

# ***NAVFAC***

## ***OTEC Industry Day***

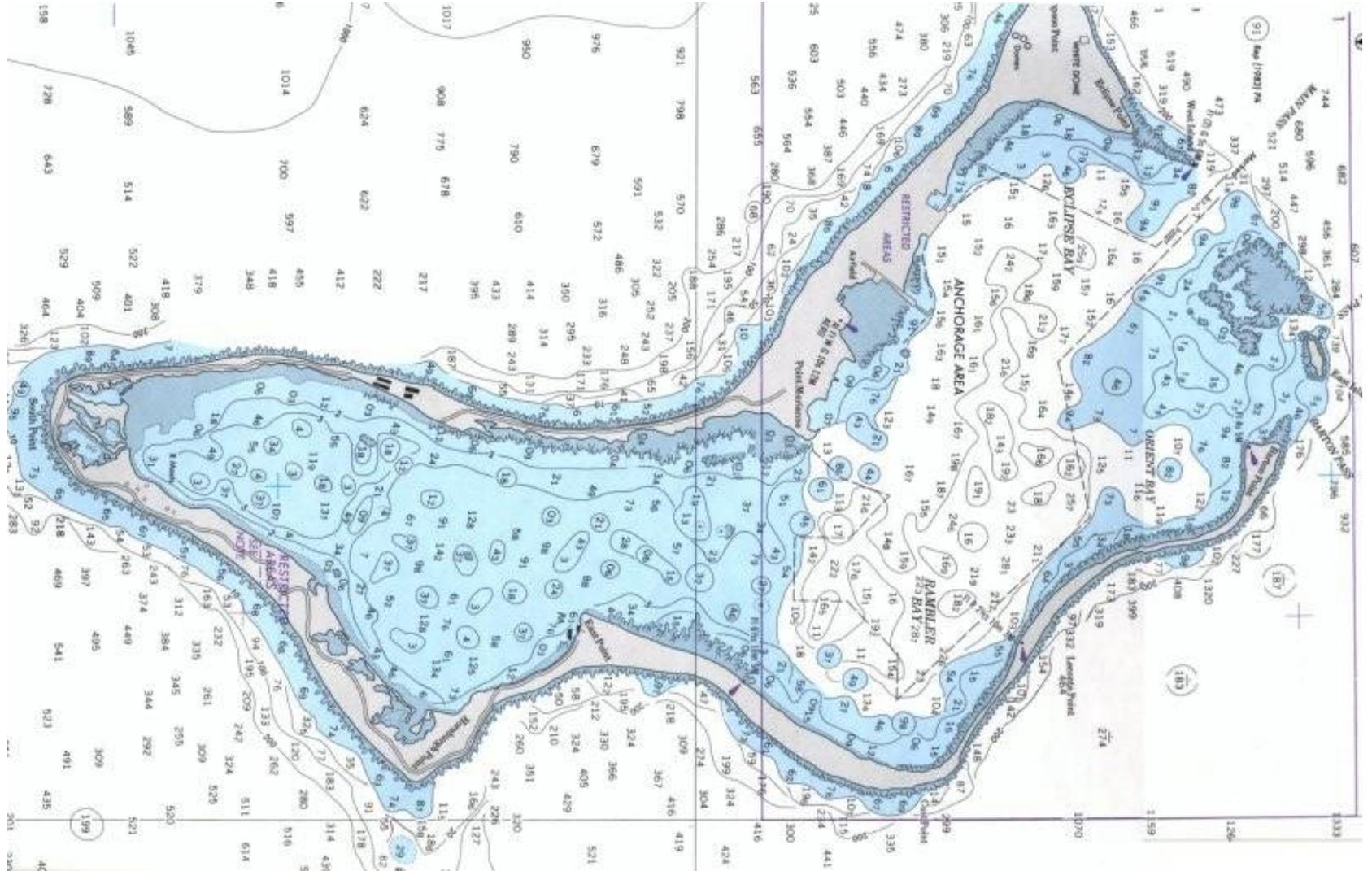
***19 May 2009***  
***ESC OF51/Cable***

## Presentation Topics

### □ Summary of RFP GFI:

➤ **Offshore bathymetric information plus electrical & related utility usage for the following NAVY OTEC sites:**

- **Naval Support Facility Diego Garcia;**
- **Guam;**
- **Pacific Missile Range Facility Kauai, HI;**
- **Pearl Harbor, HI;**
- **Marine Corps Base Kaneohe, HI.**





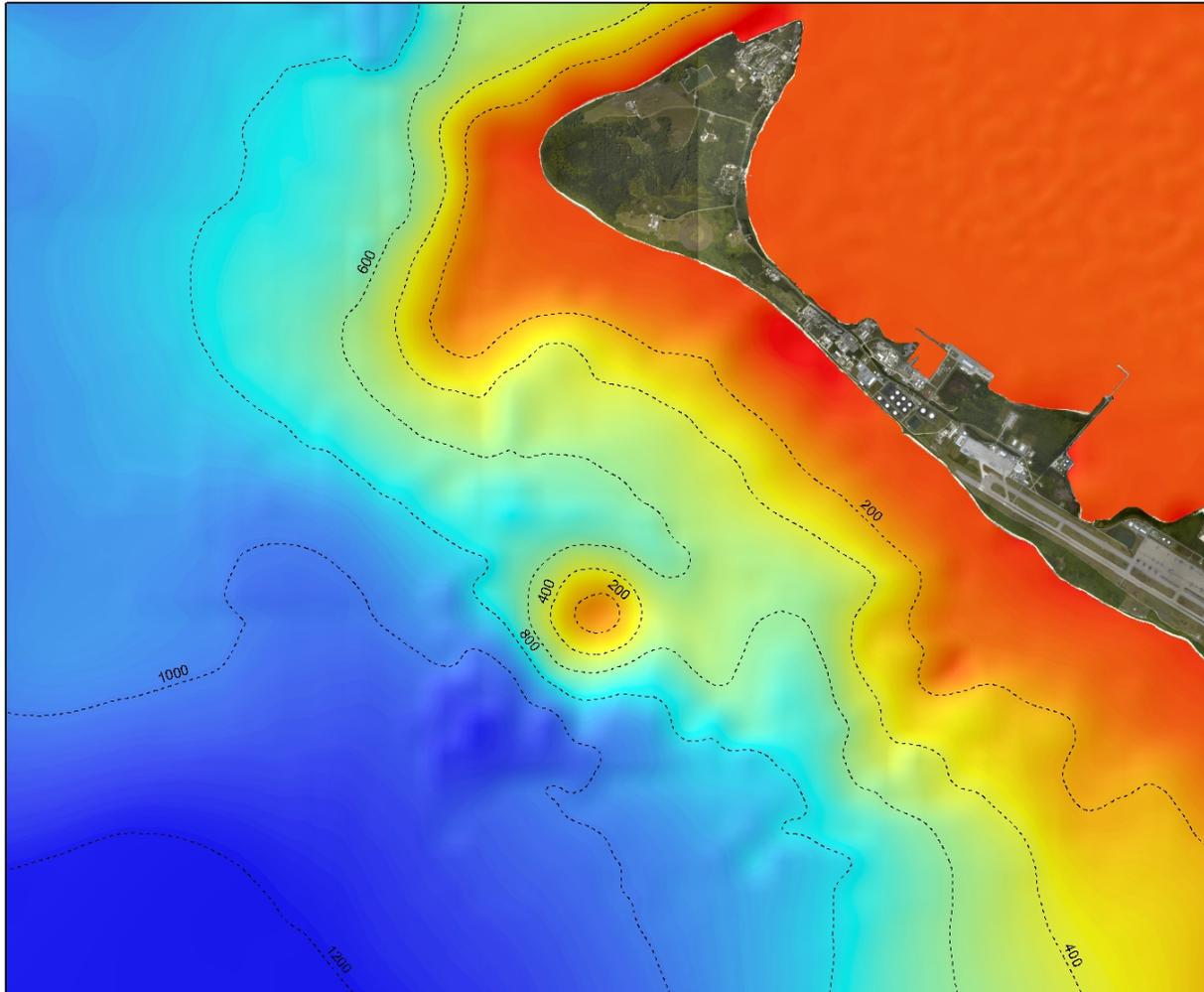
**NSF  
Diego Garcia**

Meters  
3,600



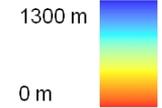
Bathymetry derived from sounding points (NGA Digital Nautical Chart of Indian Ocean, 2007).





## NSF Diego Garcia

### Bathymetry



Meters  
1,600



Bathymetry derived from sounding points (NGA Digital Nautical Chart of Indian Ocean, 2007).



**EAR16 Activity Detail Report**  
4th Quarter FY 2008: October 2007 through September 2008

ACTIVITY DETAIL FOR: N68539 NAVSUPFAC DIEGO GARCIA  
CLAIMANT: CNIC  
FEC: NAVFAC Far East

REGION:  
Baseline Year:

CNIC JAPAN  
2003

4th Quarter 2015 Reduction Goal: -30%

Quarterly Progress Summary		
FY-2003 Baseline MBTU/KSF	Current MBTU/KSF	Reduction Progress
440.17	252.94	-42.54

Current Quarter Reduction Goal:	-9.00
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Thousand Square Feet Summary		
FY-2003 Baseline KSF	Current KSF	KSF % Change
2,316	2,771	19.65

Twelve Month Summary									
Utility Type	Baseline MWH	Current MWH	Baseline MBTU	Current MBTU	MBTU % Change	Baseline Cost	Current Cost	Cost % Change	Unit Cost
FSX			1,019,445	700,894	-31.25	6,390,604	17,571,908	174.96	25.07
<b>SUMMARY</b>			<b>1,019,445</b>	<b>700,894</b>	<b>-31.25</b>	<b>6,390,604</b>	<b>17,571,908</b>	<b>174.96</b>	<b>25.07</b>

## EAR20 Activity Water Detail Report

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4th Quarter FY 2008: October 2007 through September 2008

 ACTIVITY DETAIL FOR: N68539 NAVSUPFAC DIEGO GARCIA  
 CLAIMANT: CNIC  
 FEC: NAVFAC Far East

 REGION:  
 Baseline Year:

 CNIC JAPAN  
 2007

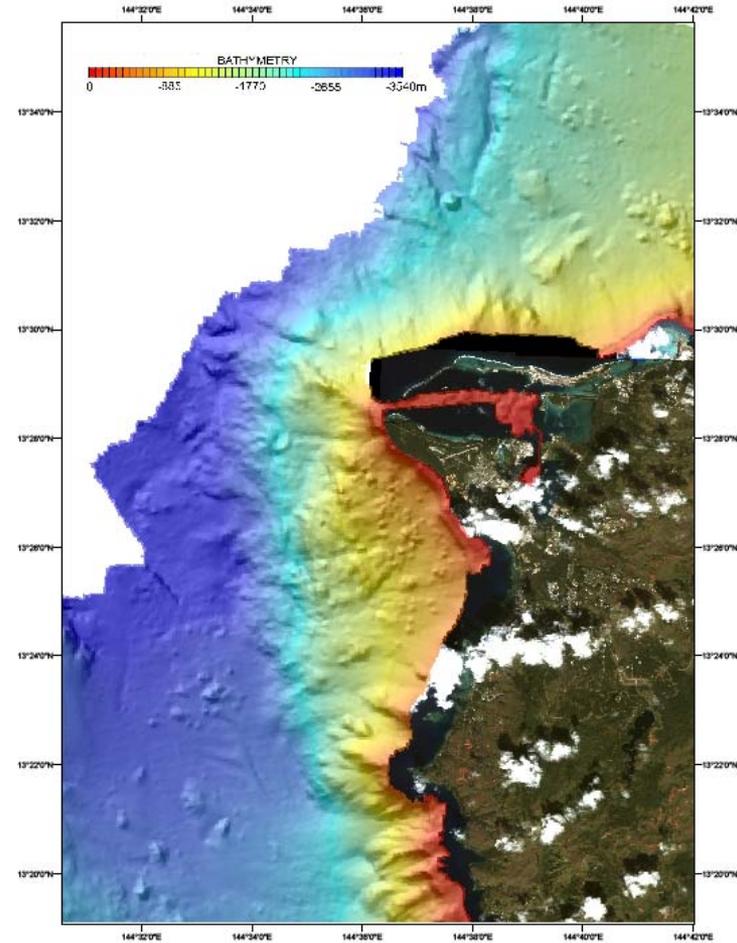
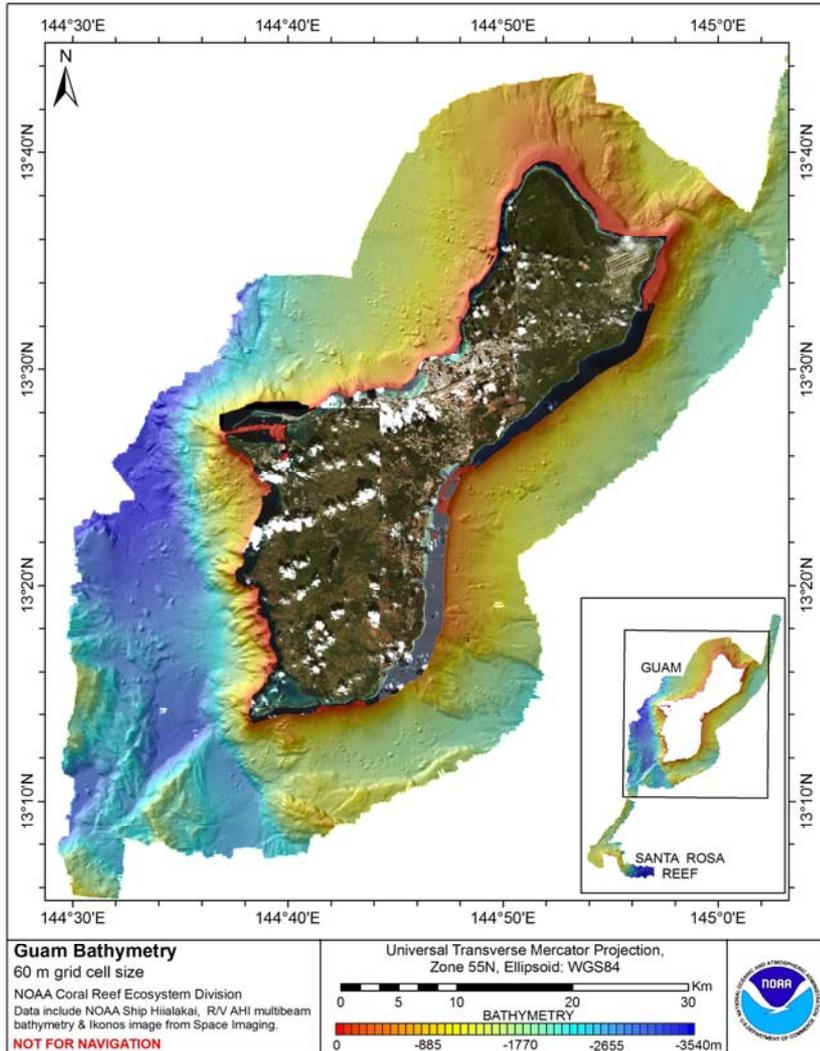
Quarterly Progress Summary		
FY-2007 Baseline KGAL	Current KGAL	Reduction Progress
244,700	254,926	4.18

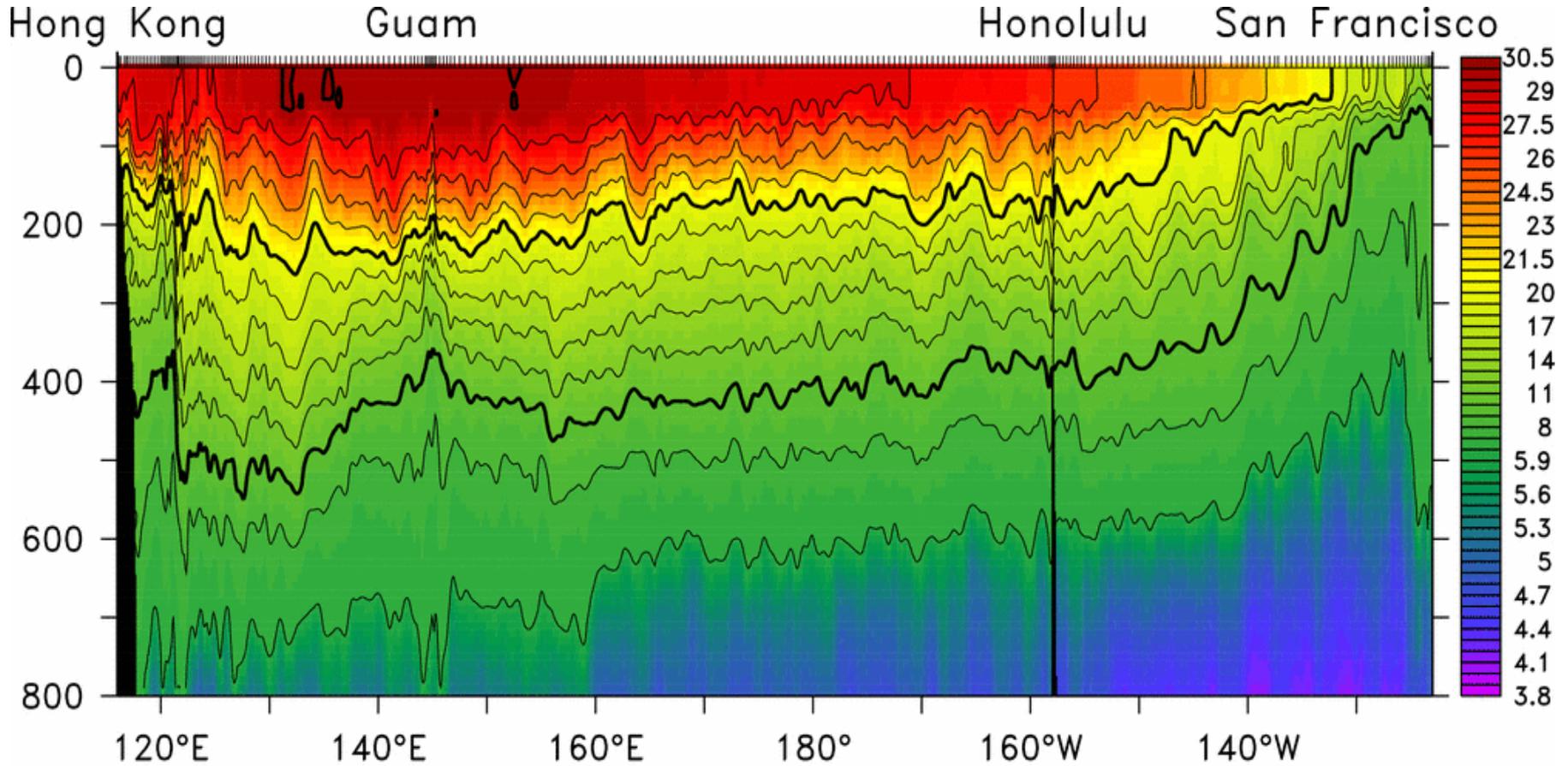
Twelve Month Summary							
Utility Type	Baseline KGAL	Current KGAL	KGAL % Change	Baseline Cost	Current Cost	Cost % Change	Unit Cost
PWT	244,700	254,926	4.18	1,732,476	1,804,876	4.18	7.08
<b>SUMMARY</b>	<b>244,700</b>	<b>254,926</b>	<b>4.18</b>	<b>1,732,476</b>	<b>1,804,876</b>	<b>4.18</b>	<b>7.08</b>

### Monthly Detail by Utility

#### Water Potable

Date	Baseline KGAL	Current KGAL	KGAL % Change	Baseline Cost	Current Cost	Cost % Change	Unit Cost
<b>1st Quarter, 2008</b>							
OCT 07	19,874	21,420	7.78	140,707	151,854	7.78	7.08
NOV 07	19,846	22,179	11.76	140,509	157,026	11.75	7.08
DEC 07	18,501	21,970	18.75	130,984	156,550	18.75	7.08
<b>Quarter Summary</b>	<b>58,221</b>	<b>65,569</b>	<b>12.62</b>	<b>412,200</b>	<b>464,229</b>	<b>12.62</b>	<b>7.08</b>
<b>2nd Quarter, 2008</b>							
JAN 08	18,961	23,403	23.43	134,246	166,896	23.43	7.08
FEB 08	20,203	23,582	16.73	143,035	166,961	16.73	7.08
MAR 08	18,845	21,728	15.30	133,421	153,836	15.30	7.08
<b>Quarter Summary</b>	<b>58,009</b>	<b>68,713</b>	<b>18.45</b>	<b>410,702</b>	<b>486,492</b>	<b>18.45</b>	<b>7.08</b>
<b>3rd Quarter, 2008</b>							
APR 08	20,807	23,431	12.61	147,316	166,890	12.61	7.08
MAY 08	20,784	21,008	1.08	147,154	148,738	1.08	7.08
JUN 08	20,784	19,471	-6.32	147,154	137,852	-6.32	7.08
<b>Quarter Summary</b>	<b>62,375</b>	<b>63,910</b>	<b>2.46</b>	<b>441,624</b>	<b>452,480</b>	<b>2.46</b>	<b>7.08</b>
<b>4th Quarter, 2008</b>							
JUL 08	20,865	18,988	-9.00	147,721	134,433	-9.00	7.08
AUG 08	23,041	18,873	-18.09	163,134	133,621	-18.09	7.08
SEP 08	22,199	18,873	-14.94	157,095	133,621	-14.94	7.08
<b>Quarter Summary</b>	<b>66,095</b>	<b>56,734</b>	<b>-14.16</b>	<b>467,950</b>	<b>401,675</b>	<b>-14.16</b>	<b>7.08</b>





PX44/PX10/PX37, Horizon Hawk, 10 Sep 2008–26 Sep 2008, Good drops=301

## EAR16 Activity Detail Report

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4th Quarter FY 2008: October 2007 through September 2008

ACTIVITY DETAIL FOR: N61755 NAVBASE GUAM  
CLAIMANT: CNIC  
FEC: NAVFAC Marianas

REGION:  
Baseline Year:

CNIC MARIANAS  
2003

4th Quarter 2015 Reduction Goal: -30%

Quarterly Progress Summary		
FY-2003 Baseline MBTU/KSF	Current MBTU/KSF	Reduction Progress
76.06	67.34	-11.46

Current Quarter Reduction Goal:	-9.00
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Thousand Square Feet Summary		
FY-2003 Baseline KSF	Current KSF	KSF % Change
5,058	5,448	7.71

Twelve Month Summary									
Utility Type	Baseline MWH	Current MWH	Baseline MBTU	Current MBTU	MBTU % Change	Baseline Cost	Current Cost	Cost % Change	Unit Cost
ELC	112,713	107,489	384,689	366,860	-4.63	12,253,560	20,461,512	66.98	190.36
FSX			0	0		0	0		
<b>SUMMARY</b>	<b>112,713</b>	<b>107,489</b>	<b>384,689</b>	<b>366,860</b>	<b>-4.63</b>	<b>12,253,560</b>	<b>20,461,512</b>	<b>66.98</b>	<b>55.77</b>

Purchased Electricity conversion factor: 3.413 \* MWH

**EAR20 Activity Water Detail Report**  
4th Quarter FY 2008: October 2007 through September 2008

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ACTIVITY DETAIL FOR: P61755 NAVBASE GUAM  
CLAIMANT: CNIC  
FEC: NAVFAC Marianas

REGION: CNIC MARIANAS  
Baseline Year: 2007

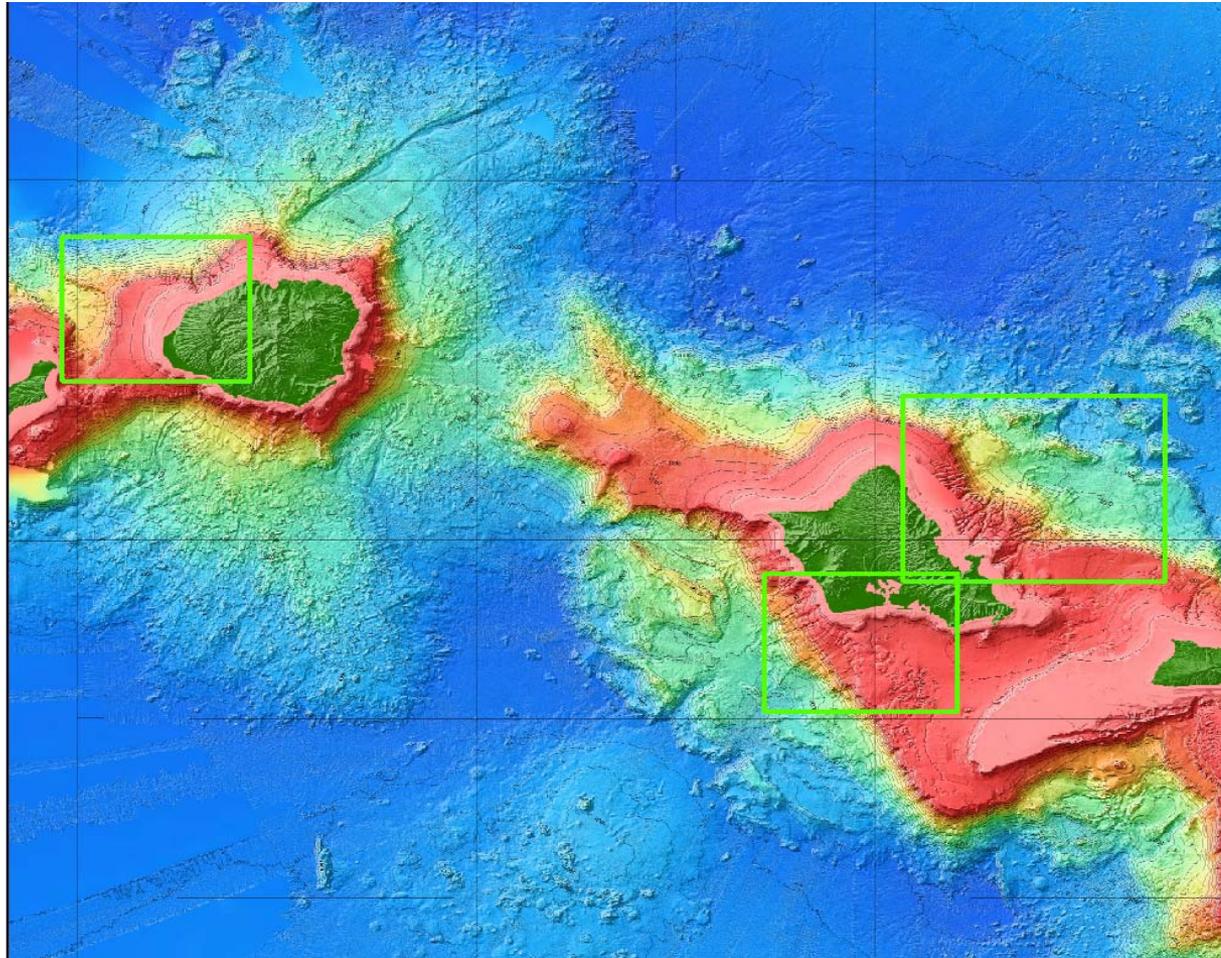
Quarterly Progress Summary		
FY-2007 Baseline KGAL	Current KGAL	Reduction Progress
23,847	20,898	-12.37

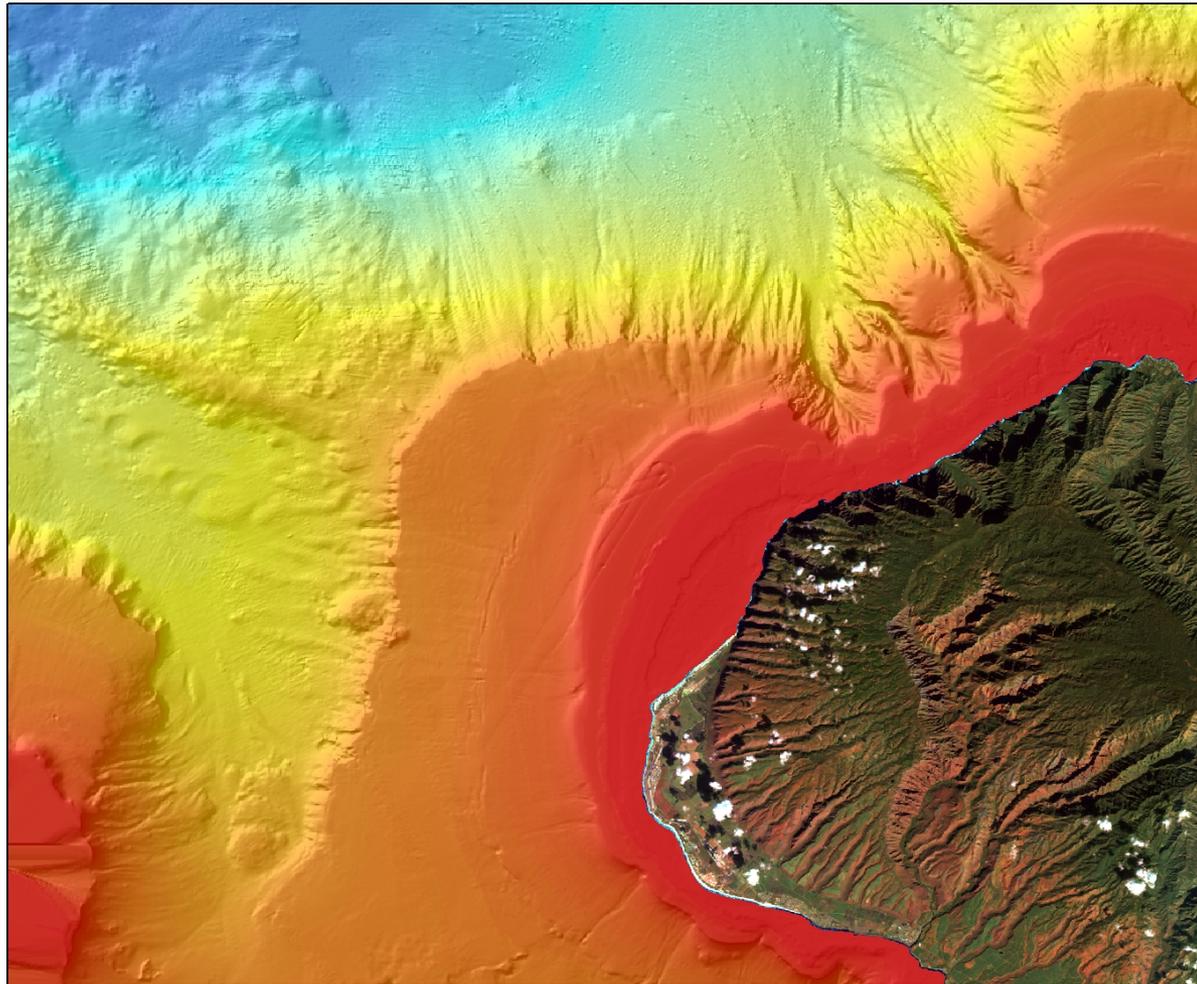
Twelve Month Summary							
Utility Type	Baseline KGAL	Current KGAL	KGAL % Change	Baseline Cost	Current Cost	Cost % Change	Unit Cost
PWT	23,847	20,898	-12.37	0	0		
<b>SUMMARY</b>	<b>23,847</b>	<b>20,898</b>	<b>-12.37</b>	<b>0</b>	<b>0</b>		

**Monthly Detail by Utility**

Water Potable

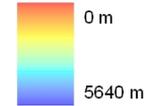
Date	Baseline KGAL	Current KGAL	KGAL % Change	Baseline Cost	Current Cost	Cost % Change	Unit Cost
<b>1st Quarter, 2008</b>							
OCT 07	1,760	828	-63.07	0	0		
NOV 07	1,842	1,995	8.31	0	0		
DEC 07	1,460	2,197	60.48	0	0		
<b>Quarter Summary</b>	<b>5,062</b>	<b>5,018</b>	<b>-0.87</b>	<b>0</b>	<b>0</b>		
<b>2nd Quarter, 2008</b>							
JAN 08	2,202	1,610	-26.88	0	0		
FEB 08	1,132	1,833	61.93	0	0		
MAR 08	668	1,702	148.10	0	0		
<b>Quarter Summary</b>	<b>4,020</b>	<b>5,145</b>	<b>27.99</b>	<b>0</b>	<b>0</b>		
<b>3rd Quarter, 2008</b>							
APR 08	1,357	1,691	24.61	0	0		
MAY 08	1,782	2,053	16.52	0	0		
JUN 08	2,957	1,387	-63.09	0	0		
<b>Quarter Summary</b>	<b>6,076</b>	<b>5,131</b>	<b>-15.55</b>	<b>0</b>	<b>0</b>		
<b>4th Quarter, 2008</b>							
JUL 08	1,390	730	-47.48	0	0		
AUG 08	3,848	1,918	-60.16	0	0		
SEP 08	3,451	2,958	-14.34	0	0		
<b>Quarter Summary</b>	<b>8,689</b>	<b>5,604</b>	<b>-35.50</b>	<b>0</b>	<b>0</b>		





**PMRF  
Barking  
Sands**

**Bathymetry**

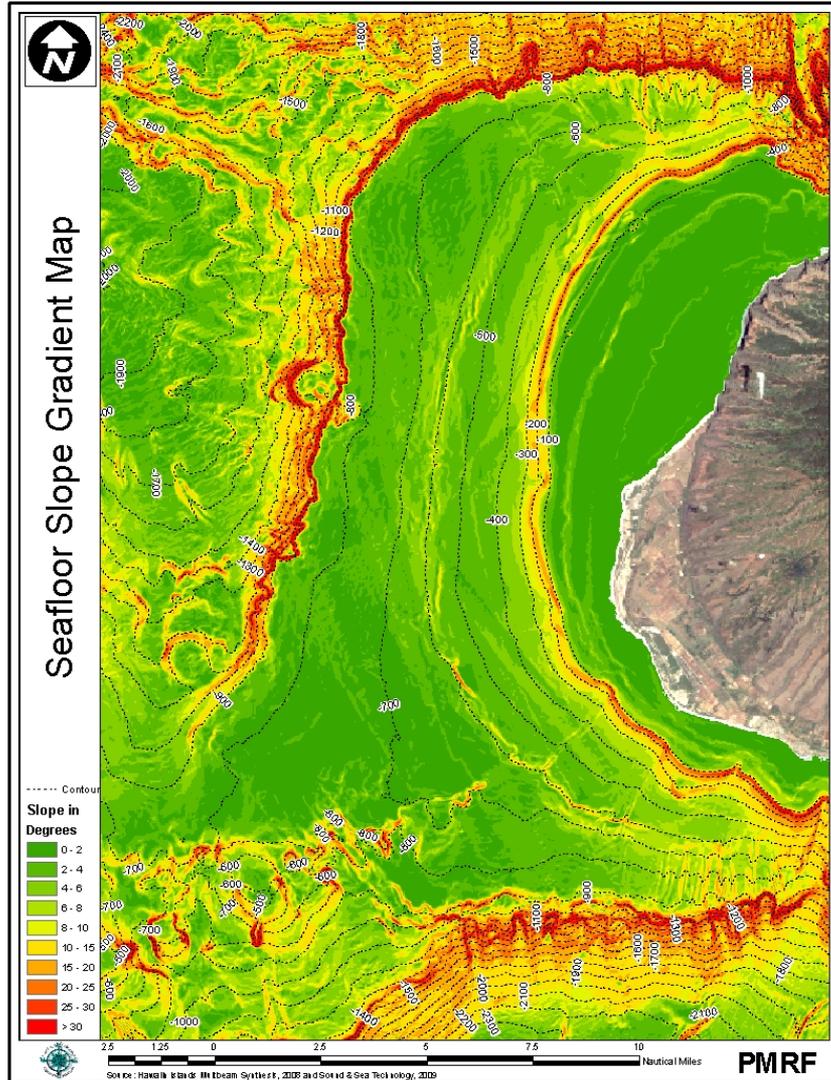


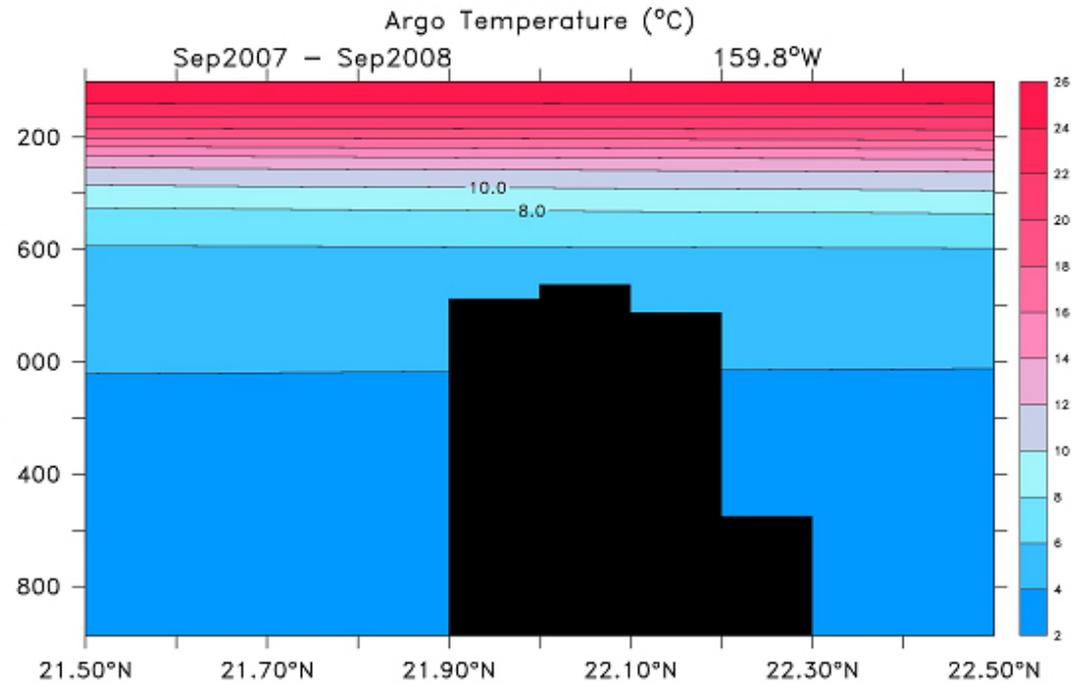
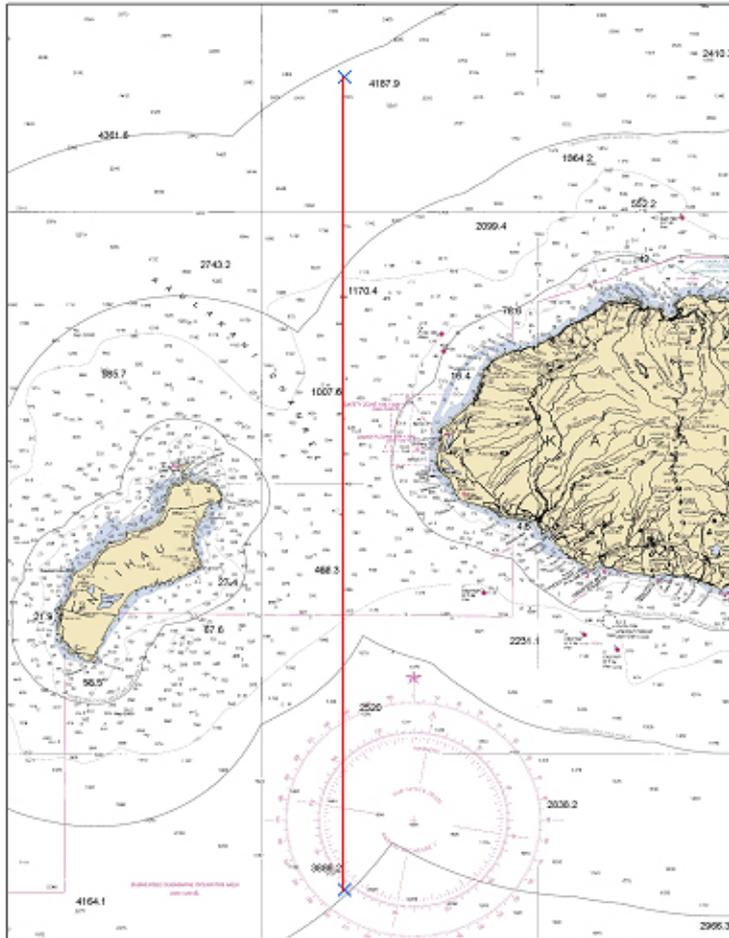
Meters  
6,000



Data include 50m  
multibeam bathymetry  
grids (Hawaii Coastal  
Geology Group) and  
Landsat imagery  
(NOAA)







## EAR16 Activity Detail Report

4th Quarter FY 2008: October 2007 through September 2008

ACTIVITY DETAIL FOR: N0534A PACMISRANFAC HAWAREA BARKING SANDS HI  
CLAIMANT: CNIC  
FEC: NAVFAC Hawaii

REGION:  
Baseline Year:

CNIC HAWAII  
2003

4th Quarter 2015 Reduction Goal: -30%

Quarterly Progress Summary		
FY-2003 Baseline MBTU/KSF	Current MBTU/KSF	Reduction Progress
109.65	106.90	-2.51

Current Quarter Reduction Goal:	-9.00
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Thousand Square Feet Summary		
FY-2003 Baseline KSF	Current KSF	KSF % Change
614	698	13.68

Twelve Month Summary									
Utility Type	Baseline MWH	Current MWH	Baseline MBTU	Current MBTU	MBTU % Change	Baseline Cost	Current Cost	Cost % Change	Unit Cost
ELC	12,733	13,581	43,458	46,352	6.66	2,876,761	5,841,274	103.05	430.11
FSX			23,868	28,265	18.42	219,978	767,062	248.70	27.14
<b>SUMMARY</b>	<b>12,733</b>	<b>13,581</b>	<b>67,326</b>	<b>74,617</b>	<b>10.83</b>	<b>3,096,739</b>	<b>6,608,336</b>	<b>113.40</b>	<b>88.56</b>

Purchased Electricity conversion factor: 3.413 \* MWH

## EAR20 Activity Water Detail Report

4th Quarter FY 2008: October 2007 through September 2008

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ACTIVITY DETAIL FOR: N0534A PACMISRANFAC HAWAREA BARKING SANDS HI  
CLAIMANT: CNIC  
FEC: NAVFAC Hawaii

REGION:  
Baseline Year:

CNIC HAWAII  
2007

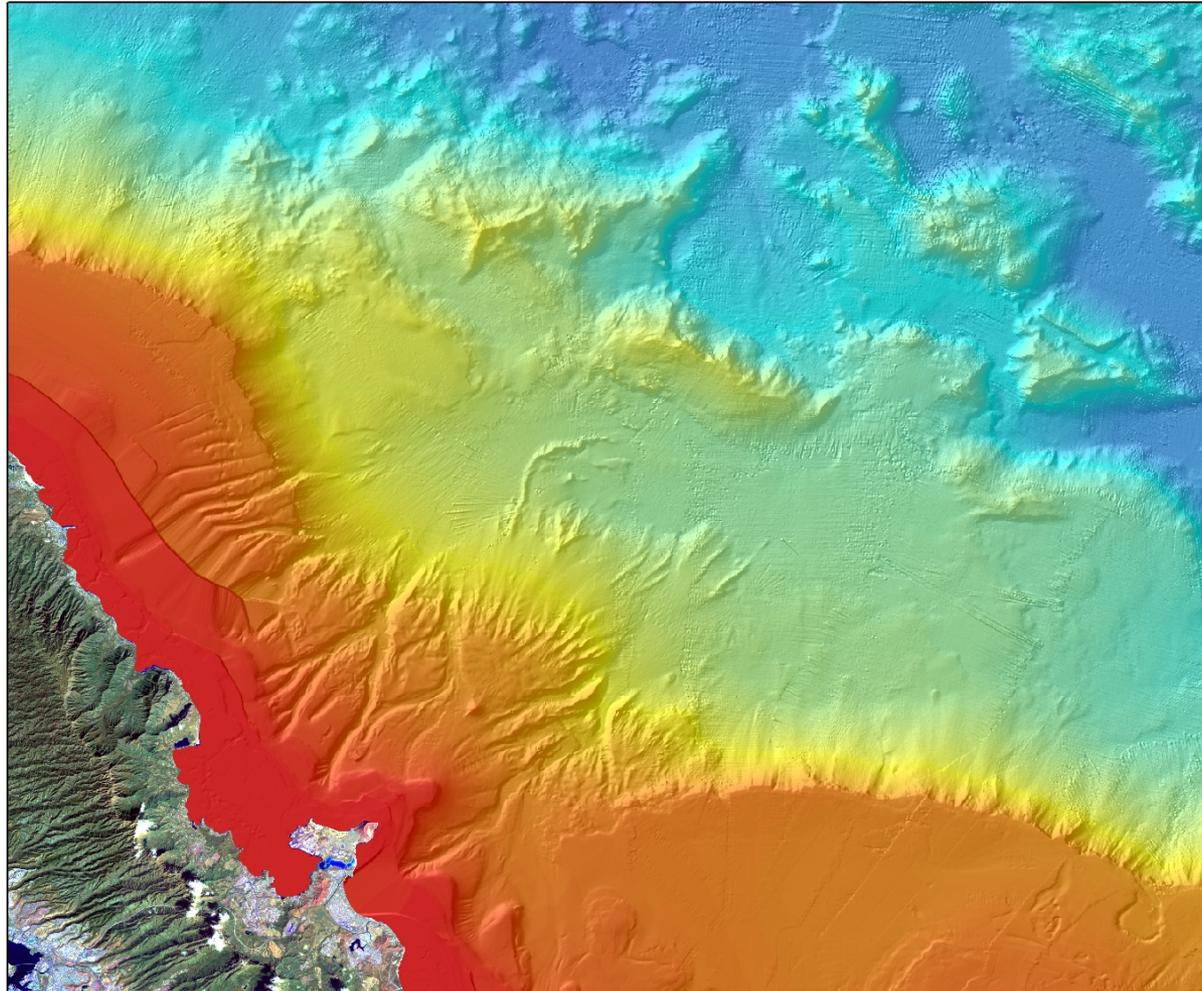
Quarterly Progress Summary		
FY-2007 Baseline KGAL	Current KGAL	Reduction Progress
54,570	57,358	5.11

Twelve Month Summary							
Utility Type	Baseline KGAL	Current KGAL	KGAL % Change	Baseline Cost	Current Cost	Cost % Change	Unit Cost
PWT	54,570	57,358	5.11	24,858	13,411	-46.05	0.23
<b>SUMMARY</b>	<b>54,570</b>	<b>57,358</b>	<b>5.11</b>	<b>24,858</b>	<b>13,411</b>	<b>-46.05</b>	<b>0.23</b>

### Monthly Detail by Utility

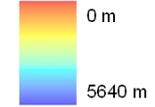
#### Water Potable

Date	Baseline KGAL	Current KGAL	KGAL % Change	Baseline Cost	Current Cost	Cost % Change	Unit Cost
<b>1st Quarter, 2008</b>							
OCT 07	4,039	5,987	48.23	700	860	22.86	0.14
NOV 07	2,647	3,830	44.69	368	217	-41.03	0.06
DEC 07	4,185	2,497	-40.05	770	217	-71.82	0.09
<b>Quarter Summary</b>	<b>10,851</b>	<b>12,314</b>	<b>13.48</b>	<b>1,838</b>	<b>1,294</b>	<b>-29.60</b>	<b>0.11</b>
<b>2nd Quarter, 2008</b>							
JAN 08	4,146	4,601	10.97	636	956	50.31	0.21
FEB 08	3,546	4,092	15.40	1,392	956	-31.32	0.23
MAR 08	4,011	4,964	23.76	268	754	181.34	0.16
<b>Quarter Summary</b>	<b>11,703</b>	<b>13,657</b>	<b>16.70</b>	<b>2,296</b>	<b>2,666</b>	<b>16.11</b>	<b>0.20</b>
<b>3rd Quarter, 2008</b>							
APR 08	7,595	4,267	-43.88	1,485	754	-49.23	0.18
MAY 08	9,187	4,466	-51.39	1,515	1,185	-21.78	0.27
JUN 08	9,387	4,293	-54.27	1,473	1,185	-19.55	0.28
<b>Quarter Summary</b>	<b>26,139</b>	<b>13,006</b>	<b>-50.24</b>	<b>4,473</b>	<b>3,124</b>	<b>-30.16</b>	<b>0.24</b>
<b>4th Quarter, 2008</b>							
JUL 08	1,959	6,166	214.70	5,417	1,683	-68.93	0.27
AUG 08	1,959	6,108	211.79	5,417	2,322	-57.13	0.38
SEP 08	1,959	6,108	211.79	5,417	2,322	-57.13	0.38
<b>Quarter Summary</b>	<b>5,877</b>	<b>18,381</b>	<b>212.76</b>	<b>16,251</b>	<b>6,327</b>	<b>-61.07</b>	<b>0.34</b>



## Kaneohe Bay, Oahu

### Bathymetry



Meters  
7,000



Data include 50m multibeam bathymetry grids (Hawaii Coastal Geology Group) and Landsat imagery (NOAA)



**EAR16 Activity Detail Report**  
 4th Quarter FY 2008: October 2007 through September 2008

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ACTIVITY DETAIL FOR: M00318 MCB HAWAII KANEHOE BAY  
 CLAIMANT: USMC  
 FEC: NAVFAC Hawaii

REGION:  
 Baseline Year:

USMC  
 2003

4th Quarter 2015 Reduction Goal: -30%

Quarterly Progress Summary		
FY-2003 Baseline MBTU/KSF	Current MBTU/KSF	Reduction Progress
58.96	58.44	-0.88

Current Quarter Reduction Goal:	-9.00
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Thousand Square Feet Summary		
FY-2003 Baseline KSF	Current KSF	KSF % Change
6,311	6,405	1.49

Twelve Month Summary									
Utility Type	Baseline MWH	Current MWH	Baseline MBTU	Current MBTU	MBTU % Change	Baseline Cost	Current Cost	Cost % Change	Unit Cost
ELC	102,054	100,966	348,310	344,597	-1.07	10,578,107	19,309,702	82.54	191.25
PPG			17,286	25,164	45.57	229,314	527,856	130.19	20.98
FSX			6,500	4,573	-29.65	34,184	84,712	147.81	18.52
FOR			0			0			
<b>SUMMARY</b>	<b>102,054</b>	<b>100,966</b>	<b>372,096</b>	<b>374,334</b>	<b>0.60</b>	<b>10,841,605</b>	<b>19,922,270</b>	<b>83.76</b>	<b>53.22</b>

Purchased Electricity conversion factor: 3.413 \* MWH

## EAR20 Activity Water Detail Report

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4th Quarter FY 2008: October 2007 through September 2008

ACTIVITY DETAIL FOR: M00318 MCB HAWAII KANEHOE BAY  
CLAIMANT: USMC  
FEC: NAVFAC Hawaii

REGION:  
Baseline Year:

USMC  
2007

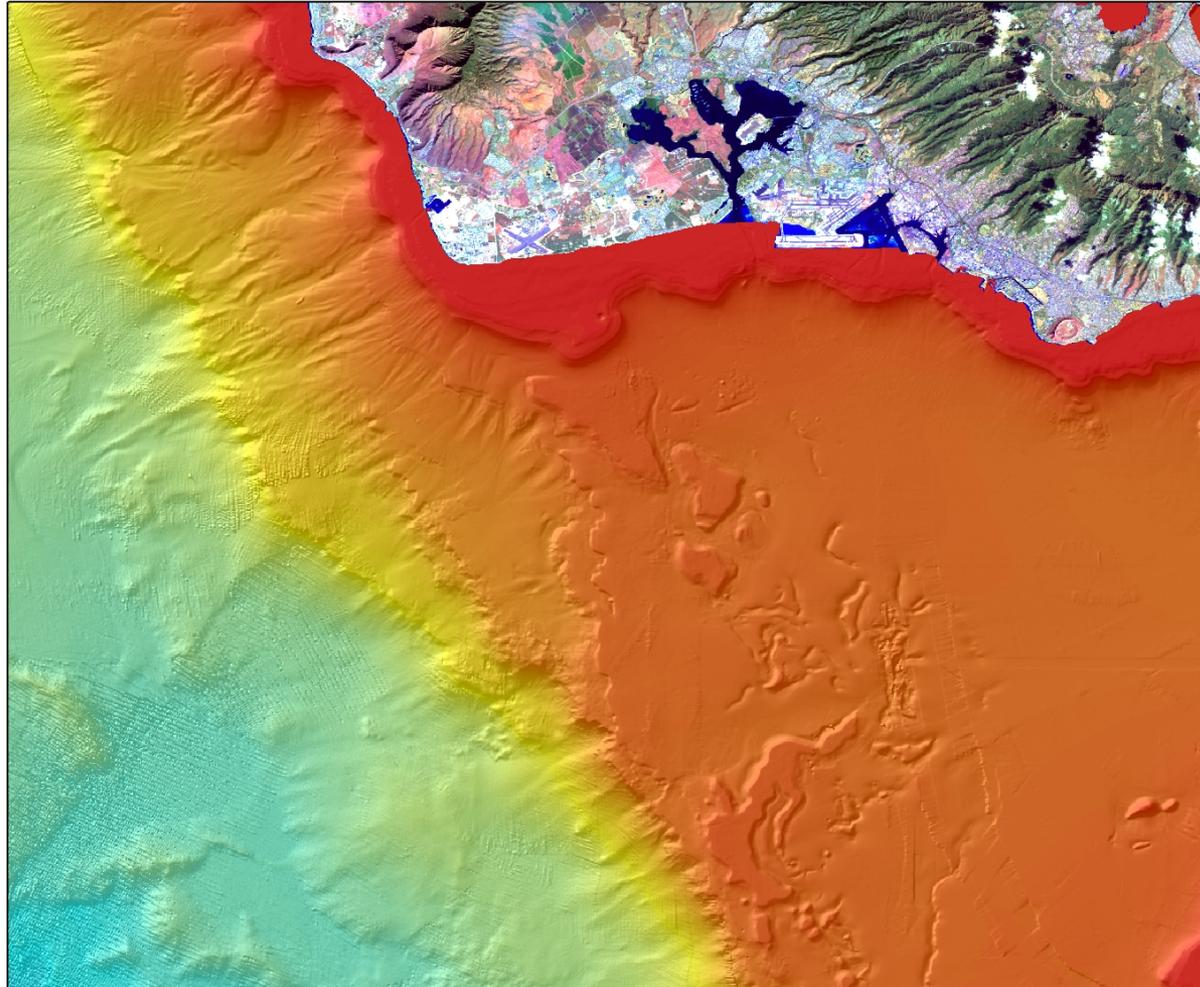
Quarterly Progress Summary		
FY-2007 Baseline KGAL	Current KGAL	Reduction Progress
440,842	399,574	-9.36

Twelve Month Summary							
Utility Type	Baseline KGAL	Current KGAL	KGAL % Change	Baseline Cost	Current Cost	Cost % Change	Unit Cost
PWT	440,842	399,574	-9.36	984,706	954,267	-3.09	2.39
<b>SUMMARY</b>	<b>440,842</b>	<b>399,574</b>	<b>-9.36</b>	<b>984,706</b>	<b>954,267</b>	<b>-3.09</b>	<b>2.39</b>

### Monthly Detail by Utility

#### Water Potable

Date	Baseline KGAL	Current KGAL	KGAL % Change	Baseline Cost	Current Cost	Cost % Change	Unit Cost
<b>1st Quarter, 2008</b>							
OCT 07	42,331	39,654	-6.32	89,835	94,393	5.07	2.38
NOV 07	33,431	37,661	12.65	72,920	90,267	23.82	2.40
DEC 07	32,005	33,968	6.13	89,575	81,086	16.54	2.39
<b>Quarter Summary</b>	<b>107,767</b>	<b>111,283</b>	<b>3.26</b>	<b>232,330</b>	<b>265,766</b>	<b>14.39</b>	<b>2.39</b>
<b>2nd Quarter, 2008</b>							
JAN 08	31,034	28,358	-8.62	66,964	66,900	-0.10	2.36
FEB 08	33,848	27,730	-18.07	73,318	65,883	-10.41	2.37
MAR 08	34,470	25,174	-26.97	74,897	59,022	-21.20	2.34
<b>Quarter Summary</b>	<b>99,352</b>	<b>81,262</b>	<b>-18.21</b>	<b>215,179</b>	<b>191,605</b>	<b>-10.96</b>	<b>2.36</b>
<b>3rd Quarter, 2008</b>							
APR 08	32,128	38,389	19.49	70,136	92,742	32.23	2.42
MAY 08	44,360	26,224	-40.88	96,920	63,072	-34.92	2.41
JUN 08	46,346	31,133	-32.82	102,108	75,316	-26.24	2.42
<b>Quarter Summary</b>	<b>122,834</b>	<b>95,746</b>	<b>-22.05</b>	<b>269,164</b>	<b>231,130</b>	<b>-14.13</b>	<b>2.41</b>
<b>4th Quarter, 2008</b>							
JUL 08	33,189	39,654	19.48	79,164	94,393	19.24	2.38
AUG 08	39,495	37,661	-4.64	95,777	90,267	-5.73	2.40
SEP 08	38,205	33,968	-11.09	93,092	81,086	-12.90	2.39
<b>Quarter Summary</b>	<b>110,889</b>	<b>111,283</b>	<b>0.36</b>	<b>268,033</b>	<b>265,766</b>	<b>-0.85</b>	<b>2.39</b>



## EAR16 Activity Detail Report

Page 1 of 5

1st Quarter FY 2009: January 2008 through December 2008

ACTIVITY DETAIL FOR: N62813 NAVSTA PEARL HARBOR HI  
CLAIMANT: CNIC  
FEC: NAVFAC Hawaii

REGION:  
Baseline Year:

CNIC HAWAII  
2003

4th Quarter 2015 Reduction Goal: -30%

Quarterly Progress Summary		
FY-2003 Baseline MBTU/KSF	Current MBTU/KSF	Reduction Progress
55.15	45.58	-17.35

Current Quarter Reduction Goal: -9.75

Thousand Square Feet Summary		
FY-2003 Baseline KSF	Current KSF	KSF % Change
10,913	10,878	-0.32

Twelve Month Summary									
Utility Type	Baseline MWH	Current MWH	Baseline MBTU	Current MBTU	MBTU % Change	Baseline Cost	Current Cost	Cost % Change	Unit Cost
ELC	174,755	145,271	596,439	495,810	-16.87	25,956,479	33,607,909	29.48	231.35
PPG			362	50	-86.19	3,670	1,290	-64.85	25.80
FSX			5,075			26,067			
FOR			0			0			
<b>SUMMARY</b>	<b>174,755</b>	<b>145,271</b>	<b>601,876</b>	<b>495,860</b>	<b>-17.61</b>	<b>25,986,216</b>	<b>33,609,199</b>	<b>29.33</b>	<b>67.78</b>

Purchased Electricity conversion factor: 3.413 \* MWH

## EAR20 Activity Water Detail Report

Page 1 of 1

4th Quarter FY 2008: October 2007 through September 2008

ACTIVITY DETAIL FOR: N62813 NAVSTA PEARL HARBOR HI  
CLAIMANT: CNIC  
FEC: NAVFAC Hawaii

REGION:  
Baseline Year:

CNIC HAWAII  
2007

Quarterly Progress Summary		
FY-2007 Baseline KGAL	Current KGAL	Reduction Progress
1,957,895	1,339,455	-31.59

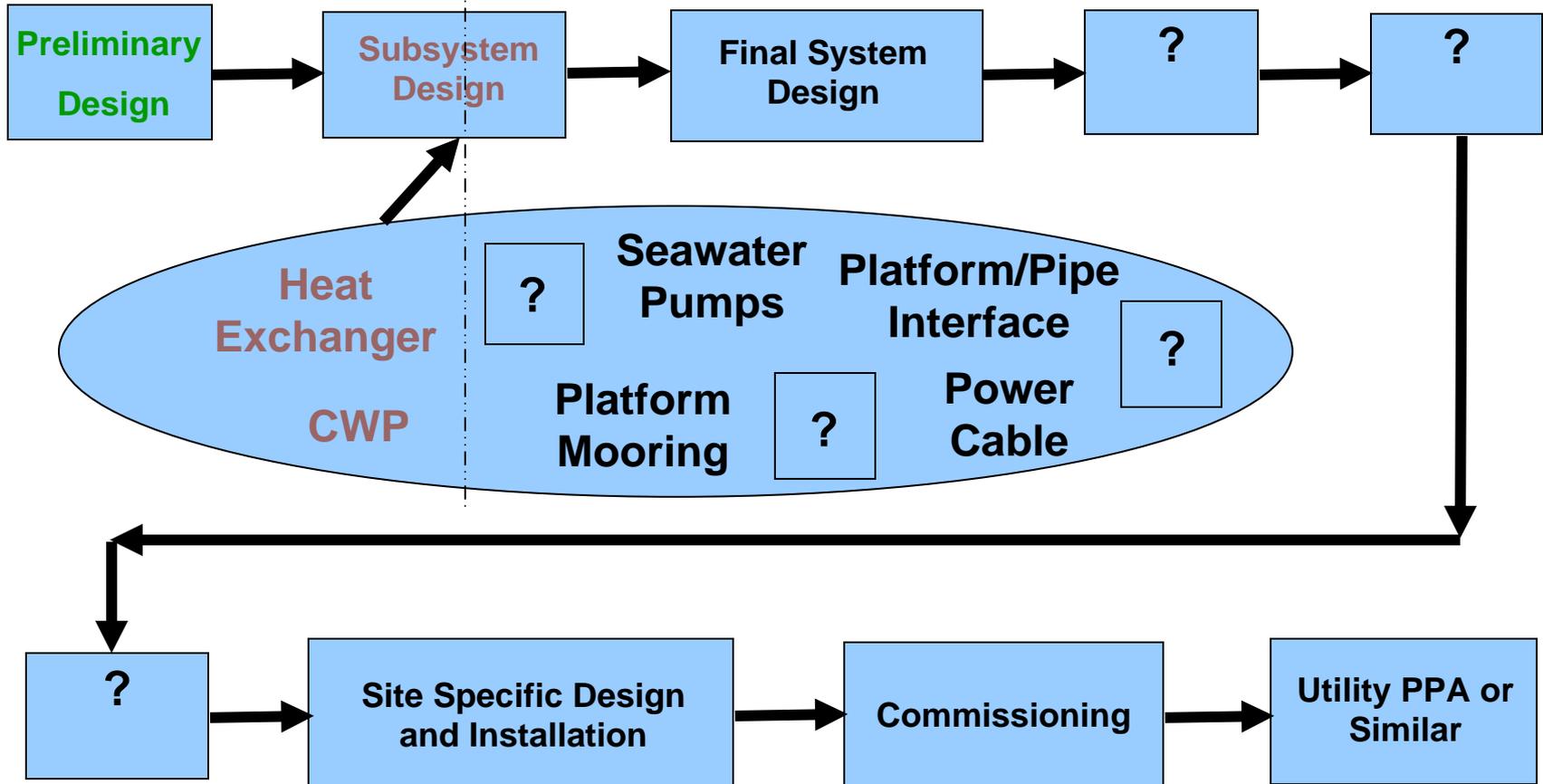
Twelve Month Summary							
Utility Type	Baseline KGAL	Current KGAL	KGAL % Change	Baseline Cost	Current Cost	Cost % Change	Unit Cost
PWT	1,957,895	1,339,455	-31.59	4,776,784	3,583,040	-24.99	2.67
<b>SUMMARY</b>	<b>1,957,895</b>	<b>1,339,455</b>	<b>-31.59</b>	<b>4,776,784</b>	<b>3,583,040</b>	<b>-24.99</b>	<b>2.67</b>

### Monthly Detail by Utility

#### Water Potable

Date	Baseline KGAL	Current KGAL	KGAL % Change	Baseline Cost	Current Cost	Cost % Change	Unit Cost
<b>1st Quarter, 2008</b>							
OCT 07	239,985	183,678	-23.46	508,776	503,266	-1.08	2.74
NOV 07	154,145	139,307	-9.83	369,944	359,420	-2.84	2.58
DEC 07	146,050	114,020	-21.93	363,668	280,498	-22.87	2.46
<b>Quarter Summary</b>	<b>540,180</b>	<b>437,003</b>	<b>-19.10</b>	<b>1,242,376</b>	<b>1,143,184</b>	<b>-7.98</b>	<b>2.62</b>
<b>2nd Quarter, 2008</b>							
JAN 08	196,424	132,378	-32.61	514,633	356,094	-30.81	2.69
FEB 08	160,528	83,629	-47.90	407,743	224,962	-44.83	2.69
MAR 08	153,600	86,863	-43.45	393,217	233,661	-40.58	2.69
<b>Quarter Summary</b>	<b>510,552</b>	<b>302,868</b>	<b>-40.68</b>	<b>1,315,593</b>	<b>814,717</b>	<b>-38.07</b>	<b>2.69</b>
<b>3rd Quarter, 2008</b>							
APR 08	156,213	94,387	-40.34	392,677	239,749	-37.38	2.54
MAY 08	135,074	78,719	-41.72	336,337	200,741	-40.32	2.55
JUN 08	137,878	79,363	-42.44	314,367	202,375	-35.62	2.55
<b>Quarter Summary</b>	<b>431,165</b>	<b>252,469</b>	<b>-41.44</b>	<b>1,033,581</b>	<b>642,865</b>	<b>-37.80</b>	<b>2.55</b>
<b>4th Quarter, 2008</b>							
JUL 08	169,707	128,278	-24.41	422,570	362,996	-14.10	2.83
AUG 08	150,558	90,559	-39.85	374,889	256,282	-31.64	2.83
SEP 08	155,733	128,278	-17.63	397,775	362,996	-8.39	2.83
<b>Quarter Summary</b>	<b>475,998</b>	<b>347,115</b>	<b>-27.08</b>	<b>1,185,234</b>	<b>982,274</b>	<b>-17.12</b>	<b>2.83</b>

May 2009



**COMPLETE**

**ACTIVE**

**OUTSTANDING**