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**Cost Analysis for a Dedicated Search and  
Rescue Capability for Commander Strike  
Fighter Wing U.S. Pacific Fleet**

**Biros, Russ; Corpuz, Noel; Hines, Cade; Riggs2, Tinsika**  
Monterey, California ; Naval Postgraduate School

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EMBA PROJECT REPORT**

**Cost Analysis for a Dedicated Search and Rescue Capability for Commander  
Strike Fighter Wing U.S. Pacific Fleet**

**18 March 2009**

**By:**

**Russ Biros**

**Noel Corpus**

**Cade Hines**

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# Cost Analysis for a Dedicated Search and Rescue Capability for Commander Strike Fighter Wing U.S. Pacific Fleet

## **EXECUTIVE SUMMARY**

Lemoore is a Master Jet Base, but is one of the few on the West Coast without an in-house, dedicated Search and Rescue (SAR) capability. The lack of SAR at Lemoore is a growing concern due to the increase in the number of squadrons at Lemoore, the new Lemoore Military Operating Airspace (MOA), and the need to use the Offshore Warning Areas for more training due to increased congestion in other airspaces. As a result, Commander Naval Air Forces (CNAF) is examining the issue of returning a dedicated SAR capability to Naval Air Station Lemoore (NASL).

The objective of this project is to provide a cost comparison and analysis of the pros and cons of different models for providing Lemoore with dedicated SAR. A key assumption is made that the Navy has a sufficient inventory of helicopters. Thus, the cost of procuring new helicopters is not considered. A second assumption is that due to high workload for Fleet Helicopter Wings, detachments from these Helicopter Wing squadrons in support of a full-time SAR detachment at NAS Lemoore are not feasible. Due to time constraints for this project, only the five most viable SAR models are considered.

Data was gathered from multiple DoD, Federal Government, and civilian organizations. A spreadsheet analysis of the data was conducted, and then used to make meaningful, equivalent comparisons of the five viable SAR models. The results show that the two least expensive models for returning dedicated SAR capability to Lemoore are to establish a SAR detachment for Lemoore from an already existing Navy SAR unit, followed closely by the slightly more expensive model of using the government acquisition process to procure contract SAR for Lemoore from a commercial entity.

Analyses support the recommendation for the Navy to procure contract SAR for Lemoore via the government acquisition process. Contracts for civilian SAR offer both low cost and the flexibility of one-year options, which would allow the service to be easily discontinued if funds are cut. Precedence for contract helicopter services exists at Marine Air-Ground Task Force Training Command (MAGTFTC), Twentynine Palms, CA. Fleet & Industrial Supply Center (FISC) personnel have offered assistance in drafting the Statement of Work and Source Selection Board Plan. The Department of Interior's Aviation Management Office exists to perform inspections and certifications of commercial helicopter providers and has offered to do so for the Navy. Contract SAR would be operational 6 months after Request for Proposal (RFP) announcement. 4

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## **I. INTRODUCTION AND BACKGROUND**

### **A. INTRODUCTION**

NAS Lemoore (NASL) is the home port for sixteen F/A-18 squadrons and four Carrier Air Wings. As a Master Jet Base it is the focal point for Navy F/A-18 training on the West Coast. Commander Strike Fighter Wing Pacific (CSFWP) is responsible for the Wing's aircraft when home-ported and is tasked with ensuring the squadrons have the necessary support they need to meet the primary mission of providing fully qualified Carrier Air Wings to the Carrier Battle Group. A key part of this support is providing Operational Risk Management (ORM) mitigation to ensure that CSFWP aircrews can safely complete their training. As such, the presence of dedicated Search and Rescue (SAR) capability is central to ensuring that CSFWP is able to meet its mission.

Over the past five years, the training airspaces available to CSFWP have become congested due to several factors to include the increase in the number of F/A-18 squadrons home-ported at NASL. This increased congestion in CSFWP's traditional training airspaces (especially that of the Edwards/China Lake training airspace) resulted in both the February 2008 commissioning of the NASL Military Operating Area (MOA), and the increased need to use both the Offshore Warning Areas W283/285/532 and the Fort Hunter Liggett training airspaces. However, unlike the Edwards/China Lake training airspaces, which have full-time dedicated SAR coverage via Navy H-60 helicopters based out of NAWS China Lake; the NASL MOA, the Offshore Warning Areas, and the Fort Hunter Liggett training airspaces are devoid of any full-time dedicated SAR assets, putting at risk the lives of the CSFWP aircrews who are increasingly flying over these unprotected airspaces.

### **B. BACKGROUND**

CSFWP lost its in-house, dedicated SAR support with the disestablishment of the Lemoore SAR division in 2004. A Center for Naval Analyses (CNA) paper proposing disestablishment recommended using some of the savings resulting from the closure of 8



Lemoore SAR to procure such services from other SAR capable agencies.<sup>1</sup> To date, this has not happened. More importantly, CSFWP SAR requirements have changed significantly since the CNA study due to the increased usage of training airspaces such as W283/285/532, Fort Hunter Liggett, and the recently-commissioned Lemoore MOA.

The CNA study stated Coast Guard Air Station (CGAS) San Francisco's proximity to Lemoore was adequate to provide SAR support to meet CSFWP needs. Both recent CSFWP mishaps and increased responsibilities for the USCG invalidate the accuracy of this statement. CGAS San Francisco Operations Officer, CDR Wesley Trull delineated the problem as follows: "Again, my concern is we will not be able to pull your aircrews out of the water in time to save their lives worst case. The water temps may get them even if they eject successfully. Add poor weather and possible maintenance problems with my HH-65 aircraft and your line runs even thinner." (CDR W. Trull, USCG, personal communication, July 13, 2004).

### **C. PROBLEM**

The problem of the lack of dedicated SAR for CSFWP was most recently demonstrated in the VFA-125 mishap of June 2006 that occurred over Fort Hunter Liggett, CA. Wing and tenant staff promptly notified SAR units nearest the Fort Hunter Liggett area of their need for help to recover two possible survivors. The SAR scenario described next unfolded. The 129<sup>th</sup> Air National Guard Operations Duty Officer (ODO) informed the Wing Chief of Staff Officer (CSO) that he could not help the SAR effort because the 129<sup>th</sup> was deployed and unavailable (this is a common situation for the 129<sup>th</sup>). The Fort Hunter Liggett staff informed the Wing that they had no helicopter assets at the fort at that time (this also is a common situation). Calls to the Vandenberg SAR unit were not made as this unit has been decommissioned (further worsening the SAR situation over W283/285/532).

The San Francisco Coast Guard expeditiously dispatched a helicopter to execute the SAR, but it was still en route more than two hours after the call for SAR was initiated

<sup>1</sup> Boning W.B., Ebert J.G., Keenan J.D., & Pedrick P.C. (1999). *OUTSOURCING HELICOPTERS FOR LAND BASED-SEARCH AND RESCUE. RAD, Repository/Production Services*. Center for Naval Analyses, Alexandria, Virginia. 9

due to a need to stop and refuel at Monterey (a common need for the Coast Guard due to the short fuel legs of its HH-65 helicopters). The non-injured survivor walked to a nearby road and was recovered by a pickup truck while the Coast Guard was still en route. Had this one survivor been seriously injured and down in an inaccessible area or if a search had been required to locate an injured survivor, there is a substantial probability the survivor could have died. Unfortunately in this scenario, the other pilot involved in the mishap was killed upon impact during the midair collision. This mishap vividly demonstrates the SAR dilemma that currently exists for CSFWP and its tenant commands.

#### **D. PROJECT OBJECTIVES**

The objectives of this project are to:

1.

Provide a cost comparison of different models for establishing a dedicated SAR unit for NAS Lemoore.

Analyze the implementation pros and cons of each model.

Provide CSFWP with a recommendation of the SAR model to use to establish dedicated SAR at NAS Lemoore. Provide information to facilitate the establishment of the recommended SAR model.

#### **E. PROJECT SCOPE**

A critical assumption of this report is that the Navy has in its current inventory a sufficient number of helicopters to support the transfer of one or two aircraft to NAS Lemoore for the purpose of standing-up a new SAR unit or a SAR detachment from an existing unit. Thus, the cost of procuring new helicopters is not considered. This, of course, is not relevant to the contract solution explored. A second assumption is that due to the current high operational tempo and work load for Fleet Helicopter Wings, the report does not analyze a model for SAR that uses helicopter detachments from these Fleet Helicopter Wing squadrons. Owing to these above-mentioned assumptions and the time constraints for preparing the report, this report focuses on five viable models for 10

providing dedicated SAR at Lemoore: (1) establish SAR in the image of NAS Whidbey Island (NASWI) SAR; (2) establish SAR in the image of NAS Fallon SAR; (3) establish SAR in the image of NAWS China Lake SAR; (4) establish SAR in the form of a detachment from an already existing SAR station; and (5) procure contract SAR from a commercial entity. The methodology used to make the comparisons amongst these five models will be explained in the following section.

## **F. METHODOLOGY**

The goal of this analysis was to gather data from various active SAR units to determine what model NASL SAR should adopt. First, SAR data was obtained from NAS Whidbey Island, NAS Fallon, and NAWS China Lake. The data obtained listed the number of aircrew and maintenance personnel assigned to each station. Also, as is the case with all three of these units, the cost of the contract maintenance was gathered as was information regarding the costs per flight hour (CPH) for the aircraft in use at NAS Whidbey Island, the MH-60S Knighthawk. According to FY08 data, the targeted CPH for fuel, Aviation Depot Level Repairables (AVDLR), and Aviation Fleet Maintenance (AFM) were used to calculate both individual station flying costs based on their annual flight hour allocation, as well as a baseline flying cost for 240 hours of annual flying. Finally, their respective administrative budgets were included in the total costs for operation, so that the project team could determine an absolute annual cost associated with each SAR unit.

To determine the costs associated with a year-long detachment, some calculations were made using the data received above, as well as some assumptions regarding detachment costs at NASL. First, in order to cover the 16-hour daily fly window at NASL, at least two complete crews available for operations each day while on detachment are needed. This equates to ten aircrew of various ranks and two contract maintainers. These figures were used to determine the added costs associated with these detachment personnel, to include military and civilian annual salaries, per diem, lodging, and of course the added flight-hour costs associated with an additional 240 hours of flight operations while on detachment to NASL. By summing these values, the added cost of 11

<sup>2</sup> Dutton R.A. (2007). SOLICITATION/CONTRACT/ORDER FOR COMMERCIAL ITEMS. SOLICITATION NUMBER M67399-07-R-0002. *Fleet & Industrial Supply Center*. San Diego, CA.

augmenting an existing SAR station with the necessary aircrew, contract maintainers, and flight hours to execute a year-long detachment to NASL were identified.

Finally, the costs associated with contracting SAR from a civilian aviation company were collected. There were two methods used to determine reasonable estimates for a contract SAR solution. The first came from Marine Air-Ground Task Force Training Command (MAGTFTC), Twentynine Palms, CA. This station contracts exclusively to Air Methods Incorporated for air ambulance service on an annual basis.<sup>2</sup> The values obtained from this contract were used as a starting point for what is anticipated for SAR costs with an adjustment for 240 hours instead of the MAGTFTC contract requirement of 300 hours. Additionally, completely independent of the MAGTFTC information, the project team queried a local helicopter operator on potential costs for SAR coverage of NASL for 240 hours annually. The information received was in-line with MAGTFTC contract SAR values, and thus, incorporated into this analysis.

Once the information was gathered for each course of action (COA), the numbers were calculated to determine not only total costs for each unit, but also a cost for operations if each unit were to fly 240 hours annually, which is an amount determined to be adequate to cover the flying schedule at NASL. In both scenarios, a cost per hour was determined as a final calculation for determining which COA operates at the lowest costs per flight hour. 12

## II. RESULTS

The results of this analysis are shown below. The specific costs that comprise these totals are shown in Appendix A in Tables A-1 through A-4. Included along with the analysis totals are basic pros and cons associated with each COA.

### A. NAS WHIDBEY ISLAND SAR

Pros:

Military manning of aircrew as well as maintenance offers flexibility for squadron activity (i.e., the advantage of organic dedicated SAR).

Cons:

Requires CNAF transfer of MH-60S from existing unit to NASL.

H-60 Full Mission Capable (FMC) percentage is relatively poor (< 70%).

Time requirement for implementation due to manning document and airfield facility support is at best 12-15 months, typically 18-24 months.

More difficult to disestablish if funding becomes unavailable in the future.

MH-60S has short fuel legs (2 hours, poor for open ocean SAR).

Expensive.

Total Cost of Operations: \$5,378,434

Total Cost per Flight Hour: \$6,403

Cost of Operations for 240 hours: \$4,050,034

Cost per Flight Hour for 240 hours: \$16,875

### B. NAS FALLON SAR

Pros:

Minimizes total manning requirement due to contract maintenance.

The advantage of organic dedicated SAR.

SH-60F has 5 hour fuel legs (ideal for open-ocean SAR).

Cons:

Requires CNAF transfer of H-60F from existing unit to NASL.

- H-60 Full Mission Capable (FMC) percentage is relatively poor (< 70%).

- Time requirement for implementation due to manning document and airfield facility support is at best 12-15 months, typically 18-24 months.

- More difficult to disestablish if funding becomes unavailable in the future.

- Expensive.

Total Cost of Operations: \$6,467,414  
Total Cost per Flight Hour: \$5,053  
Cost of Operations for 240 hours: \$4,164,854  
Cost per Flight Hour for 240 hours: \$17,354

### **C. NAWS CHINA LAKE SAR**

- Pros:
  - Minimizes total manning requirement due to contract maintenance.
  - The advantage of organic dedicated SAR.
  - SH-60F has 5 hour fuel legs (ideal for open-ocean SAR).

- Cons:
  - Requires CNAF transfer of H-60F from existing unit to NASL.
  - SAR is part of Test and Evaluation squadron at NAWS China Lake. Complex stand-up requirements if trying to combine with current Lemoore squadron, such as VFA-125.
  - H-60 Full Mission Capable (FMC) percentage is relatively poor (< 70%).

- Time requirement for implementation due to manning document and airfield facility support is at best 12-15 months, typically 18-24 months.

- More difficult to disestablish if funding becomes unavailable in the future.

- Expensive.

Total Cost of Operations: \$4,466,680  
Total Cost per Flight Hour: \$9,504  
Cost of Operations for 240 hours: \$3,957,460  
Cost per Flight Hour for 240 hours: \$16,489

**D. NAS FALLON SAR DET LEMOORE 14**

Pros:

○

Least expensive option.

○

Fallon SAR acquires at least one additional helicopter.

○

The advantage of organic dedicated SAR.

○

SH-60F has 5 hour fuel legs (ideal for open-ocean SAR).

Cons:

○

Requires CNAF transfer of H-60F from existing unit to NASL.

○

H-60 Full Mission Capable (FMC) percentage is relatively poor  
(< 70%).

○

Quality of life concerns for shore-based crews on detachment often during the year.

○

Inefficient use of government funds for per diem and lodging costs while aircrew and contract maintainers are on detachment.

○

Necessary to ferry aircraft, parts, and personnel to and from NAS Fallon to NASL.

Total Cost of Operations: \$1,855,777

Total Cost per Flight Hour: \$7,732

## **E. CONTRACT SAR**

Pros:

○

Quickest and easiest to implement.

○

Option to not renew contract if future funding becomes unavailable.

○

Second least expensive option.

○

Local commercial company has Bell 212's (3.5 hour fuel legs).

Cons:

○

Reliance on civilian contractor for maintenance and aircrew performance (non-organic).

Total Cost of Operations: \$2,259,680

Total Cost per Flight Hour: \$9,415 15

### **III. SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS**

#### **A. SUMMARY**

The consequences of continuing to train and operate the West Coast Hornet Fleet without a viable, dedicated SAR capability are unacceptable. Due to the inherent risks associated with Naval Aviation, it is never a question of “if”, but rather a question of “when” will the next mishap occur. As recent high visibility mishaps in both military and general aviation have shown, availability of SAR assets are necessary to provide immediate location and recovery of survivors. The analyses conducted for this project determined the following cost per hour (based on 240 flight hours) of the five most viable models of providing dedicated SAR capability for CSFWP:

NAS Whidbey Island - \$16,875

NAS Fallon – \$17,354

NAWS China Lake - \$16,489

Detachment Concept - \$7,732

Contract – \$9,415

#### **B. CONCLUSIONS**

This study shows that the lowest cost option for establishing a dedicated SAR capability for CSFWP is the detachment model. However, this model has the significant drawback (as do the other three military options) of requiring that one or two helicopters be taken/transferred from other Navy helicopter squadrons/stations. Also, the detachment model has another serious negative aspect in that it adversely impacts the quality of life of both the military and civilian personnel who will be required to do substantial amounts of Temporary Assigned Duty (TAD) time away from home in support of the Lemoore detachment (in addition to the added per diem and lodging expenses that will be incurred in support of the detachment). Finally, it takes longer to both establish SAR capability and decommission it in the event of future budget cuts. This is a negative aspect of all four military SAR models.

An analysis of the pros and cons of each of the five models clearly reveals the contract SAR option to be the superior model. This superiority of the contract SAR 16



model is of sufficient magnitude that it renders the minute cost difference between the detachment model versus the contract SAR model insignificant. The flexibility germane to the contract option is beneficial to the Navy on several levels: First, this option allows the Navy to cancel the contract should funding not be available in the future; second, the ease of implementation of a contract SAR solution (in terms of both timeliness and manpower issues) offers the Navy the fastest means to establish dedicated SAR capability for CSFWP; and finally, it may serve as an immediate, interim solution should the Navy decide to pursue an organic military SAR solution to CSFWP's current SAR deficiency. Ultimately, the desired end state is increased readiness and safety for CSFWP Hornet aircrews operating on the West Coast. The most economical, timely, and efficient means of achieving this capability supports implementation of the contract SAR model.

### **C. RECOMMENDATIONS**

The following recommendations are made to accomplish the objective of establishing a dedicated, low cost SAR capability for CSFWP in a manner that is easy to implement in terms of both timeliness and quality of life/manpower issues, and can be discontinued in the event of budget cuts:

1.

Establish a dedicated SAR capability for CSFWP via the contract SAR model.

Work with Fleet & Industrial Supply Center San Diego (FISCSD) personnel to draft a comprehensive, clearly defined Statement of Work (SOW), Source Selection Board Plan (SSP), and Request for Proposal (RFP) using the MAGTFTC, Twentynine Palms contract for helicopter ambulance services as a template.

Use OPNAVINST 3130.6 and guidance from both the Department of Interior's Aviation Management Division and Navy SAR Model Manager to draft the over-water SAR requirements for inclusion in the SOW, SSP, and RFP.

Coordinate with the Department of Interior's Aviation Management Division to enter into an agreement to utilize its inspection services to certify that the

commercial helicopter providers who respond to the Navy's RFP for contract SAR are able to meet the CSFWP's SAR requirements as detailed in the SOW, SSP, and RFP.

5.

Write the contract in one-year increments or with one-year options so that the SAR service can be simply discontinued in the event of future budget cuts.

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## **LIST OF REFERENCES**

Center for Naval Analyses study “Outsourcing Helicopters for Land-Based Search and Rescue”  
March 1999.

Marine Air-Ground Task Force Training Command, Twentynine Palms SAR contract  
“Solicitation/Contract/Order for Commercial Items,” Contract Number M67399-07-R-0002.  
OPNAVINST 3130.6 Naval Search and Rescue Standardization Program. 19

## **INITIAL DISTRIBUTION LIST**

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## APPENDIX A

Manning Requirements Number Personnel Granular Cost Number Personnel Granular Cost Aviators (O-4) \$266,478 \$266,478 Aviators (O-3) \$659,850 \$439,906 \$659,850 Aviators (O-2) \$190,035 Aircrew (E-7) \$188,250 \$88,250 Aircrew (E-6) \$429,650 \$202,148,260 \$74,130 Aircrew (E-5) \$5303,395 \$3182,037 \$2121,358 Aircrew (E-4) \$47,523 \$3142,569 \$4190,092 Corpsman (E-5) \$160,670 Maintainers (E-8) \$199,425 Maintainers (E-7) \$2176,500 Maintainers (E-6) \$444,780 Maintainers (E-5) \$5303,395 Maintainers (E-4) \$47,523 Civilian Contractors \$7630,000 \$152,346,000 \$1352,300,000 Manning Costs \$3,453,674 \$3,613,494 \$3,406,100 Flight Hour Allocation FY08 (hrs/year) 8401280470 Target Fuel Cost per Hour / Fuel Target FY08 \$457 \$383,880 \$457 \$584,960 \$457 \$214,790 Target AVDLR CPH / AVDLR Target FY08 \$1,260 \$1,058,400 \$1,260 \$1,612,800 \$1,260 \$592,200 Target AFM CPH / AFM Target FY08 \$497 \$417,480 \$497 \$636,160 \$497 \$233,590 Total CPH / Total Flying Costs FY08 \$2,214 \$1,859,760 \$2,214 \$2,833,920 \$2,214 \$1,040,580 Administrative Budget (\$/year) \$65,000 \$20,000 \$20,000 Total Costs \$5,378,434 \$6,467,414 \$4,466,680 Cost per Hour \$6,403 \$5,053 \$9,504 NAWAS Whidbey Island, WANAS Fallon, NVNAWS China Lake, CA

### Table A- 1: Military SAR Annual Costs

Manning Requirements Number Personnel Granular Cost Number Personnel Granular Cost Number Personnel Granular Cost Aviators (O-4) \$266,478 \$266,478 Aviators (O-3) \$659,850 \$439,906 \$659,850 Aviators (O-2) \$190,035 Aircrew (E-7) \$188,250 \$88,250 Aircrew (E-6) \$429,650 \$202,148,260 \$74,130 Aircrew (E-5) \$5303,395 \$3182,037 \$2121,358 Aircrew (E-4) \$47,523 \$3142,569 \$4190,092 Corpsman (E-5) \$160,670 Maintainers (E-8) \$199,425 Maintainers (E-7) \$2176,500 Maintainers (E-6) \$444,780 Maintainers (E-5) \$5303,395 Maintainers (E-4) \$47,523 Civilian Contractors \$7630,000 \$152,346,000 \$1352,300,000 Manning Costs \$3,453,674 \$3,613,494 \$3,406,100 Flight Hour Allocation FY08 (hrs/year) 240240240 Target Fuel Cost per Hour / Fuel Target FY08 \$457 \$109,680 \$457 \$109,680 \$457 \$109,680 Target AVDLR CPH / AVDLR Target FY08 \$1,260 \$302,400 \$1,260 \$302,400 \$1,260 \$302,400 Target AFM CPH / AFM Target FY08 \$497 \$119,280 \$497 \$119,280 \$497 \$119,280 Total CPH / Total Flying Costs FY08 \$2,214 \$531,360 \$2,214 \$531,360 \$2,214 \$531,360 Administrative Budget (\$/year) \$65,000 \$20,000 \$20,000 Total Costs \$4,050,034 \$4,164,854 \$3,957,460 Cost per Hour \$16,875 \$17,354 \$16,489 NAWAS Whidbey Island, WANAS Fallon, NVNAWS China Lake, CA

### Table A- 2: Military SAR with 240 hour Baseline 20

Additional Manning Requirements# PersonnelGranular CostPer Diem Cost (\$28/day)Lodging Rate (\$/night)Lodging Cost Aircrew (O-4)1\$133,239\$9,940\$35\$12,425 Aircrew (O-3)4\$439,900\$39,760\$35\$49,700 Aircrew (E-6)2\$148,260\$19,880\$30\$21,300 Aircrew (E-5)2\$121,358\$19,880\$30\$21,300 Aircrew (E-4)1\$47,523\$9,940\$20\$7,100Total Manning Costs per Year10\$890,280\$99,400\$111,825Flight Hour Allocation FY08 (hrs/year)240 Target Cost per Hour / Target Fuel FY08\$457\$109,680 AVDLR CPH / AVDLR Target FY08\$1,260\$302,400 AFM CPH / AFM Target FY08\$497\$119,280Total CPH / Total Flying Costs FY08\$2,214\$531,360Contractor Maintenance Det Costs Standard work week hours40 Billing rate \$/hour\$39.76 Cost per week\$1,590.40 Annual Cost per Maintainer\$82,700.80 Anticipated Maintainer Requirement2Total Maintainer Cost\$165,401.60Contractor Per Diem + Lodging NASL\$81Per Diem \$46/day, Lodging \$35/day # days to be detached355 Annual Per Diem per maintainer\$28,755 Anticipated Maintainer Requirement2Total Per Diem/Lodging Costs\$57,510Total Detachment Costs\$1,855,776.60Cost per Hour\$7,732.40NAS Fallon SAR Detachment

**Table A- 3: SAR Detachment at NASL**

Marine Air-Ground Task Force Training Command (MAGTFTC), Twentynine Palms, CALocal Commercial OperatorAnnual Service fee for Operating Costs (June 09-June 10)\$2,503,020\$1,886,000Contract Cost Per Hour\$1,788\$1,100Flight Hour Costs for 240 hours240\$429,120\$264,000Contract without fuel costs (Dry)\$2,932,140\$2,150,000Anticipated Gallons per Year (100 gal/hr burn rate)24,00024000Fuel Costs (Contract Rate/Gallon JP)\$4.57\$109,680\$109,680Total Contract Award\$2,932,140\$2,259,680Cost per Hour\$12,217\$9,415

**Table A- 4: Contract SAR**