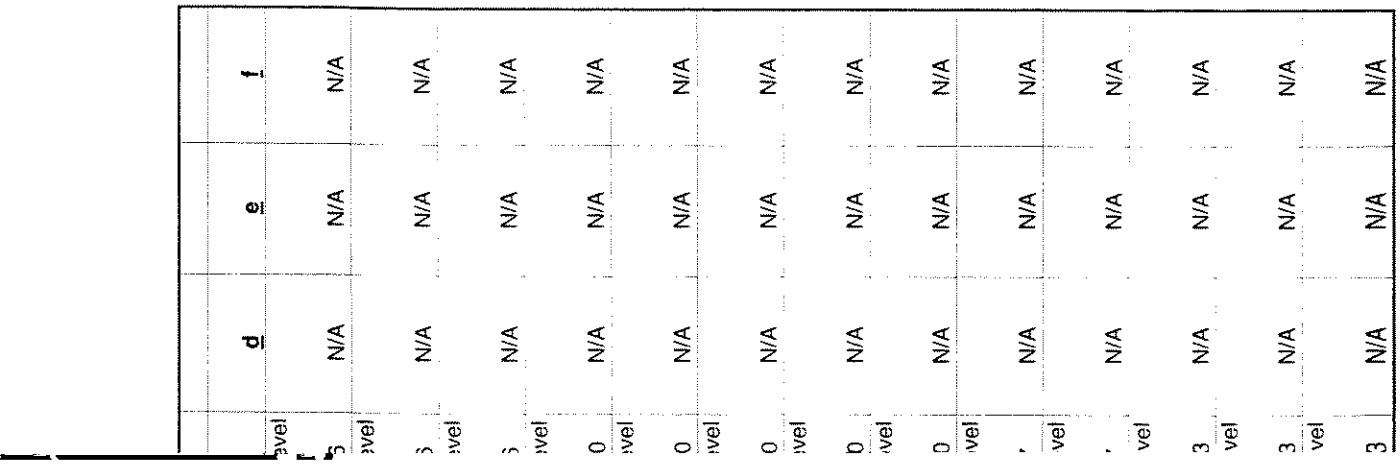
	b	c	d	e	f
nt	See attachment C-3	See attachment C	See attachment C	See attachment C	See attachment C
nt	See attachment C-3	See attachment C	See attachment C	See attachment C	See attachment C
nt	See attachment C-3	See attachment C	See attachment C	See attachment C	See attachment C
nt	See attachment C-3	See attachment C	See attachment C	See attachment C	See attachment C
nt	See attachment C-3	See attachment C	See attachment C	See attachment C	See attachment C
nt	See attachment D-1	Actual force level at time of forecast = 3	N/A	N/A	N/A
nt	See attachment D-2	Actual force level at time of forecast = 22	N/A	N/A	N/A
nt	See attachment D-3	Actual force level at time of forecast = 3	N/A	N/A	N/A
nt	N/A	See attachment E	See attachment E	N/A	N/A
nt	N/A	See attachment E	See attachment E	N/A	N/A
nt	See attachment F-1	Actual force level at time of forecast = 6	N/A	N/A	N/A
nt	See attachment F-1	Actual force level at time of forecast = 6	N/A	N/A	N/A

Dept	RA	Resp Area	NARUC	Act		FY05	a	b	c	d	e	f
Environ	PJW	Water & Haz Mat	566	787	$	323	See attachment F	See attachment F-1	Actual force level at time of forecast = 6	N/A	N/A	N/A
Environ	PJW	Water & Haz Mat	566	788	$	972	See attachment F	See attachment F-1	Actual force level at time of forecast = 6	N/A	N/A	N/A
Environ	PJW	Water & Haz Mat	566	876	$	777	See attachment F	See attachment F-1	Actual force level at time of forecast = 6	N/A	N/A	N/A
Environ	PJW	Water & Haz Mat	566	877	$	5,508	See attachment F	See attachment F-1	Actual force level at time of forecast = 6	N/A	N/A	N/A
Environ	PJW	Water & Haz Mat	566	878	$	2,787	See attachment F	See attachment F-1	Actual force level at time of forecast = 6	N/A	N/A	N/A
Environ	PJW	Water & Haz Mat	573	876	$	777	See attachment F	See attachment F-1	Actual force level at time of forecast = 6	N/A	N/A	N/A
Environ	PJW	Water & Haz Mat	573	877	$	7,451	See attachment F	See attachment F-1	Actual force level at time of forecast = 6	N/A	N/A	N/A
Environ	PJW	Water & Haz Mat	573	878	$	6,674	See attachment F	See attachment F-1	Actual force level at time of forecast = 6	N/A	N/A	N/A
Environ	PJW	Water & Haz Mat	588	787	$	323	See attachment F	See attachment F-1	Actual force level at time of forecast = 6	N/A	N/A	N/A
Environ	PJW	Water & Haz Mat	588	788	$	2,593	See attachment F	See attachment F-1	Actual force level at time of forecast = 6	N/A	N/A	N/A
Environ	PJW	Water & Haz Mat	588	876	$	777	See attachment F	See attachment F-1	Actual force level at time of forecast = 6	N/A	N/A	N/A
Environ	PJW	Water & Haz Mat	588	877	$	7,451	See attachment F	See attachment F-1	Actual force level at time of forecast = 6	N/A	N/A	N/A
Environ	PJW	Water & Haz Mat	588	878	$	6,479	See attachment F	See attachment F-1	Actual force level at time of forecast = 6	N/A	N/A	N/A



	d	e	f
evel	N/A	N/A	N/A
5 evel	N/A	N/A	N/A
5 evel	N/A	N/A	N/A
5 evel	N/A	N/A	N/A
0 evel	N/A	N/A	N/A
0 evel	N/A	N/A	N/A
0 evel	N/A	N/A	N/A
0 evel	N/A	N/A	N/A
0 evel	N/A	N/A	N/A
evel	N/A	N/A	N/A
evel	N/A	N/A	N/A
3 evel	N/A	N/A	N/A
3 evel	N/A	N/A	N/A
3	N/A	N/A	N/A

	d	e	f
Level 11	N/A	N/A	N/A
Level 11	N/A	N/A	N/A
Level 11	N/A	N/A	N/A
Level 11	N/A	N/A	N/A
Level 11	N/A	N/A	N/A
Level 11	N/A	N/A	N/A
Level 11	N/A	N/A	N/A
Level 11	N/A	N/A	N/A
Level 11	N/A	N/A	N/A
Level 11	N/A	N/A	N/A
Level 11	N/A	N/A	N/A
Level 23	N/A	N/A	N/A
Level 8	No positions added	N/A	N/A
Level 8	No positions added	N/A	N/A

Dept	RA	Resp Area	NARUC	Act	FY05	a	b	c	d	e	f
Sys Op	PRC	Communications	570	348	$ 212,105	See attachment K	See attachment K-1	Actual force level at time of forecast = 8	No positions added	N/A	N/A
Sys Op	PRC	Communications	570	350	$ 77,625	See attachment K	See attachment K-1	Actual force level at time of forecast = 8	No positions added	N/A	N/A
Sys Op	PRC	Communications	592	485	$ 4,347	See attachment K	See attachment K-1	Actual force level at time of forecast = 8	No positions added	N/A	N/A
Sys Op	PRC	Communications	592	487	$ 2,207	See attachment K	See attachment K-1	Actual force level at time of forecast = 8	No positions added	N/A	N/A
Sys Op	PRD	Operating Dispatch	560	376	$ 120,895	See attachment K	See attachment K-2	Actual force level at time of forecast = 23	No positions added	N/A	N/A
Sys Op	PRD	Operating Dispatch	561	376	$ 572,559	See attachment K	See attachment K-2	Actual force level at time of forecast = 23	No positions added	N/A	N/A
Sys Op	PRD	Operating Dispatch	580	377	$ 120,895	See attachment K	See attachment K-2	Actual force level at time of forecast = 23	No positions added	N/A	N/A
Sys Op	PRD	Operating Dispatch	581	377	$ 660,659	See attachment K	See attachment K-2	Actual force level at time of forecast = 23	No positions added	N/A	N/A
Sys Op	PRE	Operating Engineering	561	376	$ 233,762	See attachment K	See attachment K-3	Actual force level at time of forecast = 9	See attachment K	See attachment K	See attachment K
Sys Op	PRE	Operating Engineering	566	326	$ 40,873	See attachment K	See attachment K-3	Actual force level at time of forecast = 9	See attachment K	See attachment K	See attachment K
Sys Op	PRE	Operating Engineering	581	377	$ 114,183	See attachment K	See attachment K-3	Actual force level at time of forecast = 9	See attachment K	See attachment K	See attachment K
Sys Op	PRE	Operating Engineering	588	456	$ 201,282	See attachment K	See attachment K-3	Actual force level at time of forecast = 9	See attachment K	See attachment K	See attachment K
Sys Op	PRI	Instrument & Control	561	376	$ 34,101	See attachment K	See attachment K-4	Actual force level at time of forecast = 6	See attachment K	See attachment K	See attachment K

Dept	RA	Resp Area	NARUC	Act	FY05	a	b	c	d	e	f
Sys Op	PRI	Instrument & Control	562	333	$ 61,541	See attachment K	See attachment K-4	Actual force level at time of forecast = 6	See attachment K	See attachment K	See attachment K
Sys Op	PRI	Instrument & Control	570	348	$ 39,387	See attachment K	See attachment K-4	Actual force level at time of forecast = 6	See attachment K	See attachment K	See attachment K
Sys Op	PRI	Instrument & Control	570	350	$ 29,585	See attachment K	See attachment K-4	Actual force level at time of forecast = 6	See attachment K	See attachment K	See attachment K
Sys Op	PRI	Instrument & Control	570	366	$ 4,848	See attachment K	See attachment K-4	Actual force level at time of forecast = 6	See attachment K	See attachment K	See attachment K
Sys Op	PRI	Instrument & Control	573	354	$ 44,428	See attachment K	See attachment K-4	Actual force level at time of forecast = 6	See attachment K	See attachment K	See attachment K
Sys Op	PRI	Instrument & Control	582	463	$ 68,136	See attachment K	See attachment K-4	Actual force level at time of forecast = 6	See attachment K	See attachment K	See attachment K
Sys Op	PRI	Instrument & Control	592	485	$ 57,248	See attachment K	See attachment K-4	Actual force level at time of forecast = 6	See attachment K	See attachment K	See attachment K
Sys Op	PRI	Instrument & Control	592	487	$ 50,295	See attachment K	See attachment K-4	Actual force level at time of forecast = 6	See attachment K	See attachment K	See attachment K
Sys Op	PRI	Instrument & Control	592	509	$ 3,643	See attachment K	See attachment K-4	Actual force level at time of forecast = 6	See attachment K	See attachment K	See attachment K
Sys Op	PRI	Instrument & Control	598	491	$ 44,257	See attachment K	See attachment K-4	Actual force level at time of forecast = 6	See attachment K	See attachment K	See attachment K
Sys Op	PRI	Instrument & Control	598	492	$ 21,937	See attachment K	See attachment K-4	Actual force level at time of forecast = 6	See attachment K	See attachment K	See attachment K
Sys Op	PRR	Relay	562	327	$ 9,969	See attachment K	See attachment K-5	Actual force level at time of forecast = 10	No positions added	N/A	N/A
Sys Op	PRR	Relay	562	333	$ 62,696	See attachment K	See attachment K-5	Actual force level at time of forecast = 10	No positions added	N/A	N/A

Dept	RA	Resp Area	NARUC	Act	FY05	a	b	c	d	e	f
Sys Op	PRR	Relay	570	340	$ 4,030	See attachment K	See attachment K-5	Actual force level at time of forecast = 10	No positions added	N/A	N/A
Sys Op	PRR	Relay	570	348	$ 85,418	See attachment K	See attachment K-5	Actual force level at time of forecast = 10	No positions added	N/A	N/A
Sys Op	PRR	Relay	570	350	$ 28,304	See attachment K	See attachment K-5	Actual force level at time of forecast = 10	No positions added	N/A	N/A
Sys Op	PRR	Relay	570	366	$ 3,998	See attachment K	See attachment K-5	Actual force level at time of forecast = 10	No positions added	N/A	N/A
Sys Op	PRR	Relay	582	463	$ 54,540	See attachment K	See attachment K-5	Actual force level at time of forecast = 10	No positions added	N/A	N/A
Sys Op	PRR	Relay	592	485	$ 109,334	See attachment K	See attachment K-5	Actual force level at time of forecast = 10	No positions added	N/A	N/A
Sys Op	PRR	Relay	592	487	$ 28,053	See attachment K	See attachment K-5	Actual force level at time of forecast = 10	No positions added	N/A	N/A
Sys Op	PRR	Relay	592	509	$ 2,015	See attachment K	See attachment K-5	Actual force level at time of forecast = 10	No positions added	N/A	N/A
Sys Op	PRR	Relay	598	492	$ 1,562	See attachment K	See attachment K-5	Actual force level at time of forecast = 10	No positions added	N/A	N/A
Sys Op	PRS	Substation	562	330	$ 7,677	See attachment K	See attachment K-6	Actual force level at time of forecast = 28	See attachment K	See attachment K	See attachment K
Sys Op	PRS	Substation	566	720	$ 12,525	See attachment K	See attachment K-6	Actual force level at time of forecast = 28	See attachment K	See attachment K	See attachment K
Sys Op	PRS	Substation	566	789	$ 25,050	See attachment K	See attachment K-6	Actual force level at time of forecast = 28	See attachment K	See attachment K	See attachment K
Sys Op	PRS	Substation	566	797	$ 25,050	See attachment K	See attachment K-6	Actual force level at time of forecast = 28	See attachment K	See attachment K	See attachment K

Dept	RA	Resp Area	NARUC	Act	FY05	a	b	c	d	e	f
Sys Op	PRS	Substation	570	348	$ 450,289	See attachment K	See attachment K-6	Actual force level at time of forecast = 28	See attachment K	See attachment K	See attachment K
Sys Op	PRS	Substation	570	350	$ 274,903	See attachment K	See attachment K-6	Actual force level at time of forecast = 28	See attachment K	See attachment K	See attachment K
Sys Op	PRS	Substation	582	460	$ 62,355	See attachment K	See attachment K-6	Actual force level at time of forecast = 28	See attachment K	See attachment K	See attachment K
Sys Op	PRS	Substation	592	485	$ 543,558	See attachment K	See attachment K-6	Actual force level at time of forecast = 28	See attachment K	See attachment K	See attachment K
Sys Op	PRS	Substation	592	487	$ 251,927	See attachment K	See attachment K-6	Actual force level at time of forecast = 28	See attachment K	See attachment K	See attachment K
Sys Op	PRS	Substation	595	482	$ 59,261	See attachment K	See attachment K-6	Actual force level at time of forecast = 28	See attachment K	See attachment K	See attachment K
Sys Op	PRS	Substation	595	484	$ 40,404	See attachment K	See attachment K-6	Actual force level at time of forecast = 28	See attachment K	See attachment K	See attachment K
Sys Op	PRX	Construction Mgt	570	348	$ 10,758	See attachment K	See attachment K-6	Actual force level at time of forecast = 3	No positions added	N/A	N/A
Sys Op	PRX	Construction Mgt	570	350	$ 32,274	See attachment K	See attachment K-6	Actual force level at time of forecast = 3	No positions added	N/A	N/A
Sys Op	PRX	Construction Mgt	592	487	$ 32,274	See attachment K	See attachment K-6	Actual force level at time of forecast = 3	No positions added	N/A	N/A
Sys Op	PRX	Construction Mgt	595	484	$ 32,274	See attachment K	See attachment K-6	Actual force level at time of forecast = 3	No positions added	N/A	N/A

General Information Requests

For each of the HECO witnesses who sponsor test period budgeted labor direct expense amounts, please provide the following information:

a. Identify each employee involved in preparation of budgeted staffing and associated labor direct expense amounts included in the witnesses' portion of the rate case test period budget.

b. Provide complete copies of all calculations, spreadsheet files, "pencil" workpapers, surveys and other analyses performed by each of the employees identified in response to part (a), documenting all work done to determine required staffing levels and overtime hours by Department, RA, Activity and NARUC Account.

c. Describe the actual force level that existed at the date the budget was prepared or otherwise served as a base for purposes of preparing the budget level.

d. For each budgeted employee position that is added to existing actual force levels (as the date the budget was prepared), **explain** the analyses undertaken to determine that each added position was necessary and should be filled in order to meet present or anticipated work requirements. Also, please explain how the anticipated work requirements were defined and determined.

e. Describe and, to the extent possible, quantify the backlog of work, unfinished projects, deferred maintenance and other labor requirements unfulfilled at present staffing levels, that will be satisfied by adding the employee positions identified in your response to part (d).

f. Provide complete copies of all studies, analyses, workpapers, projections, notes, correspondence, assumptions and other documents associated with your responses to parts (d) and (e) above.

HECO Response:

a. For the Construction & Maintenance (C&M) Department the employees involved in the preparation of budgeted staffing and associated labor direct expense amounts for the rate case test period are Arvin Fujii, Department Administrator and Douglas Kumataka, Work Coordinator.

b. Please refer to attachments B-1 through B-5 for additional details.

c. The total staffing level for C&M at the time the Rate case budget was prepared was 206, as

compared to the budgeted amount of 221. The actual staffing level at the end of 2004 was 220. Please refer to column c on Attachment A for additional details.

d. The increased staffing is to address increased system requirements as a result of the ongoing growth and age of the utility plant and to account for the loss of technical

[redacted]

knowledge and experience through retirements of existing staff, as well as, to implement new projects. Over the next three to five years, we will be faced with the loss of technical knowledge and experience due to retirements. Replacement employees do not have similar

et - NonProject
05

Prepared by Arvin Fujii
Date 2/18/2004

ab card	Units tab card												
Link To	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
	*(enter **employee count** in **"Units tab card"**)*												
e Hours	1	1	1	1	1	1	1	1	1	1	1	1	12
	*(enter **hours** in **"Units tab card"**)*												
	0	8	8	0	8	8	8	8	8	8	16	16	96
	14	9	11	13	14	11	12	16	9	11	19	22	160
	4	3	3	4	4	3	4	5	3	3	6	7	48
													0
	28	37	45	64	31	46	34	45	22	15	17	17	401
	1	7	10	5	3	4	4	5	4	2	3	3	51
	1	1	1	1	1	1	1	1	1	1	1	1	12
	0	7	5	5	2	2	4	4	4	3	4	7	47
	1	4	5	5	5	7	13	4	15	12	0	1	72
	51	67	92	113	87	73	88	81	90	96	80	81	999
	74	21	27	13	13	4	8	13	12	8	17	29	239
	2	2	2	2	2	2	2	2	2	2	2	2	24
	0	5	0	1	4	4	3	0	2	0	12	4	35
	8	8	8	8	8	8	8	8	8	8	8	8	96
	185	179	217	234	182	173	189	191	179	169	184	198	2,280
	168	160	184	168	176	176	168	184	176	168	176	176	2,080
	17	19	33	66	6	(3)	21	7	3	1	8	22	
	0	8	8	0	8	8	8	8	8	8	16	16	96
	168	160	184	168	176	176	168	184	176	168	176	176	2080

l hours (which are budgeted in the Project file)

	14	9	11	13	14	11	12	16	9	11	19	22
160	0.0901	0.0575	0.0659	0.0799	0.0858	0.0661	0.0778	0.0971	0.0542	0.0692	0.1168	0.1396
	4	3	3	4	4	3	4	5	3	3	6	7
48	0.0901	0.0575	0.0659	0.0799	0.0858	0.0661	0.0778	0.0971	0.0542	0.0692	0.1168	0.1396

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1/4/2005

Labor Input Sheet - NonProject
2005

Resp Area (RA) DC
Labor Class W_JPCORD JP Coordinator

Prepared by Arvin Fujii
Date 2/18/2004

Dimension tab card								Rates tab card	Units tab card													
Line Item	RA	Act	Loc	Ind	Proj	EE	Labor Class	Rates Link To	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Labor Supply :									*(enter employee count in "Units tab card")*												
Labor Supply	DC	*Supply	*Supply	*Supply	*Supply	*Supply	W_JPCORD	Available Hours	1	1	1	1	1	1	1	1	1	1	1	1	12
Labor Demand :									*(enter hours in "Units tab card")*												
Holiday	DC	098	PHE	ND		107	W_JPCORD	W_JPCORD	0	8	8	0	8	8	8	8	8	8	16	16	96
Vacation	DC	098	PHE	ND		107	W_JPCORD	W_JPCORD	14	9	11	13	14	11	12	16	9	11	19	22	160
Other NPW	DC	098	PHE	ND		107	W_JPCORD	W_JPCORD	4	3	3	4	4	3	4	5	3	3	6	7	48
Workers Comp	DC	098	PHE	ND		108	W_JPCORD	W_JPCORD													0
Respond to Cust Inq & Svc Req	DC	600	OAH	NC	NPDZZZZZ	150	W_JPCORD	W_JPCORD	33	33	33	33	33	33	33	33	33	33	33	33	396
Attend Training	DC	789	PDO	NE	NPDZZZZZ	150	W_JPCORD	W_JPCORD	2	2	2	2	2	2	2	2	2	2	2	2	24
Joint Pole Records	DC	926	PDO	NE	NPDZZZZZ	150	W_JPCORD	W_JPCORD	116	117	116	117	116	117	116	117	116	117	116	116	1,397
								Total NonProj/Pgm Demand	170	172	173	169	177	174	175	180	170	174	191	196	2,121
								Total Supply	168	160	184	168	176	176	168	184	176	168	176	176	2,080
									2	12	(11)	1	1	(2)	7	(4)	(6)	6	15	20	
Holidays - 2/21, 3/25, 5/30, 6/10, 7/4, 8/19, 9/5, 10/10, 11/11, 11/24, 12/24(1/2), 12/26, 12/30(1/2)									0	8	8	0	8	8	8	8	8	8	16	16	96
Available hours per employee									168	160	184	168	176	176	168	184	176	168	176	176	2080

NOTE: Total NonProject Demand hours may *NOT* equal Total Supply hours due to Project Demand hours (which are budgeted in the Project file)

Vacation		14	9	11	13	14	11	12	16	9	11	19	22
	160	0.0901	0.0575	0.0659	0.0799	0.0858	0.0661	0.0778	0.0971	0.0542	0.0692	0.1168	0.1396
Other NPW		4	3	3	4	4	3	4	5	3	3	6	7
	48	0.0901	0.0575	0.0659	0.0799	0.0858	0.0661	0.0778	0.0971	0.0542	0.0692	0.1168	0.1396

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bor Input Sheet - NonProject
2005

Prepared by Arvin Fujii
Date 2/18/2004

	Rates tab card	Units tab card												
abor Class	Rates Link To	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
		(enter employee count in "Units tab card")												
JOCED	Available Hours	6	6	6	6	6	6	6	6	6	6	6	6	72
		(enter hours in "Units tab card")												
JOCED	BUOCED	0	48	48	0	48	48	48	48	48	48	96	96	576
JOCED	BUOCED	65	41	47	58	62	48	56	70	39	50	84	100	720
JOCED	BUOCED	26	17	19	23	25	19	22	28	16	20	34	40	288
JOCED	BUOCED													0
JOCED	BUOCED	45	45	45	45	45	45	45	45	45	45	45	45	540
JOCED	BUOCED	3	27	14	15	10	5	3	1	3	2	6	8	97
JOCED	BUOCED	4	8	17	0	3	6	43	13	8	14	14	14	144
JOCED	BUOCED	177	211	297	367	167	167	67	37	167	67	155	123	2,002
JOCED	BUOCED	142	124	128	114	119	113	122	149	138	151	128	132	1,560
JOCED	BUOCED	192	187	138	53	261	187	420	437	226	246	158	175	2,680
JOCED	BUOCED	42	42	42	42	42	42	42	42	42	42	42	42	504
JOCED	BUOCED	11	30	33	63	39	0	3	9	3	3	1	22	217
JOCED	BUOCED	15	0	4	0	1	3	0	10	14	5	18	3	73
JOCED	BUOCED	51	47	50	12	17	11	15	18	14	14	10	9	268
JOCED	BUOCED	123	100	118	82	75	101	110	122	99	100	71	99	1,200
	nProj/Pgm Demand	896	927	1,000	874	913	795	996	1,029	862	807	862	909	10,869
	pply	1,008	960	1,104	1,008	1,056	1,056	1,008	1,104	1,056	1,008	1,056	1,056	12,480
		(112)	(33)	(104)	(134)	(143)	(261)	(12)	(75)	(194)	(201)	(194)	(147)	
		0	8	8	0	8	8	8	8	8	8	16	16	96
		168	160	184	168	176	176	168	184	176	168	176	176	2080

oject Demand hours (which are budgeted in the Project file)

	11	7	8	10	10	8	9	12	6	8	14	17
120	0.0901	0.0575	0.0659	0.0799	0.0858	0.0661	0.0778	0.0971	0.0542	0.0692	0.1168	0.1396
	4	3	3	4	4	3	4	5	3	3	6	7
48	0.0901	0.0575	0.0659	0.0799	0.0858	0.0661	0.0778	0.0971	0.0542	0.0692	0.1168	0.1396

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[redacted]

Labor Input Sheet - NonProject
2005

Resp Area (RA) DP
Labor Class FS_ED Superintendent

Prepared by Arvin Fujii
Date 2/18/2004

Dimension tab card								Rates tab card	Units tab card													
Line Item	RA	Act	Loc	Ind	Proj	EE	Labor Class	Rates Link To	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Labor Supply:									*(enter employee count in "Units tab card")*												
Labor Supply	DP	*Supply	*Supply	*Supply	*Supply	*Supply	FS_ED	Available Hours	1	1	1	1	1	1	1	1	1	1	1	1	12
Labor Demand:									*(enter hours in "Units tab card")*												
Holiday	DP	098	PHE	ND		107	FS_ED	FS_ED	0	8	8	0	8	8	8	8	8	8	16	16	96
Vacation	DP	098	PHE	ND		107	FS_ED	FS_ED	14	9	11	13	14	11	12	16	9	11	19	22	160
Other NPW	DP	098	PHE	ND		107	FS_ED	FS_ED	4	3	3	4	4	3	4	5	3	3	6	7	48
Workers Comp	DP	098	PHE	ND		108	FS_ED	FS_ED													0
Respond to Cust Inq & Svc Req	DP	600	OAH	NS	NPDZZZZZ	150	FS_ED	FS_ED	5	5	5	5	5	5	5	5	5	5	5	5	60
Strategic Planning Meeting	DP	700	OAH	NC	NPDZZZZZ	150	FS_ED	FS_ED	64	65	7	13	25	5	12	107	71	17	75	20	481
Improve Business Processes	DP	720	OAH	NC	NPDZZZZZ	150	FS_ED	FS_ED	7	7	6	7	8	8	7	7	6	6	7	4	80
Coord, Conduct & Assist w/Audit	DP	760	OAH	NC	NPDZZZZZ	150	FS_ED	FS_ED	0	12	0	0	0	0	0	0	0	0	0	0	12
Dev, Mng Admin EE Policies,Prac,Proc	DP	765	PDM	NC	NPDZZZZZ	150	FS_ED	FS_ED	79	73	83	88	96	81	80	81	84	89	85	81	1,000
Dev, Mng Admin Recruit Policies,Prac,Proc	DP	767	OAH	NC	NPDZZZZZ	150	FS_ED	FS_ED	0	0	0	6	1	0	0	6	2	6	1	4	26
Conduct Employee Training	DP	785	OAH	NC	NPDZZZZZ	150	FS_ED	FS_ED	10	5	4	3	4	3	5	3	1	3	2	4	47
Conduct Employee Training	DP	788	OAH	NC	NPDZZZZZ	150	FS_ED	FS_ED	0	0	0	0	0	0	16	0	0	0	0	0	16
Attend Training	DP	789	OAH	NC	NPDZZZZZ	150	FS_ED	FS_ED	6	16	12	10	22	19	6	11	13	21	5	2	143
								Total NonProj/Pgm Demand	190	203	139	149	187	143	155	248	201	169	220	165	2,169
								Total Supply	168	160	184	168	176	176	168	184	176	168	176	176	2,080
									22	43	(45)	(19)	11	(33)	(13)	64	25	1	44	(11)	
Holidays - 2/21, 3/25, 5/30, 6/10, 7/4, 8/19, 9/5, 10/10, 11/11, 11/24, 12/24(1/2), 12/26, 12/30(1/2)									0	8	8	0	8	8	8	8	8	8	16	16	96
Available hours per employee									168	160	184	168	176	176	168	184	176	168	176	176	2080

NOTE: Total NonProject Demand hours may *NOT* equal Total Supply hours due to Project Demand hours (which are budgeted in the Project file)

Vacation		14	9	11	13	14	11	12	16	9	11	19	22
	160	0.0901	0.0575	0.0659	0.0799	0.0858	0.0661	0.0778	0.0971	0.0542	0.0692	0.1168	0.1396
Other NPW		4	3	3	4	4	3	4	5	3	3	6	7
	48	0.0901	0.0575	0.0659	0.0799	0.0858	0.0661	0.0778	0.0971	0.0542	0.0692	0.1168	0.1396

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nput Sheet - NonProject
2005

Prepared by Arvin Fujii
Date 2/18/2004

	Rates tab card	Units tab card												
Class	Rates Link To	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
		(enter employee count in "Units tab card")												
	Available Hours	10	10	10	10	10	10	10	10	10	10	10	10	120
		(enter hours in "Units tab card")												
	TCS_ED	0	80	80	0	80	80	80	80	80	80	160	160	960
	TCS_ED	143	102	134	107	103	148	130	139	101	124	184	185	1,600
	TCS_ED	43	31	40	32	31	44	39	42	30	37	55	55	480
	TCS_ED													0
	TCS_ED	117	117	117	117	117	117	117	117	117	117	117	117	1,400
	TCS_ED	31	95	28	22	16	10	6	371	18	157	206	0	960
	TCS_ED	67	95	73	71	74	53	27	51	57	57	79	89	793
	TCS_ED	5	5	5	5	5	5	5	5	5	5	5	5	60
	TCS_ED	14	0	34	30	4	14	3	0	7	35	13	0	154
	TCS_ED	294	188	201	201	210	153	199	214	207	213	176	229	2,485
	TCS_ED	83	83	83	83	83	83	83	83	83	83	83	83	1,000
	TCS_ED	3	10	18	10	6	31	6	0	0	0	15	0	99
	TCS_ED	478	288	314	189	274	554	465	412	396	236	163	312	4,081
	TCS_ED	478	288	314	189	274	554	465	412	396	236	163	312	4,081
	TCS_ED	0	88	80	40	96	120	0	60	60	20	140	0	704
	TCS_ED	73	99	150	99	109	60	33	84	50	117	59	13	946
	TCS_ED	19	18	25	26	31	13	8	19	14	27	10	6	216
	TCS_ED	3	3	3	2	1	3	2	2	1	1	1	2	24
	TCS_ED	30	26	33	28	28	18	21	23	19	23	15	25	289
Pgm Demand		1,881	1,616	1,732	1,252	1,542	2,061	1,689	2,114	1,641	1,568	1,644	1,593	20,332
		1,680	1,600	1,840	1,680	1,760	1,760	1,680	1,840	1,760	1,680	1,760	1,760	20,800
		201	16	(108)	(428)	(218)	301	9	274	(119)	(112)	(116)	(167)	
		0	8	8	0	8	8	8	8	8	8	16	16	96
		168	160	184	168	176	176	168	184	176	168	176	176	2080

Demand hours (which are budgeted in the Project file)

	14	10	13	11	10	15	13	14	10	12	18	18
160	#####	#####	#####	#####	#####	#####	#####	#####	#####	#####	#####	#####
	4	3	4	3	3	4	4	4	3	4	6	6
48	0.0892	0.0638	0.0836	0.0672	0.0645	0.0926	0.0811	0.087	0.0629	0.0776	0.1149	0.1155

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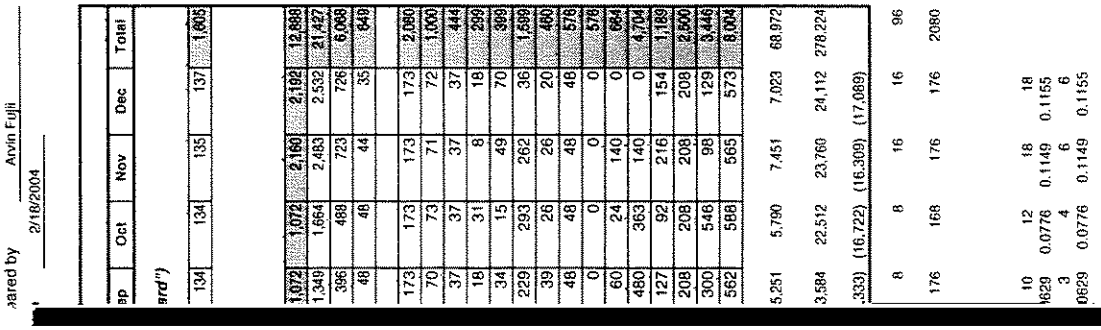

pared by Arvin Fujii
2/18/2004

ap	Oct	Nov	Dec	Total
ard")				
134	134	135	137	1,605
1,072	1,072	2,160	2,192	12,888
1,349	1,664	2,483	2,532	21,427
396	488	723	726	6,068
48	48	44	35	540
173	173	173	173	2,080
70	73	71	72	1,000
37	37	37	37	444
18	31	8	18	299
34	15	49	70	386
229	293	262	36	1,599
39	26	26	20	460
48	48	48	48	576
0	0	0	0	576
60	24	140	0	864
480	363	140	0	4,704
127	92	216	154	1,189
208	208	208	208	2,500
300	546	98	129	3,446
562	588	565	573	6,004
5,251	5,790	7,451	7,023	68,972
3,584	22,512	23,760	24,112	278,224
(333)	(16,722)	(16,309)	(17,089)	
8	8	16	16	96
176	168	176	176	2080

10	12	18	18
629	0.0776	0.1149	0.1155
3	4	6	6
0629	0.0776	0.1149	0.1155

Total
269
2,120
2,677
1,071
2,089
60
143
201
1,596
76
792
792
301
11,916
46,608
96
2080

General Information Requests

For each of the HECO witnesses who sponsor test period budgeted labor direct expense amounts, please provide the following information:

a. Identify each employee involved in preparation of budgeted staffing and associated labor direct expense amounts included in the witnesses' portion of the rate case test period budget.

b. Provide complete copies of all calculations, spreadsheet files, "pencil" work papers, surveys and other analyses performed by each of the employees identified in response to part (a), documenting all work done to determine required staffing levels and overtime hours by Department, RA, Activity and NARUC Account.

c. Describe the actual force level that existed at the date the budget was prepared or otherwise served as a base for purposes of preparing the budget level.

d. For each budgeted employee position that is added to existing actual force levels (as the date the budget was prepared), **explain** the analyses undertaken to determine that each added position was necessary and should be filled in order to meet present or anticipated work requirements. Also, please explain how the anticipated work requirements were defined and determined.

e. Describe and, to the extent possible, quantify the backlog of work, unfinished projects, deferred maintenance and other labor requirements unfulfilled at present staffing levels, that will be satisfied by adding the employee positions identified in your response to part (d).

f. Provide complete copies of all studies, analyses, work papers, projections, notes, correspondence, assumptions and other documents associated with your responses to parts (d) and (e) above.

HECO Response:

a. For the Customer Installation Department (CID) the employees involved in the preparation of budgeted staffing and associated labor direct expense amounts for the rate case test period are Darlene Bajadali, Department Administrator (PWA), Randy China, Meter Engineer (PWX) and Enrique Che, Director, Planning & Design (PWP).

b. Please refer to attachments C-1 through C-3.

c. The total staffing level at the time the Rate case budget was prepared were as follows:

PWA-10

PWX-11

PWP-26

d. PWX-Increased from 10 to 11.

Through the years, Meter Division's workforce reduced substantially by attrition and these positions were not replaced. The workforce reduced from 11 meter electricians (ME) in 1999 to 7 in 2004. Presently the division has a veteran workforce where additional ME's are nearing the age of retirement. In anticipation of these ME's retiring, the 5 year

apprenticeship program to become a senior ME and possible future meter projects, the

type of work requires two people. The Meter personnel have been working overtime to assist in completing the annual ANSI testing of meters. We have also increased the work load with special programs such as the Class Load Study and the Time of Use.

We have had to schedule overtime work regularly for the Planners during the week and on Saturdays to keep up with the workload.

f. Attachment C-4 was used as a projection to forecast staffing levels.

Labor Input Sheet - NonProject
2005

Resp Area (RA) wa
Labor Class ew

Prepared by _____
Date _____

Dimension tab card								Rates tab card	Units tab card													
Line Item	RA	Act	Loc	Ind	Proj	EE	Labor Class	Rates Link To	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Labor Supply :									*(enter employee count in "Units tab card")*												
Labor Supply	wa	*Supply	*Supply	*Supply	*Supply	*Supply	ew	Available Hours	1	1	1	1	1	1	1	1	1	1	1	1	12
Labor Demand :									*(enter hours in "Units tab card")*												
Holiday	wa	098	PHE	ND		107	ew	ew	0	8	8	0	8	8	8	8	8	8	16	16	96
Vacation	wa	098	PHE	ND		107	ew	ew			40			40		40					120
Other NPW	wa	098	PHE	ND		107	ew	ew													0
Workers Comp	wa	098	PHE	ND		108	ew	ew													0
	wa	600	oah	nc		150	ew	ew	35	35	25	35	35	15	35	25	35	35	35	35	380
	wa	603	oah	nc		150	ew	ew	10	10	10	10	10	10	10	10	10	10	10	10	120
	wa	701	oah	nc		150	ew	ew	35	35	35	35	35	35	35	35	35	35	35	35	420
	wa	720	oah	nc		150	ew	ew	35	35	35	35	35	35	35	35	35	35	35	35	420
	wa	767	oah	nc		150	ew	ew	43	27	21	43	43	23	35	21	43	35	35	35	404
	wa	926	pdo	ne		150	ew	ew	10	10	10	10	10	10	10	10	10	10	10	10	120
	wa					150	ew	ew													0
	wa					150	ew	ew													0
	wa					150	ew	ew													0
	wa					150	ew	ew													0
								Total NonProj/Pgm Demand	168	160	184	168	176	176	168	184	176	168	176	176	2,080
								Total Supply	168	160	184	168	176	176	168	184	176	168	176	176	2,080

Holidays - 2/21, 3/25, 5/30, 6/10, 7/4, 8/19, 9/5, 10/10, 11/11, 11/24, 12/23 (1/2), 12/26, 12/30 (1/2)	0	8	8	0	8	8	8	8	8	8	16	16	96
Available hours per employee	168	160	184	168	176	176	168	184	176	168	176	176	2080

NOTE: Total NonProject Demand hours may *NOT* equal Total Supply hours due to Project Demand hours (which are budgeted in the Project file)

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nProject

Prepared by _____

Date _____

Units tab card											
eb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
(enter employee count in "Units tab card")											
1	1	1	1	1	1	1	1	1	1	1	12
(enter hours in "Units tab card")											
8	8	0	8	8	8	8	8	8	16	16	96
	40			40		40					120
											0
											0
27	27	27	27	27	27	27	27	27	27	27	324
10	10	10	10	10	10	10	10	10	10	10	120
35	35	35	35	25	35	35	35	35	35	35	410
35	25	35	35	25	35	25	35	35	35	35	390
27	21	43	43	23	35	21	43	35	35	35	404
10	10	10	10	10	10	10	10	10	10	10	120
8	8	8	8	8	8	8	8	8	8	8	96
											0
											0
160	184	168	176	176	168	184	176	168	176	176	2,080
160	184	168	176	176	168	184	176	168	176	176	2,080
8	8	0	8	8	8	8	8	8	16	16	96
160	184	168	176	176	168	184	176	168	176	176	2080

ed hours (which are budgeted in the Project file)

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1/4/2005

Labor Input Sheet - NonProject
2005

Resp Area (RA) wa
Labor Class tcs-w

Prepared by _____
Date _____

Dimension tab card								Rates tab card	Units tab card													
Line Item	RA	Act	Loc	Ind	Proj	EE	Labor Class	Rates Link To	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Labor Supply :									*(enter **employee count** in **"Units tab card"**)*												
Labor Supply	wa	*Supply	*Supply	*Supply	*Supply	*Supply	tcs-w	Available Hours	1	1	1	1	1	1	1	1	1	1	1	1	12
Labor Demand :									*(enter **hours** in **"Units tab card"**)*												
Holiday	wa	098	PHE	ND		107	tcs-w	tcs-w	0	8	8	0	8	8	8	8	8	8	16	16	96
Vacation	wa	098	PHE	ND		107	tcs-w	tcs-w		40		40					40				120
Other NPW	wa	098	PHE	ND		107	tcs-w	tcs-w													0
Workers Comp	wa	098	PHE	ND		108	tcs-w	tcs-w													0
	wa	600	oah	nc		150	tcs-w	tcs-w	45	45	45	45	45	45	45	45	45	45	45	45	540
	wa	613	oah	nc		150	tcs-w	tcs-w	10	10	10	10	10	10	10	10	10	10	10	10	120
	wa	618	oah	nc		150	tcs-w	tcs-w	2	2	2	2	2	2	2	2	2	2	2	2	24
	wa	701	oah	nc		150	tcs-w	tcs-w	40	40	40	40	40	40	40	40	40	40	40	40	480
	wa	720	oah	nc		150	tcs-w	tcs-w	63	7	71	23	63	63	55	71	23	55	55	55	604
	wa	767	oah	nc		150	tcs-w	tcs-w	8	8	8	8	8	8	8	8	8	8	8	8	96
	wa					150	tcs-w	tcs-w													0
	wa					150	tcs-w	tcs-w													0
	wa					150	tcs-w	tcs-w													0
	wa					150	tcs-w	tcs-w													0
								Total NonProj/Pgm Demand	168	160	184	168	176	176	168	184	176	168	176	176	2,080
								Total Supply	168	160	184	168	176	176	168	184	176	168	176	176	2,080

Holidays - 2/21, 3/25, 5/30, 6/10, 7/4, 8/19, 9/5, 10/10, 11/11, 11/24, 12/23 (1/2), 12/26, 12/30 (1/2)	0	8	8	0	8	8	8	8	8	8	16	16	96
Available hours per employee	168	160	184	168	176	176	168	184	176	168	176	176	2080

NOTE: Total NonProject Demand hours may *NOT* equal Total Supply hours due to Project Demand hours (which are budgeted in the Project file)

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bor Input Sheet - NonProject/NonProgram
2005

Prepared by Enrique Che
Date 6/30/2004

	Rates tab card	Units tab card												
Class	Rates Link To	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
		(enter employee count in "Units tab card")												
HER	Available Hours	2	2	2	2	2	2	2	2	2	2	2	2	24
		(enter hours in "Units tab card")												
HER	W. RESHER	16	16	16	0	16	16	16	16	16	16	32	32	208
HER	W. RESHER	13	13	13	13	13	13	13	13	13	13	13	13	160
HER	W. RESHER	16	16	16								16	16	80
HER	W. RESHER													0
HER	W. RESHER	8	8	8	8	8	8	8	8	8	8	8	8	96
HER	W. RESHER	8	8	8	8	8	8	8	8	8	8	8	8	96
HER	W. RESHER	240	193	209	256	241	225	256	224	240	256	176	224	2,796
HER	W. RESHER													0
HER	W. RESHER	67	66	66	67	66	66	67	67	67	67	67	67	800
HER	W. RESHER													0
HER	W. RESHER													0
HER	W. RESHER													0
HER	W. RESHER													0
HER	W. RESHER													0
/Pgm Demand		368	320	336	352	352	336	368	336	352	368	320	368	4,176
		368	320	336	352	352	336	368	336	352	368	320	368	4,176
	Difference	0	0	0	0	0	0	0	0	0	0	0	0	0
2/25, 12/31 (1/2)		8	8	8	0	8	8	8	8	8	8	16	16	104
		184	160	168	176	176	168	184	168	176	184	160	184	2,088

al Total Supply hours due to Project/Program Demand hours (which are budgeted in the Project model)

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l/NonProgram

Prepared by Enrique Che
Date ######

Units tab card

b	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
(enter employee count in "Units tab card")											
				1	1	1	1				4
(enter hours in "Units tab card")											
0	0	0	0	8	8	8	8	0	0	0	32
0	0	0	0	0	8		0	0	0	0	8
											0
											0
											0
0	0	0	0	160	168	160	168	0	0	0	656
											0
											0
											0
											0
											0
											0
											0
0	0	0	0	168	184	168	176	0	0	0	696
0	0	0	0	168	184	168	176	0	0	0	696
0	0	0	0	0	0	0	0	0	0	0	0
8	8	0	8	8	8	8	8	8	16	16	104
0	168	176	176	168	184	168	176	184	160	184	2,088

ect/Program Demand hours (which are budgeted in the Project model)

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Labor Input Sheet - roject
2005

Prepared by _____

Date _____

	Rates tab card	Units tab card												
bor Class	Rates Link To	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
		*(enter **employee count** in **"Units tab card"**)*												
itsupv	Available Hours	1	1	1	1	1	1	1	1	1	1	1	1	12
		*(enter **hours** in **"Units tab card"**)*												
itsupv	w_mtsupv	0	8	8	0	8	8	8	8	8	8	16	16	96
itsupv	w_mtsupv	16	16	16	16	16	16	16	16	16	16	16	16	192
itsupv	w_mtsupv													0
itsupv	w_mtsupv													0
itsupv	w_mtsupv	19	19	19	19	19	19	19	19	19	19	19	19	228
itsupv	w_mtsupv	2	2	2	2	2	2	2	2	2	2	2	2	24
itsupv	w_mtsupv													0
itsupv	w_mtsupv	8	8	8	8	8	8	8	8	8	8	8	8	96
itsupv	w_mtsupv	42	46	42	42	42	39	42	42	42	42	42	42	505
itsupv	w_mtsupv	2	2	2	2	2	2	2	2	2	2	2	2	24
itsupv	w_mtsupv	5	5	5	5	5	5	5	5	5	5	5	5	60
itsupv	w_mtsupv	3	3	3	3	3	3	3	3	3	3	3	3	36
itsupv	w_mtsupv	1	1	1	1	1	4	1	1	1	1	1	1	15
itsupv	w_mtsupv	4	4	4	4	4	5	4	4	4	4	4	5	50
itsupv	w_mtsupv	4	4	4	4	4	4	4	4	4	4	4	4	48
itsupv	w_mtsupv	3	3	3	3	3	3	3	3	3	3	3	3	36
itsupv	w_mtsupv	1	1	1	1	1	1	1	1	1	1	1	1	12
itsupv	w_mtsupv	3	3	3	3	3	2	3	3	3	3	3	2	34
itsupv	w_mtsupv	3	3	3	3	3	3	3	3	3	3	3	3	36
itsupv	w_mtsupv	3	3	3	3	3	3	3	3	3	3	3	3	36
itsupv	w_mtsupv	2	2	2	2	2	2	2	2	2	2	2	2	24
itsupv	w_mtsupv	2	2	2	2	2	2	2	2	2	2	2	2	24
Proj/Pgm Demand		123	135	131	123	131	131	131	131	131	131	139	139	1,576
ily		168	160	184	168	176	176	168	184	176	168	176	176	2,080
		45	25	53	45	45	45	37	53	45	37	37	37	504
12/26, 12/30 (1/2)		0	8	8	0	8	8	8	8	8	8	16	16	96
		168	160	184	168	176	176	168	184	176	168	176	176	2080

upply hours due to Project Demand hours (which are budgeted in the Project file)

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Prepared by _____

Date _____

ts tab card							
Jul	Aug	Sep	Oct	Nov	Dec	Total	
count in "Units tab card")							
8	8	8	8	8	8	96	
in "Units tab card")							
64	64	64	64	114	114	740	
122	122	122	122	122	122	1,464	
48	48	48	48	48	48	576	
						0	
310	310	310	310	310	322	3,732	
15	15	15	15	15	15	180	
7	7	7	7	7	7	84	
15	15	15	15	15	15	180	
311	311	311	311	311	317	3,738	
40	40	40	40	40	40	481	
52	52	52	52	52	53	625	
95	95	95	95	95	95	1,146	
11	11	11	11	11	11	130	
7	7	7	7	7	7	88	
6	6	6	6	6	6	72	
38	38	38	38	38	38	456	
16	16	16	16	16	16	192	
						0	
						0	
1,157	1,157	1,157	1,157	1,207	1,226	13,884	
1,344	1,472	1,408	1,344	1,408	1,408	16,640	
187	315	251	187	201	182	2,756	
8	8	8	8	16	16	96	
168	184	176	168	176	176	2080	

the Project file)

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Labor Input Sheet - NonProject
2005

Prepared by _____

Date _____

Dimension tab card						Rates tab card	Units tab card												
Act	Loc	Ind	Proj	EE	Labor Class	Rates Link To	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
							*(enter **employee count** in **"Units tab card"**)*												
upply	*Supply	*Supply	*Supply	*Supply	mtengr	Available Hours	2	2	2	2	2	2	2	2	2	2	2	2	24
							*(enter **hours** in **"Units tab card"**)*												
098	PHE	ND		107	mtengr	mtengr	0	16	16	0	16	16	16	16	16	16	32	32	192
098	PHE	ND		107	mtengr	mtengr	16	16	16	16	16	16	16	16	16	16	16	16	192
098	PHE	ND		107	mtengr	mtengr	8	8	8	8	8	8	8	8	8	8	8	8	96
098	PHE	ND		108	mtengr	mtengr													0
600	oah	ne	npwzzzzz	150	mtengr	mtengr	15	15	15	15	15	15	15	15	15	15	15	15	180
601	oah	ne	npwzzzzz	150	mtengr	mtengr	26	26	26	26	26	26	26	26	26	26	26	26	312
602		ne	npwzzzzz	150	mtengr	mtengr	8	8	8	8	8	5	8	8	8	8	8	5	90
603		ne	npwzzzzz	150	mtengr	mtengr	17	13	17	17	17	17	17	17	17	17	17	17	200
604		ne	npwzzzzz	150	mtengr	mtengr	1	1	1	1	1	4	1	1	1	1	1	1	15
701		ne	npwzzzzz	150	mtengr	mtengr	3	3	3	3	3	3	3	3	3	3	3	3	36
720		ne	npwzzzzz	150	mtengr	mtengr	20	20	20	20	20	20	20	20	20	20	20	20	240
722		ne	npwzzzzz	150	mtengr	mtengr	3	3	3	3	3	3	3	3	3	3	3	3	36
786		ne	npwzzzzz	150	mtengr	mtengr	7	7	7	7	7	7	7	7	7	7	7	7	84
788		ne	npwzzzzz	150	mtengr	mtengr	12	8	12	12	12	12	12	12	12	12	12	12	140
789		ne	npwzzzzz	150	mtengr	mtengr	7	7	7	7	7	7	7	7	7	7	7	7	84
797		ne	npwzzzzz	150	mtengr	mtengr	3	3	3	3	3	3	3	3	3	3	3	3	36
842		ne	npwzzzzz	150	mtengr	mtengr	3	3	3	3	3	3	3	3	3	3	3	3	36
					Total NonProj/Pgm Demand		149	157	165	149	165	165	165	165	165	165	181	178	1,969
					Total Supply		336	320	368	336	352	352	336	368	352	336	352	352	4,160
							187	163	203	187	187	187	171	203	187	171	171	174	2,191
4, 8/19, 9/5, 10/10, 11/11, 11/24, 12/23 (1/2), 12/26, 12/30 (1/2)							0	8	8	0	8	8	8	8	8	8	16	16	96
							168	160	184	168	176	176	168	184	176	168	176	176	2080

mand hours may *NOT* equal Total Supply hours due to Project Demand hours (which are budgeted in the Project file)

Customer Installations Department
Planning and Design Division

	Staffing Levels		
	Past	Present	Future
Grades	HECo[1]	HECo	HECo
10	6	5	6
12	5	4	4
15	5	3	3
Total	16	12	13

[1]The past count is for year 1995.

No. of Service Requests	2000	2001	2002	2003	2004*
HECo	5846	5827	5999	6819	7800
Increase		-0.33%	2.95%	13.67%	14.39%

* HECo: Normalized for the year based on November 2004 totals.

General Information Requests

For each of the HECO witnesses who sponsor test period budgeted labor direct expense amounts, please provide the following information:

a. Identify each employee involved in preparation of budgeted staffing and associated labor direct expense amounts included in the witnesses' portion of the rate case test period budget.

b. Provide complete copies of all calculations, spreadsheet files, "pencil" workpapers, surveys and other analyses performed by each of the employees identified in response to part (a), documenting all work done to determine required staffing levels and overtime hours by Department, RA, Activity and NARUC Account.

c. Describe the actual force level that existed at the date the budget was prepared or otherwise served as a base for purposes of preparing the budget level.

d. For each budgeted employee position that is added to existing actual force levels (as the date the budget was prepared), **explain** the analyses undertaken to determine that each added position was necessary and should be filled in order to meet present or anticipated work requirements. Also, please explain how the anticipated work requirements were defined and determined.

e. Describe and, to the extent possible, quantify the backlog of work, unfinished projects, deferred maintenance and other labor requirements unfulfilled at present staffing levels, that will be satisfied by adding the employee positions identified in your response to part (d).

f. Provide complete copies of all studies, analyses, workpapers, projections, notes, correspondence, assumptions and other documents associated with your responses to parts (d) and (e) above.

HECO Response:

a. For the Customer Service Department the employees involved in the preparation of budgeted staffing and associated labor direct expense amounts for the rate case test period are Victoria Marzano, Department Administrator and Jan Loose.

b. Please refer to attachments D-1 through D-3 for additional details.

Labor Input Sheet - NonProject
2005

Resp Area (RA) CF

Labor Class TC
Administrator

Prepared by J Loose

Date 7/31/2003

Dimension tab card									Rates tab card	Units tab card													
Line Item	NARUC	RA	Act	Loc	Ind	Proj	EE	Labor Class	Rates Link To	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Labor Supply :										*(enter employee count in "Units tab card")*												
Labor Supply		CF	*Supply	*Supply	*Supply	*Supply	*Supply	TC	_ Available Hours	1	1	1	1	1	1	1	1	1	1	1	1	12
Labor Demand :										*(enter hours in "Units tab card")*												
Holiday		CF	098	PHE	ND		107	TC	TC	0	8	8	0	8	8	8	8	8	8	16	16	96
Vacation		CF	098	PHE	ND		107	TC	TC					20	20				20	20		80
Other NPW		CF	098	PHE	ND		107	TC	TC													0
Workers Comp		CF	098	PHE	ND		108	TC	TC													0
Customer Installations	587	CF	620	OAH	NE	NPCZZZZZ	150	TC	TC	56	56	56	56	56	56	56	56	56	56	56	56	672
Manage Account Problems	903	CF	611	OAH	NE	NPCZZZZZ	150	TC	TC	73	73	73	73	73	73	73	73	73	73	73	74	880
Budget	903	CF	701	PHE	NE	NPCZZZZZ	150	TC	TC	13	13	13	13	13	13	13	13	13	13	13	13	160
Development, PDS, Etc.	903	CF	785	PHE	NE	NPCZZZZZ	150	TC	TC	16	16	16	16	16	16	16	16	16	16	16	16	192
		CF					150	TC	TC													0
						Total NonProj/Pgm Demand				159	167	167	159	187	187	167	167	167	187	195	175	2,080
						Total Supply				159	167	167	159	187	187	167	167	167	187	195	175	2,080
Holidays - 2/21, 3/25, 5/30, 6/10, 7/4, 8/19, 9/5, 10/10, 11/11, 11/24, 12/23 (1/2), 12/26, 12/30 (1/2)										0	8	8	0	8	8	8	8	8	8	16	16	96
Available hours per employee										168	160	184	168	176	176	168	184	176	168	176	176	2080

NOTE: Total NonProject Demand hours may *NOT* equal Total Supply hours due to Project Demand hours (which are budgeted in the Project file)

[redacted]

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ATTACHMENT D-1
PAGE 1 of 1

Prepared by J Loose
Date 7/31/2003

's tab card

Jul	Aug	Sep	Oct	Nov	Dec	Total
ount in "Units tab card")						
1	1	1	1	1	1	12
in "Units tab card")						
8	8	8	8	16	16	96
40			40			120
						0
						0
8	8	8	8	8	8	96
48	48	48	48	48	48	576
8	8	8	8	8	8	96
24	80	72	24	64	64	712
32	32	32	32	32	32	384
						0
						0
						0
						0
						0
168	184	176	168	176	176	2,080
168	184	176	168	176	176	2,080
8	8	8	8	16	16	96
168	184	176	168	176	176	2080

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HECO T-8
ATTACHMENT D-2
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Input Sheet - NonProject
2005

Prepared by J Loose
Date 7/31/2003

Rates tab card	Units tab card												
Rates Link To	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
	(enter employee count in "Units tab card")												
Available Hours	1	1	1	1	1	1	1	1	1	1	1	1	12
	(enter hours in "Units tab card")												
BUOC	0	8	8	0	8	8	8	8	8	8	16	16	96
BUOC					40						40		80
BUOC													0
BUOC													0
BU-OC	16	16	16	16	16	16	16	16	16	16	16	16	192
BU-OC	48	48	48	48	48	48	48	48	48	48	48	48	576
BU-OC	16	16	16	16	16	16	16	16	16	16	16	16	192
BU-OC	88	72	96	88	48	88	80	96	88	80	40	80	944
BU-OC													0
BUOC													0
BUOC													0
BUOC													0
BUOC													0
BUOC													0
emand	168	160	184	168	176	176	168	184	176	168	176	176	2,080
	168	160	184	168	176	176	168	184	176	168	176	176	2,080
	0	8	8	0	8	8	8	8	8	8	16	16	96
	168	160	184	168	176	176	168	184	176	168	176	176	2080

roject Demand hours (which are budgeted in the Project file)

[redacted]

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ed by J Loose
7/31/2003

	Oct	Nov	Dec	Total
ard")	4	4	4	48
	32	64	64	384
	40	80	80	680
				0
				0
	372	332	332	4,520
	180	180	180	2,160
	48	48	48	576
				0
				0
				0
				0
				0
				0
	672	704	704	8,320
	672	704	704	8,320
	8	16	16	96
	168	176	176	2080

Labor Input Sheet - NonProject
2005

Resp Area (RA) CG
Labor Class BUOC
Field Service Reps

Prepared by J Loose
Date 7/31/2003

Dimension tab card									Rates tab card	Units tab card													
Line Item	NARUC	RA	Act	Loc	Ind	Proj	EE	Labor Class	Rates Link To	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Labor Supply :										*(enter employee count in "Units tab card")*												
Labor Supply		CG	*Supply	*Supply	*Supply	*Supply	*Supply	BUOC	_ Available Hours	16	16	16	16	16	16	16	16	16	16	16	16	192
Labor Demand :										*(enter hours in "Units tab card")*												
Holiday		CG	098	PHE	ND		107	BUOC	BUOC	0	128	128	0	128	128	128	128	128	128	256	256	1,536
Vacation		CG	098	PHE	ND		107	BUOC	BUOC	0	180	240	180	180	240	180	180	240	180	240	160	2,200
Other NPW		CG	098	PHE	ND		107	BUOC	BUOC													0
Workers Comp		CG	098	PHE	ND		108	BUOC	BUOC													0
locks/unlocks/NCOP/CB	586	PCG	602	OAH	NE	NPCZZZZZ	150	BU-OC	BU-OC	790	750	790	790	790	850	790	790	790	790	670	910	9,500
Re-reads/CB LH	902	PCG	610	OAH	NE	NPCZZZZZ	150	BU-OC	BU-OC	790	750	790	790	790	850	790	790	790	790	670	850	9,440
Disconnects/Reconnects	903	PCG	619	OAH	NE	NPCZZZZZ	150	BU-OC	BU-OC	1,108	752	996	928	928	748	800	1,056	868	800	980	640	10,604
		CG					150	BUOC	BUOC													0
		CG					150	BUOC	BUOC													0
		CG					150	BUOC	BUOC													0
		CG					150	BUOC	BUOC													0
		CG					150	BUOC	BUOC													0
		CG					150	BUOC	BUOC													0
		CG					150	BUOC	BUOC													0
								Total NonProj/Pgm Demand		2,688	2,560	2,944	2,688	2,816	2,816	2,688	2,944	2,816	2,688	2,816	2,816	33,280
								Total Supply		2,688	2,560	2,944	2,688	2,816	2,816	2,688	2,944	2,816	2,688	2,816	2,816	33,280
Holidays - 2/21, 3/25, 5/30, 6/10, 7/4, 8/19, 9/5, 10/10, 11/11, 11/24, 12/23 (1/2), 12/26, 12/30 (1/2)										0	8	8	0	8	8	8	8	8	8	16	16	96
Available hours per employee										168	160	184	168	176	176	168	184	176	168	176	176	2080

NOTE: Total NonProject Demand hours may*NOT* equal Total Supply hours due to Project Demand hours (which are budgeted in the Project file)

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J Loose
7/31/2003

	Nov	Dec	Total
	1	1	12
	16	16	96
	16	16	160
			0
			0
	4	4	48
	8	8	96
	77	92	974
	8		24
	63	48	530
	8	8	176
			0
			0
			0
			0
			0
	184	176	2,104
	176	176	2,080
	16	16	96
	176	176	2080
	16		
	176		

Labor Input Sheet - NonProject
2005

Resp Area (RA) CM
Labor Class TC
Planner/Analyst

Prepared by J Loose
Date 2/6/2004

Dimension tab card									Rates tab card	Units tab card													
Line Item	NARUC	RA	Act	Loc	Ind	Proj	EE	Labor Class	Rates Link To	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Labor Supply :										*(enter employee count in "Units tab card")*												
Labor Supply		CM	*Supply	*Supply	*Supply	*Supply	*Supply	TC	Available Hours	1	1	1	1	1	1	1	1	1	1	1	1	12
Labor Demand :										*(enter hours in "Units tab card")*												
Holiday		CM	098	PHE	ND		107	TC	TC	0	8	8	0	8	8	8	8	8	8	16	16	96
Vacation		CM	098	PHE	ND		107	TC	TC				40				40					80
Other NPW		CM	098	PHE	ND		107	TC	TC													0
Workers Comp		CM	098	PHE	ND		108	TC	TC													0
Respond to Cust Inq/Reqst	903	CM	600	OAH	NE	NPCZZZZZ	150	TC	TC	4	4	4	4	4	4	4	4	4	4	4	4	48
Maintain Meter Information	586	CM	603	OAH	NE	NPCZZZZZ	150	TC	TC	8	8	8	8	8	8	8	8	8	8	8	8	96
Read Meters	902	CM	610	OAH	NE	NPCZZZZZ	150	TC	TC	92	80	84	88	88	84	25	84	88	92	77	92	974
Dev measures/analyze	902	CM	721	PHE	NE	NPCZZZZZ	150	TC	TC	56	52	72	20	60	56	67	8	60	48	63	48	610
Empl Training and Reviews	902	CM	785	PHE	NE	NPCZZZZZ	150	TC	TC	8	8	8	8	8	16	56	32	8	8	8	8	176
		CM					150	TC	TC													0
		CM					150	TC	TC													0
		CM					150	TC	TC													0
		CM					150	TC	TC													0
		CM					150	TC	TC													0
									Total NonProj/Pgm Demand	168	160	184	168	176	176	168	184	176	168	176	176	2,080
									Total Supply	168	160	184	168	176	176	168	184	176	168	176	176	2,080
Holidays - 2/21, 3/25, 5/30, 6/10, 7/4, 8/19, 9/5, 10/10, 11/11, 11/24, 12/23 (1/2), 12/26, 12/30 (1/2)										0	8	8	0	8	8	8	8	8	8	16	16	96
Available hours per employee										168	160	184	168	176	176	168	184	176	168	176	176	2080

NOTE: Total NonProject Demand hours may *NOT* equal Total Supply hours due to Project Demand hours (which are budgeted in the Project file)

[redacted]

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Labor Input Sheet - NonProject
2005

Resp Area (RA) CM
Labor Class BUOC
Clerk

Prepared by J Loose
Date 7/31/2003

Dimension tab card									Rates tab card	Units tab card													
Line Item	NARUC	RA	Act	Loc	Ind	Proj	EE	Labor Class	Rates Link To	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Labor Supply :														*(enter employee count in "Units tab card")*								
Labor Supply		CM	*Supply	*Supply	*Supply	*Supply	*Supply	BUOC	Available Hours	1	1	1	1	1	1	1	1	1	1	1	1	12
Labor Demand :														*(enter hours in "Units tab card")*								
Holiday		CM	098	PHE	ND		107	BUOC	BUOC	0	8	8	0	8	8	8	8	8	8	16	16	96
Vacation		CM	098	PHE	ND		107	BUOC	BUOC	16	8	8	16	8	8	8	8	8	16	16		120
Other NPW		CM	098	PHE	ND		107	BUOC	BUOC													0
Workers Comp		CM	098	PHE	ND		108	BUOC	BUOC													0
Respond to Cust Rqsts	903	CM	600	OAH	NE	NPCZZZZZ	150	BUOC	BUOC	32	32	32	32	32	32	32	32	32	32	32	32	384
Maintain Meter Info	586	CM	603	OAH	NE	NPCZZZZZ	150	BUOC	BUOC	40	40	40	40	40	40	40	40	40	40	40	40	480
Maintain Cust Acct Info	903	CM	604	OAH	NE	NPCZZZZZ	150	BUOC	BUOC	40	40	40	40	40	40	40	40	40	40	40	40	480
Upload/Download to CIS	902	CM	610	OAH	NE	NPCZZZZZ	150	BUOC	BUOC	32	24	48	32	40	40	32	48	40	24	24	40	424
Upload/Download (OT)	902	CM	610	OAH	NE	NPCZZZZZ	150	BUOC	BUOC	8					8					8		24
Payroll Processing	902	CM	777	OAH	NE	NPCZZZZZ	150	BUOC	BUOC	8	8	8	8	8	8	8	8	8	8	8	8	96
		CM					150	BUOC	BUOC													0
		CM					150	BUOC	BUOC													0
		CM					150	BUOC	BUOC													0
		CM					150	BUOC	BUOC													0
		CM					150	BUOC	BUOC													0
							Total NonProj/Pgm Demand			176	160	184	168	176	184	168	184	176	168	184	176	2,104
							Total Supply			168	160	184	168	176	176	168	184	176	168	176	176	2,080
Holidays - 2/21, 3/25, 5/30, 6/10, 7/4, 8/19, 9/5, 10/10, 11/11, 11/24, 12/23 (1/2), 12/26, 12/30 (1/2)										0	8	8	0	8	8	8	8	8	8	16	16	96
Available hours per employee										168	160	184	168	176	176	168	184	176	168	176	176	2080

NOTE: Total NonProject Demand hours may *NOT* equal Total Supply hours due to Project Demand hours (which are budgeted in the Project file)

[redacted]

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General Information Requests

For each of the HECO witnesses who sponsor test period budgeted labor direct expense amounts, please provide the following information:

a. Identify each employee involved in preparation of budgeted staffing and associated labor direct expense amounts included in the witnesses' portion of the rate case test period budget.

b. Provide complete copies of all calculations, spreadsheet files, "pencil" work papers, surveys and other analyses performed by each of the employees identified in response to part (a), documenting all work done to determine required staffing levels and overtime hours by Department, RA, Activity and NARUC Account.

c. Describe the actual force level that existed at the date the budget was prepared or otherwise served as a base for purposes of preparing the budget level.

d. [redacted]

Dept	RA	Resp Area	NARUC	Act	EE	FY05	a	b	c	d	e	f	g
Engineering	PBZ	T&D Technical Svcs	588	730	150	$ 40,005	Marc Matsuura Kathy Koga	N/A	1,000 hrs budgetd which is equivalent to between 5%-10% of the Engineers' time. Division had 8 employees at time budget prepared.	Additional 2 employees added are to fill vacancies that existed at that time and not to meet present or anticipated work in this activity.	None	None	
Engineering	PBZ	T&D Technical Svcs	588	731	150	$ 18,811	Marc Matsuura Kathy Koga	N/A	480 hrs budgeted.	Additional 2 employees added are to fill vacancies that existed at that time and not to meet present or anticipated work in this activity.	None	None	
Engineering	PBZ	T&D Technical Svcs	588	730	201	$ 7,500	Marc Matsuura Kathy Koga	N/A	N/A	NA	NA	NA	NA

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General Information Requests

For each of the HECO witnesses who sponsor test period budgeted labor direct expense amounts, please provide the following information:

a. Identify each employee involved in preparation of budgeted staffing and associated labor direct expense amounts included in the witnesses' portion of the rate case test period budget.

b. Provide complete copies of all calculations, spreadsheet files, "pencil" workpapers, surveys and other analyses performed by each of the employees identified in response to part (a), documenting all work done to determine required staffing levels and overtime hours by Department, RA, Activity and NARUC Account.

c. Describe the actual force level that existed at the date the budget was prepared or otherwise served as a base for purposes of preparing the budget level.

[redacted]

d. For each budgeted employee position that is added to existing actual force levels (as the date the budget was prepared), **explain** the analyses undertaken to determine that each added position was necessary and should be filled in order to meet present or anticipated work requirements. Also, please explain how the anticipated work requirements were defined and determined.

e. Describe and, to the extent possible, quantify the backlog of work, unfinished projects, deferred maintenance and other labor requirements unfulfilled at present staffing levels, that will be satisfied by adding the employee positions identified in your response to part (d).

f. Provide complete copies of all studies, analyses, workpapers, projections, notes,

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n	FY05
00841 001 FUEL OIL M	746
00837 002 FUEL OIL LA	1,866
00838 001 FUEL OIL M	9,330
00836 001 FUEL OIL KA	3,732
00249 001 FUEL OIL HIL	9,330
00641 001 HELCO TSF	9,330
00408 MECO TSF OIL (E	3,732
00285 001 KEAHOLE W	5,598
00838 003 MAALAEA W	13,062
00836 003 KAHULUI WA	5,598
00286 000 PUNA WAST	5,598
00288 001 HILL WASTE	16,794
00289 001 SHIPMAN WA	3,732
00841 004 MOLOKAI OI	746
00837 005 LANAI OIL-RE	746
5915/001 MECO TSF C	11,196
00838 004 MAALAEA O	746
00295 001 HILL OIL-REL	746
00300 001 KEAHOLE NC	622
00838 005 MAALAEA N	5,598
00836 005 KAHULUI NC	1,866
00301 001 PUNA NON-C	1,866
00303 001 HILL NON-OI	3,732
00313 001 SHIPMAN NC	746
ILITY WATER (G00048	1,866
ILITY OIL-RELATED (G	746
	17,914
	28,612
EL OIL (G0000364)	3,732
EL OIL (G0000390)	14,617
July 02 - Fuel Oil QA/QC	746
EL OIL (G0000376)	14,617
INTAIN BOILER (G0002	933
INTAIN BOILER (G0002	3,732
AINTAIN BOILER (G000	3,732
SF SHOP (E0000756)	**8,982**

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Loc Entity	*RA #	*Act #	*Loc #	*Ind #	*Project #	*EE #	*Labor Class	Line item	FY05
HECO	**PJC**	**349**	**OAH**	**NE**	**NPJZZZZZ**	**150**	**J_CHEMST**	**HECO SS (E0000757)**	**10,030**
HECO	PJC	701	PHE	NE	NPJZZZZZ	150	J_CHEMST	DEV & MANAGE FORECASTS	1,866
HECO	PJC	720	PHE	NE	NPJZZZZZ	150	J_CHEMST	ORG DEV MEETINGS (G00015	746
HECO	PJC	745	PHE	NE	NPJZZZZZ	150	J_CHEMST	RELATIONS WITH REGULATO	622
HECO	PJC	749	PHE	NE	NPJZZZZZ	150	J_CHEMST	RELATIONS WITH INDUSTRY	622
HECO	PJC	750	PHE	NE	NPJZZZZZ	150	J_CHEMST	RELATIONS WITH CUSTOMEF	1,796
HECO	PJC	753	PHE	NE	NPJZZZZZ	150	J_CHEMST	COMMUNITY SERVICE	599
HECO	PJC	777	PHE	NE	NPJZZZZZ	150	J_CHEMST	PROCESS PAYROLL	1,493
HECO	PJC	785	PHE	NE	NPJZZZZZ	150	J_CHEMST	PERFORMANCE APPRAISALS	622
HECO	PJC	789	PHE	NE	NPJZZZZZ	150	J_CHEMST	ATTEND TRAINING (G0002898	4,416
HECO	PJC	797	PHE	NE	NPJZZZZZ	150	J_CHEMST	ATTEND SAFETY TRAINING	4,478
HECO	PJC	842	PHE	NE	NPJZZZZZ	150	J_CHEMST	ORDER MATERIALS	1,493
HECO	PJC	843	PHE	NE	NPJZZZZZ	150	J_CHEMST	PROCESS INVOICES	373
HECO	PJC	876	HST	NE	NPJZZZZZ	150	J_CHEMST	HST WASTEWATER (G000036	11,196
HECO	PJC	876	KST	NE	NPJZZZZZ	150	J_CHEMST	KST WASTEWATER (G000038	36,480
HECO	PJC	876	PHE	NE	NPJZZZZZ	150	J_CHEMST	MISCELLANEOUS & 09 HOURS	35,796
HECO	PJC	876	PHE	NE	NPJZZZZZ	150	J_CHEMST	Update July 02 - Wastewater QA	9,330
HECO	PJC	876	WST	NE	NPJZZZZZ	150	J_CHEMST	WST WASTEWATER (G000037	36,480
HECO	PJC	877	HST	NE	NPJZZZZZ	150	J_CHEMST	HST OIL-RELATED (G0000363)	1,866
HECO	PJC	877	KST	NE	NPJZZZZZ	150	J_CHEMST	KST OIL-RELATED (G0000386)	3,732
HECO	PJC	877	WST	NE	NPJZZZZZ	150	J_CHEMST	WST OIL-RELATED (G0000374	1,866
HECO	PJC	878	HST	NE	NPJZZZZZ	150	J_CHEMST	HST NON-OIL (G0000365)	746
HECO	PJC	878	KST	NE	NPJZZZZZ	150	J_CHEMST	KST NON-OIL (G0000392)	1,866
	PJC								385,805
HELCO	PJW	788	CNS	BE	NPJZZZZZ	150	J_WHMSCI	HGA - Conduct Training	808
MECO	PJW	788	MAL	BE	NPJZZZZZ	150	J_WHMSCI	M15316 006	673
MECO	PJW	788	MAM	BE	NPJZZZZZ	150	J_WHMSCI	M15317 005	673
MECO	PJW	788	MAU	BE	NPJZZZZZ	150	J_WHMSCI	MDE M15885 003	1,346
MECO	PJW	788	MPO	BE	NPJZZZZZ	150	J_WHMSCI	M15313 009 - Kahului	2,019
MECO	PJW	788	MPO	BE	NPJZZZZZ	150	J_WHMSCI	M15314 010 - Maalaea	2,019
HELCO	PJW	788	PST	BE	NPJZZZZZ	150	J_WHMSCI	HGA - Conduct Training	269
HELCO	PJW	788	RST	BE	NPJZZZZZ	150	J_WHMSCI	HGA H18840 001	1,211
HELCO	PJW	788	SST	BE	NPJZZZZZ	150	J_WHMSCI	HGA H18840 004	2,019
HELCO	PJW	866	CNS	BE	NPJZZZZZ	150	J_WHMSCI	HGA H18843 005	673
MECO	PJW	866	MNS	BE	NPJZZZZZ	150	J_WHMSCI	MGM M15314 004	4,038

RA #	*Act #	*Loc #	*Ind #	*Project #	*EE #	*Labor Class	Line item	FY05
JW	866	NST	BE	NPJZZZZZ	150	J_WHMSCI	MGK 15313 003	4,038
JW	866	RST	BE	NPJZZZZZ	150	J_WHMSCI	HGA H18843 002	2,692
JW	866	SST	BE	NPJZZZZZ	150	J_WHMSCI	HGA H18843 001	4,038
JW	876	BNS	BE	NPJZZZZZ	150	J_WHMSCI	HGA H18945 005	673
JW	876	CNS	BE	NPJZZZZZ	150	J_AIRSPE	HGA H13745 006	3,190
JW	876	CNS	BE	NPJZZZZZ	150	J_WHMSCI	HGA H18945 006	2,423
JW	876	CNS	BE	NPJZZZZZ	150	J_WHMSCI	HGA H18945 006	5,048
JW	876	HEL	BE	NPJZZZZZ	150	J_WHMSCI	HDE H18792 004	673
JW	876	MAU	BE	NPJZZZZZ	150	J_WHMSCI	MDE M15885 004	673
JW	876	MNS	BE	NPJZZZZZ	150	J_AIRSPE	MGM M19147 005	3,828
JW	876	MNS	BE	NPJZZZZZ	150	J_WHMSCI	MGM M15314 006	4,105
JW	876	MNS	BE	NPJZZZZZ	150	J_WHMSCI	MGM M15314 006	2,423
JW	876	NST	BE	NPJZZZZZ	150	J_AIRSPE	MGK M19146 005	6,379
JW	876	NST	BE	NPJZZZZZ	150	J_WHMSCI	MGK M15313 005	8,884
JW	876	NST	BE	NPJZZZZZ	150	J_WHMSCI	MGK M15313 005	2,591
JW	876	PST	BE	NPJZZZZZ	150	J_AIRSPE	HGA H13745 003	1,697
JW	876	PST	BE	NPJZZZZZ	150	J_WHMSCI	HGA H18945 003	673
JW	876	PST	BE	NPJZZZZZ	150	J_WHMSCI	HGA H18945 003	808
JW	876	RST	BE	NPJZZZZZ	150	J_AIRSPE	HGA H13745 002	4,253
JW	876	RST	BE	NPJZZZZZ	150	J_WHMSCI	HGA H18845 002	2,692
JW	876	RST	BE	NPJZZZZZ	150	J_WHMSCI	HGA H18845 002	2,019
JW	876	SST	BE	NPJZZZZZ	150	J_AIRSPE	HGA H13745 001	4,253
JW	876	SST	BE	NPJZZZZZ	150	J_WHMSCI	HGA H18945 001	4,846
JW	876	SST	BE	NPJZZZZZ	150	J_WHMSCI	HGA H18945 001	4,038
JW	877	BNS	BE	NPJZZZZZ	150	J_WHMSCI	HGA H18844 005	404
JW	877	CNS	BE	NPJZZZZZ	150	J_WHMSCI	HGA H18844 006	3,634
JW	877	GNS	BE	NPJZZZZZ	150	J_WHMSCI	MGT M15317 003	673
JW	877	HEL	BE	NPJZZZZZ	150	J_WHMSCI	HGA H18794 003	10,095
JW	877	LNS	BE	NPJZZZZZ	150	J_WHMSCI	MGL M15316 004	337
JW	877	MAU	BE	NPJZZZZZ	150	J_WHMSCI	MDE M15885 001	10,095
JW	877	MNS	BE	NPJZZZZZ	150	J_WHMSCI	MGM M15314 007	7,672
JW	877	NST	BE	NPJZZZZZ	150	J_WHMSCI	MGK M15313 006	2,961
JW	877	PST	BE	NPJZZZZZ	150	J_WHMSCI	HGA H18844 003	1,615
JW	877	RST	BE	NPJZZZZZ	150	J_WHMSCI	HGA H18844 002	1,615
JW	877	SST	BE	NPJZZZZZ	150	J_WHMSCI	HGA H18844 001	2,019
JW	878	ANS	BE	NPJZZZZZ	150	J_WHMSCI	HGA H18847 004	269

Loc Entity	*RA #	*Act #	*Loc #	*Ind #	*Project #	*EE #	*Labor Class	Line item	FY05	
HELCO	PJW	878	BNS	BE	NPJZZZZZ	150	J_WHMSCI	HGA H18847 005	269	
HELCO	PJW	878	CNS	BE	NPJZZZZZ	150	J_WHMSCI	HGA H18847 006	808	
MECO	PJW	878	GNS	BE	NPJZZZZZ	150	J_WHMSCI	MGT M15317 004	673	
HELCO	PJW	878	HEL	BE	NPJZZZZZ	150	J_WHMSCI	HDE H18794 004	10,095	
MECO	PJW	878	LNS	BE	NPJZZZZZ	150	J_WHMSCI	MGL M15316 005	673	
MECO	PJW	878	MAU	BE	NPJZZZZZ	150	J_WHMSCI	MDE M15885 002	10,095	
MECO	PJW	878	MNS	BE	NPJZZZZZ	150	J_WHMSCI	MGM M15314 008	4,846	
MECO	PJW	878	NST	BE	NPJZZZZZ	150	J_WHMSCI	MGK M15313 007	3,702	
HELCO	PJW	878	P01	BE	NPJZZZZZ	150	J_WHMSCI	HGA H8847 007	269	
HELCO	PJW	878	PST	BE	NPJZZZZZ	150	J_WHMSCI	HGA H18847 003	538	
HELCO	PJW	878	RST	BE	NPJZZZZZ	150	J_WHMSCI	HGA H18847 002	1,817	
HELCO	PJW	878	SST	BE	NPJZZZZZ	150	J_WHMSCI	HGA H18847 001	1,346	
HECO	PJW	98	PHE	ND	NPJZZZZZ	107	J_AIRSPE	Holidays	2,552	
HECO	PJW	98	PHE	ND	NPJZZZZZ	107	J_AIRSPE	Vacation	1,063	
HECO	PJW	98	PHE	ND	NPJZZZZZ	107	J_WHMSCI	Holidays	19,382	
HECO	PJW	98	PHE	ND	NPJZZZZZ	107	J_WHMSCI	New Body - Holidays	4,038	
HECO	PJW	98	PHE	ND	NPJZZZZZ	107	J_WHMSCI	New Body - Vacation	2,692	
HECO	PJW	98	PHE	ND	NPJZZZZZ	107	J_WHMSCI	Vacation	21,536	
HECO	PJW	701	PHE	NE	NPJZZZZZ	150	J_WHMSCI	Dev & Manage Forecasts	4,038	
HECO	PJW	720	PHE	NE	NPJZZZZZ	150	J_WHMSCI	ECC-EDF	3,365	
HECO	PJW	720	PHE	NE	NPJZZZZZ	150	J_WHMSCI	ECC-PS	4,846	
HECO	PJW	720	PHE	NE	NPJZZZZZ	150	J_WHMSCI	Impr Bus Process - G0001519	4,038	
HECO	PJW	787	HST	NE	NPJZZZZZ	150	J_WHMSCI	Develop Training-Honolulu	337	
HECO	PJW	787	KST	NE	NPJZZZZZ	150	J_WHMSCI	Develop Training-Kahe	337	
HECO	**PJW**	**787**	**PDO**	**NE**	**NPJZZZZZ**	**150**	**J_WHMSCI**	**Develop Training-C&M**	**323**	←
HECO	PJW	787	PHE	NE	NPJZZZZZ	150	J_WHMSCI	Develop Training-Safety/Facilitie	337	
HECO	**PJW**	**787**	**PTO**	**NE**	**NPJZZZZZ**	**150**	**J_WHMSCI**	**Develop Training-Substation**	**323**	←
HECO	PJW	787	WRD	NE	NPJZZZZZ	150	J_WHMSCI	Develop Training-Support Svcs	337	
HECO	PJW	787	WST	NE	NPJZZZZZ	150	J_WHMSCI	Develop Training-Waiau	337	
HECO	PJW	788	HST	NE	NPJZZZZZ	150	J_WHMSCI	Conduct Training-Honolulu	505	
HECO	PJW	788	KST	NE	NPJZZZZZ	150	J_WHMSCI	Conduct Training-Kahe	1,010	
HECO	**PJW**	**788**	**PDO**	**NE**	**NPJZZZZZ**	**150**	**J_WHMSCI**	**Conduct Training-C&M**	**2,593**	←
HECO	PJW	788	PHE	NE	NPJZZZZZ	150	J_WHMSCI	Conduct Training-Safety/Facilitie	337	
HECO	**PJW**	**788**	**PTO**	**NE**	**NPJZZZZZ**	**150**	**J_WHMSCI**	**Conduct Training-Substation**	**972**	←
HECO	PJW	788	WRD	NE	NPJZZZZZ	150	J_WHMSCI	Conduct Training-Support Svcs	337	
HECO	PJW	788	WST	NE	NPJZZZZZ	150	J_WHMSCI	Conduct Training-Waiau	1,010	

Loc Entity	*RA #	*Act #	*Loc #	*Ind #	*Project #	*EE #	*Labor Class	Line item	FY05
HECO	PJW	789	PHE	NE	NPJZZZZZ	150	J_AIRSPE	Attend Training (excludes Safety	1,276
HECO	PJW	789	PHE	NE	NPJZZZZZ	150	J_WHMSCI	Attend Training (excludes Safety	4,038
HECO	PJW	797	PHE	NE	NPJZZZZZ	150	J_AIRSPE	Attend Safety Training	53
HECO	PJW	797	PHE	NE	NPJZZZZZ	150	J_WHMSCI	Attend Safety Training	404
HECO	PJW	866	HST	NE	NPJZZZZZ	150	J_WHMSCI	Permitting, Water - Hon G00005	4,038
HECO	PJW	866	KST	NE	NPJZZZZZ	150	J_WHMSCI	Permitting, Water - Kahe G0000	4,038
HECO	PJW	866	WST	NE	NPJZZZZZ	150	J_WHMSCI	Permitting, Water - Waiau G000	4,038
HECO	PJW	876	HST	NE	NPJZZZZZ	150	J_AIRSPE	Water Monitoring - Hon G00005	6,911
HECO	PJW	876	HST	NE	NPJZZZZZ	150	J_WHMSCI	Compliance, water - Hon G0000	4,038
HECO	PJW	876	HST	NE	NPJZZZZZ	150	J_WHMSCI	Water Monitoring - Hon G00005	3,096
HECO	PJW	876	KST	NE	NPJZZZZZ	150	J_AIRSPE	Water Monitoring - Kahe G0000	6,911
HECO	PJW	876	KST	NE	NPJZZZZZ	150	J_WHMSCI	Compliance, water - Kahe G000	5,384
HECO	PJW	876	KST	NE	NPJZZZZZ	150	J_WHMSCI	Water Monitoring - Kahe G0000	3,096
HECO	**PJW**	**876**	**PDM**	**NE**	**NPJZZZZZ**	**150**	**J_WHMSCI**	**Compliance, water - Distributi**	**777**
HECO	**PJW**	**876**	**PDO**	**NE**	**NPJZZZZZ**	**150**	**J_WHMSCI**	**Compliance, water - Distributi**	**777**
HECO	PJW	876	PHE	NE	NPJZZZZZ	150	J_AIRSPE	Water Monitoring - Other	4,253
HECO	**PJW**	**876**	**PTM**	**NE**	**NPJZZZZZ**	**150**	**J_WHMSCI**	**Compliance, water - Transmis**	**777**
HECO	**PJW**	**876**	**PTO**	**NE**	**NPJZZZZZ**	**150**	**J_WHMSCI**	**Compliance, water - Transmis**	**777**
HECO	PJW	876	WST	NE	NPJZZZZZ	150	J_AIRSPE	Water Monitoring - Waiau G000	8,771
HECO	PJW	876	WST	NE	NPJZZZZZ	150	J_WHMSCI	Compliance, water - Waiau G00	6,057
HECO	PJW	876	WST	NE	NPJZZZZZ	150	J_WHMSCI	Water Monitoring - Waiau G000	3,230
HECO	PJW	877	BPT	NE	NPJZZZZZ	150	J_WHMSCI	Compliance, oil - Barbers Point T	1,010
HECO	PJW	877	BPT	NE	NPJZZZZZ	150	J_WHMSCI	New Body Compliance, oil - BTF	1,683
HECO	PJW	877	HST	NE	NPJZZZZZ	150	J_WHMSCI	Compliance, oil - Hon G0000507	6,730
HECO	PJW	877	HST	NE	NPJZZZZZ	150	J_WHMSCI	Honolulu Harbor Tech Working (	15,143
HECO	PJW	877	ITF	NE	NPJZZZZZ	150	J_WHMSCI	Compliance, oil - Iwilei Tank Far	1,010
HECO	PJW	877	ITF	NE	NPJZZZZZ	150	J_WHMSCI	New Body Compliance, oil - Iwile	1,683
HECO	PJW	877	KST	NE	NPJZZZZZ	150	J_WHMSCI	Compliance, oil - KST G0000517	8,076
HECO	PJW	877	KST	NE	NPJZZZZZ	150	J_WHMSCI	New Body Compliance, oil - KST	9,254
HECO	**PJW**	**877**	**PDM**	**NE**	**NPJZZZZZ**	**150**	**J_WHMSCI**	**Compliance, oil - Distribution**	**4,200**
HECO	**PJW**	**877**	**PDM**	**NE**	**NPJZZZZZ**	**150**	**J_WHMSCI**	**New Body Compliance, oil - Di**	**2,019**
HECO	**PJW**	**877**	**PDO**	**NE**	**NPJZZZZZ**	**150**	**J_WHMSCI**	**Compliance, oil - Distribution**	**5,432**
HECO	**PJW**	**877**	**PDO**	**NE**	**NPJZZZZZ**	**150**	**J_WHMSCI**	**New Body Compliance, oil - Di**	**2,019**
HECO	**PJW**	**877**	**PTM**	**NE**	**NPJZZZZZ**	**150**	**J_WHMSCI**	**Compliance, oil - Transmissio**	**5,432**
HECO	**PJW**	**877**	**PTM**	**NE**	**NPJZZZZZ**	**150**	**J_WHMSCI**	**New Body Compliance, oil - Tr**	**2,019**
HECO	**PJW**	**877**	**PTO**	**NE**	**NPJZZZZZ**	**150**	**J_WHMSCI**	**Compliance, oil - Transmissio**	**5,508**

$6,219

$7,451

$7,451

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Loc Entity	*RA #	*Act #	*Loc #	*Ind #	*Project #	*EE #	*Labor Class	Line item	FY05
HECO	PJW	877	WST	NE	NPJZZZZZ	150	J_WHMSCI	Compliance, oil - WST G000052	8,076
HECO	PJW	877	WST	NE	NPJZZZZZ	150	J_WHMSCI	New Body Compliance, oil - WS	9,254
HECO	PJW	878	HST	NE	NPJZZZZZ	150	J_WHMSCI	Compliance, non-oil - Hon G000	6,730
HECO	PJW	878	HST	NE	NPJZZZZZ	150	J_WHMSCI	New Body Compliance, non-oil -	4,038
HECO	PJW	878	KST	NE	NPJZZZZZ	150	J_WHMSCI	Compliance, non-oil - Kahe G00	6,730
HECO	PJW	878	KST	NE	NPJZZZZZ	150	J_WHMSCI	New Body Compliance, non-oil -	5,048
HECO	**PJW**	**878**	**PDM**	**NE**	**NPJZZZZZ**	**150**	**J_WHMSCI**	**Compliance, non-oil - Distribu**	**3,787**
HECO	**PJW**	**878**	**PDM**	**NE**	**NPJZZZZZ**	**150**	**J_WHMSCI**	**New Body Compliance, non-oi**	**2,692**
HECO	**PJW**	**878**	**PDO**	**NE**	**NPJZZZZZ**	**150**	**J_WHMSCI**	**Compliance, non-oil - Distribu**	**3,787**
HECO	**PJW**	**878**	**PDO**	**NE**	**NPJZZZZZ**	**150**	**J_WHMSCI**	**New Body Compliance, non-oi**	**2,692**
HECO	PJW	878	PHE	NE	NPJZZZZZ	150	J_WHMSCI	Compliance, non-oil	4,038
HECO	**PJW**	**878**	**PTM**	**NE**	**NPJZZZZZ**	**150**	**J_WHMSCI**	**Compliance, non-oil - Transmi**	**3,780**
HECO	**PJW**	**878**	**PTM**	**NE**	**NPJZZZZZ**	**150**	**J_WHMSCI**	**New Body Compliance, non-oi**	**2,894**
HECO	**PJW**	**878**	**PTO**	**NE**	**NPJZZZZZ**	**150**	**J_WHMSCI**	**New Body Compliance, non-oi**	**2,787**
HECO	PJW	878	WST	NE	NPJZZZZZ	150	J_WHMSCI	Compliance, non-oil - WST G00	6,730
HECO	PJW	878	WST	NE	NPJZZZZZ	150	J_WHMSCI	New Body Compliance, non-oil -	5,048
HECO	PJW	885	PHE	NE	NPJZZZZZ	150	J_WHMSCI	Participate in Envir Rule/Reg Ma	3,230
	PJW								471,137

$6,479

$6,479

$6,674

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Labor Hours (For CA-IR-1)

_RA	_LbrClass	_Proj	_Act	_Loc	Project	Line item	FY05	
PJC	J_CHEMST	*Supply	*Supply	*Supply	Labor Supp	Labor Supp	12,480	
PJC	J_CHEMST	NPJZZZZZ	98	PHE	Environme	Holiday	-576	
PJC	J_CHEMST	NPJZZZZZ	98	PHE	Environme	Vacation	-920	
PJC	J_CHEMST	NPJZZZZZ	241	GNS	Environme	MGT M008	-24	
PJC	J_CHEMST	NPJZZZZZ	241	HST	Environme	HST FUEL	-120	
PJC	J_CHEMST	NPJZZZZZ	241	KST	Environme	KST FUEL	-470	
PJC	J_CHEMST	NPJZZZZZ	241	KST	Environme	Update Jul	-24	
PJC	J_CHEMST	NPJZZZZZ	241	LNS	Environme	MGL M008	-60	
PJC	J_CHEMST	NPJZZZZZ	241	MNS	Environme	MGM M008	-300	
PJC	J_CHEMST	NPJZZZZZ	241	NST	Environme	MGK M008	-120	
PJC	J_CHEMST	NPJZZZZZ	241	RST	Environme	HGA H002	-300	
PJC	J_CHEMST	NPJZZZZZ	241	WST	Environme	WST FUEL	-470	
PJC	J_CHEMST	NPJZZZZZ	245	HST	Environme	HST MAIN	-30	
PJC	J_CHEMST	NPJZZZZZ	245	KST	Environme	KST MAIN	-120	
PJC	J_CHEMST	NPJZZZZZ	245	WST	Environme	WST MAIN	-120	
PJC	**J_CHEMST**	**NPJZZZZZ**	**344**	**OAH**	**Environme**	**HECO TSF**	**-300**	←
PJC	J_CHEMST	NPJZZZZZ	349	HAH	Environme	HDC H006	-300	
PJC	J_CHEMST	NPJZZZZZ	349	MAU	Environme	MDE M004	-120	
PJC	**J_CHEMST**	**NPJZZZZZ**	**349**	**OAH**	**Environme**	**HECO SS**	**-335**	←
PJC	J_CHEMST	NPJZZZZZ	701	PHE	Environme	DEV & MA	-60	
PJC	J_CHEMST	NPJZZZZZ	720	PHE	Environme	ORG DEV	-24	
PJC	J_CHEMST	NPJZZZZZ	745	PHE	Environme	RELATION	-20	
PJC	J_CHEMST	NPJZZZZZ	749	PHE	Environme	RELATION	-20	
PJC	J_CHEMST	NPJZZZZZ	750	PHE	Environme	RELATION	-60	
PJC	J_CHEMST	NPJZZZZZ	753	PHE	Environme	COMMUNI	-20	
PJC	J_CHEMST	NPJZZZZZ	777	PHE	Environme	PROCESS	-48	
PJC	J_CHEMST	NPJZZZZZ	785	PHE	Environme	PERFORM	-20	
PJC	J_CHEMST	NPJZZZZZ	789	PHE	Environme	ATTEND T	-142	
PJC	J_CHEMST	NPJZZZZZ	797	PHE	Environme	ATTEND S	-144	
PJC	J_CHEMST	NPJZZZZZ	842	PHE	Environme	ORDER M	-48	
PJC	J_CHEMST	NPJZZZZZ	843	PHE	Environme	PROCESS	-12	
PJC	J_CHEMST	NPJZZZZZ	876	CNS	Environme	HGA H002	-180	
PJC	J_CHEMST	NPJZZZZZ	876	HST	Environme	HST WAST	-360	
PJC	J_CHEMST	NPJZZZZZ	876	KST	Environme	KST WAST	-1,173	
PJC	J_CHEMST	NPJZZZZZ	876	MNS	Environme	MGM M008	-420	
PJC	J_CHEMST	NPJZZZZZ	876	NST	Environme	MGK M008	-180	
PJC	J_CHEMST	NPJZZZZZ	876	OUT	Environme	NON-UTIL	-60	
PJC	J_CHEMST	NPJZZZZZ	876	PHE	Environme	MISCELLA	-1,151	
PJC	J_CHEMST	NPJZZZZZ	876	PHE	Environme	Update Jul	200	

_RA	_LbrClass	_Proj	_Act	_Loc	Project	Line item	FY05	
PJC	J_CHEMST	NPJZZZZZ	877	WST	Environme	WST OIL-F	-60	
PJC	J_CHEMST	NPJZZZZZ	878	CNS	Environme	HGA H003	-20	
PJC	J_CHEMST	NPJZZZZZ	878	HST	Environme	HST NON-	-24	
PJC	J_CHEMST	NPJZZZZZ	878	KST	Environme	KST NON-	-60	
PJC	J_CHEMST	NPJZZZZZ	878	MNS	Environme	MGM M00	-180	
PJC	J_CHEMST	NPJZZZZZ	878	NST	Environme	MGK M00	-60	
PJC	J_CHEMST	NPJZZZZZ	878	PST	Environme	HGA H003	-60	
PJC	J_CHEMST	NPJZZZZZ	878	RST	Environme	HGA H003	-120	
PJC	J_CHEMST	NPJZZZZZ	878	SST	Environme	HGA H003	-24	
PJC	J_CHEMST						48	
PJC							48	
PJW	J_AIRSPE	*Supply	*Supply	*Supply	Labor Supply		2,080	
PJW	J_AIRSPE	NPJZZZZZ	98	PHE	Environme	Holidays	-96	
PJW	J_AIRSPE	NPJZZZZZ	98	PHE	Environme	Vacation	-36	
PJW	J_AIRSPE	NPJZZZZZ	789	PHE	Environme	Attend Trai	-48	
PJW	J_AIRSPE	NPJZZZZZ	797	PHE	Environme	Attend Safe	-2	
PJW	J_AIRSPE	NPJZZZZZ	876	CNS	Environme	HGA H137	-120	
PJW	J_AIRSPE	NPJZZZZZ	876	HST	Environme	Water Mon	-264	
PJW	J_AIRSPE	NPJZZZZZ	876	KST	Environme	Water Mon	-264	
PJW	J_AIRSPE	NPJZZZZZ	876	MNS	Environme	MGM M19	-144	
PJW	J_AIRSPE	NPJZZZZZ	876	NST	Environme	MGK M191	-240	
PJW	J_AIRSPE	NPJZZZZZ	876	PHE	Environme	Water Mon	-156	
PJW	J_AIRSPE	NPJZZZZZ	876	PST	Environme	HGA H137	-62	
PJW	J_AIRSPE	NPJZZZZZ	876	RST	Environme	HGA H137	-156	
PJW	J_AIRSPE	NPJZZZZZ	876	SST	Environme	HGA H137	-156	
PJW	J_AIRSPE	NPJZZZZZ	876	WST	Environme	Water Mon	-336	
PJW	J_AIRSPE						0	
PJW	J_WHMSCI	*Supply	*Supply	*Supply	Labor Supply		12,480	
PJW	J_WHMSCI	NPJZZZZZ	98	PHE	Environme	Holidays	-576	
PJW	J_WHMSCI	NPJZZZZZ	98	PHE	Environme	Vacation	-636	
PJW	J_WHMSCI	NPJZZZZZ	98	PHE	Environme	New Body	-120	
PJW	J_WHMSCI	NPJZZZZZ	98	PHE	Environme	New Body	-80	
PJW	J_WHMSCI	NPJZZZZZ	701	PHE	Environme	Dev & Man	-120	
PJW	J_WHMSCI	NPJZZZZZ	720	PHE	Environme	Impr Bus P	-120	
PJW	J_WHMSCI	NPJZZZZZ	720	PHE	Environme	ECC-PS	-144	
PJW	J_WHMSCI	NPJZZZZZ	720	PHE	Environme	ECC-EDF	-96	
PJW	J_WHMSCI	NPJZZZZZ	787	HST	Environme	Develop Tr	-12	
PJW	J_WHMSCI	NPJZZZZZ	787	KST	Environme	Develop Tr	-12	
→ **PJW**	**J_WHMSCI**	**NPJZZZZZ**	**787**	**PDO**	**Environme**	**Develop T**	**-12**	Due to rounding (9.96)
PJW	J_WHMSCI	NPJZZZZZ	787	PHE	Environme	Develop Tr	-12	
→ **PJW**	**J_WHMSCI**	**NPJZZZZZ**	**787**	**PTO**	**Environme**	**Develop T**	**-12**	Due to rounding (9.96)
PJW	J_WHMSCI	NPJZZZZZ	787	WRD	Environme	Develop Tr	-12	
PJW	J_WHMSCI	NPJZZZZZ	787	WST	Environme	Develop Tr	-12	
PJW	J_WHMSCI	NPJZZZZZ	788	CNS	Environme	HGA - Con	-24	
PJW	J_WHMSCI	NPJZZZZZ	788	HST	Environme	Conduct Tr	-12	
PJW	J_WHMSCI	NPJZZZZZ	788	KST	Environme	Conduct Tr	-36	
PJW	J_WHMSCI	NPJZZZZZ	788	MAL	Environme	M15316 00	-24	
PJW	J_WHMSCI	NPJZZZZZ	788	MAM	Environme	M15317 00	-24	
PJW	J_WHMSCI	NPJZZZZZ	788	MAU	Environme	MDE M158	-36	

_RA	_LbrClass	_Proj	_Act	_Loc	Project	Line item	FY05
PJW	J_WHMSCI	NPJZZZZZ	788	MPO	Environme	M11290 0C	-60
PJW	J_WHMSCI	NPJZZZZZ	788	MPO	Environme	M15313 0C	-60
PJW	J_WHMSCI	NPJZZZZZ	788	MPO	Environme	M15314 01	-60
PJW	**J_WHMSCI**	**NPJZZZZZ**	**788**	**PDO**	**Environme**	**Conduct T**	**-84**
PJW	J_WHMSCI	NPJZZZZZ	788	PHE	Environme	Conduct Tr	-12
PJW	J_WHMSCI	NPJZZZZZ	788	PST	Environme	HGA - Con	-12
PJW	**J_WHMSCI**	**NPJZZZZZ**	**788**	**PTO**	**Environme**	**Conduct T**	**-36**
PJW	J_WHMSCI	NPJZZZZZ	788	RST	Environme	HGA H188	-36
PJW	J_WHMSCI	NPJZZZZZ	788	SST	Environme	HGA H188	-60
PJW	J_WHMSCI	NPJZZZZZ	788	WRD	Environme	Conduct Tr	-12
PJW	J_WHMSCI	NPJZZZZZ	788	WST	Environme	Conduct Tr	-36
PJW	J_WHMSCI	NPJZZZZZ	789	PHE	Environme	Attend Trai	-120
PJW	J_WHMSCI	NPJZZZZZ	797	PHE	Environme	Attend Safe	-12
PJW	J_WHMSCI	NPJZZZZZ	866	CNS	Environme	HGA H188	-24
PJW	J_WHMSCI	NPJZZZZZ	866	HST	Environme	Permitting,	-120
PJW	J_WHMSCI	NPJZZZZZ	866	KST	Environme	Permitting,	-120
PJW	J_WHMSCI	NPJZZZZZ	866	MNS	Environme	MGM M15	-120
PJW	J_WHMSCI	NPJZZZZZ	866	NST	Environme	MGK 1531	-120
PJW	J_WHMSCI	NPJZZZZZ	866	RST	Environme	HGA H188	-84
PJW	J_WHMSCI	NPJZZZZZ	866	SST	Environme	HGA H188	-120
PJW	J_WHMSCI	NPJZZZZZ	866	WST	Environme	Permitting,	-120
PJW	J_WHMSCI	NPJZZZZZ	876	BNS	Environme	HGA H189	-24
PJW	J_WHMSCI	NPJZZZZZ	876	CNS	Environme	HGA H189	-72
PJW	J_WHMSCI	NPJZZZZZ	876	CNS	Environme	HGA H189	-156
PJW	J_WHMSCI	NPJZZZZZ	876	HEL	Environme	HDE H187	-24
PJW	J_WHMSCI	NPJZZZZZ	876	HST	Environme	Compliance	-120
PJW	J_WHMSCI	NPJZZZZZ	876	HST	Environme	Water Mon	-96
PJW	J_WHMSCI	NPJZZZZZ	876	KST	Environme	Compliance	-156
PJW	J_WHMSCI	NPJZZZZZ	876	KST	Environme	Water Mon	-96
PJW	J_WHMSCI	NPJZZZZZ	876	MAU	Environme	MDE M158	-24
PJW	J_WHMSCI	NPJZZZZZ	876	MNS	Environme	MGM M153	-120
PJW	J_WHMSCI	NPJZZZZZ	876	MNS	Environme	MGM M153	-72
PJW	J_WHMSCI	NPJZZZZZ	876	NST	Environme	MGK M153	-264
PJW	J_WHMSCI	NPJZZZZZ	876	NST	Environme	MGK M153	-72
PJW	**J_WHMSCI**	**NPJZZZZZ**	**876**	**PDM**	**Environme**	**Compliance**	**-24**
PJW	**J_WHMSCI**	**NPJZZZZZ**	**876**	**PDO**	**Environme**	**Compliance**	**-24**
PJW	J_WHMSCI	NPJZZZZZ	876	PST	Environme	HGA H189	-24
PJW	J_WHMSCI	NPJZZZZZ	876	PST	Environme	HGA H189	-24
PJW	**J_WHMSCI**	**NPJZZZZZ**	**876**	**PTM**	**Environme**	**Compliance**	**-24**
PJW	**J_WHMSCI**	**NPJZZZZZ**	**876**	**PTO**	**Environme**	**Compliance**	**-24**
PJW	J_WHMSCI	NPJZZZZZ	876	RST	Environme	HGA H188	-84
PJW	J_WHMSCI	NPJZZZZZ	876	RST	Environme	HGA H188	-60
PJW	J_WHMSCI	NPJZZZZZ	876	SST	Environme	HGA H189	-144
PJW	J_WHMSCI	NPJZZZZZ	876	SST	Environme	HGA H189	-120
PJW	J_WHMSCI	NPJZZZZZ	876	WST	Environme	Compliance	-180
PJW	J_WHMSCI	NPJZZZZZ	876	WST	Environme	Water Mon	-96
PJW	J_WHMSCI	NPJZZZZZ	877	BNS	Environme	HGA H188	-12
PJW	J_WHMSCI	NPJZZZZZ	877	BPT	Environme	Compliance	-36
PJW	J_WHMSCI	NPJZZZZZ	877	BPT	Environme	New Body	-48
PJW	J_WHMSCI	NPJZZZZZ	877	CNS	Environme	HGA H188	-108
PJW	J_WHMSCI	NPJZZZZZ	877	GNS	Environme	MGT M153	-24

Due to rounding (80.04)

Due to rounding (30.0)

_RA	_LbrClass	_Proj	_Act	_Loc	Project	Line item	FY05
PJW	J_WHMSCI	NPJZZZZZ	877	HST	Environme	Compliance	-204
PJW	J_WHMSCI	NPJZZZZZ	877	HST	Environme	Honolulu H	-456
PJW	J_WHMSCI	NPJZZZZZ	877	ITF	Environme	Compliance	-36
PJW	J_WHMSCI	NPJZZZZZ	877	ITF	Environme	New Body	-48
PJW	J_WHMSCI	NPJZZZZZ	877	KST	Environme	Compliance	-240
PJW	J_WHMSCI	NPJZZZZZ	877	KST	Environme	New Body	-276
PJW	J_WHMSCI	NPJZZZZZ	877	LNS	Environme	MGL M153	-12
PJW	J_WHMSCI	NPJZZZZZ	877	MAU	Environme	MDE M158	-300
PJW	J_WHMSCI	NPJZZZZZ	877	MNS	Environme	MGM M153	-228
PJW	J_WHMSCI	NPJZZZZZ	877	NST	Environme	MGK M153	-84
PJW	**J_WHMSCI**	**NPJZZZZZ**	**877**	**PDM**	**Environme**	**Compliance**	**-132**
PJW	**J_WHMSCI**	**NPJZZZZZ**	**877**	**PDM**	**Environme**	**New Body**	**-60**
PJW	**J_WHMSCI**	**NPJZZZZZ**	**877**	**PDO**	**Environme**	**Compliance**	**-168**
PJW	**J_WHMSCI**	**NPJZZZZZ**	**877**	**PDO**	**Environme**	**New Body**	**-60**
PJW	J_WHMSCI	NPJZZZZZ	877	PST	Environme	HGA H188	-48
PJW	**J_WHMSCI**	**NPJZZZZZ**	**877**	**PTM**	**Environme**	**Compliance**	**-168**
PJW	**J_WHMSCI**	**NPJZZZZZ**	**877**	**PTM**	**Environme**	**New Body**	**-60**
PJW	**J_WHMSCI**	**NPJZZZZZ**	**877**	**PTO**	**Environme**	**Compliance**	**-168**
PJW	J_WHMSCI	NPJZZZZZ	877	RST	Environme	HGA H188	-48
PJW	J_WHMSCI	NPJZZZZZ	877	SST	Environme	HGA H188	-60
PJW	J_WHMSCI	NPJZZZZZ	877	WST	Environme	Compliance	-240
PJW	J_WHMSCI	NPJZZZZZ	877	WST	Environme	New Body	-276

} 192

} 228 Due to rounding (230.04)

} 228 Due to rounding (230.04
Due to rounding (170.04)

_RA	_LbrClass	_Proj	_Act	_Loc	Project	Line item	FY05
PJW	J_WHMSCI	P0000007	111	OAH	DOD Priva	Environme	-48
PJW	J_WHMSCI	P0000007	111	OAH	DOD Priva	Environme	-25
PJW	J_WHMSCI	P0000007	111	PHE	DOD Priva	Environme	-33
PJW	J_WHMSCI	P0000277	877	PHE	New Kuahu	Environme	-54
PJW	J_WHMSCI	P0000897	210	PCG	HECO CHI	CHP Progr	-170
PJW	J_WHMSCI	P9631000	866	M18	MECO Ma	MGA Wate	-112
PJW	J_WHMSCI						-289
PJW							-289

General Information Requests

For each of the HECO witnesses who sponsor test period budgeted labor direct expense amounts, please provide the following information:

a. Identify each employee involved in preparation of budgeted staffing and associated labor

Input Sheet - Non. . .oject/NonProgram

2005

Prepared by CKF
Date 4/16/2003

Rates tab car		Units tab card												
Class	Rates Link To	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
		(enter employee count in "Units tab card")												
(LRR)	Available Ho	1	1	1	1	1	1	1	1	1	1	1	1	12
		(enter hours in "Units tab card")												
(LRR)		0	8	8	0	8	8	8	8	8	8	16	16	96	4.6%
(LRR)				40						40			40	120	5.8%
(LRR)														0	0.0%
(LRR)														0	0.0%
(LRR)	AD000667	2	2	2	2	2	2	2	2	2	2	2	2	24	1.2%
(LRR)	AD000666	68	66	57	48	46	47	29	27	28	29	27	28	500	24.0%
(LRR)	AD000668	16	9	6	16	16	16	16	16	16	16	16	8	167	8.0%
(LRR)	AD000664	4	4	4	4	4	4	4	4	4	4	4	4	48	2.3%
(LRR)	AD000018	16	10	6	16	16	16	16	16	16	16	16	16	176	8.5%
(LRR)	AD000051	15	10	5	15									45	2.2%
(LRR)	AD000456	2	2	2	2	2	2	2	2	2	2	2	2	24	1.2%
(LRR)	AD000066	8	8	8	8	8	8	8	8	8	8	8	8	96	4.6%
(LRR)	AD000674	2	2	2	2	2	2	2	2	2	2	2	2	24	1.2%
(LRR)	AD000011	8	8	8	8	8	8	8	8	8	8	8	8	96	4.6%
(LRR)	AD000055	13	10	14	15	15	15	15	15	15	15	15	15	172	8.3%
(LRR)	AD000058	4	3	4	8	8	8	8	8	8	8	8	8	83	4.0%
(LRR)	AD000340	5	5	5	5	5	5	5	5	5	5	5	5	60	2.9%
(LRR)	AD000047	13	13	13	19	36	35	45	63	14	45	47	14	357	17.2%
(LRR)	EE000139	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
(LRR)														0	0.0%
														0	
														0	
Pgm Demand		176	160	184	168	176	176	168	184	176	168	176	176	2,088	100.4%
		168	160	184	168	176	176	168	184	176	168	176	176	2,080	
	LEGAL-GENER/	-8	0	0	0	0	0	0	0	0	0	0	0	-8	
26, 12/30 (1/2)		0	8	8	0	8	8	8	8	8	8	16	16	96	
		168	160	184	168	176	176	168	184	176	168	176	176	2080	

ıal Total Supply hours due to Project/Program Demand hours (which are budgeted in the Project model)

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12/29/20041:00 PM

General Information Requests

For each of the HECO witnesses who sponsor test period budgeted labor direct expense amounts

[redacted]

please provide the following information:

a. Identify each employee involved in preparation of budgeted staffing and associated labor direct expense amounts included in the witnesses' portion of the rate case test period budget.

b. Provide complete copies of all calculations, spreadsheet files, "pencil" workpapers, surveys and other analyses performed by each of the employees identified in response to part (a), documenting all work done to determine required staffing levels and overtime hours by Department, RA, Activity and NARUC Account.

c. Describe the actual force level that existed at the date the budget was prepared or otherwise served as a base for purposes of preparing the budget level.

2004-2005
Forecasted Labor Hours
Transmission Planning Division

	Prior Year		Prior Year		Current Year	
	2003	2004	2004	2005	**2005**	
	PYT	PYT	PYT	PYT	**PYT**	PYT
PROJECTS from						
PLNENGR-Jun02_6-02	***370***	***207***	***0***	***0***	***0***	***0***
From July '03 Pillar Project File			258	204	**158**	0
From Jan. '04 Pillar Project File						
Projects, Total:	370	207	258	204	**158**	0
NON-PROJECTS (Act/Loc/Ind)						
Billables						
HELCO:						
Transmission Planning Support (O&M)	1,600	1,600	4,200	4,000	**4,000**	0
Transmission Planning Support (Capital)	800	800	800	800	**800**	0
Purchase Power Support	800	800	800	800	**800**	0
IRP Support	200	200	200	600	**600**	0
MECO:						
Transmission Planning Support (Capital)-GY	500	500	600	600	**600**	0
Transmission Planning Support (O&M)-GY	1,400	1,400	2,500	2,000	**2,000**	0
Purchase Power Support-GY	100	100	800	800	**800**	0
Underfrequency Load Shedding Study-Molokai			500	0	**0**	0
Underfrequency Load Shedding Study-Lanai			500	0	**0**	0
Maalaea Power Plant Bus Re-Arrangement for System Reliabiltiy-GY	100	0	0	0	**0**	0
Transmission Planning 10 Year Study	165	0	0	0	**0**	0
IRP Support-GY	200	200	200	400	**400**	0
Non-Project Billables, Total:	5,865	5,600	11,100	10,000	**10,000**	0
O&M						
R&D	100	100	100	100	**100**	0
IRP Support	50	50	50	50	**50**	0
O&M, Total:	150	150	150	150	**150**	0
Clearing						
Transmission Planning Support (300/OAH/NC)	8,207	8,595	3,324	4,374	**4,500**	**0**
Training (789/OAH/NC)	320	320	0	0	**0**	**0**
Clearing, Total:	8,527	8,915	3,324	4,374	**4,500**	0
Non-Productive						
Holiday (098)	832	896	896	832	**832**	0
Vacation (098)	960	1,000	880	1,000	**1,000**	0
Non-Productive, Total:	1,792	1,896	1,776	1,832	**1,832**	0
Labor Hour Total:	16,704	16,768	16,608	16,560	**16,640**	0
Available labor resource hours	16,704	16,768	16,768	16,640	**16,640**	0
Contract labor support (RTY)						
Avail. Hours, Total:	16,704	16,768	16,768	16,640	**16,640**	0
Surplus/(Deficit)	0	0	160	80	**0**	0

General Information Requests

For each of the HECO witnesses who sponsor test period budgeted labor direct expense amounts, please provide the following information:

a. Identify each employee involved in preparation of budgeted staffing and associated labor direct expense amounts included in the witnesses' portion of the rate case test period budget

[redacted]

b. Provide complete copies of all calculations, spreadsheet files, "pencil" workpapers, surveys and other analyses performed by each of the employees identified in response to part (a), documenting all work done to determine required staffing levels and overtime hours by Department, RA, Activity and NARUC Account.

c. Describe the actual force level that existed at the date the budget was prepared or otherwise served as a base for purposes of preparing the budget level.

d. For each budgeted employee position that is added to existing actual force levels (as the date

SSF 'R
Safe curity Facilities

PHB - Buildin ounds Division

Dept	RA	Reap Area	Acct Bl	Acct Blk Descr	NARUC	Exp Class	Proj	Act	Loc	EE	FY05	a	b	c	d	e	f	g
PHB - BUILDINGS & GROUNDS DIVISION																		
SSF	PHB	Facilities Operation	B33	Transmission Maint	**573**	Labor	NPHZZZZZ	**931**	KOO	150	1,266.72							
SSF	PHB	Facilities Operation	B33	Transmission Maint	**573**	Labor	NPHZZZZZ	**931**	WTD	150	1,266.72							
					573	**LABOR COSTS**		**931**	**TOTAL**		2,533.44	Stephen Chu, Supervisor, Bldgs & Grounds	Yes FA000244	Historical costs escalated due to increase in cust demands	NA	NA	Pillar file attached	NA

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PHB - Buildin ounds Division

Dept	RA	Resp Area	Acct Bl	Acct Blk Descr	NARUC	Exp Class	Proj	Act	Loc	EE	FY05	a	b	c	d	e	f	g
PHB - BUILDINGS & GROUNDS DIVISION																		
SSF	PHB	Facilities Operation	B35	Distribution Maint	598	Labor	NPHZZZZZ	931	PDM	150	150,369.16							
SSF	PHB	Facilities Operation	B35	Distribution Maint	598	Labor	NPHZZZZZ	931	PDM	150	15,666.39							
					598	LABOR COSTS		931	TOTAL		166,035.55	Stephen Chu, Supervisor, Bldgs & Grounds	Yes FA000244	Historical costs escalated due to addl PM work at the 185 s/stations	NA	NA	Pillar file attached	NA
SSF	PHB	Facilities Operation	B35	Distribution Maint	598	Non-Labor	NPHZZZZZ	931	PDM	501	246,999.96	Stephen Chu, Supervisor, Bldgs & Grounds	Yes FA000242 FA000243 FA000244 FA000251	Historical costs escalated due to required tree trim, & land-scaping needs to meet cust demands at the 185 s/stations	NA	NA	Pillar file attached	Pillar files attached
					598	NON LABOR	COSTS	931	TOTA	L								

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12/28/2004

***VIEW: Labor Hour**

*R...	*Ac...	*Lo...	*I...	*EE #	*Labor Class #	Line item	FY05
HB	098	PHE	ND	107	__BUTC	NProd - Carpenter	224
PHB	098	PHE	ND	107	__BUTC	NProd - Electrician	320
PHB	098	PHE	ND	107	__BUTC	NProd - Grounds Keepers (3)	1,012
PHB	098	PHE	ND	107	__BUTC	NProd - KNG Custodians(3)	872
PHB	098	PHE	ND	107	__BUTC	NProd - KNG UT Custodians(1)	296
PHB	098	PHE	ND	107	__BUTC	NProd - WRD Custodians (4)	1,236
PHB	098	PHE	ND	107	__BUTC	NProd - WRD UT Custodian (1)	296
PHB	098	PHE	ND	107	__TCS	NProd - Supervisor	376
PHB	098						4,632
PHB	797	PHE	NE	150	__BUTC	Safety Training - Carpenter	72
PHB	797	PHE	NE	150	__BUTC	Safety Training - Electrician	72
PHB	797	PHE	NE	150	__BUTC	Safety Training - GKeepers(4)	216
PHB	797	PHE	NE	150	__BUTC	Safety Training - KNG Custodians (3)	216
PHB	797	PHE	NE	150	__BUTC	Safety Training - KNG UT Custodian	72
PHB	797	PHE	NE	150	__BUTC	Safety Training - WRD Custodians(4)	288
PHB	797	PHE	NE	150	__BUTC	Safety Training - WRD UT Custodian	72
PHB	797	PHE	NE	150	__TCS	Safety Training - Supervisor	104
PHB	797						1,112
PHB	931	KNG	NE	150	__BUTC	KING - Labor - Carpenter	120
PHB	931	KNG	NE	150	__BUTC	KING - Labor - Electrician	700
PHB	931	KOO	NE	150	__BUTC	KOOLAU Baseyard Bldg. Svcs - Labor	48
HB	931	PDM	NE	150	__BUTC	SUBSTATION - Labor - Electrician	120
HB	931	PDM	NE	150	__BUTC	SUBSTATION - Labor - GKeepers(4)	5,002
PHB	931	PDM	NE	150	BUTC	SUBSTATION - Labor - GKeepers(4) OTH	576

*ENTER: Direct RA Cost

*RA #	*A...	*Lo...	*In...	*E...	*Project #	Line item	FY04	FY05
PHB	*S...	*Su...	*S...	*Su...	*Supply	Carpenter	$1,232.00	$2,080.00
PHB	*S...	*Su...	*S...	*Su...	*Supply	Electrician	$1,232.00	$2,080.00
PHB	*S...	*Su...	*S...	*Su...	*Supply	Grounds Keepers (3)	$3,696.00	$6,240.00
PHB	*S...	*Su...	*S...	*Su...	*Supply	KNG Custodians (3)	$3,696.00	$6,240.00
PHB	*S...	*Su...	*S...	*Su...	*Supply	KNG Utility Custodian(1)	$1,232.00	$2,080.00
PHB	*S...	*Su...	*S...	*Su...	*Supply	WRD Custodians (4)	$4,928.00	$8,320.00
PHB	*S...	*Su...	*S...	*Su...	*Supply	WRD Utility Custodian(1)	$1,232.00	$2,080.00
PHB	*S...	*Su...	*S...	*Su...	*Supply	Supervisor	$1,232.00	$2,080.00
PHB	*S...	*Su...	*S...	*Su...	*Supply		$18,480.00	$31,200.00
PHB	*S...						$18,480.00	$31,200.00
PHB	098	PHE	ND	107	NPHZZZZZ	NProd - Carpenter	$3,876.00	$5,911.36
PHB	098	PHE	ND	107	NPHZZZZZ	NProd - Electrician	$5,304.00	$8,144.00

*RA #	*A...	*Lo...	*In...	*E...	*Project #	Line item	FY04	FY05
PHB	931	PDM	NE	150	NPHZZZZZ	SUBSTATION - Labor - GKeepers(4) ...	$8,568.00	$15,200.64
PHB	931	PDM	NE	150	NPHZZZZZ	SUBSTATION - Labor - Supervisor	$8,832.12	$15,667.60
HB	931	PDM	NE	150	NPHZZZZZ		$91,002.55	$166,037.82
PHB	931	PDM	NE	501	NPHZZZZZ	Contract Landscaping - Outside Svcs	$140,000.00	$247,000.00
PHB	931	PDM	NE	501	NPHZZZZZ		$140,000.00	$247,000.00
PHB	931	PHE	NE	301	NPHZZZZZ	Transportation / Vehicle	$25,520.00	$45,816.00
PHB	931	PHE	NE	301	NPHZZZZZ		$25,520.00	$45,816.00
PHB	931	WRD	NE	150	NPHZZZZZ	WARD - Labor - Carpenter	$19,087.03	$34,307.00
PHB	931	WRD	NE	150	NPHZZZZZ	WARD - Labor - Electrician	$10,270.83	$18,473.00
PHB	931	WRD	NE	150	NPHZZZZZ		$29,357.86	$52,780.00
PHB	931	WRD	NE	201	NPHZZZZZ	WARD - Bldg.Svc. Misc. Expenses	$2,100.00	$3,700.00
PHB	931	WRD	NE	201	NPHZZZZZ	WARD - Maint. Bldg. Supplies	$10,500.00	$18,500.00
PHB	931	WRD	NE	201	NPHZZZZZ	WARD - Op. Bldg. Supplies	$11,200.00	$19,776.00
PHB	931	WRD	NE	201	NPHZZZZZ	WARD - Op./ Bldg. Svc. Misc. Expen...	$1,400.00	$2,500.00
PHB	931	WRD	NE	201	NPHZZZZZ		$25,200.00	$44,476.00
PHB	931	WRD	NE	501	NPHZZZZZ	WARD - Carpet Cleaning	$8,400.00	$14,800.00
PHB	931	WRD	NE	501	NPHZZZZZ	WARD - Plant Rental	$1,050.00	$1,800.00
PHB	931	WRD	NE	501	NPHZZZZZ	WARD - Termite Trmt.	$3,500.00	$6,200.00
PHB	931	WRD	NE	501	NPHZZZZZ	WARD - Water Supply	$26,600.00	$45,600.00
PHB	931	WRD	NE	501	NPHZZZZZ	WARD - Water Supply	$21,000.00	$37,000.00
PHB	931	WRD	NE	501	NPHZZZZZ		$60,550.00	$105,400.00
PHB	931	WTD	NE	150	NPHZZZZZ	WAIAU Baseyard Bldg. Svcs - Labor	$714.00	$1,266.72
B	931	WTD	NE	150	NPHZZZZZ		$714.00	$1,266.72
PHB	931						$424,664.24	$761,115.06
PHB	934	HEI	BE	150	NPHZZZZZ	HEI - Meeting Rm Set Up - FA000223	$1,071.00	$1,900.08
PHB	934	HEI	BE	150	NPHZZZZZ	HEI - Stock Holders Mtg - 9P/AD000...	$0.00	$1,055.60
PHB	934	HEI	BE	150	NPHZZZZZ		$1,071.00	$2,955.68
PHB	934	KNG	NE	150	NPHZZZZZ	KING - Labor - Custodians(3)	$73,867.59	$132,477.80
PHB	934	KNG	NE	150	NPHZZZZZ	KING - Labor - UT Custodian(1)	$25,396.00	$42,224.00
PHB	934	KNG	NE	150	NPHZZZZZ	KING - Labor - Supervisor	$8,598.01	$16,270.20
PHB	934	KNG	NE	150	NPHZZZZZ		$107,863.60	$190,972.00
PHB	934	WRD	NE	150	NPHZZZZZ	WARD - Labor - Custodians(4)	$99,311.66	$178,396.40
PHB	934	WRD	NE	150	NPHZZZZZ	WARD - Labor - Custodians(4) - OT ...	$2,677.50	$4,750.20
PHB	934	WRD	NE	150	NPHZZZZZ	WARD - Labor - UT Custodian	[illegible]	[illegible]

General Information Requests

For each of the HECO witnesses who sponsor test period budgeted labor direct expense amounts, please provide the following information:

a. Identify each employee involved in preparation of budgeted staffing and associated labor direct expense amounts included in the witnesses' portion of the rate case test period budget.

b. Provide complete copies of all calculations, spreadsheet files, "pencil" workpapers, surveys and other analyses performed by each of the employees identified in response to part (a), documenting all work done to determine required staffing levels and overtime hours by Department, RA, Activity and NARUC Account.

c. Describe the actual force level that existed at the date the budget was prepared or otherwise served as a base for purposes of preparing the budget level.

d. For each budgeted employee position that is added to existing actual force levels (as the date the budget was prepared), **explain** the analyses undertaken to determine that each added position was necessary and should be filled in order to meet present or anticipated work requirements. Also, please explain how the anticipated work requirements were defined and determined.

e. Describe and, to the extent possible, quantify the backlog of work, unfinished projects, deferred maintenance and other labor requirements unfulfilled at present staffing levels, that will be satisfied by adding the employee positions identified in your response to part (d).

f. Provide complete copies of all studies, analyses, workpapers, projections, notes, correspondence, assumptions and other documents associated with your responses to parts (d) and (e) above.

HECO Response:

a. For the Support Services Department the employees involved in the preparation of budgeted staffing and associated labor direct expense amounts for the rate case test period are Allison Sawada, Supervisor, Electrical & Welding Services, Mark Sterlacci, Department Administrator and Cecily Barnes, Manager.

b. Please refer to attachments J-1 and J-2 for additional details.

[redacted]

Labor Input Sheet - NonProject
2005

Resp Area (RA) PVL
Labor Class BUTCED (Welder)

Prepared by AL Sawada
Date 4/5/04

Dimension tab card								Rates tab card	Units tab card													
Line Item	RA	Act	Loc	Ind	Proj	EE	Labor Class	Rates Link To	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Labor Supply :									*(enter employee count in "Units tab card")*												
Labor Supply	PVL	*Supply	*Supply	*Supply	*Supply	*Supply	BUTCED (Welder)	Available Hours	4	4	4	4	4	4	4	4	4	4	4	4	48
Labor Demand :									*(enter hours in "Units tab card")*												
									50	82	82	50	82	82	82	82	82	82	114	114	984
Holiday	PVL	098	PHE	ND		107	BUTCED (Welder)	BUTCED (Welder)	0	32	32	0	32	32	32	32	32	32	64	64	384
Vacation	PVL	098	PHE	ND		107	BUTCED (Welder)	BUTCED (Welder)	37	37	37	37	37	37	37	37	37	37	37	37	444
Other NPW	PVL	098	PHE	ND		107	BUTCED (Welder)	BUTCED (Welder)	13	13	13	13	13	13	13	13	13	13	13	13	156
Workers Comp	PVL	098	PHE	ND		108	BUTCED (Welder)	BUTCED (Welder)													0
Maintain UG tsfs	PVL	484	OAH	NE	NPVZZZZZ	150	BUTCED (Welder)	BUTCED (Welder)	40	40	40	40	40	40	40	40	40	40	40	40	480
Fab / Repair Warehs equip	PVL	492	OAH	NC	NPVZZZZZ	150	BUTCED (Welder)	BUTCED (Welder)	100	100	100	100	100	100	100	100	80	80	100	100	1,160
Training, classes, updates	PVL	789	PHE	NE	NPVZZZZZ	150	BUTCED (Welder)	BUTCED (Welder)	8	8	8	8	8	8	8	8	8	8	8	8	96
Ward Welding Contract	PVL	932	WRD	NE	NPVZZZZZ	150	BUTCED (Welder)	BUTCED (Welder)	2	2	2	2	2	2	2	2	2	2	2	2	24
Vehicle repair / maint	PVL	942	PHE	NC	NPVZZZZZ	150	BUTCED (Welder)	BUTCED (Welder)	161	91	187	154	155	155	129	200	208	206	156	136	1,938
Safety training	PVL	797	PHE	NE	NPVZZZZZ	150	BUTCED (Welder)	BUTCED (Welder)	4	4	4	4	4	4	4	4	4	4	4	4	48
Substation Assistance Trans	PVL	350	OAH	NE	NPVZZZZZ	150	BUTCED (Welder)	BUTCED (Welder)	150	150	150	150	150	150	150	150	150	150	150	150	1,800
P4851000, P4852000	VL	318	OAH	NI		150	BUTCED (Welder)	BUTCED (Welder)	7	13	13	14	13	13	7	0	0	0	0	0	80
Substation Assistance Dist	PVL	487	OAH	NE	NPVZZZZZ	150	BUTCED (Welder)	BUTCED (Welder)	150	150	150	150	150	150	150	150	130	100	130	150	1,710
	PVL					150	BUTCED (Welder)	BUTCED (Welder)													0
	PVL					150	BUTCED (Welder)	BUTCED (Welder)													0
						Total NonProj/Pgm Demand			672	640	736	672	704	704	672	736	704	672	704	704	8,320
						Total Supply			672	640	736	672	704	704	672	736	704	672	704	704	8,320
Holidays - 2/21, 3/25, 5/30, 6/10, 7/4, 8/19, 9/5, 10/10, 11/11, 11/24, 12/23 (1/2), 12/26, 12/30 (1/2)									0	8	8	0	8	8	8	8	8	8	16	16	96
Available hours per employee									168	160	184	168	176	176	168	184	176	168	176	176	2080

NOTE: Total NonProject Demand hours may*NOT* equal Total Supply hours due to Project Demand hours (which are budgeted in the Project file)

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Labor Input Sheet - NonProject
2005

Resp Area (RA) PVL
Labor Class BUTCED (Sr. Elec)

Prepared by Al Sawada
Date 4/5/04

Dimension tab card								Rates tab card	Units tab card													
Line Item	RA	Act	Loc	Ind	Proj	EE	Labor Class	Rates Link To	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Labor Supply :									*(enter **employee count** in **"Units tab card"**)*												
Labor Supply	PVL	*Supply	*Supply	*Supply	*Supply	*Supply	BUTCED (Sr. Elec)	_ Available Hours	3	3	3	3	3	3	3	3	3	3	3	3	36
Labor Demand :									*(enter **hours** in **"Units tab card"**)*												
									50	74	74	50	74	74	74	74	74	74	98	98	888
Holiday	PVL	098	PHE	ND		107	BUTCED (Sr. Elec)	BUTCED (Sr. Elec)	0	24	24	0	24	24	24	24	24	24	48	48	288
Vacation	PVL	098	PHE	ND		107	BUTCED (Sr. Elec)	BUTCED (Sr. Elec)	40	40	40	40	40	40	40	40	40	40	40	40	480
Other NPW	PVL	098	PHE	ND		107	BUTCED (Sr. Elec)	BUTCED (Sr. Elec)	10	10	10	10	10	10	10	10	10	10	10	10	120
Workers Comp	PVL	098	PHE	ND		108	BUTCED (Sr. Elec)	BUTCED (Sr. Elec)													0
Junking tsfs	PVL	347	OAH	NE	NPVZZZZZ	150	BUTCED (Sr. Elec)	BUTCED (Sr. Elec)	100	100	100	100	100	100	100	100	83	100	100	100	1,183
Service OH tsf	PVL	481	OAH	NE	NPVZZZZZ	150	BUTCED (Sr. Elec)	BUTCED (Sr. Elec)	40	40	40	40	40	40	40	40	40	40	40	40	480
X-mas Deco (KING)	PVL	754	PHE	NE	NPVZZZZZ	150	BUTCED (Sr. Elec)	BUTCED (Sr. Elec)	48	0	0	0	0	0	0	48	48	0	48	40	232
Training, classes, updates	PVL	789	PHE	NE	NPVZZZZZ	150	BUTCED (Sr. Elec)	BUTCED (Sr. Elec)	6	6	6	6	6	6	6	6	6	6	6	6	72
King Electrical Contract	PVL	931	KNG	NE	NPVZZZZZ	150	BUTCED (Sr. Elec)	BUTCED (Sr. Elec)	40	40	40	40	40	40	40	40	40	40	40	40	480
Ward Electrical Contract	PVL	931	WRD	NE	NPVZZZZZ	150	BUTCED (Sr. Elec)	BUTCED (Sr. Elec)	112	112	184	160	160	160	49	28	21	107	60	68	1,221
Safety training	PVL	797	PHE	NE	NPVZZZZZ	150	BUTCED (Sr. Elec)	BUTCED (Sr. Elec)	3	3	3	3	3	3	3	3	3	3	3	3	36
Dielectric test trucks	VL	942	PHE	NC	NPVZZZZZ	150	BUTCED (Sr. Elec)	BUTCED (Sr. Elec)	0	0	0	0	0	0	0	15	15	15	15	15	75
Maintain TSub Preventive	PVL	348	OAH	NE	NPVZZZZZ	150	BUTCED (Sr. Elec)	BUTCED (Sr. Elec)	24	24	24	24	24	24	24	24	24	24	24	24	288
Maintain DSub Preventive	PVL	488	OAH	NE	NPVZZZZZ	150	BUTCED (Sr. Elec)	BUTCED (Sr. Elec)	24	24	24	24	24	24	24	24	24	24	24	24	288
P503, 504, 505, 825	PVL	930	PHE	NI		150	BUTCED (Sr. Elec)	BUTCED (Sr. Elec)	24	24	24	24	24	24	104	104	104	24	24	24	528
P1680000, P1700000	PVL	850	PHE	NI		150	BUTCED (Sr. Elec)	BUTCED (Sr. Elec)	14	14	14	14	14	14	14	14	14	14	14	14	168
P4851000, P4852000	PVL	318	OAH	NI		150	BUTCED (Sr. Elec)	BUTCED (Sr. Elec)							7	13	13	14	13	13	73
Service UG tsf	PVL	484	OAH	NE	NPVZZZZZ	150	BUTCED (Sr. Elec)	BUTCED (Sr. Elec)	40	40	40	40	40	40	40	40	40	40	40	40	480
							Total NonProj/Pgm Demand		525	501	573	525	549	549	525	573	549	525	549	549	6,492
							Total Supply		504	480	552	504	528	528	504	552	528	504	528	528	6,240
Holidays - 2/21, 3/25, 5/30, 6/10, 7/4, 8/19, 9/5, 10/10, 11/11, 11/24, 12/23 (1/2), 12/26, 12/30 (1/2)									0	8	8	0	8	8	8	8	8	8	16	16	96
Available hours per employee									168	160	184	168	176	176	168	184	176	168	176	176	2,080

NOTE: Total NonProject Demand hours may*NOT* equal Total Supply hours due to Project Demand hours (which are budgeted in the Project file)

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Labor Input Sheet - NonProject
2005

Resp Area (RA) PVL
Labor Class BUTCED (Foremen)

Prepared by Al Sawada
Date 04/05/04

Dimension tab card								Rates tab card	Units tab card													
Line Item	RA	Act	Loc	Ind	Proj	EE	Labor Class	Rates Link To	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Labor Supply :									*(enter employee count in "Units tab card")*												
Labor Supply	PVL	*Supply	*Supply	*Supply	*Supply	*Supply	BUTCED (Foremen)	Available Hours	2	2	2	2	2	2	2	2	2	2	2	2	24
Labor Demand :									*(enter hours in "Units tab card")*												
									40	56	56	40	56	56	56	56	56	56	72	72	672
Holiday	PVL	098	PHE	ND		107	BUTCED (Foremen)	BUTCED (Foremen)	0	16	16	0	16	16	16	16	16	16	32	32	192
Vacation	PVL	098	PHE	ND		107	BUTCED (Foremen)	BUTCED (Foremen)	33	33	33	33	33	33	33	33	33	33	33	33	396
Other NPW	PVL	098	PHE	ND		107	BUTCED (Foremen)	BUTCED (Foremen)	7	7	7	7	7	7	7	7	7	7	7	7	84
Workers Comp	PVL	098	PHE	ND		108	BUTCED (Foremen)	BUTCED (Foremen)													0
Maintain Sub Corrective	PVL	487	OAH	NE	NPVZZZZZ	150	BUTCED (Foremen)	BUTCED (Foremen)	40	40	40	40	40	40	40	40	40	40	40	40	480
Maintain OH Tsfs	PVL	481	OAH	NE	NPVZZZZZ	150	BUTCED (Foremen)	BUTCED (Foremen)	40	40	40	40	40	40	40	40	40	40	40	40	480
Training, classes, updates	PVL	789	PHE	NE	NPVZZZZZ	150	BUTCED (Foremen)	BUTCED (Foremen)	40	40	40	40	40	40	40	40	40	40	40	40	480
Ward Building Contract	PVL	932	WRD	NE	NPVZZZZZ	150	BUTCED (Foremen)	BUTCED (Foremen)	60	60	60	60	60	60	60	60	60	60	60	60	720
King Building Contract	PVL	932	KNG	NE	NPVZZZZZ	150	BUTCED (Foremen)	BUTCED (Foremen)	8	8	8	8	8	8	8	8	8	8	8	8	96
Vehicle repair / maint	PVL	942	PHE	NC	NPVZZZZZ	150	BUTCED (Foremen)	BUTCED (Foremen)	30	30	30	30	30	30	30	30	30	30	30	30	360
Safety training	PVL	797	PHE	NE	NPVZZZZZ	150	BUTCED (Foremen)	BUTCED (Foremen)	2	2	2	2	2	2	2	2	2	2	2	2	24
Manage,construct,reconfigur	PVL	930	PHE	NE	NPVZZZZZ	150	BUTCED (Foremen)	BUTCED (Foremen)	36	4	52	36	36	36	20	52	36	20	20	20	368
Maintain UG tsfs	PVL	484	OAH	NE	NPVZZZZZ	150	BUTCED (Foremen)	BUTCED (Foremen)	40	40	40	40	40	40	40	40	40	40	40	40	480
	PVL					150	BUTCED (Foremen)	BUTCED (Foremen)													0
								Total NonProj/Pgm Demand	336	320	368	336	352	352	336	368	352	336	352	352	4,160
								Total Supply	336	320	368	336	352	352	336	368	352	336	352	352	4,160
Holidays - 2/21, 3/25, 5/30, 6/10, 7/4, 8/19, 9/5, 10/10, 11/11, 11/24, 12/23 (1/2), 12/26, 12/30 (1/2)									0	8	8	0	8	8	8	8	8	8	16	16	96
Available hours per employee									168	160	184	168	176	176	168	184	176	168	176	176	2080

NOTE: Total NonProject Demand hours may *NOT* equal Total Supply hours due to Project Demand hours (which are budgeted in the Project file)

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Labor Input Sheet - NonProject
2005

Resp Area (RA) PVL
Labor Class TCS ED (Supervisor)

Prepared by Al Sawada
Date 4/5/04

Dimension tab card								Rates tab card	Units tab card													
Line Item	RA	Act	Loc	Ind	Proj	EE	Labor Class	Rates Link To	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Labor Supply :									*(enter **employee count** in **"Units tab card"**)*												
Labor Supply	PVL	*Supply	*Supply	*Supply	*Supply	*Supply	TCS ED (Supervisor)	Available Hours	1	1	1	1	1	1	1	1	1	1	1	1	12
Labor Demand :									*(enter **hours** in **"Units tab card"**)*												
									13	29	21	21	21	29	21	29	21	29	29	29	292
Holiday	PVL	098	PHE	ND		107	TCS ED (Supervisor)	TCS ED (Supervisor)	0	8	8	0	8	8	8	8	8	8	16	16	96
Vacation	PVL	098	PHE	ND		107	TCS ED (Supervisor)	TCS ED (Supervisor)	13	13	13	13	13	13	13	13	13	13	13	13	156
Other NPW	PVL	098	PHE	ND		107	TCS ED (Supervisor)	TCS ED (Supervisor)		8		8		8		8		8			40
Workers Comp	PVL	098	PHE	ND		108	TCS ED (Supervisor)	TCS ED (Supervisor)													0
Maintatin TSub structure	PVL	351	OAH	NE	NPVZZZZZ	150	TCS ED (Supervisor)	TCS ED (Supervisor)	10	10	10	10	10	10	10	10	10	10	10	10	120
Maintatin DSub structure	PVL	485	OAH	NE	NPVZZZZZ	150	TCS ED (Supervisor)	TCS ED (Supervisor)	10	10	10	10	10	10	10	10	10	10	10	10	120
Forecast / Budget	PVL	701	PHE	NE	NPVZZZZZ	150	TCS ED (Supervisor)	TCS ED (Supervisor)	10	10	10	10	10	10	10	10	10	10	10	10	120
Employee Development	PVL	785	PHE	NE	NPVZZZZZ	150	TCS ED (Supervisor)	TCS ED (Supervisor)	40	40	40	40	40	40	40	40	40	40	40	40	480
Training, classes, updates	PVL	789	PHE	NE	NPVZZZZZ	150	TCS ED (Supervisor)	TCS ED (Supervisor)	20	20	20	20	20	20	20	20	20	20	20	20	240
Safety Training	PVL	797	PHE	NE	NPVZZZZZ	150	TCS ED (Supervisor)	TCS ED (Supervisor)	1	1	1	1	1	1	1	1	1	1	1	1	12
Ward Contract (Facilities)	PVL	932	WRD	NE	NPVZZZZZ	150	TCS ED (Supervisor)	TCS ED (Supervisor)	10	10	10	10	10	10	10	10	10	10	10	10	120
King Contract (Facilities)	PVL	932	KNG	NE	NPVZZZZZ	150	TCS ED (Supervisor)	TCS ED (Supervisor)	10	10	10	10	10	10	10	10	10	10	10	10	120
Estimate Vehicles	PVL	942	PHE	NC	NPVZZZZZ	150	TCS ED (Supervisor)	TCS ED (Supervisor)	44	20	52	36	44	36	36	44	44	28	36	36	456
	PVL					150	TCS ED (Supervisor)	TCS ED (Supervisor)													0
								Total NonProj/Pgm Demand	168	160	184	168	176	176	168	184	176	168	176	176	2,080
								Total Supply	168	160	184	168	176	176	168	184	176	168	176	176	2,080
Holidays - 2/21, 3/25, 5/30, 6/10, 7/4, 8/19, 9/5, 10/10, 11/11, 11/24, 12/23 (1/2), 12/26, 12/30 (1/2)									0	8	8	0	8	8	8	8	8	8	16	16	96
Available hours per employee									168	160	184	168	176	176	168	184	176	168	176	176	2080

NOTE: Total NonProject Demand hours may *NOT* equal Total Supply hours due to Project Demand hours (which are budgeted in the Project file)

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2005

Resp Area (RA) PVM
Labor Class BUTC

Prepared by Cecily Barnes
Date 4/5/04

Dimension tab card								Rates tab card	Units tab card													
Line Item	RA	Act	Loc	Ind	Proj	EE	Labor Class	Rates Link To	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Labor Supply :									*(enter employee count in "Units tab card")*												
Labor Supply	PVM	*Supply	*Supply	*Supply	*Supply	*Supply	_BUTC	_Available Hours	21	21	21	21	21	21	21	21	21	21	21	21	252
Labor Demand :									*(enter hours in "Units tab card")*												
									340	508	508	340	508	508	508	508	508	508	508	676	676	6,096
Holiday	PVM	098	PHE	ND		107	_BUTC	_BUTC	0	168	168	0	168	168	168	168	168	168	336	336	2,016
Vacation	PVM	098	PHE	ND		107	_BUTC	_BUTC	60	60	60	60	60	60	60	60	60	60	60	60	720
Other NPW	PVM	098	PHE	ND		107	_BUTC	_BUTC	280	280	280	280	280	280	280	280	280	280	280	280	3,360
Workers Comp	PVM	098	PHE	ND		108	_BUTC	_BUTC													0
Tool Repairs	PVM	492	OAH	NE	NPVZZZZZ	150	_BUTC	_BUTC	140	140	140	140	140	140	140	140	140	140	140	140	1,680
Attend Safety Training	PVM	797	WRD	NC	NPVZZZZZ	150	_BUTC	_BUTC	40	40	40	40	40	40	40	40	40	40	40	40	480
Process Mat'ls & Transact	PVM	850	WRD	NC	NPVZZZZZ	150	_BUTC	_BUTC	2900	2900	2900	2900	2900	2900	2900	2900	2900	2900	2900	2900	34,800
Reclaim Stock Mat'l-WH	PVM	851	WRD	NC	NPVZZZZZ	150	_BUTC	_BUTC	40	40	40	40	40	40	40	40	40	40	40	40	480
Recover Investmt-Matl	PVM	852	WRD	NC	NPVZZZZZ	150	_BUTC	_BUTC	340	340	340	340	340	340	340	340	340	340	340	340	4,080
Inventory Control - Cycle	PVM	853	WRD	NC	NPVZZZZZ	150	_BUTC	_BUTC	180	180	180	180	180	180	180	180	180	180	180	180	2,160
	PVM					150	_BUTC	_BUTC													0
					Total NonProj/Pgm Demand				3,980	4,148	4,148	3,980	4,148	4,148	4,148	4,148	4,148	4,148	4,316	4,316	49,776
					Total Supply				3,528	3,360	3,864	3,528	3,696	3,696	3,528	3,864	3,696	3,528	3,696	3,696	43,680
Holidays - 2/21, 3/25, 5/30, 6/10, 7/4, 8/19, 9/5, 10/10, 11/11, 11/24, 12/23 (1/2), 12/26, 12/30 (1/2)									0	8	8	0	8	8	8	8	8	8	16	16	96
Available hours per employee									168	160	184	168	176	176	168	184	176	168	176	176	2080

NOTE: Total NonProject Demand hours may *NOT* equal Total Supply hours due to Project Demand hours (which are budgeted in the Project file)

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PAGE 1 of 1

General Information Requests

For each of the HECO witnesses who sponsor test period budgeted labor direct expense amounts, please provide the following information:

a. Identify each employee involved in preparation of budgeted staffing and associated labor direct expense amounts included in the witnesses' portion of the rate case test period budget.

b. Provide complete copies of all calculations, spreadsheet files, "pencil" workpapers, surveys and other analyses performed by each of the employees identified in response to part (a), documenting all work done to determine required staffing levels and overtime hours by Department, RA, Activity and NARUC Account.

c. Describe the actual force level that existed at the date the budget was prepared or otherwise served as a base for purposes of preparing the budget level.

d. For each budgeted employee position that is added to existing actual force levels (as the date the budget was prepared), **explain** the analyses undertaken to determine that each added position was necessary and should be filled in order to meet present or anticipated work requirements. Also, please explain how the anticipated work requirements were defined and determined.

e. Describe and, to the extent possible, quantify the backlog of work, unfinished projects, deferred maintenance and other labor requirements unfulfilled at present staffing levels, that will be satisfied by adding the employee positions identified in your response to part (d).

f. Provide complete copies of all studies, analyses, workpapers, projections, notes, correspondence, assumptions and other documents associated with your responses to parts (d) and (e) above.

HECO Response:

a. For the System Operation (SysOp) Department, the employees involved in the preparation of budgeted staffing and associated labor direct expense amounts for the rate case test period are: Eugene Kawamata (retired), Supervisor, Communications Div. (PRC); Dean Mizumura, Superintendent, Operating Div. (PRD); Peter Okunami, Senior Engineer, Operating Engineering Div. (PRE); Richard Freitas, Supervisor, Instrument and Control Div. (PRI); Wayne Kawamata, Supervisor, Relay Div. (PRR); and Kurt Anbe, Substation

Service Engineer, Substation Div. (PRS) and Construction Management Div. (PRX).

b. Please refer to attachments K-1 through K-6 for additional details.

c. The total staffing level for SysOp at the time the Rate case budget was prepared in April 2004, was 93, as compared to the budgeted amount of 109, the level that served as a basis for preparing the budget. The actual staffing level at the end of 2004 was 101. The standard unit of measurement in the individual RA forecasts is the number of man-hours required for specific, scheduled maintenance work. These man-hours are then converted to direct labor dollars when multiplied by appropriate wage rates in the Pillar system. These wage rates are Standard Labor rates compiled from existing union wage agreements and salary estimates for merit employees.

d. At the time the budget was prepared in April 2004 there were 11 vacancies to be filled by yearend 2004 (these were due to previous hiring constraints, retirements and transfers). There were also 2 and 3 additional positions budgeted for mid-2004 and 2005 respectively, which would bring the total staffing count to 109 in 2005 as noted below.

RA	Vacant Positions @ April 2004	Reason for Vacancy
PRE	1 Mapping Supervisor	Retirement (Kawakami)
PRE	1 Senior Mapper	Transfer (Starling)
PRI	1 Instrument & Control Technician	Transfer (Menor)
PRS	3 Substation Electricians, 1 Scheduler/Planner	Retirements (Ishikawa, Strong, Bailey, Motta)
PRS	3 Substation Electricians	Transfers (Pang, Yamane, Nakagaki)
RA	**Additions budgeted for 2004**	**Reason for Addition**
PRE	1 OMS Systems Analyst	For EMS/OMS application development/implementation
PRE	1 EMS Systems Analyst	For EMS/OMS application development/implementation

PRI	1 Instrument & Control Engineer	Anticipated retirement (Shinsato)
RA	Additions budgeted for 2005	Reason for Addition
PRI	1 Instrument & Control Technician	Anticipated retirement (Higa)
PRS	1 Substation PDM Engineer	Develop EPRI-based predictive maintenance program
PRS	1 Substation Electrician	Anticipated retirement (Rowley)

e. In general, the additional staffing is primarily to 1) provide adequate operational coverage to maintain system integrity and reliability; 2) address increased system operation and maintenance requirements as a result of continuing plant growth and age of the utility plant; 3) account for the loss of technical knowledge and experience due to pending retirements and to ensure we have adequate experienced staffing to meet critical work demands (refer to HECO-826 for analyses performed on impending retirements); 4) implement/develop new projects in our efforts to use best available technologies to ensure system reliability; 5) enable the work to be done in a more pro-active mode with more predictive/preventive maintenance versus corrective. More specific information regarding each Responsibility Area (RA) referenced above is detailed below:

PRE – Operating Engineering Division

The vacancies of a Mapping Supervisor and a Senior Mapper contributed to a backlog of work with regards to the maintenance and updating of system critical maps, circuit drawings, switching diagrams. These updates typically relate to vaults, circuits, node connectivity, facilities lists, switches, and other device changes and their accuracy is relied on by primary troublemen, other departments such as Customer Installations and dispatch operations and is critical to the safety of our field personnel. The vacancies also impacted the monitoring of discrepancies and the performance of some field inspections to verify changes and also the ongoing training of EFMS technicians.

The addition of an EMS (Energy Management System) analyst and OMS (Outage Management System) analyst is required to support the EMS replacement project and to

maintain the new EMS after installation (more complex system and periodic upgrade and support is needed). The existing EMS staff level is minimal to maintain current EMS and DMS systems. But the new EMS and OMS system demands additional work such as 1) transmission system network model maintenance/update; 2) software development and upgrade planning; 3) computer network management/security; fire-wall and integration maintenance; 4) report design/maintenance.

Although consultant recommended increasing staff to seven to ensure adequate support of the new EMS, only one Systems Analyst was added for EMS and one for the new OMS system.

PRI – Instrument and Control Division

[redacted]

performed on impending retirements). Hiring constraints leave us little time between actual retirements for adequate comprehensive training. The level of work required is based on a combination of inspection cycles, units of work and a staff with inherent knowledge of the O&M requirements for substation facilities and systems.

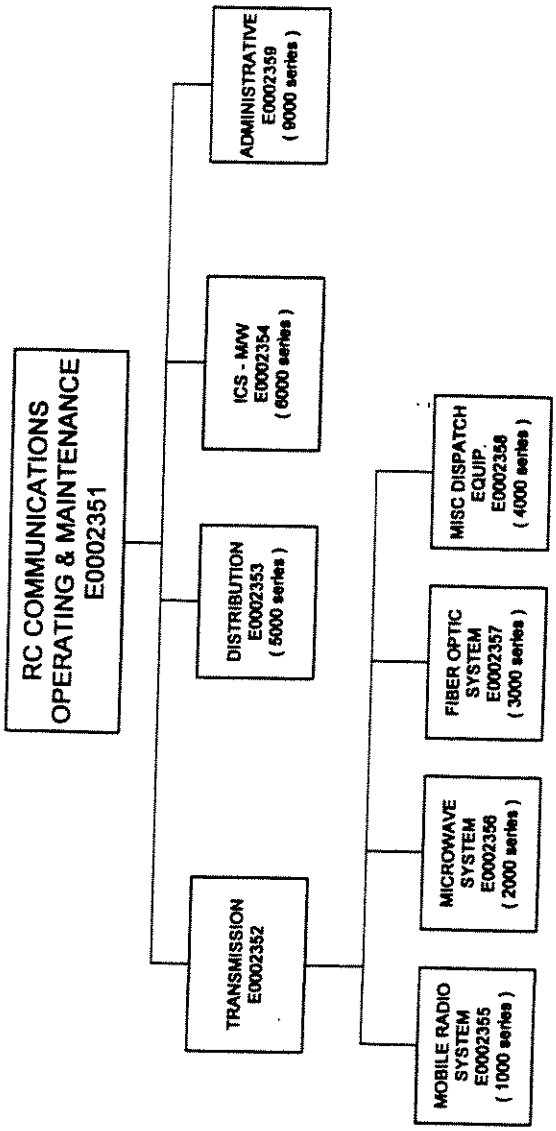
HECO was able to leverage R&D funds with EPRI to develop programs that would address the company's specific needs in optimizing 1) substation maintenance techniques and implementing more effective predictive maintenance tools and procedures; 2) substation and distribution systems and equipment evaluation techniques having a direct impact on the stability and integrity of our system and as a result, on our ability to provide reliable service. EPRI consultants recommended that in order to be fully successful with the implementation of the PDM program, we would need 2 dedicated technicians to perform substation surveys (all technologies) and visual inspections, as well as a program coordinator dedicated to this initiative. The addition of a PDM engineer is for the timely implementation of these very programs and technologies some of which include:

- Use of online monitoring technologies to help focus on visual inspections, infrared technology, oil analysis for breakers/LTC's;
- Set time and work standards for repairs/installations to improve productivity
- Identify/document critical substation equipment;
- Adapt industry maintenance/diagnostic technologies and incorporate those into HECO predictive/preventive programs.
- Identify critical subsystems, equipment, components whose failure can result in catastrophic system failure
- Implement component redesign/reconfigurations to prevent failures.

f. See attachments K-1 through K-6.

RC COMMUNICATION

January 21, 1999



Communications Division Assumptions

- 85% OM
    - Sick leave budgeted is 132 hours total
- 6 techs; 1 com engr; 1 supv
- Nonlabor
    - Tree trimming – 12K
    - Svc contracts for repairs – Harris MW $9500; PWC mobile radio repairs
    - Mat'ls - $28K (radio, MW, fiber optic supplies)
    - ICS (interisland com sys) - $5K (service MW; send parts back for repair)
    - Morning checks - $8K (checks for problems in the systems – check the hotline, see if recorder is recording; check alarms; change tapes
- Work is based on baseline maintenance schedule (see attached); spread out between prev/pred/corr

why not go thru veg mgt.

Operation/Maintenance	Total	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Man days (BU)	12480	1008	960	1104	1008	1056	1056	1008	1104	1056	1008	1056	1056
Holidays (BU)	-576	0	-48	-48	0	-48	-48	-48	-48	-48	-48	-96	-96
Vacation (BU)	-856	-72	-72	-71	-71	-71	-71	-71	-71	-71	-71	-72	-72
Sick/Others	-128	-10	-10	-11	-11	-11	-11	-11	-11	-11	-11	-10	-10
Available O/M	**10920**	**926**	**830**	**974**	**926**	**926**	**926**	**878**	**974**	**926**	**878**	**878**	**878**
Power Plant (P)	-172	0	-60	-26	0	0	0	-60	-26	0	0	0	0
Power Plant (C)	-64	-16	0	0	0	0	-16	-16	0	0	0	-8	-8
Transmission -(P)	-6148	-514	-514	-512	-512	-512	-512	-512	-512	-512	-512	-512	-512
Radio 1576 (P) 982('C)													
Micro 710 (P) 350('C)													
Fiber 468(P) 212('C)													
A. Eq 3114(P) 653('C)													
Transmission (C)	-2253	-188	-188	-187	-188	-188	-187	-188	-187	-188	-188	-188	-188
Dispatch Monitor	-228	-19	-19	-19	-19	-19	-19	-19	-19	-19	-19	-19	-19
Distribution(P&C)	-192	-16	-16	-16	-16	-16	-16	-16	-16	-16	-16	-16	-16
Safety	-96	-12	-7	-7	-7	-7	-8	-7	-12	-7	-7	-8	-7
ICS	-60	-9	-9	-9	-9	-9	-9	-9	-9	-9	-9	-9	-9
Available for projects	1707	152	17	198	175	175	159	51	193	175	127	118	119
O/M Percentage	86.29%												
Available for projects	13.71%												

Operation/Maintenance	Total	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Man days (CE)	2080	168	160	184	168	176	176	168	184	176	168	176	176
Holidays	-104	-8	-8	-8	0	-8	-8	-8	-8	-8	-8	-16	-16
Vacation	-104	-8	-8	-8	-8	-8	-24	-8	-8	-8	8	-16	-8
Sick/Others	-12	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Available O/M	**1860**	**151**	**143**	**167**	**159**	**159**	**143**	**151**	**167**	**159**	**167**	**143**	**151**
Operate SS Eq	-1416	-118	-118	-118	-118	-118	-118	-118	-118	-118	-118	-118	-118
ICS(Interisland Microwave)	-264	-22	-22	-22	-22	-22	-22	-22	-22	-22	-22	-22	-22
Safety	-12	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
ICS	-132	-11	-11	-11	-11	-11	-11	-11	-11	-11	-11	-11	-11
Available for projects	36	-1	-9	15	7	7	-9	-1	15	7	15	-9	-1

Operation/Maintenance	Total	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Man days (Supv)	2080	168	160	184	168	176	176	168	184	176	168	176	176
Holidays	-104	-8	-8	-8	0	-8	-8	-8	-8	-8	-8	-16	-16
Vacation	-208	-8	-40	-24	-24	-8	-16	-8	-8	-48	-8	-8	-8
Sick/Others	-16	-1	-2	-2	-2	-2	-1	-1	-1	-1	-1	-1	-1
Available O/M	**1752**	**151**	**110**	**150**	**142**	**158**	**151**	**151**	**167**	**119**	**151**	**151**	**151**
Operate SS Eq	-1740	-145	-145	-145	-145	-145	-145	-145	-145	-145	-145	-145	-145
Safety	-12	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Available for projects	0	5	-36	4	-4	12	5	5	21	-27	5	5	5

Operation/Maintenance	Total	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Man days (CE)	2080	168	160	184	168	176	176	168	184	176	168	176	176
Holidays	-104	-8	-8	-8	0	-8	-8	-8	-8	-8	-8	-16	-16
Vacation	-104	-8	-8	-8	-8	-8	-24	-8	-8	-8	8	-16	-8
Sick/Others	-12	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Available O/M	**1860**	**151**	**143**	**167**	**159**	**159**	**143**	**151**	**167**	**159**	**167**	**143**	**151**
Operate SS Eq	-1416	-118	-118	-118	-118	-118	-118	-118	-118	-118	-118	-118	-118
ICS(Interisland Microwave)	-264	-22	-22	-22	-22	-22	-22	-22	-22	-22	-22	-22	-22
Safety	-12	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
ICS	-132	-11	-11	-11	-11	-11	-11	-11	-11	-11	-11	-11	-11
Available for projects	36	-1	-9	15	7	7	-9	-1	15	7	15	-9	-1

RADIO PLANNED WORK

Equipment	Units in System	Maint - frequency (Mo.)	Times / yr	Man hr/per unit	Plan Work	Plan Mh	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	
Mobile Radio - FCC	340	12	1	2	340	680	60	48	60	60	60	60	60	60	60	64	44	44	680
Portable Radio - FCC	120	12	1	1.5	120	180	30	30	30	30	30	30							180
RCC Console	8	12	1	12	8	96			96										96
150 Mhz Base	18	4	3	5	54	270		90				90				90			270
450 Base	8	4	3	4	24	96		32				32				32			96
450 Base	2	12	1	3	2	6		6											6
800 Mhz PP Radio	6	12	1	6	6	36	36												36
900 Mhz	3	12	1	4	3	12				12									12
900 Mhz	10	12	1	4	10	40				40									40
Mobile - install	308	As Req		6	20	120		18	18		18	12	18		18		18		120
Mobile - removal	308	As Req		2	20	40		5	5		5	5	5		5	5	5		40
Total	1131	92	13	49.5	607	**1576**	**126**	**229**	**209**	**142**	**113**	**229**	**83**	**60**	**83**	**191**	**67**	**44**	**1576**

2005 Budget worksheet - Radior2.xls

4/5/2004

RADIO BREAKDOWN WORK

Equipment	Estimated Units	Maint - frequency (Mo.)	Times / yr	Man hr per unit	Planned Work	Planned Mh
Mobile Radio	150			4	135	540
Portable Radio	80			4	45	180
RCC Console	30			5	20	100
150 Mhz Base	18			5	18	90
450 Base	8			4	8	32
800 Mhz PP Radio	4			4	4	16
900 Mhz Mas Radio	4			6	4	24
Total	294		0	32	234	**982**

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RADIO UNITS

	Mobile	Portables	Radio 800/900	Radio Console	Radio Mot Rptr	Radio Mot Base	Radio GE Base	MDS 450 Mhz
WARD	340	120	1	8	1		2	
TRIPLER						1	1	
WAIAU								
PM			4			2		
WAHIAWA					1			
KAHE PT			1				2	
KAHE PP							1	
MOKULEIA					1		2	
LAIE					1	1	1	
MALAE					1		2	
KOKOHEAD					1	1	1	
WAIAU PP			1				1	
HONOLULU PP			1					
SHOP			1					
KOOLAU								1
POHAKAPU								1
LEEWARD DA			13					
SUB TOTAL	340	120	22	8	6	5	13	2
TOTAL								
	Mobile	Portables	Radio 800/900	Radio Console	Radio Mot Repeater	Radio Mot Base	Radio GE Base	MDS 450 Mhz

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MICROWAVE PLANNED WORK

Equipment	Units in System	Maint - frequency (Mo.)	Times / yr	Man hr per unit	Plan Work	Plan Mh	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	
6 Ghz Constellation(A)	40	12	1	3.5	40	140	140												140
6 Ghz Constellation(Q)	40	3	3	2	120	240				80			80			80			240
6 Ghz ICS (A)	6	12	1	4	6	24	24												24
6 Ghz ICS (Q)	6	3	3	2	18	36				12			12			12			36
2 Ghz (A)	4	12	1	4	4	16		16											16
2 Ghz (Q)	4	3	3	2	12	24					8			8			8		24
10 Ghz DMC (A)	8	12	1	4	8	32		32											32
10 Ghz DMC (Q)	8	3	3	2.5	24	60					20			20			20		60
10 Ghz Harris(A)	12	12	1	4	12	48		48											48
10 Ghz Harris (Q)	12	3	3	2.5	36	90					30			30			30		90
						710													710
Total							164	96	0	92	58	0	92	58	0	92	58	0	710

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MICROWAVE BREAKDOWN WORK

Equipment	Estimated Units	Maint - frequency (Mo.)	Times / yr	Man hr per unit	Planned Work	Planned Mh		
6 Ghz Constellation	40			5	25	125		
6 Ghz ICS	6			12	7	84		
2 Ghz	4			7	3	21		
10 Ghz DMC	8			6	10	60		
10 Ghz Harris	12			6	10	60		
Total	70			36	55	350		

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MICROWAVE UNITS

	Microwave Constellation Units	Microwave Rockwell 6 Ghz	Microwave Harris-ICS 6 Ghz	Microwave Harris 10 Ghz	Microwave DMC 10 Ghz	Microwave Motorola 2 Ghz	
WARD	6		2	3			
TRIPLER	8			4			
WAIAU	4						
PM	8		4	2	4		
CIP	4						
KAHE PT	4			2			
KAHE SS				2			
KOOLAU	2					2	
PUKELE	2						
HALAWA				2			
KALAELOA				2			
MAKALAPA					2		
EWA NUI					2		
MALAE						2	
WAHIAWA	2						
SUB TOTAL	40	0	6	12	8	4	
TOTAL	72						
	Microwave Constellation Units	Microwave Rockwell 6 Ghz	Microwave Harris-ICS 6 Ghz	Microwave Harris 10 Ghz	Microwave DMC 10 Ghz	Microwave Motorola 2 Ghz	

ASSOCIATED EQUIPMENT PLANNED WORK

Equipment	Units in System	Maint - frequency (Mo.)	Times / yr	Man hr per unit	Planned Work	Planned Mh	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Mux - Focus	220	12	1	2	220	440						146	146	148					440
Mux - Focus lvl chk	220	6	1	0.5	220	110	110												110
Mux - Focus Monthly link	29	1	12	0.6	40	24	2	2	2	2	2	2	2	2	2	2	2	2	24
Mux-Granger	70	12	1	2.5	70	175					120	55							175
Mux -Imux est	20	12	1	2	20	40					20	20							40
Mux- RFL 9000	24	12	1	2	24	48								48					48
					594	**837**	**112**	**2**	**2**	**2**	**142**	**223**	**148**	**198**	**2**	**2**	**2**	**2**	**837**
SOC Data link	50	12	1	4	50	200	50	50	50	50									200
																			0
Microwave Antenna	39	12	1	7	39	273							150	123					273
Radio Antenna	18	12	1	4	18	72							36	36					72
Emg Gen refurbish	7	12	1	6	7	42								42					42
Battery & Charger Banks	19	3	4	5	76	380		127				126				127			380
Power line carrier	3	12	2	1.6	9	14.4	14												14
Permissive Trip	66	6	2	5	132	660			330						330				660
Telephone Sentry	13	4	3	2.5	52	130		44				43				43			130
Test equipment Cal	24	12	1	4	24	96											48	48	96
As Built, Inventory, communication improvements, assist others						410	35	35	35	35	35	35	35	35	35	35	35	25	410
																			0
						3114.4	**211**	**258**	**417**	**87**	**177**	**427**	**369**	**434**	**367**	**207**	**85**	**75**	**3114**
Power Plant																			
System/Generation HL	27	12	1	6	27	**162**									162				
Distribution																			
Telemetry	10	12	1	6	10	**60**	60												60
CCTV, INTERCOM	2	12	1	2	2	4		4											4

ASS .ATED EQUIPMENT BREAKDOWN WORK

Equipment	Units in System	Maint - frequency (Mo.)	Times / yr	Man hr per unit	Planned Work	Planned Mh
Mux - Focus	220			3	50	150
Mux-Granger	70			3	15	45
Mux -Imux est	20			2	5	10
Mux- RFL 9000	24			5	2	10
System/Gen Hotline	27			6	8	48
SOC Data link	50			3	20	60
Telemetry	10		2	6	2	12
Microwave Antenna	39			12	2	24
Radio Antenna						
Emergency Generator	7			6	12	72
Battery & Charger Banks	19			7	3	21
Power Line Carrier	3			6	1	6
Permissive Trip	66			6	12	72
Telephone Sentry	14			3	5	15
CCTV, INTERCOM	2			6	2	12
Test equipment Cal	24	12	1	4	24	96
						653
			1			

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ASSOCIATED EQUIPMENT UNITS

	Mux - Focus	Mux Granger	Imux	RFL9000	Batteries	Gen 5/7/2003	Sys 5/7/2003	6745	FIBER	PLC	cctv
Total	212	70	20		19	15	12				
AES				2					1		
AIRPORT SW STA				2				2			
AIRPORT SUB				2				2			
ARCHER								2			
CIP			2	2				2			
TRIPLER											
WAIAU								10			
EWA NUI				2				4			
HALAWA								7			
IWILEI								3			
KAHE PT											
KAHE SS								6			
CCTV, INTERCOM	2										
KALAELOA								1	1		
KOOLAU								11			
Test equipment Cal	24	12	1	4	24						
MAKALAPA								4		1	
MALAE											
PM											
PUKELE								4			
SCHOOL			1					2			
WAHIAWA								2			
WAIAU								10			
AES PP						1	1				
HONO PP						1	1				
H-POWER -FUTURE						1	1				
KAHE PP						3	3				
KALAELOA PP						2	1				
WAIAU PP						5	3				
WARD AVE INC SPARE						2	2				
PUALOA										1	
KUAHUA										2	
SUB TOTAL	238	82	24	14	43	15	12	72	2	4	
TOTAL	**506**										

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Fiber Optic Planned

Equipment	Units in System	Maint - frequency (Mo.)	Times / yr	Man hr per unit	Planned Work	Planned Mh
Fiber Opt Radio	26	6	2	4	52	208
Sonet	10	6	2	4	20	80
Fiber link check	30	12	1	6	30	180
						468

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Fiber Optic Breakdown

Equipment	Breakdown	Maint - frequency (Mo.)	Times / yr	Man hr per unit		Planned Mh
Fiber Opt Radio	6			6		36
Sonet	8			4		32
Fiber link	24			6		144
						212

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Fiber Optic Units

	Fiber Optic Radio Units	Sonet	Link
WARD	2	2	1
ARCHER	4		4
SCHOOL	4		2
IWILEI	4		2
AIRPORT SW STA	4		2
MAKALAPA	4		2
WAIAU	4	2	3
EWA NUI		2	2
CEIP		2	2
KAHE		2	4
TOTAL	26	10	24

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2/11/2004 » budget manager: 2 Resource Leveling-Project (... 8:14AM

_RA	_LbrClass	_EE	_Proj	Project	ProjMgrOrEngr	FY05
PRC	R_COM...	*Sup...	*Supply	Labor Supply		12,480
PRC	R_COM...	107	NPRZZZZZ	System Oper...		-1,488
PRC	R_COM...	150	MOyadom...	Temp Proj M...	Oyadoma, M	0
PRC	R_COM...	150	MOyadom...	Temp Proj M...	Oyadoma, M	0
PRC	R_COM...	150	MOyadom...	Temp Proj M...	Oyadoma, M	0
PRC	R_COM...	150	NPRZZZZZ	System Oper...		-10,665
PRC	R_COM...	150	P0000280	Makalapa-Ku...	Wong, K	-976
PRC	R_COM...	150	P0000281	Makalapa-Pu...	Wong, K	-654
PRC	R_COM...	150	P0000508	PM-Makalapa...	Hayakaw, W	0
PRC	R_COM...	150	P0000509	PM-Ewa Nui ...	Hayakaw, W	0
PRC	R_COM...	150	P0000527	Facilities Atta...	Yonamin, K	-48
PRC	R_COM...	150	P0000564	W9 DCS Pro...	Yoshida, A	-40
PRC	R_COM...	150	P0000565	W10 DCS Pr...	Yoshida, A	-40
PRC	R_COM...	150	P0000713	Dispatch Cen...	Naito, C	-384
PRC	R_COM...	150	P0000716	Telecomm Ex...	Naito, C	0

2/11/2004 » budget manager: 2 Resource Leveling-Project (... 8:14AM

_RA	_LbrClass	_EE	_Proj	Project	ProjMgrOrEngr	FY05
PRC	R_COM...	150	P0000717	EMS Replace...	Naito, C	-12
PRC	R_COM...	150	P0000732	Gen Ctrl Unit ...	Oyadoma, M	-320
PRC	R_COM...	150	P0000733	Trns Sub RT...	Friel, C	-240
PRC	R_COM...	150	P0000734	RTU Wide Ar...	Oyadoma, M	0
PRC	R_COM...	150	P0000748	Barbers Point...	Fong, K	0
PRC	R_COM...	150	P0000835	Comm Links ...	Oyadoma, M	-340
PRC	R_COM...	150	P0000837	Makalapa 46...	Chong, R	-1
PRC	R_COM...	150	P0000839	Comm. Links ...	Oyadoma, M	0
PRC	R_COM...	150	P0000864	Iwi 46 kV Sub...	Oshiro, E	0
PRC	R_COM...	150	P1470000	Minor Trans ...	Lai, D	-80
PRC	R_COM...	150	P1480000	Minor Dist Su...	Tamayo, R	-20
PRC	R_COM...	150	P1500000	Misc CM Fac-...	Lau, D	-504
PRC	R_COM...	150	P1505000	Other Misc C...	Lau, D	-120
PRC	R_COM...	150	P6740000	Iwilei Ntwk Bk...	Arakaki, D	0
PRC	R_COM...	150	P7270000	N Shore Auto...	Shin, D	0
PRC	R_COM...	150	P8290000	Tripler Wahia...	Arakaki, G	0
PRC	R_COM...	150	P8470000	Koolau/Triple...	Arakaki, G	0
PRC	R_COM...	150	P9028000	Mobile Radio ...	Arakaki, G	-1,440
PRC	R_COM...	150	P9243000	450MHZZ Ra...	Oyadoma, M	0
PRC	R_COM...	150	P9262000	Malae-Koolau...	Shin, D	-950
PRC	R_COM...	150	P9487000	Honolulu Spur	Hayakaw, W	0
PRC	R_COM...	150	P9511000	Generation H...	Hayakaw, W	0
PRC	R_COM...	150	P9544000	FO Tank Lev...	Fukuda, P	0
PRC	R_COM...					-5,842
						-6,279

*ENTER: Direct RA Cost

*RA #	*Act #	Line Item	*Loc #	*Ind #	*Project #	*EE #	*Labor Class #	FY05	Jan 05	Feb 05	Mar 05	Apr 05	May 05	Jun 05	Jul 05	Aug 05	Sep 05
PRC	*Supply	Budget Analyst Count/Available Hours	*Supply	*Supply	*Supply	*Supply	R_COMENG	12	1	1	1	1	1	1	1	1	1
								$2,080.00	$168.00	$160.00	$184.00	$168.00	$176.00	$176.00	$168.00	$184.00	$176.00
PRC	*Supply	Budget Analyst Count/Available Hours	*Supply	*Supply	*Supply	*Supply	R_COMSUP	12	1	1	1	1	1	1	1	1	1
								$2,080.00	$168.00	$160.00	$184.00	$168.00	$176.00	$176.00	$168.00	$184.00	$176.00
PRC	*Supply	Budget Analyst Count/Available Hours	*Supply	*Supply	*Supply	*Supply	R_COMTEC	72	6	6	6	6	6	6	6	6	6
								$12,480.00	$1,008.00	$960.00	$1,104.00	$1,008.00	$1,056.00	$1,056.00	$1,008.00	$1,104.00	$1,056.00
PRC	098	Holiday - CE	PHE	ND	NPRZZZZZ	107	R_COMENG	96	0	8	8	0	8	8	8	8	8
								$3,554.88	$0.00	$296.24	$296.24	$0.00	$296.24	$296.24	$296.24	$296.24	$296.24
PRC	098	Sick - CE	PHE	ND	NPRZZZZZ	107	R_COMENG	12	1	1	1	1	1	1	1	1	1
								$444.36	$37.03	$37.03	$37.03	$37.03	$37.03	$37.03	$37.03	$37.03	$37.03
PRC	098	Vacation-CE	PHE	ND	NPRZZZZZ	107	R_COMENG	128	8	8	8	8	8	24	8	8	8
								$4,739.84	$296.24	$296.24	$296.24	$296.24	$296.24	$888.72	$296.24	$296.24	$296.24
PRC	098	Holiday - Supv	PHE	ND	NPRZZZZZ	107	R_COMSUP	96	0	8	8	0	8	8	8	8	8
								$3,454.08	$0.00	$287.84	$287.84	$0.00	$287.84	$287.84	$287.84	$287.84	$287.84
PRC	098	Sick -Supv	PHE	ND	NPRZZZZZ	107	R_COMSUP	16	1	1	1	1	1	1	1	1	1
								$575.68	$47.97	$47.97	$47.97	$47.97	$47.97	$47.97	$47.97	$47.97	$47.97
PRC	098	Vacation - Supv	PHE	ND	NPRZZZZZ	107	R_COMSUP	208	8	40	24	24	8	16	8	8	48
								$7,483.84	$287.84	$1,439.20	$863.52	$863.52	$287.84	$575.68	$287.84	$287.84	$1,727.04
PRC	098	Holiday - BU	PHE	ND	NPRZZZZZ	107	R_COMTEC	576	0	48	48	0	48	48	48	48	48
								$19,936.36	$0.00	$1,661.28	$1,661.28	$0.00	$1,661.28	$1,661.28	$1,661.28	$1,661.28	$1,661.28
PRC	098	Sick - BU	PHE	ND	NPRZZZZZ	107	R_COMTEC	128	11	11	11	11	11	11	11	11	11
								$4,430.08	$369.17	$369.17	$369.17	$369.17	$369.17	$369.17	$369.17	$369.17	$369.17
PRC	098	Vacation - BU	PHE	ND	NPRZZZZZ	107	R_COMTEC	856	71	71	71	71	71	71	71	71	71
								$29,626.16	$2,468.85	$2,468.85	$2,468.85	$2,468.85	$2,468.85	$2,468.85	$2,468.85	$2,468.85	$2,468.85
PRC	266	PP-Misc Eq - Preventive	KST	NE	NPRZZZZZ	150	R_COMTEC	172	0	60	28	0	0	0	0	60	28
								$5,962.92	$0.00	$2,078.60	$899.88	$0.00	$0.00	$0.00	$0.00	$2,078.60	$899.88
PRC	266	PP-Misc Eq-Corrective	KST	NE	NPRZZZZZ	150	R_COMTEC	64	16	0	0	0	0	16	16	0	0
								$2,215.04	$553.76	$0.00	$0.00	$0.00	$0.00	$553.76	$553.76	$0.00	$0.00
PRC	333	Operate SS Eq.-CE	OAH	NE	NPRZZZZZ	150	R_COMENG	1,416	118	118	118	118	118	118	118	118	118
								$52,434.48	$4,369.54	$4,369.54	$4,369.54	$4,369.54	$4,369.54	$4,369.54	$4,369.54	$4,369.54	$4,369.54
PRC	333	Operate SS Eq.	OAH	NE	NPRZZZZZ	150	R_COMSUP	1,736	145	145	145	145	145	145	145	145	145
								$62,461.28	$5,205.11	$5,205.11	$5,205.11	$5,205.11	$5,205.11	$5,205.11	$5,205.11	$5,205.11	$5,205.11
PRC	333	Materials/Tools	OAH	NE	NPRZZZZZ	201		1,000	83	83	83	83	83	83	83	83	83
								$1,044.48	$87.04	$87.04	$87.04	$87.04	$87.04	$87.04	$87.04	$87.04	$87.04
PRC	333	FCC License - M/W	OAH	NE	NPRZZZZZ	501		900	0	0	0	300	600	0	0	0	0
								$900.00	$0.00	$0.00	$0.00	$300.00	$600.00	$0.00	$0.00	$0.00	$0.00
PRC	333	Tree Trimming/	OAH	NE	NPRZZZZZ	501		12,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
								$12,000.00	$1,000.00	$1,000.00	$1,000.00	$1,000.00	$1,000.00	$1,000.00	$1,000.00	$1,000.00	$1,000.00
PRC	348	Maint SS Eq Preventive	OAH	NE	NPRZZZZZ	150	R_COMTEC	5,844	487	487	487	487	487	487	487	487	487
								$202,280.84	$16,855.07	$16,855.07	$16,855.07	$16,855.07	$16,855.07	$16,855.07	$16,855.07	$16,855.07	$16,855.07
PRC	348	Training	OAH	NE	NPRZZZZZ	150	R_COMTEC	304	25	25	25	25	25	25	25	25	25
								$10,521.44	$876.79	$876.79	$876.79	$876.79	$876.79	$876.79	$876.79	$876.79	$876.79
PRC	348	Supplies - Radio & Microwave & Fiber Optic	OAH	NE	NPRZZZZZ	201		7,000	583	583	583	583	583	583	583	583	583
								$7,000.00	$583.33	$583.33	$583.33	$583.33	$583.33	$583.33	$583.33	$583.33	$583.33
PRC	348	Software	OAH	NE	NPRZZZZZ	462		2,000	167	167	167	167	167	167	167	167	167
								$2,000.00	$166.67	$166.67	$166.67	$166.67	$166.67	$166.67	$166.67	$166.67	$166.67
PRC	350	Maint SS Eq Corrective	OAH	NE	NPRZZZZZ	150	R_COMTEC	2,250	188	188	187	188	188	187	188	187	188
								$77,872.50	$6,489.37	$6,489.37	$6,489.37	$6,489.36	$6,489.36	$6,489.37	$6,489.36	$6,489.37	$6,489.38
PRC	350	Supplies - Radio & Microwave & Fiber Optic	OAH	NE	NPRZZZZZ	201		28,000	2,333	2,333	2,333	2,333	2,333	2,333	2,333	2,333	2,333
								$28,000.00	$2,333.33	$2,333.33	$2,333.33	$2,333.33	$2,333.33	$2,333.33	$2,333.33	$2,333.33	$2,333.33
PRC	350	Maint SS Eq Corrective-Contract Svce	OAH	NE	NPRZZZZZ	501		9,500	792	792	792	792	792	792	792	792	792
								$9,922.56	$826.88	$826.88	$826.88	$826.88	$826.88	$826.88	$826.88	$826.88	$826.88
PRC	376	Dispatch Monitor -Morning checks	OAH	NE	NPRZZZZZ	150	R_COMTEC	228	19	19	19	19	19	19	19	19	19
								$7,821.86	$651.82	$651.82	$651.82	$651.82	$651.82	$651.82	$651.82	$651.82	$651.82
PRC	485	Dist Maint-Prev. Tel Sentry	OAH	NE	NPRZZZZZ	150	R_COMTEC	126	11	11	11	11	11	11	11	11	11
								$4,360.86	$363.41	$363.41	$363.41	$363.41	$363.41	$363.41	$363.41	$363.41	$363.41

Oct 05	Nov 05	Dec 05
1	1	1
68.00	$176.00	$176.00
1	1	1
68.00	$176.00	$176.00
6	6	6
08.00	$1,056.00	$1,056.00
8	16	16
96.24	$592.48	$592.48
1	1	1
37.03	$37.03	$37.03
8	16	16
96.24	$592.48	$592.48
8	16	16
87.84	$575.68	$575.68
1	1	1
47.97	$47.97	$47.97
8	8	8
87.84	$287.84	$287.84
48	96	96
61.28	$3,322.56	$3,322.56
11	11	11
69.17	$369.17	$369.17
71	71	71
68.85	$2,468.85	$2,468.85
0	8	0
$0.00	$0.00	$0.00
0	8	8
$0.00	$276.88	$276.88
118	118	118
69.54	$4,369.54	$4,369.54
145	145	145
05.11	$5,205.11	$5,205.11
83	83	83
87.04	$87.04	$87.04
0	0	0
$0.00	$0.00	$0.00
1,000	1,000	1,000
00.00	$1,000.00	$1,000.00
487	487	487
55.07	$16,855.07	$16,855.07
25	25	25
76.79	$876.79	$876.79
583	583	583
83.33	$583.33	$583.33
167	167	167
66.67	$166.67	$166.67
188	188	188
89.36	$6,489.36	$6,489.38
2,333	2,333	2,333
33.33	$2,333.33	$2,333.33
792	792	792
26.88	$826.88	$826.88
19	19	19
51.82	$651.82	$651.82
11	11	11
63.41	$363.41	$363.41

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*ENTER: Direct RA Cost

7:11AM

*RA #	*Act #	Line Item	*Loc #	*Ind #	*Project #	*EE #
PRC	487	Dist Maint - Corrective	OAH	NE	NPRZZZZZ	150
PRC	487	Supplies	OAH	NE	NPRZZZZZ	201
PRC	700	Office Supplies	OAH	NC	NPRZZZZZ	201
PRC	700	Emergency Generator (Misc Veh & Equip)	OAH	NC	NPRZZZZZ	301
PRC	700	Light truck (Van)	OAH	NC	NPRZZZZZ	301
PRC	700	Supv Vehicles	OAH	NC	NPRZZZZZ	301
PRC	700	Page, Cell, Lease line	OAH	NC	NPRZZZZZ	501
PRC	789	Training	OAH	NC	NPRZZZZZ	150
PRC	789	Training Computer	OAH	NC	NPRZZZZZ	150
PRC	797	Safety Meeting - CE	OAH	NC	NPRZZZZZ	150
PRC	797	Safety Meeting	OAH	NC	NPRZZZZZ	150
PRC	797	Safety Meeting - BU	OAH	NC	NPRZZZZZ	150
PRC	915	ICS - Trouble - CE	PHE	NN	NPRZZZZZ	150
PRC	915	ICS-Trouble	PHE	NN	NPRZZZZZ	150
PRC	915	ICS-Outside Service	PHE	NN	NPRZZZZZ	501
PRC	916	ICS - Operate - CE	PHE	NN	NPRZZZZZ	150
PRC	916	ICS - Operate	PHE	NN	NPRZZZZZ	150
PRC	917	ICS - Maintain - CE	PHE	NN	NPRZZZZZ	150
PRC	917	ICS - Maintain	PHE	NN	NPRZZZZZ	150

aber Class #	FY05	Jan 05	Feb 05	Mar 05	Apr 05	May 05	Jun 05	Jul 05	Aug 05	Sep 05	Oct 05	Nov 05	Dec 05
COMTEC	64	5	5	5	5	5	5	5	5	5	5	5	5
	$2,215.04	$184.59	$184.59	$184.59	$184.59	$184.59	$184.59	$184.59	$184.59	$184.59	$184.59	$184.59	$184.59
	12.26200	1.02100	1.02100	1.02100	1.02100	1.02100	1.02100	1.02100	1.02100	1.02100	1.02100	1.02100	1.02100
	$12.25	$1.02	$1.02	$1.02	$1.02	$1.02	$1.02	$1.02	$1.02	$1.02	$1.02	$1.02	$1.02
	1,200	100	100	100	100	100	100	100	100	100	100	100	100
	$1,200.00	$100.00	$100.00	$100.00	$100.00	$100.00	$100.00	$100.00	$100.00	$100.00	$100.00	$100.00	$100.00
	5,500	458	458	458	458	458	458	458	458	458	458	458	458
	$8,250.00	$687.50	$687.50	$687.50	$687.50	$687.50	$687.50	$687.50	$687.50	$687.50	$687.50	$687.50	$687.50
	10,500	875	875	875	875	875	875	875	875	875	875	875	875
	$57,750.00	$4,812.50	$4,812.50	$4,812.50	$4,812.50	$4,812.50	$4,812.50	$4,812.50	$4,812.50	$4,812.50	$4,812.50	$4,812.50	$4,812.50
	2,200	183	183	183	183	183	183	183	183	183	183	183	183
	$6,050.00	$504.17	$504.17	$504.17	$504.17	$504.17	$504.17	$504.17	$504.17	$504.17	$504.17	$504.17	$504.17
	600	50	50	50	50	50	50	50	50	50	50	50	50
	$600.00	$50.00	$50.00	$50.00	$50.00	$50.00	$50.00	$50.00	$50.00	$50.00	$50.00	$50.00	$50.00
COMTEC	80	0	0	0	0	20	20	20	20	0	0	0	0
	$2,758.80	$0.00	$0.00	$0.00	$0.00	$692.20	$692.20	$692.20	$692.20	$0.00	$0.00	$0.00	$0.00
COMTEC	80	7	7	7	7	7	7	7	7	7	7	7	7
	$2,758.80	$230.73	$230.73	$230.73	$230.73	$230.73	$230.73	$230.73	$230.73	$230.73	$230.73	$230.73	$230.73
COMENG	16	1	1	1	1	1	1	1	1	1	1	1	1
	$592.48	$49.37	$49.37	$49.37	$49.37	$49.37	$49.37	$49.37	$49.37	$49.37	$49.37	$49.37	$49.37
COMSUP	16	1	1	1	1	1	1	1	1	1	1	1	1
	$575.68	$47.97	$47.97	$47.97	$47.97	$47.97	$47.97	$47.97	$47.97	$47.97	$47.97	$47.97	$47.97
COMTEC	96	12	7	7	7	7	8	7	12	7	7	8	7
	$3,322.56	$415.32	$242.27	$242.27	$242.27	$242.27	$276.86	$242.27	$415.32	$242.27	$242.27	$276.86	$242.27
COMENG	72	6	6	6	6	6	6	6	6	6	6	6	6
	$2,666.16	$222.18	$222.18	$222.18	$222.18	$222.18	$222.18	$222.18	$222.18	$222.18	$222.18	$222.18	$222.18
COMTEC	36	3	3	3	3	3	3	3	3	3	3	3	3
	$1,245.96	$103.83	$103.83	$103.83	$103.83	$103.83	$103.83	$103.83	$103.83	$103.83	$103.83	$103.83	$103.83
	5,000	417	417	417	417	417	417	417	417	417	417	417	417
	$5,000.00	$416.67	$416.67	$416.67	$416.67	$416.67	$416.67	$416.67	$416.67	$416.67	$416.67	$416.67	$416.67
COMENG	144	12	12	12	12	12	12	12	12	12	12	12	12
	$5,332.32	$444.36	$444.36	$444.36	$444.36	$444.36	$444.36	$444.36	$444.36	$444.36	$444.36	$444.36	$444.36
COMTEC	24	2	2	2	2	2	2	2	2	2	2	2	2
	$830.64	$69.22	$69.22	$69.22	$69.22	$69.22	$69.22	$69.22	$69.22	$69.22	$69.22	$69.22	$69.22
COMENG	48	4	4	4	4	4	4	4	4	4	4	4	4
	$1,777.44	$148.12	$148.12	$148.12	$148.12	$148.12	$148.12	$148.12	$148.12	$148.12	$148.12	$148.12	$148.12
COMTEC	48	4	4	4	4	4	4	4	4	4	4	4	4
	$1,661.28	$138.44	$138.44	$138.44	$138.44	$138.44	$138.44	$138.44	$138.44	$138.44	$138.44	$138.44	$138.44
	100,486.25200	8,218.52100	8,351.52100	8,301.52100	8,511.52100	8,879.52100	8,320.52100	8,295.52100	8,344.52100	8,325.52100	8,259.52100	8,340.52100	8,339.52100
	$682,271.95	$53,839.21	$56,521.72	$56,961.30	$53,988.06	$56,713.98	$57,582.66	$56,803.72	$56,427.61	$57,780.82	$56,357.76	$58,274.85	$56,240.24

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Operations Division Assumptions

- For dispatchers only have so many ST hours available so the rest is made up with overtime
- Only 6 staff
- OT based on historical
- Hours are basically divided by 12, not adjusted for busier months and are assessed to various activities based on trends
- Allows 40 hrs sick per person
- Outside service contracts
    - CJ answering service - $42K
    - Weather Bank – historical weather data through internet - $3K
    - NC McCloskey – Approx. $10K per year
    - Nostradamus – load forecasting software - $7,280
    - AccuWeather – for emergency pagers - $600
    - Pcom – unit commitment software (when to schedule generation plus used for production simulation – cost is shared w/power plant) $8K is our share and may be less if Energy Services comes into the mix
    - ~~Nostradamus load forecasting software~~
    - NC Satellite phone stratus - $32/mo. ($500 annual)

	FY05	Jan 05	Feb 05	Mar 05	Apr 05	May 05	Jun 05	Jul 05	Aug 05	Sep 05	Oct 05	Nov 05	Dec 05
	$29.86	$2.49	$2.49	$2.49	$2.49	$2.49	$2.49	$2.49	$2.49	$2.49	$2.49	$2.49	$2.49
	$1,119,328.08	$93,483.82	$92,864.38	$93,483.82	$93,277.34	$93,483.82	$93,070.86	$93,277.34	$93,070.86	$93,277.34	$93,483.82	$93,277.34	$93,277.34
	$130,537.68	$10,902.22	$10,829.98	$10,902.22	$10,878.14	$10,902.22	$10,854.06	$10,878.14	$10,854.06	$10,878.14	$10,902.22	$10,878.14	$10,878.14
	$174,339.36	$14,560.44	$14,463.96	$14,560.44	$14,528.28	$14,560.44	$14,496.12	$14,528.28	$14,496.12	$14,528.28	$14,560.44	$14,528.28	$14,528.28
	$281,024.64	$23,470.56	$23,315.04	$23,470.56	$23,418.72	$23,470.56	$23,366.88	$23,418.72	$23,366.88	$23,418.72	$23,470.56	$23,418.72	$23,418.72
	$135,231.42	$11,301.43	$11,204.99	$11,301.43	$11,269.29	$11,301.43	$11,237.14	$11,269.29	$11,237.14	$11,269.29	$11,301.43	$11,269.29	$11,269.29
	$149.28	$12.44	$12.44	$12.44	$12.44	$12.44	$12.44	$12.44	$12.44	$12.44	$12.44	$12.44	$12.44
	$17,045.60	$0.00	$1,420.80	$1,420.80	$0.00	$1,420.80	$1,420.80	$1,420.80	$1,420.80	$1,420.80	$1,420.80	$2,841.60	$2,841.60
ave	$13,639.68	$1,136.64	$1,136.64	$1,136.64	$1,136.64	$1,136.64	$1,136.64	$1,136.64	$1,136.64	$1,136.64	$1,136.64	$1,136.64	$1,136.64
n	$34,099.20	$2,841.60	$2,841.60	$2,841.60	$2,841.60	$2,841.60	$2,841.60	$2,841.60	$2,841.60	$2,841.60	$2,841.60	$2,841.60	$2,841.60
day	$22,164.48	$1,704.96	$1,704.96	$0.00	$1,704.96	$1,704.96	$1,704.96	$1,704.96	$1,704.96	$1,704.96	$1,704.96	$3,409.92	$3,409.92
Leave	$13,639.68	$1,136.64	$1,136.64	$1,136.64	$1,136.64	$1,136.64	$1,136.64	$1,136.64	$1,136.64	$1,136.64	$1,136.64	$1,136.64	$1,136.64
ation	$27,279.36	$2,557.44	$1,704.96	$2,557.44	$2,557.44	$1,704.96	$2,557.44	$1,704.96	$2,557.44	$2,557.44	$1,704.96	$2,557.44	$2,557.44
	$4,560.00	$0.00	$380.00	$380.00	$0.00	$380.00	$380.00	$380.00	$380.00	$380.00	$380.00	$760.00	$760.00
ave	$1,140.00	$95.00	$95.00	$95.00	$95.00	$95.00	$95.00	$95.00	$95.00	$95.00	$95.00	$95.00	$95.00
n	$7,600.00	$0.00	$1,900.00	$0.00	$0.00	$0.00	$1,900.00	$0.00	$1,900.00	$0.00	$0.00	$0.00	$1,900.00
	$18,590.40	$1,460.80	$1,460.80	$0.00	$1,460.80	$1,460.80	$1,460.80	$1,460.80	$1,460.80	$1,460.80	$1,460.80	$2,921.60	$2,921.60
ave	$8,764.80	$730.40	$730.40	$730.40	$730.40	$730.40	$730.40	$730.40	$730.40	$730.40	$730.40	$730.40	$730.40
n	$31,553.28	$2,629.44	$2,629.44	$2,629.44	$2,629.44	$2,629.44	$2,629.44	$2,629.44	$2,629.44	$2,629.44	$2,629.44	$2,629.44	$2,629.44
tcher/Holiday	$23,556.00	$1,812.00	$1,812.00	$0.00	$1,812.00	$1,812.00	$1,812.00	$1,812.00	$1,812.00	$1,812.00	$1,812.00	$3,624.00	$3,624.00
tcher/Sick	$10,872.00	$906.00	$906.00	$906.00	$906.00	$906.00	$906.00	$906.00	$906.00	$906.00	$906.00	$906.00	$906.00
tcher/Vacat	$43,488.00	$3,624.00	$3,624.00	$3,624.00	$3,624.00	$3,624.00	$3,624.00	$3,624.00	$3,624.00	$3,624.00	$3,624.00	$3,624.00	$3,624.00
nce	$8,000.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$8,000.00
Gen Resou	$65,736.00	$5,478.00	$5,478.00	$5,478.00	$5,478.00	$5,478.00	$5,478.00	$5,478.00	$5,478.00	$5,478.00	$5,478.00	$5,478.00	$5,478.00
	$5,808.00	$484.00	$484.00	$484.00	$484.00	$484.00	$484.00	$484.00	$484.00	$484.00	$484.00	$484.00	$484.00
	$1,200.00	$100.00	$100.00	$100.00	$100.00	$100.00	$100.00	$100.00	$100.00	$100.00	$100.00	$100.00	$100.00
rans	$323,942.40	$26,995.20	$26,995.20	$26,995.20	$26,995.20	$26,995.20	$26,995.20	$26,995.20	$26,995.20	$26,995.20	$26,995.20	$26,995.20	$26,995.20
ans	$36,480.00	$3,040.00	$3,040.00	$3,040.00	$3,040.00	$3,040.00	$3,040.00	$3,040.00	$3,040.00	$3,040.00	$3,040.00	$3,040.00	$3,040.00
tcher/Gen/	$217,440.00	$18,120.00	$18,120.00	$18,120.00	$18,120.00	$18,120.00	$18,120.00	$18,120.00	$18,120.00	$18,120.00	$18,120.00	$18,120.00	$18,120.00
ce	$626.69	$52.22	$52.22	$52.22	$52.22	$52.22	$52.22	$52.22	$52.22	$52.22	$52.22	$52.22	$52.22
rvice	$4,386.82	$365.57	$365.57	$365.57	$365.57	$365.57	$365.57	$365.57	$365.57	$365.57	$365.57	$365.57	$365.57
ans	$127,089.60	$10,590.80	$10,590.80	$10,590.80	$10,590.80	$10,590.80	$10,590.80	$10,590.80	$10,590.80	$10,590.80	$10,590.80	$10,590.80	$10,590.80
erence	$8,000.00	$0.00	$0.00	$0.00	$0.00	$4,000.00	$0.00	$0.00	$0.00	$4,000.00	$0.00	$0.00	$0.00
	$8,524.80	$710.40	$710.40	$710.40	$710.40	$710.40	$710.40	$710.40	$710.40	$710.40	$710.40	$710.40	$710.40
	$404,928.00	$33,744.00	$33,744.00	$33,744.00	$33,744.00	$33,744.00	$33,744.00	$33,744.00	$33,744.00	$33,744.00	$33,744.00	$33,744.00	$33,744.00
	$36,480.00	$3,420.00	$2,280.00	$3,420.00	$3,040.00	$3,420.00	$2,660.00	$3,040.00	$2,660.00	$3,040.00	$3,420.00	$3,040.00	$3,040.00
tcher/Dist	$217,440.00	$18,120.00	$18,120.00	$18,120.00	$18,120.00	$18,120.00	$18,120.00	$18,120.00	$18,120.00	$18,120.00	$18,120.00	$18,120.00	$18,120.00
	$240.00	$20.00	$20.00	$20.00	$20.00	$20.00	$20.00	$20.00	$20.00	$20.00	$20.00	$20.00	$20.00
esting/Cons	$3,500.00	$0.00	$0.00	$0.00	$0.00	$0.00	$1,750.00	$0.00	$0.00	$0.00	$0.00	$1,750.00	$0.00
nter	$42,000.00	$3,500.00	$3,500.00	$3,500.00	$3,500.00	$3,500.00	$3,500.00	$3,500.00	$3,500.00	$3,500.00	$3,500.00	$3,500.00	$3,500.00
	$127,089.60	$10,590.80	$10,590.80	$10,590.80	$10,590.80	$10,590.80	$10,590.80	$10,590.80	$10,590.80	$10,590.80	$10,590.80	$10,590.80	$10,590.80
e Business	$18,240.00	$1,520.00	$1,520.00	$1,520.00	$1,520.00	$1,520.00	$1,520.00	$1,520.00	$1,520.00	$1,520.00	$1,520.00	$1,520.00	$1,520.00
	$8,400.00	$700.00	$700.00	$700.00	$700.00	$700.00	$700.00	$700.00	$700.00	$700.00	$700.00	$700.00	$700.00
	$4,800.00	$400.00	$400.00	$400.00	$400.00	$400.00	$400.00	$400.00	$400.00	$400.00	$400.00	$400.00	$400.00
	$70,800.00	$5,900.00	$5,900.00	$5,900.00	$5,900.00	$5,900.00	$5,900.00	$5,900.00	$5,900.00	$5,900.00	$5,900.00	$5,900.00	$5,900.00
Exercise	$12,000.00	$0.00	$0.00	$0.00	$0.00	$12,000.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
ng	$3,409.92	$284.16	$284.16	$284.16	$284.16	$284.16	$284.16	$284.16	$284.16	$284.16	$284.16	$284.16	$284.16
ining	$3,409.92	$284.16	$284.16	$284.16	$284.16	$284.16	$284.16	$284.16	$284.16	$284.16	$284.16	$284.16	$284.16
g	$1,140.00	$95.00	$95.00	$95.00	$95.00	$95.00	$95.00	$95.00	$95.00	$95.00	$95.00	$95.00	$95.00
g	$3,505.92	$292.16	$292.16	$292.16	$292.16	$292.16	$292.16	$292.16	$292.16	$292.16	$292.16	$292.16	$292.16
atcher/Train	$3,624.00	$302.00	$302.00	$302.00	$302.00	$302.00	$302.00	$302.00	$302.00	$302.00	$302.00	$302.00	$302.00
nse	$3,600.00	$300.00	$300.00	$300.00	$300.00	$300.00	$300.00	$300.00	$300.00	$300.00	$300.00	$300.00	$300.00

*RA #	*Act #	*Loc #	*Ind #	*Project #	*EE #	*Labor Class #	Line Item	FY05	Jan 05	Feb 05	Mar 05	Apr 05	May 05	Jun 05	Jul 05	Aug 05	Sep 05	Oct 05	Nov 05	Dec 05
PRD								$3,890,878.46	$319,776.79	$320,444.99	$316,599.83	$319,050.09	$336,725.11	$323,774.18	$319,996.41	$322,024.18	$324,850.89	$320,725.11	$329,379.45	$337,529.45
								$3,890,878.46	$319,776.79	$320,444.99	$316,599.83	$319,050.09	$336,725.11	$323,774.18	$319,996.41	$322,024.18	$324,850.89	$320,725.11	$329,379.45	$337,529.45

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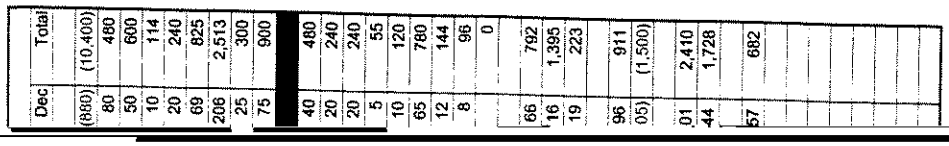
Operating Engineering Division Assumptions

- 5 mappers (4 techs, 1 sr. mapper); 1 Sr. engr.; 6 EMS staff; 1 mapping supv. = 13
- Mapping hours includes capital hours for CID (takes all) and remaining work of SOD/map revisions which is pure O&M; allows 400 hrs OT or 4%
- EMS – there is way more demand in 2005 than supply so the EMS project will probably have to contract work out over and above what can be incorporated with some OT
- Uses 1.1% nonproductive hours per person (includes sick leave, jury duty)
- Nonlabor service contracts and materials
    - Maint. on EMS hardware $4,500/mo. - $54K
    - DSS hardware maint. $1,100/mo. - $13,200
    - DSS software maint. $105K with 2 site visits but the actual may be lower since the 2nd site visit is optional ($80,400)
    - UPS/battery maintenance $19K
    - Mapping supplies – special inks/paper - $4,800
    - Switching diagram material - $6K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Dec
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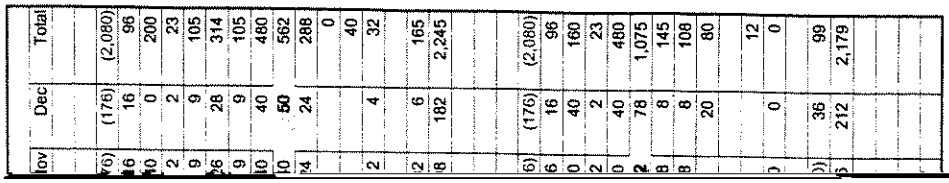
480
600
114
240
825
2,513
300
900
480
240
240
55
120
780
144
96
0
792
1,395
223
911
(1,500)
2,410
1,728
682


Total
Dec
3:33 PM

Total
(8,320)
(4,160)
384
480
92
192
160
46
416
2,268
1,676
1,260
844
416
844
832
458
[redacted]
57
104
1,114
208
270
121
120
0
0
477
6,330
4,462
200
11,553
64
12,544
24,033

		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
	Holidays 2004	8	8	0	8	8	8	8	8	8	8	24	24	120
	Holidays 2005	0	8	8	0	8	8	8	8	8	8	16	16	96
	Available Hrs 2004	176	160	184	176	168	176	176	176	176	168	176	184	2096
	Available Hrs 2005	168	160	184	168	176	176	168	184	176	168	176	176	2080
Vacation	Mappers	50	50	50	50	50	50	50	50	50	50	50	50	600
	EMS Staff	40	40	40	40	40	40	40	40	40	40	40	40	480
	EMS Staff (new)	10	10	20	10	10	20	10	10	20	10	10	20	160
	Map Supv		40	20		40	20		40			40		200
	Sr. Engr 2004	40			40			20		20	40		40	200
	Sr. Engr 2005	20			20			20		20	40		40	160
		2004	**2005**											
	ES	120	120											
	RY	120	120											
	RT	120	120											
	SN	120	120											
	RA	120	120											
		600	600											
	RS	160	160											
	TK	160	160											
	KA	80	80											
	GO	80	80											
		480	480											
	LK	200	200											
	PO	200	160											
		CID				MRO								
		New	Rev		S	M	P	TOTAL						
	March - July 2003	83	501											
	April - July 2003				158	219	17	394						
	Monthly	17	100		40	55	4	99						

PRE

Labor Forecast

	2003	Act-Apr	Forecast-first half 2004	Second-half	2005
Mappers	6	4	5	5	5
Supervivor	1	0	1	1	1
SysAnal	1	1	1	3 * **	3
SysEngr	2	2	2	2 *	2
Eengr	1	1	1	1 *	1
SrEngr	1	1	1	1	1
Total	12	9	11	13	13

* Existing EMS staff level is minimum to maintain existing EMS and DSS systems. Additional support staff required to support EMS replacement project and maintain the new EMS after installation (more complex system and periodic upgrade/support). Additional work: Transmission system network model maintenance/update; Software development and upgrade planning; Computer network management/security; Firewall and integration maintenance; Report design/maintenance.

** Although consultant recommended increasing staff to seven to suppport the new EMS, only one Systems Analyst was added for the EMS and another Systems Analyst was justified for the new OMS system.

_LbrClass	Jan 04	Feb 04	Mar 04	Apr 04	May 04	Jun 04	Jul 04	Aug 04	Sep 04	Oct 04	Nov 04	Dec 04	Jan 05	Feb 05	Mar 05	Apr 05	May 05	Jun 05	Jul 05	Aug 05	Sep 05	Oct 05	Nov 05	Dec 05
R_ENGMAP	4 0	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
R_ENGSRE	1 0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
R_ENGSTF	4 0	4	4	4	4	4	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
R_ENGSUP	0 0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	9 8	11	11	11	11	11	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13

missing Sr. Tech mapping Supervisor

					2005						
eb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
0)	(920)	(840)	(880)	(880)	(840)	(920)	(880)	(840)	(880)	(880)	(10,400)
0	40	0	40	40	40	40	40	40	80	80	480
0	50	50	50	50	50	50	50	50	50	50	600
0	10	10	10	10	10	10	10	10	10	10	114
0	20	20	20	20	20	20	20	20	20	20	240
9	69	69	69	69	69	69	69	69	69	69	825
6	225	206	206	206	206	225	206	206	206	206	2,513
5	25	25	25	25	25	25	25	25	25	25	300
5	75	75	75	75	75	75	75	75	75	75	900
0	40	40	40	40	40	40	40	40	40	40	480
0	20	20	20	20	20	20	20	20	20	20	240
0	20	20	20	20	20	20	20	20	20	20	240
5	5	5	5	5	5	5	5	5	5	5	55
0	10	10	10	10	10	10	10	10	10	10	120
5	65	65	65	65	65	65	65	65	65	65	780
2	12	12	12	12	12	12	12	12	12	12	144
8	8	8	8	8	8	8	8	8	8	8	96
											0
6	66	66	66	66	66	66	66	66	66	66	792
6	116	116	116	116	116	116	116	116	116	116	1,395
9	19	19	19	19	19	19	19	19	19	19	223
3	56	56	56	56	96	56	56	96	96	96	911
5)	(145)	(145)	(145)	(145)	(105)	(145)	(145)	(105)	(105)	(105)	(1,500)
1	201	201	201	201	201	201	201	201	201	201	2,410
4	144	144	144	144	144	144	144	144	144	144	1,728
7	57	57	57	57	57	57	57	57	57	57	682

Labor Class	Line Item	Count	%	Hrs	Act	Loc	Ind	EE	2005 Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
R_ENGSUP	Supply	1			*Supp	*Sup	*Sup	*Suppl	(168)	(160)	(184)	(168)	(176)	(176)	(168)	(184)	(176)	(168)	(176)	(176)	(2,080)
	Holidays	1			098	PHE	ND	107	0	8	8	0	8	8	8	8	8	8	16	16	96
	Vacation				098	PHE	ND	107	0	40	20	0	40	20	0	40	0	0	40	0	200
	Sick	1	1.1%		098	PHE	ND	107	2	2	2	2	2	2	2	2	2	2	2	2	23
	assign MRO - Trans	1	25.0%	0.2	326	OAH	NE	150	9	8	9	9	8	9	9	9	9	8	9	9	105
	assign MRO - Dist	1	75.0%	0.2	456	OAH	NE	150	26	24	28	26	25	26	26	26	26	25	26	28	314
	assign CID	1	100.0%	0.1	456	OAH	NE	150	9	8	9	9	8	9	9	9	9	8	9	9	105
	EFMS Support				456	OAH	NE	150	40	40	40	40	40	40	40	40	40	40	40	40	480
	Dist Maps Support				456	OAH	NE	150	58	40	46	58	40	40	40	40	58	52	40	50	562
	Trans Map Support				326	OAH	NE	150	24	24	24	24	24	24	24	24	24	24	24	24	288
	Business Plan/Act				720	OAH	NC	150													0
	Performance Appraisal				785	OAH	NC	150						20	20						40
	Training				789	OAH	NC	150	2	2	4	2	2	4	2	2	4	2	2	4	32
	TOTAL								2	36	6	2	22	26	12	16	4	2	32	6	165
	TOTAL Demand								170	196	190	170	198	202	180	200	180	170	208	182	2,245
R_ENGSRE	Supply	1			*Supp	*Sup	*Sup	*Suppl	(168)	(160)	(184)	(168)	(176)	(176)	(168)	(184)	(176)	(168)	(176)	(176)	(2,080)
	Holidays	1			098	PHE	ND	107	0	8	8	0	8	8	8	8	8	8	16	16	96
	Vacation				098	PHE	ND	107	20	0	0	20	0	0	20	0	20	40	0	40	160
	Sick	1	1.1%		098	PHE	ND	107	2	2	2	2	2	2	2	2	2	2	2	2	23
	Dist Map Support				456	OAH	NC	150	40	40	40	40	40	40	40	40	40	40	40	40	480
	EMS Support				376	OAH	NC	150	78	82	118	90	110	90	78	81	90	78	102	78	1,075
	Budgets, Focecast, Var				701	OAH	NC	150	8	8	8	8	8	8	20	45	8	8	8	8	145
	Business Plan/Act				720	OAH	NC	150	8	20	8	8	8	8	8	8	8	8	8	8	108
	Performance Appraisal				785	OAH	NC	150	20					20	20					20	80
	Other Projects						NI		3	4		1	1		1	1	1				12
	EMS PROJECT						NI		0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL								11	4	0	1	1	(0)	29	1	1	16	(0)	36	99
	Total Demand								179	164	184	169	177	176	197	185	177	184	176	212	2,179

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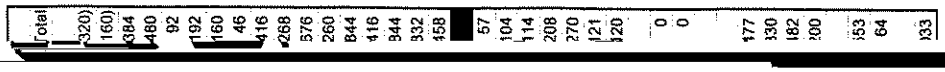
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844
416
944
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458
57
104
114
208
270
121
120
0
0
177
130
182
200
53
64
33

1871 Year-to-Date Job Absence Rate Report

Parameters

Period End Date: 12/31/2003 *Detail Level:* 1 *VP Function:* 02 ENERGY DELIVERY

District: P HAWAIIAN ELECTRIC COMPANY *Department:* PR0 SYSTEM OPERATION

District: ***HAWAIIAN ELECTRIC COMPANY***

Vice President: ***ENERGY DELIVERY***

Department: ***SYSTEM OPERATION***

(Short term sick is defined as sick hours <= 6 months)

RA		(A) Long Term Sick	(B) Short Term Sick	(A+B) Total Sick Hours	(C) Unsched Short	(B)+(C) Total Short	(D) Straight Time Prod	(B)+(C)/(D) Absence Rate
PRA	ADMINISTRATION	0	0	0	0	0	9661	0.00%
PRC	COMMUNICATIONS	0	72	72	8	80	14611	0.55%
PRD	OPERATING DISPATCH	0	860	860	57	917	37460	2.45%
PRE	OPERATING ENGINEERING	0	320	320	42	362	20522	1.76%
PRI	INSTRUMENT & CONTROL	0	0	0	5	5	10819	0.05%
PRR	RELAY	0	268	268	42	310	17874	1.73%
PRS	SUBSTATION	0	1257	1257	64	1321	51008	2.59%
PRX	CONSTRUCTION MANAGEM	0	56	56	0	56	6164	0.91%
		0	2833	2833	218	3051	168119	1.81%

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1/17/02					1/24/2002					1/31/2002					date					new	rev
new dwgs	hrs	rev dwgs	hrs	filing	new dwgs	hrs	rev dwgs	hrs	filing	new dwgs	hrs	rev dwgs	hrs	filing	new dwgs	hrs	rev dwgs	hrs	filing	dwgs	dwgs
4	22.5	6	10	1	7	21	7	15.5		3	19.5	15	17	2						4.5	2.0
										1	5.5	2	3							4.5	1.5
4	17	24	13		4	19.5	16	12	2	1	12.5	5	3.5							4.7	0.7
																				#DIV/0!	#DIV/0!
					4	20														5.0	#DIV/0!
8	**39.5**	**30**	**23**	**1**	**11**	**40.5**	**23**	**27.5**	**2**	**5**	**37.5**	**22**	**23.5**	**2**	**0**	**0**	**0**	**0**	**0**	**4.6**	**1.2**

2/21/2002					2/28/2002					3/7/2002					date					new	rev
new dwgs	hrs	rev dwgs	hrs	filing	new dwgs	hrs	rev dwgs	hrs	filing	new dwgs	hrs	rev dwgs	hrs	filing	new dwgs	hrs	rev dwgs	hrs	filing	dwgs	dwgs
3	16.5	13	13.5		3	16	16	19	3	7	18.5	5	15.5	2						3.4	1.3
2	9.5	5	2.5		1	5	1	1												4.8	0.6
1	3	1	1	4	10	12.5	3	7	3	6	16	16	16							2.5	1.0
																				#DIV/0!	3.0
																				#DIV/0!	#DIV/0!
6	**29**	**19**	**17**	**4**	**14**	**33.5**	**20**	**27**	**6**	**13**	**34.5**	**21**	**31.5**	**2**	**0**	**0**	**0**	**0**	**0**	**3.0**	**1.2**

4/18/2002					4/25/2002					5/2/2002					date						
new dwgs	hrs	rev dwgs	hrs	filing	new dwgs	hrs	rev dwgs	hrs	filing	new dwgs	hrs	rev dwgs	hrs	filing	new dwgs	hrs	rev dwgs	hrs	filing		
3	8	11	28		6	23.5	8	12		5	25.5	7	11	3						3.3	1.9
										3	15	3	1							5.0	0.3
9	25.5	6	5.5		2	12	17	20.5		2	8	14	15							3.0	1.1
																				#DIV/0!	#DIV/0!
																				#DIV/0!	#DIV/0!
12	**33.5**	**17**	**33.5**	**0**	**8**	**35.5**	**25**	**32.5**	**0**	**10**	**48.5**	**24**	**27**	**3**	**0**	**0**	**0**	**0**	**0**	**3.3**	**1.4**

6/20/2002					6/27/2002										date						
new dwgs	hrs	rev dwgs	hrs	filing	new dwgs	hrs	rev dwgs	hrs	filing	new dwgs	hrs	rev dwgs	hrs	filing	new dwgs	hrs	rev dwgs	hrs	filing		
3	25.5	3	5	2			9	10												6.5	1.3
2	9.5	7	4		2	6.5	4	2	2.5											4.6	0.7
2	7	15	13.5				17	10.5												3.5	0.7
																				#DIV/0!	#DIV/0!
																				#DIV/0!	#DIV/0!
7	**42**	**25**	**22.5**	**2**	**2**	**6.5**	**30**	**22.5**	**2.5**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**5.3**	**0.8**

7/18/2002					7/25/2002					8/1/2002					date						
new dwgs	hrs	rev dwgs	hrs	filing	new dwgs	hrs	rev dwgs	hrs	filing	new dwgs	hrs	rev dwgs	hrs	filing	new dwgs	hrs	rev dwgs	hrs	filing		
		12	14.5		3	9	6	8.5	2	2	12.5	10	17.5	2						4.5	1.8
2	11	11	17.5	1	2	16.5	9	7.5		3	16.5	3	14	0.5						3.3	1.6
																				#DIV/0!	0.5
																				#DIV/0!	#DIV/0!
																				#DIV/0!	#DIV/0!
2	**11**	**23**	**32**	**1**	**5**	**25.5**	**15**	**16**	**2**	**5**	**29**	**13**	**31.5**	**2.5**	**0**	**0**	**0**	**0**	**0**	**3.6**	**1.7**

9/19/2002					9/26/2002					10/3/2002					date						
new dwgs	hrs	rev dwgs	hrs	filing	new dwgs	hrs	rev dwgs	hrs	filing	new dwgs	hrs	rev dwgs	hrs	filing	new dwgs	hrs	rev dwgs	hrs	filing		
1	6	7	10.5	2			4	8	4.5	1	3	13	18	1.5						4.8	1.5
5	16.5	6	8.5		6	20	6	6	2.5	2	9	9	10	0.5						3.3	1.3
																				#DIV/0!	#DIV/0!
																				#DIV/0!	#DIV/0!
																				#DIV/0!	#DIV/0!
6	**22.5**	**15**	**19**	**2**	**6**	**20**	**10**	**14**	**7**	**3**	**12**	**22**	**28**	**2**	**0**	**0**	**0**	**0**	**0**	**3.8**	**1.4**

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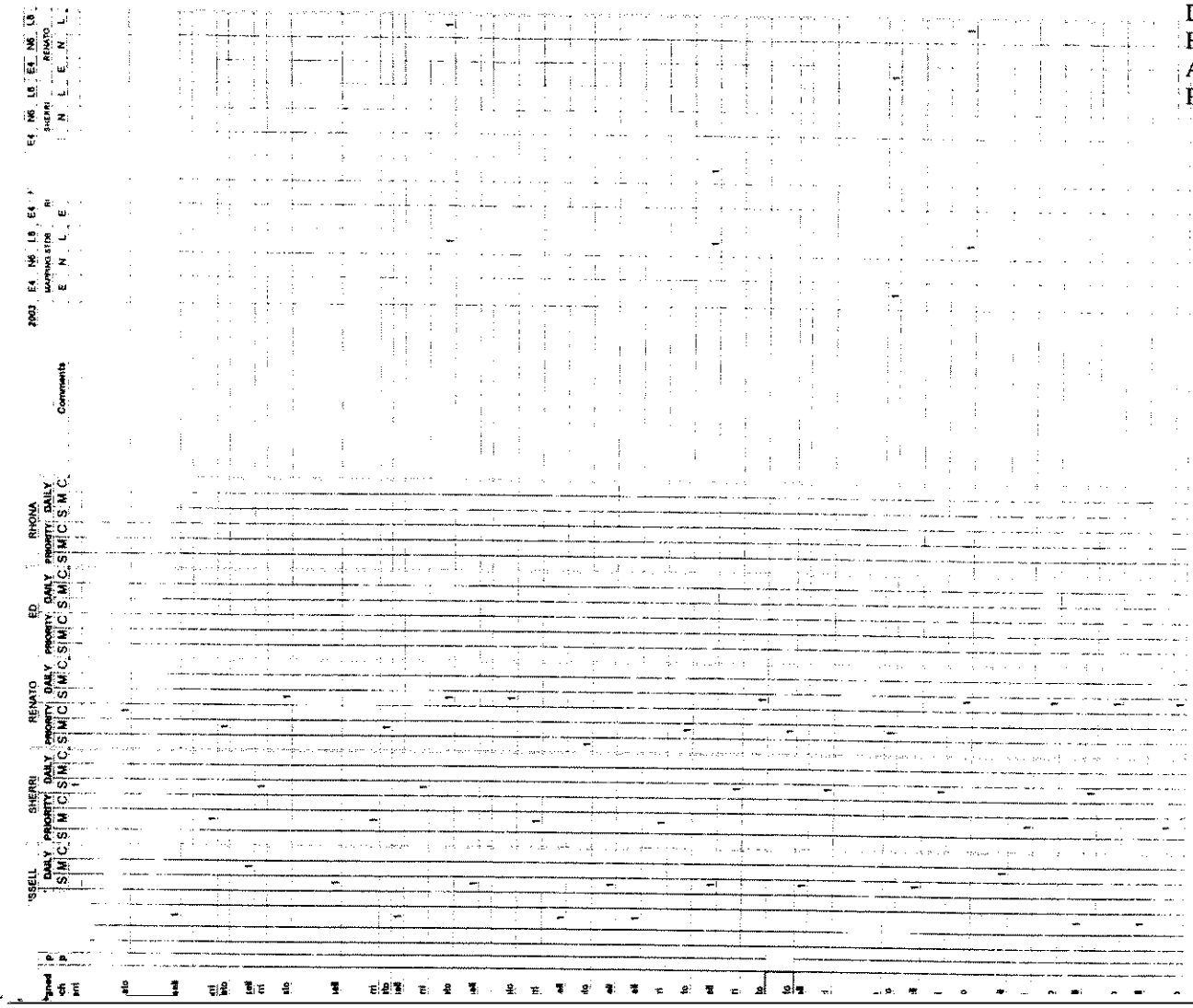
#	MRO Type / Description	Complexity (S,M,C)	Priority (P/D)	Assigned Tech	DAILY PRIORITY S M C	DAILY PRIORITY S M C	DAILY PRIORITY S M C	DAILY PRIORITY S M C	DAILY PRIORITY S M C	Comments	MAPPING STDS E N L E	SHERRI E N L E	RENATO E N L E
1003	Wahiawa Sub switches 4781 is motor operator and 5385 is manual operator. Discrepancy noted by Eastyone Oshiro	S	D	Russell									
1003	Replace defective transformer on P4 Haleakala Ave	S	D	Sherri									
	Ckt Revision (R. Yokono) @ V1457 Aala Triangle Park, show fused 60a on JP38 N. King St. Show similar to layout as shown on hstet 4kv Sub Map (dbe cstg @ P38). Show twke 4KV cable to DE by College Walk on Fort	M	D	Renato									
1003	Sylvia Lauwila 4kV Map. Remove emma	S	D	Russell									
1003	replace leaking tal V5803B Dole Cannery	S	D	Sherri									
1003	replace tal on P227 Pali Hwy	S	D	Renato									
1003	replace tal on P3 Ke Awaawa Rd	S	D	Russell									
1003	replace tal on P340 S. King St	S											
	UG CABLE FROM V8721 TO V8722P HAS BEEN INSTALLED AND ENERGIZED. NORMALLY OPEN POINT HAS BEEN RELOCATED FROM V8722P TO V8722H ON CABLE GOING TO V8722I	M	D	Sherri									
1003	CONFIRMED BY J. KERFOOT.	M	P	Renato									
1003	install F1 on P28/29 near 1652 Matsukawa Pl. chg F1 on P28/29												
	Matsukawa Pl to NC. Both fdrs closed on P28/29.												
1003	Update recds to reflect field conditions for V7941; rev 8284 is Kamokila 2 Ckt is rev 8295 is Expl Hui 2 Ckt; both switches correctly open.	C	P	Russell									
003	Relocate sectionalizer #3387 from P2 Kealaolu Ave to P41 Aukai Avenue Install 1-ph OH tal on P7731 Fort Weaver Rd Temp power for Oahu Coast	S	P	Sherri									
1003	found in field by planner, R. Yoshida	S	D	Russell									
003	HW Auxiliary Transformer Replaced per Equipment Approval	S	D	Sherri									
1003	Remove V1127 from P2 Waipio Point Access Rd	S	D	Renato									
1003	Remove KDP from Hone Sub per Substation (Charlie Thompson	M	P	Russell									
	Spike in V8388T Honolulu Advertiser @ Kapiolani Parkway temporary service	M	P	Sherri									
003	Remove note "When incoming 138KV Breaker or line is de-energized, put the opposite breaker carrier to 'xxxO'. Per W. Matsumoto, note is no longer valid.	M	P	Renato									
1003	Installed V8508 Henry's Equipment @ Lehioki St between V8722K &	M	P	Russell									
1003	YMCA V8310												
003	Replaced transformer bank on P2a/R26 Kalanianaole Hwy for Sea Life	S	D	Sherri									
003	Park w/3-50KVA transformers	S	D	Renato									
1003	Replaced transformer on P14 Third Avenue with 50KVA transformer.	S	D	Russell									
1003	Replaced platform bank on P1 & 2213 for Airport Group Intl @ 3135 Aolele St w/3-25kKVA transformers	S	D	Sherri									
003	Spike in second feeder V8388T Honolulu Advertiser @ Kapiolani Parkway	M	P	Renato									
003	temporary service	S	D	Russell									
1003	Replace transformer bank on P2 Hauwele Pl w/25KVA	S	D	Sherri									
1003	Replace transformer in V3403 Vancouver Dr w/ 50KVA	S	D	Renato									
003	Install A300 switch 1445 on P2 and 1450 on P14 Malia St, Waialae Nui	C	P	Russell									
1003	Reliability improvements	M	D	Sherri									
	For Equipment Approval Per V8721 new bke AT & AR capabilities			Renato									
003	Also remove Hawaiian Biomuk from Hone Sub as shown on sketch per	M	P	Russell									
003	Charlie Thompson. Have customer to be added in the future	M	P	Sherri									
003	Replace transformer bank @ 3122 Metcalf Ave for Korean Presbyterian	M	P	Russell									
003	Church												
	Connect primary cable to V8422F Kailani Subd PH 1, NO now in V8422J to V8422H	M	P	Sherri									
003	Show V7368 Resurrection Church @ 84-1260 Lumiauia Street in AM/FM. Shown on Maps in Load Dispatch. Attach MRO to vault pnts in Load Dispatch Vault File.	S	D	Russell									
003	Change address for P24(/28) Matsukawa Pl. to 1656A instead of 1654	S	D	Sherri									
003	shown on Map in Inset area.												
	V3281 was removed from System 8/8/03, update inset for Sw. V3218H	M	P	Russell									
003	Ananda Drive on Map 2 (Uwapo/Mililani/Upper Kipapa Map). C-phase to V3137												
003	Replace transformer in V1133 @ 1450 Hunakai St Torpicana Village w/ 50kKVA.	S	D	Sherri									
003	Replace transformer in V328 w/ 50KVA for Moiliili Subd.	S	D	Renato									
003	Energize V7106 for SOD DOT Kalanianaole Hwy Sign Control @ 42-950	S	D	Renato									
003	Kalanianaole Hwy Kalua	M	P	Russell									
003	Replace transformer in V8482A w/25KVA and V8482B w/50KVA Ala Ali St	S	D	Sherri									
003	Replace transformer on P4 Nanahoku Way w/37KVA	S	D	Renato									
003	Replace transformer on P40 Makaiki Ave w/37KVA	S	D	Russell									
03	Energize V8566A-C Eva Gentry Ave 198 Ph 4-5. Cable from V8566A to Sw V8283 not in pad bay 19 Kalia St (Do not energize). V8566A-C primary cable installed to Manukai and V8542E & F energized. No Cut primary cable C-ph from Sw V7941 to V7940D and connect to V8499G, F #E from Sw V7942. Sw#41 to C-ph cable from Sw V7941 to V8499A-E. Change NO from V7940B to V8499B	M	P	Sherri									
03	Energized V 8566A-G Kapolei Knolls Phase 2C Halekhano St.	M	P	Renato									
03	Energize V8422F Kai Lani Subd.	M	P	Renato									
03	Install V8478 C&C Parks Makiki District Park @ 1327 Keaumoku St. F2	M	P	Russell									
03	C/O on P14 NC, F2 in V8250 NO.												
03	Relocate open points: V414RE and V414R5 now NO on 3358 out feeder per Pat Kawasaki. Also add Fujevd Feeder Tie on conductors in the area. Special Request to add warning note on maps	M	P	Sherri									
	Dispatchers Note: PTM or Crew(s) may require police escort to perform												
03	work on NPI St between Murphy and Violet Sts. [completed in AM/FM (see	S	P	Renato									
03	attached), need to add to Maps in Load Disps	S	D	Russell									
03	Replace transformer V4024D w/ 50KVA Aapuyu Pl. Kailua												

1/2004 10:10 AM
Construction Release


RHONA
ED
RENATO
SHERRI
ISSELL
DAILY PRIORITY
S M C S M C S M C S M C S M C
Comments
2003

Job Type / Description	Complexity (E,M,C)	Priority (P/D	Assigned Tech	RUSSELL QTY	RUSSELL DAILY	RUSSELL P/	SHERRI QTY	SHERRI DAILY	SHERRI PRIORITY	RENATO QTY	RENATO DAILY	RENATO PRIORITY	ED QTY	ED DAILY	ED PRIORITY	RONDA QTY	RONDA DAILY	RONDA PRIORITY	MAPPING STDS SHERRI	MAPPING STDS RENATO	Comments
566 for Ewa Genetry Area 21 Infrastructure.	M	P	Russell																		
Royal Kunia Site 8A Anonui St.	S	P	Sherri																		
White, Queen St	S	P	Renato																		
ei Knolls	S	P	Renato																		
V8565 and Sw V8566 for Ewa Genetry Area																					
treet	M	P	Russell																		
e per Wes Matsumoto, Equipment Approval																					
Dispatch to update Board to reflect new																					
is now 8590.	M	P	Russell																		
on P1/52X rear of 1556 Aulana Place w/																					
m pole number(s) with JP records	S	D	Sherri																		
Place is a disconnect on C-ph. Update Maps																					
	S	D	Renato																		
/A TRANSFORMER P13 KAAMOOLOA RD																					
IRMED BY STEVE TANAKA 4/4/03)	S	D	RUSSELL																		
E DR W/ 75KVA TRANSFORMER	S	D	RENATO																		
EL RESIDENCE KAKAINA STREET	M	P	RUSSELL																		
V2889 OKO ST KANEOHE W/37 KVA																					
	D	S	SHERRI																		
V1703 HOLOLIO ST W/37KVA CODE 503	D	S	RENATO																		
V3099 IHO PLACE W/50KVA CODE 503	D	S	RUSSELL																		
ON P22 HALEAKALA AVE W/ 25KVA	D	S	SHERRI																		
ON P25 KAULAWAHA RD W/ 37KVA	D	S	RENATO																		
EEAUMOKU ST WILL BE CLOSED & SW																					
ST WILL BE OPEN	C	P	RUSSELL																		
RMER #3 AT MCCULLY SUB	S	P	SHERRI																		ALREADY "REMOVED" ON DISPATCH BD
APIOLANI BLVD W/ 750KVA																					
	S	D	RENATO																		
ST W/37KVA CODE 503. RESEARCH																					
ADJUST AS REQUIRED.	S	D	RUSSELL																		
E ST KUNIA MAKAI W/37KVA																					
	S	D	SHERRI																		
RY'S EQUIPMENT LEIHOKU ST WAIANAE	S	P	RUSSELL																		MRO20030217-INSTALL
852 MAMAKI ST NIU ESTATES, SHOWN																					
ASE ALSO REVIEW AND CHECK ALL																					
ALL RED-MARKED APPLICABLE NOTES,																					
IGINALS AND MAKE NEW PRINT OF ALL																					
	M	D	SHERRI																		
/8530C PALAHA ST, MAKAKILO																					
	M	P	RENATO																		
AR V11B FOR CITY HALL	M	P	RUSSELL																		
HE BEA. REMOVE C/O ON JP1 AND																					
TO V1712	M	P	SHERRI																		
HAWA WASTEWATER TREATMENT																					
PY OF DWG 33670 TO ATTACH TO																					
E. ALSO MAKE FULL SIZE COPY OF																					
D V8218 & V8220 IN VAULT FILE	M	P	RENATO																		
TO NEW VISTA SW GEAR V11A FOR																					
	M	P	RUSSELL																		1ST MRO20030313
E ON P40 ROUND TOP DRIVE (PIIKOI &																					
IELD DURING OUTAGE.	S	P	SHERRI																		
ON P19 ALEWA DRIVE W/ 3-50KVA																					
BWS FACILITY.	S	D	RENATO																		
/850 PUAMAMANE ST W/ 37KVA DEAD																					
	S	D	RUSSELL																		
B WAIMANO TRNG SCHOOL HAS BEEN																					
W VAULT DRAWINGS, FIELDVIEW																					
TORS AT P50 W/ ELBOWS AND																					
S A 1-PHASE CODE 503																					
/5617B NOWELO PL W/37KVA	S	D	SHERRI																		
	S	D	RENATO																		
REFLECT 3-25KVA TSF'S																					
D ALSO BE EDITED TO																					
	S	D	RUSSELL																		
/776 3108 KALOALUIKI ST W/ 25KVA																					
R	S	D	SHERRI																		
W/ DEADFRONT 150KVA																					
V STILL SHOWS LIVEFRONT																					
	S	D	RENATO																		
B PMH 3 TRANSFORMERS PER WEST																					
WG9.	M	P	RUSSELL																		
I FOR MILILANI MAUKA II ELEMENTARY																					
	M	P	SHERRI																		
SE OH TSF FROM JP97 TO JP98.																					
R PHASE CONFIGURATION AT																					
DD JP96 PER ATTACHED																					
	S	D	RENATO																		
TO V8356 & TAP TO MAIN CABLE CEIP																					
8422, 2334, 2336, 6177, 6867, 6182A, TO																					
E SW V8182B, SW 8603. CUT TAP IN																					
	C	P	RUSSELL																		REFER TO MRO 20030324
OKI) FIELDCHECK, RELOCATE PMH-3																					
SINGLE LINE DIAGRAM ATTACHED																					
IGNER.	S	D	SHERRI																		

ption	Complexity (S,M,C)	Priority (P/D	Assigned Tech	p c p c	RUSSELL DAILY S M C	SHERRI PRIORITY S M C	RENATO DAILY S M C	RENATO PRIORITY S M C	ED DAILY S M C	ED PRIORITY S M C	RHONA DAILY S M C	Comments	MAPPING STDS E N L	RUST E I	SHERRI N L	RENATO E N L
SW 5291 AND ON P9 : WHEN UPDATING IER AND/OR ADDRESS	S	D	RENATO						1					1		1
HAMEHA HWY (NEAR	S	D	RUSSELL		1											
NI ST W/ 37KVA. ALSO	S	D	SHERRI				1									
NLUA ST NEXT TO SW RU	S	D	RENATO						1			ADD TO MRO 20030332				
D V6182B (ED: additional	C	P	RUSSELL	1												
OM-V8480W	M	P	SHERRI			1						WORK TOGETHER W/ V8500T REMOVAL	1		1	
OMES	S	P	SHERRI			1						WORK TOGETHER W/ V8480M-W ENERGIZING [RECEIVED SKTECH FROM AARON LEE 4/21/2003	1		1	
ATOR TO MANUAL	S	D	RUSSELL		1											
HTING: FENCE	S	D	SHERRI				1									
100' 3-1/C 750CU PILC W/ SHOWN ON SKETCH	S	D	RENATO						1							
SW 3097 F-1 TO SW L CLOSE 3095. RACK UBDIVISION AREA W/	S	P	RUSSELL	1												
1/79, LINE SIDE OF SW HECKING IS COMPLETE, N RACKS-DO NOT FILE.	M	D	SHERRI				1									
AND PAD FOR V8490 LDS 3 TO COMPLETE OJECT DRAWINGS	M	D	RENATO						1				1			1
P60 AT END OF PUU N ON JP59 SHOULD BE ON P RECORDS OR LOCATION OF OH POLE																
NEOHE RANCH R ON SWITCH 5293	S	D	RUSSELL		1											
SPATCH BOARD CLOSER ON HALAWA	S	D	SHERRI				1						1		1	
UB IS BLOCKED. MOKUMOA ST FOR	S	D	RENATO						1							
ONSTR YARD)	M	D	RUSSELL		1											
S SHIRAI: SW 4503 P7 LUPE SUB NOW OPEN	M	P	SHERRI			1							1	1		
277 FARRINGTON HWY RMER BANK POLE REPORT 4/22/03)	S	D	RENATO						1							
I.	S	P	RUSSELL	1												
INSTALL 37KVA END OH PRIMARY AT JP4 GE OUT OH OM 25KVA TO 37KVA. SEA TEMPORARY ONFIRMED BY JARRET	S	D	SHERRI				1						1		1	
	S	D	RENATO						1							
JPAI PL W/37KVA	S	D	RUSSELL		1											
WS KALUANUI,	S	D	SHERRI				1						1		1	
WS BOOSTER STATION	S	D	RENATO						1							
A "VILLAS"	M	P	SHERRI			1										
IAWA.	M	P	RENATO					1					1			1
B 4772 AND 4788 AT AINA	M	D	SHERRI				1									
WS-KALUANUI RD	S	D	RENATO						1							
KAI ST W/ 50KVA	S	D	SHERRI				1									
AMAKAHA VALLEY RD K THAT THIS LINE IS NOT ISPATCH. CONFIRMED	S	D	RENATO						1							
W VLT TO REPLACE OMPLETED PER UG.	M	P	RUSSELL	1												
S AT/ARC PER	S	D	SHERRI				1									
S AT/ARC PER	S	D	RENATO						1							
APPROVAL AND A	S	D	RUSSELL		1											
LLEY RD OR 53-380 KAM POLE - 15A	S	D	RENATO						1							
1 & 2	M	P	SHERRI			1										

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Item #	Date	MRO Type / Description	Complexity (S,M,C)	Priority (P/D)	Assigned Tech
367	4/29/2003	REPLACED TSF AT P4 2217 AUMAKUA ST - OLD TSF #51863 37KVA CODE 407	S	D	RUSSELL
368	4/29/2003	INSTALL TSF BANK ON P62 YOUNG ST AND REMOVE TSF BANK ON P5 ARTESIAN ST	S	P	RENATO
369	4/30/2003	ENERGIZE C-PH LOOP TO V 8412 SERIES AND VAULTS 8412D TO J NOTE THAT VAULTS 8412A, B, C HAVE NO SECONDARY - TO BE INSTALLED LATER TEMP OPEN POINT IN V 8412 J TO V 8412K	M	P	RUSSELL
370	4/30/2003	REPLACE TSF P1 KAUPUNI PL OLD TSF #25864 15KVA CODE 055	S	D	SHERRI
371	4/30/2003	REPLACE TSF V 3667 AT 94-867 FARR HWY OLD TSF #32834 75KVA CODE 625	S	D	RENATO
372	5/1/2003	INSTALL NEW CABLE TO NEW SW VLT 8608 HILTON HAWAIIAN VILLAGE	M	P	SHERRI
373	5/1/2003	REMOVE OPEN POINT AT V 4410V - OPEN POINT ALREADY ON LOOP AT V 2000 TO 2001	S	P	RENATO
374	5/1/2003	LABEL F-1 AND F-2 FEEDERS AS SHOWN ON SKETCH FOR UG FEEDERS ACROSS KAIKUNANE LP	S	D	RUSSELL
376	5/2/2003	ENERGIZE NEW EQUIP. V 8178 FOR MU-RYANG-SA TEMPLE AT 2559 WAIOMAO RD AND 2424 HALELAAU PL PALOLO - 3-PH DF PDMT	M	P	RENATO
378	5/2/2003	V 433 HAO ST - DISCONNECT CABLE TO V 228 FROM MAIN CABLE AND DISCONN. T-TAP IN SW VLT 433 (A-PH) TO V 228 AND 228B . NEW CONNECTION WILL BE A-PH FROM SW VLT 433 TO V 229 TO V 228 TO COMPLETE LOOP - REFER TO SKETCH	M	P	RUSSELL
377	5/5/2003	V11 CITY HALL TO THE WAIKIKI TSF#15185. THROAT SWITCH AND PROTECTOR TO REMAIN OPEN TEMP TILL NEW TSF CAN BE INSTALLED.	S	P	RUSSELL
378	5/5/2003	CUTOFF I-7 TO MAUKA TSF V11 AND CONNECT TO SWITCH 8031 IN NEW VISTA V11A	M	P	RUSSELL
379	5/5/2003	SWITCH V11A FOR HONOLULU HALE IS "AT" PER EQUIPMENT APPROVAL	S	P	RUSSELL
380	5/6/2003	CUT IN NEW V8614 BET V4288J AND V42885	M	P	RENATO
381	5/6/2003	TSF NOT ENERGD [SANDWICH ISLE COMMUNICATIONS] INSTALLED NEW CABLE TO NEW SW V8608 AT HILTON HAWN VILLAGE	M	P	SHERRI
382	5/6/2003	ENERGIZE NEW V8419G ON NIOLO ST., EWA GENTRY 28B. VAULT IS ENERGD FROM SW V7311. ELBOW TO V8419H IS PARKED IN V8419G.	M	P	RENATO
383	5/6/2003	REPLACE LEAKING V3359 PALUAHINA PLACE.	S	D	SHERRI
387	5/6/2003	INSTALL NEW V7801 FOR MILILANI IRRIGATION	M	P	RUSSELL
386	5/6/2003	INSTALL NEW V8582 FOR KAPOLEI TRANSIT CENTR	M	P	RENATO
385	5/6/2003	SPLICE NEW CABLES FROM NEW RISER POLE 12Y TO MANHOLE #14. THIS WILL REPLACE OH & UG CIRCUIT BETWEEN POLES 12Y & 13Y. ENERGIZE NEW CABLES & RISER 7312 IN MH#14.	M	P	RUSSELL
384	5/6/2003	REPLACE V450C PIGGYBACK WITH NEW STK CODE TYPE 502	M	D	RENATO
388	5/6/2003	CREATE KALAMA SUB BREAKER NUMBERS IN CB ACCS TO ALLOW UPDATES PER AM/FM DUPLICATE CIRCUITS BY BREAKER REPORT FOR AM/FM ACCESS COMPARE PROJECT AS REQUESTED BY P. OKUNAMI. CREATE SIGN REQUEST ONLY TO REPLACE MISSING/FADED SIGNS.	S	D	ED
389	5/6/2003	UPDATE WAIKIKI DISPATCH BOARD TO REFLECT REMOVAL OF V425 BEACHES APT/HOTEL. ALSO INSTALL FI IN V86 ON C-PH. REMOVAL OF V425 CONFIRMED BY UG DIV. NO CONFIMATION FOR FI INSTALLATION RECEIVED YET-SHOW ON SIDE GOING TO V182.	S	P	RUSSELL
390	5/6/2003	CUT KALIHI CKT FROM SCHOOL ST SUB TO V1390 KAMAMALU PARK. TRANSFORMER TO BE REPLACED AT LATER DATE. (NO PROJECT DRAWINGS ON FILE-TEMPORARY RED MARKED ON MAPS)	S	P	RENATO
391	5/6/2003	CUT FORT ST 1 CKT FROM FORT ST SUB TO V1390 KAMAMALU PARK. TRANSFORMER TO BE REPLACED AT LATER DATE. (NO PROJECT DRAWINGS ON FILE-TEMPORARY RED MARKED ON MAPS)	S	P	RENATO
398	5/7/2003	REMOVE TRO SYMBOL FROM POHAKUPU 4 CKT BKR 2123 PER ROBERT TSUCHIYA/EQUIPMENT APPROVAL	S	D	RUSSELL
394	5/7/2003	PER FIELD VERIFICATION BY ALAN HIRAYAMA, TIE SWITCHES 8536 AND 8537 (PAUOA 1 & 2 CKT TIE) ARE ASGO AND NOT ASSB TYPE SWITCHES.	S	D	RENATO
393	5/7/2003	SW VLT A - V 8447 KAPOLEI SHOPPING CENTER: FUSE FEEDERS 7214 AND 7215 DISCREPANCY BETWEEN FIELDVIEW AND MAPS.	M	P	RUSSELL
392	5/7/2003	REPLACE TRANSFORMER V4838 JP48 KAM IV RD W 50KVA. F2 NORMALLY OPEN TO V4838 KILOLANI PL. ADD F1 & F2 DESIGNATION AND VERIFY LOCATION OF RISERS-FIELDVIEW SHOWS OFF P50 KAM IV RD.	S	P	RENATO
396	5/8/2003	REPLACE 25KVA OH TSF ON JP11 ALAPIO RD.	S	D	RUSSELL
397	5/8/2003	REPLACE TSF BANK DUE TO MVA ON JP204, 1717 N. KING ST.	S	D	SHERRI
395	5/8/2003	INSTALL GROUP-OPERATED AIR SWITCH 8636 (N.C.) ON JP22X AULOA RD.	S	P	RENATO
399	5/9/2003	CUT IN NEW V8626 FOR ST. FRANCIS HOSPITAL WEST - STORAGE AND CHILLER	M	P	RUSSELL
400	5/12/2003	CUT IN V8582 - KAPOLEI TRANSIT CTR., FROM SW FDR7811 FROM SW V7090	M	P	RENATO
401	5/12/2003	INSTALL AUTO-RESET FAULT INDICATORS ON JP13X BOOTH RD	S	D	RENATO
402	5/12/2003	REPLACE LEAKING TSF V4760O AT KUAULUA ST.	S	D	SHERRI

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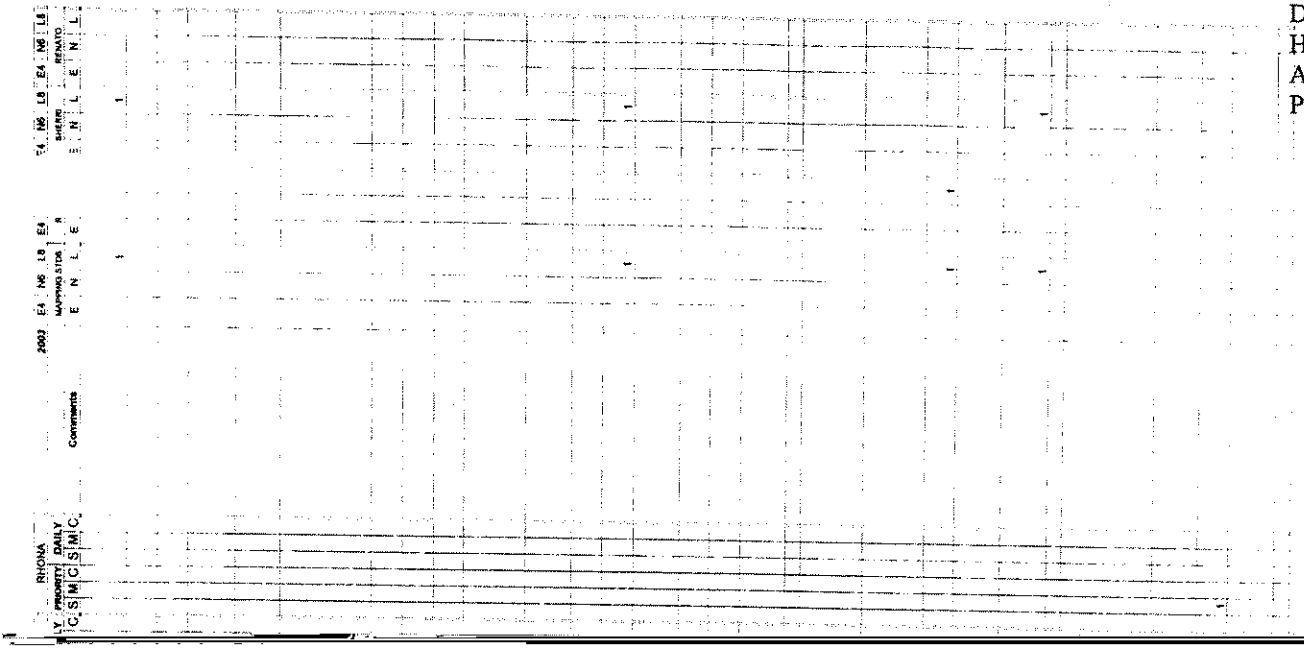
94E METRO HSG. CONNECTED WRONG ON 14 MILILANI MAUKA AREA MAP SHOWS ONLY WHICH IS INCORRECT!!! CONNECTIONS 3E ON KUAHELANI #1 (MAIN). IT IS ON FUSED , SW FDR#8279 N.O. FROM SW V6639A (AT/AR	M	P	SHERRI
SW2126, SUBM SW. V5665 ON THE KUHIO 4 029 TO SW 1907 KUHIO 4 CUTOFF. NOW O KUHIO 2.	M	P	RUSSELL
09 A-F, NANEA KAI.	M	P	SHERRI
NERGIZE V8601 FOR JP12 MAHALO ST.	M	P	RUSSELL
14 AT 85-1091 KANEAKI ST FOR SANDWICH NICATIONS.	M	P	SHERRI
NERGIZE V8449 FROM JP4 LUNALILO ST.	M	P	RUSSELL
INDICATORS ON THE WAIMANALO SIDE OF SW 3571, JP1X AND ON JP2 IN THE GULCH	S	D	SHERRI
LOCATED AT 2130 MAUNA PL.	M	P	RUSSELL
3E CUTOUTS TO DISCONNECTS ON RISER OTH RD.	S	D	RUSSELL
FECTIVE TSF V1150 - HOLIDAY MANOR.	M	P	SHERRI
93. KHON SATELLITE DISHES, WIKAO ST	M	P	SHERRI
V STRING OF VAULTS FROM SW V8565, C- 3IZE V8578 A-C AND V8578.	M	P	SHERRI
NERGIZE V8295 FOR RAFAEL RESIDENCE, AVE	M	P	RUSSELL
EN POINT ON V2578 SHOULD BE ON THE T.	S	P	RUSSELL
FEEDER TO V8626 ST. FRANCIS WEST	M	P	RUSSELL
26 ST FRANCIS WEST, CHILLER.	M	P	RUSSELL
49 PLAZA AT PUNCHBOWL	M	P	RUSSELL
KING V3488	S	D	RENATO
9B 1319 KANAINA AVE.	M	D	RENATO
DC LIVEFRONT TSF WITH NEW 50KVA SF. LOCATED AT PAAONO ST.	M	D	SHERRI
37KVA TSF FOR MEDICAL GROUP, LOCATED A AVE.	M	D	RENATO
OR V4932Q, 750 KAUANOMEHA PL.	S	D	RUSSELL
AREA 21D INSTALL NEW V 8670A BETWEEN V A AND TAP TO A-PH - INSTALL NEW STRING 570B, C, C FROM V 8565 TO V 8542	M	P	RENATO
MARY CABLE TO V 8494 F TO G TO C - N.O. 4C TO A (NOT IN YET) ENERGIZE VLTS 8494F, I SUBDIV	M	P	RUSSELL
OTES TO MAPS AND FRAMME: V 7316 ROYAL KUNIA IRRIG. PUMP CURITY ON SITE PH #633-6631 MAINTENANCE NG GOLF COURSE ACCESS	S	D	SHERRI
EN POINT SHOULD BE IN V 1321 TO V 4217 HOULD BE SHOWN WITH ELBOWS - 3080 RECT ALL MAPS AND AM/FM	S	P	RENATO
T 85-610 OLD GOVERNMENT ROAD P14 OLD KVA CODE 055	S	D	RUSSELL
AT JP3 KALIAWA ST OLD TSF #S 14990, 25KVA CODE 055/060	S	D	SHERRI
CTIVE TSF - V 5643J AT 94-427 HAMAU ST	S	D	RENATO
JP-84 FARRINGTON HWY AC-PH OLD TSF 116, 15KVA	S	D	RUSSELL
AT 1004 KALIHI ST P87 OLD TSF #S 45833, 7KVA CODE 055	S	D	SHERRI
SE 7 & 8 KAMAAHA AVE CORRECTION VLT 7658 B-ph SHOULD GO TO V 8480 KAHIO D GO TO V 8480M PAPAA ST (AM/FM IS OKAY ATE DISPATCH MAP (prekamokila3)	S	P	SHERRI
E IN HH "C" TO SW V8479. (1ST FEEDER)	M	P	RENATO
A TSF ON JP2, 85-119 PLANTATION RD.	S	D	RENATO
A TSF ON JP2, 6018 KAUPALENA ST.	S	D	RENATO
H, 94-0000 PAAWALU ST.	M	D	RUSSELL
TSF BANK ON JP7 ILANIWAI ST.	S	D	RUSSELL
A JP12 QUEEN ST	S	D	SHERRI



Item #	Date	MRO Type / Description	Complexity (S,M,C)	Priority (P/D)	Assigned Tech	Comments
609	6/5/2003	CONNECT NEW TSFS - V 125B1 AND 125B2 (NOT ENERGIZED YET) EXISTING TSF STILL CONNECTED	M	P	ED	PENDING CLARIFICATION OF VAULT NUMBER USE-V125B1 & V125B2
610	6/6/2003	KAILOANI SUBDIV - TEMP VAULT 1540T HAS BEEN REMOVED CABLES CUT & HOT CAPPED IN HH-B	S	P	RUSSELL	
611	6/6/2003	CIRCUIT RE-ARRANGEMENT PAUOA RD - SW #2788 JP219 NUUANU AVE - NORMALLY CLOSED INSTALL AUTO-RESET FAULT IND - ON JP4 PAUOA RD RISER SW #3077 DISC SW #3076 ON JP5 PAUOA RD IS NORMALLY OPEN NO WORK PACKAGE PER R. YOKONO	C	P	RENATO / RHONA	
612	6/6/2003	CORRECT SOD MAP FOR CIEP SUB - WRONG FDR SHOWN GOING TO VAULTS 8173, 8093, 8234 AND 7243 A & B REFER TO AM/FM	M	P	ED	
613	6/9/2003	REPLACED OH TSF ON JP5 PAWAINA ST - OLD TSF #56396 25KVA CODE 030	M	D	SHERRI	
614	6/9/2003	REPLACE TSF ON JP9 HAAA ST OLD TSF #58496 CODE 056 37KVA	M	D	SHERRI	
615	6/9/2003	REPLACE LEAKING TSF AT V 5042L - 84-556 KEPUE ST	M	D	RENATO	
616	6/9/2003	ENERGIZE VLTS 125B1 & 125B2 - KAHN RESID. 146 WAILUPE CIR	S	P	ED	PENDING CLARIFICATION OF VAULT NUMBER USE-V125B1 & V125B2
617	6/9/2003	CUT IN NEW SW VLT 8599 (SW #8614 N.O.) RE-CONNECT FUSED FDR (B-PH) TO V 2567 (C-PH TO V 2940A) 3PH FUSED FDR TO SWS V 2859 (FDR #6186) REPLACE 30A FUSES ON P4/4/4/36 TO NEW SW VLT 8599 WITH SLUGS - REMOVE B & C PH C/O'S TO VLTS 2940A & 2567 ON P 4/4	M	P	RUSSELL	
618	6/9/2003	SPLICE PRIMARY CABLE TO SW VLT 8598 SW #8612 - REPLACE 25A FUSES ON P5/1/5/8 AT REAR OF ALAELOA ST WITH SLUGS. REMOVE APH AND CPH CABLES TO JP5/1/5/8 IN HH TO V 1971 AND V 942 CONNECT CABLE IN HH TO V 1971 FROM APH FUSE SW V 8598, V 1971 TO V 942	M	P	RUSSELL	
619	6/10/2003	REPLACED OH TSF AT 230 VALLEY AVE P4 OLD TSF #38341 25KVA CODE 60	S	D	ED	
620	6/10/2003	REPLACE TSF AT P7 94-210 HAAA ST OLD TSF #50578 CODE 055 37KVA	S	D	RUSSELL	
621	6/10/2003	CIRCUIT RE-ARRANGEMENT - CUT OFF PAWAA KAI CABLE FROM MCCULLY #1 TSF AND TAP TO MCCULLY 4 CKT IN MH540 - RE-TAG ACB 8067 (MCCULLY 4) TO ACB 1338 (PAWAA KAI)	C	P	SHERRI	
622	6/10/2003	THE PENINSULA "THE VILLAS" 520 LUNALILI HM ROAD ENERGIZE V 8447 U - VAULTS 8447 A - T ALREADY ENERGIZED	M	P	RENATO	
623	6/12/2003	REPLACE DEFECTIVE TSF- V 5504K KUAIWI PL	S	D	RUSSELL	
626	6/12/2003	KUILIMA SUB - SW #4995 SHOULD BE SHOWN AS AN INTERRUPTER TYPE	M	P	RENATO	
627	6/12/2003	CUT KONA ST CKT FROM MCCULLY I TSF AND TAP IDLE HAUOLI CKT CABLE (NEW KONA ST CKT) IN MCCULLY SUB HH. CUT IDLE HAUOLI CKT CABLE (NEW KONA ST CKT) AND TAP TO MCCULLY #6 CKT IN MH	C	P	SHERRI	
628	6/12/2003	RELOCATE 3-PHASE DUCTLINE FROM SW V7334 TO KAMAAHA AVE. DUCTLINE SHOULD BE ON KAIAU AVE.	M	D	LINDA	
629	6/13/2003	REMOVE INTERRUPTERS TO SW 4872 - HALAWA SUB - SW TO REMAIN IN PLACE	M	D	ED	
630	6/13/2003	REPLACE SW VLT 8014 "C" WITH NEW PMH-9	M	D	ED	
631	6/13/2003	OCEAN POINTE 2A - KAPOLEI PARKWAY ENERGIZE VAULTS 8410 G-L AND 8412K & L	M	P	RHONA	
632	6/16/2003	CHANGE TSF JP-1 AT KAAKAU PL OLD TSF #57145 CODE 056 25KVA	S	D	ED	
633	6/17/2003	INSTALL NEW POLE 3X AND 3PH OH TSF BANK - FOR UNIVERSAL ASSOC. INC. 1711 KILANI AVE	M	P	RUSSELL	
634	6/17/2003	RELOCATE 1PH OH TSF ON JP-50 TO P 51 FARR HWY & RE-FRAME POLE FOR FUTURE PRIMARY RISER	S	P	RHONA	
635	6/17/2003	REMOVE 46KV TAPS TO TSF #1 TO PREP FOR TSF AND SWGR REMOVAL MCCULLY TSF 1 CUT-OFF	M	P	SHERRI	
636	6/17/2003	REPLACED 1PH OH TSF AT JP-2 1438 KEHAULANI DR OLD TSF #63908 25KVA CODE 017	S	D	ED	
637	6/17/2003	REPLACE TSF V 4502 AT 1782 LAUKAHI ST OLD TSF #39659 37KVA CODE 510	M	D	RENATO	
638	6/17/2003	RACK PRINT #13 WAIMEA 12KV DIST - PLEASE REPAIR MISSING SECTIONS OF THE WAIMEA #2 CKT ALONG UPPER PUPUKEA HOMESTEAD RD, BOY SCOUT CAMP AND AKAKOHO PL	S	D	ED	WORK TOGETHER W/ MRO 20030540
639	6/17/2003	INSTALL NEW SW 5834 ON P-11 WESTLOCH DR (NORMALLY CLOSED)	M	P	RENATO	

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540	6/18/2003	FOUND DURING OUTAGE PER DISPATCH: SLUGGED C/O ON P62 PUPUKEA RD FOUND TO BE 80A FUSES. FUSE ON P1X/62 GOING TO P4X/62 IS OPEN AND ELBOW IN V7250 GOING TO P4X/62 IS OPEN. STILL NEED TO CONFIRM FUSES ON P1X/62 ARE CUTOUTS? AND P4X/62 NOT IN FIELD?	M	P	SHERRI
541	6/18/2003	PER PAT O'TOOLE: DISCONNECT 1157 ON P5 ON BIKE PATH BEHIND KALUAMOI DR IS LOCATED ON LINE GOING TOWARDS P1/3/232 NEAR SW V7820B. OH LINE FROM P5 TO P3/5/232 IS KAM HWY CKT. CB ACCS NODES 1752 AND 28219 ALREADY UPDATED TO REFLECT KAM HWY CKT.	M	P	RUSSELL
542	6/18/2003	PREFERENCE CHANGE FROM AALA CKT TO FORT ST #4 CKT AT V 8367A HONOLULU PARK PLAZA. SW # 7170 IS NOW NORMALLY OPEN AND SW # 7171 IS NORMALLY CLOSED	M	P	SHERRI
543	6/19/2003	CUT-IN NEW SW VLT 8497 - ALSO CUT CABLES IN HH823J PER PRINT	M	P	SHERRI
544	6/19/2003	EDIT TSF'S ON SELF LANE PER FIELD CHECK BY PLANNER (MORRIS HO) AND ACCS. JP1 SHOULD HAVE 3-25KVA OH TSFS. NODE 98. JP3 SHOULD BE 3-25KVA OH TSFS, NODE # SHOULD BE 2668. RELOCATE TSF BANK FROM JP204 TO JP201 KING ST.	M	P	RHONA
545	6/20/2003	REPLACED 1PH OH TSF P4 KUMUKOA ST OLD TSF #52715 25KVA CODE 030	S	D	SHERRI
546	6/20/2003	ENERGIZE 1PH DF PADMOUNT TSF FOR PARK RESID - 3101 DIAMOND HD RD	M	P	RENATO
547	6/20/2003	REPLACE TSF VAULT 3433G WITH NEW DRY-PACK TYPE AT CAMELOT APTS 1630 LIHOLIHO ST	M	P	ED
548	6/20/2003	REPLACE 500KVA TSF AT V2187 WITH NEW 750KVA TSF TRANSFORMER TYPE SHOULD REFLECT STK554 ALSO.	M	D	RHONA
549	6/20/2003	REMOVE 3-PH OH TSF BANK ON JP47 WILDER AVE. REMOVE 1-PH TSF AND JP48 ON WILDER AVE. OH CONDUCTOR CONSTRUCTION CHANGES FROM VERTICAL TO HORIZONTAL AT JP47.	M	P	ED
550	6/23/2003	REPLACED 1PH OH TSF ON P1 LEWALANI DR. OLDTSF #67252 25KVA CODE 056	S	D	RUSSELL
551	6/23/2003	CUT IN NEW SW VLT 8497 (2ND FDR) ALSO CUT MAIN CABLE IN HH823J - PER PRINT	M	P	SHERRI
552	6/23/2003	INSTALL NEW 1-PH PRIMARY RISER TO NEW V8485 MIDKIFF-MYERS SUBDIV TSF IS NOT ENERGIZED YET	M	P	SHERRI
553	6/23/2003	CHANGE PREFERENCE TO MOANALUA S.C. (AREA) FROM MAKALAPA/AIRPORT CKT TO KEEHI/KEEHI 1 CKT - OPEN SW 3218 AND CLOSE SW 3219	C	P	RENATO
554	6/23/2003	US FISH AND WILDLIFE SERVICE - INSTALL AND ENERGIZE NEW V 8438 56-701 KAM HWY - KAHUKU	M	P	RUSSELL
555	6/24/2003	REPLACE 3PH OH TSF BANK ON JP-17 WAIAHOLE VALLEY RD OLD TSF #'S 37204, 37206, 58397	S	D	RENATO
556	6/24/2003	INSTALL PERMANENT LINE DISCONNECT SWITCH 8656 ON JP41 LUALUALEI NAD RD.	M	P	RUSSELL
557	6/24/2003	COMPLETED INSTALLATION OF 46KV OH LINE FROM P10 IROQUOIS RD TO P8/10 FRONTING WEST LOCH SUB INSTALL NEW SW 5835 AND AUTO RESET F.I'S ON P2/10 - WORK COMPLETE AS SHOWN ON PRINT PER R. KANESHIRO	C	P	RENATO
558	6/25/2003	UNTANGLE THE WAIALUA KUILIMA AND THE WAIALUA KAHUKU 46KV LINES AT JP82 BEFORE KUILIMA LINE - WAIALUA KUILIMA WILL BECOME THE WAIALUA KAHUKU LINE WAIALUA KAHUKU WILL BECOME THE WAIALUA KUILMA LINE	C	P	SHERRI
559	6/26/2003	AT MCCULLY SUB - SW 4732 SHOULD BE INTERRUPTER TYPE SW 5398 SHOULD BE A MOTOR OPERATED SWITCH SW 5397 SHOULD BE A MOTOR OPERATED SWITCH PER SUBSTATION	M	P	RENATO
560	6/26/2003	CHANGE PREFERRED FEEDER AT JACK IN THE BOX V 5859 (1922 KALAKAUA AVE) FROM DERUSSY CKT TO HAWAIIAN VILLAGE 2	M	P	RUSSELL
561	6/26/2003	REPLACE LEAKING TSF V 3666F AT HOKULELE PL	M	D	SHERRI
562	6/26/2003	INSTALLED NEW 1PH OH TSF AT JP17X KUNIA RD	S	D	RUSSELL
563	6/26/2003	REPLACED TSF ON JP12 RYCROFT ST OLD TSF #18301 37KVA CODE 055	S	D	LINDA
564	6/26/2003	CORRECT WAIKIKI DISPATCH BOARD TO REFLECT NORMALLY OPEN POINT AT V 2461 AS FDR 2 AND NORMALLY CLOSED POINT AS FDR 1	S	P	SHERRI
565	6/26/2003	INSTALL NEW TSF #1 AND SW 5828 AT WESTLOCH SUB PER EQUIPMENT APPROVAL	C	P	RENATO
562	6/27/2003	REPLACED PONCIANA V 1208 WAIPAHU ST OLD TSF #20780 300KVA CODE 555	M	D	SHERRI

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451	6/27/2003	CORRECT CKT KV IN AM/FM FOR FORT ST - PUNCHBOWL CKT ALONG LUSITANA ST BETWEEN SW 471 AND 469 (AND RADIALS) SHOULD BE SHOWN AS 4KV	M	P	RUSSELL	
456	6/27/2003	REPLACED PONCIANA V 1208 WAIPAHU ST OLD TSF #20780 300KVA, CODE 555	M	D	SHERRI	
457	6/27/2003	CORRECT CKT KV IN AM/FM FOR FORT ST - PUNCHBOWL CKT ALONG LUSITANA ST BETWEEN SW 471 AND 469 (AND RADIALS) SHOULD BE SHOWN AS 4KV	M	P	RUSSELL	
468	6/30/2003	WAIAU VIEW ESTATES - OFF HOOMALU ST - JP 21,22 PLEASE RELOCATE FROM THE WAIMALU PRINT - SHEET #1 TO THE PEARL CITY DISTRIBUTION PRINT	M	D	Renato	
469	6/30/2003	REPLACE PADMOUNT TSF AT V 4577 ST ANTHONY'S CHURCH WITH NEW	M	D	RUSSELL	
470	6/30/2003	REPLACED 3PH OH TSF BANK WITH NEW JP2 DILLINGHAM BLVD OLD TSF #S 46550, 46551, 46552	S	D	SHERRI	
471	6/30/2003	REPLACED LEAKING TSF V 5764A - KEWALO BASIN	M	D	RENATO	
472	6/30/2003	REPLACE TSF - JP47 E MANOA RD OLD TSF #32663, 50KVA CODE 017	S	D	RUSSELL	
473	6/30/2003	REPLACED V 2757 LEAKING OIL	M	D	SHERRI	
474	6/30/2003	PLEASE ADD AT/AR NOTATION TO SW VLT 8014 2230 OKOA ST WAIALAE PER EQUIPT APP	S	P	RENATO	
475	7/1/2003	INSTALL AND ENERGIZE TSF V 8405 FOR HAWAII YACHT CLUB RENOVATION REMOVE EXISTING V 246J - EXISTING CIRCUITING TO REMAIN C-PHASE	M	P	RUSSELL	
476	7/1/2003	ENERGIZE V 8485 FOR ARTESIAN VISTA - 1828 YOUNG ST	M	P	SHERRI	
477	7/1/2003	UPGRADE PRIMARY CONDUCTORS FROM JP1/77 KAL HWY TO SW 1187 (P4X/77) POOLA ST	M	P	RENATO	
478	7/1/2003	INSTALLED1000KCMIL UG CABLE FROM BKR 8624 WESTLOCH SUB TO P1 AND NEW RISER DISC 8624R ALSO NEW OH LINE FROM P1 TO NEW NAVY PRIMARY METERING PER DRAWING	M	P	RENATO	
479	7/2/2003	TRANSFORMER REPLACEMENT - V 1004 HAWAII KAI	M	D	SHERRI	
480	7/2/2003	CHANGE PREFERENCE TO TSF 2 MCCULLY SUB FROM ARCHER 43 TO ARCHER 41 CKT (OPEN SW 4732 & CLOSE SW 4685)	M	P	RUSSELL	
481	7/2/2003	ENERGIZE V 8470D ROYAL KUNIA SITE 8A	M	P	SHERRI	
482	7/2/2003	INSTALL INTERRUPTERS ON SW 4581 AND 4482 @ LAELAE SUB	M	P	RENATO	
483	7/2/2003	V 5700C 42-104 ALAKEA PLACE OLD TSF #48167 25KVA CODE 510	M	P	RENATO	
484	7/2/2003	REMOVE TSF #1 AND CONVERT SW 4684 TO MANUAL OPERATION PER EQUIPMENT APPROVAL - WORK TOGETHER WITH MRO 20030580	M	P	RUSSELL	
485	7/2/2003	PLEASE MAKE CORRECTION TO SWITCHING DIAGRAM TO SHOW SW 1092 AS A LINE RECLOSER	M	P	SHERRI	
486	7/7/2003	REMOVE SWITCH 1329 ON JP195 KAMEHAMEHA HWY	M	P	RENATO	
487	7/7/2003	REPLACE LEAKING TSF VAULT: V6237 COSTCO ANCILLARY ON MALAAI ST.	M	D	RUSSELL	
488	7/7/2003	PLEASE CORRECT FIELD VIEW - VAULT SEQUENCE DIFFERS FROM PRINT	M	D	PEND'G RUSSELL	
489	7/7/2003	REPLACE DEFECTIVE V5374A, LOCATED AT 98-1173 WAIHONA ST.	M	D	SHERRI	
490	7/7/2003	REPLACE V2952 LOCATED AT 1790 MAKUAHINE ST, OFF JP4X/97 - FOR 1.	M	D	RENATO	
491	7/7/2003	REPLACE 3-PH 25KVA TSF BANK ON JP1 AUKAI ST.	M	D	RUSSELL	
492	7/7/2003	REPLACED OH TSF ON JP18 HALEAKALA AVE.	M	D	RENATO	
493	7/7/2003	ENERGIZE NEW EQUIP: ROYAL KUNIA SITE 8A @ HOOHELE ST. FOR V8470E, F, G, H, & J.	M	P	SHERRI	
494	7/8/2003	REPLACE TSF V 4044A AT 98-052 HOKUPALEMO PL	M	D	SHERRI	
495	7/8/2003	PLEASE REPLACE LIVE- FRONT V 1117, 1118, 1119, & 1121 WITH DEAD-FRONT (ELBOW) TYPE TSFS.	M	D	RENATO	
496	7/8/2003	INSTALL NEW AIR SW 8654 ON JP133 NUUANU AVE (N.O.) SW 3076 ON JP5 PAUOA/PACIFIC HTS - TO BE CLOSED	C	P	RENATO	
497	7/8/2003	MOTT-SMITH CABLE RE-CONFIGURATION - PLEASE UPDATE PUKOI 12KV DIST PRINT RACK 29 AS FOLLOWS: RISER P41 ON MAKIKI HTS DR HAS APH & CPH C/O'S CLOSED, BPH IS OPEN AND CUT IN FIRST HH FROM POLE. CPH CABLE IS CLOSED IN V-1 AND OPEN TO V 98, TIE DISC IS NO	C	P	SHERRI	
498	7/8/2003	CONNECT AND ENERGIZE V 8422C FROM V 8422B - KAI LANI SUBDV PH2 & 3	M	P	RUSSELL	
499	7/9/2003	REPLACE V 5002 86-120 FARRINGTON HWY OLD TSF #34462 CODE 548 500KVA	M	D	RUSSELL	
500	7/9/2003	REPLACE TSF V 4978 AT 502 PAPAHEHI PL OLD TSF #38374 37KVA CODE 510	M	D	SHERRI	
501	7/9/2003	REPLACE TSF V 5987A AT 98-199 KAM HWY OLD TSF #51940 500KVA CODE 547	M	D	RENATO	

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62 PUPUKEA RD SPLICE PRIMARY O MAKE LOOP FOR V7250 BSA POINT TO JP1X/62 PUPUKEA RD.	S	D	RUSSELL			1													
/4527E AT 94-238 ILIULA PLACE.	M	D	SHERRI						1										
ARRINGTON HWY.	M	D	RENATO									1							
MP FUSES ON JP220 KAMEHAMEHA AND. NEW FUSES ARE 100 AMP	S	D	RENATO								1								
555H @ 94-253 MAHAPILI ST.	M	D	RUSSELL				1												
5859 FOR JACK IN THE BOX.	M	D	RENATO									1							
/5349A @95-777 PAIKAUHALE ST.	M	D	RUSSELL				1												
ND 3-50KVA OH TSF BANK AT 2927 KER MOODY CONSTRUCTION.	M	P	RENATO							1									
ROM CEIP 4 MAIN CABLE CUT IN FDR. 6186B AS PER PRINT. CUT 6A AND V8399 TO MAIN CABLE.	M	P	RUSSELL	1													1	1	
D FROM SERVICE - PTM SAID NOT 163 FARR. HWY	M	P	SHERRI					1											
SF WITH NEW - V 70 KAOHINANI	M	D	RENATO									1							
V 4547F AT HOLANIALII PL	M	D	RUSSELL				1												
T V 5859 JACK IN THE BOX NO	M	D	RENATO									1							
4828B AT 94-451 KEALAKAA ST	M	D	SHERRI						1										
693 AT 2153 N. KING ST - 3PH	M	D	RENATO									1							
WHITMORE AVE -OLD TS #S 75504,	S	D	RUSSELL			1													
NEW VAULT - V 8128 FOR TAKI EAD RD	M	P	SHERRI					1											
11 AND 8111A FOR NANAKULI IV	M	P	RUSSELL	1															
SW#4829 HAS INTERRUPTORS 3 DATA TO REFLECT	M	D	SHERRI						1										
MOKAPU RD -	S	D	RENATO								1								
4559 FOR KC DRIVE INN AT 2855 E 59, 112 KVA CODE 548	M	D	RUSSELL				1												
NU - PREFERENCE CHANGE N C AND N.O. SW 2592 (KUAHELANI 1)	M	P	SHERRI					1											
NE WATERFRONT PLAZA" ON THE INT #22501 RACK 34	M	P	RENATO							1						1			1
T V 927 KAHALA MANDARIN HOTEL OPEN	M	P	RUSSELL	1															
1 N. SCHOOL ST	M	D	RENATO									1							
CABLE IS CLOSED THRU IN V 8207 O NOW BE IN V 8587D TO 8587C OM SW VLT 8066 TO REMAIN OPEN	M	P	SHERRI					1							SN REQUESTED TO WORK ON MRO				
T P4 LOULU ST	S	D	RHONA											1					
T P1 MOOWAA ST	S	D	RHONA											1					
ROYAL KUNIA SITE 8A ON R, S, and Q ' V 8470N IS NOT Y PROBLEMS - CREW TO FOLLOW	M	P	SHERRI					1											
SF V 243 KAHAWALU OLD TSF #	S	D	ED										1						
NGLE PHASE CABLES TAPPED TO E #1 AND #4 CKTS IN THE TEMPLE	P	S	ik-review												use AM/FM plotshape maps				
WAIHUNA VILLAGE	M	P	RENATO							1									
ON JP17 LIHOLIHO ST OLD TSF 0	S	D	RHONA											1					
N JP2 LAMA ST OLD TSF #63895	S	D	RHONA											1					
IMPROVEMENTS/LOAD SHIFT: ON P1 MALIA ST; OPEN SWITCH	C	P	RUSSELL		1														
IMPROVEMENTS RELOCATE POINTS AS FOLLOWS: CLOSE IN OSE IN V1437, OPEN IN V1441, N 2940G; CLOSE IN 2563, OPEN IN	C	P	RUSSELL		1										vault prints not updated per new work process 10/31/03				

Item #	Date	MRO Type / Description	Complexity (S,M,C)	Priority (P/D)	Assigned Tech	Comments
638	7/22/2003	REPLACE RUSTY TSF VAULT. V 3983C AT 94-0190 ANANIA DR - MILILANI OLD TSF #33876 75KVA CODE 510	M	D	ED	
639	7/22/2003	REPLACE NOISY TSF V 3668 OLD TSF #31701 50KVA CODE 506	M	D	ED	
640	7/22/2003	INSTALL NEW 46KV SW 5831 TAPPED TO B-BUS AT WAIALUA SUB - TO REMAIN OPEN	M	P	ED	
641	7/22/2003	ADD 1PH OH TSF - VERIFIED IN FIELD - P24 LAHAINA ST MAKAHA	S	D	RHONA	
642	7/23/2003	ENERGIZED PRIMARY CABLE FROM V 8569A TO V 8569C WIKAO ST WAIHUNA VILL V VLTS B & C NOT ENERGIZED YET	M	P	RENATO	
643	7/23/2003	C & C WASTEWATER COLLECTION SYTEM NANILOA LP - ENERGIZED V 8243	M	P	SHERRI	
644	7/23/2003	ENERGIZE B-PH FROM V 7941 TO V 8498H AND FROM 7942 TO V 8498A N.O. IN V 8498E TO D ENERGIZE VAULTS V 8498A TO H	M	P	RENATO	
645	7/24/2003	WAIANAE II ELEM SCH - REMOVE VAULT 5103	M	P	RUSSELL	
646	7/25/2003	REPLACE TSF VAULT 5151 FOR LDS CHURCH LAIE 55-630 NANILOA LP OLD TSF #55626 150KVA CODE 547	S	D	RENATO	
647	7/25/2003	REPLACE 1PH OH TSF - P8/20 AT 2312 KAM HWY	S	D	RHONA	
648	7/25/2003	REPLACE 1PH TSF AT V 607 KINAU VILLAS OLD TSF #32699 225KVA CODE 615	S	D	SHERRI	
649	7/25/2003	REPLACED 1PH OH TSF AT 56-261 KAM HWY P312T OLD TSF #50286 25KVA CODE 056	S	D	RHONA	
650	7/25/2003	REPLACE 3PH OH TSF BANK AT P18X 870 FOURTH ST OLD TSF #S 52423, 52433, 64478 50KVA CODE 138	S	D	RHONA	
651	7/25/2003	LOAD SHIFT CLOSE 1167 JP-1 REAR 5025 POOLA ST - OPEN 1815SW AT SW V 433 HAO ST CLOSE 3106 SW VLT 4009 OPEN 3105 - CLOSE 3865, SW VLT 5503 OPEN 3864 CLOSE 7180 SW VLT 6393 OPEN 7181	C	P	RUSSELL	vault prints not updated per new work process 10/31/03
652	7/28/2003	INSTALL AND ENERGIZE V8656T FOR PIONEER ACE HARDWARE.	M	P	SHERRI	
653	7/28/2003	INSTALL BLINKING TYPE FAULT INDICATORS ON RISER #2299R JP1 MALIA ST.	S	D	RUSSELL	
654	7/28/2003	INSTALL 'BLINKING TYP FAULT INDICATORS ON RISER 2298r JP2 MALIA ST.	S	D	RUSSELL	
655	7/28/2003	INSTALL "BLINKING" TYPE FAULT INDICATORS ON THE FOLLOWING RISERS: RISER 2133 JP6 REAR OF 5398 POOLA DR. RISER 1982 JP7 REAR OF 5405 POOLA DR.	S	D	RUSSELL	
656	7/28/2003	DISCONNECT V175 - RICHARDS ST VAULT TSF#9357 SW 1406. EQUIPMENT TO BE REPLACED IN NEAR FUTURE. DO DGNS AVAIL. (SUBSTATION - C. THOMPSON)	M	P	RENATO	
657	7/28/2003	ENERGIZE NEW VLTS 8419H, J, K, L, M FOR EWA GENTRY AREA 28 - PHASE "B"	M	P	RENATO	
658	7/28/2003	CUT CABLE BETWEEN V7916B & V7940A. CONNECT A-PH TO V7916B FROM SW V7941 AND A-PH TO V7916A IN SW V7942. CONNECT C-PH CABLE TO V7940A FROM SW V7942. TEMP OPEN IN V7916B TO V7916A.	M	P	RUSSELL	
659	7/28/2003	INSTALL AND ENERGIZE V8444F, G, H, AND J FROM V7613 SW V7613. NORMALLY OPEN IN V8444C.	M	P	SHERRI	
660	7/28/2003	REPLACE V2995 AT 1442 HOOHONUA ST.	M	D	SHERRI	
661	7/28/2003	INSTALL NEW SW V8612A ON KAIMALEI ST FOR EWA POINT MARKETPLACE.	M	P	RENATO	
662	7/29/2003	INSTALL V8431 FOR AMFAC INDUSTRIAL SUBDIVISION.	M	P	RUSSELL	
663	7/29/2003	REPLACE V1643 AT 263 IKIIKI ST., HEEIA	S	D	RUSSELL	
664	7/29/2003	ENERGIZE NEW V8555 FOR HAWAII BAPTIST ACADEMY ELEM SCHOOL, LOCATED AT 21 BATES ST.	M	P	SHERRI	
665	7/29/2003	ENERGIZE NEW V8457 FOR SCHMALTZ RESIDENCE, LOCATED AT 72 S. KALAHEO AVE.	M	P	RENATO	
666	7/29/2003	INSTALL V8387D AND E FOR EWA GENTRY AREA 13, KAPOLEI PKWY.	M	P	SHERRI	
667	7/30/2003	REPLACE LEAKING 3-PH DEADFRONT PADMOUNT TSF VAULT V7471 FOR ARAKAKI WAREHOUSE AT 1029 PUUWAI ST, SAND ISLAND	S	D	SHERRI	
668	7/30/2003	INSTALL NEW V8504 FOR. FF2 FROM JP48 WAIPAHU ST. FOR MANAGER'S DR. SUB. PH-1.	M	P	RUSSELL	
669	7/30/2003	INSTALL NEW V8504 FF1 FROM JP14 PAIWA ST. FOR MANAGER'S DR SUB. PH-1.	M	P	RUSSELL	
670	7/30/2003	REPLACE 1-PH OH TSF ON JP8 KAKAHIAKA ST	S	D	RENATO	
671	7/30/2003	REPLACE 1-PH OH TSF ON MAUNAWILI LP P14T.	S	D	ED	
672	7/31/2003	REPLACE 1-PH OH TSF ON JP64 FARRINGTON HWY.	S	D	RHONA	
673	7/31/2003	REPLACE 1-PH OH TSF ON JP37 KALANIANAOLE HWY.	S	D	RHONA	
674	7/31/2003	REPLACE CORTEN SHELL TYPE V273 AT MANAMANA PL.	M	D	ED	
675	7/31/2003	REPLACE V4410I AT 1458 ALA NAPUNANI ST.	S	D	ED	
676	7/31/2003	CONNECT SW V8504 FOR MANAGER DRIVE AT HIAPO ST. SW 8559 (N.O.) SW 8558 (N.C.)	M	P	RUSSELL	
677	7/31/2003	INSTALL AND ENERGIZE V8612 AND V8612A FOR EWA POINT MARKETPLACE.	M	P	RENATO	

Item #	Date	MRO Type / Description	Complexity (S,M,C)	Priority (P/D	Assigned Tech	P
678	7/31/2003	INSTALL (BLINKING) FAULT INDICATORS AT THE FOLLOWING LOCATIONS SHOWN ON THE LIST SUBMITTED BY THE TROUBLE DEPT. (C&M)	M	D	SHERRI	
679	8/1/2003	DE-ENERGIZE PRIMARY METERED LINE TO CAMP SMITH - JP4 ULUNE ST NR KAIMAKANI ST CONDUCTORS TO BE REMOVED AT A LATER DATE	M	P	SHERRI	
680	8/1/2003	HALEKUA GARDENS - SW VLT "A" V 8384 IS AT/AR	S	P	SHERRI	
681	8/1/2003	REPLACE TSF V 5617 - MCDONALDS HAUULA OLD TSF #55591 150KVA CODE 553	M	D	RUSSELL	
682	8/1/2003	REPLACE 1PH OH TSF AT P45 WILIKINA DR	S	D	RENATO	
683	8/1/2003	ADD NEW 1PH OH TSF AT P3 WAILEPO ST	S	D	RENATO	
684	8/1/2003	ENERGIZE VAULTS 85698 & C - WIKAO ST WAIHUNA VILL V	S	P	RENATO	
685	8/1/2003	INSTALLED AUTO RESET FAULT INDICATORS AT THE LOCATIONS INDICATED FOR SCHOOL ST. WAIAKAMILO AND WAILUPE CKTS. REFER TO ATTACHED SHEET	M	D	RUSSELL	
686	8/1/2003	PER C. CHUN - ENERGIZED VLTS V 8503C & D OPEN POINT IN V 4780E TO D	M	P	RUSSELL	
687	8/2/2003	ADD NOTE FOR EMERGENCY CONTACT FOR KAPIOLANI HOSPITAL NOTE: CALL KAPIOLANI HOSPITAL BEFORE GOING. KEVIN MURPHY: 983-6941, DAN STENBERG: 983-6928, HOPITAL: 983-8404 (ASK FOR PLANT TECH) ADD TSF UNITS 5 AND 6 IN SUBSTATION INSET. RUN NEW MCCULLY 1 CKT MAP FOR RACK	M	P	SHERRI	
688	8/2/2003	SHOW V7702 FOR 902 PUNAHOU CONDO AS ENERGIZED, PER ACCS TSF INSTALLED 1/97. JOB PACKAGE FOUND STILL IN ACTIVE FILE, CREATE VAULT PRINT. REPRINT MCCULLY 5 CKT MAP WHEN EDITS COMPLETED.	M	P	SHERRI	
689	8/2/2003	ADD NOTES TO PAWAA KAI CKT MAP (ORIGINAL). RUN NEW PAWAA KAI CKT MAP.	M	P	RUSSELL	
690	8/4/2003	INSTALL NEW V 8567 FOR OCEANIC CABLE KAPOLEI HUB MAKAKILO TSF IS NOT ENERGIZED YET	M	P	RUSSELL	
691	8/4/2003	REPLACE 3PH OH TSF BANK AT 2865 KAHIKAPU ST P3 OLD TSF #'S 52960, 52961, 52963 25KVA CODE055	S	D	RENATO	
692	8/4/2003	REPLACED 1TSF - AT P1/27 HALAWA VALLEY ST OLD TSF #75695 CODE 056 37KVA	S	D	RENATO	
693	8/4/2003	REPLACE 1PH OH TSF ON P48 ALA ADLANI ST OLD TSF #63958 CODE 056 25KVA	S	D	RENATO	
694	8/5/2003	REPLACED 1PH OH TSF AT JP4 KOANIANI WY OLD TSF #35014 25KVA CODE 017	S	D	RUSSELL	
695	8/5/2003	REPLACE TRANSFORMER V 5448C AT NAALII ST OLD TSF #45750 37KVA CODE 506	S	D	SHERRI	
696	8/5/2003	ENERGIZE V 8431 AMFAC IND SBDIV ON FF-2 FROM V 3335	M	P	RUSSELL	
697	8/6/2003	SW #4786 HE-165 KUNIA RD CHANGE TO NORMALLY OPEN SW #5259 HE-108 FARRINGTON HWY - CHANGE TO NORMALLY CLOSE PER ENGINEERING REQUEST - PER D. SOARES	M	P	SHERRI	
698	8/6/2003	UPDATE DISPATCH BOARD : 1) PIIKOI SUB - UNITS 1,2,3 SHOW 200A FUSES ON 46KV SIDE OF TSF 2) PIIKOI SUB UNIT #4 SHOULD BE 12.5MVA (HAS FANS) 3) MCCULLY SUB UNIT #6 SHOULD HAVE 200A FUSES ON THE 46KV SIDE OF TSF	M	P	RENATO	
699	8/6/2003	REPLACE TSF V 4536 AT 1580 MAKALOA ST OLD TSF #35070 250KVA CODE 075	M	D	RUSSELL	
700	8/6/2003	WAIALUA RING BUS: NORM. CLOSE SW 5833 - NORM CLOSE SW 5831 - NORM OPEN SW 5832 ENERG IZE TSF #2 10MVA	C	P	SHERRI	
701	8/6/2003	PLEASE ADD AT/AR NOTATION TO SW VLT 6478 PER WAYNE KAWAMATA	S	D	RENATO	
702	8/7/2003	REPLACE 1PH OH TSF AT P10 KAMANAIKI ST OLD TSF #71589 25KVA CODE 030	S	D	RUSSELL	
703	8/7/2003	REPLACE TSF V 1325 KIKOWAENA PL	M	D	SHERRI	
704	8/7/2003	REPLACE V 4377 AT OAHU TEACHER'S FCU 233 VINEYARD	M	D	RENATO	
705	8/7/2003	ENERGIZE V 8567 ON FDR 2 - OCEANIC CABLE - KAPOLEI HUB REF TO MRO 690	M	P	RUSSELL	
706	8/8/2003	REPLACE 1PH OH TSF AT JP309 KAM HWY WAIPIO OLD TSF #49925 25KVA CODE 131	S	P	SHERRI	
707	8/8/2003	REPLACE TSF V 971 BAYVIEW HEIGHTS SUBDIV ALSO FDR 2 OPEN AT POLE - CLOSED THRU IN VAULT	M	P	RUSSELL	
708	8/8/2003	REPLACED RUSTY TSF V 1714 PACIFIC TRANSFER AT 864 KAKOI ST OLD TSF #23586 150KVA CODE 561	M	D	RENATO	
709	8/8/2003	CONNECT V 8605A, B, C & D EWA GENTRY AREA 21D (NOT ENERGIZED YET) MOVE OPEN POINT IN V 8570B TO OPOSITE SIDE, GOING TO V 8570C	M	P	SHERRI	
710	8/8/2003	INSTALL NEW PMH-9 SW VLT 8646 HONOLULU ADVERTISER 4545 KAPOLEI PARKWAY TSF IS NOT ENERGIZED	M	P	RENATO	

RUSSELL / SHERRI / RENATO / ED / RHONA — DAILY PRIORITY DAILY PRIORITY DAILY PRIORITY DAILY PRIORITY DAILY
S M C S M C S M C S M C S M C S M C S M C S M C S M C S M C

2003 E4 N0 L0 E4 N0

MAPPING STDS RUF

SHERRI RENATO
N L E N L

Comments

WORK TOGETHER W/MRO 712 & 715

2/11/2004 10
X = Construction ... case

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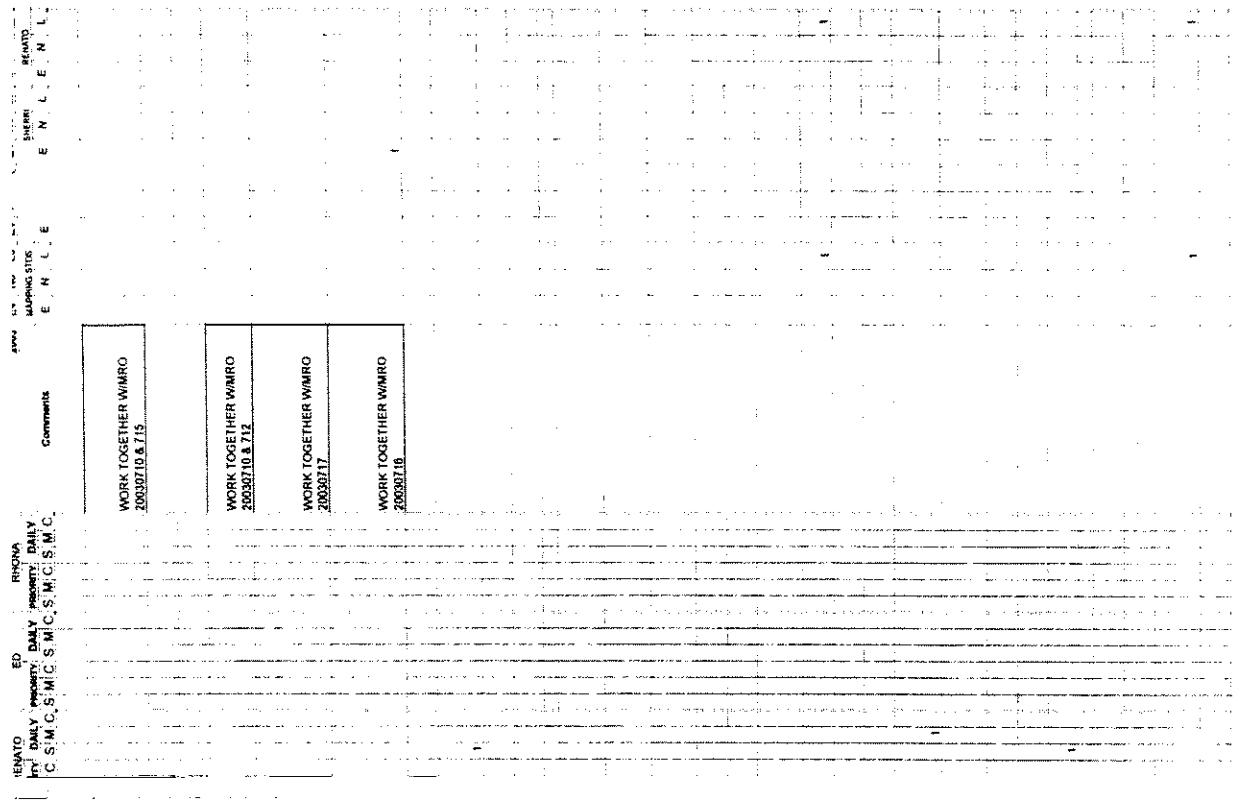
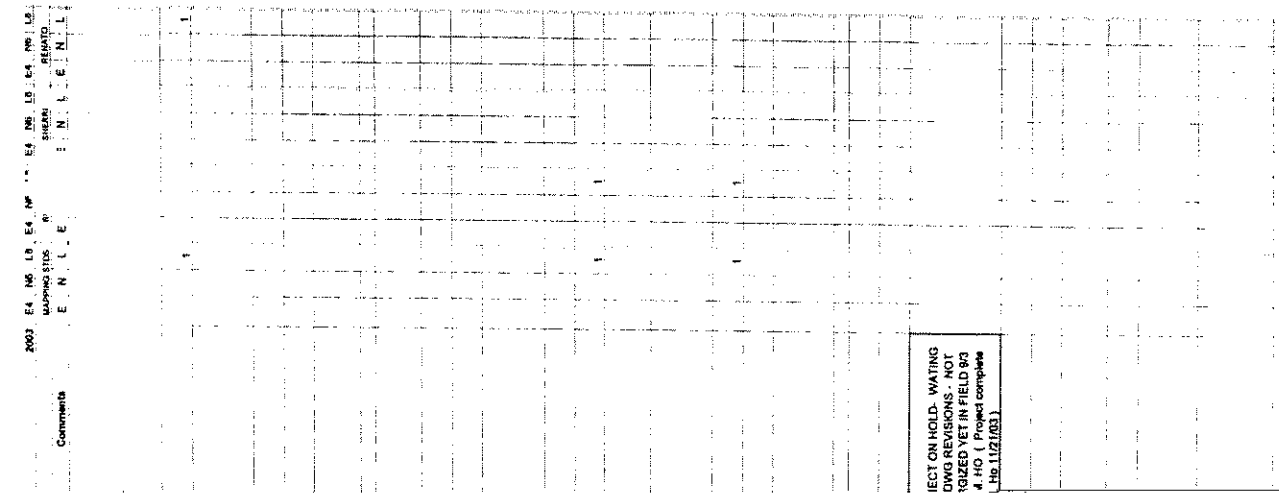

Comments
WORK TOGETHER W/MRO 20030710 & 715
WORK TOGETHER W/MRO 20030710 & 712
WORK TOGETHER W/MRO 20030717
WORK TOGETHER W/MRO 20030716



IECT ON HOLD- WATING
DWG REVISIONS - NOT
RGIZED YET IN FIELD 9/3
4. HO (Project complete
Ho 11/21/03)

Item #	Date	MRO Type / Description	Complexity (S,M,C)	Priority (P/D	Assigned Tech
770	9/5/2003	CUT-IN NEW V 8448 WHOLESALE UNLIMITED KOPAKE ST WAIPAHU SPLICE PRIMARY CABLE IN MH893B1A TSF IS NOT ENERGIZED YET	M	P	RUSSELL
771	9/5/2003	ADD 2ND POLE P8X NEXT TO P6 MOOKAULA ST FOR TSF PLATFORM - DIDS NOTIFICATION	S	D	SHERRI
772	9/8/2003	REPLACE TSF JP-448 2465 AUHUHU ST OLD TSF #65106 37KVA CODE 407	S	D	RENATO
773	9/8/2003	INSTALLED OMNIRUPTER (SWITCH) ON JP-1 KALANIANAOLE HWY RISER #1582	M	P	RENATO
774	9/10/2003	REMOVE OH PRIMARY AND 3-PH TSF BANK AT P1X/19 1290 ALA MOANA BLVD	S	P	SHERRI
775	9/10/2003	ENERGIZE TSF V 8446 94-110 KOPAKE ST - WAIPAHU	M	P	RUSSELL
776	9/10/2003	MAKAKILO SEASCAPE PH 3 & 4 - ENERGIZE VAULTS 8568N, P, & Q	M	P	RENATO
777	9/11/2003	REPLACE TSF V 3170 AT 44-278 KANOHE BAY DR OLD TSF #49832 25KVA CODE 461	M	D	SHERRI
778	9/11/2003	ENERGIZE V7801- MILILANI IRRIGATION CPR. VAULT WAS ENERGIZED ON 5/21/03	S	P	RENATO
779	9/12/2003	REPLACE TSF AT P5 48 AKAMU PL	S	D	RUSSELL
780	9/12/2003	REPLACE LEAKING TSF V 3217 WINDWARD CITY S.C.	M	D	SHERRI
781	9/12/2003	REPLACE TSF V 4047 A & B AT 1015 AOLOA PL OLD TSF #S 33180 & 33195, BOTH 50KVA CODE 510	M	D	SHERRI
782	9/12/2003	REPLACE TSF VAULT 6205 1603 MOKULUA DR OLD TSF #50080 25KVA CODE 465	M	D	RENATO
783	9/12/2003	ENERGIZE V 8633 AT 3868 ROUND TOP DRIVE	M	P	RENATO
784	9/12/2003	INSTALL PRIMARY APH CABLE FROM SW VLT 8504 TO VAULTS 8503N, L, M, K, J, H, G, ENERGIZE BOTH CABLE & TRANSFORMERS - NORMALLY OPEN IN V 8503J TO 8503 H	M	P	SHERRI
785	9/12/2003	SPLICE CPH CABLE IN HH-2 FROM V 8422A TO V 8422C, D & E - NORMALLY OPEN IN V 8422A TO E ENERGIZE TRANSFORMERS V 8422D AND 8422E	M	P	RENATO
786	9/15/2003	REPLACE DEFECTIVE TSF V 5748 AT H&W COLD STOR AT 887 N. NIMITZ HWY	M	D	RUSSELL
787	9/16/2003	INSTALL CPH PRIMARY CABLE V V 8569C TO 8569D, E, F, G, H, J - INSTALL CPH PRIMARY CABLE FROM SW V 7033 TO V 8569J - ENERGIZE CABLE AND VAULTS	M	P	RENATO
788	9/17/2003	REPLACE TSF V 8264 FOR KUILIMA WASTEWATER PLANT 57 035 KUILIMA DR OLD TSF #55376 150KVA CODE 549	M	D	ED
789	9/17/2003	REPLACE TSF V 4853 AT 94-532 PUAHI ST OLD TSF #66309 112KVA CODE 538	M	D	RHONA
790	9/17/2003	TED'S BAKERY 59-026 KAM HWY SUNSET - INSTALL NEW 3-PH OH TSF BANK ON NEW POLE P300TN NOTE OLD TSF BANK STILL IN USE - CUST NOT SWITCHED OVER TO NEW TSFS YET	M	P	SHERRI
791	9/17/2003	AT AINAKOA SUB - CHANGE SW 4657 TO INTERRUPTER TYPE	M	P	RUSSELL
792	9/18/2003	REPLACE TSF V 4008D AT 1841 KIHI ST - 1PH TSF VLT OLD TSF # 50650 37KVA CODE 509	S	D	RENATO
793	9/18/2003	REPLACE TSF AND POLE 84X KANEOHE BAY DR OLD TSF #49284 25KVA CODE 30	S	D	SHERRI
794	9/18/2003	REPLACE TSF AT JP17 KAAMOOLOA RD OLD TSF #36106 15KVA CODE 136	S	D	RUSSELL
795	9/18/2003	REPLACE TSF AT JP85X KANEOHE BAY DR OLD TSF #47832 167 KVA	S	D	RENATO
796	9/18/2003	REPLACE TSF AT JP18 KAM HWY OLD TSF #22706 15KVA CODE 055	S	D	SHERRI
797	9/18/2003	REMOVE NOTE: "SEE KAMILOIKI MAP NO 2" FROM KAMILOIKI/KUAPA MAP NO.3	S	D	RUSSELL
798	9/18/2003	CUT-IN FDR 1 & FDR 2 TO NEW V 8553 SUMNER ST - SSFM INTERNATIONAL, INC TSF IS NOT ENERGIZED YET	M	P	RENATO
799	9/18/2003	BROOKFIELD HOMES m/f phase 1 & 3 off olani st - koolina - install primary cable from V 8357G to V 8357H, j, k and l open point in v 8357E to v 8357L - also splice cph primary cable in HHG#3 to vaults 8357x, y, z and zz open point in V 8357y to v 8357Z. ENERGIZE VLTS 8357H TO L AND 8357 X, Y, Z & ZZ	M	P	SHERRI
800	9/19/2003	MAKAKILO #4 UG CIRCUIT INSTALL PRIMARY CABLE FROM HH-1 TO HH-G MAKAKILO DR & SPLICE TO MAKAKILO #2 CKT REMOVE SECT #7346 AND INSTALL DISCS (N.O.) #7346 JP7 MAKAKILO DR - SW 7345 IS NOW N.C.TAPS LIFTED AT JP 1/42 MAKAKILO DR	C	P	RUSSELL
801	9/19/2003	PREFERENCE CHANGE: SW V 3601"A" AND SW V 3613"B" TO MAKAKILO 4 CKT AFFECTS MULTIPLE VAULTS - REFER TO LIST	C	P	RUSSELL
802	9/19/2003	JP 17 WARD AVE - REMOVED DISCS #1078 AND REPLACED W/3 100A FUSED C/Os	M	P	RENATO
803	9/19/2003	ADDED 1PH OH TSF AT POLE 3/7 ONEAWA ST	S	D	SHERRI
804	9/22/2003	REPLACE OH TSF AT JP11 47670 MAPELE RD OLD TSF #49785 CODE 056 25KVA	S	D	RENATO

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	Complexity (B,M,C)	Priority (P/D	Assigned Tech	P	P	DAILY S	DAILY M	DAILY C	PRIORITY S	PRIORITY M	PRIORITY C	DAILY S	DAILY M	DAILY C	PRIORITY S	PRIORITY M	PRIORITY C	DAILY S	DAILY M	DAILY C	PRIORITY S	PRIORITY M	PRIORITY C	DAILY S	DAILY M	DAILY C	Comments	MAPPING STDS E	MAPPING STDS N	MAPPING STDS L	RUS E	SHERRI N	SHERRI L	RENATO E	RENATO N	RENATO L
SF #11164	S	D	SHERRI									1																								
ALLY OPEN	S	P	RUSSELL	1																																
OLD TSF	M	D	SHERRI										1																							
? TO NEW	C	P	RENATO												1																					
)LD TSF	M	D	RUSSELL				1																													
OVE FFDR-1	M	P	SHERRI							1																										
AR MILL	S	D	SHERRI									1																								
	S	D	RENATO															1																		
' NEW EWA	C	P	SHERRI								1																									
NDICATOR UMMER ST	M	D	RENATO																1																	
IEW V	M	P	RUSSELL	1																																
)LOA ST : 570	M	D	SHERRI										1																							
8 50KVA	S	D	RENATO															1																		
IASEYARD	M	D	RUSSELL				1																													
AP IN	C	P	SHERRI								1																									
	M	P	SHERRI							1																										
VLT 7613	M	P	RENATO																																	
TO V 155C	M	P	RUSSELL	1												1																				
TSF	M	D	ED																					1												
)VANCE IEO ST	M	D	RUSSELL				1																													
IALII ST	M	D	SHERRI										1																							
)LD TSF	M	D	RENATO																1																	
43 25KVA	S	D	RHONA															1																		
ENT AT 99-	S	D	SHERRI									1																								
SF AND SIZED YET	M	P	SHERRI							1																										
37KVA	S	D	ED																					1												
35 MANAO	M	D	RENATO																1																	
IA	M	D	SHERRI										1																							
CONN LOSED FFDR 1 IS	M	P	RUSSELL	1																																
OAA ST	M	D	SHERRI										1																							
BAKERY I SW	M	P	SHERRI							1																										
TED ON E AND NT	M	P	ED																			1														
	M	P	RUSSELL	1																																
33 ANANIA	M	D	ED																					1												
.D TSF	M	D	RHONA																																	
SEA	M	P	RENATO													1																				

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Item #	Date	MRO Type / Description	Complexity (S,M,C)	Priority (P/D	Assigned Tech	F
841	10/7/2003	PAN LO BAKERY - 711 QUEEN ST - ENERGIZE TSF V 8682 ON FF-2 1787	M	P	SHERRI	
842	10/7/2003	INSTALL & ENERGIZE NEW TSF V 6575 PUNAHOU VISTA 1566 WILDER AVE FFDR 1 & 2 FROM JP39 WILDER AVE	M	P	RUSSELL	
843	10/7/2003	PARADISE BEVERAGE - V 8648 CONNECT 1ST FEEDER FFDR 7096 FROM SW VLT 5582 TSF IS NOT ENERGIZED YET	M	P	RENATO	
844	10/7/2003	INSTALL NEW SW VAULT 8631	M	P	SHERRI	
845	10/8/2003	CONNECT 2ND FDR TO V 8648 PARADISE BEVERAGE	M	P	RENATO	
846	10/9/2003	REPLACE TSF - P15 AKAMAI ST OLD TSF #31514 25KVA CODE 060	S	D	ED	
847	10/9/2003	REMOVE 1PH TSF AT JP779 KAWELA CAMP RD OLD TSF #10331 10KVA CODE 118	S	D	RHONA	
848	10/9/2003	INSTALL NEW TSF VAULT - V 8406 FOR ALFANT RESIDENCE AT 568 PORTLOCK RD TSF IS NOT ENERGIZED YET	M	P	SHERRI	
849	10/9/2003	SHOW 1-PH TAPS OFF THE MAIN CABLE TO V 2618 AND V 5463 ALSO V 5462D AND V 2622	M	P	RENATO	
850	10/9/2003	REPLACE TRANSFORMER V 5444F AT 98-188 LANIA WAY OLD TSF #46216 CODE 506 37 KVA	M	P	RUSSELL	
851	10/10/2003	REPLACE TSF V 5415 OFF JP259 AT 2230N KING ST OLD TSF #39563 500KVA CODE 700	M	D	ED	
852	10/10/2003	REPLACED RUSTY TSF V 1235 FOR AIKAHI DISTRICT PARKS OLD TSF #33862 75KVA CODE 515	M	D	RHONA	
853	10/10/2003	REPLACE CPH STEPDOWN TSF AT JP4 AHONUI ST OLD TSF #30779 333KVA CODE 790	S	D	SHERRI	
854	10/10/2003	RE-ENERGIZE WAIAU START-UP TSF LOCATED BETWEEN 4735 AND 4838 BUS SW	M	P	RENATO	
855	10/10/2003	CUT TAP TO RISER 7735 IN MH 642-A MAKAKILO DR	M	P	RUSSELL	
856	10/10/2003	SPLICE NEW CABLE FROM CUT LINE IN MH 642A MAKAKILO DR TO NEW TAP IN MH640 FARR HWY. CLOSE SW 7735 AND SHIFT LOAD TO MAKAKILO 2 CKT	C	P	RUSSELL	
857	10/14/2003	ENERGIZE V 8406 ALFANT RESIDENCE	M	S	SHERRI	
858	10/14/2003	ENERGIZE V 8648 PARADISE BEVERAGE ON 7096 FF FROM V 5582	M	P	RENATO	
859	10/14/2003	REPLACE TSF VAULT V 1895 94-463 LIANU PL OLD TSF #25437 25KVA CODE 511	M	D	ED	
860	10/14/2003	INSTALL INTERRUPTERS ON SW #4833 JP212B NEAR BARBERS PT SW STA "B"	M	P	RUSSELL	
861	10/15/2003	AT 1414 WARD AVE - REPLACE SW 1077 DISCS WITH CUTOUTS - FUSED AT 100A	M	P	SHERRI	
862	10/15/2003	CUT-IN NEW V 8579 CLOSE FDR 2 AND OPEN FDR 1 CONNECTED FROM JP1X/12 KAPAHULU AVE ALSO - AT V 8425 OPEN FDR 2 AND CLOSE FDR 1	M	P	RENATO	
863	10/15/2003	REPLACE EXIST 3PH OH TSF BANK WITH NEW - P4X PAHOUNUI DR OLD TSF #'S 8397, 12322, 14453	D	S	RHONA	
864	10/16/2003	TEMPORARY - REMOVE V 8126 TAKI RESID 3635 DIAMOND HD RD	M	P	SHERRI	
865	10/16/2003	REMOVE PV FACILITIES ON SWITCHING DIAGRAMS 25430 AND 22730 AND RELATED GENERATOR REFERENCES ON AM/FM AT V 5177A	M	P	RENATO	
866	10/16/2003	ADD NOTE TO BREAKER 1484 TO SHOW BREAKER IS "NON-RECLOSING"	S	D	RUSSELL	
867	10/16/2003	REPLACE TSF V 5861C OLD TSF #47969 100KVA CODE 506	M	D	SHERRI	
868	10/16/2003	REPLACE V 2617 AT HUI IWA ST OLD TSF #48240 50KVA CODE 510	S	D	RENATO	
869	10/16/2003	CORRECT SW VLT NUMBER IN SWITCHING DIAGRAM - DWG #22733 VLT NUMBER SHOULD BE 7820B - INSTEAD OF 7066	M	P	ED	
870	10/17/2003	CHANGE NAME OF BHP SUBSTATION TO TESORO SINGLE LINE - 21855, 21681	M	D	RUSSELL	
871	10/17/2003	REPLACE OH TSF AT JP3/66 KUNIA ROAD OLD TSF #69209 37KVA CODE 136	S	D	SHERRI	
872	10/20/2003	REPLACE OH TSF WITH NEW - JP4/19 PALOLO AVE OLD TSF #35198 CODE 017 25KVA	S	D	RENATO	
873	10/20/2003	TRANSFORMER REPLACEMENT - V 5670 HANALANI SCHOOLS AT 94-294 ANANIA DR OLD TSF #47095 CODE 546 75KVA	M	D	SHERRI	
874	10/20/2003	REPLACE LEAKING TSF V 4810'O' AT ALAWIKI ST OLD TSF #39627 50KVA CODE 506	M	D	RHONA	
875	10/20/2003	CORRECT DISPATCH BOARD TO SHOW SW 5397 AT MCCULLY SUB AS INTERRUPTER TYPE	S	P	RUSSELL	
876	10/20/2003	REPLACED V 5737A AND 57378 AT HALAWA PRISON WITH NEW	M	D	ED	
877	10/21/2003	CUT V 5304, 546, 2724, 8550, 3057, 224, 4296, 730A & B, AND 1861A FROM MAHUKONA CKT - TO BE CONVERTED TO PAWAA KAI CKT TOMORROW - REFER TO SKETCH	M	P	RENATO	
878	10/21/2003	AT V 3548 - SHOW POSITEC AS NORMALLY OPEN	M	P	SHERRI	

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Comments

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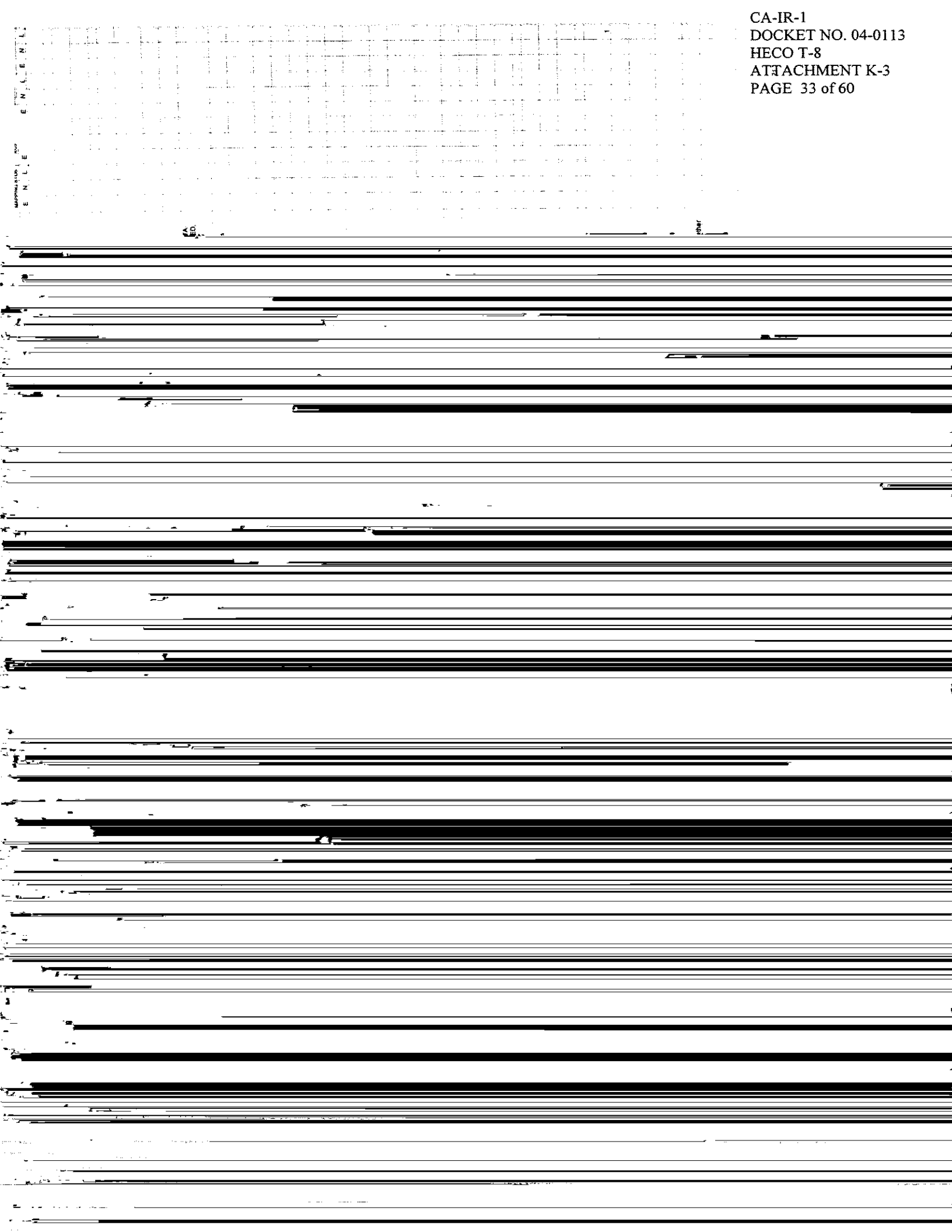
Item #	Date	MRO Type / Description	Complexity (S,M,C)	Priority (P/D	Assigned Tech	p p
879	10/21/2003	CHANGE ALL MAPS AND RECORDS TO REFLECT CHANGE FROM BHP TO TESORO (DISPATCH BOARD, SUBSTATION RACKS)	M	P	RUSSELL	
880	10/22/2003	REPLACE 1PH OH TSF AT JP15 HILLSIDE AVE OLD TSF #40005 CODE 983 15KVA	S	D	RHONA	
881	10/22/2003	REPLACE TSF V 2474 AT 390 KUAHELANI AVE	M	D	ED	
882	10/22/2003	ATKINSON RECONDUCTOR - TAP V 5304, 1661A, 730A&B, 4296, 3051, 224, 8550, 2724 AND 546 TO PAWAA KAI CKT	M	P	RENATO	
883	10/22/2003	ENERGIZE HONOLULU ZOO COMMISSARY V 6579 AT 151 KAPAHULU AVE	M	P	SHERRI	
884	10/22/2003	REPLACE TSF V 5858C FOR LONGS DRUGS- MILILANI TOWN CENTER OLD TSF #50818 500KVA CODE 536	M	D	RUSSELL	
885	10/23/2003	REPLACE TSF AT JP18 OLD PALI RD OLD TSF #54828 25KVA CODE 055	S	D	ED	
886	10/23/2003	REPLACE TSF V 7187 KAPOLEI REGIONAL PARK MANAWAI ST OLD TSF #53874 112KVA CODE 112	M	D	RHONA	
887	10/23/2003	ENERGIZE NEW VAULT 8845 STAR OF THE SEA CHILLER	M	P	RENATO	
888	10/23/2003	INSTALL AND ENERGIZE NEW UG CABLE FROM HUNA SUB TO GRACE PACIFIC	M	P	SHERRI	
889	10/23/2003	PAPAHEHI PL REMOVE V 4976D PAPAHEHI PL AND SPLICE CABLE THROUGH	M	P	RUSSELL	
890	10/23/2003	ATKINSON RECONDUCTOR - CUT KONA ST CKT FROM V 5304 AND TAP TO MAHUKONA CKT	M	P	RENATO	
891	10/24/2003	REPLACE TSF V 5396 87-1581 FARRINGTON HWY OLD TSF #55834 500KVA CODE 550	M	D	ED	
892	10/24/2003	REPLACE OH TSF AT JP3 MOANI ST WITH NEW 37KVA OLD TSF #13002 25KVA CODE 005	S	D	RHONA	
893	10/24/2003	CHANGE FUSE SIZE AT P12 OFF HEKAHA ST FROM 40A TO 100A PER NOTIFICATION - M. TRAN - REFER TO MARK-UP	S	D	SHERRI	
894	10/24/2003	SHOW EQUIPMENT AT IWILEI SUBSTATION: CLOSE BREAKER 7756 AND INSTALL 25KVA CAP BANK #1 CLOSE BREAKER 7761 AND INSTALL 25KVA CAP BANK #2 PER NOTIFICATION - N. LIANG	M	P	RUSSELL	rx o
895	10/24/2003	INCLUDE VAULT STRING - VAULTS 4608A, B AND C ON SWITCHING DIAGRAM B-PHASE TSFS - CLUBVIEW ESTATES	M	D	RENATO	
896	10/27/2003	REPLACE TSF AT JP153 WAIALAE AVE OLD TSF #9761 50KVA CODE 36	S	D	ED	
897	10/27/2003	REPLACE TSF AT JP4/38 AT 3710 TANTALUS DR OLD TSF #7605 CODE 005 7KVA ALSO CUTOUT ON JP38 UPGRADED FROM 7 AMPS LTO 20 AMPS	S	D	RHONA	x o
898	10/27/2003	PLEASE CHANGE CABLE PREFERENCE TO V 4812 - N.C FDR #1 N O. FDR #2 ALSO MARK CABLE "FDR #1" FROM JP-305T TO V 4812	M	P	SHERRI	
899	10/27/2003	INSTALL & ENERGIZE NEW TSF FOR HARRY & JEANETTE WEINBERG FOUNDATION V 8583 AT 345 N. NIMITZ HWY CONN FDR 1 & 2 FROM JP1X/7 NIMITZ HWY	M	P	RUSSELL	
900	10/28/2003	REMOVE C & H SUGAR EQUIPMENT - GENERATOR NO LONGER THERE	M	D	ED	
901	10/28/2003	REMOVE FROM PRINT: NUG AT MIRAMAR HOTEL	M	D	RENATO	
902	10/28/2003	REMOVE CHP EQUIPMENT FROM PACIFIC RESOURCE TERMINAL	M	D	SHERRI	
903	10/28/2003	REPLACE TSF AT JP7 KAAU ST OLD TSF #37313 37KVA CODE 060	S	D	RUSSELL	
904	10/28/2003	REPLACE 1PH OH TSF AT JP3 PUUHUE PL AND ADD NEW TSF AT JP5 FROG LANE - TO SPLIT LOAD. OLD TSF #74780 50KVA CODE 030	S	D	SHERRI	
905	10/28/2003	REMOVE CABLE THAT COULD TIE BETWEEN V8608 AND V1421, CUSTOMER RECONFIGURED CABLES AND REMOVED TIE	M	P	RENATO	
906	10/28/2003	PER CONSTRUCTION RELEASE: REPLACE DISC SW 3511 AND 3512 WITH 100A FUSED CUTOUTS	M	P	RUSSELL	
907	10/30/2003	CONVERT SW 5355 TO MOS TYPE AND CHANGE PREFERENCE TO NORMALLY OPEN. CHANGE PREFERENCE OF SW 4761 TO NORMALLY CLOSED.	M	P	SHERRI	
908	10/30/2003	NSTALL TRANSFORMER ON P32 WAIPAHU STREET. NEW TSF #76057 CIDE 056 50KVA	S	D	RENATO	
909	10/30/2003	REPLACE V353A WITH DEADFRONT TRANSFORMER, REMOVE POSITECT. NEW TSF #75061 CODE 485 37KVA	S	D	RUSSELL	
910	10/30/2003	REPLACED TRANSFORMER ON P4 WAILELE ROAD NEW TSF #74674 CODE 004 50KVA	S	D	SHERRI	
911	10/31/2003	REMOVE TSF AT JP13 LOKOEA PL OLD TSF #37087 25KVA CODE 055	S	D	RENATO	
912	10/31/2003	3PH TSF BANK REMOVED AT JP36 KAILUA RD	S	D	RUSSELL	
913	10/31/2003	REMOVE TSF V 2437 AT 1020 MOANALUA RD OLD TSF #45554 50KVA CODE 506	S	D	SHERRI	
914	10/31/2003	REPL TSF V 5990 AT 56-565 KAM HWY OLD TSF #50165 75KVA CODE 553	S	D	RENATO	



	Complexity (S,M,C)	Priority (P/D	Assigned Tech	Comments
LOOP	M	P	RENATO	
	M	P	RENATO	
OUTS TO	S	D	RUSSELL	
LECT UNIT L MAPPING	M	P	RUSSELL	
	S	D	RENATO	
H BOARD UA ST 2071 - TO T SHOWN	M	D	SHERRI	
TION	M	P	pending mtg w/ Dean Peter	
AP IN HH- VM42F SE IN SW M JP 163	M	P	ED	work MRO 949, & 953 together
SW #6292	S	D	RUSSELL	
	S	D	RENATO	
37KVA TSF	S	D	RENATO	
OANIALA D V7431 AMOND	M	P	RENATO	
	S	P	RUSSELL	
ERE ALLED- (15 RESSES	M	D	ED	PV OR NEM?
RCIAL	M	P	RUSSELL	
KAMA ST. / 50KVA	S	D	RHONA	MRO 20030844
FOR	S	P	RUSSELL	
R	M	P	RENATO	MRO 20030434
	S	P	SHERRI	MRO 20030950
HOA AVE. NAKAI ST. V TSF	M	P	RUSSELL	
	M	P	RENATO	
ST N	S	D	RHONA	
OLLOWING KONO	S	D	RUSSELL	MRO 20030617
NG) ON THE VE. NEAR LY), ON B				MRO20030844 & 967
	S	D	ED	
OCEAN	S	P	RUSSELL	
	M	P	SHERRI	
POINT AT AND PAPU GE "APH"	M	P	SHERRI	
SW2122R	S	D	RHONA	
CONTACT	S	D	RUSSELL	

Item #	Date	MRO Type / Description	Complexity (S,M,C)	Priority (P/D)	Assigned Tech	P	Comments
980	11/19/2003	PER OUTAGE IN AREA, WILIWILI CIRCUIT RELIABILITY IMPROVEMENT PROJECT FOUND COMPLETED NEW 46KV SWITCHES 5829 ON P39X AND 5830 ON P39Y FOUND INSTALLED AND IN SERVICE. ALSO, EXISTING SWITCH 5284 ON P34 REMOVED FROM SERVICE UPDATE MAPS AND RECORDS ASAP. (DRAWING O-11462 REV 8 FOR REMOVAL OF SWITCH 5284)	M	P	EO		
981	11/20/2003	ENERGIZE V8541 ON FF1 FOR HALEIWA COMMERCIAL DEVELOPMENT.	S	P	RUSSELL		
982	11/20/2003	REMOVE OH STEPDOWN TSF LOCATED ON JP9 KUUKAMA ST. FIELD VERIFIED BY C&M AND ENGINEERING (A HIRAYAMA)	S	P	RENATO		
983	11/21/2003	INSTALL AND CONNECT 2ND FEEDER TO V8594, KAISER PERMANENTE	M	P	SHERRI		MRO 20030946
984	11/21/2003	REMOVE FUSE CUTOUT ON JP10 BLACK POINT RD, NEAR MST. ON JP14KAHALA AVE, INSTALL FUSE CUTOUT ON OH CONDUCTOR TAP TO BLACK POINT ROAD. FUSE SIZE TO BE FIELD VERIFIED BY C&M, AND SUBMITTED TO MAPPING LATER	S	P	RENATO		
985	11/24/2003	INSTALL AUTO-TYPE (BLINKING) FAULT INDICATORS ON JP48XX KALANIANAOLE HWY (WAIMANALO SIDE) OF SW4521. ALSO ON JP26 KALANIANAOLE HWY. SEE ATTACHMENT PROVIDED BY R. CHUN	S	D	RUSSELL		
986	11/24/2003	INSTALL MANUAL TYPE FAULT INDICATORS AT THE FOLLOWING LOCATIONS. JP9 PAAKEA RD, JP41 LUALUA LEI NAV RD, (MAUKA OF DISC SW8656), JP41 LUALUA LEI NAV RD (MAKAI OF DISC SW8656)	S	D	SHERRI		
987	11/24/2003	REPLACE V5809 FOR CERTIFIED CONSTRUCTION	S	D	RENATO		
988	11/24/2003	INSTALL 100 AMPS FUSE DISCONNECTS ON JP177 FARRINTON HY.	S	D	RUSSELL		
989	11/24/2003	ENERGIZE V8273 FOR BWS WAIPAHU WELLS, MANAGER DRIVE	S	P	SHERRI		MRO 20030926
990	11/24/2003	INSTALL AND ENERGIZE V8625 FOR KOKO MARINA MAINTENANCE FACILITY	M	P	RENATO		
991	11/24/2003	REPLACE V4341 ON 1729 AKAHI ST, KALIHI	M	D	SHERRI		
992	11/24/2003	ALL POSITECS IN SW V410 SIERRA DRIVE, ARE SLUGGED, NOT FUSED.	M	D	RENATO		MRO 20030961
993	11/26/2003	ENERGIZE V8692 FOR BERARDY RESIDENCE.	S	P	RENATO		
994	11/25/2003	EDIT AND REPLACE CONDUCTOR DESCRIPTIONS IN FRAMME FOR GRID 4482. SEE ATTACHED PRINT FOR SPECIFIED EQUIPMENT.	M	D	RUSSELL		
995	11/26/2003	REPLACE OH TSF ON JP11X ST JOHNS RD.	S	D	SHERRI		
996	11/26/2003	INSTALL 1ST FEEDER TO V8658. V8658A AND V8658B.	M	P	RENATO		
997	11/26/2003	INSTALLED PRIMARY CABLES AND ENERGIZED TSF'S FROM V8357G TO V8357H, V8357J, V8357K, V8357L, AND V8357E. REMOVED V8357L TSF#30987, CODE503, 50KVA RE/INSTALLED V8357L (RELOCATED W/ NEW TSF)	M	P	RUSSELL		
998	11/28/2003	REPLACE 750 KVA TSF WITH NEW 1000KVA TSF V 6943	S	P	SHERRI		
999	12/1/2003	REPLACE 10KVA OH TSF ON P13 KIONAOLE RD.	S	D	RENATO	D	
1000	12/1/2003	PLEASE HAVE FFDR 7204 CABLES LABELED FROM KALANIANAOLE SW VLT V8515 ON MAPS	S	D	RUSSELL		
1001	12/1/2003	REPLACE V227 WITH NEW 50KVA TSF.	S	D	SHERRI		
1002	12/1/2003	INSTALL 1-10KVA OH TSF ON JP8 MAKAKILO DR.	S	P	RENATO		
1003	12/1/2003	TESTING MRO PGM					
1004	12/1/2003	REPLACE 25KVA OH TSF AT 1042 IOPONO LP, JP8	S	D	RUSSELL		
1005	12/1/2003	REPLACE DEFECTIVE TSF., V1926 PINAO ST	S	D	SHERRI		
1006	12/2/2003	REPLACE 25KVA OH TSF ON JP20 ULUPUNI ST	S	D	RENATO		
1007	12/3/2003	REPLACE 100KVA OH TSF ON JP1/3 PAHIA RD.	S	D	RUSSELL		
1008	12/2/2003	ADD V7366 - EASTMAN KODAK COMPANY TO KUAHELANI 4 CKT., SW FDR 2787.	M	P	RENATO		
1009	12/2/2003	PLEASE ADD THE NAME AND PHONE NUMBER FOR AFTER HOUR ENTRY TO V8450, AT&T MILILANI HIGH TECH PARK.	S	D	RENATO		
1010	12/3/2003	PLEASE DESIGNATE BY NUMBER, ALL TAPS TO MAIN CABLES ON KALANIANAOLE HWY (PLACE FFDR AND SW FDR LABELS) FROM NENUE ST., E. HIND DR., PUU IKENA DR., HAWAII LOA ST., TO HALEMAUMAU ST. (NEAR SW V7322A)	M	D	SHERRI	X	O
1011	12/3/2003	REPLACE 25KVA OH TSF ON JP2/2 KAPAA QUARRY RD.	S	D	RUSSELL		
1012	12/3/2003	REPLACE 100KVA OH TSF BANK ON JP1/1X/3 LULUKU PLACE WITH 3-75KVA TSFS. RENUMBER JP1/1X/3 TO JP2 LULUKU PLACE	S	D	SHERRI		
1013	12/3/2003	RELOCATE 3-PH BANK FROM JP10/51 TO JP11/51 WAIANAE VALLEY RD RELOCATE 1-PH 25KVA TSF FROM JP11/51 TO JP11X/51 WAIANAE VALLEY RD.	S	D	RUSSELL	X	O
1014	12/3/2003	UPDATE TRANSMISSION RECORDS TO REFLECT SW4656 TO BE LOCATED ON P5X MAHAILUA ST, MAKAPUU SIDE OF P5	S	D	RENATO		

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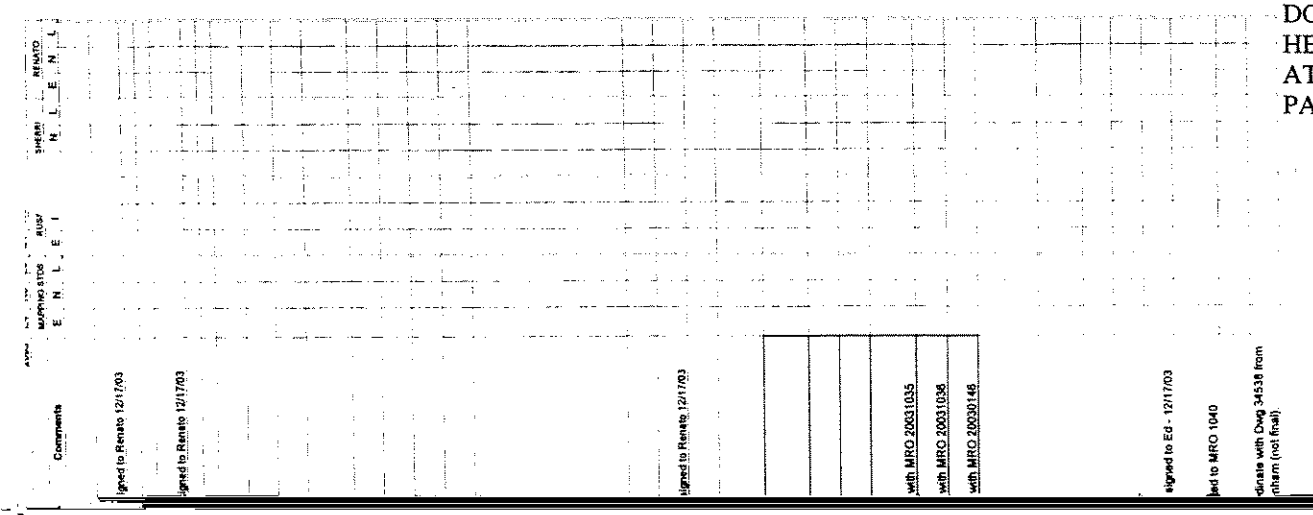
RENATO
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Comments
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with MRO 20031035
with MRO 20031036
with MRO 20030146
signed to Ed - 12/17/03
led to MRO 1040
dinate with Dwg 34538 from
ntsarm (not final)

Item #	Date	MRO Type / Description	Complexity (S,M,C)	Priority (F/D	Assigned Tech
1049	12/15/2003	REPLACE 1PH OH TSF AT JP2/181 CALIFORNIA AVE OLD TSF 60559 25KVA CODE 55	S	D	RENATO
1050	12/15/2003	REPLACE 1PH OH TSF AT JP4 COLBURN ST OLD TSF #29728 50KVA CODE 055	S	D	RUSSELL
1051	12/15/2003	REPLACE 1PH OH TSF AT JP-1X PILILAAU AVE OLD TSF #28390 15KVA CODE 060	S	D	ED
1052	12/15/2003	REPLACE OH TSF AT JP-2 KOKEA ST OLD TSF #37152 25KVA CODE 056	S	D	RENATO
1053	12/15/2003	PER EQUIPMENT APPROVAL - TEST DIVISION PLEASE ADD AT/AR NOTATION AT SW VAULT 5304 ALA MOANA PAC PLAZA	S	D	SHERRI
1054	12/16/2003	INSTALLED NEW 1PH OH TSF ON JP-1/10 AT 3155 ALINI DR	S	D	RUSSELL
1055	12/16/2003	REPLACED RUSTY TSF ON JP48 E. MANOA RD OLD TSF #46952 50KVA CODE 017	S	D	RUSSELL
1056	12/16/2003	REPLACE OH TSF AT JP19 PUULOA RD OLD TSF #55900 25KVA CODE 055	S	D	RENATO
1057	12/16/2003	INSTALL & ENERGIZE V 8632K, L, M, N, P, Q, R, S, T, U, V, W, X FOR OCEAN POINTE PH. 2B-1	M	P	SHERRI
1058	12/16/2003	TAP EXISTING EWA BEACH #4 CABLE IN MH885M. CUT & HOT CAP CABLE IN MH 885D EWA BEACH 4 CKT. CUT & HOT CAP CABLE IN MH885D & CONNECT CABLE IN MH885M TO NEW FT WEAVER #4 CKT	C	P	ED-RUSSELL
1059	12/17/2003	REPLACE TSF V 5700A AT 42-106 ALEKA PL OLD TSF #46154 37KVA CODE 510	S	D	RUSSELL
1060	12/18/2003	INSTALL FIRST FEEDER - FUSED FEEDER FROM SW V 8332 TO NEW V 8615 - KA UKA BUSINESS CTR- TSF IS NOT ENERGIZED YET	M	P	RUSSELL
1061	12/18/2003	REPLACED OH TSF AT JP8 KAULUKANU ST OLD TSF #4199 10KVA CODE 008	S	D	SHERRI
1062	12/18/2003	REMOVED FROM SERVICE - SW 1935 ON JP-217 FARR HWY	S	D	RUSSELL
1063	12/18/2003	REPLACED V 2972B 95-101 KIPAPA DR OLD TSF #29115 100KVA CODE 461	S	D	RENATO
1064	12/18/2003	REPLACED TSF V 2591 KIPAPA DR OLD TSF INFORMATION NOT AVAILABLE	S	D	SHERRI
1065	12/18/2003	INSTALL NEW TSF V 8701 AT KAMOKILA BLVD & KAPOLEI PARKWAY FOR HOME DEPOT KAPOLEI TSF IS NOT ENERGIZED YET	M	P	RUSSELL
1066	12/19/2003	CONNECT EXISTING CEIP#3 CABLE TO NEW KAMOKILA #3 CKT IN MH640A - CHANGE SW 7734 TO NORMALLY OPEN - RISER DISC AT JP-102 FARR HWY.	C	P	RENATO
1067	12/19/2003	PER N. LIANG SW5373 WAS NOT REMOVED FROM SYSTEM. SHOW SW5373 AS NORMALLY OPEN ON P19Y, PER DGN75092.	M	P	RENATO
1068	12/19/2003	CONNECT SECOND FEEDER - WAIPIO 1 CKT - TO NEW KA UKA CENTER V 8615 94-1235 KA UKA BLVD - TSF IS NOT ENERGIZED YET	M	P	RUSSELL
1069	12/19/2003	REPLACE TSF V 2622 WITH LOOP FEEDER PROTECTION TYPE TSF NOTE: FEEDER PROTECTION FUSED AT 100A TO V 2621 - REFER TO SKETCH	S	D	SHERRI
1070	12/22/2003	REPLACE 1PH OH TSF AT JP221 510198 KVA HWY OLD TSF #67669 25KVA CODE 056	S	D	RUSSELL
1071	12/23/2003	REPLACED DEFECTIVE V 5712 94-520 PUAHI ST OLD TSF #48434 150KVA CODE 548	S	D	RUSSELL
1072	12/23/2003	ENERGIZE TSF VAULTS 8588A, B, C, D, E TAPPED BPH PRIMARY CABLE IN HH#3 FROM V 8283F TO V 8588B NORMALLY OPEN IN V 8588F TO 8588G	M	P	RENATO
1073	12/23/2003	SPLICE A-PH CABLE IN HH#2 TO V 8587A FROM SW VLT 8068 - ENERGIZE PRIMARY CABLE & VAULTS 8587A, B, & C NORMALLY OPEN IN V 8587E TO V 8587D	M	P	SHERRI
1074	12/24/2003	REPLACED 1PH OH TSF PALI HWY - JP-249 OLD TSF #72037 CODE 056 50KVA	S	D	SHERRI
1075	12/24/2003	ENERGIZE TSF V 8615 KA UKA CENTER	S	P	RUSSELL
1076	12/29/2003	REPLACE OH TSF ON JP10 , 12TH AVENUE	S	D	RENATO
1077	12/29/2003	REPLACE V383 FOR KOKOHEAD ELEMENTARY SCHOOL, LUNALILO HM RD.			Canceled
1078	12/29/2003	PLEASE REMOVE THE SCHOOL ST #1 1-LINE FROM THE MIMIC BOARD - NOT NEEDED	M	P	RUSSELL
1079	12/29/2003	CORRECT RACK PRINT #8 MAP 13 - 1) JP-56 BEHIND HOUSE ON KELEWINA ST IS DISCONNECT - NOT FUSE. 2) ADD FUSE ON JP-2/56 OFF MAUNAWILI TRAIL AT END OF 336 TREEWIRE, BEGINNING OF #4 CU WIRE.	M	P	SHERRI
1080	12/29/2003	REPLACE EXIST TSF AT P2/282T KAM HWY WITH NEW -OLD TSF #20310 25KVA CODE 055	S	D	SHERRI
1081	12/29/2003	REPLACE 3-PH TSF BANK IN V 383 FOR KOKOHEAD ELEM SCH @ 189 LUNALILO HM ROAD OLD TSF #S 33628, 33629, 33630 75KVA CODE 060	S	D	RUSSELL
1082	12/29/2003	REPLACE 2 OF 3PH OH TSF BANK AT 941211 KUNIA RD P2/92 OLD TSF #S 63776, 63777 50KVA CODE 138	S	D	RHONA

Comments
Reassigned to Ed - 12/17/03
work with MRO 1025
work with MRO 666

2/11/2004 10:10 AM
X = Construction Release

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Item #	Date	MRO Type / Description	Complexity (S,M,C)	Priority (P/D)	Assigned Tech	P #
					Apr-03	15
						27

TY C	DAILY S	DAILY M	DAILY C	P			DAILY S	DAILY M	DAILY C	PRIORITY S	PRIORITY M	PRIORITY C	DAILY S	DAILY M	DAILY C	PRIORITY S	PRIORITY M	PRIORITY C	DAILY S	DAILY M	DAILY C	PRIORITY S	PRIORITY M	PRIORITY C	DAILY S	DAILY M	DAILY C
				37						36																	
3	11	1	0	4	6	0	15	3	0	3	3	0	20	2	0	0	0	0	0	0	0	0	0	0	0	0	0
	12			10			18			6			22			0			0			0			0		
				28						28						0						0					

Comments		E	N	L	E			E	N	L	E	N	L
	Apr-03	5	0	11	0			3	0	6	2	0	4
	Previous	2	0	7	0	0	1	1	0	1	1	0	5

energized status or conditions	E
name, number assignment or location of facilities	N
labeling of info, conductor size, pole number, etc (cosmetic errors)	L

Description	NE
Business Center	
	1
	1
t Halawa	
-13 & 13-1B	
-12	
	1
	1
Alinui Dr	
V1327	
	1
Infrastructure	
all V441A & B	1
03A-P, V8504	
tructure V8603 & V8604	
Alinui Dr	
Business Center	
& V8612A	
lity	1
uses V8509A-F	
l Storage V8601	
Facility above)	
607	
uses V8509A-F	
uses V8509A-F	
Alinui Dr	
13 & 13-1B	
A-F	
uses V8509A-F	
- 8-V8578A-C	
41A-C	
0-12	
St-temp power	

Assigned Tech	RT N	RT R	SN N	SN R	RA N	RA R	PAU X	CE #	Planner	Co...nts
Russell		1					X	CE058896	Morris Ho	
Sherri				3			X	CE042022	Erik Kusunoki	
Renato					1		X	CE056637	Arron Lee	
Russell		3						CE058844	Russell Yoshida	new drawing revision
Sherri			1					CE054406	Tim Laborte	
Renato						1	X	CE053884	Morris Ho	
Russell		2						CE041603	Morris Ho	
Sherri				1			X	CE047122	Tim Laborte	
Renato						2	X	CE055856	Russell Yoshida	
Russell		1						CE049616	Morris Ho	
Sherri				2				CE058777	Morris Ho	
Renato					1			CE060774	Tim laborte	
Renato						1	X	CE056637	Arron Lee	
Russell		1						CE068480	Erik Kusunoki	
Sherri			1					CE057742	Morris Ho	
Renato						2	X	CE046742	Jon Sakata	Due 2/24/03
Russell		1						CE060806(& 7)	Bill Denham	~~on hold BD to submit w/Request~~
Sherri				1			X	CE057558	Morris Ho	
Renato					1			CE059775	Bill Denham	Due 2/28/03
Russell		2						CE045393	Morris Ho	Initial and note
Sherri				2				CE057419	Bill Denham	
Renato					1			CE058631	Russell Yoshida	suggest to designer to label V441A&B [dwg 34478]
Russell		5						CE040949	Alan Ing	Due 3/14/03-add street names
Sherri				2				CE052675	Bill Denham	
Renato						2		CE046742	Jon Sakata	Due 2/28/03-2nd revision
Russell		1						CE058896	Morris Ho	2nd revision
Sherri				1				CE057046	E. Kusunoki	worked on previous to 2/21/03 and assigned for revision; this is 2nd revision, also assign switch numbers
Renato						3		CE057564	Russell Yoshida	worked on previous to 2/21/03, assign vault numbers
Russell	1							CE060007	Mike Hahn	
Sherri				1				CE040918	Morris Ho	**RUSH req'd today**, rev to sht 3 only; no cell for new (piggyback) tsf
Renato						1		CE059764	Morris Ho	signatures
Russell										
Sherri				1				CE059115	Morris Ho	
Renato						1		CE012496	Erik Kusunoki	
Sherri				2				CE040918	Morris Ho	**RUSH req'd by 3/4/03 morning if possible**-rev to sht 2 & 3
Sherri				2				CE040918	Morris Ho	**RUSH req'd by 3/4/03 morning if possible**-rev to sht 2 & 3, returned for additional revision
Renato						2		CE046742	Jon Sakata	3rd revision
Renato						2		CE055856	Russell Yoshida	2nd revision-w/sig
Renato						2		CE057564	Russell Yoshida	worked on previous to 2/21/03, 2nd revision on sht 1 & 2 only
Russell		2						CE058844	Russell Yoshida	2nd revision on sht 2 and 3 only
Sherri				2				CE040918	Morris Ho	returned for additional rev to sht 2 & 3 w/sigs
Renato						1		CE051918	Russell Yoshida	revision w/sigs
Russell		1						CE055120	Russell Yoshida	revision w/sigs
Sherri				2				CE033753	Morris Ho	
Sherri				2				CE058239	Morris Ho	2nd revision(?)
Russell		2						CE041603	Morris Ho	2nd revision
Renato						3		CE057564	Russell Yoshida	worked on previous to 2/21/03, 3rd revision sht 1-3
Russell		1						CE058632	Morris Ho	

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Item #	Date	Job Name Type / Description	# NEW	# REV	Assigned Tech	RT N	RT R	SN N	SN R	RA N	RA R	PAD X	CE #	Planner	Comments
49	3/7/2003	Kaluanui Phase 2 & 3 Townhouses V8509A-F		1	Sherri				1				CE040918	Morris Ho	onlyw/sigs
50	3/7/2003	McDonald's-Kam Shpg Ctr School St		1	Renato						1		CE053497	Morris Ho	add Detail "B"
51	3/10/2003	St Francis Hospital-Ice Thermal Storage V8601		1	Renato						1		CE059764	Morris Ho	2nd revision & signatures
52	3/10/2003	*St. Francis Hospital West*		*1*	*Renato*						*1*		*CE059775*	*Bill Denham*	*was submitted for revisions on 3/10/03 per Renato*
53	3/11/2003	Kaiser Permanente-Waipio Clinic V8594, V8594A		1	Russell		1						CE050685	Jon Sakata	
54	3/11/2003	Ewa Gentry Area 21D Phase 10-12		2	Sherri				2				CE058239	Morris Ho	3rd revision
55	3/11/2003	Ewa Gentry Area 21C Phase 9-12		2	Sherri				2				CE058777	Morris Ho	3rd revision
56	3/11/2003	Royal Kunia Site 8A Anonui St V8470A-H, J, J, N, P-S		4	Renato						4		CE040489	Loren Yasuda	
57	3/12/2003	UH Med Sch-JABSOM Health & Wellness Ctr, Italo St V8622, 8622A, V8623, 8623A, V8624, 8624A & 8624B		2	Renato						2		CE047576	Jimmy Lum	worked on previous to 2/21/03,
58	3/13/2003	McDonald's-Kam Shpg Ctr School St		1	Renato						1		CE053497	Morris Ho	add revision block and sigs
59	3/13/2003	Waikalua Bayside Estates V8341A-C		3	Sherri				3				CE033753	Morris Ho	add sigs
60	3/13/2003	Ewa Point Marketplace V8612 & V8612A		1	Sherri				1				CE057046	E. Kusunoki	3rd revision-add detail
61	3/13/2003	Punahou Middle School		1	Russell		1						CE038737	Russell Yoshida	add revision block and sigs
62	3/13/2003														
63	3/14/2003	Costco-Iwilei Gas		1	Renato						1		CE060774	Tim Laborte	2nd revision? Add sigs
64	3/14/2003	Yamamoto Residence		1	Russell		1						CE059475	Tim Laborte	2nd revision? Add sigs
65	3/14/2003	Ewa Gentry Area 28 Phase B V8419G-M		1	Sherri				1				CE 027799	Eric Shimono	RUSH req'd today, worked on previous to 2/21/03, revise switch number assignment.
66	3/17/2003	Mililani Mauka Offsite 13-St Lts V8621		1	Sherri				1				P25056	Wes Tashiro	pending-sigs only-WT created own dgns
67	3/17/2003	C&C Parks-Wahiawa Botanical Gardens		1	Russell		1						CE043452	Morris Ho	[PO to discuss w/EC 3/14/03]
68	3/17/2003	Gouveia Residence		1	Sherri				1				CE054406	Tim Laborte	2nd revision?
69	3/18/2003	Ewa Gentry Area 21A Ph 16 & 17; Ewa Gentry Area 21C Ph 1 and Area 21D Ph 5, Makalea St		3	Renato						3		CE045866	Morris Ho	
70	3/18/2003	Ewa Gentry Area 21D Ph 1- 4, Makalea St		1	Russell		1						CE046277	Morris Ho	
71	3/19/2003	West Loch Fairway St Ltg Impv		2	Sherri				2				CE056734	Aaron Lee	required 3/24/03
72	3/19/2003	Gouveia Residence		1	Sherri				1				CE054406	Tim Laborte	3rd revision? & sigs
73	3/19/2003	Ewa Point Marketplace V8612 & V8612A		1	Sherri				1				CE057046	E. Kusunoki	4th revision @ metering detail
74	3/19/2003	Mililani Mauka MF107B V8609A-F		3	Russell		3						CE058844	Russell Yoshida	revision & sigs, 3 shts
75	3/21/2003														
76	3/21/2003	Banana Patch Seafood		1	Russell		1						CE049616	Morris Ho	2nd rev w/sigs
77	3/21/2003	Plaza at Punchbowl		2	Russell		2						CE041603	Morris Ho	3rd revision
78	3/21/2003	C&C CSM Baseyard Iwaena St Halawa		1	Renato						1		CE053884	Morris Ho	2nd revision
79	3/21/2003	Ewa Gentry Area 21C Phase 9-12		1	Sherri				1				CE058777	Morris Ho	4th revision-sht 1 only
80	3/21/2003	Ewa Gentry Area 21D Phase 10-12		1	Sherri				1				CE058239	Morris Ho	4th revision-sht 1 only
81	3/21/2003	Ewa Point Marketplace V8612 & V8612A		1	Sherri				1				CE057046	E. Kusunoki	5th revision and sigs
82	3/24/2003	Koko Marina Maintenance Facility		1	Russell		1						CE060007	Mike Hahn	2nd revision and sigs
83	3/24/2003	Restaurant @ Pearlridge III-V8607		1	Sherri				1				CE059115	Morris Ho	2nd revision
84	3/24/2003	Royal Kunia Site 8A Anonui St V8470A-H, J, J, N, P-S		4	Renato						4		CE040489	Loren Yasuda	add sigs
85	3/24/2003	C&C Manana Corp Yard		1	Renato						1		CE054326	Morris Ho	2nd revision
86	3/24/2003	Oceanic Cable-Kapolei		1	Russell		1						CE043581	Morris Ho	print hard copy
87	3/24/2003	Iolani School, Multi Purpose Facility V8537 & V8537A		1	Sherri				1				CE034971	Eric Shimono	3rd revision (NO/NC on P9)
88	3/24/2003	C&C Puuohulu Park, Kaukama Rd., Maili	1		Russell	1							CE059235	Reuben Ogoshi	new drawing request (pad)
89	3/25/2003	Mililani Mauka MF 115, Meheula Pkwy		4	Sherri				4				CE050686	Loren Yasuda	new revision assignment
90	3/25/2003	Mililani Mauka Unit 127/133 Kaikua St (future Kapahoe)		4	Renato						4		CE055340	Bill Denham	new revision assignment
91	3/25/2003														
92	3/25/2003	Royal Kunia Site 8B Anonui St		4	Russell		4						CE057434	Loren Yasuda	new revision assignment
93	3/25/2003	Royal Kunia Site 8A Anonui St V8470A-H, J, J, N, P-S		1	Renato						1		CE040489	Loren Yasuda	sht 2 only rev
94	3/25/2003	C&C Manana Corp Yard		1	Renato						1		CE054326	Morris Ho	3rd revision
95	3/26/2003	Restaurant @ Pearlridge III-V8607		1	Sherri				1				CE059115	Morris Ho	3rd revision
96	3/26/2003	Kalani High School install new V441A & B and remove old V441		1	Renato						1		CE058631	Russell Yoshida	1st revision

2 10:09 AM
X=completed

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e / Description	NEW	REV	Assigned Tech	RT N	RT R	SN N	SN R	RA N	RA R	PAU X	CE #	Planner	Co
											CE056489/P00		
anoe St	3		Sherri			3					22665	Loren Yasuda	new drawing request (subd)
eula Pkwy		4	Sherri				4				CE050686	Loren Yasuda	2nd revision
porary Service-Health &													
		1	Renato						1		CE056536	Jimmy Lum	new revision assignment
Avenue Install V8540		1	Russell		1						CE050485	Russell Yoshida	new revision assignment
38 Nimitz Hwy	1		Renato					1			CE062394	Russell Yoshida	new drawing request (3-ph pad)
Avenue Install V8540		1	Russell		1						CE050485	Russell Yoshida	add sig
e 10-12		1	Sherri				1				CE058239	Morris Ho	5th revision-sht 1 & 2
e 9-12		1	Sherri				1				CE058777	Morris Ho	5th revision-sht 1 & 2
w V441A & B and remove													
		1	Renato						1		CE058631	Russell Yoshida	2nd revision
V8607		1	Sherri				1				CE059115	Morris Ho	4th revision
		1	Renato						1		CE054326	Morris Ho	4th revision
mal Storage V8601		1	Renato						1		CE059764	Morris Ho	2nd revision
Mikole St Sand Island	1		Russell	1							CE060236	Tim Laborte	
111 & V8111A		1	Sherri				1				CE 008656	Eric Shimono	new revision assignment
sa Quarry Rd		1	Renato						1		CE057723	Erik Kusunoki	new revision assignment
h2B-1 Keoneula Blvd		5	Russell		5						CE054399	Loren Yasuda	new revision assignment
12 & V8612A		1	Sherri				1				CE057046	E. Kusunoki	6th revision and additional sigs
acility		1	Russell		1						CE060007	Mike Hahn	3rd revision and sigs
mal Storage V8601		1	Renato						1		CE059764	Morris Ho	3rd revision
rastructure V8603 & V8604		2	Sherri				2				CE052675	Bill Denham	2nd revision request
V8607		1	Sherri				1				CE059115	Morris Ho	5th revision
e 10-12		1	Sherri				1				CE058239	Morris Ho	6th revision-sht 2 only
e 9-12		1	Sherri				1				CE058777	Morris Ho	6th revision-sht 2 only
okila Blvd 3-ph pad	1		Renato						1		CE057765	Erik Kusunoki	new drawing request
nd Top Dr V8952	1		Russell	1							CE051227	Tim Laborte	new drawing request
ortlock Rd 1-ph pad	1		Sherri			1					CE056534	Erik Kusunoki	new drawing request
St 3-ph pad		1	Renato						1		CE044190	Russell Yoshida	new revision assignment
hase 11A V8408 & V8409													
		7	Russell		7						CE03653152	Bill Denham	new revision assignment
ent 1A Kamaaha Ave		4	Sherri				4				CE044471	Loren Yasuda	new revision assignment-shts 2, 3, 4 & 6 only
houses V8509A-F													
lanea Kai]		1	Sherri				1				CE040918	Morris Ho	2nd revision-ASAP
sa Quarry Rd		1	Renato						1		CE057723	Erik Kusunoki	2nd revision
mal Storage V8601		1	Renato						1		CE059764	Morris Ho	4th revision, sigs and vellum
Mikole St Sand Island		1	Russell		1						CE060236	Tim Laborte	2nd revision
houses V8509A-F													
lanea Kai]		1	Sherri				1				CE040918	Morris Ho	3rd revision
3-vault subd)	2		Renato					2			CE062783	Russell Yoshida	new drawing request
acility		1	Russell		1						CE060007	Mike Hahn	4th revision and sigs
npv		2	Sherri				2				CE056734	Aaron Lee	2nd revision?
w V441A & B and remove													
		1	Renato						1		CE058631	Russell Yoshida	3rd revision
ons V8405		1	Renato						1		CE037945	Russell Yoshida	new revision request
e 2-5		1	Russell		1						CE046690	Morris Ho	new revision request
Clinic Temp V8594T	1		Russell	1							CE063118	Morris Ho	new drawing request
houses V8509A-F													
lanea Kai]		1	Sherri				1				CE040918	Morris Ho	4th revision
w V441A & B and remove													
		1	Renato						1		CE058631	Russell Yoshida	4th revision
urline Drive 1-ph pad	1		Sherri			1					CE062320	Jarret Sasaki	new drawing request
t	1		Renato					1			CE010668	Alan Ing	RUSH prep PUC exhibit
85 Lunalilo Home Rd,	1		Russell	1							CE061955	Erik Kusunoki	new drawing request

pe / Description	# NEW	REV	Assigned Tech	RT N	RT R	SN N	SN R	RA N	RA R	PAU X	CE #	Planner	Comments
Portlock Rd 1-ph pad		1	Sherri				1				CE056534	Erik Kusunoki	1st revision request
. Kalahea Ave, Kailua; 1-													
		1	Sherri				1				CE042791	Morris Ho	2nd revision
nokila Blvd 3-ph pad		1	Renato						1		CE057765	Erik Kusunoki	1st revision request
noa Elder Care) 2850 Manoa													
		1	Sherri				1				CE058017	Tim Laborte	new revision request
r 38 Nimitz Hwy		1	Renato						1		CE062394	Russell Yoshida	1st revision request(3-ph pad)
ama Rd., Maili		1	Russell		1						CE059235	Reuben Ogoshi	1st revision request (pad)
lth & Wellness Ctr, Ilalo St													worked on previous to 2/21/03-revisions &
3A, V8624, 8624A & 8624B		2	Renato						2		CE047576	Jimmy Lum	sigs
e 6 - 8-V8578A-C		1	Russell		1						CE055120	Russell Yoshida	2nd revision w/sigs-sht 2 of 2
(3-vault subd)		2	Renato						2		CE062783	Russell Yoshida	1st drawing revision
e 9-13 & 13-1B		1	Renato						1		CE055856	Russell Yoshida	1st drawing revision-sht 1 of 2
e 6-9 Makalea St V8570A-													
		1	Renato						1		CE053456	Russell Yoshida	new revision request-sht 2 of 2
ikua St V8544A-C		1	Russell		1						CE050155	Russell Yoshida	new revision request-sht 1 of 2
nent 1A Kamaaha Ave													
		4	Sherri				4				CE044471	Loren Yasuda	1st revision add initials and print vellum
nd Top Dr V6952		1	Russell		1						CE051227	Tim Laborte	1st drawing revision
hase 11A V8408 & V8409													
		2	Russell		2						CE03653152	Bill Denham	revision to shts 4 &
Kalahea Ave, Kailua; 1-													
		1	Sherri				1				CE042791	Morris Ho	3rd revision
houses V8509A-F													
lanea Kai)		3	Sherri				3				CE040918	Morris Ho	5th revision-3 shts
38 Nimitz Hwy		1	Renato						1		CE062394	Russell Yoshida	2nd revision request (3-ph pad)
9-13 & 13-1B		1	Renato						1		CE055856	Russell Yoshida	2nd revision-sht 1 of 2
			Sherri										new drawing request [RUSH-Renato
tion Kaileolea St	1		Renato					1			CE061956	Russell Yoshida	volunteered to work on project]
St Kalihi		1	Sherri				1				CE048880	Loren Yasuda	new revision request
ipv		2	Sherri				2				CE058734	Aaron Lee	3rd revision
55 Lunalilo Home Rd,													
		1	Russell		1						CE061955	Erik Kusunoki	1st revision
-vault subd)		1	Renato						1		CE062783	Russell Yoshida	2nd revision-sht 2 only
okila Blvd 3-ph pad		1	Renato						1		CE057765	Erik Kusunoki	1st revision
rtlock Rd 1-ph pad		1	Sherri				1				CE056534	Erik Kusunoki	2nd revision request
urline Drive 1-ph pad		1	Sherri				1				CE062320	Jarret Sasaki	1st revision
111 & V8111A		1	Russell		1						CE008656	Eric Shimono	new revision request-sht 1 only
10-12		1	Sherri				1				CE058239	Morris Ho	7th revision-sht 2 only
5 Lunalilo Home Rd,													
		1	Russell		1						CE061955	Erik Kusunoki	2nd revision
likole St Sand Island		1	Russell		1						CE060236	Tim Laborte	3rd revision
		1	Sherri				1				CE057558	Morris Ho	
vault subd)		1	Renato						1		CE062783	Russell Yoshida	3rd revision-sht 2 only
9-13 & 13-1B		1	Renato						1		CE055856	Russell Yoshida	2nd revision-sht 2 of 2
		3	Renato						3		CE057564	Russell Yoshida	worked on previous to 2/21/03, 2nd revision
yal Place V8397		1	Sherri				1				CE033752	Tim Laborte	new drawing revision-RUSH
3-phase pad)	1		Russell	1							CE062251	Loren Yasuda	new drawing request
		1	Renato						1		CE054326	Morris Ho	5th revision
alahea Ave, Kailua; 1-													
		1	Sherri				1				CE042791	Morris Ho	4th revision
kila Blvd 3-ph pad		1	Renato						1		CE057765	Erik Kusunoki	2nd revision
uses V8509A-F													
nea Kai)		3	Sherri				3				CE040918	Morris Ho	6th revision-sht 3 only
Business Center		1	Russell		1						CE056896	Morris Ho	3rd revision
5 Makalea Street (3-vault													
	1		Sherri			1					CE058845	Erik Kusunoki	new drawing request
imitz Hwy Iwilei	1		Russell	1							CE060702	Morris Ho	new drawing request

2003

Assigned Tech	RT N	RT R	SN N	SN R	N	RA R	PAU X	CE #	Planner	Cc
Russell		1					1	CE062251	Loren Yasuda	1st revision
Renato							1	CE062394	Russell Yoshida	3rd revision request (3-ph pad)
Renato								CE063919	Russell Yoshida	new revision request
Sherri			1					CE062320	Janet Sasaki	2nd revision-add signatures
Renato						1		CE053884	Morris Ho	3rd revision
Sherri			1					CE057558	Morris Ho	3rd revision (?)
Renato					1			CE062879	Erik Kusunoki	new drawing request
Sherri			1					CE033752	Tim Laborte	2nd revision-RUSH
Russell		3						CE057434	Loren Yasuda	2nd revision shts 2, 3 & 4
Sherri			1					CE058239	Morris Ho	8th revision-sht 2 only
Russell		1		1				CE061955	Erik Kusunoki	3rd revision-sig. minor edit
Sherri								CE056534	Erik Kusunoki	3rd revision-sig. minor edit
Russell		1						CE038743	Erik Kusunoki	new drawing revision
Sherri				1				CE058845	Erik Kusunoki	1st revision
Renato		1				1		CE062879	Erik Kusunoki	1st revision
Russell								CE063225	Erik Kusunoki	new drawing request
Russell								CE058896	Morris Ho	4th revision
Russell		1						CE060702	Morris Ho	1st revision
Russell		5						CE054399	Loren Yasuda	2nd revision
Russell		1						CE038743	Erik Kusunoki	2nd revision
Sherri										new drawing request-due 5/8/03 [Sherri on vac 5/5/03, reassigned to Renato]
Renato					2			CE048131	Alan Ing	9th revision-sht 1& 2
Sherri			2					CE058239	Morris Ho	7th revision-sht 1 & 2
Sherri			1					CE058777	Morris Ho	
Sherri						1		CE061956	Russell Yoshida	1st drawing revision
Renato								CE037093	Bill Denham	new drawing revision
Sherri			2					CE058844	Russell Yoshida	revision to sht 3
Russell								CE057556	Morris Ho	4th revision (?)
Sherri		1						CE053884	Morris Ho	4th revision
Renato			1			1				
Renato						3		CE057564	Russell Yoshida	worked on previous to 2/21/03, 3rd revision
										new drawing request(originally submitted
Russell	1							CE059833	Erik Kusunoki	under CE0024301)
Russell		1						CE063225	Erik Kusunoki	1st drawing revision
Russell		1						CE061955	Erik Kusunoki	4th revision
Renato		1						CE060702	Morris Ho	2nd revision
Renato						1		CE054326	Morris Ho	6th revision
Renato					1			CE063654	Erik Kusunoki	new drawing request
Russell		1						CE058896	Morris Ho	5th revision
Renato						1		CE062879	Erik Kusunoki	2nd revision
Russell		1						CE063225	Erik Kusunoki	2nd drawing revision
Sherri										
Renato						1		CE061956	Russell Yoshida	2nd drawing revision
Renato						1		CE034070	Erik Kusunoki	new drawing revision
Renato						1		CE062783	Russell Yoshida	4th revision-sht 1 & 2
Sherri			2					CE058845	Erik Kusunoki	2nd revision-2 shts
Renato						1		CE057765	Erik Kusunoki	3rd revision
Russell								CE061120	Erik Kusunoki	new drawing request
Renato		1				1		CE062879	Erik Kusunoki	3rd revision
Sherri				2				CE058239	Morris Ho	10th revision-sht 1& 2
Sherri				2				CE058777	Morris Ho	8th revision-sht 1 & 2
Russell		1						CE060702	Morris Ho	3rd revision
Russell		1						CE063225	Erik Kusunoki	3rd drawing revision
Sherri					2			CE051653	Jon Sakata	new drawing request
Sherri				1				CE059115	Morris Ho	6th revision

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scription	# of ... NEW	REV	Assigned Tech	RT N	RT R	SN N	SN R	RA N	RA R	PAU X	CE #	Planner	Comments
	2		Renato					2			CE026792	Charlyne Nakamura	new drawing request
Temporary Waialii Pl		1	Renato						1		CE063654	Erik Kusunoki	1st revision
		2	Sherri				2				CE037093	Bill Denham	2nd revision
	1		Russell	1							CE005157	Jon Sakata	new drawing request
kalea Street (3-vault		1	Renato						1		CE042051	Jon Sakata	new revision request
		2	Sherri				2				CE058845	Erik Kusunoki	3rd revision-2 shts
Temporary Waialii Pl s V8509A-F		1	Renato						1		CE063654	Erik Kusunoki	2nd revision
(all)		3	Sherri				3				CE040918	Morris Ho	7th revision-sht 3 only
		1	Sherri				1				CE057558	Morris Ho	5th revision (?)
		1	Sherri				1				CE058777	Morris Ho	9th revision-sht 2 only
wy Hwy Iwilei	1		Sherri			1					CE058514	Erik Kusunoki	new drawing request
		1	Russell		1						CE060702	Morris Ho	4th revision
Temporary Waialii Pl		1	Renato						1		CE063654	Erik Kusunoki	3rd revision
		1	Russell		1						CE061120	Erik Kusunoki	1st dwg revision
		1	Renato						1		CE062879	Erik Kusunoki	4th revision
		1	Renato						1		CE054326	Morris Ho	7th revision
subd)		1	Renato						1		CE062783	Russell Yoshida	5th revision-sht 1 & 2
ers Blvd	1		Renato					1			CE054680	Jon Sakata	new drawing request
eval		1	Russell		1						CE064505	Jarret Sasaki	new drawing revision-RUSH
	1		Sherri			1					CE055348	Tim Laborte	new drawing request-RUSH
		3	Renato						3		CE057564	Russell Yoshida	worked on previous to 2/21/03, 5th revision
		4	Russell		4						CE057434	Loren Yasuda	3rd revision 4 shts
		1	Sherri				1				CE058777	Morris Ho	10th revision-sht 2 only
wy se pad)		1	Sherri				1				CE058514	Erik Kusunoki	1st revision
		1	Russell		1						CE062251	Loren Yasuda	2nd revision
lvd - TEMPORARY	1		Renato					1			CE063584	Wayne Yata	new drawing request
			~~Sherri~~										
ny		2	Renato						2		CE048131	Alan Ing	1st revision
ass Center		1	Russell		1						CE058898	Morris Ho	6th revision
rive 1-ph pad		1	Sherri				1				CE062320	Jarret Sasaki	2nd revision
Hwy Iwilei r) Aliinui Dr, KoOlina		1	Russell		1						CE060702	Morris Ho	5th revision
		1	Renato						1		CE064419	Jarret Sasaki	new drawing revision
val		1	Russell		1						CE064505	Jarret Sasaki	1st revision-by 5/30/03
8578A-C		1	Russell		1						CE055120	Russell Yoshida	3rd revision-sht 2 of 2
		1	Sherri				1				CE017878	Erik Kusunoki	new drawing revision
leoneula Blvd		5	Russell		5						CE054399	Loren Yasuda	3nd revision
0A-H, J, J, N, P-S		1	Renato						1		CE040489	Loren Yasuda	sht 2 only rev 2
F Pdmt Tsfs & Sw V4 and W5	1		Sherri			1					CE062707	Jon Sakata	new drawing
	1		Russell	1							CE052170	Alan Ing	new drawing request-RUSH
	1		Sherri			1					CE063300	Morris Ho	new drawing request
	1		Renato					1			CE065100	Morris Ho	new drawing request
		2	Sherri				2				CE051653	Jon Sakata	1st dwg revision
		1	Sherri				1				CE017878	Erik Kusunoki	2nd dwg revision
mporary Waialii Pl t		1	Renato						1		CE063654	Erik Kusunoki	4th revision
		1	Russell		1						CE063225	Erik Kusunoki	4th drawing revision
		1	Renato						1		CE057564	Russell Yoshida	worked on previous to 2/21/03, 6th revision-sht 3 only
		1	Sherri			1					CE058514	Erik Kusunoki	2nd revision

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Comments

RUSH wants to issue today

sht 1 & 3 only

g request

required 6/3/03
, required 6/5/03
n-sht 2 only

-2 shts

g request
t request
g request-work w/CE064935
g request-work w/CE064350
g request,superceded by 2nd
n Morris, assigned to Sherri
-signatures

or rev 2 on sht 1 & 3
g request-by 6/13/03

-request by 6/5/03
g request
g request
(originally submitted under
)
, sht 1 only, required 6/5/03
revision

revious to 2/21/03, 7th revision

g request

-orig Koolina Sales Office
-customer request permanent

t request
signatures
, required 6/5/03
-sht 2 only
g request
-sht 1 & 2
revious to 2/21/03, 8th revision

2 shts

request-work w/CE055454

Item #	Date	Job Name Type / Description	# of sheets NEW	# of sheets REV	Assigned Tech	RT N	RT R	SN N	SN R	RA N	RA R	PAU X	CE #	Planner	Comments
294	6/13/2003	Iongs Drugs Store-Kailua	1		Russell	1							CE055454	Erik Kusunoki	new drawing request-work w/CE055452
295	6/16/2003	Kahala Nui, Maka St, Kahala 2-ph DF Pdmt Tsfs & Sw		1	Sherri				1				CE062707	Jon Sakata	2nd revision-date required = 6/12/03, received 6/16/03 pm
296	6/17/2003	Ewa Gentry Area 21C Phase 9-12		1	Sherri				1				CE058777	Morris Ho	14th revision-sht 1 & 2 sigs
297	6/17/2003	Kaimuki Middle School 18th Ave install V8540		1	Russell		1						CE050485	Russell Yoshida	2nd rev-add rev 2 ASAP
298	6/17/2003	Wal-Mart Super Ctr/Sam's Club		1	Sherri				1				CE051653	Jon Sakata	4th revision, sigs only req 6/18/03
299	6/17/2003	C&C BWS Hart Street		1	Russell		1						CE005157	Jon Sakata	2nd revision
300	6/17/2003	Ka Uka Center V8615 Gentry Business Center		1	Russell		1						CE058896	Morris Ho	9th revision-signatures
301	6/17/2003	Ewa Villages Kapolei Pkwy Extn		2	Renato						2		CE046208	Jon Sakata	new revision request
302	6/18/2003	Public Storage-Pearl City		1	Sherri				1				CE057558	Morris Ho	6th revision (?)-sigs only
303	6/19/2003	Mililani Mauka MF107B		1	Russell		1						CE058844	Russell Yoshida	1st revision-sht 2 only
304	6/19/2003	Ewa Gentry Area 20 Phase I		1	Renato						1		CE057564	Russell Yoshida	worked on previous to 2/21/03, 9th revision-sht 3 only
305	6/19/2003	Ewa Gentry 21D Phase 13-15 Makalea Street (3-vault subd)		1	Sherri				1				CE058845	Erik Kusunoki	6th revision-sht 2 only
306	6/19/2003	Kaunala Beach Lot Subd V8436A & B; Sunset Beach		2	Russell		2						CE040444	Erik Kusunoki	new revision request
307	6/19/2003	Kapolei Knolls Phase 2C V8499A-G Kapolei		1	Sherri				1				CE042021	Erik Kusunoki	new revision request
308	6/20/2003	Island Pacific Academy Haumea St Kapolei		1	Renato Russell						1		CE059833	Erik Kusunoki	2nd revision [originally submited under CE0024301]
309	6/20/2003	Kailua Shopping Center Renovation		1	Sherri				1				CE017878	Erik Kusunoki	3rd revision
310	6/20/2003	Ewa Gentry 21D Phase 13-15 Makalea Street (3-vault subd)		1	Sherri				1				CE058845	Erik Kusunoki	7th revision-sht 2 only
311	6/20/2003	Peninsula Parcel B Wailua St Hawaii Kai		3	Sherri				3				CE054312	Alan Ing	1st revision-sht 2, 3, & 4
312	6/23/2003	Banana Patch Seafood		1	Russell		1						CE049616	Morris Ho	3rd rev w/initials
313	6/23/2003	Paradise Beverages Moanlani St		1	Russell		1						CE061120	Erik Kusunoki	4th revision
314	6/23/2003	Lanlakea At Waikiki Olohana St		1	Russell		1						CE057671	Russell Yoshida	1st revision
315	6/23/2003	Martin Residence Maunawili Rd V6802		1	Sherri				1				CE049041	Tim Laborte	2nd revision
316	6/23/2003	SOH DOT Airport-Navaids	1		Sherri			1					CE063220	Jarret Sasaki	new drawing request
317	6/23/2003	C&C Sand Island WWTP Disinfection Facility		2	Renato						2		CE064367	Jimmy Lum	new revision request
318	6/23/2003	Palama Market Makaloa St		1	Russell		1						CE044585	Russell Yoshida	new revision request
319	6/24/2003	KFC Ewa Point Marketplace	1		Renato					1			CE064934	Erik Kusunoki	new drawing request
320	6/24/2003	Kapolei City Road E off Kamokila Blvd		2	Renato						2		CE056490	Jon Sakata	2nd revision
321	6/24/2003	C&C BWS Hart Street		1	Russell		1						CE005157	Jon Sakata	3rd revision-sigs & vellum
322	6/24/2003	Ewa Villages Kapolei Pkwy Extn		2	Renato						2		CE046208	Jon Sakata	1st revision
323	6/24/2003	Pioneer Ace Hardware Kamokila Blvd - TEMPORARY		1	Renato						1		CE063584	Wayne Yata	3rd revision-request by 6/5/03
324		(Loren Yasuda)			Russell										
325	6/26/2003	HSI-Electric Inc Pahounui Dr Sand Island		1	Russell		1						CE063657	Loren Yasuda	1st revision
326	6/26/2003	WalMart Pearl City Kuala St (3-phase pad)		1	Russell		1						CE062251	Loren Yasuda	3rd revision
327	6/26/2003	Sunset Heights-Temporary Waimanu St	1		Russell	1							CE066144	Loren Yasuda	new drawing request
328	6/27/2003	Kailua Shopping Center Renovation		1	Sherri				1				CE017878	Erik Kusunoki	4th revision
329	6/27/2003	Hawaii Yacht Club Renovations V8405		1	Renato						1		CE037945	Russell Yoshida	2nd revision
330	6/30/2003	Peninsula Parcel B Wailua St Hawaii Kai		4	Sherri				4				CE054312	Alan Ing	2nd revision-minor edits & sigs
331	7/1/2003	Water Resources Intl, 1249 Mikole St Sand Island		1	Russell		1						CE060236	Tim Laborte	5th revision
332	7/1/2003	CID Revised Transformer Cells per Standards Division (30-5010, -5011, -5015, & -5017)	6		Renato					6			CE001107	Charlyne Nakamura	new request
333	7/2/2003	Taki Residence Diamond Hd Rd V8128		1	Sherri				1				CE-004094	Morris Ho	new revision request
334	7/2/2003	KFC Ewa Point Marketplace		1	Renato						1		CE064934	Erik Kusunoki	1st revision
335	7/7/2003	Taki Residence Diamond Hd Rd V8128		1	Sherri				1				CE-004094	Morris Ho	1st revision
336	7/7/2003	Cycle City 2904 Kamehameha Hwy Airport		1	Renato						1		CE064350	Morris Ho	1st revision-work w/CE064935
337	7/7/2003	Wendy's @ Cycle City 630 Puuloa Rd Airport		1	Renato						1		CE064935	Morris Ho	1st revision-work w/CE064350
338	7/8/2003	Ewa Villages Kapolei Pkwy Extn		2	Renato						2		CE046208	Jon Sakata	2nd revision, note & sigs
339	7/8/2003	Kaiser Permanente-Waipio Clinic V8594, V8594A		1	Russell		1						CE050685	Jon Sakata	2nd revision
340	7/8/2003	Ka Uka Center V8615 Gentry Business Center		1	Russell		1						CE058896	Morris Ho	10th revision
341	7/9/2003	Taki Residence Diamond Hd Rd V8128		1	Sherri				1				CE-004094	Morris Ho	2nd revision
342	7/9/2003	Miller Residence Pueo St V8651		1	Sherri				1				CE055348	Tim Laborte	2nd revision
343	7/9/2003	Taki Residence Diamond Hd Rd V8128		1	Sherri				1				CE-004094	Morris Ho	3rd revision-requesting to revert to original plan [SN create another dgn
344	7/9/2003	Ewa Point Marketplace V8612 & V8612A		1	Sherri				1				CE057046	E Kusunoki/Russell Yoshida	7th revision

8 10 09 AM
X=completed

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HECO T-8
ATTACHMENT K-3
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E #	Planner	Co.
53657	Loren Yasuda	2nd revision
31272	E. Kusunoki/Morris Ho	new revision request
50702	Morris Ho	6th revision
04094	Morris Ho	4th revision-edits and BF initial
66144	Loren Yasuda	1st revision
28150	Morris Ho	new revision request
48901	Tim Laborte	new revision request (SN on vac)
50686	Loren Yasuda	3rd revision
10083	Loren Yasuda	new drawing request
04094	Morris Ho	5th revision-edits and BF initial
488/P00		
1985	Loren Yasuda	1st revision
67217	Loren Yasuda	new revision request
58896	Morris Ho	11th revision (RT swap w/ SN)
57671	Russell Yoshida	2nd revision (RT swap w/ SN)
55452	Erik Kusunoki	1st revision (RT swap w/ SN)
64934	Erik Kusunoki	2nd revision
62861	Bill Denham	new drawing request
55452	Erik Kusunoki	2nd revision (RT swap w/ SN)
57671	Russell Yoshida	3rd revision (RT swap w/ SN)
66144	Loren Yasuda	2nd revision
67217	Loren Yasuda	2nd revision
62861	Bill Denham	new drawing request-2nd sheet
64934	Erik Kusunoki	3rd revision
58536	Jarret Sasaki	new drawing request-LK=pls rush
54326	Morris Ho	6th revision
CE	Bill Denham	new drawing request -no electronic files
55454	Erik Kusunoki	1st revision
54326	Morris Ho	9th revision
65400	Russell Yoshida	new drawing request
58536	Jarret Sasaki	1st revision
488/P00		
1985	Loren Yasuda	2nd revision
55454	Erik Kusunoki	2nd revision
34932	Russell Yoshida	new revision request
10083	Loren Yasuda	new drawing request--reassigned to RA
57671	Russell Yoshida	4th revision (RT swap w/ SN)
50686	Loren Yasuda	4th revision
59115	Morris Ho	7th revision
53884	Morris Ho	5th revision
64539	Morris Ho	new drawing request
55452	Erik Kusunoki	3rd revision (RT swap w/ SN)
60702	Morris Ho	7th revision
04094	Morris Ho	6th revision-edits and BF initial
61120	Erik Kusunoki	5th revision
64511	Jarret Sasaki	new drawing request-due 7/30/03
61615	Morris Ho	new drawing request-due 8/1/03
65400	~~Morris Ho~~	~~new drawing request~~//Returned to designer, originally assigned to Renato.
57671	Russell Yoshida	5th revision (RT swap w/ SN)
54326	Morris Ho	10th revision
64934	Erik Kusunoki	4TH revision
55452	Erik Kusunoki	4TH revision (RT swap w/ SN)
51242	Aaron Lee	new revision request-due 7/28/03
57801	Russell Yoshida	new revision request
52675	Bill Denham	3rd revision request

Job Name Type / Description	# of NEW	REV	Assigned Tech	RT N	RT R	SN N	SN R	RA N	RA R	PAU X	CE #	Planner	Comments
Ewa Ft Weaver Rd		1	Renato						1		CE065100	Morris Ho	1st revision
and WWTP Disinfection Facility		2	Renato						2		CE064367	Jimmy Lum	2nd revision to sht 1 & 2
and WWTP Disinfection Facility	1		Renato					1			CE064367	Jimmy Lum	new drawing request-add sht 3 to CE064367
Unit 132 Kapanoe St	3		Russell	3							CE067737	Russell Yoshida	new drawing request
g & Boiler Co	1		Sherri			1					CE067982	Morris Ho	new drawing request
ific Center		1	Sherri				1				CE065248	Bill Denham	1st revision
Small Boat Facility	2		Renato					2			CE043445	Erik Kusunoki	new drawing request-redesign original dwg34247
Diamond Hd Rd V8128		1	Sherri				1				CE-004094	Morris Ho	7th revision-edits and BF initial
eyard lwaena St Halawa		1	Renato						1		CE053884	Morris Ho	6th revision
Pearlridge III-V8607		1	Sherri				1				CE059115	Morris Ho	8th revision
e Trailers Wailua St	1		Sherri			1					CE055599	Tim Laborte	new drawing request-RUSH req'd 8/1/03
Corp Yard		1	Renato						1		CE054326	Morris Ho	11th revision
, Inc Kalaimoku St Transformer Reloc		1	Renato						1		CE058536	Jarret Sasaki	2nd revision
2 & 3 Townhouses V8509A-F													
ne change: Nanea Kai}		3	Sherri				3				CE040918	Morris Ho	8th revision-sht 2 & 3 only
Subd Ph 2		4	Renato						4		CE040949	Alan Ing	new revision request
Subd Ph 1-V8503A-P, V8504		2	Russell		2						CE040949	Alan Ing	due 8/15/03-2 of 5 shts only
el B Wailua St Hawaii Kai		3	Sherri				3				CE054312	Alan Ing	3rd revision
Unit 134A		3	Renato						3		CE065400	Russell Yoshida	1st revision
ia 20 Phase I		3	Renato						3		CE057564	Russell Yoshida	10th revision
sa 21C Ph 9-12-Irrigation Makalea St		1	Russell		1						CE052813	Aaron Lee	new revision request
dustrial Complex		1	Sherri				1				CE061615	Morris Ho	1st revision
er	1		Renato					1			CE067053	Russell Yoshida	new drawing request
ilkiki Olohana St		1	Sherri				1				CE057671	Russell Yoshida	6th revision (RT swap w/ SN)-sigs
ailua Conversion		1	Sherri				1				CE055452	Erik Kusunoki	4TH revision (RT swap w/ SN)-minor chgs, sigs
Small Boat Facility		2	Renato						2		CE043445	Erik Kusunoki	1st dwg revision
Marketplace		1	Renato						1		CE064934	Erik Kusunoki	5th revision-sigs
dustrial Complex		1	Sherri				1				CE 061615	Morris Ho	2nd revision
diate School	1		Russell	1							TD035758	Erik Kusunoki	new drawing request
~~& Boiler Co.~~			Sherri								CE067982	Morris Ho	new drawing request-duplicate request; Sherri completed and returned 1st request on 8/4/03
dustrial Complex		1	Sherri				1				CE 061615	Morris Ho	3rd revision
Ewa Ft Weaver Rd		1	Renato						1		CE065100	Morris Ho	2nd revision
Unit 134A		3	Renato						3		CE065400	Russell Yoshida	2nd revision
a 21C Ph 9-12-Irrigation Makalea St		1	Russell		1						CE052813	Aaron Lee	2nd revision
Sand Island Access Rd	1		Sherri			1					CE067333	Erik Kusunoki	new drawing request
luaen St	1		Renato					1			CE068114	Morris Ho	new drawing request
ke-Kailua		1	Russell		1						CE055454	Erik Kusunoki	3rd revision
Koa Wells II Halekoa Dr		1	Renato ~~Russell~~						1		CE010083	Loren Yasuda	1st revision-reassigned to RA
set Avenue	1		Russell	1							CE068113	Russell Yoshida	new drawing request
& Boiler Co.		1	Sherri				1				CE067982	Morris Ho	1st revision
ansportable Asphalt Plant Halawa Vly		1	Sherri				1				CE047240	Morris Ho	1st revision
e 2 HI Kai Dr	5		Sherri			5					CE063300	Morris Ho	New - phase 2
Trailers Wailua St		1	Sherri				1				CE055599	Tim Laborte	1st revision - Rush 8/13/03
set Avenue		1	Russell		1						CE068113	Russell Yoshida	1st revision - Rush ASAP
tplace Building B	1		Renato					1			CE064541	Erik Kusunoki	new drawing request
Sand Island Access Rd		1	Sherri				1				CE067333	Erik Kusunoki	1st revision
ueen St		1	Renato						1		CE068114	Morris Ho	1st drawing revision
Jani at Makakilo)	5		Russell	5							CE064790	Russell Yoshida	new drawing request
nit 134A		3	Renato						3		CE065400	Russell Yoshida	3rd revision-sigs only
Koa Wells II Halekoa Dr		1	Renato ~~Russell~~						1		CE010083	Loren Yasuda	2nd revision-reassigned to RA-sigs & minor revisions
Inc Kalaimoku St Transformer Reloc		1	Renato						1		CE058536	Jarret Sasaki	3rd revision

gned	RT		SN		RA	PAU		
lech	N	R	N	R	N	R	X	CE #	Planner
ussell		1						CE055454	Erik Kusunoki
ussell		1						TD035758	Erik Kusunoki
nato						1		CE064541	Erik Kusunoki
herri				1				CE047240	Morris Ho
herri				1				CE-004094	Morris Ho
herri				1				CE058017	Tim Laborte
nato						2		CE000059	Tim Laborte
herri				1				CE058514	Erik Kusunoki
nato						1		CE065400	Russell Yoshida
ussell		1						CE060007	Mike Hahn
nato						1		CE057564	Russell Yoshida
herri				2				CE062861	Bill Denham
ussell		1						CE060702	Morris Ho
herri				1				CE037947	Morris Ho
nato						1		CE067053	Russell Yoshida
herri				1				CE067333	Erik Kusunoki
herri				1				CE037947	Morris Ho
herri				1				CE057671	Russell Yoshida
nato						2		CE043445	Erik Kusunoki
nato						1		CE064541	Erik Kusunoki
herri				1				CE058514	Erik Kusunoki
ussell		1						CE068113	Russell Yoshida
herri				1				CE052675	Bill Denham
nato						1		CE067053	Russell Yoshida
herri				1				CE037947	Morris Ho
nato						1		CE064511	Jarret Sasaki
herri				2				CE062861	Bill Denham
nato						4		CE055340	Bill Denham
ussell	1							CE068586	Mike Hahn
nato						1		CE068114	Morris Ho
herri			1					CE065905	Erik Kusunoki
ussell		3						CE067737	Russell Yoshida
nato					2			CE021382	Bill Denham
nato						1		CE010083	Loren Yasuda
herri				1				CE052675	Bill Denham
nato						1		CE051242	Aaron Lee
nato						1		CE048901	Tim Laborte
nato						2		CE043445	Erik Kusunoki
nato						1		CE053884	Morris Ho
herri				1				CE065905	Erik Kusunoki
herri				1				CE067982	Morris Ho
herri				1				CE-004094	Morris Ho
herri				1				CE059115	Morris Ho
nato						2		CE084367	Jimmy Lum
nato						1		CE067053	Russell Yoshida
i/Russell				1				CE055454	Erik Kusunoki
nato						1		CE064541	Erik Kusunoki
ussell		1						TD035758	Erik Kusunoki
herri			1					CE068895	Morris Ho
herri				1				CE052675	Bill Denham
ussell	1							CE056747	Morris Ho
ussell		3						CE067737	Russell Yoshida
nato						1		CE068114	Morris Ho
nato						1		CE065400	Russell Yoshida

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Item #	Date	Job Name Type / Description	# NEW	# REV	Assigned Tech	RT N	RT R	SN N	SN R	RA N	RA R	PAU X	CE #	Planner	Comments
501	9/4/2003	Mililani Mauka Unit 127/133 Kaikua st (future Kapahoe)		4	Renato						4		CE055340	Bill Denham	2nd revision
502	9/2/2003	Mililani Mauka Phase 13 Infrastructure V8603 & V8604		1	Sherri				1				CE052675	Bill Denham	6th revision request-sht 2 only
503	9/8/2003	Palehua B (Kai Nani at Makakilo)		5	Russell		5						CE064790	Russell Yoshida	1st revision
504	9/8/2003	Hawn Cement Halawa Processing Improvements		2	Sherri				2				CE062861	Bill Denham	2nd revision
505	9/8/2003	Ala Moana Wastewater pump station modification		1	Renato						1		CE021382	Bill Denham	1st revision
506	9/8/2003	Richard Lane frontal improvement	1		Russell	1							CE068322	Reuben Ogoshi	new drawing
507	9/8/2003	Mililani Mauka Unit 132 Kapanoe St		3	Russell		3						CE067737	Russell Yoshida	Signatures
508	9/8/2003	Taki Residence Diamond Hd Rd V8128		1	Sherri				1				CE-004094	Morris Ho	3rd revision
509	9/9/2003	Giles Residence	1		Renato					1			CE-066828	Jarret Sasaki	New drawing
510	9/9/2003	Panya Bakery Queen St		1	Renato						1		CE068114	Morris Ho	4th drawing revision
511	9/10/2003	Hawn Cement Halawa Processing Improvements		2	Sherri				2				CE062861	Bill Denham	3rd revision
512	9/11/2003	Manana Mixed Use Development		1	Sherri				1				CE000834	Anna Akamu	1st revision - sht 5 only
513	9/11/2003	Panya Bakery Queen St		1	Renato						1		CE068114	Morris Ho	5th drawing revision
514	9/11/2003	Nanea Kai Phase 2 HI Kai Dr		1	Sherri				1				CE063300	Morris Ho	1st drawing revision
515	9/11/2003	C&C Sand Island WWTP Disinfection Facility		2	Renato						2		CE064367	Jimmy Lum	4th revision to sht 1 & 2
516	9/12/2003	Nanaikeola Senior Apts, Nanaikeola St Nanakuli		1	Russell		1						CE064347	Russell Yoshida	new drawing request
517	9/12/2003	Giles Residence		1	Renato						1		CE066828	Jarret Sasaki	1st drawing revision
518	9/12/2003	Panya Bakery Queen St		1	Renato						1		CE068114	Morris Ho	6th drawing revision
519	9/15/2003	Richard Lane Frontage Improvement	1		Sherri			1					CE068322	Reuben Ogoshi	new drawing request
520	9/15/2003	Panya Bakery Queen St		1	Sherri				1				CE068114	Morris Ho	signatures
521	9/15/2003	Taki Residence Diamond Hd Rd V8128		1	Sherri				1				CE004094	Morris Ho	signatures
522	9/16/2003	Nanea Kai Phase 1 HI Kai Dr		1	Renato						1		CE040918	Morris Ho	8th drawing revision (sht 1 & 2)
523	9/17/2003	Ewa Marina OH Relocation Keoneula Blvd	1		Renato					1			CE067739	Tim Laborte	new drawing request
524	9/17/2003	Taki Residence Diamond Hd Rd V8128		1	Sherri				1				CE004094	Morris Ho	4th drawing revision
525	9/17/2003	Manager Drive Subd Ph 1-V8503A-P, V8504		4	Russell		4						CE040949	Alan Ing	Add street names
526	9/17/2003	C&C Parks-Waipahu District Park Paiwa st		1	Russell		1						CE056747	Morris Ho	1st drawing revision
527	6/11/1901	C&C CSM Baseyard Iwaena St Halawa		1	Renato						1		CE053884	Morris Ho	8th revision
528	9/18/2003	Berardy Residence	1		Russell	1							CE051225	Jarrett Sasaki	new drawing
529	9/19/2003	American Piping & Boiler Co.		1	Sherri				1				CE067982	Morris Ho	3rd dwg revision
530	9/19/2003	Ala Moana Wastewater pump station modification		1	Renato						1		CE021382	Bill Denham	2nd revision
531	9/19/2003	Hilton Hawaiian Village V8608 Infrastructure modifications		2	Sherri				2				CE057419	Bill Denham	2nd revision
532	9/19/2003	Giles Residence		1	Renato						1		CE066828	Jarret Sasaki	2nd drawing revision
533	9/19/2003	Miller Residence Pueo St V8651		1	Sherri				1				CE055348	Tim Laborte	3rd revision
534	9/22/2003	Nanea Kai Phase 1 HI Kai Dr		3	Renato						3		CE040918	Morris Ho	9th drawing revision (sht 1 & 2)
535	9/22/2003	Masini Residence	1		Sherri			1					CE054619	Jarret Sasaki	new drawing request
536	9/23/2003	Palehua B (Kai Nani at Makakilo)		3	Russell		3						CE064790	Russell Yoshida	2nd revision (project reduced to 3 shts)
537	9/23/2003	Richard Lane Frontage Improvement		1	Sherri				1				CE068322	Reuben Ogoshi	1st revision
538	9/24/2003	C&C Parks-Waipahu District Park Paiwa st		1	Russell		1						CE056747	Morris Ho	2nd drawing revision
539	9/25/2003	Kaluanui		1	Sherri				1				CE037378	Jon Sakata	3rd revision
540	9/25/2003	Giles Residence		1	Renato						1		CE066828	Jarret Sasaki	signatures
541	9/25/2003	Nanaikeola Senior Apts, Nanaikeola St Nanakuli		1	Russell		1						CE064347	Russell Yoshida	signatures
542	9/25/2003	Koolani Tower Waimanu Street	2		Russell	2							CE066143	Loren yasuda	new drawing
543	9/25/2003	Ala Moana Wastewater pump station modification		1	Renato						1		CE021382	Bill Denham	2nd revision
544	9/25/2003	C&C Parks-Waipahu District Park Paiwa st		1	Russell		1						CE056747	Morris Ho	3rdd drawing revision
545	9/26/2003	American Piping & Boiler Co.		1	Sherri				1				CE067982	Morris Ho	3rd dwg revision
546	9/29/2003	Stupski Residence, 202 Kaikuono Place, Black Point		1	Sherri				1				CE046289	Tim Laborte	2nd revision - RUSH
547	10/1/2003	Waikele Industrial Center	1		Sherri			1					CE070501	Russell Yoshida	new drawing
548	10/2/2003	Mililani Mauka Unit 132 Kapanoe St		1	Renato						1		CE067737	Russell Yoshida	St light details
549	10/2/2003	Koko Marina Maintenance Facility		1	Renato						1		CE060007	Mike Hahn	6th revision
550	10/2/2003	C & C DOT Traffic Signal	1		Renato					1			CE069497	Val Ogoshi	new drawing (rush)
551	10/2/2003	St Francis Medical West	1		Sherri			1					CE058555	Reuben Ogoshi	new drawing
552	10/3/2003	Ewa Marina OH Relocation Keoneula Blvd		1	Renato						1		CE067739	Tim Laborte	1st revision (1 sheet)
553	10/3/2003	Sea Country Area 3 Pakeke Street, Maili	3		Sherri			3					CE064539	Morris Ho	1st revision
554	10/3/2003	Taki Residence Diamond Hd Rd V8128		1	Sherri				1				CE004094	Morris Ho	5th drawing revision
555	10/3/2003	C&C CSM Baseyard Iwaena St Halawa		1	Renato						1		CE053884	Morris Ho	9th revision
556	10/6/2003	C&C Waikiki Improvements		1	Renato						1		CE040914	Tim Laborte	2nd revision

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Item #	Date	Job Name Type / Description	NE	CV	Assigned Tech	RT N	RT R	SN N	SN R	RA N	RA R	PAU X	CE #	Planner	C
667	11/24/2003	Mariaco Small Boat Harbor		2	Renato						2		CE043445	Erik Kusunoki	3rd revision
668	11/24/2003	Ewa Gentry Area 13 Phases 9-13 & 13-1B		1	Renato						1		CE055856	Russell Yoshida	3rd revision-sht 1 of 2 [add grid #s]
669	11/25/2003	Miller Residence Pueo St V8651		1	Sherri				1				CE055348	Tim Laborte	5th revision
670	11/25/2003	Waikele Industrial Center		1	Sherri				1				CE070501	Russell Yoshida	2nd revision [add grid #4345, 4355
671	11/25/2003	Honolulu Ford		1	Sherri		1						CE065905	Erik Kusunoki	6th revision-sigs and vellum print
672	11/25/2003	LPG Transfer Station @ Kaaeloa Malakole Road	1		Russell	1						o	CE069378	Erik Kusunoki	new drawing request [add grid #s]
673	11/26/2003	Palehua B (Kai Nani at Makakilo)		1	Russell		1						CE064790	Russell Yoshida	4th revision-sht 2 of 3 [add grid #3269]
674	11/26/2003	Black Point Rd OH to UG Conversion P12-13		1	Russell		1						CE064911	Reuben Ogoshi	3rd revision [due 12/1/03]
675	11/28/2003	Ocean Pointe/Ewa Marina Ph2B-1 Keoneula Blvd		1	Russell		1						CE054399	Loren Yasuda	6th revision-shts 2 [add grid #4232, 4233]
676	11/28/2003	Nanea Kai Phase 2 Hi Kai Dr		5	Sherri				5				CE063300	Morris Ho	4th revision-add new sheet (total 5?)
677	12/1/2003	Mariaco Small Boat Harbor		2	Renato						2		CE043445	Erik Kusunoki	4th revision
678	12/2/2003	Bayview Golf Course Subdivision		2	Russell		2						CE071640	Russell Yoshida	2nd revision-ASAP
679	12/2/2003	Ewa Gentry - East (Keaunui Dr Extension)		3	Sherri				3				CE059989	Alan Ing	2nd revision [due 12/15/03] - 1st rev2003
680	12/2/2003	Milliani Mauka Ph 1B Infrastructure, Koolani Drive & Ukuwai Street		2	Russell		2					x	CE069129	Bill Denham	1st Revision
681	12/2/2003	John King Whse 905 Kalanianaole Hwy Bldg 24-27		1	Renato						1		CE071551	Russell Yoshida	4th revision
682	12/3/2003	Milliani Mauka MF 115, Meheula Pkwy		4	Sherri				4				CE050686	Loren Yasuda	6th revision
683	12/4/2003	Kalakaua Tenent Prep	1		Renato					1			CE068821	Morris Ho	New Drawing - requested 12/3/03
684	12/5/2003	Chinese Lutheran Church - 1640 Liliha St		1	Russell		1					o	CE017088	Morris Ho	1st revision
685	12/5/2003	Black Point Rd OH to UG Conversion P12-13		1	Russell		1						CE064911	Reuben Ogoshi	4rd revision
686	12/5/2003	Sunset Heights-Temporary Waimanu St (name changed to Koolani Tower		1	Sherri				1				CE066144	Loren Yasuda	3rd revision-name changed to Koolani Tower (RUSH 12/5/03)
687	12/5/2003	Burger King at Ewa, Ft. Weaver Road		1	Sherri				1				CE065100	Morris Ho	1st revision
688	12/5/2003	Tamura's Wahiawa		1	Sherri				1				CE008883	Morris Ho	2nd revision request
689	12/5/2003	Sea Country Pakeke Street Extension, Malli		3	Renato						3		CE064856	Jon Sakata	1st revision
690	12/8/2003	HOKUA - Temp UG SVC	1		Russell	1							CE069894	Morris Ho	New Drawing
691	12/8/2003	Ewa Gentry Area 20 Phase I		1	Renato						1		CE057564	Russell Yoshida	12th revision-(CID FINAL Rev 2) ASAP
692	12/8/2003	C&C BWS Manana Well, Kuala St off Waimano Hm Rd V8370		1	Russell		1						CE026150	Morris Ho	3rd revision (CID FINAL Rev 3) ASAP
693	12/8/2003	Operating Engineers 56-1030 Kam Hwy, Kahuku	2		Sherri			2					CE073633	Tim Laborte	New Drawing
694	12/9/2003	Waiokeola Church Kilauea Avenue		1	Russell		1						CE056447	Russell Yoshida	1st Revision (final drawing?)
695	12/9/2003	Ewa Gentry Area 20 Phase 2		3	Renato						3		CE068288	Bill Denham	1st revision
696	12/9/2003	Nanea Kai Phase 2 Hi Kai Dr		4	Sherri				4				CE063300	Morris Ho	5th revision
697	12/9/2003	C&C Parks-Waipahu District Park Palwa st		1	Russell		1						CE056747	Morris Ho	6th drawing revision
698	12/9/2003	YMCA - Kalihi	1		Russell	1						o	CE072550	Morris Ho	New drawing
699	12/9/2003	Glover Warehouse		1	Sherri				1				CE068895	Morris Ho	2nd revision
700	12/9/2003	Burger King at Ewa, Ft. Weaver Road		1	Sherri				1				CE065100	Morris Ho	2nd revision
701	12/9/2003	Palehua East A Subdivision Pueonani Street		3	Renato						3		CE058187	Jon Sakata	1st revision
702	12/10/2003	Black Point Rd OH to UG Conversion P12-13		1	Russell		1						CE064911	Reuben Ogoshi	5th revision & add signatures [RUSH 12/10/03]
703	12/10/2003	Sutton Residence 4287 Kahala Avenue		1	Russell		1						CE066415	Tim Laborte	1st revision drawing
704	12/10/2003	Elena Subd North Road, Ewa		2	Renato						2		CE070983	Morris Ho	1st revision
705	12/10/2003	Mariaco Small Boat Harbor		2	Renato						1		CE043445	Erik Kusunoki	5th revision [sheet 1 of 2]
706	12/10/2003	Fernhurst YWCA	1		Sherri			1					CE070901	Erik Kusunoki	New drawing request
707	12/10/2003	BWS Maisekahana Wells ph 1A	4		Russell	4						o	CE028152	Morris Ho	New drawing request
708	12/11/2003	HOKUA - Temp UG SVC		1	Russell		1						CE069894	Morris Ho	1st Revision
709	12/12/2003	Bayview Golf Course Subdivision		2	Russell		2						CE071640	Russell Yoshida	3rd revision (Signatures)
710	12/12/2003	Nanea Kai Phase 2 Hi Kai Dr		1	Sherri				1				CE063300	Morris Ho	6th revision- sheet 4 of 4 [due 12/15/03]
711	12/12/2003	Blood Bank of Hawaii	1		Sherri			1					CE071921	Morris Ho	New drawing request
712	12/12/2003	Ewa Gentry Area 13 Phases 9-12 Launahele St.		1	Renato						1		CE015272	Erik Kusunoki	FINAL DRAWING Revision 2
713	12/12/2003	Ala Moana Pacific Center		1	Sherri				1				CE065248	Bill Denham	2nd revision - Working with MRO 20031048
714	12/12/2003	Koko Villa Subdivision		4	Sherri				4				CE056110	Erik Kusunoki	3rd revision (Signatures)
715	12/12/2003	Tamura's Wahiawa		1	Sherri				1				CE008883	Morris Ho	3rd revision
716	12/12/2003	Milliani Mauka Unit 135	5		Renato					5		o	CE072599	Russell Yoshida	New drawing request
717	12/12/2003	Sea Country Pakeke Street Extension, Malli		2	Renato						2	o	CE064856	Jon Sakata	2nd revision
718	12/15/2003	Milliani Mauka MF 115, Meheula Pkwy		3	Sherri				3				CE050686	Loren Yasuda	7th revision - Official Revision and print to Vellum (sheets 2, 3, and 4 of 4)
719	12/16/2003	Granny's Gourmet Muffin, Akoki St., Waipahu	1		Russell	1							CE071178	Reuben Ogoshi	New Drawing [12/29/03]

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ATTACHMENT K-3
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RT N	RT R	SN N	SN R	RA N	RA R	PAU X	CE #	Planner	Comments
					1		CE057564	Russell Yoshida	13th revision-(CID FINAL Rev 3) ASAP
			1				CE068822	Erik Kusunoki	1st revision (CID FINAL)
	1					o	CE058747	Morris Ho	7th revision (CID FINAL)
			1				CE065248	Bill Denham	3nd revision - (CID FINAL Rev1) Print to Vellum
			1				CE065100	Morris Ho	3nd revision
			1				CE063300	Morris Ho	7th revision- sheet 4 of 4 [due 12/17/03]
					1		CE045865	Morris Ho	1st revision [dure 12/19/03]
2						o	CE071550	Morris Ho	New drawing
			1				CE070901	Erik Kusunoki	1st revision
					1		CE067739	Tim Laborte	4th revision (CID FINAL Rev1) [due 12/22/03]
			4				CE071761	Russell Yoshida	1st Revision
					2		CE043445	Erik Kusunoki	6th revision (CID FINAL Rev2)
			2				CE064539	Morris Ho	4th revision (sheets 2&3 of 3)
					1		CE009773	Reuben Ogoshi	1st revision (old project) [due 12/29/03]
		3				o	CE068321	Russell Yoshida	New Drawing [asap - 1/13/04]
					3	o	CE058187	Jon Sakata	2nd revision - CID Final and print [Due 12/29/03]
					2		CE064856	Jon Sakata	3rd revision - CID Final and print [due 12/29/03]
	1					x	CE069894	Morris Ho	2nd Revision RUSH [due 12/26/03]
			4			x	CE071761	Russell Yoshida	2nd Revision RUSH [due 01/02/04]
	1					o	CE066415	Tim Laborte	2nd revision
			1			x	CE070901	Erik Kusunoki	2nd revision
			1			x	CE073633	Tim Laborte	1st Revision sheet 1 of 2 [12/30/03]
				1		o	CE074452	Tim Laborte	New Drawing [1/16/04]
	1					o	CE071178	Reuben Ogoshi	1st revision [1/8/04]
					1	o	CE045865	Morris Ho	2nd revision sheet 3 or 3
			1			o	CE068895	Morris Ho	2nd revision
			1			o	CE008883	Morris Ho	3rd revision
					1	o	CE073779	Charlyne Nakamura	1st revision - sh 1 & 2 of 3 [due 1/5/04]
			3			o	CE064539	Morris Ho	5th revision
				1		o	CE054680	Jon Sakata	new drawing [1/12/04]
		1				o	CE075762	Erik Kusunoki	New drawing
					3	o	CE068288	Bill Denham	2nd revision [CID FINAL]
			1			o	CE065100	Morris Ho	3nd revision
		1				o	CE072434	Reuben Ogoshi	New drawing [due 1/14/04]
				1		o	CE063778	Tim Laborte	New drawing [due 1/16/04]
			1			o	CE068561	Wayne Yata	2nd revision
				1		o	CE068821	Morris Ho	1st revision

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Job Name Type / Description	# o. NEW	REV	Assigned Tech	RT N	RT R	SN N	SN R	RA N	RA R	PAU X	CE #	Planner	Con
				32		51		40					
l-03				9 17	8	9 39	30	10 35	25				
p-03				5 28	23	2 22	20	2 24	22				
ug-03				8 23	15	6 44	36	5 55	50				
ul-03				4 18	14	9 49	40	18 40	22				
Jun-03				6 29	23	6 37	31	5 28	23				
May-03				6 43	37	6 40	34	8 40	32				
Apr-03				5 36	31	3 45	42	6 36	30				

icates start of new CID Drawing Request/Feedback Form
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The conference will feature:

- *Preconference Knowledge Immersion Seminars*
  Experience one-and-a-half days of in-depth, hands-on learning on 15 of the hottest geospatial topics.
- *More than 85 Power Presentations*
  Get a balanced and impartial perspective from these real-world technical paper presentations.
- *A motivating and inspiring Opening Session*
  Our phenomenal keynote speaker defies description. You won't forget this performance, we promise.
- *An 80,000-square-foot exhibition hall*
  See a virtual "who's who" in the geospatial solution provider arena.
- *Birds of a Feather user forums*
  Speak what's on your mind in these informal users-only sessions.
- *Numerous networking opportunities*
  From power breakfasts to evening socials, you'll connect with experienced users and knowledgeable solution providers.
- *Informative panel discussions*
  Industry leaders will deliberate on what the future holds for geospatial technologies.

This uniquely unbiased conference brings together geospatial users with experienced solution providers to impart their combined decades of knowledge, insight, and experience in implementing highly successful geospatial systems. Come join us!

About GITA

The Geospatial Information & Technology Association (GITA) is the premier professional association serving the global geospatial community. For nearly three decades, GITA has provided unbiased, world-class information on geospatial technologies through its conferences, seminars, chapter events, webcasts, forums, and publications. Visit GITA on the Web at www.gita.org.

Who Should Attend

Anyone who is interested in using geospatial information technologies should attend. Discussion topics involve geographic information systems (GIS), information technology (IT), mobile and field computing, supervisory control and data acquisition (SCADA), network operations management, work management systems, enterprise application integration, critical infrastructure protection, and other related technologies.

The conference program will address topics of interest to those involved in electric, gas, and water/wastewater utilities; telecommunications companies; public works; local government; academia; and other entities interested in using geospatial data as a core component of their operational strategy.

Travel and General Information

...erence Dates: April 25-28, 2004

Location:
The conference and exhibition will be held at the Washington State Convention & Trade Center, 800 Convention Place, Seattle, WA 98101 USA

Hotel Reservation Deadline: March 31, 2004

Conference Fees
Full-Conference Rates:
Members: $645 in room block; $755 out of room block
Nonmembers: $695 in room block; $805 out of room block
Spouse/guest: $50 (Includes admittance to Opening Session, President's Reception, Exhibitor Reception, and show floor when accompanied by a paid registrant)

Daily Conference Rates
Members: $350 in room block; $385 out of room block
Nonmembers: $400 in room block; $435 out of room block

Seminar Fees
Half-Day Seminars:
Members: $125 in room block; $138 out of room block
Nonmembers: $150 in room block; $175 out of room block

...ation Policy
A $25 processing fee will be charged for any cancellation or substitution. Fifty percent of the registration fee will be charged for cancellations received after March 15, 2004, but before March 31, 2004. Cancellations received on or after March 31, 2004, are nonrefundable.

Conference Travel

GITA has negotiated special discounts for conference attendees with United Airlines, the official conference airline, and Avis Rent-A-Car, the official car rental agency for Annual Conference 27.

UNITED AIRLINES

Official Airline: United Airlines will offer a 5% discount on the lowest applicable fare or 10% on the unrestricted coach fare. To take advantage of this discount, you or your travel agent must call United Airlines' toll-free number, 800-521-4041, and refer to Meeting ID Number **551SD**. An additional 5% discount will apply when you purchase your ticket at least 60 days in advance of your travel date. Discounts apply on United Express. Dedicated reservation agents are on duty seven days a week from 7:00 a.m. to midnight, Eastern time. Book early to take advantage of promotional fares that give you the greatest discount. Mileage Plus members receive full credit for all miles flown to GITA's Annual Conference 27.

AVIS

Car Rental: Avis Rent-A-Car is offering special negotiated rates to conference attendees. Reservations can be made by calling Avis Reservations at **800-331-1600**. Use the Avis Meeting Discount Number **T526099**.

Hotel Reservation Form

GITA's Annual Conference 27 • April 25-28, 2004 • Seattle, Washington USA

Check out what's in store on Wednesday afternoon! See page 5 for details.

Please submit this form **no later than March 31, 2004**, to receive conference rates. If the contracted block is sold out or if you reserve your room after March 31, 2004, rooms are subject to space and rate availability.

By phone or fax:

The Westin Seattle: Phone 888-627-8513, Fax (661) 949-2579
Sheraton Seattle Hotel & Towers: Phone 800-204-6100, Fax (206) 447-5525

Register online:
www.gita.org

Please print or type all information on this form to ensure accuracy.

Room Occupant

Name _____

Organization _____

Address _____

City _____ State/Prov. _____ ZIP/Postal Code _____

Country _____ Daytime Phone _____

Home Phone _____ Fax _____

number of guests in room: _____ Additional guests name(s): _____

☐ Additional guest(s) are over age 19 (additional charge will prevail.) ☐ Additional guests(s) are under age 19.

Arrival Date _____ Arrival Time _____ (check-in time: 4:00 p.m.)

Departure Date _____ Departure Time _____ (check-out time: 12:00 p.m.)

Special Request: ☐ Nonsmoking ☐ Smoking ☐ Handicap accessible ☐ Other _____

Starwood Preferred Guest. Please indicate number: _____

Please select hotel and room of your choice: *Note: All rooms are subject to a 15.6% room tax.*

■ The Sheraton Seattle Hotel & Towers

☐ Main hotel Single	$182
☐ Main hotel Double	$202
☐ Main hotel Triple	$222
☐ Main hotel Quad	$242
☐ Club Level Single	$248
☐ Club Level Double	$273

■ The Westin Seattle

☐ Single	$172
☐ Double	$172

A credit card is required to guarantee all reservations. ☐ American Express ☐ Diners Club ☐ MasterCard ☐ Visa

Cardholder's Name (please print): _____

Cardholder Signature: _____ Exp. Date: _____

If this reservation is cancelled less than 72 hours in advance of the confirmed arrival date, a charge in the amount equal to one night's room and tax will be charged to the credit card provided.

Instrument & Control Division Assumptions

- 85-90% O&M; 10-15% capital
  Sick leave budgeted is 10% of total avail hours
- Nonlabor - supplies (i.e. recordation pens/charts); ongoing leasing of phone lines
- Note: cell phone costs will escalate to $15K/year due to new BMI installations
- Work is based on baseline maintenance schedule (see attached) which increases as new* equipment is added (i.e. # of regulators, RTUs, BMIs, etc) or as equipment changes over from electromechanical to digital
- Anticipate that going forward 2005-2010 there will be much more capital work due to the following projects: EMS, RTU migration; LAN/WAN for EMS; continuing BMI/MOSCAD work - coud be as much as 40% capital in ensuing years; for 2005 may be 20-25%
- Currently in 2004 we are at 50-60 hours extra per month on capital jobs
- Although not budgeted, I&C is responsible for:
  In emergencies, servicing of EMS system UPS, EMS and DSS hardware until vendors with whom we have service agreements can either be contacted or until replacement parts arrive.

* increaseing BMI sites about 30/year

	A	B	C	D	E	F	G
1	**INSTRUMENT & CONTROL BASE MAINT:**						
2		**UNITS**	**SCHEDULE**	**UNITS**	**MN/HR**	**TOTAL**	
3	**TRANS**		**MONTHS**		**UNIT**	**MN/HR**	
4	**PREV CREW.**						**1,232**
5	**REGULATORS**	**77**	12	77	2.5	193	
6	**REC. METERS & INST.**	**274**	12	274	2	548	
7	**BATTERY CHARGERS**	**53**	12	53	2.5	133	
8	**CAP BANK CONTROLS**	**15**	12	15	2	30	
9	**RTU'S**	**12**	12	12	10	120	
10	**SCADA/EMS**	**12**	12	12	10	120	
11	**O2 MONITORS**	**6**	12	6	6	36	
12	**EMS FRONT END**	**1**	12	1	16	16	
13	**HYDRAN MONITORS**	**9**	12	9	4	32	
14	**PQ MONITORS**	**1**	12	1	4	4	
15							
16							
17	**TRANS.**						
18	**COR. TRANS CREW.**						**1,090**
19	**REGULTORS**	**77**	AS NEEDED			200	
20	**REC. METERS & INST**	**274**	AS NEEDED			400	
21	**BATTERY CHARGERS**	**53**	AS NEEDED			100	
22	**CAP BANK CONTROLS**	**15**	AS NEEDED			15	
23	**RTU'S**	**12**	AS NEEDED			80	
24	**SCADA/EMS**	**12**	AS NEEDED			60	
25	**O2 MONITORS**	**6**	AS NEEDED			24	
26	**EMS FRONT END**	**1**	AS NEEDED			12	
27	**HYDRAN MONITORS**	**9**	AS NEEDED			16	
28	**PQ MONITORS**	**1**	AS NEEDED			4	
29	**OTHER/MISC**		AS NEEDED			180	
30							
31							
32	**DIST.**						
33	**PREV CREW**						**3,692**
34	**REGULATORS**	**256**	12	256	2.5	640	
35	**REC. METERS & INST**	**840**	12	840	2	1,680	
36	**BATTERY CHARGERS**	**270**	12	270	2.5	675	

A	B	C	D	E	F	G
ONTROL	53	12	53	2	106	
	30	12	30	10	300	
:ND	2	12	2	30	60	
ADS	15	12	15	2	30	
: DOWNLOADS	9	12	9	3.5	32	
ARM SYSTEM	32	12	32	4	128	
STATION	3	12	3	3	9	
ATORS	8	12	8	4	32	
						2,098
S	256	AS NEEDED			512	
& INST	840	AS NEEDED			840	
ARGERS	270	AS NEEDED			115	
ONTROLS	53	AS NEEDED			22	
	30	AS NEEDED			80	
:ND	1	AS NEEDED			15	
ADS	15	AS NEEDED			4	
: DOWNLOADS	9	AS NEEDED			10	
ARM SYSTEM	32	AS NEEDED			80	
STATION	3	AS NEEDED			40	
ATORS	8	AS NEEDED			80	
:					300	
TS						
						300
	8	12	8	4	32	
S	48	12	48	2.5	120	
NG	8	12	8	4	32	
	2	12	2	3	6	
	16	12	16	1	16	
	16	12	16	3	48	
T	3	12	3	15	45	
TS						

A	B	C	D	E	F	G
						288
	8	AS NEEDED			24	
TS	**48**	AS NEEDED			80	
ING	**8**	AS NEEDED			24	
	2	AS NEEDED			16	
	16	AS NEEDED			40	
	16	AS NEEDED			80	
:	**3**	AS NEEDED			24	
						345
	2	12	2	16	32	
	4	12	4	8	32	
G	**1**	12	1	80	80	
:	**1**	AS NEEDED			200	
						300
	2	12	2	16	32	
G	**1**	12	1	120	120	
	1	AS NEEDED			150	
INST.						
						760
CKS	**3**	12	3	4	12	
TS	**15**	12	15	20	300	
IC		AS NEEDED			450	
	5	12	5		120	**120**
	5	12	5		120	**120**
TAL	**5**	12	5		60	**60**
JCTIVE						
ION	5	AS NEEDED	600	8	**4800**	
	5	AS NEEDED	300	8	**2400**	

CA-IR-1
DOCKET NO. 04-0113
HECO T-8
ATTACHMENT K-4
PAGE 4 of 5

	A	B	C	D	E	F	G
109							
110	**TOTAL (5) TECH'S**	**10,405**					**10,405**
111	**TOTAL HR**	**2,081**					
112	**TOTAL HPE**	**2,096**					

Relay Division Assumptions

- 87% OM
- Sick leave budgeted 2 hours per month per person
    - 24 hrs/engineer = 48 hrs.
    - 144 hrs/crew
- Nonlabor outsides services (Sanitation services $1K)
- Misc. outside services $12K each budgeted for Transm & Distrib (based on equipment ratio); $3K for power plant
- 6 techs; 2 engineers; 1 supv; 1 supt.
- work is based on baseline maintenance schedule (see attached)

Responsible for:

1. Operating and maintaining all protective relays, schemes and associated equipment in T&D substations, steam and combustion plants.
2. This includes analysis and repairing of fault analyzing equip, directing crews to faulted areas and emergency storm repairs - 46 KV, 12 KV, auto transfers; load shedding; 12 KV line reclosers

	elays, ant in the	elays, the nalysis and directing ncy storm	elays, the KV and 12 KV Load	Training, Enviornment	eam and nd

O Mo · hrs.

RELAY O&M	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DE
. OWER PLANT												
POWE R PLANT RELAYS (OVERHAUL)	112			112		112		112			112	
GEN CT RATIO/MEGGER	24			24		24		24			24	
GEN T RIP TEST		8			8		8		8			8
BREAKDOWN	16			16		16		16			16	
TRANSMISSION												
TRANSMISSION RELAYS	300	300	300	200	200	300	300	300	300	300	300	200
WL TRIP VOLTAGE CKS	8	8	8	8	8	8	8	8	8	8	8	8
CT BURDEN CKS	8	8	8	8	8	8	8	8	8	8	8	8
LINE PROTECTION END-END TEST	16				16				16			
TSF DIFF WL TRIP TEST		16				16				16		
BUS DIFF WL TRIP TEST			16				16				16	
BF WL TRIP TEST				16				16				16
BREAKDOWN	50	50	50	50	50	50	50	50	50	50	50	50
DISTRIBUTION												
DISTRIBUTION RELAYS	80	80	80	80	80	80	80	80	80	80	80	80
CT BURDEN CKS	4	4	4	4	4	4	4	4	4	4	4	4
WL TRIP TEST	4	4	4	4	4	4	4	4	4	4	4	4
46KV TRANSFERS	352	276			352	276			352	276		
SWITCHGEAR TRANSFERS			163				163				163	
S-CONTROL TRANSFERS		44	44			44	44			44	44	
LOAD SHED				208								
LINE RECLOSER								116				
BREAKDOWN	50	50	50	50	50	50	50	50	50	50	50	50
ICB (BILLABLE)												
MECO RELAYS				400	100							
MOLOKAI RELAY					200							
LANAI RELAYS												
TRAINING												
SHOP/SAFETY MEETINGS	33	33	33	33	33	33	33	33	33	33	33	33
NON LABOR												
Vac/Sick/Holiday	120	120	72	120	120	120	120	120	120	120	216	276
	1177	1001	832	1333	1233	1145	888	941	1033	993	1128	737
Available hours per employee	176	160	184	176	168	176	176	176	176	168	176	184
employee count	6	6	6	6	6	6	6	6	6	6	6	6
Total Supply	1056	960	1104	1056	1008	1056	1056	1056	1056	1008	1056	1104

RELAY MAINT.
UNIT COUNT/HRS
PER YEAR

RELAY MAINTENANCE	TOTAL UNITS	UNITS PER YR	HRS PER UNIT	TOTAL HRS
TRANSMISSION RELAYS (YEARLY)	2722	2479	1.3	3222.7
TRANSMISSION CODE BLOCK ACTIVITY # 348				**TOTAL = 3222.7**
DISTRIBUTION RELAYS (3 YEARS)	3234	1078	1	1078
LINE RECLOSERS * (YEARY)	29	29	4	116
LOAD SHED * (YEARLY)	52	52	4	208
S-CONTROL VALUTS * (YEARLY)	88	88	3	264
SWITCHGEAR VAULTS (PMH-9) * (YEARLY)	245	245	2	490
46KV TRANSFER * (3 X YEAR)	157	471	4	1884
DISTRIBUTION CODE BLOCK ACTIVITY # 485				**TOTAL = 4040**
POWER PLANT RELAYS (3 YEARS)	1141	360	1.5	540
GENERATION CODE BLOCK ACTIVITY # 260				**TOTAL = 540**
MECO RELAYS (2 TO 3 YEARS)	1750	750	1	750
TRANSMISSION (ICB) CODE BLOCK ACTIVITY # 348 (BE)				**TOTAL = 750**
* = HOURS BASED ON 2 PERSON CREW.				
ALL HOURS INCLUDES TRAVEL TIME.				**TOTAL = 8552.7**
DOES NOT INCLUDE CORRECTIVE MAINT HOURS.				

Relay HRS

2/11/2004

*VIEW: Direct Labor Cost

*R...	*Ac...	*Lo...	*In...	*Project #	*E...	*Labor Clas...	Line item	FY05
	098	PHE	ND	NPRZZ...	107	R_RELCRW	Holiday Crew	576
	098	PHE	ND	NPRZZ...	107	R_RELCRW	Sick Crew	144
PRR	098	PHE	ND	NPRZZ...	107	R_RELCRW	Vac Crew	800
PRR	098	PHE	ND	NPRZZ...	107	R_RELENG	Holiday Eng	192
PRR	098	PHE	ND	NPRZZ...	107	R_RELENG	Sick Eng	48
PRR	098	PHE	ND	NPRZZ...	107	R_RELENG	Vac Eng	264
PRR	098	PHE	ND	NPRZZ...	107	R_RELSUP	Holiday Sup	96
PRR	098	PHE	ND	NPRZZ...	107	R_RELSUP	Sick Sup	24
PRR	098	PHE	ND	NPRZZ...	107	R_RELSUP	Vac Sup	144
PRR	098	PHE	ND	NPRZZ...	107	R_TECSPT	Holiday Supt	96
PRR	098	PHE	ND	NPRZZ...	107	R_TECSPT	Sick Supt	24
PRR	098	PHE	ND	NPRZZ...	107	R_TECSPT	Vac Supt	144
PRR	260	H08	NE	NPRZZ...	150	R_RELCRW	Hono 8 RR Crew	0
PRR	260	H08	NE	NPRZZ...	150	R_RELENG	Hono 8 RR Eng	0
PRR	260	H09	NE	NPRZZ...	150	R_RELCRW	Hon 9 RR Crew	0
PRR	260	H09	NE	NPRZZ...	150	R_RELENG	Hon 9 RR Eng	0
PRR	260	K01	NE	NPRZZ...	150	R_RELCRW	Kahe 1 RR Crew	160
PRR	260	K01	NE	NPRZZ...	150	R_RELENG	Kahe 1 RR Eng	16
PRR	260	K02	NE	NPRZZ...	150	R_RELCRW	Kahe 2 RR Crew	0
PRR	260	K02	NE	NPRZZ...	150	R_RELENG	Kahe 2 RR Eng	0
PRR	260	K03	NE	NPRZZ...	150	R_RELCRW	Kahe 3 RR Crew	0
PRR	260	K03	NE	NPRZZ...	150	R_RELENG	Kahe 3 RR Eng	0
PRR	260	K04	NE	NPRZZ...	150	R_RELCRW	Kahe 4 RR Crew	0
PRR	260	K04	NE	NPRZZ...	150	R_RELENG	Kahe 4 RR Eng	8
PRR	260	K05	NE	NPRZZ...	150	R_RELCRW	Kahe 5 RR Crew	0
PRR	260	K05	NE	NPRZZ...	150	R_RELENG	Kahe 5 RR Eng	0
PRR	260	K06	NE	NPRZZ...	150	R_RELCRW	Kahe 6 RR Crew	128
PRR	260	K06	NE	NPRZZ...	150	R_RELENG	Kahe 6 RR Eng	16
PRR	260	W03	NE	NPRZZ...	150	R_RELCRW	Waiau 3 RR Crew	0

11/2004 *VIEW: Direct Labor Cost

R...	*Ac...	*Lo...	*In...	*Project #	*E...	*Labor Clas...	Line item	FY05
	)	OAH	NC	NPRZZ...	150	R_TECSPT	Cor Trans Supt	192
\	,0	OAH	NE	NPRZZ...	150	R_RELCRW	Cor Trans Eq Crew	480
'RR	350	OAH	NE	NPRZZ...	150	R_RELENG	COR Trans Eq Eng	384
'RR	350	OAH	NE	NPRZZ...	150	R_RELSUP	Trans Equip-Corr S...	192
'RR	366	OAH	NE	NPRZZ...	150	R_RELCRW	Em Trans Crew	96
'RR	366	OAH	NE	NPRZZ...	150	R_RELENG	Em Trans Eng	12
'RR	366	OAH	NE	NPRZZ...	150	R_RELSUP	Em Trans Sup	12
'RR	463	OAH	NC	NPRZZ...	150	R_TECSPT	Op Dist Supt	712
'RR	463	OAH	NE	NPRZZ...	150	R_RELENG	Op Dist Fac Eng	1,065
'RR	463	OAH	NE	NPRZZ...	150	R_RELSUP	Op Dist Fac Sup	648
PRR	485	OAH	NE	NPRZZ...	150	R_RELCRW	PRV DIST EQ C...	4,200
PRR	487	OAH	NC	NPRZZ...	150	R_TECSPT	Cor Dist Eq Supt	192
PRR	487	OAH	NE	NPRZZ...	150	R_RELCRW	Cor Dist Eq Crew	600
PRR	487	OAH	NE	NPRZZ...	150	R_RELENG	Cor Dist Eq Eng	276
PRR	487	OAH	NE	NPRZZ...	150	R_RELSUP	Dist Equip-Corr Supv	192
PRR	492	OAH	NE	NPRZZ...	150	R_RELCRW	Mn Dist Tool & Eq ...	96
PRR	509	OAH	NE	NPRZZ...	150	R_RELCRW	Em Dist Crew	96
PRR	509	OAH	NE	NPRZZ...	150	R_RELENG	Em Dist Eng	12
PRR	789	OAH	NC	NPRZZ...	150	R_RELCRW	Training Crew	288
PRR	789	OAH	NC	NPRZZ...	150	R_RELENG	Training Eng	48
PRR	789	OAH	NC	NPRZZ...	150	R_RELSUP	Training Sup	48
PRR	797	OAH	NC	NPRZZ...	150	R_RELCRW	safety meet crew	396
PRR	797	OAH	NC	NPRZZ...	150	R_RELENG	safety meet eng	144
PRR	797	OAH	NC	NPRZZ...	150	R_RELSUP	Safety Training	72
PRR								$709,872.92
								$709,872.92

4

2/11/2004

*VIEW: Direct Labor Cost

*R...	*Ac...	*Lo...	*In...	*Project #	*E...	*Labor Clas...	Line item	FY05
	098	PHE	ND	NPRZZ...	107	R_RELCRW	Holiday Crew	$18,627.84
	098	PHE	ND	NPRZZ...	107	R_RELCRW	Sick Crew	$4,656.96
PRR	098	PHE	ND	NPRZZ...	107	R_RELCRW	Vac Crew	$25,872.00
PRR	098	PHE	ND	NPRZZ...	107	R_RELENG	Holiday Eng	$6,520.32
PRR	098	PHE	ND	NPRZZ...	107	R_RELENG	Sick Eng	$1,630.08
PRR	098	PHE	ND	NPRZZ...	107	R_RELENG	Vac Eng	$8,965.44
PRR	098	PHE	ND	NPRZZ...	107	R_RELSUP	Holiday Sup	$3,309.12
PRR	098	PHE	ND	NPRZZ...	107	R_RELSUP	Sick Sup	$827.28
PRR	098	PHE	ND	NPRZZ...	107	R_RELSUP	Vac Sup	$4,963.68
PRR	098	PHE	ND	NPRZZ...	107	R_TECSPT	Holiday Supt	$4,468.80
PRR	098	PHE	ND	NPRZZ...	107	R_TECSPT	Sick Supt	$1,117.20
PRR	098	PHE	ND	NPRZZ...	107	R_TECSPT	Vac Supt	$6,703.20
PRR	260	H08	NE	NPRZZ...	150	R_RELCRW	Hono 8 RR Crew	$0.00
PRR	260	H08	NE	NPRZZ...	150	R_RELENG	Hono 8 RR Eng	$0.00
PRR	260	H09	NE	NPRZZ...	150	R_RELCRW	Hon 9 RR Crew	$0.00
PRR	260	H09	NE	NPRZZ...	150	R_RELENG	Hon 9 RR Eng	$0.00
PRR	260	K01	NE	NPRZZ...	150	R_RELCRW	Kahe 1 RR Crew	$5,174.40
PRR	260	K01	NE	NPRZZ...	150	R_RELENG	Kahe 1 RR Eng	$543.36
PRR	260	K02	NE	NPRZZ...	150	R_RELCRW	Kahe 2 RR Crew	$0.00
PRR	260	K02	NE	NPRZZ...	150	R_RELENG	Kahe 2 RR Eng	$0.00
PRR	260	K03	NE	NPRZZ...	150	R_RELCRW	Kahe 3 RR Crew	$0.00
PRR	260	K03	NE	NPRZZ...	150	R_RELENG	Kahe 3 RR Eng	$0.00
PRR	260	K04	NE	NPRZZ...	150	R_RELCRW	Kahe 4 RR Crew	$0.00
PRR	260	K04	NE	NPRZZ...	150	R_RELENG	Kahe 4 RR Eng	$271.68
PRR	260	K05	NE	NPRZZ...	150	R_RELCRW	Kahe 5 RR Crew	$0.00
PRR	260	K05	NE	NPRZZ...	150	R_RELENG	Kahe 5 RR Eng	$0.00
PRR	260	K06	NE	NPRZZ...	150	R_RELCRW	Kahe 6 RR Crew	$4,139.52
PRR	260	K06	NE	NPRZZ...	150	R_RELENG	Kahe 6 RR Eng	$543.36
PRR	260	W03	NE	NPRZZ...	150	R_RELCRW	Waiau 3 RR Crew	$0.00
	260	W03	NE	NPRZZ...	150	R_RELENG	Waiau 3 RR Eng	$0.00
	260	W04	NE	NPRZZ...	150	R_RELCRW	Waiau 4 RR Crew	$5,174.40
PRR	260	W04	NE	NPRZZ...	150	R_RELENG	Waiau 4 RR Eng	$543.36
PRR	260	W05	NE	NPRZZ...	150	R_RELCRW	WAIAU 5 RR Crew	$0.00
PRR	260	W05	NE	NPRZZ...	150	R_RELENG	Waiau 5 RR Eng	$0.00
PRR	260	W06	NE	NPRZZ...	150	R_RELCRW	Waiau 6 RR Crew	$0.00
PRR	260	W06	NE	NPRZZ...	150	R_RELENG	Waiau 6 RR Eng	$0.00
PRR	260	W07	NE	NPRZZ...	150	R_RELCRW	Waiau 7 RR Crew	$0.00
PRR	260	W07	NE	NPRZZ...	150	R_RELENG	Waiau 7 RR Eng	$0.00
PRR	260	W08	NE	NPRZZ...	150	R_RELCRW	Waiau 8 RR Crew	$0.00
PRR	260	W08	NE	NPRZZ...	150	R_RELENG	Waiau 8 RR Eng	$0.00
PRR	262	HST	NE	NPRZZ...	150	R_RELCRW	Hon Cor Crew	$776.16
PRR	262	HST	NE	NPRZZ...	150	R_RELENG	Hon Cor Eng	$407.52
PRR	262	KST	NE	NPRZZ...	150	R_RELCRW	Kahe Cor Crew	$776.16
PRR	262	KST	NE	NPRZZ...	150	R_RELENG	Kahe Cor Eng	$407.52
PRR	262	WST	NE	NPRZZ...	150	R_RELCRW	Waiau Cor Crew	$776.16
PRR	262	WST	NE	NPRZZ...	150	R_RELENG	Waiau Cor Eng	$407.52
PRR	272	OAH	NE	NPRZZ...	150	R_RELCRW	Waiau 9 RR Crew	$5,174.40
PRR	272	OAH	NE	NPRZZ...	150	R_RELENG	Waiau 9 RR Eng	$543.36
PRR	272	W10	NE	NPRZZ...	150	R_RELCRW	Waiau 10 RR Crew	$5,174.40
PRR	272	W10	NE	NPRZZ...	150	R_RELENG	Waiau 10 RR Eng	$543.36
PRR	274	WNS	NE	NPRZZ...	150	R_RELCRW	WNS Cor Crew	$388.08
PRR	274	WNS	NE	NPRZZ...	150	R_RELENG	WNS Cor Eng	$407.52
PRR	327	OAH	NE	NPRZZ...	150	R_RELENG	READ ANALYZE ...	$12,225.60
PRR	333	OAH	NC	NPRZZ...	150	R_TECSPT	Op Trans Fac Supt	$33,516.00
PRR	333	OAH	NE	NPRZZ...	150	R_RELENG	OP TRANS FAC ...	$40,752.00
PRR	333	OAH	NE	NPRZZ...	150	R_RELSUP	OP TRANS FAC S...	$22,336.56
PRR	340	OAH	NE	NPRZZ...	150	R_RELCRW	REP TRANS DATA...	$3,104.64
	340	OAH	NE	NPRZZ...	150	R_RELENG	Rep Trans Data Re...	$815.04
	348	MAU	BE	NPRZZ...	150	R_RELCRW	MECO-DE Relay M...	$24,255.00
PRR	348	OAH	NE	NPRZZ...	150	R_RELCRW	PRV Trans EQ Crew	$93,786.00

2/11/2004 *VIEW: Direct Labor Cost

*R...	*Ac...	*Lo...	*In...	*Project #	*E...	*Labor Clas...	Line item	FY05
	350	OAH	NC	NPRZZ...	150	R_TECSPT	Cor Trans Supt	$8,937.60
	350	OAH	NE	NPRZZ...	150	R_RELCRW	Cor Trans Eq Crew	$15,523.20
PRR	350	OAH	NE	NPRZZ...	150	R_RELENG	COR Trans Eq Eng	$13,040.64
PRR	350	OAH	NE	NPRZZ...	150	R_RELSUP	Trans Equip-Corr S...	$6,618.24
PRR	366	OAH	NE	NPRZZ...	150	R_RELCRW	Em Trans Crew	$3,104.64
PRR	366	OAH	NE	NPRZZ...	150	R_RELENG	Em Trans Eng	$407.52
PRR	366	OAH	NE	NPRZZ...	150	R_RELSUP	Em Trans Sup	$413.64
PRR	463	OAH	NC	NPRZZ...	150	R_TECSPT	Op Dist Supt	$33,143.60
PRR	463	OAH	NE	NPRZZ...	150	R_RELENG	Op Dist Fac Eng	$36,167.40
PRR	463	OAH	NE	NPRZZ...	150	R_RELSUP	Op Dist Fac Sup	$22,336.56
PRR	485	OAH	NE	NPRZZ...	150	R_RELCRW	PRV DIST EQ C...	$135,828.00
PRR	487	OAH	NC	NPRZZ...	150	R_TECSPT	Cor Dist Eq Supt	$8,937.60
PRR	487	OAH	NE	NPRZZ...	150	R_RELCRW	Cor Dist Eq Crew	$19,404.00
PRR	487	OAH	NE	NPRZZ...	150	R_RELENG	Cor Dist Eq Eng	$9,372.96
PRR	487	OAH	NE	NPRZZ...	150	R_RELSUP	Dist Equip-Corr Supv	$6,618.24
PRR	492	OAH	NE	NPRZZ...	150	R_RELCRW	Mn Dist Tool & Eq ...	$3,104.64
PRR	509	OAH	NE	NPRZZ...	150	R_RELCRW	Em Dist Crew	$3,104.64
PRR	509	OAH	NE	NPRZZ...	150	R_RELENG	Em Dist Eng	$407.52
PRR	789	OAH	NC	NPRZZ...	150	R_RELCRW	Training Crew	$9,313.92
PRR	789	OAH	NC	NPRZZ...	150	R_RELENG	Training Eng	$1,630.08
PRR	789	OAH	NC	NPRZZ...	150	R_RELSUP	Training Sup	$1,654.56
PRR	797	OAH	NC	NPRZZ...	150	R_RELCRW	safety meet crew	$12,806.64
PRR	797	OAH	NC	NPRZZ...	150	R_RELENG	safety meet eng	$4,890.24
PRR	797	OAH	NC	NPRZZ...	150	R_RELSUP	Safety Training	$2,481.84
PRR								$709,872.92
								$709,872.92

PRR	262	HST	NE	NPRZZ...	201	Pwr plant parts	$960.00
R	262	KST	NE	NPRZZ...	201	Pwr plant parts	$960.00
R	262	WST	NE	NPRZZ...	201	Pwr Plant parts	$960.00
RR	350	OAH	NE	NPRZZ...	201	Trans parts	$12,000.00
PRR	487	OAH	NE	NPRZZ...	201	Dist parts	$12,000.00
PRR	789	OAH	NC	NPRZZ...	201	Trng materials ICS	$1,200.00
PRR	797	OAH	NC	NPRZZ...	201	Safety Shoes	$900.00
PRR					201		28,980
PRR	700	OAH	NC	NPRZZ...	205	Office supplies	$720.00
PRR					205		720
PRR	700	OAH	NC	NPRZZ...	301	Crew Light Truck B-98	$11,440.00
PRR	700	OAH	NC	NPRZZ...	301	Crew Medium Trucks B...	$36,400.00
PRR	700	OAH	NC	NPRZZ...	301	Supt Vehicle	$5,720.00
PRR					301		8,320
PRR	_	_	_	_	401	Stores OH	$3,605.11
PRR					401		28,980.00
PRR	_	_	_	_	404	En Del OH	$468,167.59
PRR					404		18,139
PRR	_	_	_	_	406	Corp Adm OH	$54,598.39
PRR					406		18,139
PRR	_	_	_	_	421	NPW OH	$72,918.78
PRR					421		18,139
PRR	_	_	_	_	422	Empl Benefits OH	$117,540.72
PRR					422		18,139
PRR	_	_	_	_	423	PR Tax OH	$52,639.05
PRR					423		622,211.00
IR	700	OAH	NC	NPRZZ...	501	Tel/Pagers	$1,500.00
IR					501		1,500
PRR	348	OAH	NE	NPRZZ...	508	Sanitation equip	$1,020.00
PRR					508		1,020
PRR	789	OAH	NC	NPRZZ...	520	Mainland Training Eng	$2,000.00
PRR	789	OAH	NC	NPRZZ...	520	Mainland Trng Crew	$2,000.00
PRR					520		4,000
							768,287.00
							$859,249.64

portable toilets for female workers

1 trip ea for tech. + engr.

_RA	_LbrClass	_EE	FY03	FY04	FY05	FY06	FY07
PRR	R_RELCRW	*Supply	5,232	12,576	12,480	0	0
PRR	R_RELCRW	107	-696	-1,584	-1,440	0	0
PRR	R_RELCRW	150	-4,450	-12,008	-15,091	-538	-440
PRR	R_RELCRW		86	-1,016	-4,051	-538	-440
PRR	R_RELENG	*Supply	1,744	4,192	4,160	0	0
PRR	R_RELENG	107	-268	-528	-480	0	0
PRR	R_RELENG	150	-1,510	-4,395	-4,758	-1,473	-316
PRR	R_RELENG		-34	-731	-1,078	-1,473	-316
PRR	R_RELSUP	*Supply	872	2,096	2,080	0	0
PRR	R_RELSUP	107	-126	-288	-272	0	0
PRR	R_RELSUP	150	-834	-1,906	-2,100	-22	-56
PRR	R_RELSUP		-88	-98	-292	-22	-56
PRR	R_TECSPT	*Supply	872	2,096	2,080	0	0
PRR	R_TECSPT	107	-126	-280	-272	0	0
PRR	R_TECSPT	150	-812	-1,908	-2,017	0	0
PRR	R_TECSPT		-66	-92	-209	0	0
			-102	-1,937	-5,630	-2,033	-812

✓✓ ② 2 b adjusted down to 85% - 90%
85% shd b close to some historical #
you nd a # 2 scale back to
depends on + proj & + priority of + proj.
is 85% a good ratio?

_RA	_LbrClass	_EE	_Proj	Project	ProjMgrOrEngr	FY03	FY04	FY05
PRR	R_REL...	*Sup...	*Supply	Labor Supply		5,232	12,576	12,480
PRR	R_REL...	107	NPRZZZZZ	System Operation		-696	-1,584	-1,440
PRR	R_REL...	150	NPRZZZZZ	System Operation		-3,574	-10,619	-10,663
PRR	R_REL...	150	P0000113	BP NAS Sub A Upgrade	Ho, M	0	0	0
PRR	R_REL...	150	P0000114	BP NAS Sub B Upgrade	Ho, M	0	0	0
PRR	R_REL...	150	P0000115	BP NAS Sub C Upgrade	Ho, M	0	0	0
PRR	R_REL...	150	P0000116	BP NAS Sub D Upgrade	Ho, M	0	0	0
PRR	R_REL...	150	P0000277	New Kuahua Substation	Wong, K	0	-65	-94
PRR	R_REL...	150	P0000278	Makalapa Substation Prot	Wong, K	0	-14	-28
PRR	R_REL...	150	P0000279	Puuloa Substation Prot	Wong, K	0	-14	-46
PRR	R_REL...	150	P0000290	Halawa Cap Bank Brk 4492	Arakaki, D	-1	0	0
PRR	R_REL...	150	P0000294	Pukele Tie Breaker-Sw Rpl	Arakaki, D	-32	-32	0
PRR	R_REL...	150	P0000514	Siemen CT Replacement	Anbe, K	0	-96	-96
PRR	R_REL...	150	P0000563	Mokuone 46-12KV Substation 1	Chong, R	0	-40	0
PRR	R_REL...	150	P0000601	Gen Prot Relay Replacement	Arakawa, D	-140	-320	-180
PRR	R_REL...	150	P0000674	Waiau Start-Up SWGR Replace	Yoshida, A	-80	0	0
PRR	R_REL...	150	P0000675	W6 Control/DC Cables to Swyd	Arakawa, D	0	-160	0
PRR	R_REL...	150	P0000748	Barbers Point TF 46kV Substation	Fong, K	0	-194	0
PRR	R_REL...	150	P0000767	Ft Wvr SS Tsf #2 Install	Tamayo, R	-26	0	0
PRR	R_REL...	150	P0000769	2003 Spare 138-46kv Tsf	Hayakaw, W	-16	-32	0
PRR	R_REL...	150	P0000820	K1 Main Xfmr Replacement	Yoshida, A	0	0	-160
PRR	R_REL...	150	P0000829	W4 Main Xfmr Replacement	Kabutan, D	0	0	-100
PRR	R_REL...	150	P0000830	K1 Aux Xfmr Replacement	Yoshida, A	0	0	-40
PRR	R_REL...	150	P0000832	W3 Main Xfmr Replacement	Kabutan, D	0	-100	0
PRR	R_REL...	150	P0000833	Mamala Substation	Friel, C	0	0	-234
PRR	R_REL...	150	P0000836	Ford Island Substation	Chong, R	0	0	-762
PRR	R_REL...	150	P0000837	Makalapa 46kV Brkr Addition	Chong, R	0	0	-58
PRR	R_REL...	150	P0000855	K6 Aux Transformer	Fukuda, P	-40	-40	0
PRR	R_REL...	150	P0000856	W7 Main Transformer	Fukuda, P	0	0	0
PRR	R_REL...	150	P0000857	W7 Aux Transformer	Fukuda, P	0	0	0
PRR	R_REL...	150	P0000864	Iwi 46 kV Sub Ctrl Hse Upgr	Oshiro, E	0	0	-1,092
PRR	R_REL...	150	P1470000	Minor Trans Sub Addns	Lai, D	-100	-240	-240
PRR	R_REL...	150	P1480000	Minor Dist Sub Addns	Tamayo, R	-18	-42	-42
PRR	R_REL...	150	P1680000	Tsf & Equip Pur/Svc (CID)	Che, E	0	0	0
PRR	R_REL...	150	P1820000	Minor UG Addns (CID)	Che, E	0	0	0
PRR	R_REL...	150	P4851000	Kamoku Pukele Term	Wong, K	0	0	-288
PRR	R_REL...	150	P4852000	Pukele Termination	Wong, K	0	0	-968
PRR	R_REL...	150	P6862000	Kahe Bus B Bkup Prot	Arakaki, D	-167	0	0
PRR	R_REL...	150	P7270000	N Shore Automation Comm	Shin, D	-256	0	0
PRR	R_REL...					86	-1,016	-4,051
PRR	R_RELENG	*Sup...	*Supply	Labor Supply		1,744	4,192	4,160
PRR	R_RELENG	107	NPRZZZZZ	System Operation		-268	-528	-480
PRR	R_RELENG	150	NPRZZZZZ	System Operation		-1,257	-3,610	-3,604
PRR	R_RELENG	150	P0000113	BP NAS Sub A Upgrade	Ho, M	0	0	0
PRR	R_RELENG	150	P0000114	BP NAS Sub B Upgrade	Ho, M	0	0	0
PRR	R_RELENG	150	P0000115	BP NAS Sub C Upgrade	Ho, M	0	0	0
PRR	R_RELENG	150	P0000116	BP NAS Sub D Upgrade	Ho, M	0	0	0
PRR	R_RELENG	150	P0000277	New Kuahua Substation	Wong, K	0	-65	-94
PRR	R_RELENG	150	P0000278	Makalapa Substation Prot	Wong, K	0	-14	-28
PRR	R_RELENG	150	P0000279	Puuloa Substation Prot	Wong, K	0	-14	-28
PRR	R_RELENG	150	P0000290	Halawa Cap Bank Brk 4492	Arakaki, D	-1	0	0
PRR	R_RELENG	150	P0000294	Pukele Tie Breaker-Sw Rpl	Arakaki, D	-24	-24	0
PRR	R_RELENG	150	P0000563	Mokuone 46-12KV Substation 1	Chong, R	0	-40	0
PRR	R_RELENG	150	P0000601	Gen Prot Relay Replacement	Arakawa, D	-20	-240	-140
PRR	R_RELENG	150	P0000674	Waiau Start-Up SWGR Replace	Yoshida, A	-40	0	0
PRR	R_RELENG	150	P0000675	W6 Control/DC Cables to Swyd	Arakawa, D	0	-80	0
PRR	R_RELENG	150	P0000748	Barbers Point TF 46kV Substation	Fong, K	0	-40	0
PRR	R_RELENG	150	P0000767	Ft Wvr SS Tsf #2 Install	Tamayo, R	-10	0	0
PRR	R_RELENG	150	P0000769	2003 Spare 138-46kv Tsf	Hayakaw, W	-12	-24	0
PRR	R_RELENG	150	P0000820	K1 Main Xfmr Replacement	Yoshida, A	0	0	-160

2/11/2004

» budget manager: 2 Resource Leveling-Project (Annl)

_RA	_LbrClass	_EE	_Proj	Project	ProjMgrOrEngr	FY03	FY04	FY05
PRR	R_RELENG	150	P0000830	K1 Aux Xfmr Replacement	Yoshida, A	0	0	-40
PRR	R_RELENG	150	P0000833	Mamala Substation	Friel, C	0	0	-120
PRR	R_RELENG	150	P0000836	Ford Island Substation	Chong, R	0	0	-160
PRR	R_RELENG	150	P0000837	Makalapa 46kV Brkr Addition	Chong, R	0	0	-8
PRR	R_RELENG	150	P0000855	K6 Aux Transformer	Fukuda, P	-40	-20	0
PRR	R_RELENG	150	P0000856	W7 Main Transformer	Fukuda, P	0	0	0
PRR	R_RELENG	150	P0000857	W7 Aux Transformer	Fukuda, P	0	0	0
PRR	R_RELENG	150	P1470000	Minor Trans Sub Addns	Lai, D	-85	-204	-204
PRR	R_RELENG	150	P1480000	Minor Dist Sub Addns	Tamayo, R	-10	-20	-20
PRR	R_RELENG	150	P4851000	Kamoku Pukele Term	Wong, K	0	0	-36
PRR	R_RELENG	150	P4852000	Pukele Termination	Wong, K	0	0	-116
PRR	R_RELENG	150	P6862000	Kahe Bus B Bkup Prot	Arakaki, D	-11	0	0
PRR	R_RELENG	150	P9631000	MECO Maalaea 18	Kusaka, K	0	0	0
PRR	R_RELENG					-34	-731	-1,078
PRR	R_RELSUP	*Sup...	*Supply	Labor Supply		872	2,096	2,080
PRR	R_RELSUP	107	NPRZZZZZ	System Operation		-126	-288	-272
PRR	R_RELSUP	150	NPRZZZZZ	System Operation		-755	-1,808	-1,812
PRR	R_RELSUP	150	P0000113	BP NAS Sub A Upgrade	Ho, M	0	0	0
PRR	R_RELSUP	150	P0000114	BP NAS Sub B Upgrade	Ho, M	0	0	0
PRR	R_RELSUP	150	P0000115	BP NAS Sub C Upgrade	Ho, M	0	0	0
PRR	R_RELSUP	150	P0000116	BP NAS Sub D Upgrade	Ho, M	0	0	0
PRR	R_RELSUP	150	P0000277	New Kuahua Substation	Wong, K	0	-15	-12
PRR	R_RELSUP	150	P0000278	Makalapa Substation Prot	Wong, K	0	0	-21
PRR	R_RELSUP	150	P0000279	Puuloa Substation Prot	Wong, K	0	-14	-28
PRR	R_RELSUP	150	P0000290	Halawa Cap Bank Brk 4492	Arakaki, D	-1	0	0
PRR	R_RELSUP	150	P0000294	Pukele Tie Breaker-Sw Rpl	Arakaki, D	-8	-8	0
PRR	R_RELSUP	150	P0000563	Mokuone 46-12KV Substation 1	Chong, R	0	-20	0
PRR	R_RELSUP	150	P0000748	Barbers Point TF 46kV Substation	Fong, K	0	-20	0
PRR	R_RELSUP	150	P0000767	Ft Wvr SS Tsf #2 Install	Tamayo, R	-24	0	0
PRR	R_RELSUP	150	P0000833	Mamala Substation	Friel, C	0	0	-20
PRR	R_RELSUP	150	P0000836	Ford Island Substation	Chong, R	0	0	-80
PRR	R_RELSUP	150	P0000837	Makalapa 46kV Brkr Addition	Chong, R	0	0	-8
PRR	R_RELSUP	150	P1470000	Minor Trans Sub Addns	Lai, D	-6	-12	-12
PRR	R_RELSUP	150	P1480000	Minor Dist Sub Addns	Tamayo, R	-3	-9	-9
PRR	R_RELSUP	150	P4851000	Kamoku Pukele Term	Wong, K	0	0	-32
PRR	R_RELSUP	150	P4852000	Pukele Termination	Wong, K	0	0	-66
PRR	R_RELSUP	150	P6862000	Kahe Bus B Bkup Prot	Arakaki, D	-12	0	0
PRR	R_RELSUP	150	P7270000	N Shore Automation Comm	Shin, D			

[redacted]

PRR	R_TECSPT	*Sup...	*Supply	Labor Supply		872	2,096	2,080
PRR	R_TECSPT	107	NPRZZZZZ	System Operation		-126	-280	-272
PRR	R_TECSPT	150	NPRZZZZZ	System Operation		-752	-1,816	-1,816
PRR	R_TECSPT	150	P0000563	Mokuone 46-12KV Substation 1	Chong, R	-20	-50	0
PRR	R_TECSPT	150	P0000748	Barbers Point TF 46kV Substation	Fong, K	-32	-42	0
PRR	R_TECSPT	150	P0000767	Ft Wvr SS Tsf #2 Install	Tamayo, R	-8	0	0
PRR	R_TECSPT	150	P0000833	Mamala Substation	Friel, C	0	0	-64
PRR	R_TECSPT	150	P0000836	Ford Island Substation	Chong, R	0	0	-121
PRR	R_TECSPT	150	P0000837	Makalapa 46kV Brkr Addition	Chong, R	0	0	-16
PRR	R_TECSPT					-66	-92	-209

Substation Assumptions

- Sick leave – 2.5%
- Budget is based on work scheduled (attached) and is labor resourced
- O&M @ 85%

CSA Assumptions

- Sick leave – 2.5%
- Budget is based on 100% O&M

(1 more truck) only have 24 ✓ 2005 shd have 29

Tetund / Sf all # circ	Equipment Count	Schedule /months	Units	Manhours /Unit	Total Manhours	Crew Block	
							13854
KV Tsf	37	48	9.3	24	222	348	
KV LTC	37	21	21.1	80	1691	348	
KV Tsf	40	48	10.0	16	160	348	
KV LTC	40	24	20.0	40	800	348	
V SF6/GIS	61	48	15.3	16	244	348	
V Oil	69	24	34.5	16	552	348	
V Overhaul	130	as needed			1000	348	
SF6/GIS	46	36	15.3	16	245	348	
Oil	68	24	34.0	16	544	348	
SF6	13	36	4.3	16	69	348	
Vacuum	12	48	3.0	16	48	348	
KV Overhau	139	as needed			900	348	
V Oil	21	48	5.3	8	42	348	
V Vacuum	18	48	4.5	8	36	348	
V Air	50	48	12.5	8	100	348	
V Overhaul	89	as needed			800	348	
	306	48	76.5	48	3672	348	
	157	48	39.3	48	1884	348	
ion	53	as needed	1.0	844.5	845	348	
							6645
	37	as needed			1000	350	
V	40	as needed			600	350	
	130	as needed			1000	350	
V	139	as needed			600	350	
	13	as needed			200	350	
on	53	as needed	1	844.5	845	350	
		as needed			2400	350	

engr, (more sched/p/mr)

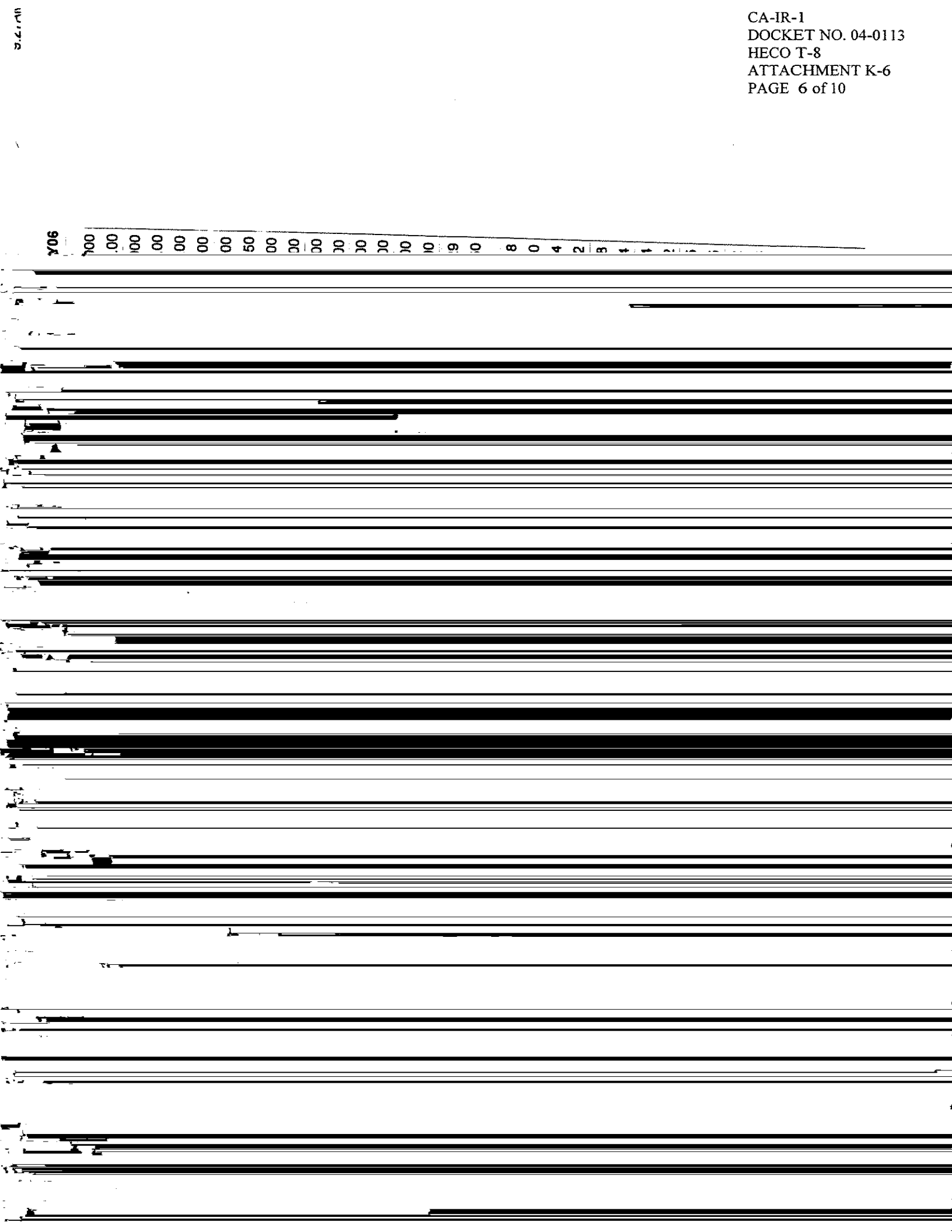
- y end up w/more cap than 4cast 25K 8K for travel
- T+D based on equip
- We hv more distrib than Kmin equip but depends where the fires appear

				Substation Count	Schedule	Units	Manhours /Unit	Total Manhours		
										228
		Predictive								
			Inspection							
			Substations	16	as needed	1	227.9	228	330	
Distribution										
	Preventive									
										19783
		Transformer								
			46/25 KV Tsf	236	24	118.0	16	1888	485	
			46/25 KV LTC	236	24	118.0	32	3776	485	
			12 KV Tsf	20	24	10.0	16	160	485	
			12 KV LTC	20	24	10.0	32	320	485	
		Breaker								
			138 KV SF6/GIS	6	48	1.5	16	24	485	
			138 KV Overhaul	6	as needed				485	
			46/25 KV SF6/GIS	5	48	1.3	16	20	485	
			46/25 KV Oil	23	24	11.5	16	184	485	
			46/25 KV Overhau	28	as needed			300	485	
			12/4 KV Oil	43	24	21.5	8	172	485	
			12/4 KV Vacuum	156	48	39.0	8	312	485	
			12/4 KV Air	260	48	65.0	8	520	485	
			12/4 KV Overhaul	459	as needed			1520	485	
		Switch								
			138 KV	37	48	9.3	48	444	485	
			46 KV	389	48	97.3	48	4668	485	
		Vaults								
			Network	160	48	40.0	24	960	482	
			Other	lot	as needed	50.0	24	1200	482	
		Battery								
				212	as needed	1	3315.5	3315	485	
	Corrective									
										7650
		Transformer								
			46/25 KV	236	as needed			1900	487	
			12 KV	20	as needed			900	487	
		Breaker								
			138 KV	6	as needed			0	487	
			46/25 KV	28	as needed			600	487	
			12/4 KV	459	as needed			1500	487	
		Vaults								

				Network	160	as needed			600	484		
				Other	lot	as needed			600	484		
			Battery									
					212	as needed			0	487		
			Other									
				Misc	lot	as needed			1550	487		
		Predictive										
			Inspection		130	as needed	1	1852.1	1852	460		1852
					Employee Count	Schedule	Units	Manhours /Unit	Total Manhours			
	Misc											
				Safety	29	1	348.0	2	696	797		1740
				Environmental	29	1	348.0	2	696	789		
				Group	29	1	348.0	1	348	720		
					Employee Count	Schedule	Units	Manhours /Unit	Total Manhours			
NON-PRODUCTIVE												
				Sick/Vacation	29	as needed	688.5	8	5508	98		8524
				Holiday	29	as needed	377.0	8	3016	98		
									60276			60276

*RA #	*Labo	s #	*EE #	*Act #	Line item	*Loc #	*Ind	*Project #	FY05	FY06
PRS			201	348	Trans Supplies	OAH	NE	NPRZZZZZ	14,000	14,000
									$14,000.00	$14,000.00
PRS			201	350	Trans Supplies	OAH	NE	NPRZZZZZ	94,000	94,000
									$94,000.00	$94,000.00
PRS			201	463	Safety Shoes	OAH	NE	NPRZZZZZ	5,400	5,400
									$5,400.00	$5,400.00
PRS			201	485	Dist Supplies	OAH	NE	NPRZZZZZ	30,000	30,000
									$30,000.00	$30,000.00
PRS			201	487	Dist Supplies	OAH	NE	NPRZZZZZ	110,000	110,000
									$110,000.00	$110,000.00
PRS			201	490	Dist Structure Supplies	OAH	NE	NPRZZZZZ	8,000	8,000
									$8,000.00	$8,000.00
PRS			201	700	Clerical Supplies	PTM	NC	NPRZZZZZ	2,016	2,016
									$2,016.00	$2,016.00
PRS			205	348	Trans Supplies	OAH	NE	NPRZZZZZ	5,000	5,000
									$5,000.00	$5,000.00
PRS			205	350	Trans Supplies	OAH	NE	NPRZZZZZ	9,400	9,400
									$9,400.00	$9,400.00
PRS			205	485	Dist Supplies	OAH	NE	NPRZZZZZ	5,000	5,000
									$5,000.00	$5,000.00
PRS			205	487	Dist Supplies	OAH	NE	NPRZZZZZ	9,600	9,600
									$9,600.00	$9,600.00
PRS			205	490	Dist Supplies	OAH	NE	NPRZZZZZ	2,000	2,000
									$2,000.00	$2,000.00
PRS			301	700	RS Heavy Vehicles (5)	PTO	NC	NPRZZZZZ	9,880	9,880
									$123,500.00	$123,500.00
PRS			301	700	RS Light Vehicles (15)	PTO	NC	NPRZZZZZ	29,640	29,640
									$163,020.00	$163,020.00
PRS			301	700	RS Medium Vehicles (7)	PTO	NC	NPRZZZZZ	13,832	13,832
									$121,030.00	$121,030.00
PRS			301	700	RS Misc Vehicles (10)	PTO	NC	NPRZZZZZ	19,760	19,760
									$29,640.00	$29,640.00
PRS			462	460	Software Laptop	OAH	NE	NPRZZZZZ	1	1
									$1.00	$1.00
PRS			501	348	Waste Disposal Rental	OAH	NE	NPRZZZZZ	1,500	1,500
									$1,500.00	$1,500.00

avg. amt. of mat'ls.



*RA #	*Labor s #	*EE #	*Act #	Line Item	*Loc #	*Ind	'Project #	FY05	FY06
PRS	R_SUBCRW	150	485	Dist Equip Prev - Crew	OAH	NE	NPRZZZZZ	17,623	17,623
								$585,436.06	$603,235.29
PRS	R_SUBCRW	150	487	Dist Equip Corr - Crew	OAH	NE	NPRZZZZZ	6,450	6,450
								$214,269.00	$220,783.50
PRS	R_SUBCRW	150	720	Group Meeting - Crew	PTO	NE	NPRZZZZZ	348	348
								$11,560.56	$11,912.04
PRS	R_SUBCRW	150	789	Training - Crew	PTO	NE	NPRZZZZZ	696	696
								$23,121.12	$23,824.08
PRS	R_SUBCRW	150	797	Safety Meeting - Crew	PTO	NE	NPRZZZZZ	696	696
								$23,121.12	$23,824.08
PRS	R_SUBCRW							60,624	60,624
								$2,062,688.72	$2,063,247.48
PRS	R_SUBENG	*Supply	*Supply	RS Engineer (2)	*Supply	*Supply	*Supply	24	24
								$4,160.00	$0.00
PRS	R_SUBENG	107	098	NPW Engineer (1)	PHE	ND	NPRZZZZZ	592	592
								$20,660.80	$21,430.40
PRS	R_SUBENG	150	348	Trans Equip Prev - Eng	OAH	NE	NPRZZZZZ	892	892
								$31,130.80	$32,290.40
PRS	R_SUBENG	150	350	Tran Equip Corr - Eng	OAH	NE	NPRZZZZZ	892	892
								$31,130.80	$32,290.40
PRS	R_SUBENG	150	485	Dist Equip Prev - Eng	OAH	NE	NPRZZZZZ	892	892
								$31,130.80	$32,290.40
PRS	R_SUBENG	150	487	Dist Equip Corr - Eng	OAH	NE	NPRZZZZZ	892	892
								$31,130.80	$32,290.40
PRS	R_SUBENG							4,184	4,184
								$149,344.00	$150,592.00
PRS	R_SUBPLN	*Supply	*Supply	RS Planner	*Supply	*Supply	*Supply	24	24
								$4,160.00	$0.00
PRS	R_SUBPLN	107	098	NPW Planner (2)	PHE	ND	NPRZZZZZ	592	592
								$21,394.88	$22,188.16
PRS	R_SUBPLN	150	348	Trans Equip Prev - Pln	OAH	NE	NPRZZZZZ	892	892
								$32,236.88	$33,432.16
PRS	R_SUBPLN	150	350	Tran Equip Corr - Pln	OAH	NE	NPRZZZZZ	892	892
								$32,236.88	$33,432.16

*Loc #	*In	*Project #	FY05	FY06
OAH	NE	NPRZZZZZ	892	892
			$32,236.88	$33,432.16
OAH	NE	NPRZZZZZ	892	892
			$32,236.88	$33,432.16
			4,184	4,184
			$154,502.40	$155,916.80
*Supply	*Supply	*Supply	24	24
			$4,160.00	$0.00
PHE	ND	NPRZZZZZ	592	592
			$24,052.96	$24,952.80
OAH	NE	NPRZZZZZ	892	892
			$36,241.96	$37,597.80
OAH	NE	NPRZZZZZ	892	892
			$36,241.96	$37,597.80
OAH	NE	NPRZZZZZ	892	892
			$36,241.96	$37,597.80
OAH	NE	NPRZZZZZ	892	892
			$36,241.96	$37,597.80
			4,184	4,184
			$173,180.80	$175,344.00
			578,405	578,405
			$3,410,134.92	$3,416,093.78
OAH	NE	NPRZZZZZ	1,000	1,000
			$1,000.00	$1,000.00
OAH	NE	NPRZZZZZ	1,000	1,000
			$1,000.00	$1,000.00
OAH	NE	NPRZZZZZ	900	900
			$900.00	$900.00
OAH	NE	NPRZZZZZ	1,000	1,000
			$1,000.00	$1,000.00
OAH	NE	NPRZZZZZ	1,000	1,000
			$1,000.00	$1,000.00

*RA #	*Labor	s #	*EE #	*Act #	Line Item	*Loc #	*Ind	*Project #	FY05	FY06
PRX			205	348		OAH	NE	NPRZZZZZ	1,000 $1,000.00	1,000 $1,000.00
PRX			205	350		OAH	NE	NPRZZZZZ	1,000 $1,000.00	1,000 $1,000.00
PRX			205	471		OAH	NE	NPRZZZZZ	1,000 $1,000.00	1,000 $1,000.00
PRX			205	481		OAH	NE	NPRZZZZZ	1,000 $1,000.00	1,000 $1,000.00
PRX			301	700	RX Heavy Vehicles (2)	PTO	NC	NPRZZZZZ	3,952 $49,400.00	3,952 $49,400.00
PRX			301	700	RX Light Vehicles (4)	PTO	NC	NPRZZZZZ	7,904 $43,472.00	7,904 $43,472.00
PRX			301	700	RX Medium Vehicles (3)	PTO	NC	NPRZZZZZ	5,928 $51,870.00	5,928 $51,870.00
PRX			301	700	RX Misc Vehicles (4)	PTO	NC	NPRZZZZZ	7,904 $11,856.00	7,904 $11,856.00
PRX			501	263	Contract Employees	KST	NE	NPRZZZZZ	3,000 $3,000.00	3,000 $3,000.00
PRX			501	265	Contract Employees	KST	NE	NPRZZZZZ	3,000 $3,000.00	3,000 $3,000.00
PRX			501	348	Contract Employees	OAH	NE	NPRZZZZZ	3,000 $3,000.00	3,000 $3,000.00
PRX			501	350	Contract Employees	OAH	NE	NPRZZZZZ	3,000 $3,000.00	3,000 $3,000.00
PRX			501	351	Contract Employees	OAH	NE	NPRZZZZZ	3,000 $3,000.00	3,000 $3,000.00
PRX			501	471	Contract Employees	OAH	NE	NPRZZZZZ	3,000 $3,000.00	3,000 $3,000.00
PRX			501	481	Contract Employees	OAH	NE	NPRZZZZZ	3,000 $3,000.00	3,000 $3,000.00
PRX			501	700	Office Equipment, Pager...	PTM	NC	NPRZZZZZ	4,200 $4,200.00	4,200 $4,200.00
PRX			501	789	Environmental Training	OAH	NC	NPRZZZZZ	500 $500.00	500 $500.00

	FY05	FY06
	60,288	60,288
	3.00	$191,198.00
	36	36
	0.00	$0.00
	882	882
	1.06	$32,104.80
	900	900
	7.00	$32,760.00
	300	300
	9.00	$10,920.00
	900	900
	7.00	$32,760.00
	900	900
	7.00	$32,760.00
	900	900
	7.00	$32,760.00
	60	60
	9.80	$2,184.00
	900	900
	7.00	$32,760.00
	,778	5,778
	4.86	$209,008.80
	,066	66,066
	2.86	$400,206.80
	,471	644,471
	7.78	$3,816,300.58

General Information Requests

For each of the HECO witnesses who sponsor test period budgeted non-labor direct expense amounts, please provide the following information:

a. Identify each employee involved in preparation of budgeted non-labor direct expense amounts included in the rate case test period budget and sponsored by the witness.

b. Provide complete copies of all calculations, spreadsheet files, "pencil" workpapers, surveys and other analyses performed by each of the employees identified in response to part (a), indicating the amounts by Department, RA, Activity and NARUC Account that such calculations support.

c. For each budgeted non-labor amount in the test period forecast that exceeds $50,000, please describe the basis for determining the budgeted amount (for example, bid solicitation, price times quantity estimation, historical cost escalated, etc.)

d. For each item in your response to part (c), where specific quantities and prices were discretely forecasted, explain the basis for and source of the budgeted quantity inputs and budgeted prices for each such item. Provide complete copies of all studies, reports and other documents that were relied upon.

e. For each item in your response to part (c) where historical costs were escalated, provide all historical cost information that was considered and explain how such data was evaluated and escalated to derive test year proposed levels.

f. For each item in your response to part (c) where a bid solicitation or other special analysis was conducted, explain what was done and provide complete copies of all supporting reports, bid solicitations, proposal, analyses, workpapers and other documents associated with such efforts.

g. Provide complete copies of all other information required to completely support and document the test year projected expense levels being proposed by the Company, including general assumptions and forecasting instructions that were employed.

HECO Response:

For additional responses to information requested please refer to Attachment A. Columns a-g on

Attachment A corresponds to the items noted above.

Dept	RA	Resp Area	NARUC	Act	EE	FY05	a	b	c	d	e	f	g
C&M	PDA	Admin-C&M	571	342	506	$ 97,500	See Attachment B	See attachment B-1	Negotiated price	N/A	N/A	See attachment B-1	N/A
C&M	PDA	Admin-C&M	588	720	501	$ 875	See Attachment B	See attachment B-1	N/A	N/A	N/A	N/A	N/A
C&M	PDA	Admin-C&M	588	747	201	$ 22,000	See Attachment B	See attachment B-1	N/A	N/A	N/A	N/A	N/A
C&M	PDA	Admin-C&M	595	481	201	$ 25,000	See Attachment B	See attachment B-1	N/A	N/A	N/A	N/A	N/A
C&M	PDA	Admin-C&M	598	700	501	$ 50,000	See Attachment B	See attachment B-1	Negotiated price	N/A	N/A	See attachment B-1	N/A
C&M	PDA	Admin-C&M	598	731	501	$ 175,000	See Attachment B	See attachment B-1	Negotiated price	N/A	N/A	See attachment B-1	N/A
C&M	PDA	Admin-C&M	598	747	501	$ 35,000	See Attachment B	See attachment B-1	N/A	N/A	N/A	N/A	N/A
C&M	PDC	Control Section	563	328	905	$ (20,592)	See Attachment B	See attachment B-2	N/A	N/A	N/A	N/A	N/A
C&M	PDC	Control Section	571	341	905	$ (84,168)	See Attachment B	See attachment B-2	Historical cost escalated	N/A	See attachment B-2	N/A	N/A
C&M	PDC	Control Section	583	458	905	$ (67,080)	See Attachment B	See attachment B-2	Historical cost escalated	N/A	See attachment B-2	N/A	N/A
C&M	PDC	Control Section	588	926	501	$ 3,000	See Attachment B	See attachment B-2	N/A	N/A	N/A	N/A	N/A
C&M	PDC	Control Section	588	926	506	$ 14,400	See Attachment B	See attachment B-2	N/A	N/A	N/A	N/A	N/A
C&M	PDC	Control Section	593	442	201	$ 300	See Attachment B	See attachment B-2	N/A	N/A	N/A	N/A	N/A

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HECO T-8
ATTACHMENT A
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Dept	RA	Resp Area	NARUC	Act	EE	FY05	a	b	c	d	e	f	g
C&M	PDC	Control Section	593	442	501	$ 48,000	See Attachment B	See attachment B-2	N/A	N/A	N/A	N/A	N/A
C&M	PDD	Training Section	588	788	501	$ 400	See Attachment B	See attachment B-3	N/A	N/A	N/A	N/A	N/A
C&M	PDF	Field Operation	584	462	201	$ 22,100	See Attachment B	See attachment B-4	N/A	N/A	N/A	N/A	N/A
C&M	PDF	Field Operation	588	600	201	$ 60,000	See Attachment B	See attachment B-4	Historical cost escalated	N/A	See attachment B-4	N/A	N/A
C&M	PDF	Field Operation	598	492	201	$ 2,400	See Attachment B	See attachment B-4	N/A	N/A	N/A	N/A	N/A
C&M	PDS	Supply Division	571	342	301	$ 127,472	See Attachment B	See attachment B-5	Historical cost escalated	N/A	N/A	N/A	N/A
C&M	PDS	Supply Division	588	942	201	$ 3,216	See Attachment B	See attachment B-5	N/A	N/A	N/A	N/A	N/A
C&M	PDS	Supply Division	593	440	201	$ 5,004	See Attachment B	See attachment B-5	N/A	N/A	N/A	N/A	N/A
C&M	PDS	Supply Division	598	492	201	$ 226,004	See Attachment B	See attachment B-5	Historical cost escalated	N/A	See attachment B-5	N/A	N/A
CID	PWX	Engineering & Meter	586	465	301	$ 23,483	See attachment C	See attachment C-1	N/A	N/A	N/A	N/A	N/A
CID	PWX	Engineering & Meter	586	601	201	$ 17,760	See attachment C	See attachment C-1	N/A	N/A	N/A	N/A	N/A
CID	PWX	Engineering & Meter	586	601	205	$ 2,100	See attachment C	See attachment C-1	N/A	N/A	N/A	N/A	N/A
CID	PWX	Engineering & Meter	586	601	220	$ 1,356	See attachment C	See attachment C-1	N/A	N/A	N/A	N/A	N/A

Resp Area	NARUC	Act	EE	FY05	a	b	c	d	e	f	g
neering & Meter	586	601	301	$ 16,320	See attachment C	See attachment C-1	N/A	N/A	N/A	N/A	N/A
neering & Meter	586	601	501	$ 7,500	See attachment C	See attachment C-1	N/A	N/A	N/A	N/A	N/A
neering & Meter	586	602	301	$ 3,903	See attachment C	See attachment C-1	N/A	N/A	N/A	N/A	N/A
neering & Meter	586	603	462	$ 3,938	See attachment C	See attachment C-1	N/A	N/A	N/A	N/A	N/A
neering & Meter	587	620	301	$ 1,000	See attachment C	See attachment C-1	N/A	N/A	N/A	N/A	N/A
neering & Meter	588	789	520	$ 6,000	See attachment C	See attachment C-1	N/A	N/A	N/A	N/A	N/A
neering & Meter	588	789	522	$ 1,200	See attachment C	See attachment C-1	N/A	N/A	N/A	N/A	N/A
neering & Meter	596	493	301	$ 1,810	See attachment C	See attachment C-1	N/A	N/A	N/A	N/A	N/A
pensation	566	723	900	$ 41,849	See attachment D	See attachment D-1	N/A	N/A	N/A	N/A	N/A
pensation	588	723	900	$ 106,661	See attachment D	See attachment D-1	Discretely forecasted	See attachment D-1	N/A	N/A	N/A
mer Field Services	587	620	201	$ 6,300	See attachment E	See attachment E-1	N/A	N/A	N/A	N/A	N/A
mer Field Services	587	620	205	$ 1,450	See attachment E	See attachment E-1	N/A	N/A	N/A	N/A	N/A
mer Field Services	587	620	301	$ 5,497	See attachment E	See attachment E-1	N/A	N/A	N/A	N/A	N/A

Dept	RA	Resp Area	NARUC	Act	EE	FY05	a	b	c	d	e	f	g
Cust Svc	PCF	Customer Field Services	587	620	501	$ 24,000	See attachment E	See attachment E-1	N/A	N/A	N/A	N/A	N/A
Cust Svc	PCG	Fld Svc & Collection	586	602	301	$ 31,045	See attachment E	See attachment E-2	N/A	N/A	N/A	N/A	N/A
Engineering	PBZ	T&D Technical Svcs	588	730	201	$ 7,500	See attachment F	See attachment F-1	N/A	N/A	N/A	N/A	N/A
Environ	PJW	Water & Haz Mat	566	877	508	$ 2,000	See attachment G	See attachment G-1	N/A	N/A	N/A	N/A	N/A
Environ	PJW	Water & Haz Mat	573	877	508	$ 2,000	See attachment G	See attachment G-1	N/A	N/A	N/A	N/A	N/A
Environ	PJW	Water & Haz Mat	588	877	508	$ 2,000	See attachment G	See attachment G-1	N/A	N/A	N/A	N/A	N/A
Environ	PJW	Water & Haz Mat	598	877	508	$ 2,000	See attachment G	See attachment G-1	N/A	N/A	N/A	N/A	N/A
Ind Rel	PPA	Admin-Ind Rel	566	723	900	$ 56,492	See attachment H	See attachment H-1	Discretely forecasted	See attachment H-1	N/A	N/A	N/A
Ind Rel	PPA	Admin-Ind Rel	588	723	900	$ 56,492	See attachment H	See attachment H-1	Discretely forecasted	See attachment H-1	N/A	N/A	N/A
InfoTech	PEP	Project & Bus Mgt	587	600	901	$ 38,579	See attachment I	See attachment I-1	N/A	N/A	N/A	N/A	N/A
InfoTech	PEZ	ISD Chargeback	563	331	451	$ 2,796	See attachment I	See attachment I-1	N/A	N/A	N/A	N/A	N/A
InfoTech	PEZ	ISD Chargeback	566	320	451	$ 24,084	See attachment I	See attachment I-1	N/A	N/A	N/A	N/A	N/A
InfoTech	PEZ	ISD Chargeback	566	326	451	$ 20,364	See attachment I	See attachment I-1	N/A	N/A	N/A	N/A	N/A

Dept	RA	Resp Area	NARUC	Act	EE	FY05	a	b	c	d	e	f	g
InfoTech	PEZ	ISD Chargeback	566	326	451	$ 129,192	See attachment I	See attachment I-1	Discretely forecasted	See attachment I-1	N/A	N/A	N/A
InfoTech	PEZ	ISD Chargeback	570	349	451	$ 1,728	See attachment I	See attachment I-1	N/A	N/A	N/A	N/A	N/A
InfoTech	PEZ	ISD Chargeback	571	343	451	$ 3,864	See attachment I	See attachment I-1	N/A	N/A	N/A	N/A	N/A
InfoTech	PEZ	ISD Chargeback	581	377	451	$ 7,908	See attachment I	See attachment I-1	N/A	N/A	N/A	N/A	N/A
InfoTech	PEZ	ISD Chargeback	582	463	451	$ 4,128	See attachment I	See attachment I-1	N/A	N/A	N/A	N/A	N/A
InfoTech	PEZ	ISD Chargeback	583	461	451	$ 4,260	See attachment I	See attachment I-1	N/A	N/A	N/A	N/A	N/A
InfoTech	PEZ	ISD Chargeback	584	462	451	$ 3,720	See attachment I	See attachment I-1	N/A	N/A	N/A	N/A	N/A
InfoTech	PEZ	ISD Chargeback	586	465	451	$ 16,944	See attachment I	See attachment I-1	N/A	N/A	N/A	N/A	N/A
InfoTech	PEZ	ISD Chargeback	586	603	451	$ 68,316	See attachment I	See attachment I-1	Discretely forecasted	See attachment I-1	N/A	N/A	N/A
InfoTech	PEZ	ISD Chargeback	588	455	451	$ 701,676	See attachment I	See attachment I-1	Discretely forecasted	See attachment I-1	N/A	N/A	N/A
InfoTech	PEZ	ISD Chargeback	588	455	451	$ 4,788	See attachment I	See attachment I-1	N/A	N/A	N/A	N/A	N/A
InfoTech	PEZ	ISD Chargeback	588	456	451	$ 81,528	See attachment I	See attachment I-1	Discretely forecasted	See attachment I-1	N/A	N/A	N/A
InfoTech	PEZ	ISD Chargeback	588	456	451	$ 69,036	See attachment I	See attachment I-1	Discretely forecasted	See attachment I-1	N/A	N/A	N/A

Dept	RA	Resp Area	NARUC	Act	EE	FY05	a	b	c	d	e	f	g
InfoTech	PEZ	ISD Chargeback	588	926	451	$ 54,696	See attachment I	See attachment I-1	Discretely forecasted	See attachment I-1	N/A	N/A	N/A
InfoTech	PEZ	ISD Chargeback	592	486	451	$ 2,124	See attachment I	See attachment I-1	N/A	N/A	N/A	N/A	N/A
InfoTech	PEZ	ISD Chargeback	593	474	451	$ 6,648	See attachment I	See attachment I-1	N/A	N/A	N/A	N/A	N/A
InfoTech	PEZ	ISD Chargeback	594	477	451	$ 6,516	See attachment I	See attachment I-1	N/A	N/A	N/A	N/A	N/A
InfoTech	PEZ	ISD Chargeback	598	420	451	$ 80,088	See attachment I	See attachment I-1	Discretely forecasted	See attachment I-1	N/A	N/A	N/A
Legal	PNL	Land & Rights of Way	567	926	570	$ 25,841	See attachment J	See attachment J	N/A	N/A	N/A	N/A	N/A
Legal	PNL	Land & Rights of Way	588	926	501	$ 1,952	See attachment J	See attachment J	N/A	N/A	N/A	N/A	N/A
Legal	PNL	Land & Rights of Way	589	926	570	$ 8,517	See attachment J	See attachment J	N/A	N/A	N/A	N/A	N/A
MAFS	PKM	ERP Administration	562	333	901	$ 12,072	See attachment K	See attachment K-1	N/A	N/A	N/A	N/A	N/A
MAFS	PKM	ERP Administration	563	331	901	$ 1,404	See attachment K	See attachment K-1	N/A	N/A	N/A	N/A	N/A
MAFS	PKM	ERP Administration	566	320	901	$ 1,452	See attachment K	See attachment K-1	N/A	N/A	N/A	N/A	N/A
MAFS	PKM	ERP Administration	570	349	901	$ 1,932	See attachment K	See attachment K-1	N/A	N/A	N/A	N/A	N/A
MAFS	PKM	ERP Administration	571	343	901	$ 900	See attachment K	See attachment K-1	N/A	N/A	N/A	N/A	N/A

Dept	RA	Resp Area	NARUC	Act	EE	FY05	a	b	c	d	e	f	g
MAFS	PKM	ERP Administration	582	463	901	$ 1,080	See attachment K	See attachment K-1	N/A	N/A	N/A	N/A	N/A
MAFS	PKM	ERP Administration	583	461	901	$ 1,884	See attachment K	See attachment K-1	N/A	N/A	N/A	N/A	N/A
MAFS	PKM	ERP Administration	584	462	901	$ 2,076	See attachment K	See attachment K-1	N/A	N/A	N/A	N/A	N/A
MAFS	PKM	ERP Administration	592	486	901	$ 40,284	See attachment K	See attachment K-1	N/A	N/A	N/A	N/A	N/A
MAFS	PKM	ERP Administration	593	474	901	$ 3,360	See attachment K	See attachment K-1	N/A	N/A	N/A	N/A	N/A
MAFS	PKM	ERP Administration	594	477	901	$ 3,252	See attachment K	See attachment K-1	N/A	N/A	N/A	N/A	N/A
MAFS	PKM	ERP Administration	598	420	901	$ 2,136	See attachment K	See attachment K-1	N/A	N/A	N/A	N/A	N/A
SSF	PHB	Facilities Operation	598	931	501	$ 247,000	See attachment L	See attachment L-1	Historical cost escalated	NA	See attachment L-1	NA	NA
SSF	PHF	Facilities Planning	573	931	501	$ 10,000	See attachment L	See attachment L-2	Historical costs escalated due to customer demands on A/C maint & misc bldg repairs	NA	NA	NA	NA

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c	d	e	f	g
istorical costs alated due to dertaking of PM uirements at the bstations	NA	See attachment L-2	NA	NA
istorical costs alated due various A/C intenance dg repairs	NA	NA	NA	NA
istorical costs alated due various A/C	NA	NA	NA	NA
N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A

Dept	RA	Resp Area	NARUC	Act	EE	FY05	a	b	c	d	e	f	g
Supp Svcs	PVL	Electric & Welding Svcs	598	492	205	$ 22,524	See attachment M	See attachment M-1	N/A	N/A	N/A	N/A	N/A
Supp Svcs	PVL	Electric & Welding Svcs	598	492	501	$ 4,200	See attachment M	See attachment M-1	N/A	N/A	N/A	N/A	N/A
Supp Svcs	PVM	Materials Management	598	492	201	$ 36,000	See attachment M	See attachment M-2	N/A	N/A	N/A	N/A	N/A
Supp Svcs	PVM	Materials Management	598	492	205	$ 30,000	See attachment M	See attachment M-2	N/A	N/A	N/A	N/A	N/A
Supp Svcs	PVM	Materials Management	598	492	501	$ 6,000	See attachment M	See attachment M-2	N/A	N/A	N/A	N/A	N/A
Sys Op	PRC	Communications	562	333	201	$ 1,042	See attachment N	See attachment N-1	N/A	N/A	N/A	N/A	N/A
Sys Op	PRC	Communications	562	333	501	$ 12,900	See attachment N	See attachment N-1	N/A	N/A	N/A	N/A	N/A
Sys Op	PRC	Communications	570	348	201	$ 7,000	See attachment N	See attachment N-1	N/A	N/A	N/A	N/A	N/A
Sys Op	PRC	Communications	570	348	462	$ 2,188	See attachment N	See attachment N-1	N/A	N/A	N/A	N/A	N/A
Sys Op	PRC	Communications	570	350	201	$ 28,000	See attachment N	See attachment N-1	N/A	N/A	N/A	N/A	N/A
Sys Op	PRC	Communications	570	350	501	$ 9,903	See attachment N	See attachment N-1	N/A	N/A	N/A	N/A	N/A
Sys Op	PRC	Communications	592	487	201	$ 12	See attachment N	See attachment N-1	N/A	N/A	N/A	N/A	N/A
Sys Op	PRD	Operating Dispatch	560	376	520	$ 8,160	See attachment N	See attachment N-2	N/A	N/A	N/A	N/A	N/A

Dept	RA	Resp Area	NARUC	Act	EE	FY05	a	b	c	d	e	f	g
Sys Op	PRD	Operating Dispatch	561	376	501	$ 5,004	See attachment N	See attachment N-2	N/A	N/A	N/A	N/A	N/A
Sys Op	PRD	Operating Dispatch	566	788	501	$ 12,000	See attachment N	See attachment N-2	N/A	N/A	N/A	N/A	N/A
Sys Op	PRD	Operating Dispatch	581	377	201	$ 240	See attachment N	See attachment N-2	N/A	N/A	N/A	N/A	N/A
Sys Op	PRD	Operating Dispatch	581	377	501	$ 45,500	See attachment N	See attachment N-2	N/A	N/A	N/A	N/A	N/A
Sys Op	PRE	Operating Engineering	561	376	201	$ 1,251	See attachment N	See attachment N-3	N/A	N/A	N/A	N/A	N/A
Sys Op	PRE	Operating Engineering	561	376	462	$ 1,094	See attachment N	See attachment N-3	N/A	N/A	N/A	N/A	N/A
Sys Op	PRE	Operating Engineering	561	376	501	$ 77,820	See attachment N	See attachment N-3	See attachment N-3	See attachment N-3	See attachment N-3	See attachment N-3	See attachment N-3
Sys Op	PRE	Operating Engineering	561	376	520	$ 3,200	See attachment N	See attachment N-3	N/A	N/A	N/A	N/A	N/A
Sys Op	PRE	Operating Engineering	561	376	521	$ 500	See attachment N	See attachment N-3	N/A	N/A	N/A	N/A	N/A
Sys Op	PRE	Operating Engineering	566	326	201	$ 6,350	See attachment N	See attachment N-3	N/A	N/A	N/A	N/A	N/A
Sys Op	PRE	Operating Engineering	581	377	501	$ 124,801	See attachment N	See attachment N-3	See attachment N-3	See attachment N-3	See attachment N-3	See attachment N-3	See attachment N-3
Sys Op	PRE	Operating Engineering	588	456	201	$ 3,753	See attachment N	See attachment N-3	N/A	N/A	N/A	N/A	N/A
Sys Op	PRE	Operating Engineering	588	456	501	$ 1,360	See attachment N	See attachment N-3	N/A	N/A	N/A	N/A	N/A

Dept	RA	Resp Area	NARUC	Act	EE	FY05	a	b	c	d	e	f	g
Sys Op	PRI	Instrument & Control	561	376	201	$ 1,080	See attachment N	See attachment N-4	N/A	N/A	N/A	N/A	N/A
Sys Op	PRI	Instrument & Control	562	333	201	$ 11,400	See attachment N	See attachment N-4	N/A	N/A	N/A	N/A	N/A
Sys Op	PRI	Instrument & Control	566	797	201	$ 1,500	See attachment N	See attachment N-4	N/A	N/A	N/A	N/A	N/A
Sys Op	PRI	Instrument & Control	570	348	201	$ 1,200	See attachment N	See attachment N-4	N/A	N/A	N/A	N/A	N/A
Sys Op	PRI	Instrument & Control	582	463	201	$ 10,920	See attachment N	See attachment N-4	N/A	N/A	N/A	N/A	N/A
Sys Op	PRI	Instrument & Control	592	485	201	$ 1,380	See attachment N	See attachment N-4	N/A	N/A	N/A	N/A	N/A
Sys Op	PRR	Relay	570	348	508	$ 1,020	See attachment N	See attachment N-5	N/A	N/A	N/A	N/A	N/A
Sys Op	PRR	Relay	570	350	201	$ 12,000	See attachment N	See attachment N-5	N/A	N/A	N/A	N/A	N/A
Sys Op	PRR	Relay	592	487	201	$ 12,000	See attachment N	See attachment N-5	N/A	N/A	N/A	N/A	N/A
Sys Op	PRS	Substation	570	348	201	$ 14,000	See attachment N	See attachment N-6	N/A	N/A	N/A	N/A	N/A
Sys Op	PRS	Substation	570	348	205	$ 5,000	See attachment N	See attachment N-6	N/A	N/A	N/A	N/A	N/A
Sys Op	PRS	Substation	570	348	501	$ 1,500	See attachment N	See attachment N-6	N/A	N/A	N/A	N/A	N/A
Sys Op	PRS	Substation	570	350	201	$ 234,000	See attachment N	See attachment N-6	See attachment N-6	See attachment N-6	See attachment N-6	See attachment N-6	See attachment N-6

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	c	d	e	f	g
ment 6	N/A	N/A	N/A	N/A	N/A
ment 6	N/A	N/A	N/A	N/A	N/A
ment 6	N/A	N/A	N/A	N/A	N/A
ment 6	N/A	N/A	N/A	N/A	N/A
ment 6	N/A	N/A	N/A	N/A	N/A
ment 6	N/A	N/A	N/A	N/A	N/A
ment 6	N/A	N/A	N/A	N/A	N/A
ment 6	N/A	N/A	N/A	N/A	N/A
ment 6	N/A	N/A	N/A	N/A	N/A
ment 6	N/A	See attachment N-6	See attachment N-6	See attachment N-6	See attachment N-6
ment 6	N/A	See attachment N-6	See attachment N-6	See attachment N-6	See attachment N-6
ment 6	N/A	N/A	N/A	N/A	N/A
ment 6	N/A	N/A	N/A	N/A	N/A

Dept	RA	Resp Area	NARUC	Act	EE	FY05	a	b	c	d	e	f	g
Sys Op	PRX	Construction Mgt	569	351	501	$ 3,000	See attachment N	See attachment N-6	N/A	N/A	N/A	N/A	N/A
Sys Op	PRX	Construction Mgt	570	348	201	$ 1,000	See attachment N	See attachment N-6	N/A	N/A	N/A	N/A	N/A
Sys Op	PRX	Construction Mgt	570	348	205	$ 1,000	See attachment N	See attachment N-6	N/A	N/A	N/A	N/A	N/A
Sys Op	PRX	Construction Mgt	570	348	501	$ 3,000	See attachment N	See attachment N-6	N/A	N/A	N/A	N/A	N/A
Sys Op	PRX	Construction Mgt	570	350	201	$ 1,000	See attachment N	See attachment N-6	N/A	N/A	N/A	N/A	N/A
Sys Op	PRX	Construction Mgt	570	350	205	$ 1,000	See attachment N	See attachment N-6	N/A	N/A	N/A	N/A	N/A
Sys Op	PRX	Construction Mgt	570	350	501	$ 3,000	See attachment N	See attachment N-6	N/A	N/A	N/A	N/A	N/A
Sys Op	PRX	Construction Mgt	582	463	201	$ 900	See attachment N	See attachment N-6	N/A	N/A	N/A	N/A	N/A
Sys Op	PRX	Construction Mgt	593	471	201	$ 1,000	See attachment N	See attachment N-6	N/A	N/A	N/A	N/A	N/A
Sys Op	PRX	Construction Mgt	593	471	205	$ 1,000	See attachment N	See attachment N-6	N/A	N/A	N/A	N/A	N/A
Sys Op	PRX	Construction Mgt	593	471	501	$ 3,000	See attachment N	See attachment N-6	N/A	N/A	N/A	N/A	N/A
Sys Op	PRX	Construction Mgt	595	481	201	$ 1,000	See attachment N	See attachment N-6	N/A	N/A	N/A	N/A	N/A
Sys Op	PRX	Construction Mgt	595	481	205	$ 1,000	See attachment N	See attachment N-6	N/A	N/A	N/A	N/A	N/A

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Dept	RA	Resp Area	NARUC	Act	EE	FY05	a See attachment	b See attachment	c	d	e	f	g
Sys Op	PRX	Construction Mgt	595	481	501	$ 3,000	N	N-6	N/A	N/A	N/A	N/A	N/A

General Information Requests

[redacted]

amounts, please provide the following in[redacted]formation:

NonLabor Input Sheet - NonProject/NonProgram
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Prepared by Arvin Fujii
Date 2/18/04

					Units tab card												
Act	Loc	Ind	Proj	EE	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
					(enter Dollars or Vehicle Hours in "Units tab card")												
342	OAH	NE	NPDZZZZZ	506	8,125	8,125	8,125	8,125	8,125	8,125	8,125	8,125	8,125	8,125	8,125	8,125	97,500
481	OAH	NE	NPDZZZZZ	201	2,083	2,083	2,083	2,083	2,083	2,083	2,083	2,083	2,083	2,083	2,083	2,083	25,000
500	OAH	NC	NPDZZZZZ	205	412	412	412	412	412	412	412	412	412	412	412	412	4,944
500	OAH	NC	NPDZZZZZ	205	375	375	375	375	375	375	375	375	375	375	375	375	4,500
500	OAH	NC	NPDZZZZZ	501	53	53	53	53	53	53	53	53	53	53	53	53	640
700	OAH	NC	NPDZZZZZ	521	-	200	-	-	200	-	-	200	-	-	200	-	800
700	PDM	NE	NPDZZZZZ	501	4,167	4,167	4,167	4,167	4,167	4,167	4,167	4,167	4,167	4,167	4,167	4,167	50,000
720	PDO	NE	NPDZZZZZ	501	-	-	-	-	-	400	-	-	-	-	-	475	875
731	PDM	NE	NPDZZZZZ	501	2,083	2,083	2,083	2,083	2,083	2,083	2,083	2,083	2,083	2,083	2,083	2,083	25,000
731	PDM	NE	NPDZZZZZ	501	12,500	12,500	12,500	12,500	12,500	12,500	12,500	12,500	12,500	12,500	12,500	12,500	150,000
747	PDO	NE	NPDZZZZZ	201	1,833	1,833	1,833	1,833	1,833	1,833	1,833	1,833	1,833	1,833	1,833	1,833	22,000
747	PDM	NE	NPDZZZZZ	501	2,917	2,917	2,917	2,917	2,917	2,917	2,917	2,917	2,917	2,917	2,917	2,917	35,000
795	OAH	NC	NPDZZZZZ	205	-	-	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	30,000
842	OAH	NC	NPDZZZZZ	205	32	32	32	32	32	32	32	32	32	32	32	32	384
931	PDO	NC	NPDZZZZZ	501	3,196	3,196	3,196	3,196	3,196	3,196	3,196	3,196	3,196	3,196	3,196	3,196	38,352
931	PDO	NC	NPDZZZZZ	505	700	700	700	700	700	700	700	700	700	700	700	700	8,400
otal Non-Labor Demand					38,477	38,677	41,477	41,477	41,677	41,877	41,477	41,677	41,477	41,477	41,677	41,952	493,395

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Resp Area (RA) PDC

Prepared by Arvin Fujii
Date 2/18/04

Dimension tab card							Units tab card												
Line Item	RA	Act	Loc	Ind	Proj	EE	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
							(enter Dollars or Vehicle Hours in "Units tab card")												
CATV Pole Rental Income	PDC	025	OUT	BO	NPDZZZZZ	905	(649)	(649)	(649)	(649)	(649)	(649)	(649)	(649)	(649)	(649)	(649)	(649)	(7,788)
Test & Treat - Subtrans - C&M Inspectors	PDC	328	OAH	NE	NPDZZZZZ	905	(1,716)	(1,716)	(1,716)	(1,716)	(1,716)	(1,716)	(1,716)	(1,716)	(1,716)	(1,716)	(1,716)	(1,716)	(20,592)
Test & Treat - Subtrans - Contractors	PDC	341	OAH	NE	NPDZZZZZ	905	(7,014)	(7,014)	(7,014)	(7,014)	(7,014)	(7,014)	(7,014)	(7,014)	(7,014)	(7,014)	(7,014)	(7,014)	(84,168)
Manage Dist Projects - Office Materials	PDC	420	OAH	NC	NPDZZZZZ	205	67	67	67	67	67	67	67	67	67	67	67	67	800
Accessories for Cellular Phones	PDC	442	OAH	NE	NPDZZZZZ	201	25	25	25	25	25	25	25	25	25	25	25	25	300
Cellular Phones & Pager Charges	PDC	442	OAH	NE	NPDZZZZZ	501	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	48,000
Test & Treat - Distribution - C&M Inspectors	PDC	458	OAH	NE	NPDZZZZZ	905	(5,590)	(5,590)	(5,590)	(5,590)	(5,590)	(5,590)	(5,590)	(5,590)	(5,590)	(5,590)	(5,590)	(5,590)	(67,080)
Utilities (Tele, etc.)	PDC	600	OAH	NC	NPDZZZZZ	520	75	75	75	75	75	75	75	75	75	75	75	75	900
Materials for Training & Development	PDC	785	OAH	NC	NPDZZZZZ	205	24	24	24	24	24	24	24	24	24	24	24	24	288
Order Materials, Equip, Supplies & Services	PDC	842	OAH	NC	NPDZZZZZ	205	240	240	240	240	240	240	240	240	240	240	240	240	2,880
Joint Pole Outside Services General Maint	PDC	926	PDO	NE	NPDZZZZZ	501	250	250	250	250	250	250	250	250	250	250	250	250	3,000
Joint Pole Software License Fees	PDC	926	PDO	NE	NPDZZZZZ	506	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200	14,400
					Total Non-Labor Demand		(9,088)	(9,088)	(9,088)	(9,088)	(9,088)	(9,088)	(9,088)	(9,088)	(9,088)	(9,088)	(9,088)	(9,088)	(109,060)

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Resp Area (RA) PDD

Prepared by Arvin Fujii
Date 2/18/04

Dimension tab card							Units tab card												
Line Item	RA	Act	Loc	Ind	Proj	EE	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
							(enter Dollars or Vehicle Hours in "Units tab card")												
Training Materials	PDD	788	PDO	NC	NPDZZZZZ	201	3,700	2,000	1,300	25,000	700	1,000	175	700	3,000	875	1,300	-	39,750
Outside Services - Training Courses	PDD	788	PDO	NE	NPDZZZZZ	501	-	-	-	-	-	-	200	-	-	200	-	-	400
Outside Services - Attend Training	PDD	789	OAH	NC	NPDZZZZZ	501	825	825	825	825	825	825	825	825	825	825	825	825	9,900
Total Non-Labor Demand							4,525	2,825	2,125	25,825	1,525	1,825	1,200	1,525	3,825	1,900	2,125	825	50,050

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Resp Area (RA) PDF

Prepared by Arvin Fujii
Date 2/18/04

Dimension tab card							Units tab card												
Line Item	RA	Act	Loc	Ind	Proj	EE	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
							(enter Dollars or Vehicle Hours in "Units tab card")												
Personal Protective Equipment	PDF	462	OAH	NE	NPDZZZZZ	201	1,842	1,842	1,842	1,842	1,842	1,842	1,842	1,842	1,842	1,842	1,842	1,842	22,100
Tools & Equip	PDF	492	OAH	NE	NPDZZZZZ	201	200	200	200	200	200	200	200	200	200	200	200	200	2,400
Resp to Cust Inq & Svc Req - Materials	PDF	600	OAH	NE	NPDZZZZZ	201	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	60,000
Total Non-Labor Demand							7,042	7,042	7,042	7,042	7,042	7,042	7,042	7,042	7,042	7,042	7,042	7,042	84,500

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*Act #	*RA #	*Proj #	Acct Blk Descr	NARUC	Lbr/NLbr	*EE #	1999 Actual $	2000 Actual $	2001 Actual $	2002 Actual $	2003 Actual $
501	PDL	NPDZZZZZ	Distribution Maint	594	Non-Labor	201	$81	$2,454	-$3,234	0	0
						501	$0	$2,157	-$2,157	0	0
						505	$135	$1,827	$16	-$16	$0
							$216	$6,438	-$5,376	-$16	$0
		NPKZZZZZ	Distribution Maint	594	Non-Labor	505	$0	$702	$0	$16	$0
							$0	$702	$0	$16	$0
	PDU	NPDZZZZZ	Distribution Maint	594	Non-Labor	201	$176	$32	$0	0	0
						205	$227	0	0	0	0
							$403	$32	$0	0	0
		P0000359	Distribution Maint	594	Non-Labor	205	0	$0	$3	0	0
							0	$0	$3	0	0
504	PDA	NPKZZZZZ	Distribution Maint	595	Non-Labor	430	$0	$0	$0	0	0
						201	$0	$59	$0	0	0
							$0	$59	$0	0	0
505	PDA	NPKZZZZZ	Distribution Maint	595	Non-Labor	201	$0	$15	$0	$343	$0
						900	0	0	0	$394	$0
							$0	$15	$0	$737	$0
		P0000121	Distribution Maint	595	Non-Labor	201	0	$0	$24	-$24	$126
						501	0	0	0	$0	$0
						505	0	$0	$0	$16	$0
						900	0	0	0	$0	$0
							0	$0	$24	-$8	$126
		P0000359	Distribution Maint	595	Non-Labor	201	0	$0	$0	$1,034	-$284
						205	0	$0	$0	0	0
						501	0	$0	$1,028	-$1,028	$0
						505	0	$0	$0	0	0
						508	0	$0	$425	-$425	$0
							0	$0	$1,453	-$419	-$284
		P1793000	Distribution Maint	595	Non-Labor	201	$191	-$181	$0	0	0
						501	$299	0	0	0	0
							$490	-$181	$0	0	0
	PDJ	NPDZZZZZ	Distribution Maint	595	Non-Labor	201	$0	$469	$0	0	0
						205	$0	$124	$0	0	0
						501	$0	$171	$0	0	0
							$0	$764	$0	0	0
508	PDF	NPDZZZZZ	Distribution Maint	594	Non-Labor	205	$0	$544	$0	0	0
						501	$70	0	0	0	0
							$70	$544	$0	0	0
600	PDA	NPDZZZZZ	Distribution Oper	588	Non-Labor	201	$15	0	0	$11	$6
						205	0	$0	$441	0	0
						501	$15	$199	$0	$1,646	$0
						505	$300	$0	$588	$215	$398
							$330	$199	$1,029	$1,872	$404
	PDF	NPDZZZZZ	Distribution Oper	588	Non-Labor	201	$51,434	$78,957	$18,427	0	0
						501	$589	$0	$2	0	0
							$52,023	$78,957	$18,429	0	0
		P0000359	Distribution Oper	588	Non-Labor	201	0	$0	$50,632	$65,999	$16,143
						205	0	0	0	$18	$0
						501	0	$0	$20	$5	$7
							0	$0	$50,652	$66,022	$16,150

A/g approx $64,000 round to $60,000

*Act #	*RA #	*Proj #	Acct Blk Descr	NARUC	Lbr/NLbr	*EE #	1999 Actual $	2000 Actual $	2001 Actual $	2002 Actual $	2003 Actual $
600	PDF	P0000740	Distribution Oper	588	Non-Labor	201	0	0	0	$0	$42,528
							0	0	0	$0	$42,528
	PDH	NPDZZZZZ	Distribution Oper	588	Non-Labor	201	0	0	0	$0	$86
							0	0	0	$0	$86
		NPWZZZZZ	Distribution Oper	588	Non-Labor	201	$1,083	$15	$103	$0	$626
						501	0	$0	$184	$1,217	$0
						505	$118	$515	$143	$304	$121
							$1,201	$530	$430	$1,521	$747
	PDL	NPWZZZZZ	Distribution Oper	588	Non-Labor	201	$0	0	0	0	0
						905	-$3,656	0	0	0	0
							-$3,656	0	0	0	0
	PDP	NPDZZZZZ	Distribution Oper	588	Non-Labor	501	0	$0	$7,204	0	0
						505	$23	$276	$1,066	$460	$0
							$23	$276	$8,270	$460	$0
	PDU	NPWZZZZZ	Distribution Oper	588	Non-Labor	201	$35	0	0	0	0
						501	$40	0	0	$311	$0
							$75	0	0	$311	$0
602	PDH	NPWZZZZZ	Distribution Oper	586	Non-Labor	201	$0	$136	$453	$1,550	$0
						501	0	0	0	$304	-$197
						505	$14,669	$18,655	$18,761	$17,024	$2,469
							$14,669	$18,791	$19,214	$18,878	$2,272
	PDU	NPWZZZZZ	Distribution Oper	586	Non-Labor	201	$335	0	0	0	0
						501	0	0	0	$1,050	$0
							$335	0	0	$1,050	$0
619	PDA	NPDZZZZZ	Customer Accounts	903	Non-Labor	501	$15	0	0	0	0
							$15	0	0	0	0
720	PDA	NPDZZZZZ	Transmission Oper	566	Non-Labor	505	0	0	0	$0	$0
							0	0	0	$0	$0
	PWM	NPWZZZZZ	Distribution Oper	588	Non-Labor	520	$0	$1,514	$0	0	0
						521	$28	0	0	0	0
							$28	$1,514	$0	0	0
722	PDA	NPDZZZZZ	Distribution Oper	588	Non-Labor	205	0	$0	$46	0	0
						501	$21	0	0	0	0
							$21	$0	$46	0	0
723	PDA	NPDZZZZZ	Distribution Oper	588	Non-Labor	201	$280	-$13	$0	0	0
						501	$0	$270	$275	0	0
							$280	$258	$275	0	0
730	PDA	NPDZZZZZ	Transmission Maint	573	Non-Labor	201	0	0	0	$91	$0
							0	0	0	$91	$0
			Distribution Oper	588	Non-Labor	501	$0	$1,502	$2,051	0	0
							$0	$1,502	$2,051	0	0
		P0000743	A & G Operation	9302	Non-Labor	201	0	0	0	$0	$652
						205	0	0	0	$0	$1,876
						501	0	0	0	$0	$0
						505	0	0	0	$0	$4,903
							0	0	0	$0	$7,431
	PDV	NPDZZZZZ	Distribution Oper	588	Non-Labor	520	$437	0	0	0	0
						521	$17	0	0	0	0
							$454	0	0	0	0

NonLabor Input Sheet - NonProject/NonProgram
2005

Resp Area (RA) PDS

Prepared by Arvin Fujii
Date 2/18/04

Dimension tab card							Units tab card												
Line Item	RA	Act	Loc	Ind	Proj	EE	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
							(enter Dollars or Vehicle Hours in "Units tab card")												
Personal Protective Equipment	PDS	440	OAH	NE	NPDZZZZZ	201	417	417	417	417	417	417	417	417	417	417	417	417	5,004
Tools & Equip	PDS	492	OAH	NE	NPDZZZZZ	201	18,417	18,417	18,417	18,417	18,417	18,417	18,417	18,417	18,417	18,417	18,417	18,417	221,000
Tools & Equip	PDS	492	OAH	NE	NPDZZZZZ	201	417	417	417	417	417	417	417	417	417	417	417	417	5,004
Truck & Tool Inventory	PDS	942	PDO	NE	NPDZZZZZ	201	268	268	268	268	268	268	268	268	268	268	268	268	3,216
			Total Non-Labor Demand				19,519	19,519	19,519	19,519	19,519	19,519	19,519	19,519	19,519	19,519	19,519	19,519	234,224

} 226,004

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*Act #	*RA #	*Proj #	Acct Blk Descr	NARUC	Lbr/NLbr	*EE #	1999 Actual $	2000 Actual $	2001 Actual $	2002 Actual $	2003 Actual $
[redacted]484	PDU	P0000120	Distribution Maint	595			0	$0	$0	0	0
		P0000121	Distribution Maint	595	Non-Labor	201	$0	$161	$52	$4,295	$511
						205	0	$0	$9,316	0	0
							$0	$161	$9,368	$4,295	$511
		P0000359	Distribution Maint	595	Non-Labor	201	0	$0	$1,221	$5,439	$13,161
						205	0	$0	$50	$17,577	$12,948
						501	0	$0	$565	$6,233	$571
						505	0	$0	$120	$1,010	$3,183
							0	$0	$1,956	$30,259	$29,863
		P0000360	Distribution Maint	595	Non-Labor	201	0	$0	$7,793	$477	$0
						205	0	$0	$4,543	$3,264	$0
						501	0	$0	$421	0	0
						505	0	0	0	$1,640	$0
							0	$0	$12,758	$5,382	$0
		P1793000	Distribution Maint	595	Non-Labor	201	$314	$835	-$131	0	0
						205	$61	0	0	0	0
							$375	$835	-$131	0	0
489	PDA	NPDZZZZZ	Distribution Maint	591	Non-Labor	501	0	0	0	$0	$0
						505	0	0	0	$13,636	$0
							0	0	0	$13,636	$0
491	PDC	NPDZZZZZ	Distribution Maint	598	Non-Labor	201	$0	$10	$0	0	0
							$0	$10	$0	0	0
[redacted]492	PDA	NPDZZZZZ	Distribution Maint	598	Non-Labor	201	$160,759	$253,821	$162,858	$247,789	$319,570
						205	$2,610	$556	$2,339	$2,142	$888
						222	$2,399	0	0	0	0
						501	$2,017	$115	$96	$2,016	$0
						505	$1,265	$1,129	$146	0	0

Avg approx $229,000 Amts are
[illegible] to DS, but actuals
[illegible] to PDA.

[redacted]

		P0000360	Distribution Maint	598	Non-Labor	201	0	$0	$60,372	$131,127	$39,745
						205	0	$0	$345	$66	$135
							0	$0	$60,716	$131,193	$39,880
	PDF	NPDZZZZZ	Distribution Maint	598	Non-Labor	201	0	0	0	$505	$0

General Information Requests

For each of the HECO witnesses who sponsor test period budgeted non-labor direct expense amounts, please provide the following information:

a. Identify each employee involved in preparation of budgeted non-labor direct expense amounts included in the rate case test period budget and sponsored by the witness.

b. Provide complete copies of all calculations, spreadsheet files, "pencil" workpapers, surveys and other analyses performed by each of the employees identified in response to part (a), indicating the amounts by Department, RA, Activity and NARUC Account that such calculations support.

c. For each budgeted non-labor amount in the test period forecast that exceeds $50,000, please describe the basis for determining the budgeted amount (for example, bid solicitation, price times quantity estimation, historical cost escalated, etc.)

d. For each item in your response to part (c), where specific quantities and prices were discretely forecasted, explain the basis for and source of the budgeted quantity inputs and budgeted prices for each such item. Provide complete copies of all studies, reports and other documents that were relied upon.

e. For each item in your response to part (c) where historical costs were escalated, provide all historical cost information that was considered and explain how such data was evaluated and escalated to derive test year proposed levels.

f. [redacted]

Non-Labor Input Sheet - NonProject
2005

Resp Area (RA) wx
Labor Class

Prepared by
Date

Dimension tab card							Units tab card												
Line Item	RA	Act	Loc	Ind	Proj	EE	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Non-Labor Demand:							*(enter **hours** in **"Units tab card"**)*												
	wx	465	oah	ne	npwzzzzz	301	1,956	1,964	1,956	1,956	1,956	1,956	1,956	1,956	1,956	1,956	1,956	1,956	23,483
	wx	493	oah	ne	npwzzzzz	301	154	119	154	154	154	154	154	154	154	154	154	154	1,810
	wx	601	oah	ne	npwzzzzz	201, 205, 220,301,501	3,753	3,753	3,753	3,753	3,753	3,753	3,753	3,753	3,753	3,753	3,753	3,753	45,036
	wx	602	oah	ne	npwzzzzz	301	324	341	324	324	324	324	324	324	324	324	324	324	3,903
	wx	603	oah	ne	npwzzzzz	462,503	328	328	328	328	328	328	328	328	328	328	328	328	3,938
	wx	610	oah	ne	npwzzzzz	301	70	105	70	70	70	70	70	70	70	70	70	70	875
	wx	619	oah	ne	npwzzzzz	157	99	171	99	99	121	99	99	99	99	99	99	99	1,280
	wx	620	pdo	ne	npwzzzzz	301	80	120	80	80	80	80	80	80	80	80	80	80	1,000
	wx	789	pdo	ne	npwzzzzz	520, 522	600	600	600	600	600	600	600	600	600	600	600	600	7,200
																			88,524
						Total Non-Labor Demand	7,364	7,501	7,364	7,364	7,386	7,364	7,364	7,364	7,364	7,364	7,364	7,364	88,524

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General Information Requests

For each of the HECO witnesses who sponsor test period budgeted non-labor direct expense amounts, please provide the following information:

a. Identify each employee involved in preparation of budgeted non-labor direct expense amounts included in the rate case test period budget and sponsored by the witness.

b. Provide complete copies of all calculations, spreadsheet files, "pencil" workpapers, surveys and other analyses performed by each of the employees identified in response to part (a), indicating the amounts by Department, RA, Activity and NARUC Account that such calculations support.

c. For each budgeted non-labor amount in the test period forecast that exceeds $50,000, please describe the basis for determining the budgeted amount (for example, bid solicitation, price times quantity estimation, historical cost escalated, etc.)

d. For each item in your response to part (c), where specific quantities and prices were discretely forecasted, explain the basis for and source of the budgeted quantity inputs and budgeted prices for each such item. Provide complete copies of all studies, reports and other documents that were relied upon.

e. For each item in your response to part (c) where historical costs were escalated, provide all historical cost information that was considered and explain how such data was evaluated and escalated to derive test year proposed levels.

f. For each item in your response to part (c) where a bid solicitation or other special analysis was conducted, explain what was done and provide complete copies of all supporting reports, bid solicitations, proposal, analyses, workpapers and other documents associated with such efforts.

g. Provide complete copies of all other information required to completely support and

*RA #	*Act #	*Loc #	*Ind #	*Project #	*EE #	Line item	FY04	FY05	
PFC	723	PDO	NE	NPFZZZZZ	900	Distribution Merit Key Contributor Awards	68,670	71,107	✓
PFC	723	PDO	NE	NPFZZZZZ	900	Distribution Merit Team Awards	34,277	35,554	✓ 106,661.
PFC	723	PHE	NE	NPFZZZZZ	900	Admin & Genl Merit Key Contributor Awards	179,241	185,345	
PFC	723	PHE	NE	NPFZZZZZ	900	Admin & Genl Merit Team Awards	89,446	92,789	
PFC	723	PPO	NE	NPFZZZZZ	900	Production Merit Key Contributor Awards	146,652	152,705	
PFC	723	PPO	NE	NPFZZZZZ	900	Production Merit Team Awards	73,501	76,353	
PFC	723	PTO	NE	NPFZZZZZ	900	Transmission Merit Key Contributor Awards	26,770	27,977	✓
PFC	723	PTO	NE	NPFZZZZZ	900	Transmission Merit Team Awards	13,443	13,872	✓ 41,849.
							632,000	655,700	
						* J11 from S:\HumanResources\HRCOMP\Merit Award Prgms\2004\2004 Budget Base Rate			
						* M11 = J11*1.0375 to reflect aging salaries by 3.75%			
						* All distributions assume same % as previous years			

General Information Requests

For each of the HECO witnesses who sponsor test period budgeted non-labor direct expense amounts, please provide the following information:

a. Identify each employee involved in preparation of budgeted non-labor direct expense amounts included in the rate case test period budget and sponsored by the witness.

b. Provide complete copies of all calculations, spreadsheet files, "pencil" workpapers, surveys and other analyses performed by each of the employees identified in response to part (a), indicating the amounts by Department, RA, Activity and NARUC Account that such calculations support.

c. For each budgeted non-labor amount in the test period forecast that exceeds $50,000, please describe the basis for determining the budgeted amount (for example, bid solicitation, price times quantity estimation, historical cost escalated, etc.)

d. For each item in your response to part (c), where specific quantities and prices were discretely forecasted, explain the basis for and source of the budgeted quantity inputs and budgeted prices for each such item. Provide complete copies of all studies, reports and other documents that were relied upon.

e. For each item in your response to part (c) where historical costs were escalated, provide all historical cost information that was considered and explain how such data was evaluated and escalated to derive test year proposed levels.

f. For each item in your response to part (c) where a bid solicitation or other special analysis was conducted, explain what was done and provide complete copies of all supporting reports, bid solicitations, proposal, analyses, workpapers and other documents associated with such efforts.

g. Provide complete copies of all other information required to completely support and document the test year projected expense levels being proposed by the Company, including general assumptions and forecasting instructions that were employed.

HECO Response:

a. For the Customer Service Department the employees involved in the preparation of budgeted non-labor direct expense amounts for the rate case test period are Victoria Marzano, Department Administrator and Jan Loose.

b. Please refer to attachments E-1 and E-2 for additional details.

NonLabor Input Sheet - NonProject
2005

Resp Area (RA) PCF

Prepared by J Loose
Date 7/31/2003

Dimension tab card									Rates tab card	Units tab card													
Line Item	NARUC	RA	Act	Loc	Ind	Proj	EE	Lbr Class	Rates Link To	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
										(enter Dollars or Vehicle Hours in "Units tab card")												
Photo/Video Equip		PCF	620	OAH	NE	NPCZZZZZ	201								1,500						1,500	3,000
Trade Tools		PCF	620	OAH	NE	NPCZZZZZ	201								1,500						1,500	3,000
Tools - Toolroom		PCF	620	OAH	NE	NPCZZZZZ	201				50		50		50		50		50		50	300
CF Field Materials	587		620	OAH	NE	NPCZZZZZ	201		No escalation	0	50	0	50	0	3,050	0	50	0	50	0	3,050	6,300
Photo/Video		PCF	620	OAH	NE	NPCZZZZZ	205								150			150			150	450
Small Tools		PCF	620	OAH	NE	NPCZZZZZ	205					100			100			100			100	400
Stationary/Ofc Supplies		PCF	620	OAH	NE	NPCZZZZZ	205			150			150			150			150			600
CF Supplies/Small tools	587		620	OAH			205		No escalation	150	0	100	150	0	250	150	0	250	150	0	250	1,450
Attend training	903	PCF	789	OAH	NE	NPCZZZZZ	501		No escalation						5,000							5,000
Outside Services (RP-HD)	587	PCF	620	OAH	NE	NPCZZZZZ	501		No escalation	24,000												24,000
Softwarre/Hardware	903	PCF	600	OAH	NE	NPCZZZZZ	462		No escalation	2,188												2,188
																						38,938
Sedan - CF	903	PCF	600	OAH			301		VEH Sedan	40	40	40	45	45	40	38	40	40	40	40	40	488
Sedan - CF	902	PCF	610	OAH			302		VEH Sedan	38	38	38	38	38	38	38	38	38	38	38	38	456
Sedan - CF	903	PCF	619	OAH			303		VEH Sedan	38	38	38	38	38	38	38	38	38	38	38	38	456
Sedan - CF	903	PCF	720	OAH			304		VEH Sedan	38	38	38	38	38	38	38	38	38	38	38	38	456
Total Sedan Hours																						1,856
Mini Van - CF	903	PCF	611	OAH	NE	NPCZZZZZ	301		VEH LightTruck	72	72	104	88	80	70	70	72	72	80	80	80	940
Mini Van - CF	587	PCF	620	OAH	NE	NPCZZZZZ	301		VEH LightTruck	72	82	80	72	80	70	90	90	70	80	80	90	956 **
Total Mini Van Hours																						1,896
		PCF																				0

****Note: Total cost is 5,497 (956 vehicle hours x 5.75 vehicle rate)**

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Prepared by: J Loose
Date: ########

g	Sep	Oct	Nov	Dec	Total
*Units tab card")					
100	100	50	50	50	800
50	50	50	50	50	600
	100		100		300
					150
150	**250**	**100**	**200**	**100**	**1,850**
600	900	900	900	900	10,800
		8,000			32,000
900	**900**	**8,900**	**900**	**900**	**42,800**
		20,000			20,000
	1,000				2,000
50	50	50	50	50	600
300	300	300	300	300	3,600
		4,000			10,000
					4,500
350	**1,350**	**24,350**	**350**	**350**	**40,700**
	100			100	400
300	1,300	1,300	1,300	1,300	15,600
	100			100	400
600	600	600	600	600	7,200
75	75	75	75	75	900
975	**2,175**	**1,975**	**1,975**	**2,175**	**24,500**
975	4,675	35,325	3,425	3,525	109,850
364	404	372	300	332	4,488
24	32	32	32	32	368
388	**436**	**404**	**332**	**364**	**4,856**
148	148	148	128	169	1,783 **
392	692	692	592	791	8,317 **
840	**840**	**840**	**720**	**960**	**10,100**
180	180	180	180	180	2,160
392	692	692	592	742	8,268
32	40	40	40	40	464
904	**912**	**912**	**812**	**962**	**10,892**
148	148	148	128	159	1,772

NonLabor Input Sheet - NonProject
2005

Resp Area (RA) PCG

Prepared by J Loose
Date #######

Dimension tab card									Rates tab card	Units tab card													
Line Item	NARUC	RA	Act	Loc	Ind	Proj	EE	Lbr Class	Rates Link To	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Sedans (4) - Stops		PCG	611	OAH	NE		301			40	40	40	40	40	40	40	40	40	40	40	40	480
Sedan - CGSup - Mng/resolve billing		PCG	611	OAH	NE		301			32	32	32	32	32	32	24	24	32	32	32	32	368
Sedans - 611	**903**	**PCG**	**611**	**OAH**	**NE**	**NPCZZZZZ**	**301**		**VEH Sedans**	**72**	**72**	**72**	**72**	**72**	**72**	**64**	**64**	**72**	**72**	**72**	**72**	**848**
Sedans (14) - Disc/Rec		PCG	619	OAH	NE		301			804	678	1,028	836	725	672	672	804	836	725	745	510	9,035
Sedan - CGSup - Disc		PCG	619	OAH	NE		301			44	28	60	36	36	36	28	28	44	36	20	28	424
Sedans - 619	**903**	**PCG**	**619**	**OAH**	**NE**	**NPCZZZZZ**	**301**		**VEH Sedans**	**848**	**706**	**1,088**	**872**	**761**	**708**	**700**	**832**	**880**	**761**	**765**	**538**	**9,459**
Blazer (3) - Disc/Rec		PCG	619	OAH	NE		301			172	146	220	180	155	144	304	172	180	155	159	110	2,097
Sedan - CGSup - Time & Attendance		PCG	777	OAH	NE		301			4	4	4	4	4	4	4	4	4	4	4	4	48
Sedans - 777	**903**	**PCG**	**777**	**OAH**	**NE**	**NPCZZZZZ**	**301**		**VEH Sedans**	**4**	**4**	**4**	**4**	**4**	**4**	**4**	**4**	**4**	**4**	**4**	**4**	**48**
Sedan - CGSup - Perf Reviews		PCG	785	OAH	NE		301			8	8	8	8	8	16	48	48	8	8	8	8	184
Sedans - 785	**903**	**PCG**	**785**	**OAH**	**NE**	**NPCZZZZZ**	**301**		**VEH Sedans**	**8**	**8**	**8**	**8**	**8**	**16**	**48**	**48**	**8**	**8**	**8**	**8**	**184**
Total Vehicle (hours)										3,080	2,838	3,424	3,144	3,001	3,058	2,988	3,080	3,152	3,001	2,713	2,908	36,387

** Note: Total cost is 31,045 [(1,783 vehicle hours x 5.75 vehicle rate + (8,317 vehicle hours x 2.50 vehicle rate)]

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General Information Requests

For each of the HECO witnesses who sponsor test period budgeted non-labor direct expense amounts, please provide the following information:

a. Identify each employee involved in preparation of budgeted non-labor direct expense amounts included in the rate case test period budget and sponsored by the witness.

b. Provide complete copies of all calculations, spreadsheet files, "pencil" workpapers, surveys and other analyses performed by each of the employees identified in response to part (a), indicating the amounts by Department, RA, Activity and NARUC Account that such calculations support.

c. For each budgeted non-labor amount in the test period forecast that exceeds $50,000, please describe the basis for determining the budgeted amount (for example, bid solicitation, price times quantity estimation, historical cost escalated, etc.)

d. For each item in your response to part (c), where specific quantities and prices were discretely forecasted, explain the basis for and source of the budgeted quantity inputs and budgeted prices for each such item. Provide complete copies of all studies, reports and other documents that were relied upon.

e. For each item in your response to part (c) where historical costs were escalated, provide all historical cost information that was considered and explain how such data was evaluated and escalated to derive test year proposed levels.

f. For each item in your response to part (c) where a bid solicitation or other special analysis was conducted, explain what was done and provide complete copies of all supporting reports, bid solicitations, proposal, analyses, workpapers and other documents associated with such efforts.

g. Provide complete copies of all other information required to completely support and document the test year projected expense levels being proposed by the Company, including general assumptions and forecasting instructions that were employed.

HECO Response:

a. For the Engineering Department the employees involved in the preparation of budgeted non-labor direct expense amounts for the rate case test period are Marc Matsuura, Principal Engineering and Kathy Koga, Statistical Clerk.

Please refer to attachment F-1 for additional details on items b-g.

Dept	RA	Resp Area	NARUC	Act	EE	FY05	a	b	c	d	e	f	g
Engineering	PBZ	T&D Technical Svcs	588	730	150	$ 40,005	Marc Matsuura Kathy Koga	N/A	1,000 hrs budgetd which is equivalent to between 5%-10% of the Engineers' time. Division had 8 employees at time budget prepared.	Additional 2 employees added are to fill vacancies that existed at that time and not to meet present or anticipated work in this activity.	None	None	
Engineering	PBZ	T&D Technical Svcs	588	731	150	$ 18,811	Marc Matsuura Kathy Koga	N/A	480 hrs budgeted.	Additional 2 employees added are to fill vacancies that existed at that time and not to meet present or anticipated work in this activity.	None	None	
Engineering	PBZ	T&D Technical Svcs	588	730	201	$ 7,500	Marc Matsuura Kathy Koga	N/A	N/A	NA	NA	NA	NA

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ATTACHMENT F-1
PAGE 1 OF 1

General Information Requests

For each of the HECO witnesses who sponsor test period budgeted non-labor direct expense amounts, please provide the following information:

a. Identify each employee involved in preparation of budgeted non-labor direct expense amounts included in the rate case test period budget and sponsored by the witness.

b. Provide complete copies of all calculations, spreadsheet files, "pencil" workpapers, surveys and other analyses performed by each of the employees identified in response to part (a),

Non-Labor Dollars (For CA-IR-2)

*RA #	*Act #	*Loc #	*Ind #	*Project #	*EE #	Line item	FY05
PJW	_	_	_	_	462	Stores OHPJW	110
PJW	788	CNS	BE	NPJZZZZZ	522	HGA H13741 003	470
PJW	788	HEL	BE	NPJZZZZZ	522	HDE H18794 001	940
PJW	788	MAL	BE	NPJZZZZZ	522	M15316 006 - Conduct Training Lanai	380
PJW	788	MAM	BE	NPJZZZZZ	522	M15317 005 - Conduct Training Palaau	380
PJW	788	MAU	BE	NPJZZZZZ	522	M15885 003 - Conduct Training ED	940
PJW	788	MPO	BE	NPJZZZZZ	521	M15314 010 - Conduct Training Maalaea	160
PJW	788	MPO	BE	NPJZZZZZ	522	M15313 009 - Conduct Training Kahului	940
PJW	788	MPO	BE	NPJZZZZZ	522	M15314 010 - Conduct Training Maalaea	1,420
PJW	788	PST	BE	NPJZZZZZ	521	HGA - Conduct Training	190
PJW	788	RST	BE	NPJZZZZZ	522	HGA H18840 001	570
PJW	788	SST	BE	NPJZZZZZ	521	HGA H18840 004	570
PJW	876	BNS	BE	NPJZZZZZ	522	HGA H18945 005	235
PJW	876	CNS	BE	NPJZZZZZ	201	HGA H18945 006	150
PJW	876	CNS	BE	NPJZZZZZ	522	HGA H18945 006	2,550
PJW	876	CNS	BE	NPJZZZZZ	522	HGA H18945 006	940
PJW	876	HEL	BE	NPJZZZZZ	522	HDE H18794 002	235
PJW	876	HST	NE	NPJZZZZZ	201	WETT & ZOM Monitoring - HONOLULU	500
PJW	876	HST	NE	NPJZZZZZ	508	BBCM - Honolulu	4,000
PJW	876	HST	NE	NPJZZZZZ	508	NPDES 316(b) Study	75,000
PJW	876	HST	NE	NPJZZZZZ	508	WET TEST EXTRA ANALYSIS	6,000
PJW	876	HST	NE	NPJZZZZZ	508	WETT - HONOLULU	1,600
PJW	876	KST	NE	NPJZZZZZ	201	WETT, Sand and Coral Monitoring - KAHE	500
PJW	876	KST	NE	NPJZZZZZ	508	NPDES 316(b) Study	75,000
PJW	876	KST	NE	NPJZZZZZ	508	WET TEST EXTRA ANALYSES	12,000
PJW	876	KST	NE	NPJZZZZZ	508	WETT & Coral Study - KAHE	17,820
PJW	876	MNS	BE	NPJZZZZZ	201	MGM M19147 005	100
PJW	876	MNS	BE	NPJZZZZZ	521	MGM M19147 005	150
PJW	876	MNS	BE	NPJZZZZZ	522	MGM M19147 005	1,700
PJW	876	MNS	BE	NPJZZZZZ	522	MGM M19147 005 - Compliance	1,410
PJW	876	NST	BE	NPJZZZZZ	201	MGK M19146 005	200
PJW	876	NST	BE	NPJZZZZZ	521	MGK M19146 005	480
PJW	876	NST	BE	NPJZZZZZ	522	MGK M19146 005	3,000
PJW	876	NST	BE	NPJZZZZZ	522	MGK M19146 005 - Compliance	1,410
PJW	876	PHE	NE	NPJZZZZZ	301	Vehicle, Assigned - Boat Trailer	11,440
PJW	876	PHE	NE	NPJZZZZZ	301	Vehicle, Assigned - Van	11,440
PJW	876	PHE	NE	NPJZZZZZ	501	Cellular Phone Svc - AT&T (4)	1,200
PJW	876	PHE	NE	NPJZZZZZ	501	Misc - Printing, Utilities, Membership Fees/Dues	1,200
PJW	876	PHE	NE	NPJZZZZZ	501	Pager - GTE (4)	540
PJW	876	PHE	NE	NPJZZZZZ	520	Mainland Travel - Airfare, Hotel	2,000
PJW	876	PHE	NE	NPJZZZZZ	521	Meals/Entertainment	300
PJW	876	PST	BE	NPJZZZZZ	201	HGA H18945 003	50
PJW	876	PST	BE	NPJZZZZZ	522	HGA H18945 003	570
PJW	876	PST	BE	NPJZZZZZ	522	HGA H18945 003	235
PJW	876	RST	BE	NPJZZZZZ	201	HGA H18845 002	150
PJW	876	RST	BE	NPJZZZZZ	522	HGA H18845 002	1,520
PJW	876	RST	BE	NPJZZZZZ	522	HGA H18845 002	1,410
PJW	876	SST	BE	NPJZZZZZ	201	HGA H18945 001	1,100
PJW	876	SST	BE	NPJZZZZZ	522	HGA H18945 001	760
PJW	876	SST	BE	NPJZZZZZ	522	HGA H18945 001	705
PJW	876	WST	NE	NPJZZZZZ	201	WETT & ZOM Monitoring - WAIAU	500

*RA #	*Act #	*Loc #	*Ind #	*Project #	*EE #	Line item	FY05
PJW	876	WST	NE	NPJZZZZZ	508	BBCM - Waiau	4,000
PJW	876	WST	NE	NPJZZZZZ	508	NPDES 316(b) Study	75,000
PJW	876	WST	NE	NPJZZZZZ	508	WET TEST EXTRA ANALYSIS	18,000
PJW	876	WST	NE	NPJZZZZZ	508	WETT Monitoring - WAIAU	6,000
PJW	877	BNS	BE	NPJZZZZZ	522	HGA H18844 005	470
PJW	877	CNS	BE	NPJZZZZZ	522	HGA H18844 006	1,175
PJW	877	GNS	BE	NPJZZZZZ	522	MGT M19151 005	705
PJW	877	HEL	BE	NPJZZZZZ	508	HDE H18794 003	470
PJW	877	HST	NE	NPJZZZZZ	201	Supplies	500
PJW	877	HST	NE	NPJZZZZZ	508	NPREP Drill	3,000
PJW	877	KST	NE	NPJZZZZZ	201	Supplies	500
PJW	877	KST	NE	NPJZZZZZ	508	NPREP Drill	3,000
PJW	877	LNS	BE	NPJZZZZZ	522	MGL M19149 003	705
PJW	877	MAU	BE	NPJZZZZZ	508	MDE M15885 001	6,000
PJW	877	MAU	BE	NPJZZZZZ	522	MDE M15885 001	1,410
PJW	877	MNS	BE	NPJZZZZZ	521	MGM M19147 006	80
PJW	877	MNS	BE	NPJZZZZZ	522	MGM M19147 006	1,250
PJW	877	NST	BE	NPJZZZZZ	521	MGK M19146 006	120
PJW	877	NST	BE	NPJZZZZZ	522	MGK M19146 006	1,560
PJW	**877**	**PDM**	**NE**	**NPJZZZZZ**	**508**	**SPCC Consulting**	**2,000**
PJW	**877**	**PDO**	**NE**	**NPJZZZZZ**	**508**	**SPCC Consulting**	**2,000**
PJW	877	PHE	NE	NPJZZZZZ	301	Vehicle, Assigned - Ford Explorer	11,440
PJW	877	PHE	NE	NPJZZZZZ	462	PC Software	1,200
PJW	877	PHE	NE	NPJZZZZZ	501	Cellular Phone Svc - AT&T (2)	700
PJW	877	PHE	NE	NPJZZZZZ	501	Pager - GTE (2)	280
PJW	877	PHE	NE	NPJZZZZZ	520	Mainland Travel - Airfare, Hotel	2,000
PJW	877	PHE	NE	NPJZZZZZ	521	Meals/Entertainment	300
PJW	877	PST	BE	NPJZZZZZ	522	HGA H18844 003	190
PJW	877	PTM	NE	NPJZZZZZ	508	SPCC Consulting	2,000

General Information Requests

For each of the HECO witnesses who sponsor test period budgeted non-labor direct expense amounts, please provide the following information:

a. Identify each employee involved in preparation of budgeted non-labor direct expense amounts included in the rate case test period budget and sponsored by the witness.

b. Provide complete copies of all calculations, spreadsheet files, "pencil" workpapers, surveys and other analyses performed by each of the employees identified in response to part (a), indicating the amounts by Department, RA, Activity and NARUC Account that such calculations support.

c. For each budgeted non-labor amount in the test period forecast that exceeds $50,000, please describe the basis for determining the budgeted amount (for example, bid solicitation, price times quantity estimation, historical cost escalated, etc.)

d. For each item in your response to part (c), where specific quantities and prices were discretely forecasted, explain the basis for and source of the budgeted quantity inputs and budgeted prices for each such item. Provide complete copies of all studies, reports and other documents that were relied upon.

e. For each item in your response to part (c) where historical costs were escalated, provide all historical cost information that was considered and explain how such data was evaluated and escalated to derive test year proposed levels.

f. For each item in your response to part (c) where a bid solicitation or other special analysis was conducted, explain what was done and provide complete copies of all supporting reports, bid solicitations, proposal, analyses, workpapers and other documents associated with such efforts.

g. Provide complete copies of all other information required to completely support and document the test year projected expense levels being proposed by the Company, including general assumptions and forecasting instructions that were employed.

HECO Response:

a. For the Industrial Relations Department the employee involved in the preparation of budgeted non-labor direct expense amounts for the rate case test period is Jeri Morimatsu, Generalist.

b. Please refer to attachment H-1 for additional details.

Recognition Program
2004-2005

Ho'okina

			Reduce to $200 Award	*1440 EEs*	*810 EEs*	*6/03 Update*	*Using 2003 $s as base*
		Original Budget	**2003 Recycle**	**2003 Rev. Budget**	**5/1/03 Adjustment**	**2003 Upd. Budget**	**2004-2005 Estimate**
Distr Operations	19.6%	95,625	(39,034.6)	56,590.4	(24,813.5)	31,776.9	**56,492.3**
Trans Operations	19.6%	95,625	(39,034.6)	56,590.4	(24,813.5)	31,776.9	**56,492.3**
Prod Operations	28.0%	136,500	(55,720.0)	80,780.0	(35,420.0)	45,360.0	**80,640.0**
Adm & General	32.8%	159,750	(65,210.8)	94,539.2	(41,453.1)	53,086.2	**94,375.4**
TOTAL	100%	487,500	(199,000)	288,500	(126,500)	162,000	**288,000**

General Information Requests

For each of the HECO witnesses who sponsor test period budgeted non-labor direct expense amounts, please provide the following information:

a. Identify each employee involved in preparation of budgeted non-labor direct expense amounts included in the [redacted] test period budget and sponsored by [redacted]

Hawaiian Electric Company, Inc.
Information Technology & Services Department
ITS Costing System Allocated Costs - PEZ Entries

HECO's IT costs are allocated to functional area code blocks via the IT Costing System. The allocation entries are coded with the Responsibility Area (RA) code PEZ in HECO's financial system. The following is a general description of the PEZ budgeting methodology. Workpapers A-1 through A-7 show the detail allocation amounts for 2005.

Costs to be Cleared
IT Non-Project and non-capital Project costs represent the base of costs to be allocated. These costs are coded with Indicator NC (Non-billable clearing) and are therefore said to be subject to "Clearing". For 2005, the Costs to be Cleared were estimated to be $12,865,283, as shown on workpaper A-1. Details of these costs are shown on workpapers B and C.

Costs Cleared to
IT Costs are cleared to the following categories:
1) HELCO IT Costing System Direct Charges (2005 Estimate - $226,338)
2) MECO IT Costing System Direct Charges (2005 Estimate - $177,768)
3) Non-ITS Project Charges - Expense Element 451 transactions (2005 Estimate - $709,008)
4) Intercompany Billings (2005 Estimate - $265,335)
5) EFMS Program Charges (2005 Estimate - $799,992)
6) Ebusiness Program Charges (2005 Estimate - $758,292)
7) Other Functional Area Charges ($9,928,550)

Basis for Clearing
Amounts which are cleared to the first 4 items above (HELCO/MECO IT Direct Charges, Non-ITS Project Charges, Intercompany Billings) are directly identified. Workpapers D, E, and F show the basis for the amounts included in the 2005 budget.

Amounts which are cleared for items 5 (EFMS Program) and 6 (Ebusiness Program) are estimated by the Program Managers of these IT-Managed programs. Costs are cleared to HECO functional area code blocks benefiting from the services provided by these programs. EFMS and Ebusiness Program costs are shown on workpaper C. Proration percentages used to allocate these costs were identified by Program Managers in prior years and are shown on workpaper G-1.

The amount of item 7 (Other Functional Area Charges) represent the residual of "Costs to be Cleared" reduced by the first 6 items of "Costs Cleared to". These costs are prorated to functional area code blocks based on actual 2003 PEZ proration amounts shown on workpaper G

[redacted]

PEZ Workpaper Index

PEZ ALLOCATION MODEL

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Hawaiian Electric Company, Inc.
Information Technology & Services Department
PEZ Actuals Jan- Dec 2003

	RA	Act	Loc	Ind	Project	EE	Monthly 05		Total 2005
COSTS TO BE CLEARED:									
Total NC charges)									
	NC per Non-Project							B	9,093,607
	Non-Project on-cost							B&C	2,149,763
	NC per EFMS Project							C	800,000
	NC per EBUS Project							C	758,300
	NC per Other Projects							C	63,613
	Total NC charges						1,072,107		12,865,283
COSTS CLEARED TO:									
Less: HELCO-IT Costing System direct charge per B. Tobara							18,862	D	226,338
Less: MECO-IT Costing System direct charge per B. Tobara							14,814	D	177,768
Less: Expense Element 451 charges by non-ITS PMs								E	709,008
									11,752,169
Less: InterCompany									
	PEZ	700	RHI	BE	NPASVP7Z	451	89	F	1,070
	PEZ	775	HEI	BE	NPFZZZZZ	451	212		2,544
	PEZ	776	HEL	BE	NPFZZZZZ	451	212		2,544
	PEZ	777	MAU	BE	NPFZZZZZ	451	212		2,544
	PEZ	776	HEI	BE	NPFZZZZZ	451	167		1,998
	PEZ	776	HPC	BE	NPFZZZZZ	451	7		87
	PEZ	776	PEC	BE	NPFZZZZZ	451	15		174
	PEZ	778	HEI	BE	NPFZZZZZ	451	87		1,045
	PEZ	778	HPC	BE	NPFZZZZZ	451	4		45
	PEZ	778	PEC	BE	NPFZZZZZ	451	8		91
	PEZ	779	HEI	BE	NPFZZZZZ	451	95		1,140
	PEZ	779	HPC	BE	NPFZZZZZ	451	2		20
	PEZ	779	PEC	BE	NPFZZZZZ	451	3		40
	PEZ	817	HEL	BE	NPAZZZZZ	451	-		-

Hawaiian Electric Company, Inc.
Information Technology & Services Department
PEZ Actuals Jan- Dec 2003

	RA	Act	Loc	Ind	Project	EE		Monthly 05	Total 2005	
	PEZ	455	OAH	NC	NPEZZZZZ			3,928	47,136.00	
	PEZ	455	OAH	NE	NPEZZZZZ			399	4,788.00	NARUC 583
	PEZ	456	OAH	NE	NPEZZZZZ			6,794	81,528.00	NARUC 583
	PEZ	600	OAH	NE	NPWZZZZZ			14,944	179,328.00	
	PEZ	907	OAH	NC	NPBZZZZZ			1,993	23,916.00	
	PEZ	926	PHE	NE	NPEZZZZZ			1,108	13,296.00	
	PEZ	931	PHE	NE	NPEZZZZZ			2,038	24,456.00	
Total EFMS								66,667	799,992.00	
				NE	41%		NE		331,944.00	
				NC	59%		NC		468,048.00	
				Total	100%				799,992.00	
Less: EBusiness Allocations										
	PEZ	110	PHE	NE	NPNEZZZZ			6565	78,780.00	
	PEZ	600	OAH	NE	NPNEZZZZ			442	5,304.00	
	PEZ	611	OAH	NE	NPNEZZZZ			13401	160,812.00	
	PEZ	713	PHE	NE	NPNEZZZZ			5688	68,256.00	
	PEZ	730	PHE	NE	NPNEZZZZ			0	-	
	PEZ	750	PHE	NE	NPNEZZZZ			23255	279,060.00	
	PEZ	950	PHE	NE	NPNEZZZZ			13840	166,080.00	
Total EBusiness								63,192	758,292.00	
Total NC less Direct Charge, Intercompan								827,379	9,928,550	
	PEZ	100	PHE	NE	NPSZZZZZ	451		6,105	73,260	
		100 Total								
	PEZ	102	PHE	NE	NPSZZZZZ	451		1,243	14,916	
		102 Total								
	PEZ	110	PHE	NE	NPSZZZZZ	451		13,004	156,048	
	PEZ	110	PHE	NE	NPEZZZZZ	451				
		110 Total								
	PEZ	112	PHE	NE	NPSZZZZZ	451		6,764	81,168	
		112 Total								
	PEZ	122	PHE	NE	**NPIZZZZZ**	451		4,905	58,860	
		122 Total								
	PEZ	201	WST	NE	NPYZZZZZ	451		8,626	103,512	
		201 Total								
	PEZ	210	WST	NC	NPYZZZZZ	451		-	-	
		210 Total								
	PEZ	211	WST	NC	NPYZZZZZ	451		14,881	178,572	
	PEZ	211	WST	NC	NPEZZZZZ	451				

Hawaiian Electric Company, Inc.
Information Technology & Services Department
PEZ Actuals Jan- Dec 2003

RA	Act	Loc	Ind	Project	EE	Monthly 05	Total 2005	
PEZ	242	KST	NE	**NPIZZZZZ**	451	6,904	82,848	
PEZ	242	WST	NE	**NPIZZZZZ**	451			
PEZ	242	HST	NE	**NPIZZZZZ**	451			
	242 Total							
PEZ	245	KST	NE	NPAVP2ZZ	451	1,075	12,900	
	245 Total							
PEZ	246	KST	NE	NPAVP2ZZ	451	898	10,776	
	246 Total							
PEZ	256	WST	NE	**NPIZZZZZ**	451	34,054	408,648	
PEZ	256	KST	NE	**NPIZZZZZ**	451			
PEZ	256	HST	NE	**NPIZZZZZ**	451			
	256 Total							
PEZ	258	KST	NE	NPAVP2ZZ	451	1,364	16,368	
	258 Total							
PEZ	261	KST	NE	NPAVP2ZZ	451	809	9,708	
	261 Total							
PEZ	307	OAH	NC	**NPBZZZZZ**	451	46,700	560,400	
PEZ	307	OAH	NC	**NPYZZZZZ**	451		-	
PEZ	307	OAH	NE	NPAVP2ZZ	451			
	307 Total							
PEZ	320	OAH	NE	NPAVP2ZZ	451	2,007	24,084	NARUC 320
	320 Total							
PEZ	325	OAH	NC	**NPRZZZZZ**	451	4,634	55,608	
	325 Total							
PEZ	326	OAH	NE	**NPRZZZZZ**	451	10,766	129,192	NARUC 566
	326 Total							
PEZ	331	OAH	NE	NPAVP2ZZ	451	233	2,796	NARUC 563
	331 Total							
PEZ	333	OAH	NC	**NPRZZZZZ**	451	11,468	137,616	
PEZ	333	OAH	NE	NPAVP2ZZ	451			
	333 Total							
PEZ	343	OAH	NE	NPAVP2ZZ	451	322	3,864	NARUC 571
	343 Total							
PEZ	349	OAH	NE	NPAVP2ZZ	451	144	1,728	NARUC 570
	349 Total							
PEZ	375	OAH	NC	**NPRZZZZZ**	451	14,920	179,040	
	375 Total							
PEZ	377	OAH	NE	NPRZZZZZ	451	659	7,908	NARUC 581
	377 Total							
PEZ	408	OAH	NC	**NPBZZZZZ**	451	38,681	464,172	
PEZ	408	OAH	NC	NPEZZZZZ	451			
	408 Total							NARUC 598
PEZ	420	OAH	NE	NPAVP2ZZ	451	6,674	80,088	ITS NVT
	420 Total							651,600 + 50,076
PEZ	455	OAH	NE	**NPDZZZZZ**	451	54,300	651,600	701,676
PEZ	455	OAH	NC	**NPDZZZZZ**	451	24,536	294,432	NARUC 583
	455 Total							
PEZ	456	OAH	NC	**NPRZZZZZ**	451	9,915	118,980	
PEZ	456	OAH	NE	**NPRZZZZZ**	451	5,753	69,036	NARUC 583
	456 Total							
PEZ	461	OAH	NE	NPAVP2ZZ	451	355	4,260	NARUC 583

Hawaiian Electric Company, Inc.
Information Technology & Services Department
PEZ Actuals Jan- Dec 2003

	RA	Act	Loc	Ind	Project	EE		Monthly 05	Total 2005	
		461 Total								
	PEZ	462	OAH	NE	NPAVP2ZZ	451		310	3,720	NARUC 584
		462 Total								
	PEZ	463	OAH	NE	NPAVP2ZZ	451		344	4,128	NARUC 582
		463 Total								
	PEZ	465	OAH	NE	NPWZZZZZ	451		1,412	16,944	NARUC 586
		465 Total								
	PEZ	474	OAH	NE	NPAVP2ZZ	451		554	6,648	NARUC 593
		474 Total								

Hawaiian Electric Company, Inc.
Information Technology & Services Department
PEZ Actuals Jan- Dec 2003

	RA	Act	Loc	Ind	Project	EE	Monthly 05	Total 2005
	PEZ	714	PHE	NE	NPEZZZZZ	451		
		714 Total						
	PEZ	720	PHE	NS	**NPCZZZZZ**	451	60,493	725,916
	PEZ	720	PHE	NE	NPNEZZZZ	451		
		720 Total						
	PEZ	722	PHE	NE	**NPFZZZZZ**	451	1,667	20,004
		722 Total						
	PEZ	730	PPO	NE	NPEZZZZZ	451	367	4,404

Hawaiian Electric Company, Inc.
Information Technology & Services Department
PEZ Actuals Jan- Dec 2003

RA	Act	Loc	Ind	Project	EE	Monthly 05	Total 2005
PEZ	818	PHE	NE	**NPAVP1ZZ**	451		
PEZ	818	PHE	NE	NPAZZZZZ	451		
	818 Total						
PEZ	825	PHE	NE	NPKZZZZZ	451	1,452	17,424
	825 Total						
PEZ	826	PHE	NE	NPKZZZZZ	451	4,289	51,468
PEZ	826	PHE	NE	NPAVP4ZZ	451		
	826 Total						
PEZ	827	PHE	NE	NPKZZZZZ	451	2,846	34,152
	827 Total						
PEZ	842	PHE	NE	**NPVZZZZZ**	451	16,574	198,888
PEZ	842	PHE	NE	NPAVP2ZZ	451		
	842 Total						
PEZ	843	PHE	NE	NPAVP2ZZ	451	16,353	196,236
PEZ	843	PHE	NE	NPEZZZZZ	451		
PEZ	843	PHE	NI	P0000340	451		
PEZ	843	PHE	NE	NPAZZZZZ	451		
	843 Total						
PEZ	850	PHE	NE	NPAVP2ZZ	451	4,484	53,808
PEZ	850	PHE	NE	**NPIZZZZZ**	451		
	850 Total						
PEZ	853	PHE	NC	**NPVZZZZZ**	451	12,945	155,340
	853 Total						
PEZ	875	HST	NE	NPJZZZZZ	451	7,005	84,060
PEZ	875	PHE	NE	NPJZZZZZ	451		
	875 Total						
PEZ	876	PHE	NE	NPJZZZZZ	451	11,888	142,656
	876 Total						
PEZ	896	PHE	NE	NPEZZZZZ	451	3,417	41,004
	896 Total						
PEZ	899	PHE	NE	NPKZZZZZ	451	-	-
	899 Total						
PEZ	907	OAH	NC	NPBZZZZZ	451	1,570	18,840
PEZ	907	OAH	NC	NPEZZZZZ	451		
	907 Total						
PEZ	916	PHE	NC	**NPRZZZZZ**	451	2,846	34,152
	916 Total						
PEZ	926	PDO	NE	NPWZZZZZ	451	4,558	54,696

Hawaiian Electric Company, Inc.
Information Technology & Services Department
PEZ Actuals Jan- Dec 2003

RA	Act	Loc	Ind	Project	EE			Monthly 05	Total 2005
PEZ	950	PHE	NE	**NPHZZZZZ**	451			8,268	99,216
PEZ	950	PHE	NE	**NPKZZZZZ**	451				
	950 Total								
PEZ	951	PHE	NE	NPKZZZZZ	451			2,825	33,900
	951 Total								
PEZ	953	PHE	NE	NPFZZZZZ	451			3,520	42,240
	953 Total								
PEZ	960	PHE	NE	NPNCZZZZ	451			6,244	74,928
	960 Total								
PEZ	965	PHE	NE	NPEZZZZZ	451			1,636	19,632
	965 Total								
PEZ	966	PHE	NE	NPEZZZZZ	451			2,896	34,752
	966 Total								
PEZ	967	PHE	NE	NPEZZZZZ	451			3,375	40,500
	967 Total								
	Grand Total							827,378	9,928,536
						NE		599,043	7,249,788
						NC/N		228,335	2,678,748
									9,928,536
Check total to pillar									11,752,155.00

NON-PROJECT "NC" CHARGES

4/20/2004 » budget manager: PR300 11:49AM

Dept	Expense Categ...	FY05 Upd04 RA
InfoTech	Labor (A)	$4,714,393
	Materials	$105,604
	On-Costs	0
	Other	$1,181,513
	Outside Svcs	$3,090,837
	Transportation	$1,260
		$9,093,607

SEE WORKPAPER B-3 FOR DETAILS

LABOR (A) 4714,393

LABOR ON-COST % XB-1 x 45.6%

NC LABOR ON-COST 2,149,763

8A

NON-PROJECT TOTAL CHARGES

4/20/2004 » budget manager: P... 11:49AM

NOTE: USED TO CALCULATE LABOR ON-COST %

Dept	Expense Categ...		FY05 Upd04 RA
InfoTech	Labor	(L)	$6,241,212
	Materials	(A)	$314,204
	On-Costs	(E)	$2,875,047
	Other		$1,761,191
	Outside Svcs		$3,311,618
	Transportation		$23,040
			$14,526,312

MATERIAL (A)

MATERIAL ON-COST %

MATERIAL ON-COST

TOTAL ON-COST (E)

LABOR ON-COST

LABOR BASE (L)

LABOR ON-COST %

314,204
x B-2 x .095
<29,750>
2875047
2,846,797
6241212

45.6%
xB

B-1

On-Costs and Vehicle Rates

On-Cost	2004 Budget Rates	1/1/2004 Recorded Rates	2/1/2004 Recorded Rates	4/1/2004 Recorded Rates	Preliminary 2005 Budget Rates
Payroll Taxes	8.51%	8.51%	8.51%	8.51%	8.42%
Employee Benefits	$6.25	$9.38	$5.96	$5.96	$6.46
Non-Productive Wages	$4.44	$4.44	$4.44	$4.44	$3.84
Corporate Administration	$2.76	$2.89	$2.74	$2.74	$2.86
Customer Engineering	$113.55	$119.53	$100.00	$90.00	$98.56
Stores	12.00%	12.55%	10.70%	10.70%	9.15%
Energy Delivery	$26.80	$28.22	$27.75	$27.75	$26.88
Power Supply	$6.38	$6.72	$6.24	$6.24	$6.70
Vehicles					
Heavy Trucks (VH)	$12.50	$12.47	$16.39		$12.50
Medium Trucks (VM)	$8.50	$9.45	$12.53		$8.75
Light Trucks (VL)	$5.50	$5.08	$4.98		$5.50
Sedans (VS)	$2.75	$1.89	$2.79		$2.50
Condor 150I (VC)	$58.25	$31.79	$37.32		$59.25
Misc (VZ)	$1.50	$1.26	$1.55		$1.50
Caterpillar (VX)	$4.25	$2.25	$2.61		$4.25

x B-1

Productive labor is labor less non-productive hours such as holiday, sick, vacation, etc.

Effective 1/1/01, there are no recorded vehicle rates. Instead, transportation clearing costs are allocated monthly to (1) assigned vehicles based on 8 hours per day, Monday through Friday, excluding holidays and (2) pool vehicles based on actual usage.

Dept	*RA #	*Act #	*Ind #	*Loc #	*Proj #	*EE #	Line Item	FY05 Upd04 RA	Expense Category
InfoTech	PEA	749	NC	PHE	NPEZZZZZ	515	UTC Dues 1/2 2004-2005	$3,200	Other
InfoTech	PEA	749	NC	PHE	NPEZZZZZ	520	Travel - mainland	$6,000	Other
InfoTech	PEA	749	NC	PHE	NPEZZZZZ	520	Conferences - Maintain Industry Relations	$9,500	Other
InfoTech	PEA	749	NC	PHE	NPEZZZZZ	521	Travel - mainland meals/ent	$500	Other
InfoTech	PEA	891	NC	PHE	NPEZZZZZ	461	Consultants-applications dev <ED>	$140,000	Other
InfoTech	PEA	901	NC	PHE	NPEZZZZZ	461	Consulting <ED>	$70,000	Other
InfoTech	PEA	901	NC	PHE	NPEZZZZZ	461	Gartner Fees	$35,000	Other
InfoTech	PEA	901	NC	PHE	NPEZZZZZ	522	Travel - neighbor island	$3,800	Other
InfoTech	PED	890	NC	PHE	NPEZZZZZ	462	PC Software Products - New App Devl & Enhance	$45,000	Other
InfoTech	PED	891	NC	PHE	NPEZZZZZ	463	Software Prod Application Maint - sybase-power bldr	$1,500	Other
InfoTech	PEI	896	NC	PHE	NPEZZZZZ	462	Mcafee license <EI>	$90,000	Other
InfoTech	PEI	896	NC	PHE	NPEZZZZZ	570	Network data circuits <ES>	$150,000	Other
InfoTech	PEI	897	NC	PHE	NPEZZZZZ	462	Misc software & Verisign @$3K <EC>	$8,500	Other
InfoTech	PEI	897	NC	PHE	NPEZZZZZ	462	Remedy's Change Management 2005B Add	$90,000	Other
InfoTech	PEI	900	NC	PHE	NPEZZZZZ	570	HECO trunks <ES>	$178,800	Other
InfoTech	PEI	915	NC	PHE	NPEZZZZZ	900	Expanet & Koolau & generator maint <EI>	$349,713	Other
InfoTech								$1,181,513	Other
InfoTech	PEA	789	NC	PHE	NPEZZZZZ	501	Education & Training	$50,000	Outside Svcs
InfoTech	PED	891	NC	PHE	NPEZZZZZ	501	Middleware Maintenance	$55,200	Outside Svcs
InfoTech	PED	891	NC	PHE	NPEZZZZZ	501	Bell&Howell transformer/ Grp 1 Cd 1 SW Maintenance	$32,900	Outside Svcs
InfoTech	PEI	795	NC	PHE	NPEZZZZZ	501	Safety shoes <Eo>	$1,000	Outside Svcs
InfoTech	PEI	895	NC	PHE	NPEZZZZZ	501	IBM laser printers <Eo>	$79,263	Outside Svcs
InfoTech	PEI	895	NC	PHE	NPEZZZZZ	501	Mainframe hardware maintenance <Eo>	$193,015	Outside Svcs
InfoTech	PEI	895	NC	PHE	NPEZZZZZ	501	UPS & generator maintenance <Eo>	$33,600	Outside Svcs
InfoTech	PEI	895	NC	PHE	NPEZZZZZ	501	CPU (Z800 2066 OC1) Lease <Eo>	$156,516	Outside Svcs
InfoTech	PEI	895	NC	PHE	NPEZZZZZ	501	Disaster Recovery for Enterprise Server < Eo>	$65,052	Outside Svcs
InfoTech	PEI	895	NC	PHE	NPEZZZZZ	501	Mainframe Software <Eo>	$528,261	Outside Svcs
InfoTech	PEI	895	NC	PHE	NPEZZZZZ	501	IBM Software <Eo>	$393,384	Outside Svcs
InfoTech	PEI	895	NC	PHE	NPEZZZZZ	501	HEI Fees for Internet (2004 contains increm incr only)	$82,706	Outside Svcs
InfoTech	PEI	895	NC	PHE	NPEZZZZZ	501	HEI Fees for Spam (Big Fish) Filtering Charges	$30,000	Outside Svcs
InfoTech	PEI	896	NC	PHE	NPEZZZZZ	501	MS premier support fees <EI>	$141,000	Outside Svcs
InfoTech	PEI	896	NC	PHE	NPEZZZZZ	501	Network Equipment Maintenance <EI>	$250,000	Outside Svcs

BASED ON HISTORY

NEW 2005 PROJECT BASED ON HISTORY

BASED ON HISTORY

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Dept	*RA #	*Act #	*Ind #	*Loc #	*Proj #	*EE #	Line Item		FY05 Upd04 RA	Expense Category
InfoTech	PEI	896	NC	PHE	NPEZZZZZ	501	10 ISDN Phones		$4,800	Outside Svcs
InfoTech	PEI	897	NC	PHE	NPEZZZZZ	501	MEA for HECO	<EC>	$311,000	Outside Svcs
InfoTech	PEI	897	NC	PHE	NPEZZZZZ	501	PC maintenance	<EI>	$374,400	Outside Svcs
InfoTech	PEI	898	NC	PHE	NPEZZZZZ	501	EFMS maint (Intergraph)	<EI>	$275,000	Outside Svcs
InfoTech	PEI	900	NC	PHE	NPEZZZZZ	501	Generator propane	<EI>	$540	Outside Svcs
InfoTech	PEI	900	NC	PHE	NPEZZZZZ	501	Moves, adds, chgs	<EI>	$6,000	Outside Svcs
InfoTech	PEI	900	NC	PHE	NPEZZZZZ	501	Long Distance Charges	<ES>	$20,000	Outside Svcs
InfoTech	PEI	900	NC	PHE	NPEZZZZZ	501	Directory Listing	<EI>	$7,200	Outside Svcs
InfoTech									$3,090,837	Outside Svcs
InfoTech	PEA	901	NC	PHE	NPEZZZZZ	301	Car pools		$1,260	Transportation
InfoTech									$1,260	Transportation
									$9,093,607	

BASED ON HISTORY

BASED ON HISTORY

HOURS / EMPLOYEES - "NC" CHARGES

12/22/2004 » budget manager: PR110H NPUpd - Det... 1:06PM

*R...	*Ac...	*Lo...	*In...	*Proj #	*E...	*Lbr Class	Line item	FY05 Upd04 RA	HOURS / EMPLOYEES
PEA	730	PHE	NC	NPEZZ...	150	__E	E res new tech 730	144	
PEA	890	PHE	NC	NPEZZ...	150	__E	E dev-new 890	600	
PEA	891	PHE	NC	NPEZZ...	150	__E	E dev comp apps enh 891	504	
PEA	895	PHE	NC	NPEZZ...	150	__E	E mainframe 895	192	
PEA	896	PHE	NC	NPEZZ...	150	__E	E LAN 896	384	
PEA	897	PHE	NC	NPEZZ...	150	__E	E desktop-bus 897	216	
PEA	898	PHE	NC	NPEZZ...	150	__E	E desktop-tech 898	168	
PEA	901	PHE	NC	NPEZZ...	150	__E	E provide IT cust asst 901	192	
PEA							ITS CHIEF INFORMATION OFFICER	2,400	1
PEA	777	PHE	NC	NPEZZ...	150	__I	I process payroll 777	96	
PEA	901	PHE	NC	NPEZZ...	150	__I	I provide IT cust asst 901	1,812	
PEA							ITS SECRETARY	1,908	1
PEC	901	PHE	NC	NPEZZ...	150	__FS	FS IT cust asst 901	1,248	
PEC	965	PHE	NC	NPEZZ...	150	__FS	FS dev mng fcst 701	420	
PEC	966	PHE	NC	NPEZZ...	150	__FS	FS maint rel 721	204	
PEC	967	PHE	NC	NPEZZ...	150	__FS	FS Org Dev Strat 722	204	
PEC							DIRECTOR - CUSTOMER CARE	2,076	1
PEC	842	PHE	NC	NPEZZ...	150	__I	I order mat'ls equip-clrg 842	396	
PEC	844	PHE	NC	NPEZZ...	150	__I	I prepare contracts-clrg 844	1,944	
PEC	901	PHE	NC	NPEZZ...	150	__I	I provide IT cust asst-clrg 901	7,464	
PEC							SPECIALISTS	9,804	5
PEC	701	PHE	NC	NPEZZ...	150	__TC	TC Dev Mnge Fcst 701	384	
PEC	721	PHE	NC	NPEZZ...	150	__TC	TC Dev Meas & Anl Perf 721	1,308	
PEC	840	PHE	NC	NPEZZ...	150	__TC	TC Admin Oth Procur Pgm 840	192	
PEC	844	PHE	NC	NPEZZ...	150	__TC	TC prep/mge contracts-clrg 844	768	
PEC	901	PHE	NC	NPEZZ...	150	__TC	TC provide it customer assistance-clrg...	9,276	
PEC							CONSULTANTS / ANALYSTS	11,928	6
PED	785	PHE	NC	NPEZZ...	150	__FS	FS Plan Emp Trng & Dev 785	204	
PED	891	PHE	NC	NPEZZ...	150	__FS	FS develop comp apps-enh 891	1,860	
PED							DIRECTOR - DEVELOPMENT SERVICES	2,064	1
PED	730	PHE	NC	NPEZZ...	150	__TC	TC new tech 730	576	
PED	789	PHE	NC	NPEZZ...	150	__TC	TC attend training 789	1,740	
PED	890	PHE	NC	NPEZZ...	150	__TC	TC develop comp apps-new 890	6,960	
PED	891	PHE	NC	NPEZZ...	150	__TC	TC develop comp apps-enhanced 891	48,108	
PED	901	PHE	NC	NPEZZ...	150	__TC	TC Prov IT Cust Assist 901	576	
PED							LEADS / ANALYSTS / SPECIALISTS	57,960	30
PEI	895	PHE	NC	NPEZZ...	150	__BUOC	BUOC oper & main mainframe 895	9,120	
PEI							OPERATORS	9,120	5
PEI	895	PHE	NC	NPEZZ...	150	__FS	FS oper & main mainframe 895	336	
PEI	896	PHE	NC	NPEZZ...	150	__FS	FS oper & main LAN 896	1,116	
PEI	897	PHE	NC	NPEZZ...	150	__FS	FS oper & main desktop 897	780	
PEI							DIRECTOR - INFRASTRUCTURE & OPERATIONS	2,232	1
PEI	896	PHE	NC	NPEZZ...	150	__I	I oper & main LAN 896	2,052	

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12/22/2004 » budget manager: PR110H NPUpd - Det... 1:06PM

HOURS

*R...	*Ac...	*Lo...	*In...	*Proj #	*E...	*Lbr Class	Line item	FY05 Upd04 RA	EMPLOYEE
PEI	897	PHE	NC	NPEZZ...	150	__I	I oper & maint desktop 897	1,836	
PEI	900	PHE	NC	NPEZZ...	150	__I	I op desk top offc telecom 900	1,788	
PEI							SPECIALISTS/COORDINATOR	5,676	3
PEI	895	PHE	NC	NPEZZ...	150	__TC	TC oper & main mainframe 895	7,608	
PEI	896	PHE	NC	NPEZZ...	150	__TC	TC oper & main LAN 896	13,296	
PEI	897	PHE	NC	NPEZZ...	150	__TC	TC oper & main desktop 897	3,648	
PEI							LEAD/ADMINISTRATOR/ANALYSTS	24,552	12
PEI	895	PHE	NC	NPEZZ...	150	__TCS	TCS oper & main mainframe 895	2,028	
PEI							SUPERVISOR	2,028	1
PEP	700	PHE	NC	NPEZZ...	150	__FS	FS dev & adm bus plans 700	108	
PEP	722	PHE	NC	NPEZZ...	150	__FS	FS org dev strat 722	216	
PEP	730	PHE	NC	NPEZZ...	150	__FS	FS rsrch new technology 730	1,380	
PEP	765	PHE	NC	NPEZZ...	150	__FS	FS empl pol prac proc 765	108	
PEP	785	PHE	NC	NPEZZ...	150	__FS	FS performance appraisals 785	108	
PEP	906	PHE	NC	NPEZZ...	150	__FS	FS telecom-man, engr, design 906	216	
PEP							DIRECTOR-PROJECT & BUS MGT	2,136	1
PEP	700	PHE	NC	NPEZZ...	150	__TC	TC dev & adm bus plans 700	324	
PEP	701	PHE	NC	NPEZZ...	150	__TC	TC dev & mg fcst 701	1,620	
PEP	722	PHE	NC	NPEZZ...	150	__TC	TC org dev strat 722	648	
PEP	730	PHE	NC	NPEZZ...	150	__TC	TC research new tech 730	2,424	
PEP	789	PHE	NC	NPEZZ...	150	__TC	TC attend training - local 789	168	
PEP	890	PHE	NC	NPEZZ...	150	__TC	TC develop apps - new 890	648	
PEP	891	PHE	NC	NPEZZ...	150	__TC	TC maintain apps - enhances 891	6,624	
PEP	896	PHE	NC	NPEZZ...	150	__TC	TC op and maintain LAN 896	1,620	
PEP	906	PHE	NC	NPEZZ...	150	__TC	TC plan the Sys Telecom 906	2,100	
PEP							LEAD	16,176	9
								150,060	77

PROJECT "NC" CHARGES

FROM PROJECT FILE INDICATOR = NC

4/20/2004 » budget manager: PR9100-P: Summa... 11:34AM

*Project #	Project	*M-Proj #	Curr Upd New Total $	Proj to Date Act $	FY05 UPDATE04
P0000040	EFMS Program	P0000040	$3,780,000	0	$800,000
		R0003012	$25,234	$25,234	0
		R0003621	$79,981	$79,981	0
		R0003624	$65,116	$65,116	0
		R0003625	$168,320	$168,320	0
		R0003627	-$14,583	-$14,583	0
		R0003628	$31,662	$31,662	0
		R0004779	$35,110	$35,110	0
		R0004780	$13,263	$13,263	0
		R0004884	$0	$0	0
		R0004885	$63,305	$63,305	0
		R0004886	$38,964	$38,964	0
		R0004887	$38,964	$38,964	0
		R0004888	$38,964	$38,964	0
		R0005500	$12,188	$12,188	0
		R0005749	$28,100	$28,100	0
		R0006579	$54,938	$54,938	0
		R0006598	$26,880	$26,880	0
		R0009382	$4	$4	0
		R0009383	$7,486	$7,486	0
			$4,493,893	$713,893	$800,000
P0000427	e-Bus HECOcom Proje...		$24,827	0	$18,300
		P0000427	$2,721,233	$50,233	$740,000
			$2,746,060	$50,233	$758,300
P0000868	Middleware Implementa...		$50,311	0	$7,842
		P0000868	$425,727	0	$55,771
			$476,039	0	$63,613
			$7,715,992	$764,126	$1,621,913

C

HECO IT Costing Estimates for 2005-2006 for HELCO

HELCO - IT COSTING SYSTEM DIRECT CHARGE

DIRECT CHARGES

Dist.	Project #	WO #		Account Code					Estimate 2005	Estimate 2006	
HELC			H9P	700	HEL	NE	NHAPRESI	451	1,143	1,143	
HELC			HAA	701	HEL	NE	NHAZZZZZ	451	1,714	1,714	
HELC			HAA	818	HEL	NE	NHAZZZZZ	451	1,714	1,714	
HELC			HAC	818	HEL	NE	NHAZZZZZ	451	3,727	3,727	
HELC			HAK	604	HAK	NE	NHAZZZZZ	451	5,407	5,407	
HELC			HAP	817	HEL	NE	NHAZZZZZ	451	2,285	2,285	
HELC			HDA	965	HED	NC	NHDZZZZZ	451	7,013	7,013	
HELC			HDC	603	HAH	NE	NHDZZZZZ	451	15,328	15,328	
HELC			HDR	455	HED	NC	NHDZZZZZ	451	3,428	3,428	
HELC			HDR	600	HAH	NE	NHDZZZZZ	451	3,428	3,428	
HELC			HGA	211	ANS	NS	NHGZZZZZ	451	3,620	3,620	
HELC			HNA	775	HEL	NE	NHNZZZZZ	451	1,299	1,299	
HELC			HNL	928	HEL	NE	NHNZZZZZ	451	1,517	1,517	
HELC		CS000024	HCS	112	HEL	NE	NHCZZZZZ	451	6,040	6,040	
HELC		CS000101	HCE	750	HEL	NE	NHCZZZZZ	451	1,143	1,143	
HELC		CS000274	HAW	604	HEL	NE	NHAZZZZZ	451	8,448	8,448	
HELC		CS000317	HAK	604	HAK	NE	NHAZZZZZ	451	17,470	17,470	
HELC		CS000347	HAS	604	HAH	NE	NHAZZZZZ	451	32,863	32,863	
HELC		CS000431	HCB	711	HEL	NE	H0000004	451	3,802	3,802	
HELC		EE000629	HWA	408	HED	NC	NHWZZZZZ	451	49,364	49,364	
HELC		FI000043	HAC	818	HEL	NE	NHAZZZZZ	451	6,186	6,186	
HELC		HR000258	HNP	778	HEL	NE	NHNZZZZZ	451	30,450	30,450	FBF App labor
HELC		HR000259	HNP	779	HEL	NE	NHNZZZZZ	451	1,800	1,800	FBH App labor
HELC		HR000260	HNP	779	HEL	NE	NHNZZZZZ	451	600	600	FBP App labor
HELC		HR000261	HNP	776	HEL	NE	NHNZZZZZ	451	450	450	FBS App labor
HELC		HR000262	?	?	?	?	?	451	7,500	7,500	FCC App labor
HELC		HR000264	?	?	?	?	?	451	600	600	FP App labor
HELC	C0000929		HCI	714	HEL	NE	H0000002	451	5,588	5,588	
HELC	C0000939		HCI	714	HEL	NE	H0000001	451	2,411	2,411	
							TOTAL		226,338	226,338	

XA

INTERCOMPANY BILLABLE (ICB) CHARGES

Dist.	Project #	WO #		Account Code					2005	2006	
HECO		HR000238	PFC	775	HEL	NE	NPFZZZZZ	451	2,574	2,574	PFC Desktop
							TOTAL		2,574	2,574	

D

Murakami, Blane

From: Inouye, Juliane
Sent: Tuesday, April 20, 2004 1:34 PM
To: Murakami, Blane
Subject: FW: 2005-2006 ITCosting Estimates for HELCO

From: Inouye, Juliane
Sent: Tuesday, March 16, 2004 10:16 AM

[redacted]

Subject: 2005-2006 ITCosting Estimates for HELCO

Paul,

Attached are HECO's ITS Costing Estimates for 2005 and 2006. As in the past, all estimates except for those marked "App Labor" are based on last year's actual charges. The App labor estimates are projections. Note that although most Benefits and Compensation charges were App labor charges are now being direct charged, one charge will continue to be processed through intercompany billing.

In addition, completed Inercompany Service Forms for Records Management and Microsoft MEA are being mailed to you today.

Please feel free to call me if you have any questions.

Thank you,

Juliane Inouye
HECO - ITS Dept.
ph. 808-543-7135

HECO IT Costing Estimates for 2005-2006 for MECO

MECO - IT COSTING SYSTEM DIRECT CHARGE

DIRECT CHARGES

Dist.	Project #	WO #		Account Code					Estimate 2005	Estimate 2006	
MECO			M9P	700	MAU	NE	NMAZZZZZ	451	2,439	2,439	
MECO			MAA	612	MAU	NE	NMAZZZZZ	451	1,143	1,143	
MECO			MAA	818	MAU	NE	NMAZZZZZ	451	1,105	1,105	
MECO			MAB	612	MAU	NE	NMAZZZZZ	451	3,428	3,428	
MECO			MAG	612	MAU	NE	NMAZZZZZ	451	1,439	1,439	
MECO			MCT	604	MAM	NE	NMCZZZZZ	451	4,571	4,571	
MECO			MDK	620	MAU	NE	NMDZZZZZ	451	1,615	1,615	
MECO			MDM	603	MAU	NE	NMDZZZZZ	451	8,745	8,745	
MECO			MDR	618	MAU	NE	NMDZZZZZ	451	13,042	13,042	
MECO			MGA	899	NST	NC	NMGZZZZZ	451	2,409	2,409	
MECO			MSP	778	MAU	NE	NMSZZZZZ	451	1,887	1,887	
MECO			MWA	901	MAU	NC	NMWZZZZZ	451	10,847	10,847	
MECO			MWC	600	MAU	NC	NMWZZZZZ	451	2,285	2,285	
MECO			MWP	600	MAU	NC	NMWZZZZZ	451	19,426	19,426	
MECO			MWS	600	MAU	NC	NMWZZZZZ	451	3,428	3,428	
MECO		CS000027	MCN	112	MAU	NE	NMCZZZZZ	451	26,282	26,282	
MECO		CS000096	MCM	610	MAU	NE	NMCZZZZZ	451	3,132	3,132	
MECO		CS000153	MCA	604	MAU	NE	NMCZZZZZ	451	11,085	11,085	
MECO		CS000158	MCR	604	MAU	NE	NMCZZZZZ	451	17,140	17,140	
MECO		HR000132	MSP	779	MAU	NE	NMSZZZZZ	451	620	620	FP App labor
MECO		HR000133	MSP	775	MAU	NE	NMSZZZZZ	451	7,500	7,500	FCC App labor
MECO		HR000135	MSP	778	MAU	NE	NMSZZZZZ	451	31,262	31,262	FBF App labor
MECO		HR000144	MSP	779	MAU	NE	NMSZZZZZ	451	1,856	1,856	FBH App labor
MECO		HR000199	MSP	776	MAU	NE	NMSZZZZZ	451	462	462	FBS App labor
MECO		HR000232	MSP	779	MAU	NE	NMSZZZZZ	451	620	620	FBP App labor
							TOTAL		177,768	177,768	

YA

INTERCOMPANY BILLABLE (ICB) CHARGES

Dist.	Project #	WO #		Account Code					2005	2006	
HECO		HR000240	PFC	775	HEL	NE	NPFZZZZZ	451	2,574	2,574	PFC Desktop
							TOTAL		2,574	2,574	

Murakami, Blane

From: Inouye, Juliane
Sent: Tuesday, April 20, 2004 1:34 PM
To: Murakami, Blane
Subject: FW: 2005-2006 ITCosting Estimates for MECO

From: Inouye, Juliane
Sent: Tuesday, March 16, 2004 10:24 AM
To: Matsunaga, Lyle
Cc: Matsumura, Joyce; Young, Patti; Tobara, Bryce
Subject: 2005-2006 ITCosting Estimates for MECO

Lyle,

Attached are our ITS Costing Estimates for 2005 and 2006. As in the past, all estimates except for those marked "App Labor" are based on last year's actual charges. The [redacted]

NON-ITS PROJECT - EXPENSE ELEMENT 451 CHARGES FROM LINDA YAMAMOTO

*Project #	Project	*M-Proj #	ProjMgrOrEngr	*RA #	*Ind #	*EE #	FY05	FY05 Adj
P0000318	Project Ellipse	P0000318	Noda, R	PEZ	BE	451	-	
P0000318	Project Ellipse	P0000318	Noda, R	PEZ	NE	451	-	
P0000318							-	-
P0000350	Field Service System Replacement	P0000350	Oda, W	PEZ	NI	451	-	
P0000350							-	-
P0000502	Waiau Minor Gen Addns	P0000502	Nakano, W	PEZ	NI	451	48	
P0000502							48	2,400
P0000503	Ward Ave Minor Addns	P0000503	Nakano, W	PEZ	NI	451	96	
P0000503							96	4,800
P0000504	King St Minor Addns	P0000504	Nakano, W	PEZ	NI	451	48	
P0000504							48	2,400
P0000571	CIS Replacement	P0000571	Hull, Thomas	PEZ	BD	451	78,813	
P0000571	CIS Replacement	P0000571	Hull, Thomas	PEZ	BE	451	23,037	
P0000571	CIS Replacement	P0000571	Hull, Thomas	PEZ	ND	451	172,987	
P0000571	CIS Replacement	P0000571	Hull, Thomas	PEZ	NE	451	50,563	
P0000571							325,400	325,400
P0000825	C&M Renovation	P0000825	Nakano, W	PEZ	NI	451	120	
P0000825							120	6,000
P0000826	ITS Renovation	P0000826	Nakano, W	PEZ	NI	451	-	
P0000826							-	-
P0000851	Purchasing Warehouse Renov	P0000851	Nakano, W	PEZ	NI	451	-	
P0000851							-	-
P0000878	Check Processing Upgrade	P0000878	Ejercito, A	PEZ	NE	451	-	
P0000878							-	-
00896	Finance Plus Replacement		Takamura, I	PEZ	NE	451		
00896							-	-
P0000907	PLC Market Trial		Nordyke, M	PEZ	NE	451	154,800	
P0000907							154,800	154,800
P0000984	Promote e-Customer Service		Ejercito, A	PCA	NE	451	12,000	
P0000984							12,000	12,000
P0000985	Bill Payment System/ATM Proj		Ejercito, A	PCA	NE	451	6,000	
P0000985	Bill Payment System/ATM Proj		Ejercito, A	PCA	NI	451	-	
P0000985							6,000	6,000
P0000986	GPS (Global Posit. Sys.)		Ejercito, A	PCA	NE	451	4,000	
P0000986	GPS (Global Posit. Sys.)		Ejercito, A	PCA	NI	451	-	
P0000986							4,000	4,000
P0000987	3rd Party Pay Solutions		Ejercito, A	PCA	NE	451		
P0000987							-	-
P0000988	ACCESS (solutions to issues)		Ejercito, A	PCA	NE	451	10,000	
P0000988	ACCESS (solutions to issues)		Ejercito, A	PCA	NI	451	-	
P0000988							10,000	10,000

Murakami, Blane

From: Yamamoto, Linda
Sent: Thursday, April 15, 2004 12:43 PM
To: Murakami, Blane
Cc: Young, Patti; Shimabukuro, Gail
Subject: RE: ITS cost reports aka EE451 reports

0415 ITS Upd Costs EDProj.ASC

0415 ITS Upd Costs NEDProj.ASC...

Attached are your reports for the Update.

-----Original Message-----
From: Murakami, Blane
Sent: Thursday, April 15, 2004 11:08 AM
To: Yamamoto, Linda
Cc: Young, Patti; Shimabukuro, Gail
Subject: RE: ITS cost reports aka EE451 reports

Would you send me an update of the ascii files below (based on Pillar inputs submitted on April 12). I would like to review the current EE451 estimates to determine if changes to ITS's 2005 Budget PEZ estimates are required.

Thanks.

-----Original Message-----
From: Yamamoto, Linda
Sent: Friday, February 13, 2004 9:48 AM
To: Murakami, Blane
Cc: Young, Patti; Takahashi, Cynthia
Subject: RE: ITS cost reports aka EE451 reports

<< File: 0212 ITS Bud Costs EDProj.ASC >> << File: 0212 ITS Bud Costs NEDProj.ASC >> << File: 0212 ITS Upd Costs EDProj.ASC >> << File: 0212 ITS Upd Costs NEDProj.ASC >>

Attached are the reports you requested. Let me know if you have any questions.

Linda

-----Original Message-----
From: Murakami, Blane
Sent: Friday, February 13, 2004 9:16 AM
To: Yamamoto, Linda
Cc: Young, Patti; Takahashi, Cynthia
Subject: FW: ITS cost reports aka EE451 reports

Would you be able to provide the reports below based on the current Pillar inputs (as of Feb 12). We call these the EE451 entries in ITS.

Thanks

-----Original Message-----
From: Yamamoto, Linda
Sent: Wednesday, August 27, 2003 11:34 AM
To: Murakami, Blane; Young, Patti; Takahashi, Cynthia
Subject: ITS cost reports

<< File: 0826 ED ITS Bud Costs 04-05.ASC >> << File: 0826 ED ITS Costs Aug-Dec03.ASC >> << File: 0826 NED ITS Bud Costs 04-05.ASC >> << File: 0826 NED ITS Costs Aug-Dec03.ASC >>

Attached are the ITS cost reports for 2003 Update (Aug-Dec) as well as 2004 and 2005 Budget.

Linda Yamamoto
543-7752

E-1

*RA #	*Act #	*Loc #	*Ind #	*Project #	*EE #	Line Item	FY05
PEA	965	HEL	BE	NPEZZZZZ	521	H9P HELCO File Audit Rec ...	$180.00
PEA	965	HEL	BE	NPEZZZZZ	522	H9P HELCO File Audit Rec ...	$580.00
PEA	965	MAU	BE	NPEZZZZZ	521	MSA MECO File Audit Rec ...	$180.00
PEA	965	MAU	BE	NPEZZZZZ	522	MSA MECO File Audit Rec ...	$580.00
PED	711	HEL	BE	NPEZZZZZ	452	HEL billable Dev Sup for HE...	$2,000.00
PEI	895	FCU	BE	NPEZZZZZ	451	HECO Federal Credit Union	$9,600.00
PEI	895	HEI	BE	NPEZZZZZ	451	HEI Stock Transfer Data Ce...	$23,376.00
PEI	897	HEL	BE	NPEZZZZZ	501	HAC MEA for HELCO ...	$60,000.00
PEI	897	MAU	BE	NPEZZZZZ	501	MAA MEA for MECO ...	$49,000.00
PEI	900	HEI	BE	NPEZZZZZ	501	HEI telecomm-HEI ...	$9,000.00
PEZ	700	RHI	BE	NPASVP7Z	451	RHI Billable	$1,070.00
PEZ	775	HEI	BE	NPFZZZZZ	451	PFC HEI Billable - Empl Co...	$2,544.00
PEZ	775	HEL	BE	NPFZZZZZ	451	PFC HEL Billable - Empl Co...	$2,544.00
PEZ	775	MAU	BE	NPFZZZZZ	451	PFC MAU Billable - Empl C...	$2,544.00
PEZ	776	HEI	BE	NPFZZZZZ	451	PFB - HEI Billable - Ben Pla...	$1,998.00
PEZ	776	HPC	BE	NPFZZZZZ	451	PFB HPC Billable - Ben Pla...	$87.00
PEZ	776	PEC	BE	NPFZZZZZ	451	PFB PEC Billable - Ben Pla...	$174.00
PEZ	778	HEI	BE	NPFZZZZZ	451	PFB HEI Billable - Adm Flex...	$1,045.00
PEZ	778	HPC	BE	NPFZZZZZ	451	PFB HPC Billable - Adm Fle...	$45.00
PEZ	778	PEC	BE	NPFZZZZZ	451	PFB PEC Billable - Adm Fle...	$91.00
PEZ	779	HEI	BE	NPFZZZZZ	451	PFB HEI Billable - Adm Reti...	$1,140.00
PEZ	779	HPC	BE	NPFZZZZZ	451	PFB HPC Billable - Adm Re...	$20.00
PEZ	779	PEC	BE	NPFZZZZZ	451	PFB PEC Billable - Adm Ret...	$40.00
PEZ	817	HEL	BE	NPAZZZZZ	451	HEL Billable	$0.00
PEZ	817	MAU	BE	NPAZZZZZ	451	MAU Billable	$0.00
PEZ	825	HEI	BE	NPKZZZZZ	451	PKT HEI Billable - Manage ...	$2,464.00
PEZ	825	HEL	BE	NPKZZZZZ	451	HEL Billable	$189.00
PEZ	825	MAU	BE	NPKZZZZZ	451	MAU Billable	$189.00
PEZ	826	HEL	BE	NPKZZZZZ	451	HEL Billable	$791.00
PEZ	826	MAU	BE	NPKZZZZZ	451	MAU Billable	$931.00
PEZ	891	HEI	BE	NPEZZZZZ	451	HEI Billable	$1,357.00
PEZ	895	HEL	BE	NPAVP2ZZ	451	P2V HEL Billable - Op & Ma...	$123,036.00
PEZ	895	MAU	BE	NPAVP2ZZ	451	P2V MAU Billable - Op & M...	$123,036.00

2005 INTERCOMPANY BILLINGS INTERCOMPANY BILLABLE PROJECTED FROM 2003 ACTUALS

(HISTORY)

ITS Department
PEZ Actuals Jan-Dec 2003

2003 INTERCOMPANY BILLABLES

PA	Act	Loc	Ind	Proj	EE	Q1	Q2	Q3	Q4	FY 03	Mo Avg
PEZ	775	HEI	BE	NPFZZZZZ	451	670	637	648	588	2,544	212
PEZ	776	HEI	BE	NPFZZZZZ	451	1,357	416	91	134	1,998	167
PEZ	778	HEI	BE	NPFZZZZZ	451	198	264	176	408	1,045	87
PEZ	779	HEI	BE	NPFZZZZZ	451	400	267	169	305	1,140	95
PEZ	825	HEI	BE	NPKZZZZZ	451	641	616	632	574	2,464	205
PEZ	891	HEI	BE	NPEZZZZZ	451	0	1,357	0	0	1,357	113
PEZ	700	RHI	BE	NPASVP7Z	451	0	13,573	(12,503)	0	1,070	89
PEZ	776	PVT	BE	NPFZZZZZ	451	118	36	0	0	154	13
PEZ	778	PVT	BE	NPFZZZZZ	451	17	23	0	0	40	3
PEZ	779	PVT	BE	NPFZZZZZ	451	21	7	0	0	29	2
PEZ	776	PEC	BE	NPFZZZZZ	451	118	36	8	12	174	15
PEZ	778	PEC	BE	NPFZZZZZ	451	17	23	15	35	91	8
PEZ	779	PEC	BE	NPFZZZZZ	451	21	7	5	6	40	3
PEZ	776	HPC	BE	NPFZZZZZ	451	59	18	4	6	87	7
PEZ	778	HPC	BE	NPFZZZZZ	451	9	11	8	18	45	4
PEZ	779	HPC	BE	NPFZZZZZ	451	11	4	3	3	20	2
PEZ	775	MAU	BE	NPFZZZZZ	451	670	637	648	588	2,544	212
PEZ	775	HEL	BE	NPFZZZZZ	451	670	637	648	588	2,544	212
PEZ	776	MAU	BE	NPFZZZZZ	451	9,086	2,786	607	900	13,378	1,115
PEZ	776	HEL	BE	NPFZZZZZ	451	8,791	2,695	591	877	12,953	1,079
PEZ	778	MAU	BE	NPFZZZZZ	451	1,323	1,768	1,178	2,731	7,000	583
PEZ	778	HEL	BE	NPFZZZZZ	451	1,280	1,710	1,148	2,660	6,798	567
PEZ	779	MAU	BE	NPFZZZZZ	451	2,678	1,794	1,133	2,051	7,657	638
PEZ	779	HEL	BE	NPFZZZZZ	451	2,591	1,735	1,099	1,988	7,413	618
PEZ	817	MAU	BE	NPAZZZZZ	451	0	337	0	0	337	28
PEZ	817	HEL	BE	NPAZZZZZ	451	0	337	0	0	337	28
PEZ	825	MAU	BE	NPKZZZZZ	451	49	47	49	44	189	16
PEZ	825	HEL	BE	NPKZZZZZ	451	49	47	49	44	189	16
PEZ	826	MAU	BE	NPKZZZZZ	451	47	0	0	884	931	78
PEZ	826	HEL	BE	NPKZZZZZ	451	40	0	0	751	791	66
PEZ	895	MAU	BE	NPAVP2ZZ	451	27,447	31,510	25,052	39,027	123,036	10,253
PEZ	895	HEL	BE	NPAVP2ZZ	451	27,447	31,510	25,052	39,027	123,036	10,253

Hawaiian Electric Company, Inc.
Information Technology & Services Department
PEZ Actuals Jan- Dec 2003

2003 PEZ ACTUALS
ITS COSTING SYSTEM
ALLOCATIONS

	RA	Act	Loc	Ind	Project	EE	Jan-Dec 03	Proportions
	PEZ	100	PHE	NE	NPSZZZZZ	451	67,746	
		100 Total					67,746	0.7%
	PEZ	102	PHE	NE	NPSZZZZZ	451	13,789	
		102 Total					13,789	0.2%
	PEZ	110	PHE	NE	NPSZZZZZ	451	144,316	
	PEZ	110	PHE	NE	NPEZZZZZ	451	0	
		110 Total					144,316	1.6%
	PEZ	112	PHE	NE	NPSZZZZZ	451	75,064	
		112 Total					75,064	0.8%
	PEZ	122	PHE	NE	**NPIZZZZZ**	451	54,438	
		122 Total					54,438	0.6%
	PEZ	201	WST	NE	NPYZZZZZ	451	95,731	
		201 Total					95,731	1.0%
	PEZ	210	WST	NC	NPYZZZZZ	451	0	
		210 Total					0	0.0%
	PEZ	211	WST	NC	NPYZZZZZ	451	165,147	
	PEZ	211	WST	NC	NPEZZZZZ	451	0	
		211 Total					165,147	1.8%
	PEZ	212	KST	NE	NPAVP2ZZ	451	7,505	
		212 Total					7,505	0.1%
	PEZ	220	WST	NE	**NPIZZZZZ**	451	18,952	
		220 Total					18,952	0.2%
	PEZ	240	WST	NE	**NPIZZZZZ**	451	356,793	
	PEZ	240	WST	NE	**NPYZZZZZ**	451	73,230	
		240 Total					430,023	4.7%
	PEZ	242	KST	NE	**NPIZZZZZ**	451	31,586	
	PEZ	242	WST	NE	**NPIZZZZZ**	451	26,078	
	PEZ	242	HST	NE	**NPIZZZZZ**	451	18,952	
		242 Total					76,616	0.8%
	PEZ	245	KST	NE	NPAVP2ZZ	451	11,935	
		245 Total					11,935	0.1%
	PEZ	246	KST	NE	NPAVP2ZZ	451	9,966	
		246 Total					9,966	0.1%
	PEZ	256	WST	NE	**NPIZZZZZ**	451	327,375	
	PEZ	256	KST	NE	**NPIZZZZZ**	451	37,904	
	PEZ	256	HST	NE	**NPIZZZZZ**	451	12,635	
		256 Total					377,914	4.1%
	PEZ	258	KST	NE	NPAVP2ZZ	451	15,133	
		258 Total					15,133	0.2%
	PEZ	261	KST	NE	NPAVP2ZZ	451	8,982	
		261 Total					8,982	0.1%
	PEZ	307	OAH	NC	**NPBZZZZZ**	451	447,870	

Hawaiian Electric Company, Inc.
Information Technology & Services Department
PEZ Actuals Jan- Dec 2003

	RA	Act	Loc	Ind	Project	EE	Jan-Dec 03	Proportions
	PEZ	331	OAH	NE	NPAVP2ZZ	451	2.584	

Hawaiian Electric Company, Inc.
Information Technology & Services Department
PEZ Actuals Jan- Dec 2003

	RA	Act	Loc	Ind	Project	EE	Jan-Dec 03		Proportions
	PEZ	614	OAH	NE	**NPCZZZZZ**	451	8,400		
		614 Total					8,400		0.1%
	PEZ	616	OAH	NE	**NPCZZZZZ**	451	64,575		
		616 Total					64,575		0.7%
	PEZ	700	PHE	NE	NPAVP7ZZ	451	31,586		
	PEZ	700	PHE	NE	NPAVP377	451	31,586		

Hawaiian Electric Company, Inc.
Information Technology & Services Department
PEZ Actuals Jan- Dec 2003

	RA	Act	Loc	Ind	Project	EE	Jan-Dec 03	Proportions
	PEZ	767	PHE	NE	**NPFZZZZZ**	451	56,408	
		767 Total					56,408	0.6%
	PEZ	775	PHE	NE	NPFZZZZZ	451	17,807	
		775 Total					17,807	0.2%
	PEZ	776	PHE	NE	NPFZZZZZ	451	108,215	
		776 Total					108,215	1.2%
	PEZ	777	PHE	NE	NPAVP2ZZ	451	233,153	
	PEZ	777	PHE	NE	NPAZZZZZ	451	24,749	
		777 Total					257,902	2.8%
	PEZ	778	PHE	NE	NPFZZZZZ	451	30,435	

Hawaiian Electric Company, Inc.
Information Technology & Services Department
PEZ Actuals Jan- Dec 2003

	RA	Act	Loc	Ind	Project	EE	Jan-Dec 03	Proportions
	PEZ	876	PHE	NE	NPJZZZZZ	451	131,933	
		876 Total					131,933	1.4%
	PEZ	896	PHE	NE	NPEZZZZZ	451	37,921	
		896 Total					37,921	0.4%
	PEZ	899	PHE	NE	NPKZZZZZ	451	0	
		899 Total					0	0.0%
	PEZ	907	OAH	NC	NPBZZZZZ	451	17,425	
	PEZ	907	OAH	NC	NPEZZZZZ	451	0	
		907 Total					17,425	0.2%
	PEZ	916	PHE	NC	**NPRZZZZZ**	451	31,586	
		916 Total					31,586	0.3%
	PEZ	926	PDO	NE	NPWZZZZZ	451	10,125	
	PEZ	926	PHE	NE	**NPNLZZZZ**	451	40,454	

ITS Department
EFMS and Ebus Allocations

EFMS Allocations		Allocation Basis:	
PEZ 211 WST NC	NPYZZZZZ	62,388	10.8%
PEZ 256 KST NE	NPEZZZZZ	2,964	0.5%
PEZ 256 WST NE	NPEZZZZZ	2,964	0.5%
PEZ 307 OAH NC	NPEZZZZZ	112,644	19.4%
PEZ ## OAH NE	NPEZZZZZ	14,760	2.5%
PEZ 408 OAH NC	NPEZZZZZ	112,644	19.4%
PEZ 455 OAH NC	NPEZZZZZ	34,152	5.9%
PEZ 455 OAH NE	NPEZZZZZ	3,468	0.6%
PEZ 456 OAH NE	NPEZZZZZ	59,076	10.2%
PEZ 600 OAH NE	NPWZZZZZ	129,948	22.4%
PEZ 907 OAH NC	NPBZZZZZ	17,328	3.0%
PEZ ## PHE NE	NPEZZZZZ	9,636	1.7%
PEZ 931 PHE NE	NPEZZZZZ	17,724	3.1%

[redacted]

EBusiness Allocations		Allocation Basis:	
PEZ ## PHE NE	NPNEZZZZ	1,767	10.4%
PEZ ## OAH NE	NPNEZZZZ	119	0.7%
PEZ ## OAH NE	NPNEZZZZ	3,607	21.2%
PEZ ## PHE NE	NPNEZZZZ	1,531	9.0%
PEZ ## PHE NE	NPNEZZZZ	-	0.0%
PEZ ## PHE NE	NPNEZZZZ	6,259	36.8%
PEZ ## PHE NE	NPNEZZZZ	3,725	21.9%
EFMS Allocations Total		17,008	100.0%

ALLOCATION BASIS ESTABLISH BY EFMS AND EBUS PROGRAM MANAGERS IN

Hawaiian Electric Company, Inc.
Information Technology & Services Department
Direct Charges to O&M

ITS Department costs for non-core IT functions, including Records Management, Printing Services and Mailing Services are directly charged to Operations & Maintenance Expenses. Amortizaton of deferred Ebusiness costs are also directly charged to Operations & Maintenance Expenses. These costs not processed through the ITS Costing System.

The attached workpapers H and H-1 show the assumptions for 2005 Estimates for non-core IT functions. These costs are directly charged to functional area code block in the following areas:

Non-Core IT Function Direct O&M Charges:
- A & G Operation
- Customer Operations

Ebusiness Amortization Direct O&M Charges:
- Customer Services
- Distribution Operations
- Customer Accounts
- Customer Services
- Production Operations
- A & G Operations

Dept	*RA #	*Act #	*Ind #	*Loc #	*Proj #	*EE #	Line Item	FY05 Upd04 RA	Expense Category	
~~InfoTech~~	~~PEA~~	~~901~~	~~NE~~	~~PHE~~	~~NPEZZZZZ~~	~~401~~	~~Prioritization List Additions~~	~~$105,000~~	~~Other~~	DELETED 6/3/04
InfoTech	PEA	965	NE	PHE	NPEZZZZZ	205	Records Mgt Supplies & Ref Materials	$1,200	Materials	
InfoTech	PEA							$106,200		
InfoTech	PEC	965	NE	PHE	NPEZZZZZ	150	IMPL 965-150 Provide Records Mgmt Svcs	$43,169	Labor	1752 HRS - 1 EMPL
InfoTech	PEC	965	NE	PHE	NPEZZZZZ	150	BUOC Provide Records Mgmt Svcs 965	$42,732	Labor	1800 HRS - 1 EMPL
InfoTech	PEC	965	NE	PHE	NPEZZZZZ	150	TC Provide Records Mgmt Svcs 965	$62,318	Labor	1956 HRS - 1 EMPL
InfoTech	PEC	965	NE	PHE	NPEZZZZZ	501	Records Equip Maintenance	$2,000	Outside Svcs	BASED ON HISTORY
InfoTech	PEC	965	NE	PHE	NPEZZZZZ	501	Records Outside Svcs (ie Storage)	$60,000	Outside Svcs	$80,000
InfoTech	PEC	965	NE	PHE	NPEZZZZZ	501	Records Outside Svcs (ie Microfilm, Rearch, etc)	$13,000	Outside Svcs	
InfoTech	PEC	965	NE	PHE	NPEZZZZZ	501	Shredex	$5,000	Outside Svcs	
InfoTech	PEC	967	NE	PHE	NPEZZZZZ	501	Copyright Clearinghouse License	$7,600	Outside Svcs	
InfoTech	PEC	967	NE	PHE	NPEZZZZZ	600	Shredder Equip Maint	$4,300	Other	
InfoTech	PEC							$240,119		
InfoTech	PEI	967	NE	PHE	NPEZZZZZ	150	TC Provide Printing Svcs 967 (PER TCS)	$60,024	Labor	1834 HRS - 1 EMPL
InfoTech	PEI	967	NE	PHE	NPEZZZZZ	150	I Provide Printing Svcs 967 (PER)	$43,465	Labor	1764 HRS - 1 EMPL
InfoTech	PEI	967	NE	PHE	NPEZZZZZ	150	BUOC Provide Printing Svcs 967 (PER)	$86,034	Labor	3624 HRS - 2 EMPL
InfoTech	PEI	967	NE	PHE	NPEZZZZZ	201	Copier, Fax, Toner & Misc Supplies	$84,000	Materials	$92,400 BASED ON HISTORY
InfoTech	PEI	967	NE	PHE	NPEZZZZZ	201	Printshop Supplies (PER)	$8,400	Materials	
InfoTech	PEI	967	NE	PHE	NPEZZZZZ	205	Printshop Supplies (PER)	$32,200	Materials	$107,200
InfoTech	PEI	967	NE	PHE	NPEZZZZZ	205	Copier & Fax Paper - Pro Card	$75,000	Materials	
InfoTech	PEI	967	NE	PHE	NPEZZZZZ	501	Safety Shoes (PER)	$864	Outside Svcs	
InfoTech	PEI	967	NE	PHE	NPEZZZZZ	501	Copier Software & Software Upgrades	$3,300	Outside Svcs	$11,688
InfoTech	PEI	967	NE	PHE	NPEZZZZZ	501	Printshop Outside Svcs (PER)	$7,524	Outside Svcs	
InfoTech	PEI	967	NE	PHE	NPEZZZZZ	600	Copier & Fax Equip Maint	$144,000	Other	$151,512
InfoTech	PEI	967	NE	PHE	NPEZZZZZ	600	Printshop Equip Maint (PER)	$7,512	Other	
InfoTech	PEI	968	NE	PHE	NPEZZZZZ	150	BUOC Prov Word Proc Svcs 968 (PER)	$42,732	Labor	1800 HRS - 1 EMPL
InfoTech	PEI	968	NE	PHE	NPEZZZZZ	462	Word Proc Software & Upgrades (PER)	$2,151	Other	
InfoTech	PEI							$597,206		
InfoTech	PEM	614	NE	OAH	NPEZZZZZ	150	BUOC Proc Customer Bills 614	$89,167	Labor	3756 HRS - 2 EMPL
InfoTech	PEM	966	NE	PHE	NPEZZZZZ	150	BUTC Handle & Deliver Mail 966	$52,473	Labor	1932 HRS - 1 EMPL
InfoTech	PEM	966	NE	PHE	NPEZZZZZ	150	TCS Handle & Deliver Mail 966	$60,096	Labor	1920 HRS - 1 EMPL
InfoTech	PEM	966	NE	PHE	NPEZZZZZ	150	BUOC Handle & Deliver Mail 966	$228,759	Labor	9636 HRS - 5 EMPL

A&G OPERATIONS

CUSTOMER OPERATIONS

A&G OPERATIONS

I

Dept	*RA #	*Act #	*Ind #	*Loc #	*Proj #	*EE #	Line Item	FY05 Upd04 RA	Expense Category
InfoTech	PEM	966	NE	PHE	NPEZZZZZ	205	Mailroom Supplies	$7,800	Materials
InfoTech	PEM	966	NE	PHE	NPEZZZZZ	301	Vehicle (1): Van	$10,890	Transportation
InfoTech	PEM	966	NE	PHE	NPEZZZZZ	301	Vehicle (1): Light vehicle	$10,890	Transportation
InfoTech	PEM	966	NE	PHE	NPEZZZZZ	501	Postal Fees: Postal P. O. Box fees + subscription	$3,493	Outside Svcs
InfoTech	PEM	966	NE	PHE	NPEZZZZZ	600	EM Mach Maint: Pitney Bowes + B&H + Valenti	$36,780	Other
InfoTech	PEM							$500,348	
InfoTech	PEP	110	NE	PHE	NPNEZZZZ	901	Amort of eBus BTL [ebus platform]	$12,062	Other
InfoTech	PEP	110	NE	PHE	NPNEZZZZ	901	Amort of eBus ATL [heco.com]	$6,841	Other
InfoTech	PEP	600	NE	OAH	NPNEZZZZ	901	Amort of eBus BTL [ebus platform]	$24,617	Other
InfoTech	PEP	600	NE	OAH	NPNEZZZZ	901	Amort of eBus ATL [heco.com]	$13,962	Other
InfoTech	PEP	611	NE	OAH	NPNEZZZZ	901	Amort of eBus BTL [ebus platform]	$24,617	Other
InfoTech	PEP	611	NE	OAH	NPNEZZZZ	901	Amort of eBus ATL [heco.com]	$13,962	Other
InfoTech	PEP	713	NE	PHE	NPNEZZZZ	901	Amort of eBus BTL [ebus platform]	$31,017	Other
InfoTech	PEP	713	NE	PHE	NPNEZZZZ	901	Amort of eBus ATL [heco.com]	$17,592	Other
InfoTech	PEP	730	NE	PPO	NPNEZZZZ	901	Amort of eBus BTL [ebus platform]	$6,154	Other
InfoTech	PEP	730	NE	PPO	NPNEZZZZ	901	Amort of eBus ATL [heco.com]	$3,491	Other
InfoTech	PEP	750	NE	PHE	NPNEZZZZ	901	Amort of eBus BTL [ebus platform]	$12,308	Other
InfoTech	PEP	750	NE	PHE	NPNEZZZZ	901	Amort of eBus BTL [ebus platform]	$6,154	Other
InfoTech	PEP	750	NE	PHE	NPNEZZZZ	901	Amort of eBus ATL [heco.com]	$6,981	Other
InfoTech	PEP	750	NE	PHE	NPNEZZZZ	901	Amort of eBus ATL [heco.com]	$3,491	Other
InfoTech	PEP	950	NE	PHE	NPNEZZZZ	901	Amort of eBus BTL [ebus platform]	$6,154	Other
InfoTech	PEP	950	NE	PHE	NPNEZZZZ	901	Amort of eBus ATL [heco.com]	$3,491	Other
InfoTech	PEP							$192,896	
								$1,636,769	

A&G OPERATIONS

BASED ON HISTORY

5-YEAR AMORTIZATION

CUSTOMER SERVICES 18,903

DISTRIBUTION OPERATIONS 38,579

CUSTOMER ACCOUNTS 38,579

CUSTOMER SERVICES 48,609

PRODUCTION OPERATIONS 9644

CUSTOMER SERVICES 28,934

A&G OPERATIONS 9645

NARUC 587

» budget manager: PR110H NPUpd - Detail Hrs

Ac...	*Lo...	*In...	*Proj #	*E...	*Lbr Class	Line item	HOURS FY05 Upd04 RA	EMPLOYEES
65	PHE	NE	NPEZZ...	150	__BUOC	BUOC Provide Records Mgmt Svcs 965	1,800	1
65	PHE	NE	NPEZZ...	150	__I	IMPL 965-150 Provide Records Mgmt Svcs	1,752	1
65	PHE	NE	NPEZZ...	150	__TC	TC Provide Records Mgmt Svcs 965	1,956	1
							5,508	
67	PHE	NE	NPEZZ...	150	__BUOC	BUOC Provide Printing Svcs 967 (PER)	3,624	2
67	PHE	NE	NPEZZ...	150	__I	I Provide Printing Svcs 967 (PER)	1,764	1
67	PHE	NE	NPEZZ...	150	__TC	TC Provide Printing Svcs 967 (PER TCS)	1,884	1
68	PHE	NE	NPEZZ...	150	__BUOC	BUOC Prov Word Proc Svcs 968 (PER)	1,800	1
							9,072	
14	OAH	NE	NPEZZ...	150	__BUOC	BUOC Proc Customer Bills 614	3,756	2
66	PHE	NE	NPEZZ...	150	__BUOC	BUOC Handle & Deliver Mail 966	9,636	5
66	PHE	NE	NPEZZ...	150	__BUTC	BUTC Handle & Deliver Mail 966	1,932	1
66	PHE	NE	NPEZZ...	150	__TCS	TCS Handle & Deliver Mail 966	1,920	1
							17,244	
							31,824	17

General Information Requests

For each of the HECO witnesses who sponsor test period budgeted non-labor direct expense amounts, please provide the following information:

a. Identify each employee involved in preparation of budgeted non-labor direct expense amounts included in the rate case test period budget and sponsored by the witness.

b. Provide complete copies of all calculations, spreadsheet files, "pencil" workpapers, surveys and other analyses performed by each of the employees identified in response to part (a), indicating the amounts by Department, RA, Activity and NARUC Account that such calculations support.

c. For each budgeted non-labor amount in the test period forecast that exceeds $50,000, please describe the basis for determining the budgeted amount (for example, bid solicitation, price times quantity estimation, historical cost escalated, etc.)

d. For each item in your response to part (c), where specific quantities and prices were discretely forecasted, explain the basis for and source of the budgeted quantity inputs and budgeted prices for each such item. Provide complete copies of all studies, reports and other documents that were relied upon.

e. For each item in your response to part (c) where historical costs were escalated, provide all historical cost information that was considered and explain how such data was evaluated and escalated to derive test year proposed levels.

f. For each item in your response to part (c) where a bid solicitation or other special analysis was conducted, explain what was done and provide complete copies of all supporting reports, bid solicitations, proposal, analyses, workpapers and other documents associated with such efforts.

g. Provide complete copies of all other information required to completely support and document the test year projected expense levels being proposed by the Company, including general assumptions and forecasting instructions that were employed.

HECO Response:

a. For the Land & Rights of Way Division of the Legal Department, the employee involved in the preparation of budgeted non-labor direct expense amounts for the rate case test period is Rachelle Pruss, Land Agent.

b. Please refer to attachment J-1 for additional details.

HECO - 2004/2005 REAL PROPERTY TAXES

TMK #	USE	Site Location	Area (sf / ac)	Pttl Code	Land Class	Building Asmt Value	Building Exemption	Land Asmt Value	Land Exemption	Net Taxable	Annual Taxes Due	1ST Instl due 8/20	2ND Instl due 2/20	Comment
ACCOUNT # PNL926PDONENPNLZZZZ---501 (PNL-LA000223-501)														
8-5-019:049	New Waianae Sub	Waianae	28,719	500	Agricultural			$89,900		$89,900	$860.34	$430.17	$430.17	No Change in Assessment
8-5-019:080	New Waianae Sub	Waianae	70,000	500	Agricultural			$137,900		$137,900	$1,319.70	$659.85	$659.85	No Change in Assessment
											$2,180.04	$1,090.02	$1,090.02	SUB-TOTAL PAYMENT
ACCOUNT # PNL926PPONENPNLZZZZ---501 (PNL-LA000224-501)														
9-7-019:002	Waiau PP	Waiau	43,879	400	Industrial			$677,900		$677,900	$7,707.72	$3,853.86	$3,853.86	Previous Asmt appealed, Exemption denied

HECO - 2005/2006 REAL PROPERTY TAXES

TMK #	USE	Site Location	Area (sf / ac)	Pttl Code	Land Class	Building Asmt Value	Building Exemption	Land Asmt Value	Land Exemption	Net Taxable	Annual Taxes Due	1ST Instl due 8/20	2ND Instl due 2/20	Comment
ACCOUNT # PNL926PDONENPNLZZZZ---501 (PNL-LA000223-501)														
8-5-019:049	New Waianae Sub	Waianae	28,719	500	Agricultural			$109,600		$109,600	$1,048.87	$524.44	$524.43	22% increase in Assessment
8-5-019:080	New Waianae Sub	Waianae	70,000	500	Agricultural			$168,000		$168,000	$1,607.76	$803.88	$803.88	22% increase in Assessment
											$2,656.63	$1,328.32	$1,328.31	SUB-TOTAL PAYMENT
UNT # PNL926PPONENPNLZZZZ---501 (PNL-LA000224-501)														
9-7-019:002	Waiau PP	Waiau	43,879	400	Industrial			$736,700		$736,700	$8,376.28	$4,188.14	$4,188.14	8.7% increase in Assessment, assuming tax rate remains the same

HECO BUDGET 2005 8-Aug-03

LESSOR	LEASE #	ACCT NO	WR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEAR TO DATE	NOTES
State of Hawaii (DOT) FACILITIES BUDGET -DO NOT INCLUDE-	HWY 89-1 (Waiawa Viaduct)	FA000019	-	$7,825.00			$7,825.00			$7,825.00			$7,825.00			$31,700.00	(1)
State of Hawaii (DOT)	H-81-1 (BP PIPELINE)	R0000813-P	1992-015	$3,790.00			$3,790.00			$3,790.00			$3,790.00			$15,160.00	(8)
State of Hawaii (DLNR)	GL - 3886	LA000034-W	1956-170		$1,420.00											$1,420.00	(3)
State of Hawaii (DHHL)	GL - 3897 (50%)	LA000035-W	1958-083, A, C		$960.00											$960.00	(3)
State of Hawaii (DLNR)	GL - 3905	LA000036-W	1961-059		$190.00											$190.00	(3)
State of Hawaii (DLNR)	GL - 3906	LA000037-W	1961-121		$11,650.00											$11,650.00	(3) (5)
State of Hawaii (DLNR)	GL - 4104	LA000038-W	1969-158B			$10.00										$10.00	(3)
State of Hawaii (DOT)	HY-75-801	LA000039-W	1956-120													$0.00	(8)
State of Hawaii (DLNR)	RP S-0418	LA000040-W	1007-262			$43.00			$43.00			$43.00			$43.00	$172.00	(2)
State of Hawaii (DLNR)	RP S-0444	LA000041-W	1950-020, A, B			$43.00			$43.00			$43.00			$43.00	$172.00	(2)
State of Hawaii (DLNR)	RP S-0497	LA000042-W	1950-071						$172.00							$172.00	(2)
State of Hawaii (DLNR)	RP S-1316	LA000043-W	1953-140	$172.00												$172.00	(2)
State of Hawaii (DLNR)	RP S-1489	LA000044-W	1954-058A	$172.00												$172.00	(2)
State of Hawaii (DLNR)	RP S-2956	LA000047-W	1958-069						$172.00							$172.00	(2)
State of Hawaii (DLNR)	RP S-2957	LA000048-W	1960-091	$172.00												$172.00	(2)
State of Hawaii (DLNR)	RP S-2959	LA000049-W	1961-014	$172.00												$172.00	(2)
State of Hawaii (DLNR)	RP S-2960	LA000050-W	1957-232							$172.00						$172.00	(2)
State of Hawaii (DLNR)	RP S-8566 (Kuhio Interchange)	LA000051-W	1975-030	$835.00	$835.00	$835.00	$835.00	$835.00	$835.00	$835.00	$835.00	$835.00	$835.00	$835.00	$835.00	$10,020.00	(2)
U. S. Army	HONEA 182	LA000031-W	1008-713			$43.00										$43.00	(3)
	(TRANSMISSION)	LA000006-W	Subtotal	$1,833.00	$16,868.00	$974.00	$838.00	$838.00	$1,288.00	$1,007.00	$838.00	$921.00	$838.00	$838.00	$921.00	$26,841.00	
Board of Water Supply	MUUANU SUB	LA000066-W	1956-008A					$872.00								$872.00	(3)
State of Hawaii (DOT)	DOT-A-86-19 (Lagoon Drive)	LA000054-W	L1982-110			$300.00										$300.00	(3)
State of Hawaii (DLNR)	GL - 1755	LA000055-W	1008-066, 068			$1.00										$1.00	(3) (7)
State of Hawaii (DHHL)	GL - 3897 (50%)	LA000056-W	1958-083, A, C		$960.00											$960.00	(3)
State of Hawaii (DLNR)	GL - 3898	LA000057-W	1955-000		$840.00											$840.00	(3)
State of Hawaii (DLNR)	GL - 3901	LA000058-W	1964-017		$156.00											$156.00	(3)
State of Hawaii (DLNR)	GL - 3904	LA000060-W	1963-078		$1,920.00											$1,920.00	(3)
State of Hawaii (DLNR)	GL - 5112	LA000061-W	1953-010							$0.00						$0.00	(8)
U. S. Navy	N6274286RP00046	LA000062-W	1979-004			$350.00										$350.00	(3)
U. S. Navy	N6274201RP00049	LA000170-W	1984-003	$350.00												$350.00	(4)
State of Hawaii (DLNR)	RP S-1336	LA000064-W	1954-058	$14.33	$14.33	$14.33	$14.33	$14.33	$14.33	$14.33	$14.33	$14.33	$14.33	$14.33	$14.37	$172.00	(2)
State of Hawaii (DLNR)	GL - 6386	LA000065-W	1964-003	$2,500.00												$2,500.00	(3)
	(DISTRIBUTION)	LA000007-W	Subtotal	$2,864.33	$3,890.33	$666.33	$14.33	$14.33	$14.33	$14.33	$14.33	$14.33	$14.33	$14.33	$14.37	$7,648.66	
U. S. Army	DACA84-2-86-19		1987-004													$0.00	
U. S. Army	DA 84-626-ENG-28		1982-107B													$0.00	
U. S. Army	DA 84-626-ENG-33		1983-001													$0.00	
U. S. Army	DACA84-2-87-41		1986-083													$0.00	
U. S. Army	DACA84-2-86-14		1986-053													$0.00	
" Army	DACA84-2-88-42		1988-006													$0.00	
Army	DACA84-2-75-19		1974-004, A, B													$0.00	
army	DACA84-2-81-6		1980-042													$0.00	
army	DACA84-2-84-10		1978-058A													$0.00	
Army	DACA84-3-76-180		1979-085													$0.00	
u. S. Army	HONEA 182		1986-053													$0.00	

HECO Budget 2005 8-03

LESSOR	LEASE #	ACCT NO	TMK	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEAR TO DATE	NOTES
U. S. Army	HONEA 194		1956-125													$0.00	
U. S. Army (Helemano Army)	HONEA 143		1005-422													$0.00	
Dept of Navy	N62742-88-C-0014															$0.00	
Dept of Navy	N6274280RP00004		1979-019A													$0.00	
Dept of Navy	N6274281RP00046		1980-049													$0.00	
Dept of Navy	N6274282RP00004		1979-004													$0.00	
Dept of Navy	N6274283RP00011		1975-011B													$0.00	
Dept of Navy	N6274283RP00016		1963-078													$0.00	
Dept of Navy	N6274286RP00034		1008-867													$0.00	
Dept of Navy	N6274289RP00020															$0.00	
Dept of Navy	N6274290RP00009		1965-090, A, B													$0.00	
Dept of Navy	N6274290RP00070		1989-058													$0.00	
Dept of Navy	N6274294RP00065		1979-001													$0.00	
Dept of Navy	HOy(R)-63209		1961-037B													$0.00	
U. S. Air Force	DA 84-626-ENG-89		1984-003													$0.00	
U. S. Air Force	DACA84-2-84-26		1980-048													$0.00	
			Subtotal													$0.00	
	TOTAL			$8,177.33	$18,845.33	$1,838.33	$4,838.33	$1,821.33	$1,279.33	$4,811.33	$846.33	$936.33	$4,838.33	$846.33	$936.37	$48,822.00	
	(NOTE: TOTAL DOES NOT INCLUDE WAIAU VIADUCT)															$48,822.00	

NOTES:

(1) In Facilities bud-dget; subject to renegotiation as of 1/1/99.
(2) Assumes DLNR increased in 2004 the rent for RP's 10% to $172/yr. and the rent for S-5568 (Puu Manawahua) to $10,020/yr., and kept them the same for 2005.
(3) 2005 rent per contract.
(4) Navy N62742C11RP00048 will expire 1/05; assumes rent will be increased to $350/yr.
(5) Assumes DLNR has not converted GL 3908 to perpetual and rent is still being paid at renegotiated rate of $11,650/yr.
(6) GL 5112 expired 7/2001. DLNR approved conversion to perpetual easement and stopped billing in 2001.
(7) GL 1758 undergoing conversion to perpetual grant; assumes still paying GL rent in 2005.
(8) To be renegotiated for 10 years, 9/04 to 9/14. Assumes renegotiation to increase rent at 5.39% compound annually for 5 years to $3,790/quarter, similar to the increases in previous bump ups
(9) Assumes no change in rent for 2006.

General Information Requests

For each of the HECO witnesses who sponsor test period budgeted non-labor direct expenses [redacted]

amounts, please provide the following information:

a. Identify each employee involved in preparation of budgeted non-labor direct expense amounts included in the rate case test period budget and sponsored by the witness.

b. Provide complete copies of all calculations, spreadsheet files, "pencil" workpapers, surveys and other analyses performed by each of the employees identified in response to part (a), indicating the amounts by Department, RA, Activity and NARUC Account that such calculations support.

c. For each budgeted non-labor amount in the test period forecast that exceeds $50,000, please describe the basis for determining the budgeted amount (for example, bid solicitation, price times quantity estimation, historical cost escalated, etc.)

d. For <u>each</u> item in your response to part (c), where specific quantities and prices were discretely forecasted, explain the basis for and source of the budgeted quantity inputs and

NonLabor Input Sheet - NonProject/NonProgram
2005

Resp Area (RA) PKM

Prepared by _____

Date _____

(enter Dollars or Vehicle Hours in "Units tab card")

Dimension tab card								Rates tab card	Units tab card														
Line Item	RA	Act	Loc	Ind	Proj	EE	Lbr Class	Rates Link To	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total		
Mainland User Conf-MIMS Adm	PKM	749	PHE	NE	NPKZZZZZ	501		No escalation	0	0	0	0	0	0	0	0	0	1,100	0		1,100		
Mainland Travel-MIMS Adm	PKM	749	PHE	NE	NPKZZZZZ	520		No escalation	0	0	0	2,400	0	0	0	0	0	2,400	0	0	4,800		
Telephone-MIMS	PKM	891	PHE	NE	NPKZZZZZ	501		No escalation	0	0	0	0	0	0	0	0	0	0	0	0	0		
Census Software Maintenance	PKM	891	PHE	NE	NPKZZZZZ	501		No escalation		1,641											1,641		1,641
Support custom code	PKM	891	PHE	NE	NPKZZZZZ	501		No escalation												204	204		204
CORP LEVEL COSTS																							
mims amort of deferred costs and annual maint	PKM	212	KST	NE	NPKZZZZZ	901			541	541	541	541	541	541	541	541	541	541	541	541	6,491		
mims amort of deferred costs and annual maint	PKM	245	KST	NE	NPKZZZZZ	901			450	450	450	450	450	450	450	450	450	450	450	450	5,397		
mims amort of deferred costs and annual maint	PKM	246	KST	NE	NPKZZZZZ	901			684	684	684	684	684	684	684	684	684	684	684	684	8,212		
mims amort of deferred costs and annual maint	PKM	258	KST	NE	NPKZZZZZ	901			411	411	411	411	411	411	411	411	411	411	411	411	4,927		
mims amort of deferred costs and annual maint	PKM	261	KST	NE	NPKZZZZZ	901			338	338	338	338	338	338	338	338	338	338	338	338	4,062		
mims amort of deferred costs and annual maint	PKM	320	OAH	NE	NPKZZZZZ	901			121	121	121	121	121	121	121	121	121	121	121	121	1,454		
mims amort of deferred costs and annual maint	PKM	331	OAH	NE	NPKZZZZZ	901			117	117	117	117	117	117	117	117	117	117	117	117	1,409		
mims amort of deferred costs and annual maint	PKM	333	OAH	NE	NPKZZZZZ	901			1,006	1,006	1,006	1,006	1,006	1,006	1,006	1,006	1,006	1,006	1,006	1,006	12,072		
mims amort of deferred costs and annual maint	PKM	343	OAH	NE	NPKZZZZZ	901			75	75	75	75	75	75	75	75	75	75	75	75	898		
mims amort of deferred costs and annual maint	PKM	349	OAH	NE	NPKZZZZZ	901			161	161	161	161	161	161	161	161	161	161	161	161	1,926		
mims amort of deferred costs and annual maint	PKM	420	OAH	NE	NPKZZZZZ	901			178	178	178	178	178	178	178	178	178	178	178	178	2,134		
mims amort of deferred costs and annual maint	PKM	461	OAH	NE	NPKZZZZZ	901			157	157	157	157	157	157	157	157	157	157	157	157	1,884		
mims amort of deferred costs and annual maint	PKM	462	OAH	NE	NPKZZZZZ	901			173	173	173	173	173	173	173	173	173	173	173	173	2,079		
mims amort of deferred costs and annual maint	PKM	463	OAH	NE	NPKZZZZZ	901			90	90	90	90	90	90	90	90	90	90	90	90	1,085		
mims amort of deferred costs and annual maint	PKM	474	OAH	NE	NPKZZZZZ	901			280	280	280	280	280	280	280	280	280	280	280	280	3,362		
mims amort of deferred costs and annual maint	PKM	477	OAH	NE	NPKZZZZZ	901			271	271	271	271	271	271	271	271	271	271	271	271	3,247		
mims amort of deferred costs and annual maint	PKM	486	OAH	NE	NPKZZZZZ	901			3,357	3,357	3,357	3,357	3,357	3,357	3,357	3,357	3,357	3,357	3,357	3,357	40,279		
mims amort of deferred costs and annual maint	PKM	766	PHE	NE	NPKZZZZZ	901			350	350	350	350	350	350	350	350	350	350	350	350	4,202		
mims amort of deferred costs and annual maint	PKM	777	PHE	NE	NPKZZZZZ	901			10,945	10,945	10,945	10,945	10,945	10,945	10,945	10,945	10,945	10,945	10,945	10,945	131,345		
mims amort of deferred costs and annual maint	PKM	818	PHE	NE	NPKZZZZZ	901			17,209	17,209	17,209	17,209	17,209	17,209	17,209	17,209	17,209	17,209	17,209	17,209	206,509		
mims amort of deferred costs and annual maint	PKM	842	PHE	NE	NPKZZZZZ	901			889	889	889	889	889	889	889	889	889	889	889	889	10,669		
mims amort of deferred costs and annual maint	PKM	843	PHE	NE	NPKZZZZZ	901			5,770	5,770	5,770	5,770	5,770	5,770	5,770	5,770	5,770	5,770	5,770	5,770	69,242		
mims amort of deferred costs and annual maint	PKM	850	PHE	NE	NPKZZZZZ	901			2,232	2,232	2,232	2,232	2,232	2,232	2,232	2,232	2,232	2,232	2,232	2,232	26,779		549,664
Software Maint - software mods	PKM	891	PHE	NE	NPKZZZZZ	501			see amort of software maintenance above														
Software Maint on reports	PKM	891	PHE	NE	NPKZZZZZ	501			see amort of software maintenance above														
develop software mods (corporate wide)	PKM	891	PHE	NE	NPKZZZZZ	501															0		
Quality Assurance Consultants	PKM	891	PHE	NE	NPKZZZZZ	501															0		
Project Management	PKM	891	PHE	NE	NPKZZZZZ	501															0		
Technical Consultants	PKM	891	PHE	ND	NPKZZZZZ	501															0		
Functional Consultants	PKM	891	PHE	NE	NPKZZZZZ	501														19,600	19,600		
ISD charges	PKM	891	PHE	NE	NPKZZZZZ	501																	
Billable portions																							
billable MECO MIMS maint	PKM	891	MAU	BD	NPKZZZZZ	501			9,815	9,815	9,815	9,815	9,815	9,815	9,815	9,815	9,815	9,815	9,815	9,815	117,785		117,785
billable MECO consulting	PKM	891	MAU	BE	NPKZZZZZ	501			0	0	0	0	0	0	0	0	0	0	0	4,200	4,200		
Billable HELC MIMS maint	PKM	891	HEL	BD	NPKZZZZZ	501			9,815	9,815	9,815	9,815	9,815	9,815	9,815	9,815	9,815	9,815	9,815	9,815	117,785		117,785
Billable HELC consulting	PKM	891	HEL	BE	NPKZZZZZ	501			0	0	0	0	0	0	0	0	0	0	0	4,200	4,200		
																					820,979		787,079

Budget for Ellipse Maintenance

Software maint folder

Original file

Amendment 17

	Old maint fee	Amort of relicense fee	credit for old maint fee	New maint fee	BSI	TOTAL P,H,M	CPI
200401	47,308.93				1,222.50		
200402	47,308.93				1,222.50		
200403	47,308.93				1,222.50		
200404	47,308.93				1,222.50		
200405	47,308.93				1,222.50		
200406	13,798.44	47,742.75	(13,798.44)	16,232.54	1,222.50	65,197.79	
200407	13,798.44	47,742.75	(13,798.44)	16,232.54	1,222.50	65,197.79	
200408	13,798.44	47,742.75	(13,798.44)	16,232.54	1,222.50	65,197.79	
200409	13,798.44	47,742.75	(13,798.44)	16,232.54	1,222.50	65,197.79	
200410	13,798.44	47,742.75	(13,798.44)	16,232.54	1,222.50	65,197.79	
200411	13,798.44	47,742.75	(13,798.44)	16,232.54	1,222.50	65,197.79	
200412	13,798.44	47,742.75	(13,798.44)	16,232.54	1,222.50	65,197.79	
200501	13,798.44	47,742.75	(13,798.44)	16,232.54	1,249.76	65,225.05	0.0223
200502	13,798.44	47,742.75	(13,798.44)	16,232.54	1,249.76	65,225.05	
200503	13,798.44	47,742.75	(13,798.44)	16,232.54	1,249.76	65,225.05	
200504	13,798.44	47,742.75	(13,798.44)	16,232.54	1,249.76	65,225.05	
200505	13,798.44	47,742.75	(13,798.44)	16,232.54	1,249.76	65,225.05	
200506	13,798.44	47,742.75	(13,798.44)	16,594.52	1,249.76	65,587.03	0.0223
200507	13,798.44	47,742.75	(13,798.44)	16,594.52	1,249.76	65,587.03	
200508	13,798.44	47,742.75	(13,798.44)	16,594.52	1,249.76	65,587.03	
200509	13,798.44	47,742.75	(13,798.44)	16,594.52	1,249.76	65,587.03	
200510	13,798.44	47,742.75	(13,798.44)	16,594.52	1,249.76	65,587.03	
200511	13,798.44	47,742.75	(13,798.44)	16,594.52	1,249.76	65,587.03	
200512	13,798.44	47,742.75	(13,798.44)	16,594.52	1,249.76	65,587.03	
200601	13,798.44	47,742.75	(13,798.44)	16,594.52	1,277.63	65,614.90	0.0223
200602	13,798.44	47,742.75	(13,798.44)	16,594.52	1,277.63	65,614.90	
200603	13,798.44	47,742.75	(13,798.44)	16,594.52	1,277.63	65,614.90	
200604	13,798.44	47,742.75	(13,798.44)	16,594.52	1,277.63	65,614.90	
200605	13,798.44	47,742.75	(13,798.44)	16,594.52	1,277.63	65,614.90	
200606				16,964.58	1,277.63	18,242.21	0.0223
200607				16,964.58	1,277.63	18,242.21	
200608				16,964.58	1,277.63	18,242.21	
200609				16,964.58	1,277.63	18,242.21	
200610				16,964.58	1,277.63	18,242.21	
200611				16,964.58	1,277.63	18,242.21	
200612				16,964.58	1,277.63	18,242.21	
200701				16,964.58	1,306.12	18,270.70	0.0223
200702				16,964.58	1,306.12	18,270.70	
200703				16,964.58	1,306.12	18,270.70	
200704				16,964.58	1,306.12	18,270.70	
200705				16,964.58	1,306.12	18,270.70	
200706				17,342.89	1,306.12	18,649.01	0.0223
200707				17,342.89	1,306.12	18,649.01	
200708				17,342.89	1,306.12	18,649.01	
200709				17,342.89	1,306.12	18,649.01	
200710				17,342.89	1,306.12	18,649.01	
200711				17,342.89	1,306.12	18,649.01	
200712				17,342.89	1,306.12	18,649.01	
200801				17,342.89		17,342.89	
200802				17,342.89		17,342.89	
200803				17,342.89		17,342.89	
200804				17,342.89		17,342.89	
200805				17,342.89		17,342.89	
200806						-	
200807						-	
200808						-	
200809						-	
200810						-	
200811						-	
200812						-	

$785,234 for HECO, Helc, MECO
see (A)

Hawaiian Electric Company
Maintenance Invoice information **Reminder to budget for GET Tax 1.04166**

		Escalation used 2005		2004 june to dec
Ellipse Software		785,234.47		355,251.02
		785,234.47	(A)	355,251.02
1% Contingency				
Total		**785,234.47**		**355,251.02**
HECO portion	70%	549,664.13	(B)	248,675.71
HELC portion	15%	117,785.17		53,287.65
MECO portion	15%	117,785.17		53,287.65
		785,234.47	(A)	**355,251.02**

General Information Requests

For each of the HECO witnesses who sponsor test period budgeted non-labor direct expense amounts, please provide the following information:

a. Identify each employee involved in preparation of budgeted non-labor direct expense amounts included in the rate case test period budget and sponsored by the witness.

b. Provide complete copies of all calculations, spreadsheet files, "pencil" workpapers, surveys and other analyses performed by each of the employees identified in response to part (a), indicating the amounts by Department, RA, Activity and NARUC Account that such calculations support.

c. For each budgeted non-labor amount in the test period forecast that exceeds $50,000, please

Dept	RA	Resp Area	Acct Bl	Acct Blk Descr	NARUC	Exp Class	Proj	Act	Loc	EE	FY05	a	b	c	d	e	f	g
PHB - BUILDINGS & GROUNDS DIVISION																		
SSF	PHB	Facilities Operation	B33	Transmission Maint	573	Labor	NPHZZZZZ	931	KOO	150	1,266.72							
SSF	PHB	Facilities Operation	B33	Transmission Maint	573	Labor	NPHZZZZZ	931	WTD	150	1,266.72							
					573	LABOR COSTS		931	TOTAL		2,533.44	Stephen Chu, Supervisor, Bldgs & Grounds	Yes FA000244	Historical costs escalated due to increase in cust demands	NA	NA	Pillar file attached	NA

CA-IR-2
DOCKET NO. 04-0113
HECO T-8
ATTACHMENT L-1
PAGE 1 of 5

CA-IR-2
DOCKET NO. 04-0113
HECO T-8
ATTACHMENT L-1
PAGE 2 of 5

hu, r,	Yes FA000244	Historical costs escalated due to addl PM work at the 185 s/stations	NA	NA	Pillar file attached	NA
hu, r,	Yes FA000242 FA000243 FA000244 FA000251	Historical costs escalated due to required tree trim, & land-scaping needs to meet cust demands at the 185 s/stations	NA	NA	Pillar file attached	Pillar files attached

12/28/2004

***VIEW: Labor Hour**

*R...	*Ac...	*Lo...	*I...	*EE #	*Labor Class #	Line item	FY05
HB	098	PHE	ND	107	__BUTC	NProd - Carpenter	224
PHB	098	PHE	ND	107	__BUTC	NProd - Electrician	320
PHB	098	PHE	ND	107	__BUTC	NProd - Grounds Keepers (3)	1,012
PHB	098	PHE	ND	107	__BUTC	NProd - KNG Custodians(3)	872
PHB	098	PHE	ND	107	__BUTC	NProd - KNG UT Custodians(1)	296
PHB	098	PHE	ND	107	__BUTC	NProd - WRD Custodians (4)	1,236
PHB	098	PHE	ND	107	__BUTC	NProd - WRD UT Custodian (1)	296
PHB	098	PHE	ND	107	__TCS	NProd - Supervisor	376
PHB	098						4,632
PHB	797	PHE	NE	150	__BUTC	Safety Training - Carpenter	72
PHB	797	PHE	NE	150	__BUTC	Safety Training - Electrician	72
PHB	797	PHE	NE	150	__BUTC	Safety Training - GKeepers(4)	216
PHB	797	PHE	NE	150	__BUTC	Safety Training - KNG Custodians (3)	216
PHB	797	PHE	NE	150	__BUTC	Safety Training - KNG UT Custodian	72
PHB	797	PHE	NE	150	__BUTC	Safety Training - WRD Custodians(4)	288
PHB	797	PHE	NE	150	__BUTC	Safety Training - WRD UT Custodian	72
PHB	797	PHE	NE	150	__TCS	Safety Training - Supervisor	104
PHB	797						1,112
PHB	931	KNG	NE	150	__BUTC	KING - Labor - Carpenter	120
PHB	931	KNG	NE	150	__BUTC	KING - Labor - Electrician	700
PHB	931	KOO	NE	150	__BUTC	KOOLAU Baseyard Bldg. Svcs - Labor	48
HB	931	PDM	NE	150	__BUTC	SUBSTATION - Labor - Electrician	120
HB	931	PDM	NE	150	__BUTC	SUBSTATION - Labor - GKeepers(4)	5,002
PHB	931	PDM	NE	150	__BUTC	SUBSTATION - Labor - GKeepers(4) OTH...	576
PHB	931	PDM	NE	150	__TCS	SUBSTATION - Labor - Supervisor	520
PHB	931	WRD	NE	150	__BUTC	WARD - Labor - Carpenter	1,300
PHB	931	WRD	NE	150	__BUTC	WARD - Labor - Electrician	700
PHB	931	WTD	NE	150	__BUTC	WAIAU Baseyard Bldg. Svcs - Labor	48
PHB	931						9,134
PHB	934	HEI	BE	150	__BUTC	HEI - Meeting Rm Set Up - FA000223	72
PHB	934	HEI	BE	150	__BUTC	HEI - Stock Holders Mtg - 9P/AD000164	40
PHB	934	KNG	NE	150	__BUTC	KING - Labor - Custodians(3)	5,020
PHB	934	KNG	NE	150	__BUTC	KING - Labor - UT Custodian(1)	1,600
PHB	934	KNG	NE	150	__TCS	KING - Labor - Supervisor	540
PHB	934	WRD	NE	150	__BUTC	WARD - Labor - Custodians(4)	6,760
PHB	934	WRD	NE	150	__BUTC	WARD - Labor - Custodians(4) - OT Hours	180
PHB	934	WRD	NE	150	__BUTC	WARD - Labor - UT Custodian	1,570
PHB	934	WRD	NE	150	__TCS	WARD - Labor - Supervisor	540
PHB	934						16,322
PHB							31,200
							31,200

*ENTER: Direct RA Cost

*RA #	*A...	*Lo...	*In...	*E...	*Project #	Line item	FY04	FY05
PHB	*S...	*Su...	*S...	*Su...	*Supply	Carpenter	$1,232.00	$2,080.00
PHB	*S...	*Su...	*S...	*Su...	*Supply	Electrician	$1,232.00	$2,080.00

*ENTER: Direct RA Cost

*RA #	*A...	*Lo...	*In...	*E...	*Project #	Line item	FY04	FY05
PHB	931	PDM	NE	150	NPHZZZZZ	SUBSTATION - Labor - GKeepers(4) ...	$8,568.00	$15,200.64
PHB	931	PDM	NE	150	NPHZZZZZ	SUBSTATION - Labor - Supervisor	$8,832.12	$15,667.60
PHB	931	PDM	NE	150	NPHZZZZZ		$91,002.55	$166,037.82
PHB	931	PDM	NE	501	NPHZZZZZ	Contract Landscaping - Outside Svcs	$140,000.00	$247,000.00
PHB	931	PDM	NE	501	NPHZZZZZ		$140,000.00	$247,000.00
PHB	931	PHE	NE	301	NPHZZZZZ	Transportation / Vehicle	$25,520.00	$45,816.00
PHB	931	PHE	NE	301	NPHZZZZZ		$25,520.00	$45,816.00
PHB	931	WRD	NE	150	NPHZZZZZ	WARD - Labor - Carpenter	$19,087.03	$34,307.00
PHB	931	WRD	NE	150	NPHZZZZZ	WARD - Labor - Electrician	$10,270.83	$18,473.00
PHB	931	WRD	NE	150	NPHZZZZZ		$29,357.86	$52,780.00
PHB	931	WRD	NE	201	NPHZZZZZ	WARD - Bldg.Svc. Misc. Expenses	$2,100.00	$3,700.00
PHB	931	WRD	NE	201	NPHZZZZZ	WARD - Maint. Bldg. Supplies	$10,500.00	$18,500.00
PHB	931	WRD	NE	201	NPHZZZZZ	WARD - Op. Bldg. Supplies	$11,200.00	$19,776.00
PHB	931	WRD	NE	201	NPHZZZZZ	WARD - Op./ Bldg. Svc. Misc. Expen...	$1,400.00	$2,500.00
PHB	931	WRD	NE	201	NPHZZZZZ		$25,200.00	$44,476.00
PHB	931	WRD	NE	501	NPHZZZZZ	WARD - Carpet Cleaning	$8,400.00	$14,800.00
PHB	931	WRD	NE	501	NPHZZZZZ	WARD - Plant Rental	$1,050.00	$1,800.00
PHB	931	WRD	NE	501	NPHZZZZZ	WARD - Termite Trmt.	$3,500.00	$6,200.00
PHB	931	WRD	NE	501	NPHZZZZZ	WARD - Water Supply	$26,600.00	$45,600.00
PHB	931	WRD	NE	501	NPHZZZZZ	WARD - Water Supply	$21,000.00	$37,000.00
PHB	931	WRD	NE	501	NPHZZZZZ		$60,550.00	$105,400.00
PHB	931	WTD	NE	150	NPHZZZZZ	WAIAU Baseyard Bldg. Svcs - Labor	$714.00	$1,266.72
PHB	931	WTD	NE	150	NPHZZZZZ		$714.00	$1,266.72
PHB	931						$424,664.24	$761,115.06
PHB	934	HEI	BE	150	NPHZZZZZ	HEI - Meeting Rm Set Up - FA000223	$1,071.00	$1,900.08
PHB	934	HEI	BE	150	NPHZZZZZ	HEI - Stock Holders Mtg - 9P/AD000...	$0.00	$1,055.60
PHB	934	HEI	BE	150	NPHZZZZZ		$1,071.00	$2,955.68
PHB	934	KNG	NE	150	NPHZZZZZ	KING - Labor - Custodians(3)	$73,867.59	$132,477.80
PHB	934	KNG	NE	150	NPHZZZZZ	KING - Labor - UT Custodian(1)	$25,398.00	$42,224.00
PHB	934	KNG	NE	150	NPHZZZZZ	KING - Labor - Supervisor	$8,598.01	$16,270.20
PHB	934	KNG	NE	150	NPHZZZZZ		$107,863.60	$190,972.00
PHB	934	WRD	NE	150	NPHZZZZZ	WARD - Labor - Custodians(4)	$99,311.66	$178,396.40
PHB	934	WRD	NE	150	NPHZZZZZ	WARD - Labor - Custodians(4) - OT ...	$2,677.50	$4,750.20
PHB	934	WRD	NE	150	NPHZZZZZ	WARD - Labor - UT Custodian	$24,814.84	$41,432.30
PHB	934	WRD	NE	150	NPHZZZZZ	WARD - Labor - Supervisor	$8,599.62	$16,270.20
PHB	934	WRD	NE	150	NPHZZZZZ		$135,403.62	$240,849.10
PHB	934						$244,338.23	$434,776.78
							$783,788.73	$1,380,471.20

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l Fujiwara, tor FO&P Smith, FP	Yes	FA000087 FA000103	Historical costs escalated due to customer demands on A/C maintenance & misc bldg repairs	NA	See attached Pillar files	NA	See attached Pillar files
/ Fujiwara, tor FO&P Smith, FP	Yes	FA000092 FA000097	Historical costs escalated due to undertaking of PM requirements at the 185 substations	NA	See attached Pillar files	NA	See attached Pillar files
l Fujiwara, or FO&P Smith, FP	Yes	FA000103 FA000106	Historical costs escalated due to various A/C maintenance & bldg repairs	NA	See attached Pillar files	NA	See attached Pillar files

Dept	_RA	Resp Area	Acct Blk	Acct Blk Descr	NARUC	Exp Class	_Proj	_Act	_Loc	_EE	FY05	a	b	c	d	e	f	g
PHF - FACILITIES PLANNING DIVISION																		
SSF	PHF	Facilities Planning	B35	Distribution Maint	598	Non-Labor	NPHZZZZZ	931	PDM	501	35,000.04	Cheryl Fujiwara, Director FO&P, Gail Smith FP Clerk	Yes FA000087 FA000103	Historical costs escalated due to various substation & A/C repairs	NA	See attached Pillar files	NA	See attached Pillar files
					598	NON LABOR		931	TOTAL		35,000.04							

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*VIEW: Labor Hour

*RA #	*Act #	*Loc #	*Ind #	*EE #	*Labor Class #	Line item	FY05
PHF	098	PHE	ND	107	__BUOC	NProd - Facilities Clerk	304
PHF	098	PHE	ND	107	__BUOC	NProd - Facilities Drafting Tech	264
PHF	098	PHE	ND	107	__FS	NProd - Facilities Director	264
PHF	098	PHE	ND	107	__TC	NProd - Fac Bldg Tech	224
PHF	098	PHE	ND	107	__TC	NProd - Facilities Project Manager	264
PHF	098						1,320
PHF	701	PHE	NE	150	__BUOC	Forecast - Clerk	144
PHF	701	PHE	NE	150	__FS	Forecast - Director	96
PHF	701						240
PHF	777	PHE	NE	150	__BUOC	Process Payroll - Clerk	80
PHF	777	PHE	NE	150	__FS	Process Payroll - Director	48
PHF	777						128
PHF	785	PHE	NE	150	__FS	Training Dev - Director	8
PHF	785						8
PHF	789	PHE	NE	150	__BUOC	Attend Training - Clerk	6
PHF	789	PHE	NE	150	__BUOC	Attend Training - Draft Tech	6
PHF	789	PHE	NE	150	__FS	Attend Training - Director	6
PHF	789	PHE	NE	150	__TC	Attend Training - Fac Bldg Tech	6
PHF	789	PHE	NE	150	__TC	Attend Training - Project Mgr	6
PHF	789						30
PHF	797	PHE	NE	150	__BUOC	Safety Mtg - Clerk	3
HF	797	PHE	NE	150	__BUOC	Safety Mtg - Draft Tech	3
PHF	797	PHE	NE	150	__FS	Safety Mtg - Director	3
PHF	797	PHE	NE	150	__TC	Safety Mtg - Fac Bldg Tech	64
PHF	797	PHE	NE	150	__TC	Safety Mtg - Project Mgr	3
PHF	797						76
PHF	842	PHE	NE	150	__BUOC	Order Mtrls & Supplies - Draft Tech	48
PHF	842	PHE	NE	150	__BUOC	Requisition Mtrls & Supplies - Clerk	474
PHF	842	PHE	NE	150	__FS	Order Mtrls & Supplies - Director	48
PHF	842	PHE	NE	150	__TC	Ord Mtrls & Supplies - Fac Bldg Tech	48
PHF	842						618
PHF	843	PHE	NE	150	__BUOC	Process Inv - Clerk	346
PHF	843	PHE	NE	150	__FS	Process Inv - Director	12
PHF	843	PHE	NE	150	__TC	Process Inv - Fac Bldg Tech	24
PHF	843						382
PHF	844	PHE	NE	150	__BUOC	Prep & Manage Contracts - Clerk	154
PHF	844	PHE	NE	150	__BUOC	Prep & Manage Contracts - Draft Tech	6
PHF	844	PHE	NE	150	__FS	Prep & Manage Contracts - Director	6
PHF	844	PHE	NE	150	__TC	Prep & Manage Contracts - Fac Bldg Tech	48
PHF	844						214
PHF	930	KNG	NE	150	__BUOC	CAPITAL - KNG - Clerk	60
PHF	930	KNG	NE	150	__BUOC	CAPITAL - KNG - Draft Tech	96
PHF	930	KNG	NE	150	__FS	CAPITAL - KNG - Director	300
IF	930	KNG	NE	150	__TC	CAPITAL - KNG - Fac Bldg Tech	96
IF	930	PHE	NE	150	__BUOC	CAPITAL - PHE - Clerk	20
PHF	930	PHE	NE	150	__BUOC	CAPITAL - PHE - Draft Tech	12

12/28/2004 *VIEW: Labor Hour

*RA #	*Act #	*Loc #	*Ind #	*EE #	*Labor Class #	Line item	FY05
F	930	PHE	NE	150	__FS	CAPITAL - PHE - Director	96
PHF	930	PHE	NE	150	__TC	CAPITAL - PHE - Fac Bldg Tech	48
PHF	930	PHE	NE	150	__TC	CAPITAL - WRD - Fac Bldg Tech	96
PHF	930	PHE	NE	150	__TC	CAPITAL - WRD - Project Mgr	60
PHF	930	WRD	NE	150	__BUOC	CAPITAL - WRD - Clerk	50
PHF	930	WRD	NE	150	__BUOC	CAPITAL - WRD - Draft Tech	96
PHF	930	WRD	NE	150	__FS	CAPITAL - WRD - Director	300
PHF	930						1,330
PHF	931	HEI	BE	150	__TC	HALE KEKELA - ICB - PE	48
PHF	931	KNG	NE	150	__BUOC	O&M Labor - KNG - Clerk	174
PHF	931	KNG	NE	150	__BUOC	O&M Labor - KNG - Draft Tech	325
PHF	931	KNG	NE	150	__FS	O&M Labor - KNG - Director	368
PHF	931	KNG	NE	150	__TC	O&M Labor - KNG - Fac Bldg Tech	96
PHF	931	MAH	NN	150	__TC	MAH - Labor Project Mgr	48
PHF	931	PHE	NE	150	__BUOC	O&M Labor - PHE - Clerk	20
PHF	931	PHE	NE	150	__BUOC	O&M Labor - PHE - Draft Tech	12
PHF	931	PHE	NE	150	__FS	O&M Labor - PHE - Director	96
PHF	931	PHE	NE	150	__TC	O&M Labor - PHE - Fac Bldg Tech	52
PHF	931	PHE	NE	150	__TC	O&M Labor - PHE - Project Mgr	72
PHF	931	WRD	NE	150	__BUOC	O&M Labor - WRD - Clerk	174
PHF	931	WRD	NE	150	__BUOC	O&M Labor - WRD - Draft Tech	324
PHF	931	WRD	NE	150	__FS	O&M Labor - WRD - Director	368
PHF	931	WRD	NE	150	__TC	O&M Labor - WRD - Project Mgr	20
PHF	931	WRD	NE	150	__TC	O&M Labor - WRD - Fac Bldg Tech	96
PHF	931						2,293
F	932	KNG	NE	150	__BUOC	REPAIRS - KNG - Labor Clerk	40
PHF	932	KNG	NE	150	__BUOC	REPAIRS - KNG - Labor Draft Tech	90
PHF	932	KNG	NE	150	__FS	REPAIRS - KNG - Labor Director	42
PHF	932	KNG	NE	150	__TC	REPAIRS - KNG - Fac Bldg Tech	60
PHF	932	PHE	NE	150	__BUOC	REPAIRS - PHE - Labor - Draft Tech	12
PHF	932	PHE	NE	150	__FS	REPAIRS - PHE - Labor - Director	12
PHF	932	PHE	NE	150	__TC	REPAIRS - PHE - Fac Bldg Tech	96
PHF	932	PHE	NE	150	__TC	REPAIRS - PHE - Project Mgr	48
PHF	932	WRD	NE	150	__BUOC	REPAIRS - WRD - Labor Clerk	40
PHF	932	WRD	NE	150	__BUOC	REPAIRS - WRD - Labor Draft Tech	60
PHF	932	WRD	NE	150	__FS	REPAIRS - WRD - Labor Director	42
PHF	932	WRD	NE	150	__TC	REPAIRS - WRD - Fac Bldg Tech	96
PHF	932	WRD	NE	150	__TC	REPAIRS - WRD - Project Mgr	48
PHF	932						686
PHF							7,325
							7,325

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2204_2005 Direct RA Cost

*RA #	*Act #	*Loc #	*Ind #	*Project #	*EE #	Line item	FY04	FY05
PHF	*Supply	*Supply	*Supply	*Supply	*Supply	Drafting Tech/Facilities	$1,232.00	$2,080.00
PHF	*Supply	*Supply	*Supply	*Supply	*Supply	Facilities Clerk	$1,232.00	$2,080.00
PHF	*Supply	*Supply	*Supply	*Supply	*Supply	Facilities Director	$1,232.00	$2,080.00
PHF	*Supply	*Supply	*Supply	*Supply	*Supply	Fac Bldg Tech	$1,232.00	$2,080.00
PHF	*Supply	*Supply	*Supply	*Supply	*Supply	Facilities Project Manager	$1,232.00	$2,080.00
PHF	*Supply	*Supply	*Supply	*Supply	*Supply		$6,160.00	$10,400.00
PHF	*Supply						$6,160.00	$10,400.00
PHF	098	PHE	ND	NPHZZZZZ	107	NProd - Facilities Clerk	$3,970.49	$7,013.28
PHF	098	PHE	ND	NPHZZZZZ	107	NProd - Facilities Drafting Tech	$3,448.06	$6,090.48
PHF	098	PHE	ND	NPHZZZZZ	107	NProd - Facilities Director	$0.00	$10,509.84
PHF	098	PHE	ND	NPHZZZZZ	107	NProd - Fac Bldg Tech	$2,658.48	$6,870.08
PHF	098	PHE	ND	NPHZZZZZ	107	NProd - Facilities Project Manager	$5,558.64	$8,096.88
PHF	098	PHE	ND	NPHZZZZZ	107		$15,635.67	$38,580.56
PHF	098						$15,635.67	$38,580.56
PHF	701	PHE	NE	NPHZZZZZ	150	Forecast - Clerk	$1,745.56	$3,312.75
PHF	701	PHE	NE	NPHZZZZZ	150	Forecast - Director	$2,246.16	$3,821.76
PHF	701						$3,991.72	$7,134.51
PHF	777	PHE	NE	NPHZZZZZ	150	Process Payroll - Clerk	$1,880.76	$1,845.60
PHF	777	PHE	NE	NPHZZZZZ	150	Process Payroll - Director	$1,123.08	$1,910.88
PHF	777	PHE	NE	NPHZZZZZ	150		$3,003.84	$3,756.48
PHF	777						$3,003.84	$3,756.48
PHF	785	PHE	NE	NPHZZZZZ	150	Training Dev - Director	$187.18	$318.48
PHF	785	PHE	NE	NPHZZZZZ	150		$187.18	$318.48
PHF	785						$187.18	$318.48
PHF	789	PHE	NE	NPHZZZZZ	150	Attend Training - Clerk	$67.17	$138.42
PHF	789	PHE	NE	NPHZZZZZ	150	Attend Training - Draft Tech	$67.17	$138.42
PHF	789	PHE	NE	NPHZZZZZ	150	Attend Training - Director	$0.00	$238.86
PHF	789	PHE	NE	NPHZZZZZ	150	Attend Training - Fac Bldg Tech	$178.74	$184.02
PHF	789	PHE	NE	NPHZZZZZ	150	Attend Training - Project Mgr	$181.26	$184.02
PHF	789	PHE	NE	NPHZZZZZ	150		$494.34	$883.74
PHF	789						$494.34	$883.74
PHF	797	PHE	NE	NPHZZZZZ	150	Safety Mtg - Clerk	$44.78	$69.21
PHF	797	PHE	NE	NPHZZZZZ	150	Safety Mtg - Draft Tech	$44.78	$69.21
PHF	797	PHE	NE	NPHZZZZZ	150	Safety Mtg - Director	$70.19	$119.43
PHF	797	PHE	NE	NPHZZZZZ	150	Safety Mtg - Fac Bldg Tech	$966.72	$1,962.88

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2204_2005 Direct RA Cost

*RA #	*Act #	*Loc #	*Ind #	*Project #	*EE #	Line item	FY04	FY05
PHF	842	PHE	NE	NPHZZZZZ	150	Requisition Mtrls & Supplies - Clerk	$9,588.36	$10,935.18
PHF	842	PHE	NE	NPHZZZZZ	150	Order Mtrls & Supplies - Director	[redacted]	[redacted]

*RA #	*Act #	*Loc #	*Ind #	*Project #	*EE #	Line item	FY04	FY05
PHF	931	KNG	NE	NPHZZZZZ	201	KNG - Corporate Moves - Material	$16,391.67	$28,950.00
PHF	931	KNG	NE	NPHZZZZZ	201	KNG - Misc Repairs - Materials	$14,583.33	$25,750.00
PHF	931	KNG	NE	NPHZZZZZ	201		$30,975.00	$54,700.00
PHF	931	KNG	NE	NPHZZZZZ	501	KNG - Corporate Moves - Outside S...	$8,195.83	$14,500.00
PHF	931	KNG	NE	NPHZZZZZ	501	KNG - Elevator Repair	$3,424.75	$7,000.00
PHF	931	KNG	NE	NPHZZZZZ	501	KNG - Elevator Service Contract	$5,833.33	$10,500.00
PHF	931	KNG	NE	NPHZZZZZ	501	KNG - Misc Repairs	$5,833.33	$10,500.00
PHF	931	KNG	NE	NPHZZZZZ	501	KNG - Roof Repairs	$2,916.67	$5,500.00
PHF	931	KNG	NE	NPHZZZZZ	501	KNG - Water Treatment	$1,750.00	$3,900.00
PHF	931	KNG	NE	NPHZZZZZ	501		$27,953.92	$51,900.00
PHF	931	KOO	NE	NPHZZZZZ	501	KOO - AC Maintenance	$2,916.67	$5,000.00
PHF	931	KOO	NE	NPHZZZZZ	501	KOO - Misc Contract	$2,916.67	$5,000.00
PHF	931	KOO	NE	NPHZZZZZ	501		$5,833.33	$10,000.00
PHF	931	MAH	NN	NPHZZZZZ	150	MAH - Labor Project Mgr	$845.88	$1,472.16
PHF	931	MAH	NN	NPHZZZZZ	150		$845.88	$1,472.16
PHF	931	MAH	NN	NPHZZZZZ	501	MAH - Contract Work	$5,716.67	$11,000.00
PHF	931	MAH	NN	NPHZZZZZ	501	MAH - Pest Control	$1,884.17	$3,500.00
PHF	931	MAH	NN	NPHZZZZZ	501	MAH - Property Maintenance	$19,497.92	$33,425.00
PHF	931	MAH	NN	NPHZZZZZ	501	MAH - Repair Mtrls	$1,166.67	$2,000.00
PHF	931	MAH	NN	NPHZZZZZ	501	MAH - Repairs	$5,833.33	$10,000.00
PHF	931	MAH	NN	NPHZZZZZ	501	MAH - Tree Trimming	$6,358.33	$10,899.86
PHF	931	MAH	NN	NPHZZZZZ	501		$40,457.08	$70,824.86
PHF	931	PDM	NE	NPHZZZZZ	501	DIST SUB - AC Maint/Repair	$2,916.67	$5,000.00
PHF	931	PDM	NE	NPHZZZZZ	501	DIST SUB - Misc Repairs	$8,750.00	$30,000.00
PHF	931	PDM	NE	NPHZZZZZ	501		$11,666.67	$35,000.00
PHF	931	PHE	NE	NPHZZZZZ	150	O&M Labor - PHE - Clerk	$261.22	$461.40
PHF	931	PHE	NE	NPHZZZZZ	150	O&M Labor - PHE - Draft Tech	$156.73	$276.84
PHF	931	PHE	NE	NPHZZZZZ	150	O&M Labor - PHE - Director	$2,246.16	$3,821.76
PHF	931	PHE	NE	NPHZZZZZ	150	O&M Labor - PHE - Fac Bldg Tech	$916.37	$1,594.84
PHF	931	PHE	NE	NPHZZZZZ	150	O&M Labor - PHE - Project Mgr	$1,268.82	$2,208.24
PHF	931	PHE	NE	NPHZZZZZ	150		$4,849.30	$8,363.08
PHF	931	PHE	NE	NPHZZZZZ	301	Assigned Vehicle	$3,362.33	$5,200.00
PHF	931	PHE	NE	NPHZZZZZ	301		$3,362.33	$5,200.00
PHF	931	PTM	NE	NPHZZZZZ	501	TRANS SUB - AC Maint/Repair	$2,916.67	$10,000.00
PHF	931	PTM	NE	NPHZZZZZ	501	TRANS SUB - Misc Repairs	$12,833.33	$50,000.00
PHF	931	PTM	NE	NPHZZZZZ	501		$15,750.00	$60,000.00
PHF	931	WRD	NE	NPHZZZZZ	150	O&M Labor - WRD - Clerk	$2,612.17	$4,014.18
PHF	931	WRD	NE	NPHZZZZZ	150	O&M Labor - WRD - Draft Tech	$9,403.80	$7,474.68
PHF	931	WRD	NE	NPHZZZZZ	150	O&M Labor - WRD - Director	$8,610.28	$14,650.08
PHF	931	WRD	NE	NPHZZZZZ	150	O&M Labor - WRD - Project Mgr	$352.45	$613.40
PHF	931	WRD	NE	NPHZZZZZ	150	O&M Labor - WRD - Fac Bldg Tech	$1,691.76	$2,944.32
PHF	931	WRD	NE	NPHZZZZZ	150		$22,670.46	$29,696.66
PHF	931	WRD	NE	NPHZZZZZ	201	O&M Materials - WRD - Corp Moves	$23,333.33	$50,000.00
PHF	931	WRD	NE	NPHZZZZZ	201	O&M Materials - WRD - Misc Repairs	$3,966.67	$6,800.00
PHF	931	WRD	NE	NPHZZZZZ	201		$27,300.00	$56,800.00

*RA #	*Act #	*Loc #	*Ind #	*Project #	*EE #	Line item	FY04	FY05
PHF	931	WRD	NE	NPHZZZZZ	501	ARCHER - Water Treatment - Outsid...	$3,500.00	$6,000.00
PHF	931	WRD	NE	NPHZZZZZ	501	WRD - Corporate Moves - Outside S...	$11,666.67	$25,000.00
PHF	931	WRD	NE	NPHZZZZZ	501	WRD - Elevator Repair - Outside Svcs	$1,750.00	$3,000.00
PHF	931	WRD	NE	NPHZZZZZ	501	WRD - Elevator Service Contract	$5,833.33	$10,000.00
PHF	931	WRD	NE	NPHZZZZZ	501	WRD - Misc Repairs	$7,700.00	$13,200.00
PHF	931	WRD	NE	NPHZZZZZ	501	WRD - Water Treatment	$1,750.00	$3,000.00
PHF	931	WRD	NE	NPHZZZZZ	501		$32,200.00	$60,200.00
PHF	931	WTD	NE	NPHZZZZZ	501	WAIAU - Corporate Moves	$4,083.33	$7,000.00
PHF	931	WTD	NE	NPHZZZZZ	501	WAIAU - Misc Contracts	$5,833.33	$20,000.00
PHF	931	WTD	NE	NPHZZZZZ	501		$9,916.67	$27,000.00
PHF	931						$248,334.24	$501,735.25
PHF	932	KNG	NE	NPHZZZZZ	150	REPAIRS - KNG - Labor Clerk	$522.43	$922.80
PHF	932	KNG	NE	NPHZZZZZ	150	REPAIRS - KNG - Labor Draft Tech	$1,175.48	$2,076.30
PHF	932	KNG	NE	NPHZZZZZ	150	REPAIRS - KNG - Labor Director	$982.69	$1,672.02
PHF	932	KNG	NE	NPHZZZZZ	150	REPAIRS - KNG - Fac Bldg Tech	$1,057.35	$1,840.20
PHF	932	KNG	NE	NPHZZZZZ	150		$3,737.95	$6,511.32
PHF	932	PHE	NE	NPHZZZZZ	150	REPAIRS - PHE - Labor - Draft Tech	$156.73	$276.84
PHF	932	PHE	NE	NPHZZZZZ	150	REPAIRS - PHE - Labor - Director	$280.77	$477.72
PHF	932	PHE	NE	NPHZZZZZ	150	REPAIRS - PHE - Fac Bldg Tech	$1,691.76	$2,944.32
PHF	932	PHE	NE	NPHZZZZZ	150	REPAIRS - PHE - Project Mgr	$845.88	$1,472.16
PHF	932	PHE	NE	NPHZZZZZ	150		$2,975.14	$5,171.04
PHF	932	WRD	NE	NPHZZZZZ	150	REPAIRS - WRD - Labor Clerk	$522.43	$922.80
PHF	932	WRD	NE	NPHZZZZZ	150	REPAIRS - WRD - Labor Draft Tech	$783.65	$1,384.20
PHF	932	WRD	NE	NPHZZZZZ	150	REPAIRS - WRD - Labor Director	$982.69	$1,672.02
PHF	932	WRD	NE	NPHZZZZZ	150	REPAIRS - WRD - Fac Bldg Tech	$1,691.76	$2,944.32
PHF	932	WRD	NE	NPHZZZZZ	150	REPAIRS - WRD - Project Mgr	$845.88	$1,472.16
PHF	932	WRD	NE	NPHZZZZZ	150		$4,826.42	$8,395.50
PHF	932						$11,539.51	$20,077.86
							$329,232.12	$660,437.58

General Information Requests

For each of the HECO witnesses who sponsor test period budgeted non-labor direct expense amounts, please provide the following information:

a. Identify each employee involved in preparation of budgeted non-labor direct expense amounts included in the rate case test period budget and sponsored by the witness.

b. Provide complete copies of all calculations, spreadsheet files, "pencil" workpapers, surveys and other analyses performed by each of the employees identified in response to part (a), indicating the amounts by Department, RA, Activity and NARUC Account that such calculations support.

c. For each budgeted non-labor amount in the test period forecast that exceeds $50,000, please describe the basis for determining the budgeted amount (for example, bid solicitation, price times quantity estimation, historical cost escalated, etc.)

d. For each item in your response to part (c), where specific quantities and prices were discretely forecasted, explain the basis for and source of the budgeted quantity inputs and budgeted prices for each such item. Provide complete copies of all studies, reports and other documents that were relied upon.

e. For each item in your response to part (c) where historical costs were escalated, provide all historical cost information that was considered and explain how such data was evaluated and escalated to derive test year proposed levels.

f. For each item in your response to part (c) where a bid solicitation or other special analysis was conducted, explain what was done and provide complete copies of all supporting reports, bid solicitations, proposal, analyses, workpapers and other documents associated with such efforts.

g. Provide complete copies of all other information required to completely support and

NonLabor Input Sheet - NonProject
2005

Resp Area (RA) PVL

Prepared by Allison Sawada
Date 4/5/04

Dimension tab card								Rates tab card	Units tab card												
Line Item	RA	Act	Loc	Ind	Proj	EE	Lbr Class	Rates Link To	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
									(enter Dollars or Vehicle Hours in "Units tab card")												
Material Cost-Maint. Tr UG Ln-Corr	PVL	347	OAH	NE	NPVZZZZZ	205		No Escalation	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	18,000
Vehicle Usage - Underground tsf repair	PVL	347	OAH	NE	NPVZZZZZ	301		VEHLGT Rate (Light Trucks)	1680	1600	1840	1680	1760	1760	1680	1840	1760	1680	1760	1760	20,800
Material cost for Tsub MAINTENANCE	PVL	351	OAH	NE	NPVZZZZZ	205		No Escalation	200	200	200	200	200	200	200	200	200	200	200	200	2,400
Substation maintenance - Sump pumps/tanks	PVL	351	OAH	NE	NPVZZZZZ	501		No Escalation	0	0	0	0	6,000	0	0	0	0	0	0	0	6,000
Material Cost	PVL	481	OAH	NE	NPVZZZZZ	205		No Escalation	625	625	625	625	625	625	625	625	625	625	625	625	7,500
Material cost for Dsub MAINTENANCE	PVL	488	OAH	NE	NPVZZZZZ	205		No Escalation	200	200	200	200	200	200	200	200	200	200	200	200	2,400
Material Cost	PVL	492	OAH	NE	NPVZZZZZ	205		No Escalation	1877	1877	1877	1877	1877	1877	1877	1877	1877	1877	1877	1877	22,524
Contract Service Tool repair	PVL	492	OAH	NE	NPVZZZZZ	501		No Escalation	350	350	350	350	350	350	350	350	350	350	350	350	4,200
Forklift usage - 3 propane / 1 electrical	PVL	492	WRD	NC	NPVZZZZZ	301		VEHMIS Rate (Misc Veh & Equip)	756	720	828	756	792	792	756	828	792	756	792	792	9,360
Material Cost Grafitti paint	PVL	754	PHE	NE	NPVZZZZZ	205		No Escalation	115	115	115	115	115	115	115	115	115	115	115	115	1,380
Contract Service	PVL	931	WRD	NE	NPVZZZZZ	501		No Escalation	368	368	368	368	368	368	368	368	368	368	368	368	4,416
Material Cost Repair Bulid & Grds	PVL	932	WRD	NE	NPVZZZZZ	205		No Escalation	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	18,000
Vehicle Cost - Overhead tsf repairs	PVL	932	WRD	NE	NPVZZZZZ	301		VEHLGT Rate (Light Trucks)	840	800	920	840	880	880	840	920	880	840	880	880	10,400
Contract Services Ward	PVL	932	WRD	NE	NPVZZZZZ	501		No Escalation	1838	1838	1838	1838	1838	1838	1838	1838	1838	1838	1838	1838	22,056
Material Cost - Paint & Materials	PVL	942	PHE	NC	NPVZZZZZ	205		No Escalation	2965	2965	2965	2965	2965	2965	2965	2965	2965	2965	2965	2965	35,580
Contract Services	PVL	942	PHE	NC	NPVZZZZZ	501		No Escalation	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	18,000

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NonLabor Input Sheet - NonProject
2005

Resp Area (RA) PVM

Prepared by Cecily Barnes
Date 4/5/04

Dimension tab card								Rates tab card	Units tab card													
Line Item	RA	Act	Loc	Ind	Proj	EE	Lbr Class	Rates Link To	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
									(enter Dollars or Vehicle Hours in "Units tab card")												
Tool Rprs-Matl Purch	PVM	492	OAH	NE	NPVZZZZZ	201		No Escalation	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000	36,000
Tool Rprs-ProCard	PVM	492	OAH	NE	NPVZZZZZ	205		No Escalation	2500	2500	2500	2500	2500	2500	2500	2500	2500	2500	2500	2500	30,000
Tool Rprs-Services	PVM	492	OAH	NE	NPVZZZZZ	501		No Escalation	500	500	500	500	500	500	500	500	500	500	500	500	6,000
Training-Misc	PVM	789	WRD	NC	NPVZZZZZ	501		No Escalation	120	120	120	120	120	120	120	120	120	120	120	120	1,440
Training-Travel/mainland	PVM	789	WRD	NC	NPVZZZZZ	520		No Escalation	0	0	0	2400	0	0	0	0	0	2400	0	0	4,800
Launder Nomex coveralls	PVM	795	WRD	NC	NPVZZZZZ	501		Escalation (2003 base)	3415	3415	3415	3415	3415	3415	3415	3415	3415	3415	3415	3415	40,985
Exempt Matl	PVM	850	WRD	NC	NPVZZZZZ	201		Escalation (2003 base)	96092	96092	96092	96092	96092	96092	96092	96092	96092	96092	96092	96092	1,153,106
fabricate matl/in-house net ee 201$	PVM	850	WRD	NC	NPVZZZZZ	201		No Escalation	200	200	200	200	200	200	200	200	200	200	200	200	2,400
Stores Misc-Mat'ls	PVM	850	WRD	NC	NPVZZZZZ	201		No Escalation	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	12,000
Stores Misc-ProCard	PVM	850	WRD	NC	NPVZZZZZ	205		No Escalation	850	850	850	850	850	850	850	850	850	850	850	850	10,200
HEAVY trucks (4)	PVM	850	WRD	NC	NPVZZZZZ	301		VEHHVY Rate (Heavy Trucks)	12474	12474	12474	12474	12474	12474	12474	12474	12474	12474	12474	12474	149,688
LIGHT truck (3)	PVM	850	WRD	NC	NPVZZZZZ	301		VEHLGT Rate (Light Trucks)	2600	2600	2600	2600	2600	2600	2600	2600	2600	2600	2600	2600	31,200
MEDIUM truck (1)	PVM	850	WRD	NC	NPVZZZZZ	301		VEHMED Rate (Medium Trucks)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	19,203
MISC lifts, carts, sweepers, trailers (30)	PVM	850	WRD	NC	NPVZZZZZ	301		VEHMIS Rate (Misc Veh & Equip)	7800	7800	7800	7800	7800	7800	7800	7800	7800	7800	7800	7800	93,600
SEDAN (2)	PVM	850	WRD	NC	NPVZZZZZ	301		VEHSED Rate (Sedans)	1041	1041	1041	1041	1041	1041	1041	1041	1041	1041	1041	1041	12,492
Stores Misc-services	PVM	850	WRD	NC	NPVZZZZZ	501		Escalation (2003 base)	4278	4278	4278	4278	4278	4278	4278	4278	4278	4278	4278	4278	51,338
Credit inventry-missing job#	PVM	851	WRD	NC	NPVZZZZZ	201		No Escalation	-10000	-10000	-10000	-10000	-10000	-10000	-10000	-10000	-10000	-10000	-10000	-10000	-120,000
reclaim matl - solvent machine rental	PVM	851	WRD	NC	NPVZZZZZ	501		No Escalation	50	50	50	50	50	50	50	50	50	50	50	50	600
Disposal Stock matl (obsolete)	PVM	852	WRD	NC	NPVZZZZZ	201		No Escalation	6000	6000	6000	6000	6000	6000	6000	6000	6000	6000	6000	6000	72,000
Hazardous Waste Disposal	PVM	877	WRD	NC	NPVZZZZZ	201		No Escalation	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	25,200
Bldg&grounds services Waiau janitorial	PVM	931	WRD	NC	NPVZZZZZ	501		Escalation (2003 base)	1176	1176	1176	1176	1176	1176	1176	1176	1176	1176	1176	1176	14,113
Rubbish Disposal	PVM	936	WRD	NC	NPVZZZZZ	501		No Escalation	9000	9000	9000	9000	9000	9000	9000	9000	9000	9000	9000	9000	108,000
891.VP.Ellipse Service Pack	PVM	891	WRD	NC	NPVZZZZZ	501		No Escalation						4088						4088	8,175
	PVM																				0

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General Information Requests

For each of the HECO witnesses who sponsor test period budgeted non-labor direct expense amounts, please provide the following information:

a. Identify each employee involved in preparation of budgeted non-labor direct expense amounts included in the rate case test period budget and sponsored by the witness.

b. Provide complete copies of all calculations, spreadsheet files, "pencil" workpapers, surveys and other analyses performed by each of the employees identified in response to part (a), indicating the amounts by Department, RA, Activity and NARUC Account that such calculations support.

c. For each budgeted non-labor amount in the test period forecast that exceeds $50,000, please describe the basis for determining the budgeted amount (for example, bid solicitation, price

Operating Div. (PRD); Peter Okunami, Senior Engineer, Operating Engineering Div. (PRE); Richard Freitas, Supervisor, Instrument and Control Div. (PRI); Wayne Kawamata, Supervisor, Relay Div. (PRR); and Kurt Anbe, Substation Service Engineer, Substation Div. (PRS) and Construction Management Div. (PRX).

b. Our overall goal is to continue to deliver reliable, cost-effective service to our customers.

[redacted]

Communications Division Assumptions

- 85% OM
    - Sick leave budgeted is 132 hours total
- 6 techs; 1 com engr; 1 supv
- Nonlabor
    - Tree trimming – 12K
    - Svc contracts for repairs – Harris MW $9500; PWC mobile radio repairs
    - Mat'ls - $28K (radio, MW, fiber optic supplies)
    - ICS (interisland com sys) - $5K (service MW; send parts back for repair)
    - Morning checks - $8K (checks for problems in the systems – check the hotline, see if recorder is recording; check alarms; change tapes
- Work is based on baseline maintenance schedule (see attached); spread out between prev/pred/corr

why not go thru veg mgt.

Operations Division Assumptions

- For dispatchers only have so many ST hours available so the rest is made up with overtime
- Only 6 staff
- OT based on historical
- Hours are basically divided by 12, not adjusted for busier months and are assessed to various activities based on trends
- Allows 40 hrs sick per person
- Outside service contracts
    - CJ answering service - $42K
    - Weather Bank – historical weather data through internet - $3K
    - NC McCloskey – Approx. $10K per year
    - Nostradamus – load forecasting software - $7,280
    - AccuWeather – for emergency pagers - $600
    - Pcom – unit commitment software (when to schedule generation plus used for production simulation – cost is shared w/power plant) $8K is our share and may be less if Energy Services comes into the mix
    - ~~Nostradamus load forecasting software~~
    - NC Satellite phone stratus - $32/mo. ($500 annual)

Operating Engineering Division Assumptions

- 5 mappers (4 techs, 1 sr. mapper); 1 Sr. engr.; 6 EMS staff; 1 mapping supv. = 13
- Mapping hours includes capital hours for CID (takes all) and remaining work of SOD/map revisions which is pure O&M; allows 400 hrs OT or 4%
- EMS – there is way more demand in 2005 than supply so the EMS project will probably have to contract work out over and above what can be incorporated with some OT
- Uses 1.1% nonproductive hours per person (includes sick leave, jury duty)
- Nonlabor service contracts and materials
    - Maint. on EMS hardware $4,500/mo. - $54K
    - DSS hardware maint. $1,100/mo. - $13,200
    - DSS software maint. $105K with 2 site visits but the actual may be lower since the 2nd site visit is optional ($80,400)
    - UPS/battery maintenance $19K
    - Mapping supplies – special inks/paper - $4,800
    - Switching diagram material - $6K

NL Forecast

ABM		Document	D-F	Actual	Forecast	A-F	F-F	Forecast
		2003	% Incre	2004		% Incre	% Incre	2005
	Jan	$4,265	8.3%	$4,142	$4,620	17.1%	5.0%	$4,850
	Feb	$4,265	8.3%	$4,142	$4,620	17.1%	5.0%	$4,850
	Mar	$4,265	8.3%	$4,142	$4,620	17.1%	5.0%	$4,850
	Apr	$4,265	8.3%	$4,142	$4,620	17.1%	5.0%	$4,850
	May	$4,265	8.3%	$4,142	$4,620	17.1%	5.0%	$4,850
	Jun	$4,265	8.3%	$4,142	$4,620	17.1%	5.0%	$4,850
	Jul	$4,265	8.3%	$4,142	$4,620	17.1%	5.0%	$4,850

WORK AUTHORIZATION NO. RE 02-02-001
UNDER PURCHASE ORDER NO. P44814 /CONTRACT NO. RE 02-02

I. Request for Quote

Under the terms and conditions of the General Services Master Agreement, dated September 16, 2002, by and between SNC-Lavalin Energy Control Systems, Inc. ("Contractor") and Hawaiian Electric Company, Inc. ("Company"), Company hereby requests a proposal from Contractor to perform the following Work:

Comprehensive Software support for SCADA for the period November 1, 2002 to December 31, 2003, with the option for a 5-day site visit (the need for the site visit will be determined at a future date), as described in SLECS document Customer Support Services for 2003 Revision B dated 30 September 2002

Dated: November 8, 2002

Hawaiian Electric Company, Inc.
Company

The minimum insurance limits and warranty defect discovery period specified in the Master Agreement shall be modified for this Work Authorization only:

Warranty
Section 7.4 - _____ year discovery period for defects

Employers' Liability
Section 8.1 - $_____ per each accident
$_____ for bodily injury from disease - each employee
$_____ for bodily injury from disease - each policy limit

Commercial General Liability
Section 8.2 - $_____ per occurrence
$_____ general aggregate

Automobile Liability
Section 8.3 - $_____ bodily injury/person
$_____ bodily injury/occurrence
$_____ property damage/accident

Pollution Liability and/or Asbestos Abatement Liability and/or Lead Abatement Liability
Section 8.4 - $_____ per occurrence

Marine
Section 8.5 - $_____ per occurrence

III. Work Authorization

Contractor's foregoing Proposal is accepted. Contractor is authorized to perform the Work as proposed. Company's Designated Representative for this Work Authorization shall be Peter Okunami.

Dated: Nov. 19, 2002

Robert K. S. Y. Young
Company

WORK AUTHORIZATION NO. RE 02-02-002
UNDER PURCHASE ORDER NO. P44814 / CONTRACT NO. RE 02-02

I. Request for Quote

Under the terms and conditions of the General Services Master Agreement, dated September 16, 2002, by and between SNC - Lavalin Energy Control Systems Inc. ("Contractor") and Hawaiian Electric Company, Inc. ("Company"), Company hereby requests a proposal from Contractor to perform the following Work: Comprehensive Software support for SCADA for the period January 1, 2004 to December 31, 2004.

Comprehensive Support Software Support SCADA for a (12) month period from January 01/2004 until December 31/2004 including one (1) 5-day site visit.

Dated: October 31, 2003 Hawaiian Electric Co., Inc.
Company

The minimum insurance limits and warranty defect discovery period specified in the Master Agreement shall be modified for this Work Authorization only:

Warranty
Section 7.4 - _____ year discovery period for defects

Employers' Liability
Section 8.1 - $_____ per each accident
$_____ for bodily injury from disease - each employee
$_____ for bodily injury from disease - each policy limit

Commercial General Liability
Section 8.2 - $_____ per occurrence
$_____ general aggregate

Automobile Liability
Section 8.3 - $_____ bodily injury/person
$_____ bodily injury/occurrence
$_____ property damage/accident

Pollution Liability and/or Asbestos Abatement Liability and/or Lead Abatement Liability
Section 8.4 - $_____ per occurrence

Marine
Section 8.5 - $_____ per occurrence

III. Work Authorization

Contractor's foregoing Proposal is accepted. Contractor is authorized to perform the Work as proposed. Company's Designated Representative for this

[redacted]

Dated: 11/25/03

Ralph M. Im
Company

WORK AUTHORIZATION NO. 02-02-003
UNDER PURCHASE ORDER NO. P44814 /CONTRACT NO. RE 02-02

I. Request for Quote

Under the terms and conditions of the General Services Master Agreement, dated September 16, 2002, by and between SNC - Lavalin Energy Control Systems Inc. ("Contractor") and Hawaiian Electric Company, Inc. ("Company"), Company hereby requests a proposal from Contractor to perform the following Work:

Comprehensive Software Support/Maintenance for Hawaiian Electric Company's Distribution SCADA System (DSS) for a twelve (12) month period January 01, 2005 through December 31, 2005 including one (1) 5-day site visit.

Dated: October 19, 2004 Hawaiian Electric Company, Inc.
Company

III. Work Authorization

Contractor's foregoing Proposal is accepted. Contractor is authorized to perform the Work as proposed. Company's Designated Representative for this Work Authorization shall be Peter Okunami.

Dated: 11 November 2004

Mark Doran
Manager Customer Service & Upgrades

Dated: 11-17-04

Ralph Imai
Manager, System Operation

B OF First Amendment to the GENERAL ... ICES AG... MENT #RE 99-8

Q...TATION

Customer Number	0248346
MCA No.	
Master Agreement No.	First Amendment to the GSA RE 99-8
Quotation No.	99049663D / 0 - 2
Purchase Order No.	PO7882/004
Service Period	NOV-01-2002 to OCT-31-2003
Quote Expiration	NOV-11-2002
Print Date	AUG-13-2002

...TER CORPORATION
...rmation
...Phone
...0-354-9000

Compaq Federal LLC, a wholly-owned subsidiary of Compaq Computer Corporation; Compaq Computer Corporation is a wholly-owned subsidiary of Hewlett-Packard Company

Customer Name:
PETER M. OKUNAMI (WA1-RE)
HAWAIIAN ELECTRIC CO INC
820 Ward Ave.
HONOLULU, HI 96814

Invoice Address:
...ABLE
...CTRIC CO INC

...96840-0001

Billing Information:
Payment Method: Invoice
Billing Frequency: Monthly
Payment Terms: On Receipt

Sum of Invoices:

Gross (excl. tax):	**$**	**22,880.40**
Adjustments (excl. tax):	**$**	**-11,358.48**
Total (excl. tax):	**$**	**11,521.92**

Allowances are calculated off net discounted amount.

Supply PO # if required: _____

re: Peter M Okunami

Peter M. Okunami
...ent: First Amendment to the General Service Agreement
...-8

For Compaq:

Date: AUG-13-2002

Authorized Signature: Cherlyn F Newcomer

Prepared By: CHERLYN F NEWCOMER, Phone: 001-503-6249764
E-mail: cherlyn.newcomer@hp.com

...ensed through NOV-11-2002." By signing above, or otherwise indicating approval of the terms of this Quotation, Customer hereby offers to purchase the referenced ...ecified herein (Order). Any such Orders are subject to acceptance by Compaq. The terms governing this Order are those of (a) any Master Agreement currently in ...r and Compaq, or the U.S. Customer Services Standard Terms, and the applicable Service Descriptions (these documents are available upon request), and (b) any Terms

...vice Agreement price includes a One-time Conversion Allowance of $1,061.88 over the period of the Agreement.

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ATTACHMF B of First Amendment to the GENERAL SERV AGREEM T #RE 99-8

QUOTATION

Compaq Federal LLC is a wholly-owned subsidiary of Hewlett-Packard Company

Customer Number	0248346
MCA No.	
Master Agreement No.	First Amendment to the GSA RE 99-8
Quotation No.	99049663D / 0 - 3
Purchase Order No.	P07882/005
Service Period	NOV-01-2003 to OCT-31-2004
Quote Expiration	JAN-13-2004
Print Date	OCT-15-2003

Customer Inquiry Information
For Sales Assistance, Phone 1 503-6249764
For Service, Phone 800-354-9000

Reply to:
1124 Tower Road
Schaumburg
IL, 60173

Customer Name:
PETER OKUNAMI (WA1-RE)
HAWAIIAN ELECTRIC CO INC
820 Ward Ave.
HONOLULU, HI 96814

[redacted]

Invoice Address:
ACCOUNTS PAYABLE
HAWAIIAN ELECTRIC CO INC
PO BOX 2750
HONOLULU, HI 96840-0001

Billing Information:

Payment Method:	Invoice
Billing Frequency:	Monthly
Payment Terms:	On Receipt

Sum of Invoices:

Gross (excl. tax):	$	23,566.80
Adjustments (excl. tax):	$	-10,605.48
Total (excl. tax):	$	12.961.32

Allowances are calculated off net discounted amount.

For the Customer:

Supply PO # if required: P07882 / 005

Date: Oct. 17, 2003

Authorized Signature: Peter M. Okunami

Customer Contact: Peter M. Okunami
Authorizing Agreement: First Amendment to the General Service Agreement Contract No. RE 99-8.

For Hewlett-Packard:

Date: OCT-15-2003

Authorized Signature:

Prepared By: MARSHA BRADFORD, Phone: 1-916-7856710
E-mail: marsha.bradford@hp.com

This quotation will be [redacted] By signing above, or otherwise indicating approval of the terms of this Quotation, Customer hereby offers to purchase the referenced services at the prices specified (Order). Any such Orders are subject to acceptance by Hewlett-Packard. The sole terms governing this Order are those of (a) any Master Agreement currently in effect between [redacted] and Hewlett-Packard, or the U.S. Customer Services Standard Terms and the applicable Service Descriptions (these documents are available upon request), and (b) any Terms [redacted] below.

Comments:

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MASTER AGREEMENT No.: Amendment N RE 99-8

Attachment D

QUOTATION

Customer Number	0248346
MCA No.	
Master Agreement No.	Amendment No. 2, RE 99-8
Quotation No.	99049663D / 0 - 5
Purchase Order No.	P56173 (line item #2)
Service Period	NOV-01-2004 to OCT-31-2005
Quote Expiration	DEC-14-2004
Print Date	SEP-16-2004

tomer Inquiry Information
Sales Assistance, Phone 1 916-7856710
Service, Phone 800-354-9000

ly to:
4 Tower Road
aumburg
60173

Customer Name:
PETER OKUNAMI
HAWAIIAN ELECTRIC CO INC
799 S KING ST
HONOLULU, HI 96840

Invoice Address:

CCOUNTS PAYABLE
IAWAIIAN ELECTRIC CO INC
O BOX 2750
IONOLULU, HI 96840-0001

Billing Information:

Payment Method:	Invoice
Billing Frequency:	Monthly
Payment Terms:	On Receipt

Sum of Invoices:

Gross (excl. tax):	$	23,473.20
Adjustments (excl. tax):	$	-10,563.36
Total (excl. tax):	$	12,909.84

Allowances are calculated off net discounted amount.

or the Customer:

Supply PO # if required: _____

ate:

uthorized Signature:

ustomer Contact
uthorizing Agreement:

For Hewlett-Packard:

Date: SEP-16-2004

Authorized Signature:

Prepared By: CAROL CHOQUETTE, Phone: 001-408-2858670
E-mail: carol.choquette@hp.com

e quoted prices are valid through Dec-14-2004. Services are subject to HP Terms and Conditions of Sale and Service, Exhibit E26, and HP Support Services, Exhibit S85.

omments:

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QUOTATION

COMPAQ COMPUTER CORPORATION

Customer Inquiry Information
For Sales Assistance, Phone
For Service, Phone 800-354-9000

Reply to:
677 Ala Moana Boulevard
Honolulu
HI, 96813

Compaq Federal LLC, a wholly-owned subsidiary of Compaq Computer Corporation; Compaq Computer Corporation is a wholly-owned subsidiary of Hewlett-Packard Company

Customer Name:
PETER OKUNAMI
HAWAIIAN ELECTRIC CO INC
PO BOX 2750
HONOLULU, HI 96840

Customer Number	0248346
MCA No.	
Master Agreement No.	GSA RE 01-026
Quotation No.	98049163D / 0 - 5
Purchase Order No.	P33554 / 002
Service Period	DEC-01-2002 to NOV-30-2003
Quote Expiration	DEC-15-2002
Print Date	NOV-04-2002

Invoice Address:
ACCOUNTS PAYABLE
HAWAIIAN ELECTRIC CO INC
PO BOX 2750
HONOLULU, HI 96840-0001

Billing Information:

Payment Method:	Invoice
Billing Frequency:	Monthly
Payment Terms:	On Receipt

Sum of Invoices:

Gross (excl. tax):	**$**	**95,130.36**
Adjustments (excl. tax):	**$**	**-46,003.20**
Total (excl. tax):	**$**	**49,127.16**

Allowances are calculated off net discounted amount.

For the Customer:

Supply PO # if required: P33554

Date: Nov. 13, 2002

Authorized Signature: pwo Robert K. Ishizu

Customer Contact: Peter M. Okunami
Authorizing Agreement: GSA RE 01-026

For Compaq:

Date: NOV-04-2002

Authorized Signature: Cherlyn Newcomer

Prepared By: CHERLYN F NEWCOMER, Phone: 001-503-6249764
E-mail: cherlyn.newcomer@hp.com

This quotation will be honored through Dec-15-2002. By signing above, or otherwise indicating approval of the terms of this Quotation, Customer hereby offers to purchase the referenced services at the prices specified herein (Order). Any such Orders are subject to acceptance by Compaq. The sole terms governing this Order are those of (a) any Master Agreement currently in effect between Customer and Compaq, or the U.S. Customer Services Standard Terms, and the applicable Service Descriptions (these documents are available upon request), and (b) any Terms listed below.

Comments: The Service Agreement price includes a One-time Conversion Allowance of $3,191.76 over the period of the Agreement.

[redacted]

0248346
98049163D / 2
P56307
DEC-01-1997
DEC-01-2003 to NOV-30-2004
NOV-14-2003
DEC-01-2003 to NOV-30-2004

[redacted]

Sum of Invoices:		
:l. tax):	$	86,764.80
nts (excl. tax):	$	-39,046.56
l. tax):	$	47,718.24

re calculated off net discounted amount.

DFORD, Phone: 1-916-7856710
om

ND, Phone: 001-847-7816522

[redacted]

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WORK AUTHORIZATION NO. RE 02-02-002
UNDER PURCHASE ORDER NO. P44814 / CONTRACT NO. RE 02-02

I. Request for Quote

Under the terms and conditions of the General Services Master Agreement, dated September 16, 2002, by and between SNC - Lavalin Energy Control Systems Inc. ("Contractor") and Hawaiian Electric Company, Inc. ("Company"), Company hereby requests a proposal from Contractor to perform the following Work: Comprehensive Software support for SCADA for the period January 1, 2004 to December 31, 2004.

Comprehensive Support Software Support SCADA for a (12) month period from January 01/2004 until December 31/2004 including one (1) 5-day site visit.

Dated: October 31, 2003 Hawaiian Electric Co., Inc.
Company

The minimum insurance limits and warranty defect discovery period specified in the Master Agreement shall be modified for this Work Authorization only:

Warranty
Section 7.4 - _____ year discovery period for defects

Employers' Liability
Section 8.1 - $_____ per each accident
$_____ for bodily injury from disease - each employee
$_____ for bodily injury from disease - each policy limit

Commercial General Liability
Section 8.2 - $_____ per occurrence
$_____ general aggregate

Automobile Liability
Section 8.3 - $_____ bodily injury/person
$_____ bodily injury/occurrence
$_____ property damage/accident

Pollution Liability and/or Asbestos Abatement Liability and/or Lead Abatement Liability
Section 8.4 - $_____ per occurrence

Marine
Section 8.5 - $_____ per occurrence

II. Contractor's Proposal

Contractor hereby proposes to perform the Work described above in Section I, under said terms and conditions, for the following amount: **USD $80,100** subject to the following payment schedule:

Date	Amount (USD)
January 1, 2004	$6,675
February 1, 2004	$6,675

III. Work Authorization

Contractor's foregoing Proposal is accepted. Contractor is authorized to perform the Work as proposed. Company's Designated Representative for this Work Authorization shall be Peter Okunami.

Dated: 11/25/03

Ralph M. Im
Company

Attachment D-3

SNC·LAVALIN
ECS

Customer Support Services

For 2004

SNC·LAVALIN
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Configuration Management Information

Document Number and Current Revision		
ECS–PD–1102773-2004 Rev. A		
Revision History		
Date	**Rev. #**	**Revision Details**
10/09/2003	A	Dates updated to 2004.

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General

SNC-Lavalin ECS warrants that the products purchased from SNC-Lavalin ECS are free from defects in materials and workmanship under normal use during the warranty period. SNC-Lavalin ECS will correct any product deficiencies documented as per SNC-Lavalin ECS procedures and advise the Customer of the corrective action. Unless otherwise stated in the Contract Documents, installation and testing of fixes at the Customer site is the responsibility of the Customer.

During the warranty period, SNC-Lavalin ECS will provide technical support for any problems detected in the product. Technical support is defined as assistance with questions and issues about the product that was delivered and accepted, as defined in the Contract Documents. Technical support is available free of charge during the warranty period and is offered during standard business hours, 9:00AM to 5:00PM EST, Monday to Friday.

To enhance the level of technical support available during the warranty period, and to continue this technical support following the warranty period, SNC-Lavalin ECS offers technical support, maintenance, and upgrade services to its customers world-wide. Technical support and maintenance services augment the high degree of system reliability and availability expected by SNC-Lavalin ECS customers. In addition, SNC-Lavalin ECS on-call staff can reduce the need for customers to have specially skilled personnel to maintain, support, and upgrade their system.

The Software Support Agreements and Hardware Maintenance Agreements offered by SNC-Lavalin ECS augment the services provided during and after the warranty period by offering a 24-hours/7-days hotline for technical support, a pool of technical support hours, software updates, and more. These service agreements are offered on an annual basis and offer a wide range of services that have been tailored to satisfy customer needs. The details of these agreements are described in the sections that follow.

Software Maintenance Agreements

Basic Software Support

The Basic Software Support service agreement provides:

a) Access to emergency technical support seven days a week, 24-hours per day, with a guaranteed maximum 4-hour engineering response time. For the purposes of this agreement, an emergency is defined when a critical system function is unavailable. For calls which are handled during standard business hours, 9:00AM to 5:00PM EST Monday to Friday, a minimum of [redacted]

associated procedure will be implemented to ensure that on-site modifications will also be captured and placed under configuration control.

d) A secure software repository. Copies of the files kept under configuration control will be placed in a secure repository for emergency backup restoration. A backup tape, or other suitable long-term storage media, will be produced periodically or after major software changes from customer configuration control baseline and placed in a fireproof data safe. This contingency measure ensures recovery of the system software following an emergency event at the customer site.

e) Software maintenance releases. Changes to the SNC-Lavalin ECS produced source code to correct known problems and minor software updates are provided as software releases. During the validity period of the agreement, applicable releases are planned to coincide with the on-site visit.

As each customer software baselines is unique, the release is specifically tailored for the target site using the in-house configuration control baseline. A change package is created and verified using the in-house SNC-Lavalin ECS software baseline by replacing existing modules or adding new modules, and by modifying the code, as required, to achieve error free compilation and linking. Using this process, the overall effort and cost to install software changes, both for priority problem resolution and scheduled releases, is significantly reduced. Also, the cost associated with problem resolution is reduced, for an individual customer, since certain problems are common across the customer base.

For the purpose of this agreement, a minor update is defined as a maintenance related modification to a software application or module that already exists as part of the customer software baseline, where the release has been previously designed, coded and tested on a different but similar software baseline. This modification involves a limited number of files, which can be retrofitted [redacted]

Site Visits

SNC-Lavalin ECS strongly recommends two (2) site visits per year by a Customer Service representative, specialized in system software, to perform maintenance tasks, system assessment, troubleshooting tasks, or software release installations at customer site for a one week period. This site visit will provide the Customer Service representative with a first hand appraisal of the system status and will promote dialog and closer co-operation between the customer's maintenance staff and SNC-Lavalin ECS's support staff. This opportunity can also be used to advise, review, and assist the customer with on-going maintenance, operation, or upgrade issues.

Prior to the visit, it is advisable that the customer provides SNC-Lavalin ECS with a list of issues and concerns to properly plan and prepare the on-site work, and to ensure a productive and successful trip. At the end of the site visit SNC-Lavalin ECS will produce a trip report detailing the work performed.

The labor costs for a one-week site visit include preparation time, travel time, and follow-up time. Travel and living expenses will be billed at cost plus a 15% handling fee.

Technical Support Services

Requests for technical support, hardware or software upgrades, or consultation services during and after the warranty period that are not covered by the software support agreements above are handled on an individual basis. The customer simply contacts the Customer Service department with a description of the technical support, hardware or software upgrade or consultation service required. Negotiations will be held to determine the amount of effort required and a mutually agreed timetable for start and completion of the work.

The request will be documented in a Statement of Work that will be signed by both parties. The Statement of Work will describe the services to be provided, the list of hardware, software, documentation and training deliverables, and the terms and conditions of the sale.

Field Service Representatives

For long-term, dedicated software support, SNC-Lavalin ECS can provide a programmer or engineer to work at the customer site, under the customer's direction, for an extended period of time. The customer will appoint one person to be responsible for co-ordinating and directing the technical support to be provided by the field service representative. In addition, the customer will, at the customer's expense, supply the tools, materials,

Hardware Maintenance Agreements

Hardware maintenance agreements cover a wide variety of services such as scheduled routine and preventive hardware maintenance, on-call technical services, technician dispatch, repair or replacement of failed hardware components, and others.

Scheduled Preventive Maintenance

For customers that do not wish to or cannot carry out the required hardware preventive maintenance tasks, SNC-Lavalin ECS hardware maintenance personnel are available and can be scheduled, once per year, to perform these tasks at customer site. Hardware maintenance services, including preparation time, travel time and follow-up time, will be billed at published normal hourly rates, and travel and living expenses will be billed at cost plus a 15% handling fee.

Hardware Diagnostics Services

The aim of this program is to provide hardware diagnostics support to customers in order to resolve hardware failures. With this program, SNC-Lavalin ECS will provide technical support to customers when a hardware failure has occurred in order to find and procure a suitable replacement part. On-site hardware diagnostics services to diagnose board-level hardware problems and replace failed parts using customer-furnished spare parts can also be provided.

Requests for hardware diagnostics services are handled on an individual basis; simply contact the Customer Service department with a description of the hardware failure when it occurs. Discussions will be held to determine the hardware repair or replacement costs and the amount of technical support required, and a mutually agreed timetable for start and completion of the work. The request will be documented in a Statement of Work that will be signed by both parties. The Statement of Work will describe the services to be provided, the list of hardware components to be delivered, and the terms and conditions of the contract.

Customer Responsibilities

- Maintain the security of SNC-Lavalin ECS proprietary and confidential information.
- Maintain backup and recovery procedures, and data external to the SNC-Lavalin ECS System, for reconstruction of lost or altered data files or programs.
- Maintain current backup tapes of the relational databases

- Ensure that a representative is available to provide assistance when SNC-Lavalin ECS is performing on site or remote access telephone/modem support.
- Provide high-speed remote access to the System including:
  - One data quality telephone line with locally compatible modem of 28,800 baud or greater. Integrated Service Digital Network (ISDN) or Virtual Private Network (VPN) is preferred. Customer is responsible for installation and configuration of the remote access equipment and for telecommunication charges on the Customer side of the link;
  - One voice grade telephone line with termination near the work site.
- Access to the equipment covered under this agreement.
- Adequate working space for installation and support.
- Access to, and use of all information, internal resources and facilities necessary to support and maintain the product.
- Access to computer resources to perform diagnostics and tests required as part of the installation or support procedures.
- Document all customer implemented customization, reconfiguration, relocation, or other changes to the system.
- Ensure the site support staff has taken the appropriate training courses to enable fulfilment of the customer responsibilities.
- Maintain a listing (including part numbers and serial numbers) of all spares which are available or used as part of the hardware support options.
- Inform SNC-Lavalin ECS in a timely and precise manner of any issues which apply to the system.

Instrument & Control Division Assumptions

- 85-90% O&M; 10-15% capital
  Sick leave budgeted is 10% of total avail hours
- Nonlabor - supplies (i.e. recordation pens/charts); ongoing leasing of phone lines
- Note: cell phone costs will escalate to $15K/year due to new BMI installations
- Work is based on baseline maintenance schedule (see attached) which increases as new* equipment is added (i.e. # of regulators, RTUs, BMIs, etc) or as equipment changes over from electromechanical to digital
- Anticipate that going forward 2005-2010 there will be much more capital work due to the following projects: EMS, RTU migration; LAN/WAN for EMS; continuing BMI/MOSCAD work - coud be as much as 40% capital in ensuing years; for 2005 may be 20-25%
- Currently in 2004 we are at 50-60 hours extra per month on capital jobs
- Although not budgeted, I&C is responsible for:
  In emergencies, servicing of EMS system UPS, EMS and DSS hardware until vendors with whom we have service agreements can either be contacted or until replacement parts arrive.

* increaseing BMI sites about 30/year

Relay Division Assumptions

- 87% OM
- Sick leave budgeted 2 hours per month per person
    - 24 hrs/engineer = 48 hrs.
    - 144 hrs/crew

[redacted]

- Misc. outside services $12K each budgeted for Transm & Distrib (based on equipment ratio); $3K for power plant
- 6 techs; 2 engineers; 1 supv; 1 supt.
- work is based on baseline maintenance schedule (see attached)

Responsible for:

1. Operating and maintaining all protective relays, schemes and associated equipment in T&D substations, steam and combustion plants.
2. This includes analysis and repairing of fault analyzing equip, directing crews to faulted areas and emergency storm repairs - 46 KV, 12 KV, auto transfers; load shedding; 12 KV line reclosers

Materials/Supplies for Activities 350 - transmission corrective and 487 distibution corrective

		Actuals				4 Yr Avg	2005 Forecast
EE 201	Materials	2000	2001	2002	2003		

[redacted]

materials for corrective work typically 90% of total (90% of 551,400=approx 494,000)
split out based on historical: 47% Xmn; 53% distrib. roughly

Act 350	234,000	47%
Act 487	260,000	53%
	494,000	

Outside Services - Environmental (to keep in compliance); mainly Haztech

EE508	O/S-Envl		2001	2002	2003	3 Yr Avg	
			197,575	37,207	69,245	101,342	73,000

kept 2005 figure same as 2004 #