Alaska Land Mobile Radio Communications System

User Council 2014 Annual Assessment on System Operations and Management Performance

January 13, 2015

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1.0 Introduction

Per the Alaska Land Mobile Radio (ALMR) Communications System Cooperative Agreement, Article 8 - User Council, Section 16.2, Performance Monitoring.

> The User Council will monitor and evaluate the performance of the System, including the efficiency and effectiveness of its operation and management, as well as the performance of contracts and user agreements. The User Council will report to the Executive Council their assessment of the operational health of the System annually, or as requested by the Executive Council.

This report provides a high-level overview of ALMR System performance monitoring by the User Council (UC) and their oversight of the day-to-day Operations and System Management functions.

2.0 Membership

At the beginning of 2014, there were 119 agencies operating on ALMR. At the end of the year, the total agencies had increased to 122 agencies with 19,247 subscriber units in service. The newest member agencies to join in 2014 were the Providence-Kodiak Island Medical Center, Chickaloon Village Tribal Council Justice Department and Naukati Bay Volunteer Fire Department.

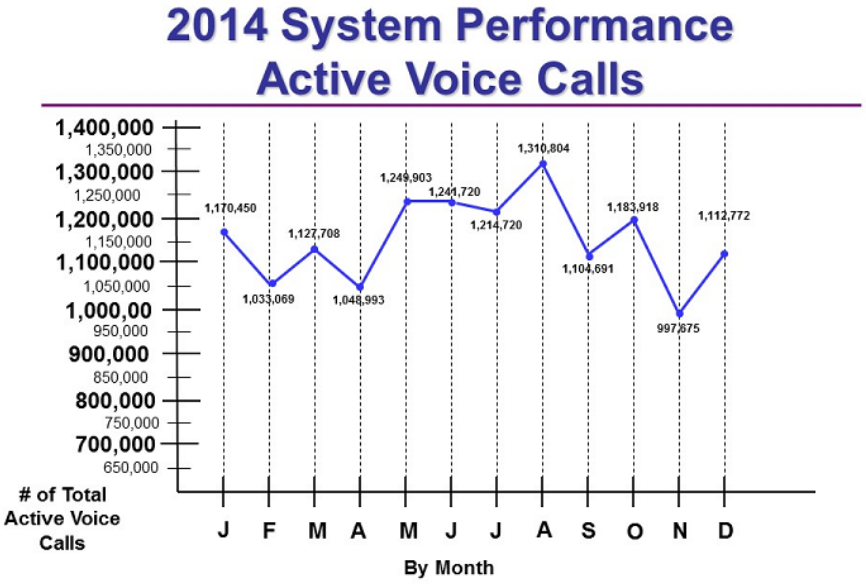
3.0 Metrics

The UC is responsible for monitoring System performance and tracking various parameters including busies and voice calls per month in order to note any trends that may indicate System deficiencies. To accomplish this, they employ the Operations Management Office (OMO) to provide periodic reports. The OMO presents ALMR System metrics at the monthly UC meeting and also at the Executive Council (EC) meetings, as scheduled.

The UC has established a performance baseline standard, with respect to System busies, which identifies day-to-day and emergency operations data for individual sites by both the percentage and duration. When sites exceed established standards, reviews are conducted to determine whether they are related to State of Alaska (SOA) Telecommunications System (SATS) downtime, military exercises, weather-related events or a specific emergency response event.

The OMO provides monthly statistics to the UC to determine whether those sites exceeding the standard are experiencing excessive traffic due to normal seasonal traffic, or if there is simply insufficient channel capacity at the site to handle daily operations.

The following charts examine the total numbers of System voice calls and data allocations per month.



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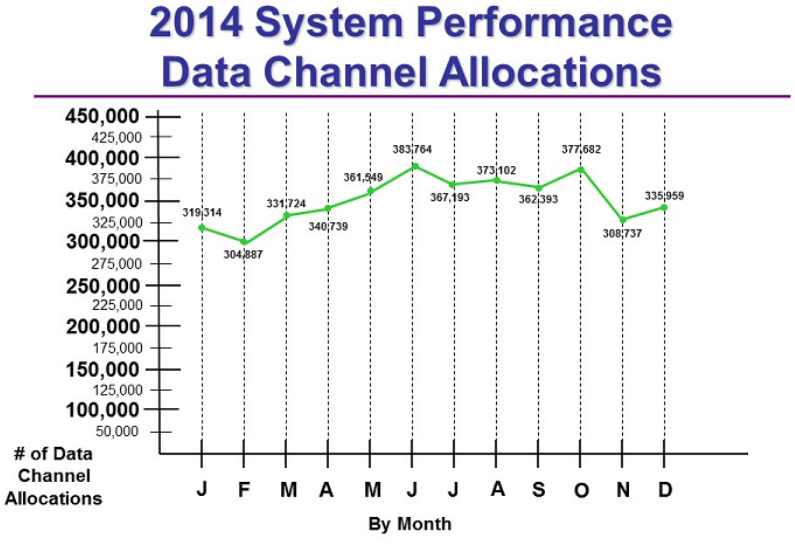

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In 2014, the ALMR System supported a cumulative total of 13,796,423 voice calls and 4,167,043 data allocations. System busies for 2014 totaled 10,929, which was .0007 of the cumulative voice calls.

4.0 Conflictions/De-conflictions

There is currently one known conflict involving ALMR sites.

- Confliction:
  - FS12 (frequency conflict with MOA/Channel 10 not licensed)

  NOTE: The conflict with the Municipality of Anchorage was resolved in December 2013 when their license for the conflicting frequency expired. Subsequently, Channel 10 was licensed but will remain off until such time it is moved to another site due to the determination to reduce the number of channels at FS12 made by the User Council at the May 7 meeting. This item is **CLOSED** as of this report.

5.0 Build out

The ALMR System was originally designed to support 105 sites. The Atwood 800MHz site was added, as well as the two Transportable Communications Systems. At the end of 2014, site equipment ownership was as follows (original design number and current build-out status/ownership):

- US Army Alaska (USARAK) – 45/4
- Joint Base Elmendorf-Richardson – 1/1
- Eielson Air Force Base – 3/3
- Municipality of Anchorage (MOA) – 15/12
- SOA – 40/73

There are currently 94 operational sites including the 12 MOA Anchorage Wide Area Radio Network (AWARN) sites; this total does not included the transportable systems. All Department of Defense (DOD) sites have been completed and the State has completed the build out of all funded sites.

NOTE 1: In calendar year 2012, radio frequency (RF) equipment belonging to USARAK at 41 sites was transferred to the State of Alaska. This accounts for the difference in the listed numbers for the planned site build out and the current number of owned sites.

NOTE 2: St Paul Island is not included in the above total operational site count due to the fact it has no reach back capability to the rest of the ALMR System and operates only in site trunking mode. However, it does have an assigned ALMR site number and is under control of St Paul Island Public Safety.

NOTE 3: The Clear site was shut down on April 15, 2013, and the equipment was removed on July 10, 2013. Disposition/relocation of the equipment is still pending. **Update 12/3/14:** The System Manager, Mr. Casey Borg, briefed the User Council that the Clear site was going to be re-installed but the final location was still undetermined.

NOTE 4: The Atwood 800MHz site was removed in May 2013 to utilize as a test bed for the 7.13 System software upgrade. The decision was made at the February 5 User Council meeting not to reinstall the site. The System Change Request was approved by the Executive Council on February 26, 2014.

6.0 System Coverage Issues

ALMR was originally designed and built to provide coverage along the major roadway system in Central and South Central Alaska, major population centers in Southeast Alaska, and some portions of the Marine Highway.

During 2014, several previously identified coverage issues continue to be tracked by the OMO.

- **Skagway** (carried forward from 2010)
  The ALMR site at Skagway does not provide coverage over the last six miles of the Klondike Highway. This is the section that is most intensively maintained, and the area where whiteouts, blowing snow, and avalanches occur. When maintenance crews are in these areas, they must use a conventional DOT frequency for communications, which is often interfered with by truckers using the highway.

  DOT has suggested that an ALMR repeater be installed on Mine Mountain. This would cover the portion of the highway that currently has no ALMR coverage. However, Mine Mountain is remote and does not have power. The DOT&PF planning section offered to assist with funding, if a plan can be put together.

  NOTE: There was no change to the status for this item in 2014.

- **Houston** (carried forward from 2010)
  The Technical Advisor traveled to the Houston area to investigate an issue with poor portable coverage reported by Houston PD. One of the immediate problems noted was that the radios did not have a "most preferred" tower site programmed. During the coverage checks in the Houston area, the only tower sites that were accessible were Site Summit, Cottonwood, and Rabbit Creek. Of the three, Site Summit provides the best site coverage for the affected area. It was suggested that when the agency programs their radios, they should consider making Site Summit the "most preferred' site.

  The System Manager noted that there had been some discussion about a new tower site along the Knik Goose Bay Road in Wasilla. There is an existing tower in the area that could provide excellent coverage throughout the Houston area. However, it may take several years to add an additional radio site if/when funding is approved.

  Subsequently, the only option available at this time, which could improve Houston PD portable radio coverage in the near future, would be for them to acquire/install in-vehicle repeaters. It was suggested they contact Soldotna PD, who had installed several in their police vehicles and were reportedly satisfied with the improved reception capability.

  NOTE: The City of Houston deactivated the Police Department in 2011 and is no longer a member of the ALMR System. There was no change in the status for this item in 2014.

- **Palmer/Wasilla** (carried forward from 2009)
  In September 2009, the OMO conducted coverage tests in the Wasilla area as a follow-up to reported issues from the Wasilla PD. At that time, there were limited areas where coverage issues were experienced.

  One item of particular attention was that the Cottonwood site was not being affiliated to by the agency as much as it should have been. Given that the site is in the middle of Wasilla, it should be most preferred 90 percent of the time. The issue was passed on to the System Management Office (SMO) and they did identify some areas that had a high bit error rate on the Parks Highway on the south side of Wasilla.

  In order to improve coverage, the ALMR technician worked with ETS personnel to relocate the antennas to another side of the Cottonwood tower. Subsequently,

this action did improve the coverage along the Parks Highway. The SMO contacted Wasilla PD to see if this resolved the issue. The SMO was advised there were still other outstanding issues.

The technician then worked with Wasilla PD to update their firmware version, which provided for a stronger signal roaming capability. At this time, Wasilla PD hasn't completed the firmware upgrades in all their subscriber units. The SMO will continue to periodically check the situation for final resolution.

Update 11/21/2014: Installation of one additional channel at the Cottonwood Creek site was completed and the channel is up and operational. This item is **CLOSED**, as of this report.

- **North Pole** (carried forward from 2008)
  Previously, a System Design/System Analysis was completed at the request of Fairbanks North Star Borough and local public safety agencies regarding the potential for an additional site in the North Pole area. The report was published in March 2008.

  At the time of the original ALMR System design, it was determined that a site was not required in the North Pole area as the projected coverage met the design requirements for mobile subscriber units. Funding options for a North Pole site continue to be explored.

  Update 2012: Mr. Jim Kohler met with Chief Jeff Tucker, North Star Volunteer Fire Department, and they looked at possible places where the site could be co-located with existing infrastructure to save on costs of building a green site. At the end of 2012, the State was awaiting response from an organization regarding a co-location agreement and cost estimates.

  Update 2013: At the May 1 User Council meeting, further exploration regarding a North Pole site was **tabled**.

  NOTE: There was no change in the status of this item in 2014.

- **Delta Junction** (carried forward from 2008)
  Delta area agencies advised the OMO in 2008 that ALMR coverage was no longer satisfactory and had degraded over the course of time. At that time, the OMO requested Motorola determine if the initial projected coverage in the area

had been detrimentally affected by the relocation of the former Delta Junction site to Donnelly Dome, concurrent with the relocation of the former Donnelly Dome site to Ft Greely, and/or finally by the addition of a cellular antenna array to the Ft Greely tower.

Motorola performed a thorough preventative maintenance inspection of the ALMR transmission/receiver equipment and a sweep of all lines/antennas and determined that all equipment was working within specifications. Additionally, Motorola determined there was a strong possibility that the Ft Greely tower cellular antennas, and additional lines, were causing an RF shading/obstruction condition to occur in the direction of Delta Junction.

Motorola documented they believe an interference condition does exist in the area and is causing the observed radio behaviors and changes to the over-the-air signal levels. The source of this interference is a combination of tower obstruction/shading, land clutter (foliage), multi-path, and potentially outside RF interference.

USARAK advised the UC at the Annual Training Conference in September 2009 that they would work with AT&T and the SMO to isolate the antenna on the tower in order to determine if the modifications by AT&T were causing degradation. Testing by the SMO indicated that there was no RF interference. USARAK is continuing to work the issue from their end.

Update 2012: Follow up testing, which involved a change of the ALMR transmit antenna at the site did not resolve the coverage issues that have been experienced. Additionally, no specific interference source was identified that could be mitigated.

At this time, no further action is planned as the site, which is operating within specifications, as confirmed with previous testing. This issue is determined closed.

Update 2013: The issue was re-opened at the May 1, 2013, User Council meeting when it was suggested coverage in the Delta area should be re-engaged as an existing coverage area that is underserved. Mr. Jordan Halden had met with a large group at Delta who stated although the mobile coverage was sufficient; the portable coverage was inadequate particularly over the ridge at

Delta to Jack Warren Road. They felt they had much better coverage before the Delta Junction site was moved to Donnelly Dome.

Additionally, it was noted the Troopers could point out exactly on a map where they can't get coverage in the Delta area. The System Manager agreed there were areas where both mobiles and portables have issues. The User Council requested ETS look at the Delta area for enhancing coverage and were advised that Spring 2014 might be the soonest ETS could begin serious exploration.

Update March 2014: System Manager, Mr. Casey Borg, traveled to Delta Junction to talk to Mr. Ernie Wyrick, as well as representatives for AST, DOT and possibly Forestry, regarding coverage concerns in the area, and to find out what could be done to facilitate better coverage. The final coverage report was published September 9, 2014, and contained two recommendations: 1) complete subscriber periodic maintenance inspections; and 2) add another site to the area. **NOTE:** Funding for an additional site at this location is not currently available.

- **Chena Dome/Chena Hot Springs Road**
  At the May 1 User Council meeting, the council was briefed that Chief Jeff Tucker, North Star VFD, had mentioned Chena Hot Springs where there is no ALMR coverage, but only a conventional site where power is problematic.

  Major Leveque briefed there is a conventional site AST has access to, but he had talked to his troopers who stated there is virtually no coverage there even on the conventional side.

  DOT engineers were looking at how to bring down the cost to implement Chena Dome, but it would still be a significant cost regardless. ETS was requested to explore the Chena Hot Springs Road site and were advised that spring 2014 might be the soonest ETS could begin serious exploration.

  NOTE: The Stuart Creek 2 wildfire, in July 2013, reached the Chena River and prompted an evacuation along Chena Hot Springs Road for residents between mileposts 18 and 34.

- **FS12**
  During a joint meeting of ETS and ALMR OMO and SMO staff, the determination was made to shut off four channels at the FS12 site, which was currently running nine channels. Busies at surrounding sites were tracked to determine the

impact. The proposed purpose for the channel reduction at FS12 would be to utilize the removed channels to upgrade three-channel sites with high busy rates identified by the UC for capacity increases. The decision to leave the channels off was agreed upon by ETS and ALMR and approved by the User Council at the May 7 meeting; channels will remain at the site until such time they are needed elsewhere. Channels 7, 8 and 9 were indefinitely deactivated and the System Change Request to was approved by the Executive Council on July 26, 2014.

- **Valdez**
  At the July 2 User Council meeting, Chief Bill Comer of Valdez Police Department briefed the council regarding coverage shortfalls in the Valdez area that created an officer safety issue

- **Capacity Upgrades**
  At the March 5 meeting, the User Council voted and approved the ALMR/ETS recommendations to increase the channel capacity, by one channel each, at the Tok, Willow Mountain, Glennallen, Tolsona and Cottonwood Creek sites, as resources and funding became available.

  After the Funny River fire in June, the decision was made to put the Pipeline site on the list for capacity upgrade, as well.

  The Cottonwood Creek site was upgraded by one channel on November 21, the Willow Mountain site was upgraded by one channel on December 16 and the Glennallen site was upgraded by one channel on December 17.

- Sitka site
  The decision was made to pursue installation of a site at Sitka, which was one of the original locations planned for ALMR build out in the southeast. The failure of the Daniels repeater installed by ETS several years back contributed to the decision to move forward, as well as the availability of equipment which was previous removed from the Rabbit Creek site when the GTR8000 six-pack was installed. Planning had just begun in December; therefore, final installation is unknown at this time.

7.0 On-going Projects

There are currently no on-going projects at this time.

8.0 Contractor Performance

8.1 The OMO is responsible for auditing and control of the policies and procedures, which provide for accountability, compliance, monitoring, and performance assessment of the ALMR System. Therefore, documents are reviewed annually and updated, as necessary, to reflect changes to System performance parameters or operational mandates. The status of ALMR documentation for 2014 is:

- 72 reviewed/updated
- 5 reviewed/approved by the UC
- 65 reviewed/approved by the OMO
- 2 outstanding
  - 2014 Business Case (awaiting User Council and Executive Council approval)
  - Service Level Agreement (awaiting Executive Council approval)
- Newly developed
  - Key Management Facility Policy and Procedure 400-17

8.2 The OMO performs third party Quality Assurance/Quality Control (QA/QC) of System Management Office (SMO) functions and general System oversight on behalf of the stakeholders/member agencies.

8.2.1 Key Variable Loaders

As part of the OMO QA/QC contractual requirement, a quarterly physical audit of Key Variable Loaders (KVLs), under the control of the SMO, is conducted and compared against those listed on the SMO equipment inventory. The results are as follows:

- **Date of Inspection:** January 24
  Findings: The ten KVLs listed on the System Management Office equipment inventory were inspected or accounted for.

- **Date of Inspection:** June 4
  Findings: The ten KVLs listed on the System Management Office equipment inventory were inspected or accounted for.

- **Date of Inspection:** July 10
  Findings: The ten KVLs listed on the System Management Office equipment inventory were inspected or accounted for.

- **Date of Inspection:** December 26
  Findings: The ten KVLs listed on the System Management Office equipment inventory were inspected or accounted for.

8.2.2 Infrastructure Equipment Spares

As part of the OMO QA/QC contractual requirement, a quarterly ALMR Random Infrastructure Equipment Spares Inventory inspection is performed on five randomly selected items from the SMO, Asset Manager's Infrastructure Spare Equipment Inventory list. The results are as follows:

- **Date of Inspection:** March 28
  Details: Physical inspection of the equipment took place at the Alaska Wireless facility located in Wasilla, Alaska on 26 March.
  The five (5) items randomly selected for inspection were:
  - UHF/AM Air-To-Ground Base Station – ALMR3001361 – Technisonic Industries – Model TRM-U225
  - Quantar® DC Power Supply – 13-E17065 – Motorola – Model TLN3377A
  - Quantar® VHF Range 1 Receiver – 13-E17080 – Motorola – Model TLN3250A
  - Monitor Stand – ALMR3000703 – Del – Model 0HD058
  - VHF/AM Air-To-Ground Base Station – ALMR3000186 – DX Radio Systems – Model MA75V181N

  Findings: All items were located and asset tag numbers verified.

- **Date of Inspection:** June 20
  Details: Physical inspection of the equipment took place at the Alaska Wireless facility located in Wasilla, Alaska on 20 June.
  The five (5) items randomly selected for inspection were:
  - Monitor Stand – ALMR3000703 – Dell – P/N0HD058
  - Flat Panel Antenna – ALMR3000182 – Redline – Model A2209MTF
  - Quantar® Power Amplifier – ALMR1001877 – Motorola – Model TLN3254A
  - Quantar® VHF Range 1 Receiver – 13-E17081 – Motorola – Model TLN3250A
  - Quantar® VHF Range 2 Exciter – 13-E17093 – Motorola – Model TLN3253A

  Findings: All of the above items were located and asset tag numbers verified.

- **Date of Inspection:** September 26
  Details: Physical inspection of the equipment took place at the Alaska Wireless facility located in Wasilla, Alaska on 26 September.
  The five (5) items randomly selected for inspection were:

- Quantar® VHF Range 2 Exciter – SOA – 13-E17092 – Motorola – Model TLN3253A
- Quantar® Oscillator – ALMR1001348 – Motorola – Model TLN3459A
- Tape Drive – ALMR1001229 – Seagate – Model STD224000N
- Quantar® DC Power Supply – SOA – 13-E17056 – Motorola – Model TLN3377A
- Quantar® VHF Range 1 Receiver – SOA – 13-E17080 – Motorola – Model TLN3250A

Findings: All of the above items were located and asset tag numbers verified.

- **Date of Inspection:** November 21 and 24
  Details: Physical inspection of the equipment took place at the Bering Straits Information Technology (BSIT) facility located in Wasilla, Alaska on 21 November, and the Transportable Area South (TAS) Logistics Shelter on 24 November.

  The five (5) items randomly selected for inspection were:
  - Computer Battery – ALCOM – ALMR3001355 – Del – Model Y4367
  - Computer Docking Station – ALCOM – ALMR3000764 – Del – Model PD01X
  - Site Controller – ALMR2000149 – Site Item – Motorola – Model T6784A
  - Computer DVD Drive – ALCOM – ALMR3000791 – Del – Model 0R046F
  - Fortress Mesh Laptop Air Card– USARAK – ALMR3000961 – Ubiquiti Networks – Model SRC 300mW802.11.a/b/

  Findings: All of the above items were located and asset tag numbers verified. The Fortress Mesh Laptop Air Card is deployed at the TAS Logistics Shelter with a laptop, when the Infrastructure Inventory sheet indicates that it is a spare located at the Wasilla BSIT Bogart Road facility. The Asset Manager was notified of such.

8.2.3 Catastrophic Natural Event Cleanup Kits

As part of the OMO QA/QC contractual requirement, a periodic inventory inspection is performed on a sampling of the Catastrophic Natural Event (CNE) cleanup kits maintained by the SMO.

The results are as follows:

Date of Inspection: November 21
Details: Inventory inspection was performed on one of the two kits (kit number 3) at the Bering Straits facility, located in Wasilla. **Findings:** All of the items were located, inspected, and with the exception of the case of water in the kit, everything was located. Bottled water has a “Use by Date” and has to be rotated periodically. It is

suggested that the SMO purchase the required bottled water and develop a schedule for swapping out the water as expiration dates near.

8.2.4 System Recovery Plan

In accordance with System Recovery Procedure 400-1, the System Recovery Plan shall be tested annually and all results of the test shall be recorded. The Security Manager shall be responsible for overseeing the testing and verifying that the results have been recorded. Results of the testing will be presented to the User Council.

NOTE: Real-world occurrences of, and response to, System failures shall meet the annual test requirement.

- **Date of Incident:** January 22
  Details: Secondary DAT 160 NICE Backup Tape Drive failure at Zone 1 Tudor Road
  Findings: At approximately 2225PM, the "secondary" DAT 160 NICE Backup Tape Drive failed destroying a second tape in a month. This was observed by Mr. Casey Borg, System Management Office Manager, and initial disaster response efforts began immediately.

  After the hardware failure was discovered, Mr. Borg and Mr. Kelly proceeded with the recovery process by troubleshooting the malfunction, reporting to Motorola for advanced replacement part, and recovering once the replacement part was installed. The data restoration began once the tape drive was installed and tape placed in drive.

  Results: On February 3, 2014 the team re-established a fully functioning "secondary" DAT 160 NICE Backup Tape drive. Total downtime was 12 days.

- **Date of Incident:** June 4
  Details: Pillar Mountain Site Switch 2 (ES02) and Site Controller 2 went into communication failure
  Findings: At approximately 0315AM, the Site Controller 2 went into communication failure. This was observed by Mr. Jason Kelly, Systems Technician, and initial disaster response efforts began immediately.

  After the hardware failure was discovered, Mr. Borg and Mr. Kelly proceeded with the recovery process by troubleshooting the malfunction. Mr. Kelly arranged for flight to Kodiak Island to replace switch 2 and Pillar Mountain. Once on-site Motorola was notified and the replacement switch was installed. This corrected

the initial problem, but the case could not be closed due to switch hardening requirement. Mr. Kelly said that Mark Jenks the Motorola Technician, Casey Borg and himself would have to harden the switch from Tudor road. Mark Jenks began research and work on hardening the switch, but ran into problems. After great efforts the hardening issues cleared after Mark found that the errors received while hardening was due to the discovery process in Voyence and the Unified Network Configurator (UNC). Mark deleted from Voyence and then rediscovered in the UNC. After that was complete the standard steps of locking down the switch passed successfully.

Results: On June 6, 2014 the team re-established a fully functioning switch 2 to the Pillar Mountain Site. Site remained on-line the entire time and only with the loss of switch 2 for 8 hours. The hardening was complete after a total of 3 days. The Motorola and ALMR case closed on June 9, 2014 at 2038AM.

- **Date of Incident:** June 14
  Details: Honolulu Site Not Wide Trunking
  Findings: At approximately 0852AM, the Switch 1 went into communication failure. This was observed by Mr. Travis Conant, Systems Technician, and initial disaster response efforts began immediately.

  After the hardware failure was discovered, Mr. Borg and Mr. Conant proceeded with the recovery process by troubleshooting the malfunction. Mr. Conant arranged to travel to the site and troubleshoot or replace switch 1. Once on-site Motorola was notified and the replacement switch was installed. The replacement switch corrected this issue. Switch hardening was conducted.

  Results: On June 16, 2014 the team re-established a fully functioning switch 1 to the Honolulu Site. The replacement and switch hardening was complete after a total of 2 days. The Motorola and ALMR case closed on June 16, 2014 at 1720PM.

Results are also listed in the annual System Recovery Assessment and Backup-Recovery Report dated July 2, 2014.

9.0 Periodic Maintenance Inspections (PMIs)

Effective July 1, 2013, the OMO began a new contract year and the QA/QC oversight of SMO was re-added to the performance-based work statement. The OMO is

responsible for providing QA/QC oversight of periodic maintenance inspections (PMIs) conducted by the SMO on ALMR sites on behalf of the UC. This process provides third party assurance that the sites are maintained to a standard in accordance with the Service Level Agreement (SLA) and identifies outstanding discrepancies that could potentially affect site operations.

During 2014, there were a total of 24 PMIs QA/QC inspected by the Technical Advisor. They were performed at the following sites:

- Moose Pass
- Portage
- Whittier
- Independent Ridge
- High Mountain
- Mt Sunny Hay
- Tahneta Pass
- Sawmill
- Tsina
- Tolsona
- Sourdough
- Glennallen
- Paxson
- Trims
- Black Rapids
- Dot Lake
- Cooper Mountain
- Silvertip
- Seldovia
- Girdwood
- Moose Pass
- Wolcott Mountain
- Ester Dome
- Rabbit Creek

10.0 System Enhancements

10.1 The Quantars® at the Rabbit Creek site were replaced by a GTR8000 six pack on July 31. This is the first site of the ALMR System to receive a GTR8000 and ETS

will see if it is a good fit for other sites. The GTR8000 also allows for allow the future subdivision of the frequencies, effectively doubling the available channel capacity.

The Quantars® from the Rabbit Creek site will be utilized for capacity expansion at other ALMR sites.

10.2 The Quantars® in the Transportable Area North (TAN) and Transportable Area South (TAS) are currently scheduled to be replaced by GTR8000s in early 2015. Disposition of the Quantars® is pending DOD decision.

11.0 Supported Events

11.1 On-going Agency Training

Many opportunities exist to allow the UC to further interoperability throughout the State, and remain up to date on current national standards. The Performance-Based Work Statement for the OMO allows the UC to utilize the OMO staff to contact member agencies, prospective member agencies, legislators, and other interested groups to disseminate information about ALMR.

In SOA FY2014, the State allotted a $140K contract for training. The administering office for the contract was the 5 Star Team. This contract continued its focus on communications training tailored to the specific needs of ALMR agencies. Training conducted from January 1 through June 30 was completed utilizing funds from the FY2014 allotment.

From January to June 2014, training was conducted for 430 individuals from Joint Base Elmendorf-Richardson, Anchorage, Anchor Point, Homer, Soldotna, Kenai, Fairbanks, Juneau, Copper Center, Cordova and Seward. Areas covered were the Alaska Shield Mid- and Final Planning Conference, radio operations for non-first responders, communications planning and exercise, radio operations, introduction to MotoBridge® and radio operations refresher.

The new State fiscal year 2015 began on July 1, 2014, and training funds in the amount of $300K were awarded. Training was conducted from July through December for 40 individuals from Copper River Native Association, Cordova Volunteer Fire Department, and Cordova Community Medical Center.

The Training Coordinator accompanied the Operations Manager and the Technical Advisor to the Alaska Fire Conference in Kenai. Conversations were held with

approximately 40 first responders regarding the training program and the classes offered.

Additionally, an after action review of ALMR communications during the Funny River Fire was conducted to discuss and offer solutions to communications problems experienced during the event. Approximately 15 area first responders attended.

11.2 Transportable Area South (TAS) Deployment

The TAS was deployed to the City of Valdez in support of Exercise Alaska Shield from March 26 – 31. The TAS provided communications as the scenario depicted the Valdez ALMR site inundated by a tsunami and all communications in the City of Valdez destroyed.

11.3 Motorola™ End-User Video

The OMO and the SMO participated in the preparation of an ALMR outreach video and informational brochure to be used in presentations regarding ALMR and SATS.

12.0 Finance/Budget

In accordance with the Cooperative Agreement, the UC will establish a budget process and each year develop a proposed budget for the next fiscal year to meet the operating, maintenance and capital replacement needs of the System and shall submit the proposed next year's budget to the EC. All proposed expenditures and activities of the System, as well as funding sources, shall be reflected in the proposed budget. The proposed FY2016 Operating Budget was approved by the UC on July 2 for presentation to the EC. The EC approved the budget on July 17 and agreed it should be submitted into the SOA budget cycle for consideration of funding.

13.0 Other Focus Areas

Additional areas currently being tracked:

- SOA Legislative Audit
  In December 2013, the Legislative Audit Final Summary was released with one Finding and Recommendation, "The Alaska Land Mobile Radio (ALMR) Executive Council should ensure user agencies conduct an annual inventory of ALMR equipment."

As the executive agent for the EC, the Operations Manager assumed the responsibility to develop a method to address the finding and recommendation. In January, a letter was sent to each agency operating on ALMR with a form attached for the agency to sign and date, stating they had completed their inventory.

Completion of all inventories and receipt of forms was finalized as of October 17, 2014.

- SATS
  - SATS Dashboard Web Portal Implemented
    - Provided a central location for critical information on SATS sites
    - Key information includes real-time and historical alarms, current break/fix issues, site details documentation, asset management and maintenance tracking
    - Significantly improved information availability and alarm notification to SATS staff
    - Working a follow-on project to create a mobile app extending functionality of the SATS Dashboard. The app will work in a connectionless state whereas SATS infrastructure data can be securely updated while on site and synced up later with the SATS Dashboard. This avoids potentially error prone manual paperwork and data entry of details about key SATS infrastructure components while providing a smarter, more efficient way to collect and update the information
  - Deferred Maintenance – Year 4 of 5
    - Microwave Upgrades – Implementation of new microwave equipment in the Kenai area of the SATS system to increase bandwidth while replacing end-of-life equipment. By bringing this part of the SATS system up to date with the latest proven microwave technologies, SATS improves its service and reliability in its mission to support public safety communications (ALMR).
    - MPLS Alcatel Project – Continued expansion of the MPLS network by installing several 7705 routers throughout the SATS network. MPLS enabled diverse routing increasing the capability of the network to automatically route traffic around network outages minimizing downtime. This also enables maintenance to be accomplished with fewer system interruptions.
    - Power Systems Improvements - Installed new commercial power line to Cordova (Heney Range) site to replace original line that had failed and was determined to be unrepairable. Upgraded multiple battery backup and charging systems at SATS sites to enable remote management and more efficient power management.

- Executed several projects requiring heavy lift helicopter support – After receiving a short notice of availability for a heavy lift helicopter the team pulled together to plan out and prep for a rare opportunity to have support from a heavy lift helicopter. A significant amount of resources and effort when into preparations readying 7 locations and 8 lifts for the very short amount of time the heavy lift helicopter was involved. A new shelter was placed at 5 sites and 3 shelters were removed from 2 sites. Extensive time and effort went into the preparation activities for these lifts as well as the completion of the projects where new shelters were placed

NOTE: SOA maintenance and milestones are briefed at the monthly UC meeting.

- Outstanding Maintenance
  Delays in addressing R56 grounding at sites continue to be a major concern, some now being over ten years old.

14.0 Conclusion

This report addresses the status of various issues regarding the operation and management of ALMR and outstanding items noted during this calendar year, or carried forward from previous years.

The efficiency and effectiveness of the OMO and SMO in performance of their contract functions met the expectations of the UC.

The overall health of the ALMR System is currently good. The three-channel sites continue to be monitored and the channel capacity upgraded, as the need dictates. The Gold Elite dispatch consoles will reach their end of life in the next year. They will continue to function normally until the next System software update. Likewise, the Motorola™ Quantars®, as well as the XTS® and XTL® subscribers, are also reaching their end of life soon. Maintenance will no longer be supported at the depot level and replacement repair parts may be limited. These infrastructure items will need to be replaced in order to keep the System functioning at optimal performance levels.

Concerns that will continue to be monitored by the OMO and SMO are: 1) securing long-term funding for System upgrades and equipment end-of-life replacements; and 2) capacity enhancement at remaining three-channel sites.