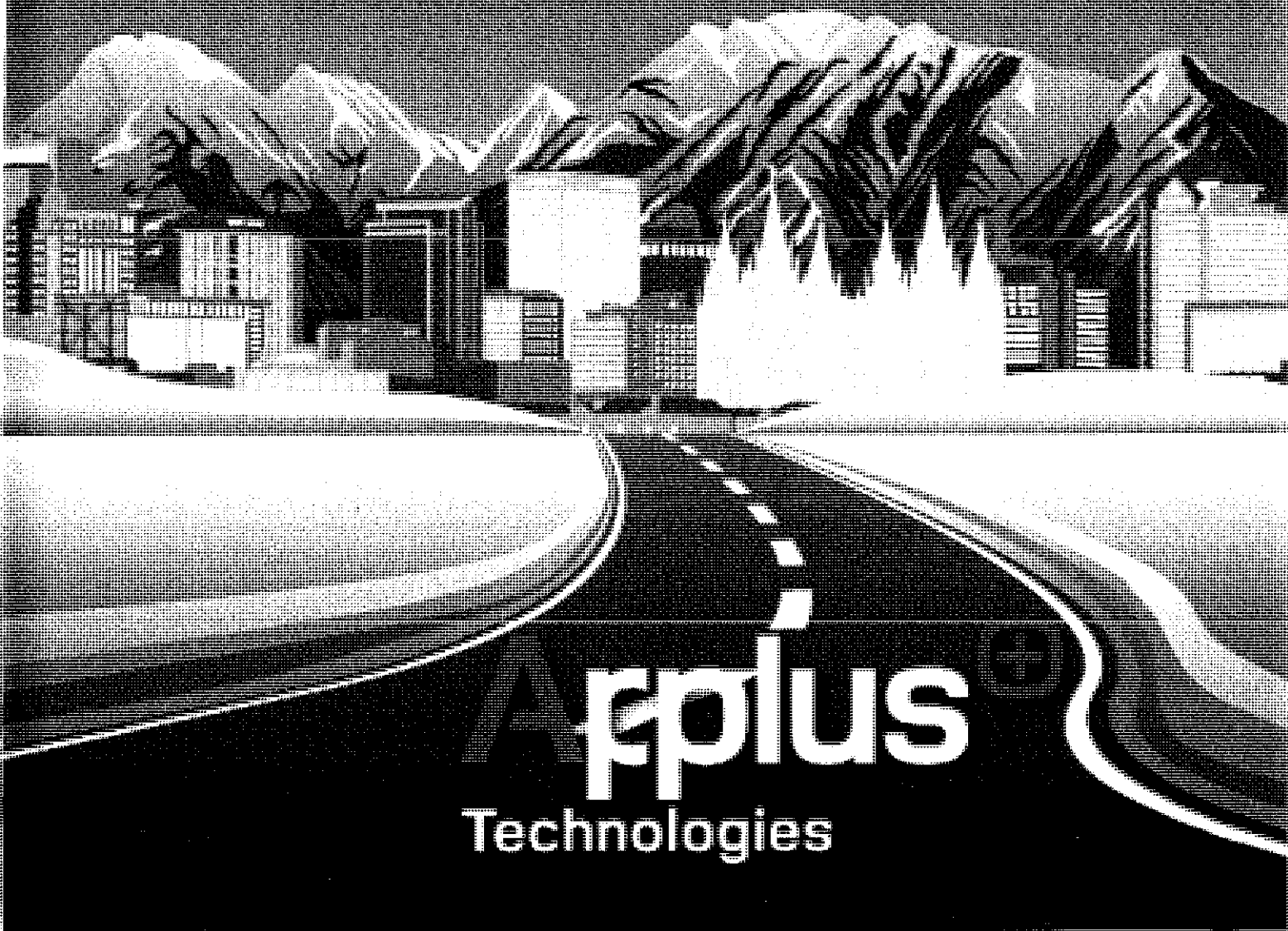


Original

# Vehicle Emissions Inspection/ Maintenance Program for Salt Lake County

RFP # HE10175



**pplus**

Technologies

## Technologies

Applus+ Technologies, Inc.  
444 N. Michigan Ave., Suite 1110  
Chicago, IL 60611  
T (312) 661-1100  
F (312) 661-0070  
www.applustech.com  
www.appluscorp.com



### Cover Letter

Mr. Glendon Mitchell  
Office of Contracts & Procurement  
2001 South State Street, Room N4500  
Salt Lake City, Utah  
84190-3100

July 22<sup>nd</sup>, 2010

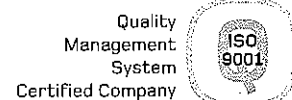
RE: Proposal for Vehicle Emission Inspection/Maintenance Program, RFP #HE10175

Dear Mr. Mitchell:

Applus+ Technologies, Inc. (hereafter referred to as Applus+) is pleased to submit the enclosed proposal to the Salt Lake Valley Health Department in response to Request for Proposal #HE10175. Applus+ takes no exception to the terms and conditions provided in the RFP and is willing to enter a contract agreement with the County. Applus+ and its entire team are proud to offer the SLVHD an innovative, cost effective, and environmentally friendly vehicle inspection program as well as the experience, technology, and financial capacity to successfully transition the current program to the next generation program you seek. Applus+ aspires to accurately portray its qualifications that will both meet and exceed the requirements of the Salt Lake County program. In this proposal, Applus+ has provided information concerning its decentralized and program transition experiences, UTAH2011 test equipment solution, VID capabilities for seamless data transfer and report generation, and formally introduces our proposed SLC Implementation and Program Management personnel teams.

Applus+ is incorporated in the state of Delaware; however its corporate headquarters is located in Chicago, Illinois. Applus+ operates across the globe providing centralized, decentralized, and hybrid inspection and maintenance technology and management oversight. Applus+ also provides driver licensing and registration technology and management.

The business line to Applus+' corporate headquarters is (312) 661-1100, however should the SLVHD have any questions pertaining to our proposal response, please contact **Mr. Darrin Greene**, Vice President of Operations, directly. Darrin is available by telephone at (312) 752-6441 or via email at: [dgreene@applustech.com](mailto:dgreene@applustech.com).



## Technologies

Applus+ Technologies, Inc.  
444 N. Michigan Ave., Suite 1110  
Chicago, IL 60611  
T (312) 661-1100  
F (312) 661-0070  
www.applustech.com  
www.appluscorp.com



Applus+ takes no exceptions to the requirements, terms or conditions in this RFP and we will deliver all the services on-time and in-scope with the goals and requirements of the SLVHD. We look forward to a successful future relationship with the SLVHD and Salt Lake County I/M stations on behalf of this worthwhile and important endeavor.

Sincerely,

A handwritten signature in black ink, appearing to read "Thomas Springer", written over a horizontal line.

Thomas Springer  
*Chief Executive Officer*  
**Applus+ Technologies, Inc.**

Quality  
Management  
System  
Certified Company



|   |           |
|---|-----------|
| <b>Executive Overview .....</b>                                       | <b>1</b>  |
| Section 8.4.1 Equipment & Technical Proposal .....                    | 7         |
| <b>Section 6.2 Statutes, Health Regulations, and Ordinances .....</b> | <b>7</b>  |
| <b>Section 6.3 Transition Plan &amp; Time Table .....</b>             | <b>7</b>  |
| <b>Section 6.4 Operation &amp; Data Management.....</b>               | <b>13</b> |
| 6.4.1 UTAH2011 Test Equipment .....                                   | 13        |
| 6.4.2 VID .....   | 15        |
| 6.4.3 Internet/Intranet.....  | 19        |
| 6.4.4 Data Transmission to State DMV .....                            | 20        |
| 6.4.5 Data Transmission to County .....                               | 20        |
| 6.4.6 Reports .....   | 20        |
| 6.4.7 Fee Revenues .....  | 23        |
| <b>Section 6.5 Decentralized Inspection Network.....</b>              | <b>23</b> |
| <b>Section 6.6 Program Station Contracts.....</b>                     | <b>23</b> |
| 6.6.1 UTAH2011 Analyzers, Test Equipment & Software .....             | 24        |
| Addendum Section 6.6.1 .....  | 27        |
| Addendum Section 6.6.1.1 .....  | 28        |
| Addendum Section 6.6.1.2.....   | 28        |
| 6.6.2 OBD Equipment.....  | 28        |
| 6.6.2.1 Other Information .....                                       | 29        |
| 6.6.2.2 Tailpipe Certification.....                                   | 29        |
| 6.6.2.3 Equipment Upgrades.....                                       | 29        |
| Addendum Section 6.6.2.4.....   | 30        |
| Addendum Section 6.6.2.5.....   | 30        |
| Addendum Section 6.6.2.6.....   | 30        |
| 6.6.3 Replacement Equipment .....                                     | 30        |
| 6.6.4 Additional Analyzers .....                                      | 30        |
| 6.6.5 I/M Station Contracts for Collecting Fees .....                 | 31        |
| 6.6.6 OBD Only and OBD/TSI Fees .....                                 | 31        |
| 6.6.7 Diesel Testing Program.....                                     | 31        |
| Addendum Section 6.6.7.1.....   | 31        |
| Addendum Section 6.6.7.2.....   | 31        |
| Addendum Section 6.6.7.3.....   | 32        |
| Addendum Section 6.6.7.4.....   | 32        |
| 6.6.8 Equipment Warranties .....                                      | 32        |
| Addendum Section 6.6.8.1.....   | 32        |
| Addendum Section 6.6.8.2.....   | 32        |
| Addendum Section 6.6.8.3.....   | 32        |
| Addendum Section 6.6.8.4.....   | 32        |
| Addendum Section 6.6.8.4.1.....                                       | 32        |
| Addendum Section 6.6.8.5.....   | 32        |
| Addendum Section 6.6.8.6.....   | 33        |
| 6.6.9 Extended Warranty/Service Agreement .....                       | 33        |

6.16.1 Issue Resolution Procedures between Station & Contractor ..... 55  
**Section 6.17 Commitment to Schedule..... 56**  
**Section 6.18 Late Delivery/Implementation Damages..... 56**  
6.18.1 Late Delivery Fees – March..... 56  
6.18.2 Late Delivery Fees – April..... 56  
6.18.3 Late Fee Payment..... 56  
Section 8.4.2 Firm Qualifications, Experience and Philosophy ..... 57  
Section 8.4.3 Project Team & Organizational Interface ..... 64  
    Addendum Section 8.4.3.1 ..... 74  
        Addendum Section 8.4.3.1.1 ..... 74  
        Addendum Section 8.4.3.1.2 ..... 74  
        Addendum Section 8.4.3.1.3 ..... 74  
        Addendum Section 8.4.3.1.4 ..... 74  
        Addendum Section 8.4.3.1.5 ..... 74  
8.4.4 Subcontractors..... 74  
Section 8.4.4 Price Proposal ..... 75

## Executive Overview

Applus+ Technologies, Inc. is the recognized leader in automotive Inspection and Maintenance (I/M) technologies and solutions. Applus+ leadership in the I/M industry and its strength in emissions and automotive diagnostic testing, customized system solutions and On Board Diagnostics (OBDII) sharpens our customers' ability to effectively address today's financial restraints and environmental concerns.

Applus+ has designed and implemented I/M solutions that integrate technical expertise, hardware, software, infrastructure, training, support and program management. Our solutions have enabled our customers, which include agencies in more than nine U.S. states, to streamline operations, reduce costs, increase productivity and deliver improved services to their citizens.

Applus+ is pleased to submit our proposal to provide the Salt Lake Valley Health Department (SLVHD) and Salt Lake County (SLC), Utah, and its citizens with a responsive and efficient turnkey I/M solution that fully meets and/or exceeds all of its stated requirements. We propose a modernized I/M program that will continue to achieve greater reductions in harmful emissions, improve service and support to participating I/M stations, meet State Implementation Plan goals and pass the U.S. EPA audit. In addition, the Applus+ solution will support the SLVHD in its efforts to adhere to its values and meet its Annual Performance Measurement.

Importantly, Applus+ offers a compelling value proposition specific to the SLVHD and SLC program needs. Applus+ has firsthand experience in working with the SLC program as a Contractor in 1998 and is fully knowledgeable of its operations and technology, policies and procedures; and, in fact, is currently licensed to do business in Utah.

Applus+ recognized the need of customer agencies such as the SLC and strategically broadened its I/M technology and service portfolio to become an industry leader providing full-service, comprehensive I/M solutions. Applus+ has successfully implemented, operated, and managed centralized, decentralized, and hybrid I/M programs. Applus+ engineers have developed numerous industry firsts with next-generation innovations in I/M technology and our management team's expertise in I/M program design and implementation continues to deliver unparalleled – and cost effective – I/M solutions to our customers.

Applus+ has long standing success in transitioning and managing **decentralized** programs like that of the SLC. Applus+ programs in the states of Utah, Connecticut, Illinois, Massachusetts, and Rhode Island, for example, collectively represent more than 6.6 million vehicle tests each year and more than 2,500 stations and nearly 17,000 Applus+ trained inspectors.

Applus+ will provide all resources necessary to ensure success of the SLVHD's goal to modernize its decentralized I/M program. We will dedicate a 17-person Applus+ team, comprised of the industry's most qualified – and experienced – professionals, to work closely with SLVHD to design, implement and manage its I/M program. Our experience and technological expertise enables Applus+ to deliver a cost effective solution that will not only meet the requirements specified by the SLVHD but will go beyond to ensure responsive service to SLVHD, SLC, participating stations and, most importantly, the motorist of SLC.

Applus+ can uniquely offer the SLVHD the best value, the most robust technology, unparalleled I/M program experience and the best team in the I/M industry today. Critical components to our success – and that of our customers – include:

- + Equipment and hardware
- + Installation expertise
- + Data management functionality
- + Program management talent
- + Commitment to environmental issues

**Industry Leading Equipment and Hardware:** Applus+ solutions are built on a foundation of newly manufactured (vs. refurbished) and industry leading **hardware and software**. Salt Lake County stations will be provided equipment capable of performing OBD/TSI/Diesel inspections and gas cap tests. At a minimum, each unit will be equipped with custom OBDII equipment, MS Windows-based computer system, flat screen monitor, laser printer, and optional bio-identification fingerprint scanner and barcode scanner. Where appropriate, stations will be customized to accommodate two speed idle testing. Applus+ also offers an Andros 6500 model gas bench that is BAR97 certified for accuracy and reliability (see certificate in *Appendix F*). In addition, diesel opacity smoke meters will be provided to all diesel-testing inspection stations.

While this equipment offering includes a no-cost warranty, Applus+ designs its own equipment to meet the highest industry manufacturing standards and is audited via an **ISO-certified Quality Management System** for quality control and assurance. This Applus+ quality standard minimizes the potential for future repair services, which reduces down time, increases customer satisfaction, and improves public acceptance.

**SLC's Equipment Installation:** Applus+ will provide trained, SLC-based technicians for the delivery and installation of each UTAH2011 test unit at SLC I/M stations once the units pass a quality assurance inspection. Prior to start-up, Applus+ will ensure all equipment is accurately calibrated and properly functioning; that all equipment connections to the *e-VID™* are intact and capable of transmitting data in real-time; that I/M station owners have been trained and have user manuals on site; and that all station owners are fully aware of who on the Applus+ team to contact for consumable ordering, service calls and for any program questions they may have. In summary, the SLVHD equipment package is:

- + **Reliable and dependable** – will operate in all environments encountered in Utah and resistant to environmental limitations such as temperature and humidity;
- + **Utilizes software developed by certified engineers** – is delivered 100% complete and quality tested prior to installation;
- + **User-friendly** – minimizes both data input requirements and user error with intuitive – and automated – software navigation
- + **Modular** – allows for quick upgrades and other enhancements. Stations wishing to expand their testing capabilities can easily do so.

**e-VID™:** All UTAH2011 equipment will be connected to the Applus+ enhanced vehicle information database (*e-VID™*) featuring robust and consistent data communication, processing, storage, and retrieval capabilities. The design of the *e-VID™* and the workstation's software are similar – both are modular, engineered by Applus+ and utilize industry-recognized standards for process management and testing. Key advantages of the Applus+ *e-VID™* are that it:

- + Serves as the central data control for all I/M program test stations and UTAH2011 test units by verifying and transmitting calibration data and station, inspector and test information;
- + Minimizes potential for suspicious or fraudulent activity by controlling test parameters and restricting unauthorized inspections;
- + Manages fee collections and test authorizations with **appropriate security**;
- + Maximizes customer service with real-time accessibility, 24/7/365;
- + Strengthens the SLVHD's enforcement capabilities and supports administrative functions;
- + Transfers vehicle testing data to the SLVHD, as well as the State Division of Motor Vehicles.

Applus+ will locate a synchronized, redundant *e-VID™* outside of Utah to ensure data security and quality assurance and allow for disaster recovery should a catastrophic event occur. For more information on *e-VID™* technology, see *Section 6.4 Data and Operation Management*.

**SLVHD and SLC Data Access:** The SLVHD will have 24/7, real-time, access to data collected from station analyzers across the network via the Applus+ Reporting Dashboard -- an innovative reporting tool featuring modular functionality to control SLC's program software applications.


SLVHD access to *e-VID™* data, including administrative functions, is web-based and accessible through the *Applus+ Reporting Dashboard* administrative tool. This allows easy access to program applications for administrative, user and inspector management, audit and trigger applications, and repair data and customer service applications. Significant and integral capabilities of the Applus+ Dashboard include:

- + Real-time access to retrieve data from the *e-VID™*;

**Proven A+ Services**

Important to the goals and success of the new SLC program, Applus+ offers the SLVHD its proven data and operational technology:

Satisfied customers in the Applus+ Illinois, Washington, and Connecticut decentralized programs utilize **similar data management technology** proposed for use in the SLC program. Our out-of-the-box data solution will be configured to the specific requirements of the SLC program. For more information concerning the technology used in similar I/M programs, see *Section 8.4.2, Project References*.



- + Electronic management of all administrative functions such as adding or terminating I/M stations, managing and tracking Inspectors working at I/M stations, managing fee collection, and changing specific test parameters;
- + Data security by monitoring and controlling access to the *e-VID*<sup>TM</sup> as well as program and testing data;
- + Messaging and comprehensive program communications for network-wide collaboration;
- + User ability, based on authorization levels, to create waivers, void transactions, exempt vehicles from testing, modify emissions cut points, and configure fraud settings and business rules;
- + Real-time report generation on test statistics such as test volumes, pass rates, fail rates and vehicle types;
- + Comprehensive test summary report development and generation for SLVHD review, program management needs, and meeting U.S. EPA reporting requirements; and
- + Management of all quality assurance functions, trigger reports, and changing parameters for trigger reports.

The functionality of the *e-VID*<sup>TM</sup>, coupled with its ease of use, provides SLVHD management with an effective means for comprehensive program oversight without additional staff or SLVHD resources. Importantly, the *e-VID*<sup>TM</sup> is easily customized to support a change in program needs and scalable to support a growth in network size or data needs. Applus+ can, for example, customize *e-VID*<sup>TM</sup> to support program modifications, expanded counties and add-ons such as incorporating vehicle license renewals.

**The I/M Industry's Most Experienced Professionals:** To accomplish the SLVHD's goal of modernizing its decentralized program will require a team of I/M industry veterans with unparalleled implementation experience and program management expertise. Applus+ is uniquely qualified to ensure SLVHD realizes that goal. We lead the I/M industry in technology and innovation for one reason: our talented and experienced professional team of engineers, software developers and program managers.

► Applus+ will support the SLVHD I/M program with a dedicated 17-member team of professionals with proven expertise to deliver a comprehensive I/M solution, from initial concept and design through implementation and ongoing program management.

Led by Tom Springer, Applus+ CEO and Country Manager, the SLVHD team will deliver the highest quality and capability to its I/M program, backed by superior customer service. In addition, select Applus+ professionals will serve as advisors, providing expertise on best practices and ensuring program success.

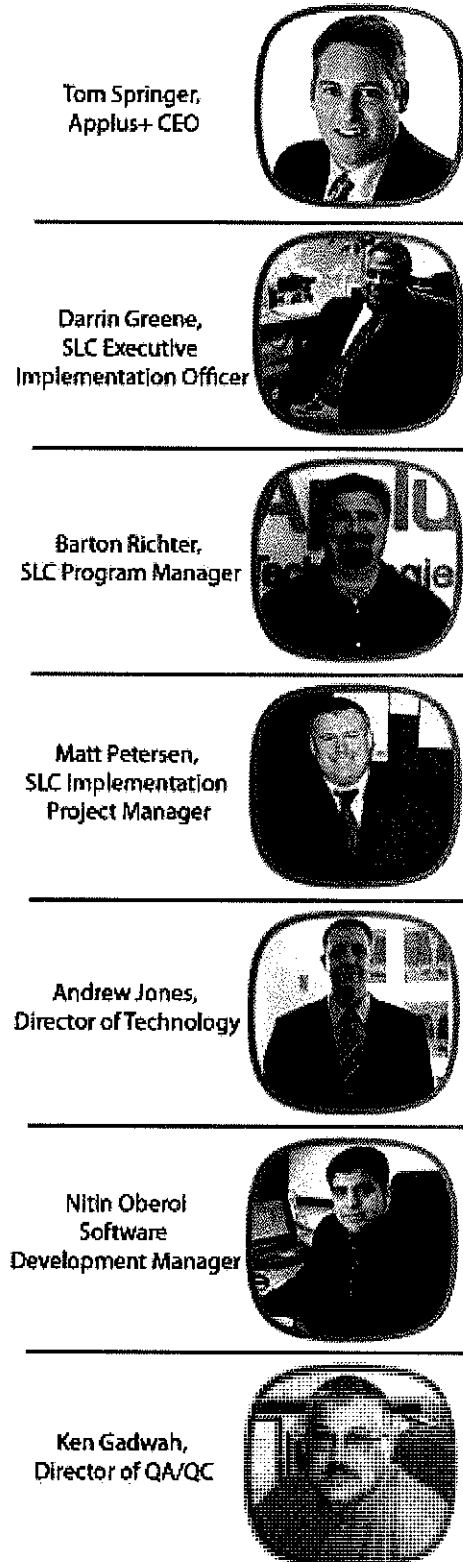
Each team member is highly qualified and has 10-to-20 years experience in design, implementation and/or management of I/M technology and programs.

The Executive Implementation Officer **Darrin Greene**, is a senior I/M operations expert with more than 22 years experience in operational management and more than a decade in I/M programs. Darrin is highly qualified to manage the implementation of the SLVHD's vehicle inspection program. Notably, he has hands-on experience with SLVHD's program through his work with the former Utah I/M program.

Additional key team members include Program Manager, **Barton Richter**; a certified Project Management Professional, **Matt Petersen**, who has specific experience in start-up and compliance standards will manage the installation and operation; **Andrew Jones**, who has more than ten years experience in the development, deployment and optimization of integrated networks, will serve as Technology Director; **Nitin Oberoi** has more than eight years of experience in client/server application design, development and management will lead the SLC's software and reporting implementation as the team's Software Development Manager; and **Ken Gadwah**, an experienced Quality Assurance/Quality Control manager, will be Director of QA/QC, overseeing all QA/QC process control efforts during implementation and equipment transition stages. The Program Manager will be given a delegation of authority for local, streamlined decision-making. Additionally, Applus+ will consider bringing on candidates from the existing program, upon SLVHD recommendation.

The SLVHD requires an experienced I/M partner to seamlessly and effectively transition their testing equipment and reporting technology into a modern, functional, and quality-driven service to its motorists. Applus+ has partnered with agencies in more than nine states and we have managed the inspection of over 50 million vehicles since 1996.

Applus+ has successfully implemented, operated and managed centralized, decentralized, and hybrid I/M programs. The varying size of our I/M customers and their diverse needs ensure Applus+ continues to innovate and meet the always present demand for enhanced services. A recent Applus+ I/M program implementation, for example, required us to overcome the substantial



► Figure 1. The SLC Program Management Team

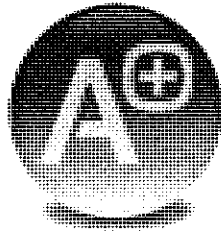
challenges in transitioning a large scale, technologically-outdated emissions and safety program in the Republic of Ireland. We delivered a successful, nationwide start-up of a vehicle inspection program for the Ireland Road Safety Authority, meeting or exceeding every goal and program requirement on time.

Notably, the SLVHD will benefit from this recent experience as its team will include key managers of the Applus+ implementation of the Ireland I/M program. Our dedication to providing the industry's highest quality ensures Applus+ consistently meets our customers' needs. Government agencies, independent inspection stations, and repair industry trade associations have **collectively endorsed** Applus+ equipment innovation and management services. For more information on personnel and Applus+ project references, see *Section 8.4.2, Firm Qualifications*.

**Applus+ Commitment to the SLC Community & Environment:** Applus+ has expansive experience in delivering I/M programs – and seeing firsthand the benefits our programs deliver to our customers' communities. We are firmly committed to providing the additional services and outreach necessary to engage – and positively impact – the local SLC community. ► An integral component of our proposed I/M program will include substantial Applus+ participation in Salt Lake County's "One Million Trees for One Million People" program. In addition to our own contributions to this and other local initiatives, our daily interaction with community motorists uniquely positions Applus+ to encourage individual participation as well.

**Consumer Pollution Contribution:** Applus+ believes its I/M program can make a significant contribution in the area of diesel vehicle emissions reduction. Diesel operated vehicles and equipment emit diesel particulates that are a key factor in air pollution. Applus+ diesel solutions enable our customers to go beyond simple testing of diesel vehicles to more effectively ensure compliance with air quality standards. Applus+ engineers will provide automotive consultation to SLVHD for multiple solutions, further detailed in *Section 8.4.2*, that can effectively reduce diesel vehicle emissions:

**To Keep in Mind when Reviewing the Applus+ Solution:** Applus+' data management solution and testing operations have been proven successful based on positive feedback from our state I/M customers, and further proven by stable and efficient program operations. In the following pages, Applus+ provides detailed information on its Utah2011 test units, support to network stations, the e-VID™ and Reporting Dashboard and its benefits to the SLVHD, as well as a transition approach ensuring 100% program implementation and operation by day one.



## **EQUIPMENT & TECHNICAL PROPOSAL**

### **Section 8.4.1 Equipment & Technical Proposal**

The following information is Applus+' technical response to RFP *Section 6, Scope of Work and Tasks to Be Completed*.

### **Section 6.2 Statutes, Health Regulations, and Ordinances**

This proposal response, including Applus+' hardware and software solution, to the Salt Lake County Valley Health Department's RFP is consistent with the following statutes, health regulations and ordinances governing the Motor Vehicle Emissions Inspection/Maintenance Programs:

- + Sections 41-6a-162 through 1644,
- + Utah Code Ann., 1963 as amended,
- + Chapter 9.73 Salt Lake County Code of Ordinances, and
- + Health Regulations Nos. 22A and 28, as required by the RFP.

### **Section 6.3 Transition Plan & Time Table**

**The Applus+ Experience – Program Transition Overview:** Applus+ is an end-to-end service provider of diverse I/M programs, and we proactively leverage a management methodology of **learn ► grow ► lead** to ensure we maintain leadership within the industry. Applus+ has successfully designed, implemented, and managed each type of I/M program – centralized, decentralized, and hybrid (a centralized & decentralized network). Applus+ is uniquely positioned to support the SLVHD with a seamless transition to new equipment, software, and management services and to implement that transition on time and without service interruption to either SLC motorists, or the I/M stations servicing them. Our collaborative partnership approach has proven successful in transitioning programs from the incumbent, as it did for Applus+ customers in the states of Connecticut, Washington, and Illinois.

**Shared Goals:** The SLVHD's program goals will drive Applus+' design and implementation methodology, ensuring all transition efforts are in sync with the SLVHD and will achieve an uninterrupted transition from the current contractor to our shared goals by:

- + Facilitating a smooth and seamless transition,
- + Maintaining transparent processes and activities with full contractor accountability to Salt Lake County at all times, and
- + Continuously monitor, document, and share project milestones, data and program improvements.
- + Initial and ongoing monitoring of operations of both legacy and new systems and synchronizing them as necessary to insure minimal impact on existing station operations;
- + Bringing the new system into full operational mode well in advance of the final implementation date to allow ample time for beta testing and auditing and to identify and correct any problems that may arise.

Applus+ experience in executing I/M program transitions provide a substantial advantage. Our team knows firsthand what it takes to execute a seamless transition and what obstacles can be proactively avoided. Applus+ professionals are experienced in projecting program milestones; efficient scheduling and timing of implementation tasks; and conducting audits.

Importantly, Applus+ professionals understand the scope of resources necessary to complete a seamless transition. Key factors in our program execution include:

- + Full collaboration between the **Project Implementation Manager** and **Executive Officer**, empowered to make decisions required for all transition and implementation tasks from day one.
- + **Immediate collaboration with SLC's incumbent contractor** to proactively negotiate all terms and details associated with ensuring a successful equipment transition and data transfer.
- + **Establish work groups comprised of key team members** that will meet weekly to insure timely transition efforts, track progress, and maintain continuous communication of program accomplishments, issues, and/or needs to all program stakeholders.
- + **Regular updates** to senior level agency personnel on the progress of the work groups.
- + **A bi-monthly newsletter** to provide all related personnel and program stakeholders updates on key program dates and ongoing status of transition efforts.
- + **Continual communication with SLVHD** to provide information on implementation progress and milestone achievement.

Applus+ proposed Transition Plan and the steps necessary for execution are highlighted below. Notably, these steps focus specifically on the transition tasks related to the incumbent and include necessary communication and cooperation between the new and current contractors, as well as with network I/M stations.

#### Key Steps in Transition Plan:

1. Contract Execution
2. Kick-off Meeting for the SLVHD and Applus+ UTAH2011 team



#### An A+ Review

Don't just take our word for it. Here's what a private inspection facility in a decentralized network had to say about Applus+:

"The Applus+ model of doing business is so fundamentally sound that it can be successfully applied in any venue where elected and appointed officials are seriously engaged in the task of advancing public safety, air quality, and consumer protection."

--Stanley Morin, General Business Manager, New England Tire and Automotive & National Treasurer, Association of Automotive Service Professionals



3. Contractor Transition Meeting for Applus+ to meet with the current contractor to negotiate the proposed plan for migrating the test data, as well as installing the UTAH2011 units in the I/M stations.
4. Configure the UTAH2011 VID and transfer protocol to prepare to receive the SLC data.
5. Initial Database “Dump” performed to receive existing SLC data.
6. Extract, Translate and Load the SLC data. The translation process will serve as advanced QC and verify proper data migration to the new system during the load. ]  
Doing this prior to “Day 1” will ensure a synchronized database and eliminate the risk of data loss during migration.
7. Meet with the SLVHD to finalize the proposed UTAH2011 installation schedule.
8. Disseminate information to I/M stations regarding the UTAH2011.
9. Begin installation of the UTAH2011 testing solution.
10. Perform initial ATP using the current contractor’s test or back-up VID, if available, otherwise perform ATP with a small number of testing stations initially.
11. Final Database Load of the SLC data to the new UTAH2011 VID.
12. Final ATP is completed.
13. UTAH2011 goes live after midnight on Day 1.

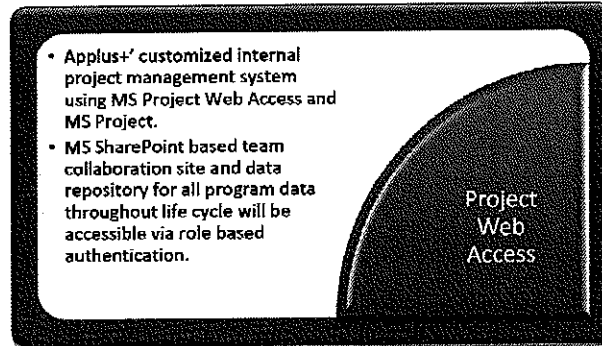
► Applus+ has provided a comprehensive Gantt Chart in *Appendix C*, which provides specific detail of the strategic scheduling proposed for all SLC program deliverables and will serve as the basis for the SLVHD’s program implementation. Applus+ SLC project management team will collaborate with SLVHD agency staff to modify the proposed implementation plan and make modifications as requested and to ensure the complete satisfaction of the SLVHD.

**Transitioning Network Stations:** A critical success factor in successfully transitioning the SLVHD’s decentralized I/M program will be engaging – and winning the buy-in from – its network stations. The Applus+ Implementation team understands the investment these small business station owners made in order to participate in the SLVHD program. We also understand firsthand the challenges they may have in dealing with a new provider, particularly when installing, operating, and maintaining updated inspection equipment, as well as adjusting operations to accommodate changes in program details and procedures.

► Applus+ has successfully transitioned numerous decentralized emissions testing and safety inspection programs. A key factor in that success is our ability to develop strong, positive working relationships with individual station owners. Applus+ will establish proactive programs to achieve that same success with the UTAH2011 program. Applus+ will communicate frequently with the I/M station network, sharing information and maintaining an open dialog between the Applus+ team and station owners and employees. Upon recommendations from SLVHD, Applus+ will consider employing existing program staff, who already know the station personnel, to ease the transition.

**Scheduling:** The Applus+ I/M solution uses Microsoft Project Web Access (PWA) tool to capture, track, and share all projects and Project related schedules. The secure PWA site and its schedules will be linked to individual, secure project workspaces on an MS SharePoint server and site that is specific to the SLC Transition Plan and Implementation Schedule. Applus+ Executive Implementation Officer, the Implementation Project Manager, and the Program Manager are all trained to effectively administer and update scheduled activities, including:

- + Providing resource leveling and reporting;
- + Ensuring the SLVHD has access to the PWA;
- + Measuring and reporting progress of each deliverable;
- + Defining milestones and deliverables;
- + Monitoring and reporting the status of key milestones and deliverables;
- + Coordinating and documenting all status meetings;
- + Monitoring issue occurrences and resolutions;
- + Administering the change control process;
- + Synchronizing activities among multiple project tasks and project locations;
- + Maintaining the MS SharePoint based repository for all I/M program data; and
- + Conducting Quality Assurance reviews.



► Figure 2. Project Web Access to track, monitor schedules.

The Applus+ Project Management (PM) team will be responsible for keeping the implementation team on task and administering schedule progress. The PM team will maintain effective communication with all Applus+ and SLVHD team members and provide detailed reports to the SLVHD at appropriate intervals to keep them informed of status and progress. In addition, the PM team will plan and coordinate all team and program-related meetings with applicable SLVHD representatives.

**Vehicle Information Database (VID) Development Time Table:** The Applus+ Development Team will be responsible for ensuring the Vehicle Information Database (VID) is operating on-time and to the full specifications of the SLVHD. This team is experienced at meeting all critical components in VID development, the proposed dates for which are detailed in the SLC Gantt Chart). Key VID development milestones include the timely purchase of all required hardware, VID modification and activation, specialized reporting, data migration, and full system Acceptance Test Procedure (ATP).

Applus+ will provide designated SLC personnel access to VID development progress through Project Web Access. The SLVHD will have a designated program website that provides updates on Applus+ progress throughout the VID development stage and is accessible via a username/password login.

**UTAH2011 Equipment Development:** The Applus+ Project Management team will ensure the SLVHD is kept informed of continued progress during the equipment development process. Like the VID and other program components, access to equipment development details will be made available through the Applus+ PWA and program website as detailed above.

**Strategic Project Management Guidelines:** Applus+ designs its Transition Plan and Implementation Schedule in alignment with the foundations of the Project Management Institute's (PMI) Project Management Body of Knowledge (PMBOK). ► PMBOK, a project management guide, is an internationally recognized PM standard that provides customized management fundamentals as they apply to the specific project at hand. PMBOK methodologies are broadly designed to encompass a variety of industries. Applus+ leverages PMBOK while also adhering to project management principles specifically tailored for the automotive industry.

In addition to the PMBOK, to ensure adherence to the Transition Plan, Implementation Schedule, and PMI methodologies, Applus+ utilizes the following methods and tools:

- + **Scope Management** to describe the processes that comprise the work required to complete the project. With this proposal, Applus+ has submitted a draft Transition Plan to be approved by the SLVHD.
- + **Schedule Management** to ensure that all deliverables are tracked and completed in a timely manner. This includes the Project Kick-off meeting, Deliverable Schedule, & Monthly Reports/Meetings as well as access to project progress through the PWA and SLC Sharepoint site.
- + **Quality Management** as applied under Applus+' ISO-certified Quality Management System and annually audited by American Systems Registrar (ASR).
- + **Opportunity and Risk Management** to analyze potential impact on the project and to mitigate all potential risks. Salt Lake County will be kept up-to-date on all potential risks to the project implementation.
- + **Human Resource Management** to organize and manage project implementation and ongoing program teams, including hiring local staff and ensuring the Salt Lake Program Team is in place.
- + **IPT Administration** to provide effective communication between Applus+ and the Customer (discussed later in this section).
- + **Email Alerts** to ensure the Project is on track and that all necessary parties are in full communication.
- + **Specialized Reporting** such as Program Implementation Progress Reports, comprehensive status updates, and customized reports, as requested.

**Program Implementation Progress Reports:** Applus+' Project Implementation Manager will, on a basis determined by the SLVHD, provide Program Implementation Progress Reports detailing implementation activity. ► Reports will consist of status details concerning the previous month's accomplishments, scheduled future accomplishments, as well as a detailed timeline, a description of the current month's activities and any accompanying information. If

applicable, up-to-date information concerning possible delays or potential implementation issues will be clearly communicated. Progress reports include:

- + Current action items;
- + Implementation delays/obstacles;
- + Previous month calendar activities;
- + Differences of interpretation; and
- + Resolution of any past challenges.

► Reports will consist of status details concerning the previous month's accomplishments, scheduled future accomplishments as well as a detailed timeline along with a description of the current month's activities and any accompanying information. If applicable, up-to-date information concerning possible delays or foreseen implementation issues will be clearly communicated.

**Project and Program Management Personnel:** Applus+ utilize project management skills refined over years of experience in implementing and fine-tuning technical solutions for inspection and maintenance programs in the U.S. and more than 20 European countries. Applus+ experience is unmatched in the industry and their professionals are adept at overcoming technical and logistical challenges to complete tasks and meet goals within limited and/or challenging schedules.

The SLVHD Implementation Project Manager, Matt Petersen, is a certified Project Management Professional. He will lead a team of Applus+ professionals expertly equipped to execute a smooth transition through the design and implementation phases. In addition, SLVHD can rely on Matt's proven experience to provide leadership and operational know-how throughout contract duration. ► The knowledge and skills of a certified PMP, coupled with Matt's in-field experience, ensures the SLVHD that all program transition efforts will be executed effectively. In addition, the Applus+ project management approach ensures an experienced, cohesive team fully capable of meeting and surpassing the SLVHD's requirements. The Applus+ project management methodology emphasizes:

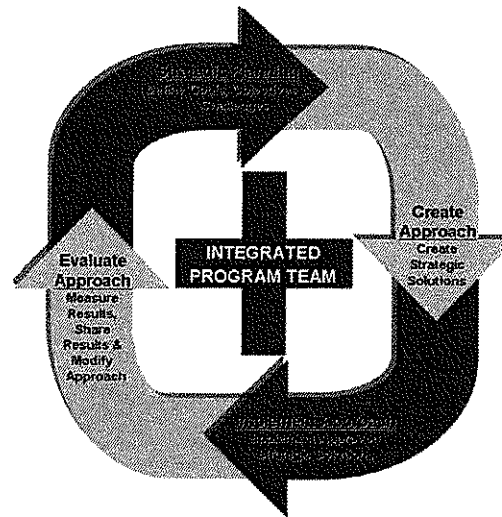
- + Open, honest communications,
- + Cooperative problem-solving,
- + Performance,
- + Productivity,
- + Efficiency, and
- + Excellent customer service.

**Applus+ & SLVHD Personnel Communication:** Open communication between Applus+ and SLVHD teams is essential. Applus+ provides operational and management transparency via open forums for discussion and dialog with particular emphasis on regularly scheduled focus

meetings. ► Applus+ creates effective opportunities for all program team members to build positive working relationships, share knowledge and solve problems. This collaboration helps deliver outstanding results at the highest level of efficiency from contract beginning to contract end.

► The Applus+ collaborative model is an Integrated Program Teams (IPT) approach. Select personnel from Applus+ and the SLVHD *integrate* at regularly scheduled times to ensure program information is effectively communicated and continuous program improvements take place. This routine interaction delivers invaluable benefit to the SLVHD, affording the agency greater opportunity for proper oversight and control of program initiatives and software development.

At the same time, IPTs allow SLVHD personnel to witness first-hand program accomplishments, deficiencies, and adjustments. IPTs are small working groups, each with their own charter, organized around specific disciplines and issues such as I/M Station Transition, VID development, Quality Assurance, Operations, and Utah2011 development. In addition to the IPT meetings, the Project Manager holds frequent meetings with each IPT leader to review progress from each IPT, ensuring all opportunities, issues and risks are identified and tracked. ► The Applus+ IPT approach is an effective platform for hosting two-way communication and participation to generate strategies, feedback and new initiatives; and allows Applus+ and SLVHD staff to continuously build and maintain the program throughout the life of the SLC program.



► Figure 3. IPTs foster scheduled program communications.

## Section 6.4 Operation & Data Management

► Applus+' data management solution and testing operations have proven successful as evidenced by continued positive feedback from state I/M customers and stable, efficient program operations each and every day. The following pages provide detailed information on Applus+ UTAH2011 test units, program support to network stations, and the e-VID™ and Reporting Dashboard and its benefits to the SLVHD. In addition, details are provided on the Applus+ transition approach to ensure 100% program implementation and operation prior to day one of program commencement.

### 6.4.1 UTAH2011 Test Equipment

Each participating SLC testing station will receive brand new equipment hardware specifically engineered to conduct OBD/TSI/Diesel inspections. Network "workstations" feature new, industry-standard OBDII testing equipment, as well as a gas cap tester. The equipment package provided will be tailored to each station's testing needs and services. Workstations are custom-equipped to perform TSI testing and/or with a diesel opacity meter option for stations performing either TSI and/or diesel testing.

Applus+' I/M testing equipment leads the industry in innovation, reliability and cost effectiveness. This delivers added value to both station owner and the SLVHD, which can rely on Applus+ equipment technology to adequately and effectively support the SLC program's request for upgrading equipment across its I/M network:

**Applus+ OBD equipment is the new industry standard:** Many competitors purchase **Applus+ equipment** for their own OBDII implementations. Such competitors include ESP, Snap-on and Parsons. The SLVHD and its I/M stations will truly benefit from stable, industry-penetrated OBDII hardware and software featuring reliable OBDII vehicle communications and annual updates for new model years. Competitors, who are also customers, using Applus+ equipment include:

- + ESP analyzers (North Carolina, China, and Mexico);
- + SysTech analyzers (Connecticut and Washington State);
- + SPX analyzers;
- + Parsons equipment (New Jersey, China, and Louisiana); and
- + Snap-on analyzers (Virginia, Pennsylvania, Georgia, and North Carolina).

**Contractor-provided equipment:** All SLC equipment is developed and maintained by Applus+, an industry leader in designing and producing highly advanced automotive aftermarket diagnostic equipment and software. Applus+ equipment engineers have dynamic industry backgrounds and many have previous experience working with Snap-On Inc., SPX Corporation, and the former Bear Automotive Emissions engineering group.

**Accurate, reliable & affordable equipment:** Applus+ UTAH2011 analyzers meet BAR97 certification and accuracy requirements. Applus+ full service Illinois workstations serve as design models for the SLC's equipment package and are already in compliance with each specific SLVHD requirement in the RFP. Many hardware and software technology providers incur excessive costs to support and service software and hardware following product release. Applus+ specifically designs its equipment solutions to help *reduce* the amount of support required after the sale.

**The latest modern equipment designs:** Applus+ uses a unique, modular software architecture in its OBDII, which minimizes the hardware obsolescence issues that plagued equipment manufacturers using older designs. The Applus+ design allows for easy customization and future program add-ons throughout the contract period. The Applus+ TSI solution follows the industry standard and BAR97 recommended Two Speed Idle Testing sequence, and ensures quality testing with accurate results throughout the life of the program.

**A swift, easy SLC startup using field proven design:** The Applus+ solution tailored for the SLVHD is effective and dependable as demonstrated by its success in supporting the Applus+



► Figure 4. Sample image of SLC workstation.

Illinois I/M program's decentralized configuration and operational performance. **Incorporating success-based equipment design ensures a smooth operational transition from the current program to the Applus+ solution.**

**Modernized technological advancement:** Applus+ technology designs are based on updated Microsoft .NET standards and development tools used by a majority of I/M programs (vs. OS2 or DOS architectures). In addition, Applus+ has developed software for outside equipment manufacturers for use within other I/M programs:

- + Sensors AMBII Gas Analyzer, NDUV NO Analyzer, VMAS;
- + Horiba BE140 NDIR Gas Analyzer, BE220 NDIR NO Analyzer;
- + Red Mountain Diesel Smoke Meter;
- + SPX BAR97 Gas Analyzer;
- + SPX Dieseltune Diesel Smoke Meter;
- + Andros BAR90/BAR97 Gas Analyzers;
- + Andros Diesel Smoke Meter;
- + Wager Diesel Smoke Meter;
- + MAHA MGT5 Gas Analyzer;
- + Mustang Dynamometers;
- + Capelec Diesel Smoke Meters / RPM Devices;
- + Multiplex OBDII; and
- + Vetronix OBDII

**U.S. software and hardware avoids undue risks:** Applus+ equipment and technology is engineered exclusively in the U.S. and thus avoids costs and delivery risks that could be associated with international suppliers. Proper analysis, design and development processes are closely monitored and controlled by Applus+ at its Wisconsin facilities. In addition, Applus+ maintenance and repair technicians will be located in Salt Lake County to provide timely support and contain costs.

**Unyielding commitment to quality:** Applus+ longstanding commitment to quality reflects our leadership in the industry and our mission to serve our customers and their end-users. That commitment drives all aspects of the Applus+ solution beginning with design and throughout the entire product manufacturing process, where extensive, quality testing procedures are used to produce extremely reliable, field-tested products. Applus+ oversees the complete product development cycle - from original concept through product manufacturing, delivery, implementation, and support.

Additionally, all UTAH2011 equipment is fully covered and backed by an inclusive 3-year **Applus+ Equipment Warranty**, detailed in *Section 6.6.3*.

#### **6.4.2 VID**

**Overview of VID:** The key component of Applus+ data management solution is an enhanced vehicle information database (VID) featuring robust and consistent data communication, processing, storage, and retrieval capabilities. Applus+ will deliver a customized *e-VID™* to serve as the central VID of the SLC program. ► The foundation of Applus+ *e-VID™*

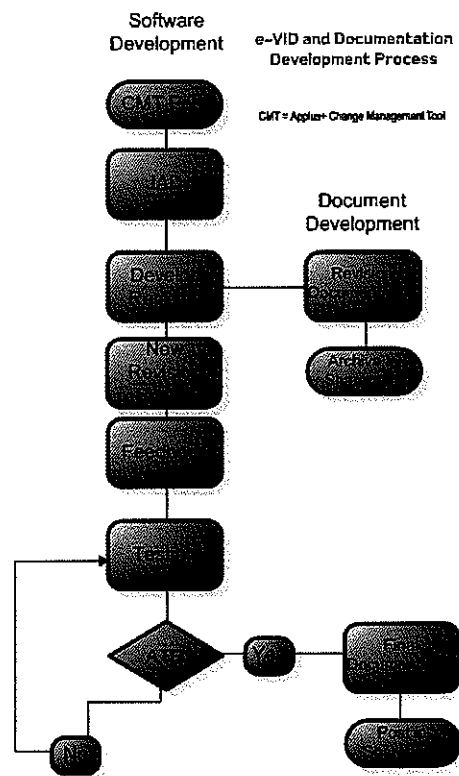
technology is a secure, centralized repository for storing all emissions data acquired by network I/M stations. The SLC network of analyzers collecting vehicle test data will be configured to communicate with the *e-VID™* over secured network connections. Collected emissions data is then stored and indexed to enhance the speed and performance of data queries and report generation performed by station personnel and the SLVHD agency. In order to access emissions and vehicle test data, the *e-VID™* communicates directly to the Reporting Dashboard - the portal serving as the single point of entry for all program users. Authorized users access *e-VID™* data through the Reporting Dashboard in order to input test data, run reports, enter program information such as a customer service issues, access the consumables website, and to update or input a variety of configurable program options. This robust database solution is developed using industry standard, yet innovative, technology powered by Microsoft.

**VID Development Methodology:** Applus+ uses a consistent and customer-centric development methodology for the design and implementation of each customer's *e-VID™*. This involves regularly scheduled Joint Application Development (JAD) sessions with SLVHD personnel to reinforce VID goals, design and develop the VID to meet each customer's needs and requirements, and to assess progress and milestones. ► This continued dialog and collaboration results in complete transparency and accountability for all contract deliverables related to VID functionality and performance.

► Continual communication and transparency of software development activities is a standard principle of the Applus+ program development and transitioning strategy and will deliver additional benefit to the SLVHD. All SLC design and development activities are web-accessible from the start of contract, as program transparency and client involvement are crucial components for meeting both expectations and on-time deliverables.

Applus+ software engineers review and supervise the design and implementation activities at each step in VID development:

- + **General system design**, in which the system, documentation requirements, and updated work plan are conceptualized;
- + **Detail design phase**, which refines the general system design; defines all interfaces, inputs, outputs, and specifications; and freezes any changes to system design;
- + **Development phase**, in which the specified system is developed and built and internal systems testing is performed; and
- + **Maintenance phase**, in which changes to systems and procedures are implemented in a controlled and timely manner.



► Figure 5. *e-VID™* documentation development.

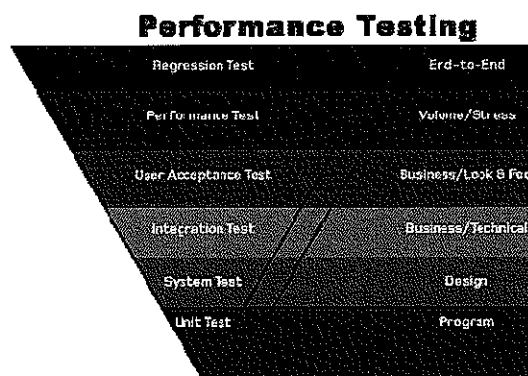
Designated SLVHD staff will be provided secure access to test systems throughout the *e-VID™* development. During this time, SLVHD personnel will use Applus+ Change Management Tool (CMT) to log comments and other feedback. ► The CMT is a web-based application, custom-developed by Applus+ to document hardware and software issues, bug fixes, software updates, software releases, and customer requests. The CMT documents revisions through resolution and acceptance testing and provides an electronic record of all development processes and meeting minutes. It also serves as a tool for reviewing and improving processes mandated by Applus+ ISO-certification. ► The Applus+ CMT is a critical tool in VID development and has successfully benefited numerous client I/M programs, including those in Washington, Connecticut, and Illinois.

**Quality Management System:** Applus+ dedicated development staff stays apprised of technological enhancements and will provide the SLVHD with demonstrations of software updates and designs.

***e-VID™* Requirements Document:** Upon completion of initial JAD sessions with the SLVHD, Applus+ will create a high-level *e-VID™* Requirements Document according to JAD-defined criteria. The document will be posted for review, and commented on by all authorized SLVHD personnel via the CMT.

**Design Document:** Upon SLVHD approval of the *e-VID™ Requirements Document*, Applus+ SLC development team will create an *e-VID™ Design Document* outlining all *e-VID™* inputs, outputs, interfaces, and specifications, including design and specifications for individual modules and reports; a logical data model; complete physical data model; system architecture; security definitions; and the application hosting environment at the Applus+ Data Center.

***e-VID™* Testing:** Applus+ applies the *V-Method* or testing level for each step of VID design and development. This ensures quality assurance and control at each step and is named for the diagram illustrating how this methodology proceeds. The diagram forms a V-shape where the project definition proceeds on a downward path, while the testing proceeds on an upward path toward completion. This is a standard approach to the software development cycle. Testing efforts proceed simultaneously at different levels. For example, code is properly verified as it is produced while VID components are verified as they are integrated. ► Utilizing its SLVHD-approved *e-VID™* Requirements and Design Documents, Applus+ will maintain close communication with the SLC Contract Manager to ensure all required business rules and logic are incorporated into every aspect of development.



► Figure 6. V-Method testing level for VID design/development.

Additionally, under the V-Method, development staff performs lower-level unit tests to ensure all components function as intended. This includes verifying that unit tests have been performed

properly and executing system tests to ensure components interact properly and are allowing the entire system to function as specified by the architecture. Integration tests are performed to determine if individual components and business objects are functioning according to design specifications. ► Applying user acceptance testing is the next level of QA/QC and confirms that business requirements are met, key risks are mitigated, and crucial production windows are accommodated. Performance tests occur at many levels to ensure that peak-user and transaction loads can be accommodated, crucial production windows can be met, and that end-to-end response time is adequate. Lastly, regression testing ensures that functionality is not compromised as a result of software upgrades or other changes. This lengthy process will confirm to both Applus+ and the SLVHD that individual components as well as the **entire integrated system** are performing to exact specification.

***e-VID™* Technical Features:** The *e-VID™* consists of a clustered Microsoft SQL Server 2008 Relational Database Management System (RDBMS) used to store vehicle emissions and test data. The SQL Server provides Applus+ with a stable platform easily capable of processing thousands of concurrent transactions. ► Utilization of an SQL Server provides a back-end database for the *e-VID™* that offers rapid response time and significantly reduced downtime, which is critical to program integrity and efficiency. The *e-VID™* was designed to provide seamless interactive access – a unique and advantageous component of the Applus+ offering.

Applus+ will maintain interactivity between the *e-VID™* and each corresponding I/M station throughout the entire SLC network. A front-end, web-accessible Dashboard application, hosted on a two node web application server, communicates with the *e-VID™* to provide authorized station personnel with dedicated access to the functionality and data reporting required to perform their inspection tasks. ► UTAH2011 analyzers will use a custom communication dynamic-link library (DLL) installed on each workstation unit to consistently communicate with the *e-VID™*. This DLL will be used for authentication with Active Directory and to facilitate encrypted data exchange with the *e-VID™*. Applus+ places a high priority on security and fast, convenient data communication. ► To achieve this, data is sent from the workstations to the *e-VID™* via a secure socket-layer (SSL) using a client-less, virtual private network (VPN) connection. Custom XML web services are used to send transactions between participating workstations and the *e-VID™*. Additionally, these transactions, which include the exchange of data or other requests between the workstations and *e-VID™*, are encrypted using the Advanced Encryption Standard (AES). Encrypting transactions adds yet another level of security that prevents unauthorized access to data.

AES is a National Institute of Standards and Technology specification for the encryption of electronic data. It is expected to become the universally-accepted means of encrypting digital information, including financial, telecommunications, and government data. Specifically, AES is an iterative, symmetric-key block cipher that can use keys of 128, 192, and 256 bits, and encrypts and decrypts data in block of 128 bits (16 bytes). Unlike public-key ciphers, which use a pair of keys, symmetric-key ciphers use the same key to encrypt and decrypt data. This is an additional level of security Applus+ provides in order to further ensure fraud prevention as well as bar un-authorized user access.

Source: MSDN Magazine

**Applus+ VID-Expertise:** Applus+ Microsoft Certified Systems Engineers (MCSE) and Cisco Certified Network Professional (CCNP) personnel will implement the Applus+ SLVHD database solution. ► Applus+ Certified Information Systems Security Professionals (CISSPs) and Cisco Certified Internetwork Engineers (CCIE) will work closely with the SLVHD agency to design and deploy requisite servers and systems for optimal performance and reliability during the program's transition and implementation stages.

As a former Utah I/M contractor, Applus+ IT professionals are already familiar and experienced with the data structure and reporting mechanisms currently used in SLC. ► The insight gained from previously managing SLC data, combined with Applus+ ability to sync compatible technologies, will give the SLVHD confidence that moving to the e-VID™ is an **exceptionally low risk migration solution.**

#### 6.4.3 Internet/Intranet

The SLVHD will receive efficient communication and information distribution across intranet or internet systems using **Web-Enabled Analyzer Messaging (WAM)**. This is similar to an instant messaging application as it has the ability to send web based messages to large groups.

Communication between the entire network – Applus+, the SLVHD, the stations, and related personnel – will be uniformly consistent and constantly available by utilizing this technology. A key WAM advantage includes constant, real-time communication among the entire network of station personnel during business hours.

► Applus+ will enhance the innovative WAM functionality with a searchable interface allowing users (station personnel or Applus+ management) to send text messages or informational bulletins to a single workstation or the entire network—an invaluable asset to the SLVHD as it can *immediately* broadcast important notifications to testing facilities and personnel, network-wide.

WAM also provides the underlying technology used for the development of the repair community forum - a forum module, developed by Applus+ to facilitate instant, online communication between members of the local repair community. Users



#### An A+ Review

Here's what a decentralized Illinois I/M station had to say about Applus+:

*"The "Dashboard" created by the Applus+ Air Team is excellent. We use it on a regular basis to monitor our success in properly solving an emissions problem. We can immediately check and see when a customer went through the system and see if they pass. The use of the internet as opposed to the old paperwork way is awesome! The site is easy to navigate and user friendly. If a customer comes in with a check engine light on, we immediately check and see if the test is due or if they just went in and failed. This way we can get honest and reliable information. We also use the site to see if they have a history of passes and fails and then we can proceed accordingly. The "Repair Forum" is also a great place to go look up information. You can see if other shops experienced similar problems. It's a great source of information and helps save you time!"*

– Will Walker, Car-X Auto Service, a decentralized station in Applus+ Illinois I/M program



can both post and reply to program-related communication threads, as well as generate a list of individual posts for reference. Such communications are available exclusively to authorized users designated by the SLVHD. ► Notably, the repair community served by the Applus+ hybrid Illinois program has responded enthusiastically to this innovative functionality that provides constant, real-time communication, notification, and support.

#### **6.4.4 Data Transmission to State DMV**

JAD sessions between Applus+ and the SLVHD will facilitate the discussion of data exchange strategies. Applus+ will collaborate with SLVHD representatives to analyze current data transmission methods used to communicate with the State DMV and will offer additional options as appropriate, including message queuing, secure FTP transfer, and/or batch file processing.

► Applus+ has experience in developing custom data transmission solutions similar to that required for the SLC program, which will deliver greater efficiencies in program execution and added benefit to program management. For example, Applus+ recently developed a solution for the Illinois program to transmit test results in real-time to the Illinois Secretary of State immediately after an emissions test is completed. In the Washington program, Applus+ securely transmits vehicle and reporting data to the Washington Department of Licensing in real-time. For the Massachusetts program, Applus+ developed a communications system that connected to an Automated Licensing and Registration System in real-time, providing the capability to search vehicle registration information and submit vehicle inspection data. **The SLVHD can rely on a high level of Applus+ collaboration, technology, and real-time communication to ensure success.**

#### **6.4.5 Data Transmission to County**

**Immediate, useful data access:** A key element in SLVHD's ability to manage its I/M program will be having easy access to up-to-date information via the Salt Lake County website. ► Applus+ will support all SLVHD data transmission requirements by connecting a web-based interface to the SLC's VID. For example, a custom module can be added to the Applus+ Reporting Dashboard to extract specific data sets from the *e-VID*<sup>TM</sup> and transmit the sets directly to the SLC website. Batch jobs can also transmit data periodically to the SLC website, avoiding performance degradation. Applus+ develops custom interfaces to automatically upload data from the *e-VID*<sup>TM</sup> directly to the database, ultimately serving the SLC website.

#### **6.4.6 Reports**

**Overview of Reporting Capabilities:** To meet SLVHD reporting requirements, Applus+ will deliver an enhanced reporting solution to generate EPA40CFR51-compliant reports. ► Such reports will be available through the SLC's I/M Reporting Dashboard, which is SLVHD's customized, one-stop interface. This reporting capability surpasses our competitors by going well beyond reports that meet the U.S EPA's requirements. In fact, the modular design of the Applus+ Dashboard enables us to provide extensive customization, which allows Applus+ to easily add new reports or tailor existing reports to meet the specific reporting and data production needs of the SLVHD.

**Secure Report Generation:** Applus+ monitors and controls access to the I/M Reporting Dashboard at all times by classifying the role or job function of each user. Classifying users

allows the Applus+ SLC management team to determine which reporting modules should be accessible through each authorized user's Dashboard browser, enhancing security controls by preventing unauthorized access. ► Such role-based security ensures that only users with the proper pre-authorization have access to the wide-ranging reporting capabilities of the SLC Reporting Dashboard. For example, station employees may be able to generate reports for test authorizations, failure rates, or basic vehicle information, while management staff can also generate financial reports.

**Reporting Features:** Within the Dashboard, a "standard reports" module allows users to generate reports based on the data filters entered (e.g., date/time ranges; inspector; vehicle make, model, year; failing DTC). ► Built-in features provide the SLVHD with printer-friendly reports, as well as the convenient ability to export data to any electronic or hardcopy medium necessary. Applus+ also provides additional reporting options.

**EPA Reporting:** In addition to the ad-hoc reporting capabilities, Applus+ will provide the SLVHD with query and data extraction assistance to assist in assembling annual SLC data reports in accordance with the requirements of 40 CFR Part 51, Subpart S, Inspection/Maintenance Program Requirements, §51.366 - Data Analysis and Reporting Requirements, and contain the following elements (a sample EPA report is included in *Appendix H*):

- a. **The number of vehicles initially tested, by model year, vehicle type, and test type (idle exhaust/catalytic converter check, OBD, gas cap).**
- b. **By model year and vehicle type, the number and percentage of vehicles:**
  1. Passing/Failing the initial test, per test type (idle exhaust, catalytic converter, OBD, gas cap);
  2. Initially failed vehicles passing/failing the first retest per test type
  3. Initially failed vehicles passing the second or subsequent retest per test type
  4. Initially failed vehicles receiving a waiver; and
  5. Initially failed vehicles with no known final outcome regardless of reason.
- c. **By model year and vehicle type, the number and percentage of vehicles for which:**
  - 1) MIL is commanded on and no codes are stored;
  - 2) MIL is not commanded on and codes are stored;
  - 3) MIL is commanded on and codes are stored;
  - 4) MIL is not commanded on and codes are not stored; and
  - 5) Readiness status indicates evaluation is not complete for module supported by OBD systems.
- d. **The initial test volume and failure rate by model year and test station.**
- e. **If performing overt/covert audits of I/M stations, data includes # of inspection stations:**
  - 1) Receiving overt performance audits in the year;
  - 2) Not receiving overt performance audits in the year;
  - 3) Receiving covert performance audits in the year;
  - 4) Not receiving covert performance audits in the year; and
  - 5) Have been shut down as a result of overt and/or covert performance audits.
- f. **The number of inspectors:**
  - 1) Suspended, fired, or otherwise prohibited from testing as a result of covert and/or overt audits, as well as for other causes;
  - 2) Received fines as a result of covert and/or overt audits, as well as other causes.
- g. **The number of inspectors certified to conduct testing.**
- h. **The total number of compliance documents (SLC) issued to network I/M stations.**
- i. **The number of missing compliance documents (SLC).**
- j. **The number of time extensions granted to motorists.**

## **The Applus+ Reporting Dashboard: Standard Modules**

### **Emissions Inspection Data (Example)**

A group of standard reports with custom data filters allows users to limit data sets to a particular range:

- + Network-wide Pass/Failure Analysis Report
- + Network-Wide Pass Analysis Report
- + Offline Testing Report
- + TSI Summary Report
- + Auditing Reports
- + Station-Analyzer Report
- + Compliance Status Reports
- + EPA Reports
- + OBD Exception Reports
- + Diesel Summary Reports
- + Calibration Reports
- + Maintenance Reports

### **Network Management Data (Example)**

Accessible through the Reporting Dashboard, Applus+ creates user controls allowing authorized personnel to manage the entire network of inspection workstations via detailed activity reports. Standard reports include:

- + **Network Daily Activity Report**, summarizing network-wide testing activity by hour and date selected (default to current day). Data includes the number of vehicles tested; the number/percentage of vehicles rejected; number/percentage of vehicles passed; number/percentage of vehicles failed; network utilization rates; etc.
- + **Network Monthly Activity Report**, summarizing network-wide testing activity described above by day and for the month selected (default to current month).
- + **Inspection Station Daily Activity Report**, summarizing station-specific activities per station for the day selected (default to current day). Data includes the number of vehicles presented for testing; the number and percentage of vehicles rejected; the number and percentage of vehicles passing; the number and percentage of vehicles failing; and inspection station utilization rate; etc.
- + **Inspection Station Monthly Report**, summarizing station-specific information described above by day and for the month selected (default to current month).
- + **Inspection Station/Operational Report**, summarizing station-specific activity for the specified date (default to current day) and utilization rate.
- + **Compliance Reports**, summarizing:
  - o Passes and waivers for the selected date and month (default to current month). Data includes the number of vehicle passes and waivers by test date and for the month.
  - o Accumulated testing activity by selected date and month (default to current month). Data includes the number of vehicles presented for testing (passes and fails) by test date and for the month.

### **EPA Reports**



Compiling program data from the e-VID™, the Applus+ Reporting Dashboard can provide point-and-click EPA Compliance Reports that meet all federal reporting requirements for government vehicle inspection and maintenance programs.

### **Customer Service Reports**



The Applus+ Reporting Dashboard can include motorist comment tracking application that allows Applus+ management personnel to enter information for tracking motorist comments, concerns, and complaints. Reports on motorist complaints will be viewable by the County and SLVHD via the Applus+ Reporting Dashboard.

**Reporting Technical Features:** Applus+ will leverage advanced web portal technology powered by Microsoft .NET application frameworks to customize the Reporting Dashboard. The modular design of the Dashboard is based on web part technology provided by ASP.NET. The Dashboard is hosted on a dedicated clustered report server, which users access over a Secure Sockets Layer, virtual private network-connected web browser.

#### 6.4.7 Fee Revenues

The Applus+ solution will strictly adhere to the SLVHD's Test Authorization (TA) guidelines as set forth in the RFP. Applus+ will sell Test Authorizations (TA) to SLC network stations and collect a monthly fee for their program participation. Fees cover equipment warranty, service and maintenance, VID hardware, software, and updates. Per-test fees and monthly service fees will be jointly determined between Applus+ and the SLVHD. Applus+ will sell SLC network stations a minimum monthly amount of required TA. Applus+ will also sell TA in blocks of 50, unless otherwise directed by the SLVHD. Applus+ understands and acknowledges that fees will be determined so as to assure sufficient revenue to operate the program as intended. Applus+ acknowledges that all excess funds will be kept in an account for the SLVHD with a means for the department to access and collect funds. TA pricing specifics are available in the Applus+ Price Proposal.

#### Section 6.5 Decentralized Inspection Network

**Applus + Decentralized & Transition Experience:** Applus+ supports the SLVHD's decision to retain its current network of test-only and test-and-repair stations. The SLC's current network of stations will benefit from over a decade of Applus+ experience transitioning established decentralized I/M programs. Applus+ will provide information materials and host program meetings for the current network to explain new program features and 2011 requirements. Applus+ will contact participating stations through various communication channels, such as seminars, direct mail, and personal site visits to retain their participation.

#### Section 6.6 Program Station Contracts

For the next phase of the SLVHD's emissions program, Applus+ has created Service Contracts that clearly delineate equipment costs, monthly fees, and per-test fees, as well as outline the responsibilities of both Applus+ and each I/M station participating in the UTAH2011 Program. A contract draft is included in *Appendix G*.



#### An A+ Review

Here's what a decentralized station had to say about Applus+:

"My business performs over 50,000 inspections. Applus+ and its employees have provided great support over the years. I can always count on their ability to answer questions, find the answers I need in a timely fashion, and limit any inconvenience to my customers. Their equipment has always been reliable as well. Considering the volume of inspections my station performs, we have had remarkably few problems with the equipment's performance. Should an issue arise, their equipment repair staff had our machines up and running within 24 hours or sooner consistently. That reliability is what keeps my customers coming back year after year."

--Dante Riggio, Riggio Auto Repair, Inc.



Applus+ will host and conduct an informational seminar with each participating I/M station in a proactive campaign to communicate program changes and provide opportunities for station employees to meet Applus+ management staff. These seminars will be held to accommodate the schedules of all inspection stations. During seminars, Applus+ will explain the Service Contracts, review and explain all costs involved, review program requirements and address any questions or concerns of station owners and employees. Applus+ believes this seminar format is a helpful and beneficial opportunity to provide the I/M stations with an open, direct platform to ask questions and talk with Applus+ representatives before officially entering into the updated program. Additionally, with the assistance and approval of the SLVHD, Applus+ will invite or possibly recruit new, applicable stations into the SLC program. Applus+ will execute a Service Contract with all participating stations in the network **prior to** transiting of service under the new I/M program contract between Applus+ and the SLVHD (i.e. prior to April 1, 2011).

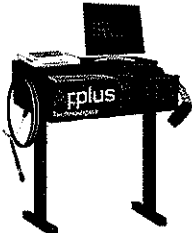
As demonstrated in *Section 8.4.2 Firm Qualifications, Project References*, Applus+ has the demonstrated capability to provide all necessary services and equipment to ensure continuous, uninterrupted I/M station participation in the UTAH2011 network. ► Upon contract award, Applus+ designated SLC management team will work with each I/M station owner in the SLC network to ensure their full understanding of details specific to the testing components of each facility. In accordance with the Transition Plan included in this proposal, Applus+ will establish and maintain the necessary equipment inventories and service staff in order to assure all network participants are properly equipped and ready to provide testing and inspection service **prior to day one** of official program commencement. ► As a former Utah contractor, Applus+ is acutely aware of the importance in establishing and providing these services to assure participation levels meet constituent needs throughout the life of the program.

#### **6.6.1 UTAH2011 Analyzers, Test Equipment & Software**

**Basic Equipment Package:** ► Applus+ OBD system design is used by more companies and states than any other OBD testing methodology in the industry and for good reason. The modular design of the cabinet supports adding diesel or TSI testing capabilities. Applus+ will supply the UTAH2011 inspection program with a TSI/OBD/Gas Cap hardware solution. Hardware included in the Applus+ equipment package consists of an EPA-approved gas cap tester; an IIGA (International Inspection Gas Analyzer) exhaust gas analyzer meeting BAR97 accuracy standards; the Applus widely-demanded and successful OBDII solution; a Microsoft Windows based computer system; a flat screen monitor; and a laser printer. ► Each package will consist of a **new** workstation cabinet and all **new** components - Applus+ will not incorporate any refurbished testing equipment or used components in the UTAH2011 implementation. Additionally, the SLVHD will benefit from Applus+ incorporation of the IIGA heavy duty, 4-gas analysis system, driven by an Andros Non-Dispersive InfraRed (NDIR) module. ► The IIGA seamlessly interfaces with Applus+ hardware and software solution, allowing technicians to perform TSI testing with maximum station throughput. Additional equipment options to the SLVHD include a biometric fingerprint scanner to reduce fraudulent testing and elevate authorization credentials for Station employees and/or Auditors performing administrative tasks; a barcode scanner for quick identification; a Ready Scan tool for user-friendly testing; and high

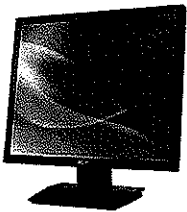
definition video cameras to monitor Inspector performance.

**A UTAH2011 Equipment Package Modular Approach**

|   |   |   |
|---|---|---|
| <p>Base workstation equipment includes:</p> <ul style="list-style-type: none"> <li>+ Desktop PC</li> <li>+ OBDII interface</li> <li>+ Laser printer</li> <li>+ 17" Flat Screen monitor</li> <li>+ Ruggedized cabinet &amp; locking mechanism</li> <li>+ Gas cap tester</li> </ul> | <p>In addition to the items on the left, TSI/OBDII systems include:</p> <ul style="list-style-type: none"> <li>+ Rugged 4 Gas analyzer, BAR-97 accurate, based on the new Andros platform.</li> <li>+ RPM Tachometer</li> </ul> | <p>In addition to the items on the left, the Diesel/TSI/OBDII systems include:</p> <ul style="list-style-type: none"> <li>+ Diesel opacity meter</li> </ul> |
| <p>Customizable options include:</p> <ul style="list-style-type: none"> <li>+ Barcode scanner</li> <li>+ Readiness Monitoring Device</li> <li>+ OBDII Tester</li> </ul>   |  <p>▼ Workstation Specifications ▼</p>  | <p>Security options include:</p> <ul style="list-style-type: none"> <li>+ Security camera(s)</li> <li>+ Bio-identification fingerprint scanner</li> </ul>   |



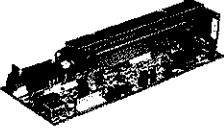



Item: Desktop Computer  
 Manufacturer: Dell or compatible alternative  
 Model: Vostro 230 Desktop  
 Description: Intel processor, Microsoft Windows 7 operating system



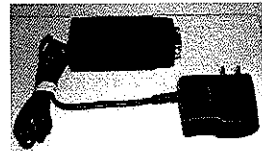
Item: LCD Monitor  
 Manufacturer: Acer or comparable alternative  
 Model: V173  
 Description: 17" TFT LCD, 1280x1024



Item: OBD-II Interface  
 Manufacturer: Multiplex Engineering  
 Model: T16-008  
 Specifications: Full OBD, SAE J1978, SAE J1979, SAE HS-3000 Scan Tool Compliant. Reads emission-related codes on model-year 1996 and newer vehicles, all makes and models. Supports all protocols including CAN, VPW, PWM, ISO,

| A UTAH2011 Equipment Package Modular Approach                                       |   |
|---|---|
|   | and KEYWORD (KWP). Meets federal OBD requirements including 40 CFR 85.2231.   |
|    | <p>Item: Gas Analyzer<br/>           Model: 6500<br/>           Manufacturer: Andros/LumaSense</p> <p>Description: BAR97 Component Approved, fifth generation, Andros NDIR system, combined with pneumatics designed by Applus+. Designed to withstand environmental challenges and maintain BAR97 accuracy.</p>  |
|   | <p>Item: Barcode Scanner (<b>optional</b>)<br/>           Manufacturer: Honeywell<br/>           Model: Voyager GS 9590</p> <p>Description: Scans through windshields, corded and designed to withstand 5' drops.</p>   |
|  | <p>Item: Diesel Opacity Meter (<b>optional</b>)<br/>           Manufacturer: Red Mountain</p> <p>Description: Partial flow sensor head, extension pole, atmospheric correction. Easy-to-clean lenses. Currently in use in many I/M diesel programs.</p>   |
|  | <p>Item: Ready Scan (<b>optional</b>)<br/>           Manufacturer: SPX/OTC<br/>           Model: 3358 OTC Ready Scan</p> <p>Description: A drive cycle is required after any emissions related repair. The 3358 OTC Ready Scan eliminates drive cycle guesswork by signifying testing completion via color coded LED display. The compact tool works on 1996 and newer OBD II and CAN compliant vehicles.</p> |

**A UTAH2011 Equipment Package Modular Approach**



Item: OBD-II Self Tester (**optional**)  
 Manufacturer: Multiplex Engineering  
 Model: T22-001  
 Description: This device tests the integrity of the circuitry inside the OBD-II interface. Tests the functionality of all OBDII protocols (VPW, PWM, CAN, ISO, and KW) to ensure the OBD-II interface is functioning properly.



Item: Fingerprint Scanner (**optional**)  
 Manufacturer: Digital Persona  
 Model: U.are.U Gold  
 Details: Applus+ proposes the positive identification of the proper inspector using fingerprint scanners. Applus+ is the originator and leader in biometric identification within the I/M industry. The Applus+ Washington and Illinois programs use fingerprint identification to authenticate inspectors prior to each inspection.



Item: USB Camera (**optional**)  
 Manufacturer: Logitech  
 Model: QuickCam Pro 9000  
 Specifications: Carl Zeiss® optics, autofocus, 2MP HD sensor.

**Addendum Section 6.6.1**

Additional equipment add-ons, offered as options to the SLVHD, include a fingerprint scanner to reduce fraudulent testing and elevate authorization credentials for Station employees and/or Auditors performing administrative tasks, as well as optional HD video cameras to clearly monitor Inspector performance at all times. Diesel equipment add-ons include Red Mountain diesel opacity meters which include sensor head, extension pole, and atmospheric correction. The equipment features easy to clean lenses, and is an industry proven meter in use in many different programs. Additional equipment add-ons include ambient sensors, OBD readiness modules, T22 OBD self tester, UPS, and wired barcode scanners.

**Equipment Security:** The security of all station testing equipment is a high priority and preserves the integrity of every test SLC I/M stations perform. Equipment security measures will include, at a minimum, analyzer cabinets with key-entry locks to unlock the door and drawer and tamper switches. The hardware communicates to the software any entry into the cabinet which, in turn, allows the software to determine if the entry was authorized or unauthorized, and apply any lock-outs if qualified as necessary.

All equipment software (and hard drive access) requires Inspector login prior to each test using a unique username/password combination. Password entry will be masked from the input screen using asterisk characters. Passwords will require refresh/update on a routine basis, with predetermined intervals at the recommendation of SLVHD. Passwords will be required to contain a minimum of 5 characters, and must contain at least one numerical digit. Included as optional security measures are biometric fingerprint scanning for Inspector authorization/identification and USB video cameras for remote inspection monitoring.

#### Addendum Section 6.6.1.1

Applus+ acknowledges and accepts this addendum section.

#### Addendum Section 6.6.1.2

Applus+ acknowledges and accepts this addendum section.

#### 6.6.2 OBD Equipment

**Per Station, Per Motorist, and Per Your Request:** On a daily basis, motorists and clients depend upon Applus+' OBD, TSI, and Diesel testing equipment to perform tests as intended with uninterrupted functionality and performance integrity. ► With the goals of the SLVHD clearly and effectively supported, the Applus+ OBD solution will provide SLC and its network stations with modernized, dependable, and BAR97-accurate equipment. Core hardware and software I/M technology will be professionally installed, audited, and operable **prior to day one of program start**. Each participating I/M station will be equipped with an out-of-the-box solution that successfully – and currently – serves in multiple Applus+ I/M programs.

- + SLC I/M stations are guaranteed a viable, dependable equipment solution upon contract award. Stations will utilize a **superior connection rate**. For example, Applus+ already achieved the success rate the SLC requires - as of April 2010, in North Carolina (where Applus+ supplies a similar OBDII equipment solution to ESP and Snap-on) the connection rate is **99.8%**, exceeding the SLVHD's requirement for a 99.5% rate. By choosing Applus+, SLC and its network stations will receive **the same technology and the same equipment which will result in the same success rate**.



The SLVHD will benefit from an OBDII solution that is in specific accordance with EPA420-R-01-015 specification. ► To fully document and ensure all equipment and procedures meet EPA requirements, Applus+' relies on strict QA/QC process control and auditing procedures to ensure complete compliance with industry regulations. The SLVHD can trust

**An A+ Review**

Don't just take our word for it. Here's what a State customer had to say about Applus+:

"I appreciate the cooperative and positive effort Applus+ has shown in assisting the Department of Ecology in attaining their goals. We are particularly impressed in your willingness to go beyond the contract language and provide services that aren't required. The Applus+ website for Washington and OBD kiosks are two fine examples of Applus+ providing more than necessary without charging us for the additional services. The citizens of the state benefit from your cooperation and customer service ethics."

–Stuart Clark, Program Manager,  
Washington State Air Quality



Applus+' auditing process and personnel as **Applus+ is the only I/M vendor with an ISO 9001 certified Quality Management System (QMS)**. Applus+ follows and abides by quality process standards that are documented in every facet and every step of its equipments' design, construction, installation, connectivity and, via regular system audits, daily performance.

**Applus+ is never complacent with standard technology:** After reaching compliance with industry specifications, Applus+ personnel continuously incorporate and sync emerging automotive technology with current products and services. ► Therefore, if at any time there is a need to modify test routines to better suit motorist vehicles with advanced features (keyless ignition systems, hybrid fuel types, etc), Applus+ will work closely with the SLVHD to ensure testing procedures are adequate for **all vehicle scenarios**. Also, since the Applus+ data solution is continuously updatable throughout the entire SLC network, any applicable software updates to complement equipment upgrades or functionality will be easily configured and nonintrusive to the station network or program operations.

Regardless of program achievements, Applus+ does not rest on its laurels but remains aggressive when OBDII communication system anomalies occur. ► To ensure station equipment continuously performs as intended, Applus+' field upgradable OBDII hardware can be easily modified for vehicles that do not conform to OBDII specification. To ensure optimal customer satisfaction and continuous equipment performance (before and after program start) Applus+ will work closely with the SLVHD to define unique test procedures and scenarios to resolve any unforeseen issues.

#### **6.6.2.1 Other Information**

**Exceeding expectation is the Applus+ core offering:** Applus+ goes beyond the basic requirements of the SLVHD's OBDII testing requirements by gathering additional vehicle information without sacrificing throughput, data integrity, or program costs. ► In Applus+' experience, acquiring more vehicle data will provide the SLVHD with deeper reporting analysis potential and greater auditing capability (of data records), both of which are highly beneficial when investigating cases of potential fraud. The Vehicle Identification Number (VIN), Calibration Identification Number (CALID) and Calibration Verification Number (CVN) are just a few data points that Applus+ collects during any given OBDII test that could support program fraud prevention efforts.

#### **6.6.2.2 Tailpipe Certification**

Applus+' gas analysis system is designed to meet and exceed BAR 97, ISO 3930/OIML R99, Class 0 accuracy standards by offering the SLVHD an Andros 6500 NDIR (Non-Dispersive Infrared) system accompanied by an electrochemical oxygen sensor. A heavy duty pump, solenoid, and filtration system round out integral gas analyzer components.

#### **6.6.2.3 Equipment Upgrades**

To ensure I/M stations perform at 100% efficiency at all times, Applus+ is able to provide stations with field upgradeable software via a simple internet connection. Applus+' upgradeable software ensures smooth, network-wide upgrades should they become necessary due to a new vehicle requirement, or similar. In addition, Applus+' modular hardware design allows for

seamless equipment replacement by trained UTAH2011 Service Technicians should component replacement become necessary.

#### **Addendum Section 6.6.2.4**

All UTAH2011 equipment includes an Automated Fuel Cap Testing system. Also included are Stant Gas Cap Adapters and Stant Calibration Caps. For more details, see *Section 6.6.1*.

#### **Addendum Section 6.6.2.5**

Applus+ will provide the SLVHD an OBDII connector complying with SAE J1962 specifications. Additionally, the Multiplex OBDII interface is compliant to various OBDII communication protocols in the SAE J1978 specification (ISO 9141-2, J1850 VPW, J1850 PWM, ISO 14230-4 and ISO 15675). UTAH2011 software will utilize the Diagnostic Test Modes in SAE J1979 during OBDII inspections. The gas cap tester provided on all UTAH2011 workstations will use industry standard cap adapters and testing specifications.

#### **Addendum Section 6.6.2.6**

The Applus+ OBD/TSI equipment to be used in the SLVHD I/M program contains all the components required for BAR97 Component Approval.

### **6.6.3 Replacement Equipment**

► Participating SLC I/M stations will receive brand new, custom installed UTAH2011 station equipment featuring OBD/Gas Cap, OBD/Gas Cap/TSI, etc. technology (equipment packages will vary, depending upon the testing needs of individual stations). Existing SLC stations will receive the numerical equivalence of the pre-existing equipment to be replaced, unless otherwise necessary. Applus+ will provide equipment amounts as requested by the SLVHD. ► Applus+ equipment includes a guaranteed three (3) year warranty on all non-consumable items, with the same warranty coverage if the contract is extended to years four, five, and six. A 90-day warranty will be provided for items considered consumable such as water trap filters, fuses, electrochemical sensors, hoses, probe, cables, and manuals. Both warranties are inclusive to the SLC contract and bear no additional cost to the I/M station(s).

### **6.6.4 Additional Analyzers**

Applus+ will provide the same, new UTAH2011 equipment to newly participating SLC stations not active or pre-existing in the current UTAH98 program. ► Stations interested in joining the program or purchasing additional equipment can contact Applus+ to request and obtain information packets regarding official program participation. Once all approval steps have been officially completed and approved and a Service Contract has been established, Applus+ will add the station(s) to the network and provide identical equipment and technology as other stations based on the station's testing services. Equipment bears no cost to the station(s) other than the per test and monthly fees. The station(s) will, however, be responsible for all costs related to installation and establishing network connectivity.

#### **6.6.5 I/M Station Contracts for Collecting Fees**

Applus+ will adhere to the SLVHD's Test Authorization (TA) and fee collection guidelines as set forth in its RFP and will establish Service Contracts with each participating SLC I/M station. Each contract outlines responsibilities of both the Contractor and the individual station. At the conclusion of each program year, Applus+ will provide the SLVHD with an independent audit performed by a third party, licensed, local CPA familiar with the unique challenges of the I/M Program and will be approved by the SLVHD. Applus+ commits to full disclosure of all program finance documentation required to perform a thorough and accurate audit.

#### **6.6.6 OBD Only and OBD/TSI Fees**

Applus+ acknowledges that costs to maintain an OBD-only and OBD/TSI inspection unit vary. Applus+ has constructed the fee structure in such a way that all test fees will be the same for the various tests performed on the UTAH2011 equipment. Also, new stations added to the program will be subject to an identical fee structure as existing network stations, unless specifically requested and authorized by SLVHD.

#### **6.6.7 Diesel Testing Program**

**SLC's Diesel Testing Program:** Applus+ can easily implement a J1667 diesel testing program. ► The SLVHD will benefit from testing innovations stemming from a modular software design, which enables Applus+ to seamlessly integrate and upgrade supplemental equipment needs, at any time, without compromising system functionality or interrupting normal program operation. Applus+ diesel solution for the SLVHD involves performing **Snap-Acceleration Testing** on all 1997 and earlier diesel vehicles (1998 and newer diesels will be tested via OBDII). Applus+ J1667 diesel solution includes a heavy duty, partial flow smoke meter (manufactured by Red Mountain), extension pole, and upgradeable software to accurately perform the J1667 Snap-Acceleration Test Procedure. ► Another leading innovation is electronic sensors that perform atmospheric corrections to snap acceleration smoke values. The precision of these sensors is integral to accurate testing since ambient conditions (such as barometric pressure, ambient temperature, and humidity – all variable conditions within a garage environment) can have a significant effect on opacity readings. The SLVHD will benefit from Red Mountain products as the company is a trusted, veteran manufacturer of diesel opacity meters. Red Mountain's meter technology is in current operation within many I/M programs, including Arizona, California, Colorado, Illinois, New York, and Ontario. Pricing for this option is located in the cost section of this proposal.

##### **Addendum Section 6.6.7.1**

Applus+ has included costs for optional diesel testing equipment within Exhibit 3 of this proposal, as well as in the cost proposal.

##### **Addendum Section 6.6.7.2**

Applus+ acknowledges and accepts this RFP addendum.

**Addendum Section 6.6.7.3**

The diesel testing solution Applus+ optionally offers as part of the UTAH2011 program can measure the opacity of gasoline engine emissions if SLC requires such a test. Applus+ recommends a technician visibly verify the gasoline vehicle is producing excessive smoke, and if so, for safety reasons, perform an opacity test on the vehicle.

**Addendum Section 6.6.7.4**

Applus+ acknowledges and accepts this RFP addendum as well as **Addendums 6.6.7.4.1** thru **6.6.7.4.8**.

**6.6.8 Equipment Warranties**

All non-consumable UTAH2011 equipment that Applus+ supplies participating SLC network stations will be fully covered by a three (3) year warranty. ► This warranty covers repairs and maintenance (preventative and general preservation for continuous operation) to all UTAH2011 equipment components not considered a consumable. This warranty is extended to new stations entering the program at any time during the contract period.

**Addendum Section 6.6.8.1**

Applus+ will charge network I/M stations a minimum monthly fee, which is due regardless of the number of tests they perform. Additionally, a per test fee will be charged, and is variable, depending on the number of tests and the type of equipment each station offers (OBD only or OBD/TSI).

**Addendum Section 6.6.8.2**

Applus+ understands that the revenue collected for monthly and per test fees will be used to reimburse the Contractor for the expenses outlined in Attachment D of the Applus+ price proposal.

**Addendum Section 6.6.8.3**

Applus+ understands that the monthly fee and per test fee will be established and agreed upon by the awarded contractor and County during contract negotiations.

**Addendum Section 6.6.8.4**

Applus+ understands that the fees will be set as to ensure that sufficient revenue is collected to meet all Contractor requirements, and the Price Proposal outlined in Attachment D accurately reflects that understanding.

**Addendum Section 6.6.8.4.1**

In the unlikely event that insufficient revenue has been collected due to errors in forecasting, Applus+ understands the per test fee and /or the monthly fee will be adjusted for the next year.

**Addendum Section 6.6.8.5**

During the first three years of the contract, fees collected by Applus+ will be used to cover equipment costs, start up, hardware, and ongoing maintenance.

### **Addendum Section 6.6.8.6**

In the event renewals, Applus+ intends to continue to charge both monthly fees and per test fees. However Applus+ understands that per test fees should be significantly less during the last 3 potential renewal years.

### **6.6.9 Extended Warranty/Service Agreement**

As referenced in Applus+' proposal response to *Section 6.6.3*, Applus+' equipment includes a guaranteed three (3) year warranty on all non-consumable equipment items, while a 90-day warranty will be provided for items considered consumable. Consumable items include water trap filters, fuses, electrochemical sensors, hoses, probe, cables, and manuals. Both warranties are inclusive to the SLC contract and bear no additional cost to network I/M stations.

**Operating reliability standards the SLVHD can trust:** The SLVHD and its network stations will benefit from Applus+ equipment maintenance standards:

- + Applus+ both develops and rigorously tests its equipment to survive harsh garage environments that may experience variable weather and temperature conditions. Most recently, Applus+ equipment used in its Illinois and Washington programs and of the type and quality to be delivered for the SLVHD program has proved to be especially durable.
- + All network stations will routinely utilize a Preventative Maintenance Schedule, which establishes guidelines for keeping all equipment performing at peak operating conditions. Maintenance testing should be performed before or after business hours to eliminate service downtime and motorist inconvenience.
- + Equipment calibrations are conveniently scheduled via the Dashboard, and inspectors and station personnel are provided with automatic reminders of scheduled calibrations.
- + Equipment preventative maintenance tasks are also conveniently scheduled via the Dashboard. Inspectors or station personnel are provided with automatic reminders of scheduled maintenance responsibilities.
- + Stations are capable of submitting service call requests directly from the workstation Dashboard.
- + Workstations are standalone units and can perform inspections offline, even if data communications are down.

**SLC Preventative Maintenance Plan\*:** Reliable, fast, and fully functional equipment that does **not** require constant maintenance and repair is a vital component of a successful and satisfactory program that ensures continuous, uninterrupted customer service every day. Considering this, Applus+ will incorporate its methods of quality equipment construction, preventive maintenance, inventory tracking, and quality assurance efforts into its Preventative Maintenance Plan. Along with its own quality standards for operating reliability, Applus+ will ensure that:

- + All regularly scheduled preventive maintenance and normal calibrations efforts will be performed by station personnel through the workstation interface, at intervals pre-determined by Applus+ and the SLVHD.

- + If calibrations or maintenance tasks are not conducted according to the set schedule, Applus+ equipment is designed to lock-out automatically. The lock-out feature ensures equipment does not perform any testing without proper verification of maintenance completion, which in turn ensures SLC motorists do not undergo inaccurate emissions testing.
- + Applus+ will supply robust equipment designed to work in harsh garage environments and adverse climate conditions, overall reducing the number of service calls and down time needed for system operation. In the rare event a station's equipment is completely inoperable, an Immediate Repair Plan will be put into effect: the Inspector can either immediately place a call to the SLC's Program headquarters to alert the appropriate personnel or can enter a service request directly (and conveniently) from a workstation. This request is automatically directed to an SLC-based technician's cell phone showing the time, location, problem code, and station address. The technician will quickly travel to the impaired station and repair the equipment as quickly as possible.
- + Applus+ will have available for immediate equipment repairs and other station needs three technician vehicles, stocked with parts and applicable repair tools to provide assistance to I/M stations experiencing issues during business hours.

Details on the Applus+ maintenance plan are included in *Appendix D* as well as *Appendix I, Exhibit 3*, which lists a reiteration of maintenance, consumables, and warranty details. Also included is a sample schedule for common preventative maintenance and equipment calibrations as well as checklists to ensure proper maintenance for SLC equipment on a regular basis.

**8-hour Response Time:** Applus+ will abide by an 8 hour response time for any and all equipment repair needs. Applus+' management priority is to provide equipment repairs or modifications without downtime for participating stations. In addition to SLC-based Repair Technicians, Applus+ has several solutions for providing swift response times: via automatic reminders from the workstation/Dashboard, Inspectors are prompted to perform routine preventative maintenance on their UTAH2011 systems, significantly reducing the potential for maintenance and service. Secondly, Applus+ hires certified Service Technicians, keeping five on staff at all times, including a Field Service Manager. Applus+' technician staff is trained to quickly respond and resolve station calls.

**Applus+ Hotline:** Applus+ provides a 24-hour Call Center for many of its I/M programs, staffed by trained customer service representatives (CSRs) that can assist either customers or station personnel with testing and service needs. CSRs screen calls for the type of service needed, and accompany the caller through applicable resolutions in an attempt to correct their issues. Use of the Call Center assists in expediting an issue's response time and often resolves station issues without the need for technician visits. SLC I/M stations will be given a hotline number directing them to Applus+' Call Center for any immediate or uncertain repair issues.

#### 6.6.10 I/M Historical Numbers

Based on the historical numbers provided in the RFP, Applus+ has developed a projection of inspection volumes for the years covered by the contract. Applus+ has developed all variable

components of the operational plan, including equipment usage, accordingly. The experience gained by successfully serving as the SLC I/M Program's Contractor in the past has assisted in developing the estimates and plans. ► Applus+ is confident equipment life will extend well beyond the base contract term, as well as all three potential extension years.

#### **6.6.11 Inventory of Consumables**

Throughout the life of the program, Applus+ will ensure all consumable items remain at a reasonable stock level at the local Applus+ SLC program headquarters and are available for purchase at a fair market cost. Payment in the form of cash, check, or major credit card will be accepted. Consumables may also be purchased from other vendors, provided they meet the specifications of those supplied by Applus+. All outside consumables must be approved by Applus+ prior to installation and/or use.

► Applus+ also makes consumable purchasing available at each UTAH2011 station via a dedicated consumables website. The convenience of online consumable ordering is a beneficial component of today's I/M program. A testament to their capabilities - Applus+ was the original developer and innovator of Utah's consumable shopping website that is still utilized today, a major innovation at the time of site launch. The same holds true for 2011 when Applus+ will launch an updated website all network I/M stations can use to securely purchase program products. In the interim, Applus+ will make any enhancements necessary to the current consumable website in order to maintain convenient and efficient consumable inventory at each participating I/M station.

#### **Section 6.7 Hardware & Software for VID System**

Applus+ database hardware and software implementation includes providing a custom interface that sends and retrieves data from the UTAH2011 analyzer system over a highly secured network. ► Microsoft SQL Server technology is leveraged to provide real-time access to vehicle data and reporting options available through a custom web portal interface. Utilizing DataOne VIN decoding and vehicle look-up tables ensures applicable information is continuously available to test stations. ► Applus+ uses a multi-faceted approach to ensure that all data transmissions occur over secure networks and to protect the database and web servers from intrusion. To maintain vehicle testing continuity, Applus+ works closely with the incumbent vendor to analyze database and network architecture before transitioning it to the *e-VID™*. Windows 2008 (64-bit) is the Applus+ operating system of choice for its newest data management systems. The Windows 2008 platform, which is used in the Applus+ *e-VID™* in Washington State and just launched this year in the Republic of Ireland's I/M program, offers a number of advantages over Windows 2003, including the memory benefits provided by its 64-bit architecture.

### 6.7.1 Agency Connection & Communication

To provide a swift, seamless data transition, the County and its network stations will benefit from existing Applus+ custom communication software that UTAH2011 analyzers will use to exchange data with the *e-VID*<sup>TM</sup>. ► Using this communication software allows station analyzers and the Utah DMV's database to have continuous access to vehicle information stored in the *e-VID*<sup>TM</sup>. For more information about data transmission and access between the *e-VID*<sup>TM</sup> and the Utah DMV, please reference *Section 6.4.4*. With security at the forefront of Applus+' technical agenda, all data exchanges between the analyzers, DMV, and *e-VID*<sup>TM</sup> are secured to protect database integrity. ► Moreover, Applus+ maintains DataOne VIN decoding software on the *e-VID*<sup>TM</sup>, and Vehicle Look-up Tables (VLT), making vehicle information continuously available to both network analyzers and the DMV database. ► Applus+ has documented its experience developing custom communication solutions - recently Applus+ developed a solution for the Illinois program to transmit test results in real-time to the Secretary of State immediately after the emissions test is completed.

### 6.7.2 Real Time Data

**Real-time Processing Overview:** Real-time access to all data will be available through the SLC's I/M Reporting Dashboard, providing its users with the ability to generate reports easily. Users simply select the data they seek and then specify a report format, such as CSV, Excel spreadsheet, or PDF. ► Since customer service is integral to program success, report generation does not affect data transmission in the system due to strategically designed network architecture that utilizes multiple servers to guarantee consistent and rapid performance. This translates to rapid report generation to satisfy the immediate data needs of the SLC, SLVHD, inspection personnel, and most importantly, the motorist.

**Real-Time Technical Features:** To ensure immediate data processing, Applus+ uses a combination of innovative network architecture and software technology. The network architecture -- designed by Applus+ -- includes a primary server where the *e-VID*<sup>TM</sup> resides, a secondary reporting server, and tertiary server used for disaster recovery purposes. With this architecture, the I/M Reporting Dashboard interacts with a reporting server that uses near real-time data transmission available by mirroring the production server. Applus+ leverages the innovative technology provided by the SQL Server Service Broker to replicate data from the *e-VID*<sup>TM</sup> on the reporting server.

#### **SQL Server DB Mirroring: Features and Advantages**

Automatic Failover and Disaster Recovery to eliminate downtime

Automatic Page Repair, which allows the primary server to transparently recover from minor errors by reading the clean copy of corrupted data from the mirror. In many cases the main database can do an automatic repair, reducing failovers in the first place

Resource Governor to keep all server requests and queries within the limits of the database system, preventing accidental or poorly written queries from taking the system down or absorbing resources

Policy-Based Management and Auditing allows Applus+ to set compliance policies per client requirements for data access. Based on these predetermined rules, the system automatically detects and reports potential compliance issues (e.g., if an employee inappropriately accessed registration information, the system would log the incident and alert appropriate staff of the event)

► This built-in feature of the SQL Server platform is used to guarantee message transmission throughout the station network. Applus+ uses this service as the primary mechanism for distributing records downloaded from the *e-VID™* to the workstations and vice versa. It is also used to synchronize *e-VID™* data with the reporting and disaster recovery servers.

#### **Addendum Section 6.7.2.1**

Applus+ will collaborate with SLVHD representatives to design custom Dashboard modules for extracting real-time data subsets from the VID. Via an easy-to-use interface, authorized SLC personnel can access reporting data by just a few clicks of the mouse. All data will be provided in the form of flat files formatted to the SLVHD's requirements.

#### **Addendum Section 6.7.2.2**

Applus+ is able to provide a series of canned reports, available to the SLVHD via the Reporting Dashboard interface. Applus+ provides back end procedures used to generate these reports allowing the SLVHD to verify their reliability. Additionally, Applus+ will set up a reporting server which will maintain a near real-time copy of VID data. This sever can be used to develop ad-hoc reports and perform statistical computations without affecting the production VID.

#### **Addendum Section 6.7.2.3**

Applus+ will provide a mirrored reporting server to maintain new, real-time replica of VID data. Authorized SLVHD users can use this data to perform ad-hoc reporting as needed via OLE database connection access.

#### **Addendum Section 6.7.2.4**

Applus+ will collaborate with the SLVHD to develop a secure and efficient method for exchanging files between the VID and the Department. Applus+ will leverage its program communications experience in other, similar I/M programs and will work with SLVHD to implement the preferred medium for data transmission. Some of the methods often used include file transfer protocol (FTP), Message queuing (via websphere or MSMQ), and web services.

### **6.7.3 Transferring Real Time Data**

SLC's web-based Reporting Dashboard features modules allowing data to be filtered for various purposes. Authorized users can easily access these modules with multiple options for filtering data by VIN, test ID, date and other parameters. Applus+ will set up scheduled, real-time data extracts responsible for extracting data subsets for the SLVHD and securely transmits them to the agency server.

### **6.7.4 Redundancy**

**Redundancy Overview:** A completely redundant system design supporting constant communication and continuous VID operation is an integral component to SLC's I/M program. To meet and exceed the SLVHD's redundancy requirements, the network architecture of Applus+' system offers redundancy via multiple backup servers. During a disaster or emergency, the system can either be automatically or manually switched over to a stand-by or backup site that assumes the program data collection and transmission functions. **Applus+' VID will be located in both Utah and Illinois:** to ensure against downtime, *e-VID™* architecture

incorporates redundancy at every level, including a mirrored local database at an Applus+ SLC location to take over in the unlikely event the main database fails, offsite mirrored databases at the Applus+ Data Center in Illinois to provide access to vehicle inspection data in case of disaster or prolonged network outage, servers with redundant power supplies, RAID arrays for system drives, and storage arrays to hold critical data and remotely replicate to the UT-designated hot site. Redundant high-speed connections with automated network failover to provide continuous *e-VID™* connectivity and an industrial-strength battery backup can power the host computer system for hours, allowing the system to shutdown gracefully and failover to the disaster recovery site during a disaster or sustained power outage.

**Technical Features:** Applus+ uses Windows 2008 (64-bit) as the operating system of choice for its newest data management systems. The Windows 2008 platform, which is used in Applus+' *e-VID™* in Washington State and just launched on January 4<sup>th</sup> of this year in the Republic of Ireland's I/M program, offers a number of advantages over Windows 2003, including the memory benefits provided by its 64-bit architecture. Applus+' experience in Washington's Emissions Check program suggests the system is more reliable (in terms of maintenance and reboots) than previous operating systems. Applus+ will also design and deploy a systems network for the County that provides reliable, efficient, and secure communication between server and other components. As illustrated in the Network Design diagram on the following page, the main data center architected by Applus+ has two web application servers and two clustered database servers. ► The failure of any server within a cluster **will not cause system downtime**. The network also includes redundant switches and firewalls that are linked to each other. The failure of any one switch or firewall will not result in downtime.

### *e-VID™* Technical Terminology Table

**Active Directory:** Microsoft software; manages password security, user access levels for entire network.

**Dynamic-link library (DLL):** customized software for a specific application. Applus+ DLL is used on station analyzers to collect vehicle emissions and test data.

**Microsoft SQL Server:** reliable, industry standard for database services; used as the platform for the *e-VID™*. Provides streamlined support for importing and exporting data, further simplifying its management & migration.

**Secure socket-layer (SSL):** protocol used to encrypt or securely transfer data over a network by converting it to restrict code unauthorized sources cannot access or decode.

**Two node web application server:** network architecture utilizing two computers to host web application server. Architecture provides redundancy and minimizes downtime. Utilizes load balancing to enhance performance by routing requests to the server with greater availability.

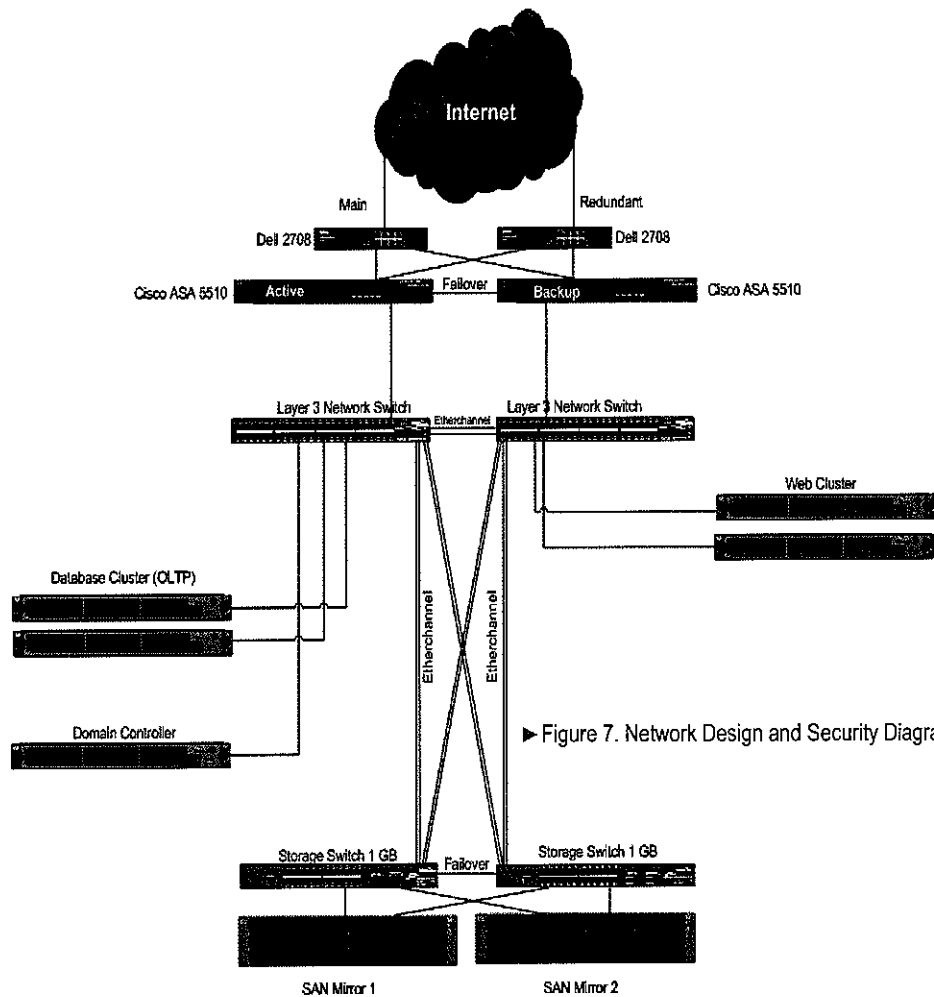
**Virtual private network (VPN):** secure tunnel in the Internet that keeps data transfers between devices private and secured.

**Web Portal:** specialized single point of entry to user interface providing access to various software features.

**XML web services:** specialized messages or requests that can be sent across the Internet.

**Detailed Network Design and Security**

The Applus+ system design incorporates offsite network redundancy using backup web and database servers. Applus+ depends on technology provided by Microsoft SQL Server Service Broker to keep data synchronized as well as guarantee message transmission. ► Should the main data center become unavailable at any point, data sent from the workstation analyzer application will switch over to the backup site for data transmissions. Switchover functionality can be performed automatically or manually by the Network System Administrator.



► Figure 7. Network Design and Security Diagram

**Addendum Section 6.7.4.1**

As demonstrated in other programs, Applus+ solutions have a long standing history of dependable server availability and we will provide SLVHD a system that delivers well over 98% up time 24/7. Apart from scheduled maintenance that will take place after normal business hours, the e-VID™ and Reporting Dashboard will be consistently available to the I/M network and the SLVHD agency. ► In this regard, Applus+ exceeds the SLVHD’s requirement of accessibility between the hours of 7:00 A.M. to 7:00 P.M., local Utah time.

**Addendum Section 6.7.4.2**

Both the main and back-up e-VID™ proposed for SLC will be functionally identical. ► These systems will be located in the states of Utah and Illinois – the main system will automatically failover to the backup system if there is any loss in connectivity to the network. Both systems will be maintained by qualified systems administrators to ensure continuous reliability standards.

**6.7.5 Transfer of Data from Old Contractor to New**

Applus+’ detailed legacy VID data-migration plan will be developed in consultation with the SLVHD after the award of the contract. The following tasks represent key milestones in the data migration process:

1. Obtain data dictionary and sample legacy datasets. Applus+ will obtain the data dictionary and data structures from existing VID structure;
2. Migrate routines and test data-load processes to validate data conversion routines;
3. Test workstation communication end-to-end. As part of the workstation transition process, the Applus+ and Applus+ AutoLogic teams will test communication to the *e-VID™* to ensure that all data will be transferred and mapped correctly;
4. Test high-speed and dial-up internet connections;
5. Migrate available legacy data to the production environment, loading historical data to the *e-VID™*, then initiating periodic feeds;
6. Setup file transfers to occur hourly (or alternatively, at the interval requested by the SLVHD);
7. Startup new *e-VID™*;
8. Migrate any data remaining on the legacy VID before switchover (i.e., the data generated between the last *e-VID™* import and *e-VID™* going live).

**Technical Features of Data Migration:** Data migration requires an effective strategy to prevent loss or corruption of important emissions testing data. Therefore, Applus+ will extract data from the incumbent database in the form of a master data file (MDF) containing the primary data, and a log data file (LDF) containing additional information. Each component of the *e-VID™* features built-in, fault tolerance provisions to avoid hard disk, system board, and memory failures, as well as power losses.

**Experience matters:** Applus+ has a track record in successfully syncing and making operable complex VID transitions without interruptions due to downtime (see *Section 8.4.2 Project References* for further detail) and is the most experienced Contractor for this specific type of data transition, having performed similar feats in Illinois, Connecticut, Washington, and just this year, the Republic of Ireland. In Washington State, Applus+, collaborating with the incumbent provider, migrated the data from the current to the new *e-VID™*, running daily checks to ensure the data on both the old and new VIDs were properly synchronized. Applus+ upgraded each workstation with new hardware and software, and verified that the workstation connections to *e-VID™* were functioning properly. During the seamless Washington State migration, all station operations were consistently running, experiencing no downtime, and remaining transparent to program users. ► Applus+ is experienced and fully capable of performing such a complex transition for the SLVHD, as well as optimizing the data to allow for better, overall performance.

► All data on the *e-VID™* will be owned by the SLVHD at the end of the contract period, and Applus+ stands ready to collaborate with any future contractors of the SLVHD should that become necessary.

#### **Addendum Section 6.7.5.1**

Applus+ acknowledges and accepts this addendum section.

**Addendum Section 6.7.5.2**

Applus+ recognizes that many stations connect to the State Safety Inspection Program via DSL. Applus+ will work closely with the SLVHD agency to ensure safety data can be easily transmitted using the existing infrastructure.

**Addendum Section 6.7.5.3**

Applus+ acknowledges and accepts this addendum section. Costs associated with the analyzers communication components have been included in the price proposal.


**6.7.6 Vehicle Identification Number (VIN) Data**

To facilitate the verification of vehicles presented for emissions testing, Applus+ integrates Vehicle Identification Number (VIN) decoding software and Vehicle Look-up Tables (VLT) from reputable third party vendors. The VIN decoding software will be maintained on the e-VID™ for fast, reliable decoding, when no record of the vehicle being tested exists on the database. The VLT will be used for pre-populating vehicle information during offline inspections, making complete and accurate vehicle information available to station personnel and the SLVHD at all times.

Applus+ utilizes popular and industry-trusted DataOne VIN decoding software equivalent to POLK software and currently used by over 14,000 automotive dealerships in the United States. Applus+ is confident in DataOne VIN software as it provides identical functionality as POLK. This industry standard VIN decoder is used by insurance, financial, state, and federal agencies across the automotive industry. The DataOne software decodes all standard fields used to validate VIN numbers, and build search lists, including Vehicle ID, Year, Make, Model, Trim, Style, Vehicle Type, and others. DataOne VIN decoding software is fast and accurate, eliminating time-consuming, manual verification of vehicle records. ► Throughout the lifecycle of the contract, Applus+ will update decoding software with enhancements as required and, at all times, monitor specification changes made by the manufacturer. In addition, Applus+ will purchase the latest version of the VLT table from Sierra Research, and make this data available in these tables to all workstations.

**6.7.7 Security**



**Overview of Security Features:** Applus+ uses a multifaceted approach to data security by controlling access to the database and web servers, as well as the SLC's web-based user interface. ► To protect the e-VID™ from intrusion, Cisco firewall and intrusion prevention



**Another Value Add:**

**A+ Data Security**

- + True system security entails constant threat analysis, monitoring, and enforcement of security policies — both physically and electronically.
- + Built to Department of Defense Security Technical Implementation Guide (STIG) standards to minimize exposure, the Applus+ Data Management System will be protected by dual Cisco ASA 5510 firewalls to detect intrusions, denial of service/distributed denial of service (DoS/DDoS) attacks, viruses, and trojans at the network level.
- + The web server will be isolated between the two firewalls in "double DMZ" configuration. Password policies will require changes every 45 days.

systems will be employed in a redundant fashion. Deploying Cisco's security solution offers the SLVHD and its sensitive program data a highly secure, yet transparent, flexible, and integrated network infrastructure while achieving better efficiency. In addition, Applus+ will leverage built-in security features available on the Microsoft SQL Server database. In the rare event the database is compromised, data will remain completely protected through powerful encryption features that prevent intruders from reading data. Modifications to the *e-VID™* are performed with secured software developed by Applus+, further protecting the database from tampering. ► In addition to secure software, Applus+ uses hardware technology that prevents unauthorized access to the data. For example, in a scenario where hardware was stolen during a station theft, data would remain safe due to authorization denial. All access to the database itself is limited to authorized administrators with special user credentials. Similarly, only authorized users will be allowed to access the I/M Reporting Dashboard, which serves as the single point of entry for the emissions program.

**Security Technical Features:** Applus+ utilizes the most advanced, comprehensive technology to protect the *e-VID™* from intrusion. Microsoft SQL Server Encryption and Symmetric Key Encryption are utilized by Applus+ to protect all sensitive data fields in the database. These robust encryption features make the data unreadable to any potential hacker that attempts to gain access to the database.

Since the Reporting Dashboard serves as the single point of entry for the SLC's emissions program, role-based security will control the type of data accessed by each user. Authorization levels for each program role will be pre-determined and configured as part of the implementation process. ► In addition, the Dashboard will only be accessible over a secure socket-layer (SSL) using a client-less, virtual private network (VPN) connection. The integrity of the *e-VID™* database tables will be maintained by restricting direct access to pre-authorized Applus+ development personnel.

**Section 6.8 Software**

With recent, successful implementations of five I/M programs that test more than 6.5 million vehicles per year, Applus+ relies upon its latest software implementation experiences coupled with its modern software technology that surpasses industry standards. ► The SLVHD will benefit from Applus+' IT personnel's extensive credentials: Applus+' development team assigned to implement the SLC program comprises Microsoft Certified Systems Engineers (MCSE) and Cisco Certified Network Professionals (CCNP). The Applus+ implementation team will additionally include Information Systems Security Professionals (CISSPs) and Cisco Certified Internetwork Engineers (CCIE).

Applus+ ensures that any applications or software associated with the user interface will be maintained and managed by Applus+. Applus+' software developed for the SLVHD meets the following standards, which are included within the contractual agreement:

| Standard | Description  | SLVHD Benefit                                     |
|----------|--|---|
| 1.       | Only software engineers who hold degrees and certified in their area of specialty will be allowed to | Eliminates errors caused by insufficient training |

| Standard | Description  | SLVHD Benefit  |
|----------|--|--|
|          | develop code for the project. (Certifications include MCSE, CCNP, and others.)   |  |
| 2.       | Development and support of <i>all</i> software will occur within the <i>United States</i>  | High level of support and communications               |
| 3.       | Absolutely <i>all</i> software developers working on the project will be able to fluently speak, understand, read and write the English language | Eliminates errors caused by poor communications        |
| 4.       | Applus+ will locate the primary software design development and support activity within a 90 minute flight of Salt Lake County                   | Fast response to operational issues and better support |
| 5.       | Once the <i>e-VID™</i> is operational, Applus+ will store a complete copy of the software source code on-site in Salt Lake County.               | Rapid disaster recovery                                |

The SLVHD will also benefit from a completely *configurable* system: both workstation parameters and *e-VID™* parameters can be adjusted via the Dashboard (by Applus+ or the SLVHD personnel) which:

1. **Results** in simple software changes that do not require retesting the entire system,
2. **Minimizes** costs to the SLVHD, and
3. **Maximizes** software stability.

### 6.8.1 Internet Communication

**Internet Communication Overview:** UTAH2011 analyzers will use custom communication software installed on each workstation unit to exchange data with the *e-VID™*. Developed by Applus+ software engineers, the communication software will both verify the identity of users sending data to the *e-VID™* and seamlessly facilitate secure data exchange with the *e-VID™*.

► The Applus+ communication software is specifically designed for analyzer interaction with the *e-VID™* and can easily be updated to include new functionality that responds to any enhancement requests or other software/program modifications. The internet communication software offered to the SLVHD is both stable and dependable; Applus+ Illinois and the Republic of Ireland I/M programs successfully utilize the same communication technology.

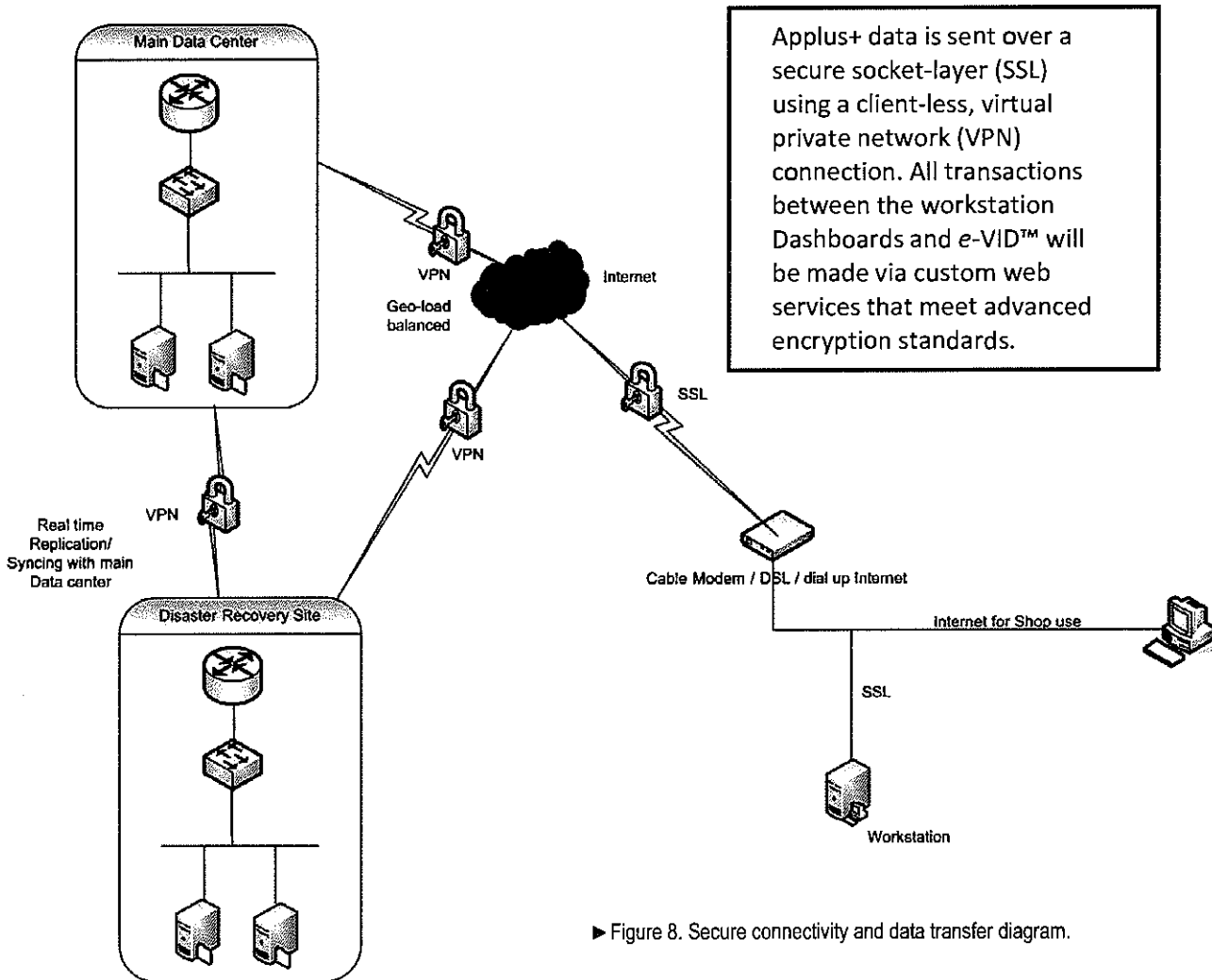
**Technical Features:** Applus+ has developed a custom dynamic-link library (DLL) to act as its communication software between the UTAH2011 analyzers and the *e-VID™*. The DLL provides Active Directory authentication and supports encrypted data exchange with the *e-VID™*. Applus+ also incorporates a series of web service calls to retrieve vehicle and related test data from the *e-VID™* and send updated test and other program information directly to the *e-VID™*.

### 6.8.2 Internet Network

Salt Lake County's web-based Dashboard interface will be designed to communicate with all program workstations. For SLVHD access, the Dashboard allows authorized users access to

multiple features for working with test data, including the capability to view offline tests, registration transactions, repair data featuring individual shop-grade information, and vehicle repairs. Authorized users can also create waivers, void transactions, exempt vehicles from testing, and perform other tasks. Test center managers or administrators will be granted access to configuration features allowing modifications of emissions cut points, configuration of fraud settings and business rules, assigning Inspectors to stations/roles, and important administrative tasks. Dashboard architecture is designed around a flexible development framework that Applus+ can easily modify or enhance with new features, such as additional reporting capabilities, a repair forum, or specific data filtering options. ► The new, modular design of the Applus+ Dashboard supports the rapid development of custom features without undergoing extensive rebuilding that older system architectures require.

Applus+ will use a redundant, high-speed internet connection for data transmission between the SLVHD and the Dashboard to enable fast and transparent network communications. ► As illustrated in the Decentralized Station Network Diagram below, the Applus+ high-speed communications solution requires only a standard internet connection, which will be of **great benefit** to the SLVHD as it eliminates costs for specialized network equipment at network I/M stations. Realizing that most existing stations rely on dialup connection, the flexibility of this solution allows I/M stations to utilize either 3G or high speed internet connectivity. Having previously established a network of internet communications in Utah, Applus+ recognizes internet accessibility may be an issue for some stations and therefore, this solution **will not require** dedicated access to high-speed Internet. The following diagram demonstrates connectivity and communications between the network workstations, the e-VID™, and data centers.



► Figure 8. Secure connectivity and data transfer diagram.

**Dashboard Technical Features:** Applus+ will develop and enhance SLC's Dashboard using industry standard, Microsoft technologies recognized as industry standards. Microsoft .NET software framework will serve as the basis for the Dashboard, which will be strategically customized to meet the specific requirements of the SLVHD. Leveraging the capabilities provided by the Microsoft framework, Applus+ software engineers will customize its secure, high performance web-based applications. Web services (.NET XML) web services and AJAX technologies will support interactive communication with the e-VID™. Web services are used to send secured data requests and other transmissions across the Internet to the e-VID™, while AJAX technology is used to enhance the user experience by supporting dynamic web pages, as well as making background tasks such as data retrieval, transparent to the user. ► The combination of these technologies ensures the Applus+ Dashboard provides a custom, high-quality application to the SLVHD without compromising security, performance, or usability.

### **Addendum Section 6.8.3**

Applus+ acknowledges and accepts this addendum section.

#### **Addendum Section 6.8.3.1**

Applus+ acknowledges and accepts this addendum section.

#### **Addendum Section 6.8.3.2**

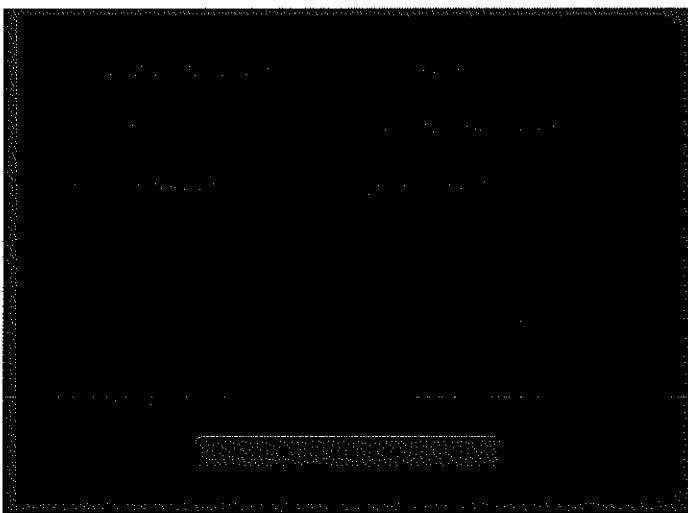
Applus+ recognizes that many SLC I/M stations connect to the State Safety Inspection Program via DSL. Applus+ will work closely with the SLVHD agency to ensure safety data can be easily transmitted using the existing infrastructure.

### **Section 6.9 Data & Reporting Management**

Accurate reporting information is necessary to determine the effectiveness of the program. Applus+ offers its customers robust reporting capabilities designed to meet requirements of the EPA, audit specifications, equipment maintenance, and quality assurance programs. At all times, the SLVHD will have direct access to data on each test performed such as date and time it was performed and the proper identification of the Inspector/station performing the test. Applus+ realizes the SLVHD is required to submit test reports to the Federal EPA in conjunction with the state-approved SIP. ► Applus+ reporting capabilities are uniquely designed to accommodate these requirements. The I/M Reporting Dashboard uses customized modules to generate these reports from near real-time data stored in the *e-VID™*. The interface's modularity easily supports the incorporation of additional custom reports the SLVHD may require now or in the future. Role-based security will control user access to the reporting module, ensuring I/M data will only be accessible by authorized users. All module interfaces for generating reports offer a range of filters, including dates, stations, and other options. These user-friendly modules also provide report formatting and quick printing options. ► Sample reports are provided in *Appendix B*.

#### **6.9.1 Reporting Mechanism**

Applus+ will implement and deploy custom modules that capture data required to meet EPA 40 CFR §51.366 requirements, which will be available to authorized users via the Reporting Dashboard. Applus+ can further customize these reports to capture additional data, as requested by the SLVHD. ► A sample audit report from Applus+ Connecticut I/M program demonstrating data capture of this EPA requirement is included in *Appendix H*.



### 6.9.2 Report of Auditor Activities

The SLVHD's team of auditors will depend upon easy-to-use auditor screens on UTAH2011 workstations to upload their overt audit findings (as demonstrated on the right). The screens are a component of the Dashboard's functionality on every workstation in the SLC network. ► After performing a covert audit, auditors access the Dashboard from a workstation, laptop or desktop computer and input their findings. The *e-VID™* will store this information for later reporting, which can be sorted by auditor, station, failure type, and other criteria. The entire data table can be transmitted to the SLVHD's servers, if desired. The sample screen captures on the right were taken from Applus+' Connecticut workstation auditor functionality used by the State DMV. When accessing audit screens, the auditor is prompted to enter their username and password, allowing the SLVHD to determine and review the activities and workload of the auditors. Schedules can be created beforehand, informing the auditor what I/M stations require auditing in a given weekly or monthly timeframe.

| QA Audit Item                           | Exceeds | Meets | Does Not Meet | Not Applicable |            |
|---|---------|-------|---------------|----------------|------------|
| Data Entry & VIR Accuracy               | E       | M     | D             | N              | Continue   |
| Inspector Retained Repair Documents     | E       | M     | D             | N              | Previous   |
| Clean & Safe Inspection Area            | E       | M     | D             | N              | Abort      |
| Condition of Probes & Hoses             | E       | M     | D             | N              | Help       |
| Camera Image Quality                    | E       | M     | D             | N              | Video Help |
| Condition of CDAS Cables and Connectors | E       | M     | D             | N              |            |

► Figure 9 & 10. Convenient Dashboard functionality for Auditors.

### 6.9.3 Transfer of Vehicle Test Data to County

**Overview:** Applus+ data solution complies with the SLC's IT Security Policy. Fast and reliable network protocols are used by Applus+ to transfer vehicle test data to the SLC website over the Internet efficiently and securely. Electronic vehicle data is exchanged between the workstations and *e-VID™*, then transferred to the SLC website. Applus+ supports data transmission to multiple, commonly used databases and FTP sites, facilitating the integration with the SLVHD's existing infrastructure. ► In designing a data transfer strategy for the SLVHD, Applus+ will leverage its on extensive experienced in developing custom applications that support real-time data transfer for numerous – and diverse -- I/M programs, including those in Massachusetts, Washington, and Illinois.

**Technical Features:** Applus+ is committed to providing the SLVHD with complete, accurate, and timely transmissions of vehicle test data. Electronic vehicle data will be exchanged between the workstations and *e-VID™* to be processed and validated and then transferred to the SLC's website. ► Using advanced encryption standards to prevent data from being compromised, vehicle summary data is sent to the SLC website over a secure socket-layer, using a client-less, VPN connection. All transactions between the *e-VID™* and SLVHD can be made via custom .NET XML web services, an industry standard for sending secured data requests and other transmissions across the Internet. Additionally, Applus+ supports real-time data transmissions to IBM WebSphere MQ Server, MSMQ, Microsoft SQL Server, SQL Server Service Broker, and FTP sites.

**6.9.4 Maintenance Records**

SLC’s I/M Reporting Dashboard is capable of providing the SLVHD with comprehensive maintenance reports developed to monitor equipment reliability, calibration statistics, security parameters, and other program information. The e-VID™ records and logs comprehensive maintenance reports and data and makes it immediately available to SLVHD personnel via Dashboard query and retrieval.

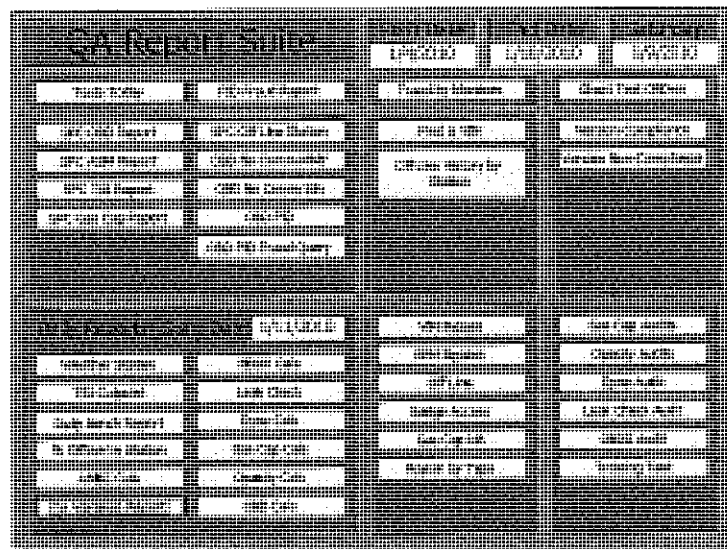
**Automatic Notifications/Alerts:** Salt Lake County and Applus+ personnel will benefit from the unique ability to select maintenance-related triggers that generate automatic notifications or alerts. The Applus+ Auto Alert Notification System (AANS) immediately notifies appropriate personnel when predetermined conditions arise. This dynamic system allows for both the addition of new alerts and/or discontinued use of ineffective alerts as the program evolves. Alerts can be received through email or by phone. QA staff is included on all communication alerts.

**6.9.5 QA and Ad Hoc Reporting**

The County’s I/M Reporting Dashboard is able to provide a variety of QA and ad hoc reports. Applus+ will provide an ODBC connection to an external access database allowing SLVHD personnel to create their own ad hoc reports. Applus+ will provide training to SLVHD personnel to ensure proper ad hoc report utilization. These standardized reports will be configured to meet the specific requirements outlined by the SLVHD. Applus+ will work with the SLVHD to develop a comprehensive list of required program reports, test reporting accuracy, and deploy the associated modules on the I/M Reporting Dashboard.

Since Applus+ provides real-time access to test data, the Dashboard is able to generate reports containing up-to-date vehicle statistics and other related data with a single click. ► Users are able to query and retrieve vehicle data, set various filters, specify report format such as CSV, Excel spreadsheet, or PDF including printer friendly reporting options.

**QA/QC Database via the Dashboard:** Applus+’ Reporting Dashboard makes QA/QC tracking and reporting quick and simple. The Dashboard interface (via e-VID™ data tables) provides personnel with a variety of reporting and tracking capabilities that allow for the planning and prioritizing of all audit functions. ► For example, authorized personnel can track and access reporting for weekly, monthly and quarterly Quality Control Reports that reflect the number of internal equipment audits and results (pass/fail) by station, and/or a description of repairs conducted as result of failed internal equipment audits by station. The Reporting Dashboard is available via any web enabled



► Figure 11. QA/QC Database demonstrating comprehensive Dashboard functionality.

connection and hosted over a secure socket layer connection.

#### **6.9.6 Reporting Total Emission of Pollutants**

By using previous and current mileage values and approved emission estimates, Applus+ can supply automated reports estimating the total emission pollutants between I/M tests. Also, this information can be used to forecast emission reductions for TSI tests based on previous test readings and the reductions created after repairs.

#### **6.9.7 Sample Reports**

Data access, retrieval, and organization has never been easier with the incorporation of the Applus+ robust and user-friendly reporting application proposed for use in the SLC program. Applus+ has provided a variety of sample reports available to the SLVHD and station personnel via the Applus+ Reporting Dashboard in *Appendix B*.

### **Section 6.10 Hardware/Equipment Upgrades**

To ensure the SLVHD's station network utilizes the best equipment system to inspect vehicles, Applus+ will include language in station Service Contracts describing hardware upgrades and explicitly informing station owners that the expense will be borne solely by I/M stations participating in the program. ► As soon as the applicable hardware upgrade is defined and approved by the SLVHD, the Applus+ team of qualified technicians will install the upgrade in all workstations. Stations can pay for the upgrades using the same payment method used to purchase consumables.

To ensure all hardware and software remains constantly up-to-date without causing station downtime, Applus+ will maintain versioned image builds of all software updates, including Windows MSI or CAB files. ► Updates will be performed using a secured Internet connection, allowing for swift, mass deployment across the entire station network. For your convenience, Applus+ is able to store and catalogue a comprehensive list of changes and enhancements on the Change Management Tool. In close collaboration with the SLVHD, Applus+ will bundle any approved changes into an image build which will be tested and made available for workstation download via the Internet.

Applus+ uses a web-software download mechanism intelligently designed to install upgrades. Workstations systematically check for the latest software version stored in its local configuration table during each communication cycle. If the local version differs from the one available on the FTP server, the workstation will first upload all offline records (if any), then download the new image build from the secure FTP site. The downloaded MSI file will automatically run and replace the old software version with the latest release. The software version will be recorded in each test record allowing Applus+ to track release versions. ► This download mechanism is successfully supporting Applus+ I/M programs in Connecticut, Washington State, and Illinois.

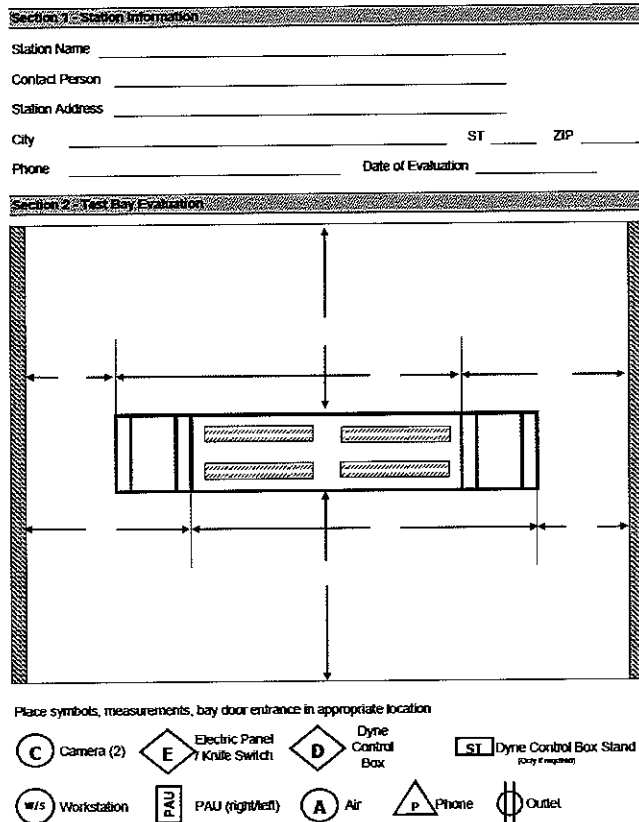
**Section 6.11 Equipment Installation, Consultation & Maintenance**

Applus+ is committed to meeting and exceeding SLVHD equipment requirements by not only offering consultation and complete equipment installation instructions, but by also taking a hands-on approach to each station's equipment transition and start-up. Applus+ will prepare a site evaluation guide, along with the proper forms to facilitate official entry of all stations in the new program. This approach will ensure station owners are fully informed and aware of their individual station responsibilities and expectations, as well station status in meeting updated program requirements. Figure 12 represents the Applus+ Site Evaluation Form, which can be tailored to meet specific SLC requirements.

Applus+ will modify its site preparation guide in collaboration with (and for approval by) the SLVHD. The sample guide information below will be amended as necessary to comply with local SLC regulations.

**Station Responsibilities:**

- ⊕ All fees related to site modifications including, but not limited to, electrical service and sub-panels; air line, regulator, water separator and filters; dedicated telephone installation and recurring charges.
- ⊕ Ensuring all site modifications comply with local, state and Federal regulations and codes.
- ⊕ Allow Applus+ or its representative(s) access to conduct a site evaluation prior to equipment installation.
- ⊕ Provide an executed Landlord Waiver Form, if property is not owned by the Station.
- ⊕ Obtaining all permits, consents and approvals prior to installation of UTAH2011 Inspection equipment.
- ⊕ All costs and fees to obtain permits, consents and approvals.
- ⊕ Provide a clean, clear area for equipment installation. Applus+ will not move or relocate existing equipment or obstructions.
- ⊕ Provide dedicated power: 115v AC 20 amp outlet for Cabinet and 208/230 VAC single phase.
- ⊕ Provide unrestricted access for the purpose of construction and/or installation.



► Figure 12. Sample Site Evaluation Form.

- ⊕ Assume liability for all costs associated with unforeseen obstacles, obstructions and/or environmental issues.
- ⊕ A dedicated line for the DSL and/or Cable modems. The line for the modem must be located within five (5) feet of workstation.
- ⊕ Any and all fines related to improper installation unless they arise solely from work Applus+ has been specifically contracted to perform.
- ⊕ Any approvals, consents or permits required for the expansion of the existing facility or construction of a new facility to be used for vehicle inspection purposes.
- ⊕ Signing the Site Evaluation Form.

Equipment installation and activation will be conducted during the same timeframe as equipment delivery. Stations receiving equipment first will also have it installed and activated first. ► The Applus+ equipment service personnel are expert in implementing station equipment installation and activation. They will provide a hands-on review of inspection procedures with each station's personnel. Applus+ personnel will perform each type of test the analyzer workstation is capable of (TSI, OBD, Gas Cap and optionally, opacity) with stations Inspectors. This onsite training ensures station inspection personnel are familiar and knowledgeable of analyzer operation and test procedure functionality prior to program start.

► Each station will receive a bay Acceptance Test Procedure (ATP) after equipment activation. The bay ATP will check and verify the functionality of all analyzer components, communications, security features, software, hardware and overall equipment performance.

To be clear, no station will be activated for customer inspections unless and until at least one of its technician's takes and passes the SLVHD Inspector Training Course. The hands-on training Applus+ provides during installation and activation is a value-add service extended to the SLVHD and is in addition to – not in lieu of -- SLVHD Inspector training.

### **Section 6.12 Used Equipment Methods & Costs**

Stations exiting the program will be held responsible for any damage(s) to UTAH2011 equipment or for any missing components as outlined in the Service Contract. If exiting, Applus+ station Service Contract defines assessment details of a workstation evaluation. If necessary, equipment will be refurbished and a detailed bill of materials will be established, payable by the exiting station. Stations entering the program network will be given the option to purchase new or refurbished UTAH2011 equipment, if available. A comprehensive price list will distinguish the cost differences between the two options.

### **Section 6.13 Analyzer Lockouts**

Applus+ will work closely with the SLVHD to provide policies and procedures for locking out analyzers from testing when necessary. ► All Applus+ programs employ this functionality, and the analyzer can be locked out from one or more test types, depending on the reason. The following is a brief summary of how lock-outs occur:

Each station, workstation, and Inspector is identified by unique identification numbers. Applicable Applus+ or SLVHD agency personnel are able to access lock-out functionality via the Dashboard interface and assign the appropriate level of the lock-out:

- + **Station lock-out** – lock-outs all UTAH2011 workstations at the defined station (performed when a station needs to immediately be removed from testing and has multiple workstations);
- + **Workstation lock-out** – lock-outs the workstation due to issues such as maintenance or investigation needs concerning calibration and/or auditing; and
- + **Inspector lock-out** – removes all software permissions for a specific Inspector to inspect vehicles at all workstations across the network (typically performed during cases of termination, suspension, suspected misuse or fraudulent activity).

#### **Section 6.14 Tasks to be Completed Before Program Start**

Applus+' Project Management team submits for SLVHD approval an Implementation Schedule and Time Table for the following deliverables:

- + **VID & Data Transfer** – complete and full operational
- + **Operational Equipment** – installed in 200 stations
- + **Part Inventory** – in stock and ready for use
- + **Trained Staffing** – ready to serve the County and I/M stations
- + **Hardware & Software Functionality** – proven compliant by ATP testing  
Applus+ prioritizes effective transitioning as a key element of its customer satisfaction and quality assurance service, which is a key driver in the Transition Plan development. ► The comprehensive Gantt Chart in *Appendix C* details the strategic scheduling of all SLC program deliverables and will serve as the basis for collaboration with SLVHD representatives on a final schedule that ensures the complete satisfaction of the SLVHD agency. ► All deliverables will meet the SLVHD's requirement for deliverable achievement 30 days prior to April 1, 2011.

## Section 6.15 Customer Service


The Applus+ commitment to deliver unparalleled customer service recognizes that both customer and motorist satisfaction is a paramount service and responsibility – and is a key success driver in all Applus+ vehicle inspection programs. Since the SLVHD serves as the main point of contact for program concerns, including motorist issues, Applus+ is sensitive to the high profile nature of this program and will work closely with SLVHD to ensure full compliance with all policies and procedures related to customer service. ► To maximize the satisfaction of SLC motorists, Applus+ will provide: reliable equipment and perform all maintenance and upgrades during non-business hours; data technology to provide swift pass/fail/repair information to motorists; ensure network stations maintain convenient business hours; and provide training and other efforts to help ensure all station personnel are 100% customer service-oriented. Applus+ holds an extensive background in providing exemplary customer service to motorists. In fact, in most of its I/M programs, Applus+ serves as the main source of contact concerning customer service and issue resolution. ► Whether it's operating a customer Call Center, providing classroom training for program personnel concerning customer service principles, or tracking and providing follow-up to customer complaints and concerns via Dashboard functionality – Applus+ has **significant** experience providing continuous, quality service to the ultimate customer, the motorist.

In additionally, the Applus+ team has extensive customer service training and hands-on experience in addressing professional customer interaction, listening skills, complaint resolution, conflict mitigation, customer empathy, and courtesy practices and phraseology.

► Applus+ is committed to working with SLVHD, SLC and station owners to ensure SLC motorists receive the best program services possible. We will provide well trained, professional Applus+ staff and ensure customer service-oriented services and trained, professional staffing is in place prior to start-up.

### 6.15.1 Customer Satisfaction Procedures

“Customer” can be defined on three different levels within this contract. The customers of Applus+ are the SLVHD agency and network I/M stations. Since the SLVHD and I/M station owners interact with the motorists directly, Applus+ refers to the SLVHD and I/M station as their core customers (regardless, Applus+ stipulates that any of its interaction with motorists will





### An A+ Review

Here's what a motorist had to say about the Applus+ testing experience:

*“Unbelievable! The time spent undergoing this emissions inspection was amazingly fast and efficient. It took away my anxiety about vehicle emissions testing. I'm glad I came to this facility. Also, the staff presented themselves in a very respectful and professional manner from the testers to the office personnel. Thanks!”*

--Satisfied Illinois Motorist

always be positive and courteous). Applus+ expects its program personnel to treat all customers with respect and courtesy. From the ground up, Applus+ personnel undergo professional training courses in order to learn real-world, everyday customer service principles:

**Understanding + Courtesy + Priority = Applus+' Customer Service Philosophy**

Whether it's a phone call, letter, or a face-to-face interaction, all customers should be treated fairly and assisted quickly should any questions or concerns arise. In order for the SLVHD and I/M station to fully assist its customers, each network station's Dashboard features a Customer Service application made available to the SLVHD, Inspector personnel, and program management. ► Complaints, compliments, questions and lists of issues and resolutions will all be cataloged electronically for review, printing, and follow-up, if necessary. Management will be able to generate reports to ensure that the customer voice is heard and their needs are documented.

Additionally, Applus+ utilizes its ISO commitment and certification to provide comprehensive customer service within all facets of this program. Applus+' customer service includes:

- + Delivering innovative and reliable solutions;
- + Ensuring personnel are courteous and knowledgeable by providing specialized training in customer service; and
- + Maintaining communication with SLVHD personnel concerning their customer call center, as well as providing I/M stations with the Applus+ hotline assistance number.

Applus+ team members are experienced in providing special accommodations to disabled or special needs customers. With SLVHD approval or requirement, all stations receiving customers should ensure their facility is – and will remain -- accessible to the public, including those with specific access needs.

**6.15.1.1 Station/Contractor Communication**

I/M stations will be provided multiple communication options for quickly contacting the Applus+ SLC management team. The fastest method is a phone call to the SLC program headquarters in order to promptly discuss needs or concerns. ► All station calls will be logged into a station communication database to track the date and time, the station personnel calling, the Applus+ team member providing resolution, and a detailed description of the issue. This data can be used for Applus+ and SLVHD analysis to determine trends in station issues. Stations may also use email, postal mail, and even personal visits to the SLC program headquarters. Applus+ SLC management team will be available to station personnel every day during business hours to mitigate and resolve any program issues or concerns. The SLVHD will have access to station issue reports generated from the SLC Dashboard.

### 6.15.1.2 Contractor/Station Communication


Following final agreement on a contract between Applus+ and the SLVHD, Applus+ will proactively work to establish effective communication with all participating stations. We will, for example, host and conduct formal seminars to fully inform station owners and appropriate personnel of program and contract revisions. During this informative seminar, Applus+ will also provide a resourceful information program packet that includes the new station agreement. The goal of this seminar is to simply and effectively communicate any and all changes from the former program to the new program. Applus+ will conclude the seminar with a question and answer opportunity, as well as one-on-one conversation opportunities between station owners and Applus+ management/program personnel. Since effective communication is always an integral component of decentralized program success, Applus+ believes establishing this conversation concerning station Service Contracts is a vital and important first step. ► Overall, Applus+ will establish and execute Service Contracts with all participating network I/M stations **prior to** transition of service under the new I/M program contract between Applus+ and the SLVHD (i.e. prior to April 1, 2011).

The next step is to continue effective communications between Applus+ and the program stations. Applus+ will communicate with the stations through multiple means. In addition to standard communication means of mailers and phone calls, all station equipment will have the ability to receive email from the program VID. Applus+ will also provide all stations a hotline number where they can speak to a live Applus+ Representative during program hours. ► The Applus+ team is committed to providing open communications with station owner. If, at any time, the SLVHD believes additional communications are needed, Applus+ will work with the SLVHD to ensure all communication needs are addressed and achieved.

## Section 6.16 Customer Problem Resolution

### 6.16.1 Issue Resolution Procedures between Station & Contractor

Applus+ sets a high priority on establishing positive relationships with participating stations and an equally high priority on issue resolution. The Applus+ SLC Program Manager, Barton Richter, is a seasoned professional equipped with the skills to address and resolve program issues. In general, our Program Manager will address issues with the station, determine the facts prompting -- and assess the causes of -- any complaint. Our staff will work toward a resolution satisfactory to all parties involved and, in the event resolution is not achieved, will inform the SLVHD and the I/M Advisory Committee of the matter.





### A+ Program Communication

Here's what a State customer had to say concerning program communication:

*"Nice to know that that all levels of your organization know of us and are willing to work with us. I appreciate that we get to meet and talk with you all rather than just "know" of the corporate image. This isn't true of all companies we have worked with and it makes our relationship go more smoothly. Thanks for taking the time."*

-- Phyllis Baas, Department of Ecology, Washington Program

In the event, a satisfactory solution to both parties is not obtained, Applus+ will seek guidance from its internal I/M Advisory Committee. Applus+ will, at the same time, advise the station of their right to submit their complaint to the official I/M Advisory Committee for review.

Applus+ is committed to reaching a fair dispute resolution in all cases and will extend all efforts necessary to achieve this. It is important to note that Applus+ has successfully resolved disputes in all of its I/M programs.

Operationally, all issues/complaints will be tracked and recorded through the Applus+ Dashboard, which allows the Program Manager and the SLVHD to confirm procedures and resolution are uniformly provided to all stations.

### **Section 6.17 Commitment to Schedule**

Applus+ is committed to delivering all hardware and software on or before by the required due dates. ► With an efficient and aggressive Implementation Schedule in place and ready for SLVHD approval, **the UTAH 2011 system will be completed and 100% operational day one of program commencement.** Applus+ provides only the best resources and has the demonstrated expertise and capability to implement projects on-time and in-scope.

### **Section 6.18 Late Delivery/Implementation Damages**

#### **6.18.1 Late Delivery Fees – March**

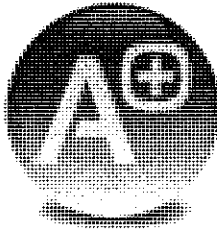
Applus+ acknowledges and accepts the completion dates outlined in this RFP and accepts all damages if these dates are not met.

#### **6.18.2 Late Delivery Fees – April**

Applus+ acknowledges and accepts the completion dates outlined in this RFP and accepts all damages if these dates are not met.

#### **6.18.3 Late Fee Payment**

Applus+ acknowledges and accepts that all damages incurred will be paid by the Contractor.



**FIRMS QUALIFICATIONS, EXPERIENCE  
& PHILOSOPHY**

### **Section 8.4.2 Firm Qualifications, Experience and Philosophy**

**Firm Qualifications:** Applus+ is a global corporation backed by the Carlyle Group, a global equity firm with nearly \$91 billion in assets. ► Having successfully served as Salt Lake County's I/M Contractor in the past, Applus+ has maintained its license to do business within the State of Utah since early 1998. The company's beginnings started with operating and managing only one vehicle inspection program. Regardless of Applus+ small, initial customer base, their focus on quality and customer service has never faltered. Applus+ grew and soon managed and transitioned I/M programs in Salt Lake County, Utah and the states of Connecticut, Illinois, Massachusetts, Rhode Island, and Washington State, as well as outside of the U.S. in Denmark, Ireland, and Spain. With a January 2010 implementation of the Republic of Ireland's nation-wide program, an additional 1.4 million vehicles are tested by Applus+ per year, and with expansion plans of an I/M program in Finland, Applus+ growth continues. **Today, Applus+ globally performs more than 17 million annual vehicle inspections per year.**

**Experience:** Applus+ has upgraded its technical savvy and process control by reinventing outdated I/M programs. In Connecticut, Illinois, and Washington State programs, Applus+ pioneered testing security through biometric fingerprint and iris scanning. In Washington State, Applus+ developed and implemented the first self-service OBD inspection kiosk in the industry, which is now used and relied upon by its Illinois program as well. ► By utilizing the most sophisticated I/M technology available in the industry, the Applus+ Illinois I/M program benefits from an OBD communication accuracy rate **greater than 99.5%**. In Salt Lake County, Applus+ was the first contractor to develop an online consumables website, still used by the incumbent today. Via a CISSP-certified team of IT personnel, Applus+ customers benefit from continuous advancements in I/M test systems, fraud prevention, and software development, as well as enterprise level relational database design and development, migration and optimization, role-based web portal development, and enhanced reporting applications.

Applus+ experience will provide substantial added value to Salt Lake County: accurate testing software, data security, real-time reporting results, and an overall, modernized I/M program. ► Applus+ is fully prepared and capable of providing SLC with the most technologically advanced – and cost effective -- I/M program available in the industry today. Through lessons learned and achievements in other Applus+ programs similar in scope and size to the I/M program we are proposing for SLC, Applus+ can and will deliver its proven, industry leading capability of seamlessly transitioning your existing I/M program.

**Technology Philosophy:** Applus+ is a recognized leader in the vehicle services market, known for providing high quality, end-to-end integrated solutions for government and corporate partners and customers. Founded in 1996 as a decentralized vehicle emissions testing provider, the Applus+ corporate philosophy at the time was that of outsourcing the technology while capitalizing on expertise in managing all of the components of their Inspection and Maintenance programs. ► However, after successful implementations and relationships in the I/M jurisdictions of Salt Lake County, Utah, and the states of Georgia, Washington, Massachusetts, Rhode Island and Connecticut, Applus+ recognized the need to expand its services to include state-of-the-art testing technology without having to rely on the hardware and software alternatives available in the marketplace. Therefore, Applus+ completed their full service

offering with the acquisition of AutoLogic– an established industry leader in the design and production of advanced vehicle emissions testing, aftermarket diagnostic equipment and software solutions since 1991. Applus+ now provides hardware and technical support to other equipment providers in the U.S. I/M industry, including:

- + ESP with software applications that run their OBD and TSI test units in the North Carolina program; the software applications that run the TSI/ASM/Diesel Snap Acceleration and Lug Down testing units in the China I/M Program; and the software that runs the J1667 Snap Acceleration test for the Red Mountain test units used in the Ontario Drive Clean Program;
- + Parsons with the software applications and hardware required to run their OBDII test units in the Louisiana program, and the software applications used to drive the Parsons' TSI/ASM units in China;
- + Snap-on with Applus+' OBD driver and test procedure software used in all of their test units in service in Virginia, Pennsylvania, Georgia, North Carolina and, California; and
- + Gordon-Darby with diagnostic equipment and parts to service analyzers used in Louisiana.

**Environmental Philosophy:** Applus+ is recognized as a global, environmentally-focused, full-service, end-to-end, custom information technology and hardware provider. ► the overriding goal of every Applus+ I/M program is to remove or repair vehicles that contribute to air pollution. Applus+ is committed to being an environmentally and socially responsible advocate and is particularly active within the communities it serves. Reducing toxic emissions, initiating recycling programs, and promoting tree conservation are just a few of the steps Applus+ takes to help preserve the environment.

### **Recognizing Applus+ as an Environmental Advocate**

► Applus+ is widely recognized for its environmental efforts and was recently recognized by King County, Washington as a “Best Workplace for Recycling and Waste Reduction 2010.” As discussed in this proposal, Applus+ currently manages an I/M contract in Washington State and we have initiated environmental efforts as a part of our community and environmental services.

The following excerpt, from King County’s official website, further illustrates our commitment and our success in this regard.

“As of 2009, Applus Technologies implemented new recycling and yard waste containers at almost all 16 of their Washington Emissions Testing stations. They provide recycling bins next to almost everyone’s desk for easier recycling habits. Throughout their facilities, there are food waste bins provided for composting food scraps. To ensure the effectiveness of all of the recycling and composting efforts, the bins are marked with clear instructions on the ‘dos and don’ts’ of recycling. Applus Technologies has also implemented a toner reduction by reusing cartridges and refilling them for all of their office printers. They have been able to reduce their paper waste by implementing the majority of their correspondence through e-mail and scanned documents. The technical equipment of Applus Technologies is repaired on site by technicians or re-used for other material parts. They have also created a yearly booklet for employees, which incorporates environmentally sound practices.”



Applus+ will support the SLVHD's goal of cleaning the air and preserving Utah's natural environment through a number of **green** initiatives. Applus+ will, for example, incorporate the following initiatives directly into the SLC I/M program, starting with the station network:

### **I/M Station Responsibility**

Applus+ will provide all SLC stations a comprehensive plan outlining easy methods for maintaining an eco-friendly repair facility. The Applus+ plan will be cost-effective and goals will be promoted as non-mandatory, yet highly encouraged. Applus+ overall goal is to provide environmentally friendly options to repair station owners while serving as a resource. ► Additionally, on a regular basis, Applus+ will create and distribute an electronic newsletter to the inspection network featuring pertinent information concerning environmental issues that are applicable to the State of Utah and Salt Lake County. All information will be subject to review by the SLVHD to ensure a consistent – and effective -- message is conveyed to the I/M stations.

### **Workstation Recycling**

Collaborating with Western Metals Recycling, the largest full-service metals recycler in the Intermountain West, Applus+ offers the SLC a comprehensive plan for removal and disposal of unwanted workstations and dynamometers of the current program, which involves recycling to the greatest extent possible (non-recyclable components will be disposed of in accordance with Utah waste ban procedures).

### **Consumer Pollution Contribution Report**

Applus+ believes the company can make a substantial contribution in the area of diesel vehicle emissions reduction. Applus+ wants to go beyond simply testing diesel vehicles to ensure compliance with air quality standards; Applus+ wants to **significantly reduce** the amount of diesel emissions released into the air altogether. Applus+ offers multiple solutions:

- + **Diesel Retrofit Program:** Diesel Retrofits are devices installed on diesel engines to reduce the amount of exhaust emissions. Applus+ will work with the SLVHD to establish a Diesel Retrofit Pilot Program. There are many products available for a diesel retrofit program in Salt Lake County, including: Diesel Particulate Filters, Diesel Oxidation Catalyst, and a Closed Crank Ventilation System. All products will be approved by the US EPA and the California Air Resource Board (CARB). In order to be successful, the Diesel Retrofit Program will require a local diesel fleet, retrofit devices, and consistent diesel engine testing. Another key to success is involving the diesel community within this process.
- + **Diesel Engine Improvement:** A key to reducing the amount of diesel exhaust released into the atmosphere is to ensure all diesel engines are running efficiently. Applus+ will work with the repair community to establish an online forum where diesel engine repairs can be discussed and solutions can be identified. The forum will be established and monitored by Applus+' SLC management personnel.
- + **Idle Reduction Technologies:** Idling vehicles rapidly burn fuel and emit large quantities of air pollution and greenhouse gases each year. Idle reduction technologies and practices are integral toward reducing petroleum consumption and emissions. Reducing idle time not

only saves fuel, engine wear, and money, but also reduces overall emissions and noise. A variety of innovative technologies are employed to reduce heavy-duty fuel use, such as onboard equipment like **automatic engine stop-start controls** and **auxiliary power units**. Additional strategies are available for light- and medium-duty vehicles and school buses. Applus+ will provide information materials to network I/M stations explaining the benefits of these idle reduction technologies. Information regarding public funding sources will also be available.

### **One Million Trees for One Million People**

Applus+ promotes the goals of this remarkable, ten-year campaign to plant one million trees in Salt Lake County by 2017. ► Since trees are a key element in the reduction of air and water pollution, as well as vital to the health of the public, Applus+ will support this program within the station network. Applus+ will utilize Inspection Stations as a way to promote and advertise the program. To further our commitment, Applus+ employs a degreed Forester who will be available to SLC as a resource. ► Outside of Salt Lake County, Applus+ participates in a variety of other **green** initiatives, including:

#### **Earth Day 2009**

Thirteen members of the Applus+ Team in Atlanta, Georgia provided help to the Atlanta Good Shepherd Community Church on Earth Day 2009. The Applus+ Team prepped the land for planting and vegetation in addition to removing rocks, debris, and then planted trees, flowers, spices, and vegetables.

#### **Earth Day 2010 and the Arbor Tree Foundation**

On April 22<sup>nd</sup>, 2010, the Applus+ Corporate team celebrated the 40<sup>th</sup> anniversary of Earth Day by making donations to the Arbor Tree Foundation. For every \$100 that was donated to the foundation, ten trees were planted in the California Plumas National Forest, an area devastated in the last few years from forest fires that destroyed many of the park's trees. With such an overwhelming and charitable response, Applus+ plans to expand participation to its various program personnel next year.

#### **CITA**

CITA is the international organization dedicated to improving road safety and protecting the environment by developing international best practices for the inspection of road vehicles. CITA is represented by members in every continent, inspecting over 200 million vehicles a year. Members are comprised of national and local government officials around the globe. ► Applus+ Chief Executive Officer, Tom Springer, is the Chairman of the Regional Advisory Group for North America. Springer serves as an inspection industry advocate and spokesperson to Federal agencies. As a customer of Applus+, SLC will have access to international resources in regards to vehicle inspection best practices.

**Project References:** Applus+ manages a number of decentralized I/M programs across the nation. The project references provided below summarize the Applus+ role within enhanced I/M programs that are similar in scope to the next generation I/M program SLC is requesting. These summaries allow the SLVHD to review program details and further demonstrate Applus+

expertise in designing, implementing and managing I/M programs and to effectively transition them through a comprehensive technology upgrade:

**Connecticut Emissions Testing Program.** In Connecticut, Applus+ successfully transitioned a complex I/M program involving an existing ESP centralized network into a decentralized private facility network and trained 1,600 new Inspectors. ► In November 2009, Applus+ was awarded a contract extension reaffirming the state agency's satisfaction with Applus+' program management and service.

| Connecticut Emissions Testing Program  | Program Data   | Type Of Tests Performed                               | Technology Employed By Applus+ For Database, Management Applications and Data Networks   |
|--|--|---|--|
| Program management<br>Vendor analyzer and software<br>Analyzer maintenance<br>Software ATPs<br>Overt auditing, training, reporting and finance | 1.1 million vehicle inspections annually<br>Manage 275 stations and 1,600 inspectors | ASM-2525<br>TSI<br>OBDII<br>Diesel Opacity<br>Gas Cap | <ul style="list-style-type: none"> <li>☒ Applus+ management VID accounting functions and reporting applications</li> <li>☒ Iris Scanning (biometrics)</li> <li>☒ SQL database station communication network</li> <li>☒ Dial-up to VPN via TCP/IP communications and connected in real time to DMV and to Applus+ backup data management system</li> <li>☒ Reporting VID – SQL database on Windows platform;</li> <li>☒ Analyzer applications – IE browser interface in MS Windows XP based on .NET development platform</li> </ul> |

The Connecticut program comprises 275 decentralized stations and more than 1,600 Inspectors, conducting over 1,100,000 emissions tests annually. Applus+ provides private inspection facilities with customized equipment as well as training and consumables needed to perform proper inspections. Applus+ conducted seminars to recruit facilities to participate in the enhanced I/M program. In addition, Applus+ provides equipment service and maintenance, conducts Inspector training, and operates a facility call center.

► Similar to the services proposed for the SLVHD, Applus+ operates and maintains a VID system connecting all test facilities and receives inspection, repair, and calibration data. The VID provides facilities with the means to order test authorizations from the test equipment. This system interfaces with financial institutions using a custom-designed application that allows Applus+ to debit test facility accounts for payment. Applus+ also performs quarterly overt equipment compliance audits to ensure proper equipment functionality. Applus+ and the Connecticut DMV jointly perform trigger audits and data analysis, SPC reports, and other analytical tools to monitor inspection data.

► For four years, Applus+ has chaired and convened an advisory council of 10-12 test facility owners. The council communicated with owners on issues relating to the I/M program. Regular meetings were held with the DMV and Applus+ to discuss topical issues.

Prior to the commencement of the I/M program, extensive ATP testing was performed on all equipment and software, including the dynamometer, diesel opacity tester, gas cap tester, analytical system, and all software functions. All subsequent software releases receive an updated, detailed ATP by Applus+ and DMV personnel.

Contact information for Applus+' Connecticut client is as follows:

**Connecticut Department of Motor Vehicles**  
 Connecticut Emissions Program, Decentralized  
 Contract Dates: October 12, 2003 – May 12, 2010  
 Status: Active, Applus+ is the prime contractor

**Point of Contact:**  
 Kenneth F. Nappi, Bureau Chief  
 State of Connecticut Department of Motor Vehicles  
 60 State Street  
 Wethersfield, CT 06161  
 860-263-5144 or ken.nappi@ct.gov

**Illinois Vehicle Emissions Testing Program.** Applus+ was awarded a contract to manage Illinois' hybrid vehicle emissions testing program (featuring decentralized and centralized networks). The Illinois program implementation provided Applus+ with quality experience in transitioning a program from one contractor to another. Similar to the needs of the SLVHD, this transition included the installation of brand new equipment as well as the creation of a new e-VID™.

| Illinois Vehicle Emissions Testing | Program Data   | Type Of Tests Performed | Technology Employed By Applus+ For Database, Management Applications and Data Networks |
|------------------------------------|--|-------------------------|--|
| Hybrid Program Management          | 1,700,000 vehicle inspections annually                       | OBDII                   | ⊕ Applus+ VID development  |
| Testing equipment                  | Manage 17 centralized stations and 38 decentralized stations | TSI                     | ⊕ Iris Scanning Biometrics   |
| Analyzer maintenance               |  | Gas Cap                 | ⊕ Reporting Applications   |
| Software ATPs                      |  |                         | ⊕ Automated notification systems   |
| VID                                |  |                         | ⊕ QA and auditing applications   |
|                                    |  |                         | ⊕ Oracle RDBMS on .NET platform  |
|                                    |  |                         | ⊕ Data migration   |

This program is a hybrid network design comprised of 17 centralized facilities and 38 decentralized test and repair inspection facilities. The Illinois I/M program tests approximately 1,700,000 vehicles per year. Applus+ uses its own custom test systems for this I/M program.

Applus+ develops and hosts a comprehensive motorist and repair facility website. ► Illinois motorists have access to all I/M program related information and facilities have access to industry-related repair news and other services. Applus+ Service Technicians provide equipment repairs and service to all centralized and decentralized locations. Like in other programs, comprehensive ATP testing was performed on all equipment and software to verify that the system conformed to requirements.

Contact information for Applus+' Illinois client is as follows:

**Illinois Environmental Protection Agency**

Illinois Vehicle Emissions Testing Program,  
Hybrid: Centralized/Repair and Test Facilities

Date of Contract: May 1, 2008 through April 30,  
2013

Status: Active, Applus+ is the Prime Contractor

**Point of Contact:**

Chris Demeroukas, Manager

Division of Mobile Resources, Illinois Environmental  
Protection Agency

1021 N. Grand Avenue, East

Springfield, IL 62794-9276

Tel: 217-524-4369 or chris.demeroukas@illinois.gov

**Washington State Emissions Check Program.** Washington is another example where Applus+' transitioned its I/M program with a new VID, equipment, and management services with uninterrupted service to the customer and no downtime. Salt Lake County will benefit from this relevant and similar transition experience.

| Washington State Emissions Check   | Program Data   | Type Of Tests Performed   | Technology Employed By Applus+ For Database, Management Applications and Data Networks                                       |
|--|--|---|--|
| Operate and manage centralized network of stations<br><br>Employ and train all management and Inspectors | 1,100,976 vehicle inspections (2008)<br><br>Operate 16 facilities with 70 lanes<br><br>Employ 250 inspectors | ASM-2525<br><br>TSI<br><br>OBDII<br><br>Gas Cap<br><br>Diesel Opacity | ☒ VID - SQL database on MS.NET platform<br>☒ Station communications: Wide Area Network<br>☒ Fingerprint Scanning (biometric) |

This I/M program employs 16 Applus+ facilities that utilize 70 lanes and more than 250 Applus+ employees as certified Inspectors. Applus+ conducts between 980,000 (low volume year) and 1,200,000 (high volume year) emissions tests annually. Applus+ provides and maintains all software and I/M program equipment, and performs all tests and waivers. The Applus+ QA/QC Manager coordinates QMS audits, performs unannounced facility audits, and processes database inquiries based on anomaly triggers to identify potential fraud.

Contact information for Applus+' Washington client is as follows:

**State of Washington, Department of Ecology,  
Air Quality Division**

Washington Vehicle Emissions Program

Date of Contract: July 1, 2002 - June 30, 2012

Status: Active, Applus+ is the Prime Contractor

**Point of Contact:**

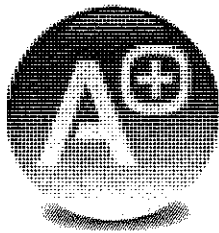
Phyllis Bass, Manager, Data Management

State of Washington Department of Ecology, Air Quality  
Program

300 Desmond Drive, SE

Olympia, WA 98504

Tel: 360-407-6822 or pbaa46I@ecy.wa.gov



## **PROJECT TEAM & ORGANIZATIONAL INTERFACE**

**Section 8.4.3 Project Team & Organizational Interface**

**Industry Leadership:** Applus+ offers the SLVHD a highly-qualified team of I/M veterans with 10-to-20+ years of I/M and related industry experience. The Applus+ SLC team will provide highly trained professionals experienced in I/M program transition, hardware and software implementation, program management and other decentralized-specific services.

**Management:** Applus+ management team is uniquely positioned to meet all requirements in the RFP and provide the SLVHD the industry's most capable professionals to lead all implementation efforts and manage ongoing, daily operations. ► The Applus+ team will be led by 10 year I/M industry expert and an **ASE-certified Operations Manager: Barton Richter**. Barton has a successful career in program management, program implementation, QA/QC processes, and field auditing – providing the SLC program with a senior manager whose experience includes the specific skills and capabilities that this program will require. His direct experience with implementing and operating modernized I/M technology is strategically valuable to transitioning the SLC program. ► In addition, the Applus+ team includes an experienced certified Project Management Professional – Matt Petersen -- who will oversee all implementation efforts as the SLC Project Implementation Manager. Barton and Matt will lead the Applus+ team and ensure all SLC implementation deliverables are executed in accordance with specific contract guidelines.

**IT:** Applus+ will deliver an innovative solution, designed to meet – and surpass -- the SLVHD's data processing requirements. The SLVHD will benefit from collaboration with the Applus+ team of I/M technology professionals with a breadth of experience in the design, development, and deployment of modern technical solutions. ► Below is a brief listing of Applus+ IT personnel certifications and academic accomplishments offered to the SLVHD:

**Summary of Applus+ Team Members' Credentials**

|   |  |
|---|--|
| + ASE certified Master Automotive Technician  | + MCDBA (Microsoft Certified Database Administrator)                                     |
| + Cisco CCNA, Boston University Corp Ed Center  | + MCP (Microsoft Certified Professional)   |
| + CISSP (Certified Information Systems Security Professional)   | + MCSD (Microsoft Certified Systems Developer)   |
| + Computer Career Program, DePaul University  | + Brainbench Project Management Certification  |
| + Graduate Studies, Northern Illinois University, Geographic Information Systems                      | + CCIE (Cisco Certified Internetworking Expert)  |
| + HTML 3.2 Certification  | + CCNA (Cisco Certified Network Associate)   |
| + L1 Advanced Level Engine Performance certification  | + CCNP (Cisco Certified Network Professional)  |
| + M.S., C.I.S., University of Michigan  | + Certificate in Digital Graphic Design & Web Development, The Illinois Institute of Art |
| + M.S., Computer Science, Illinois Institute of Technology  | + Certificate in Flash Action Scripting, The Illinois Institute of Art                   |
| + Master of Science, Computer & Information Science, Brennan School of Business, Dominican University | + Microsoft Certified Solution Developer in .Net Technologies (MCSD)                     |
| + Mastering Microsoft Visual Basic (Certificate), TeKnowldgy Education Centers                        | + Oracle DBA 8i Certification  |
| + Mastering Microsoft Visual C++ (Certificate), TeKnowldgy Education Centers                          | + Oracle DBA OCA (Database Administrator Oracle Certified Associate)                     |

Applus+ SLC IT personnel will communicate regularly with SLVHD, via weekly work meetings and product tutorials, to train its personnel to use the Reporting Dashboard and fully leverage its functionality, including administrative features and reporting capabilities, and other data access protocols specific to their needs.

**SLVHD Staffing Plan:** The Applus+ Staffing Plan will support the SLVHD's goals by providing qualified individuals accountable for ensuring quality program deliverables and customer service on a daily basis. The fold-out Organizational Chart immediately preceding this page illustrates Applus+ commitment to dedicate substantial resources and talent to the SLC program and details the scope of authority and reporting relationships for the SLC program team:

#### Introducing the Applus+ Team

Applus+ will dedicate to the SLC program a team of professionals with the high level of demonstrated experience and capabilities necessary to ensure a seamless transition with full program operational functionality in place on day one. Our SLC program team will be supported by select Applus+ professionals will serve as advisors, providing expertise on best practices and ensuring program success.

The Applus+ Team starts with the SLVHD's **onsite, 100% dedicated Program Manager, Barton Richter**, who will be based in the SLC area full time during Implementation and throughout contract duration.

#### *Barton Richter - SLC Program Manager*

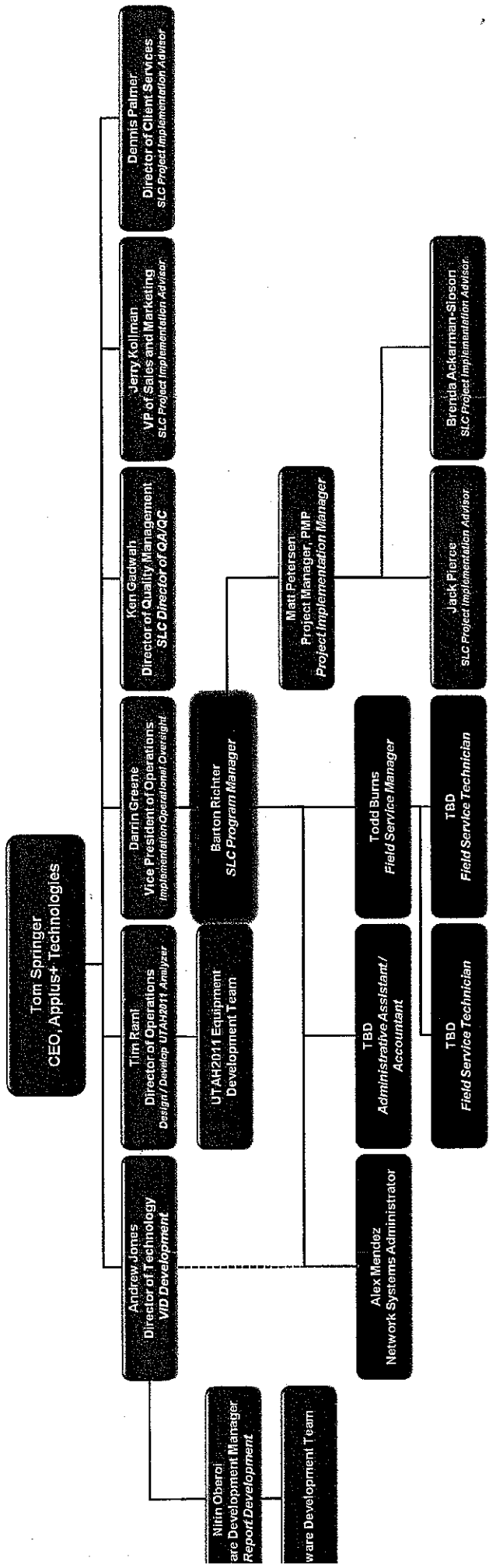
*Bart has been selected to utilize his vast I/M knowledge base to provide Salt Lake County with a smooth, on-time transition and successful management and program operations thereafter. He is 100% dedicated to the success of the UT2011 Program.*

**Relevant to the SLVHD's Needs:** Barton offers the SLVHD a multi-faceted I/M career, having performed the duties of Program Manager, Operations Manager, QA/QC Manager and Field Audit Specialist. Barton holds extensive background in transitioning program facilities and implementing newer equipment technology, as well as assisting with other program transitions involving the removal and installation of dynamometers, air and gas lines, wiring, and inspection equipment.

**Career Achievements:** An ASE-certified Operations Manager with over 10 years of program service dedicated to Applus+, Barton has served as a Program Implementation Technician in Applus+' Washington and Connecticut programs.

**Background:** Barton has garnered an extensive skill set of management, oversight, and coordination of Washington's modern I/M operations. Due to extended leaves of Program Manager, and QA/QC Manager for Applus+' Ireland start-up, Barton was tasked with the overall operation of the Washington Program, as well as continuation of his own daily responsibilities. Barton is continuously focused on providing overall program improvements, with areas of concentration concerning reducing wait times and improving customer satisfaction. Barton is currently responsible for oversight and coordination of all inspection facilities' operations.

**Agency Communication & Collaboration:** Barton will serve as a liaison of communication between



**Barton Richter - SLC Program Manager**

the SLVHD agency, Station owners, and the Applus+ SLC program team. Having worked directly with agency partners, including Washington's Department of Ecology, Barton is well-versed in communication and collaboration skills and will schedule regular IPT meetings to ensure continued program success and open lines of dialogues between all SLC parties.

**Scope of Authority:** Barton will serve as the main management contact of the program and all Applus+ program personnel will report directly to him.

**SLC Time Commitment:** 100%

**Tom Springer - CEO, Applus+**

**Relevant to the SLVHD's Needs:** As the Chief Executive Officer and North American manager of Applus+, Tom is able to provide his program management team with strategic direction and support for the SLC program. While some CEOs are seen as unattached from their customer's daily program operations, Tom has a vested interest in ensuring customer satisfaction and program integrity for each and every client as promised and intended.

**Career Achievements:** Tom has 19 years of executive experience with a demonstrated track record of success in strategic planning, business operations, QA/QC, profit and loss management, and technical program implementations.

**Background:** Tom offers the SLVHD an extensive background in executive management on behalf of inspections and maintenance (I/M) programs, licensing and systems integration services.

**Agency Communication & Collaboration:** Before his current assignment, Tom served as a Vice President for Verizon Business, providing strategic services to international, commercial and government clients. Tom is well-versed in providing superior client communication and is available to the SLVHD for any needs they may have.

**Scope of Authority:** Tom serves as the highest authority for Applus+ North America, with all corporate management personnel reporting directly to him. Tom will be advised by Darrin concerning implementation progress and operational success. Tom supports the entire SLC program team and will be available for assistance when necessary.

**SLC Time Commitment:** 10%

**Darrin Greene - Implementation & Operational Oversight**

**Relevant to the SLVHD's Needs:** Darrin served Applus+ in varying capacities, including four years as Program Manager of the Massachusetts Enhanced Emissions and Safety Test Program. Darrin has also played a key role in implementation efforts in Salt Lake City, Utah; State of Connecticut; State of Washington; State of Illinois, State of Georgia, and State of California. Additionally, he served as Technical Services Implementation Director for the former Massachusetts Enhanced Emissions and Safety Test Program. Therefore, Darrin offers the SLVHD well-rounded and extensive I/M experience.

**Darrin Greene - Implementation & Operational Oversight**

Having already worked with SLC I/M community, Darrin is familiar and knowledgeable of the program as it stands today and will incorporate his impressive background into the new generation of this program.

**Career Achievements:** Darrin has more than 22 years of dedicated experience specific to operational and project management, with the last 13 years focusing solely within the vehicle emissions testing industry.

**Background:** Before taking on senior operations responsibilities at Applus+, Darrin served as an independent consultant, providing program management and technical expertise for various I/M firms. His consulting services also included quality-management and process-improvement training. Applying the Six Sigma Methodology (a disciplined, data-driven approach for eliminating defects, reducing variation, and improving processes), Darrin facilitated training for industry giants like Motorola and Sara Lee.

**Agency Communication & Collaboration:** As the lead Implementation and Operational spokesperson, Darrin will maintain constant availability and communication with SLVHD personnel. He will have an in-depth assessment of program achievements, progress, and continuity on a daily basis. Additionally, as a certified Six Sigma Green Belt (CGB), Darrin offers a demonstrated understanding of business management and functionality, an inevitable value to constant program integrity throughout the implementation lifecycle.

**Scope of Authority:** Darrin will be responsible for ensuring all Implementation and Operation deliverables are met as intended. During Implementation, all SLC program personnel will report directly to him. Thereafter, Darrin will provide program support on behalf of Barton and his team, as necessary.

**SLC Time Commitment:** 50% during Implementation period, 25% after commencement

**Matt Petersen - Project Implementation Manager**

**Relevant to the SLVHD's Needs:** Matt's certified project management background will provide tremendous value to the SLVHD by ensuring that every component of program transition is performed properly and on-time, and is in specific accordance with contract requirements, industry standards, and QA/QC methodologies.

**Career Achievements:** With more than 10 years of extensive Program/Project management experience, Matt successfully served as Program Manager in the Georgia Emissions Program and also as the Program Manager in the Massachusetts Program. In addition to assisting on multiple program implementations in Washington, Connecticut, Illinois, and Ireland, Matt also coordinated Applus' Massachusetts ISO 9001:2000 registration efforts. Matt has also served as a Project Manager on multiple internal projects within the Applus+ organization.

**Background:** Matt began his I/M career as Senior Compliance Field Auditor for the Applus+ Rhode Island I/M program. He was promoted to Applus+ Waiver Center Manager for Georgia's Clean Air Force, where he served for more than two years. As a key member of startup teams for Applus+

**Matt Petersen - Project Implementation Manager**

inspection programs in Washington State and Connecticut, and Ireland, Matt gained invaluable I/M implementation experience and understanding. These skills will be applied toward managing implementation efforts in Utah.

**Agency Communication & Collaboration:** As a certified Project Management Professional (PMP) and member of the Project Management Institute, Matt is a certified management expert and will be fully capable of and dedicated to leading implementation tasks and responsibilities on behalf and in collaboration with the SLVHD. Ultimately, Matt will serve as a liaison between the SLVHD agency and Applus+.

**Scope of Authority:** Matt will provide support and leadership during the Implementation Period. He will advise and support Barton during these efforts and will collaborate regularly with the SLVHD concerning implementation achievements, issues, etc.

**SLC Time Commitment:** 100% during Implementation Period, 10% after program commencement

**Ken Gadwah - SLC Director of QA/QC**

**Relevant to the SLVHD's Needs:** Ken's experience -- in collaborating with software vendors, overseeing software development, equipment installation, approval testing, and program upgrades -- will be of great support in meeting the SLVHD's needs for a seamless and timely transition in its I/M program. And, importantly, Ken also has hands-on experience with the technology and systems that support all of Applus+ customers and Applus+ managed I/M programs in the U. S. He is experienced with, and highly skilled in, design optimization of Applus+ databases, queries, and reports and instrumental in directing the daily operations of the host computer system and peripheral equipment to consistently achieve better than 99-percent system availability.

**Career Achievements:** Ken has served the I/M industry in specialized technical roles for 27 years. During his career, he has been responsible for the installation, calibration, and technical repair of sophisticated I/M testing equipment. In addition, he has used his expertise in the development of specifications standards and procedures with both Applus+ software developers and outside vendors. Ken has also been involved in the development, refinement and deployment of I/M program software across multiple platforms for a number of state I/M programs.

**Background:** Ken offers an extensive I/M skill set having served Applus+ and other I/M companies in roles such as Field Service Technician, Technical Support Supervisor, Technical Support Manager, Software Engineer, and Information Technology Manager. With a background in computer systems technology and certification as an electronics technician, Ken offers an intimate understanding of technology, its functionality, and the quality controls necessary to ensure accurate development and deployment.

**Agency Communication & Collaboration:** Ken offers the SLVHD a background and skill set that is arguably unrivalled in the I/M industry. As the Director of Quality Management, Ken will work closely with the SLVHD agency and remain available to ensure quality processes are followed during every step of the implementation period, and thereafter for the life of the program.

**Ken Gadwah - SLC Director of QA/QC**

**Scope of Authority:** Ken will provide leadership over QA/QC functions and will provide support to applicable SLC program personnel during the Implementation period and thereafter as necessary.

**SLC Time Commitment:** 50% during Implementation, 25% after program commencement

**Andrew Jones - Director of Technology**

**Relevant to the SLVHD's Needs:** Andrew is a Microsoft Certified Systems Engineer, Windows NT 4.0 and IIS 4.0, TCP/IP, Windows 2000 with multiple electives, Cisco Certified Network Associate 2.0, and Cisco Certified Network Professional 2.0. His certification in IT project management represents his commitment to delivering optimal operational performance in the projects he is tasked with directing.

**Career Achievements:** Andrew offers more than ten years of experience in information technology (IT) departmental management and operations, with emphasis on the development, deployment, upgrade, and optimization of integrated networks according to organizational policies and program goals.

**Background:** Responsible for the Applus+ corporate office LAN/WAN, program operation sites, and customer networks, Andrew has considerable experience managing network hardware and software configuration, integration, and maintenance for web and data communications. He currently manages the Applus+ Data Center. Andrew is additionally responsible for the corporation-wide network and its servers, file server storage, system backups, the company-wide email system, system security, and access control.

**Agency Communication & Collaboration:** Via regularly-scheduled work meetings and IPT sessions, Andrew will communicate to the SLVHD agency progress in implementing all IT-related deliverables and thereafter ensuring full functionality and connectivity throughout the entire SLC network.

**Scope of Authority:** Andrew will provide leadership to the Network Systems Administrator as well as support the entire IT project team during both implementation/transition and throughout program operation.

**SLC Time Commitment:** 50% during Implementation Period, 25% after program commencement

**Nitin Oberoi - Software Development Manager**

**Relevant to the SLVHD's Needs:** Nitin is the leading software developer for the automotive industry's first, robust, and most comprehensive reporting and portal interface tool available —the Applus+ Reporting Dashboard. The technological innovation, sophistication and accuracy of the Reporting Dashboard will be a key advantage to the SLVHD in an Applus+ provided I/M program.

**Career Achievements:** Nitin Oberoi has over eight years of client/server application design, development, and management.

**Nitin Oberoi - *Software Development Manager***

**Background:** A Microsoft Certified Programmer, Nitin is a leading expert at architecting web and data driven solutions using the .NET framework. Nitin is also skilled in multiple computer languages (ASP.NET and ASP Web Services, C#, C++, ADO.NET, JavaScript), databases (SQL Server, Oracle, MS Access; MySQL;), operating systems and servers (Windows 2008 Server and all earlier Windows versions, IIS 6.0/5.0, Apache), and other development tools.

**Agency Communication & Collaboration:** Via regularly-scheduled work meetings and IPT sessions, Nitin will communicate to the SLVHD agency progress in implementing all equipment software, upgrades, and Dashboard-related deliverables and thereafter ensuring full functionality throughout the entire SLC network, including the SLVHD's access and use of the Dashboard for data access and retrieval needs.

**Relevant to the SLVHD's Needs:** Applus+ regards Nitin as the leading software developer for the automotive industry's first, robust, and most comprehensive reporting and portal interface tool available—Applus+' Reporting Dashboard. The sophistication and accuracy of the Reporting Dashboard is one of the many modern advancements the SLVHD will benefit from with Applus+ as your contractor.

**Scope of Authority:** Nitin will provide leadership for the Dashboard Development Team and Report Developer during implementation and will consult with the SLVHD regularly thereafter to ensure the Dashboard is customized to their satisfaction and provides optimal functionality throughout program operations.

**SLC Time Commitment:** 50% during Implementation, 25% after program commencement

**Alex Mendez - *Network Systems Administrator***

**Qualifications and Work Experience:** Alex is an experienced IT professional and was a key member of the Applus+ Illinois start-up and operations team. Alex has demonstrated technical expertise in Microsoft Windows (Workstation and Server), various backup and monitoring software packages, antivirus applications, and remote desktop and holds a number of professional certifications (e.g., A+, Linux, MCP). He also has extensive experience building desktop and laptop computer systems, performing backups and system maintenance, and providing user support since his early days in the profession.

**SLC Time Commitment:** 75% during Implementation, 25% after program commencement.

**Applus+ Executive Advisory Team**

Select Applus+ professionals will serve as advisors, providing support to the SLVHD program and available to the SLVHD and SLC personnel. Executive advisors will also serve as members of the I/M Advisory Committee that will, among other things, review and resolve any participating station issues that are not resolved at the program level, as described in *Section 6.16.1 Issue Resolution Procedures between Station and Contactor*.

**Jerry Kollman - SLC Project Implementation Advisor**

**Relevant to the SLVHD's Needs:** Jerry offers an immense experience in implementation and program transition services that is unrivalled in the I/M industry. His well-rounded implementation and I/M program background will be of great value to the SLVHD during the Implementation Period and will also provide high-level support of the Applus+ team at all times.

**Career Achievements:** Jerry has 26 years of information technology experience with large scale systems integration programs and is currently Applus+ Vice President of Sales and Marketing.

**Background:** Beginning in 1995, Jerry was one of the founding principals of MCI VANSIS and was directly involved in the United States' first eight emissions testing programs. Jerry also played a key role as a Regional Sales and Operations Manager, supporting multiple I/M programs including PA, GA, NJ, and NY.

**Agency Communication & Collaboration:** Jerry will advise Applus+' SLC Implementation Team during program transition. He will assist the Project Implementation Manager in ensuring all program deliverables are met as intended. Jerry will participate in work groups and progress meetings between SLVHD agency personnel and Applus+.

**SLC Time Commitment:** 50% during Implementation, 15% after program commencement

**Jack Pierce - SLC Project Implementation Advisor**

**Relevant to the SLVHD's Needs:** Jack has been a critical asset in many of Applus+ highly public I/M programs due to his extensive I/M and implementation expertise. His well-rounded implementation and I/M program background will be of great value to the SLVHD during the Implementation Period and will also provide high-level support of the Applus+ team at all times.

**Career Achievements:** Jack has 20+ years of successful management and supervisory experience in both the private and public sector. He has managed numerous decentralized implementation and program transition efforts including those in Connecticut, Massachusetts, and Rhode Island.

**Background:** Jack's background includes extensive I/M-related experience in decentralized project management, systems communications, systems implementation, personnel/inspector training, and government affairs.

**Agency Communication & Collaboration:** Jack will advise Applus+' SLC Implementation Team during program transition. He will assist the Project Implementation Manager in ensuring all program deliverables are met as intended. Jack will participate in work groups and progress meetings between SLVHD agency personnel and Applus+.

**SLC Time Commitment:** 50% during Implementation, 15% after program commencement

**Brenda Ackarman-Sioson - SLC Project Implementation Advisor**

**Relevant to the SLVHD's Needs:** Brenda offers the SLVHD her expertise in program implementation

**Brenda Ackarman-Sioson - SLC Project Implementation Advisor**

efforts including software and hardware development, licensing, auditing, public information, VID and software application content development. Her well-rounded implementation and I/M program background will be of great value to the SLVHD during the Implementation Period and will also provide high-level support of the Applus+ team at all times.

**Career Achievements:** Brenda has 15 years of dedicated management experience. Notably, she helped negotiate the final provisions for the Texas Information Management System (Texas I/M Vehicle Inspection Database) and offers a comprehensive skill set in collaborating with state governments, departments of transportation, and I/M agencies.

**Background:** Brenda holds a Doctorate of Jurisprudence and was previously legal counsel and an agency liaison for state governments and I/M corporations. Brenda has also served in QA/QC roles and has extensive experience in contract compliance.

**Agency Communication & Collaboration:** Brenda will advise Applus+' SLC Implementation Team during program transition. She will assist the Project Implementation Manager in ensuring all program deliverables are met as intended. Brenda will also participate in work groups and progress meetings between SLVHD agency personnel and Applus+.

**SLC Time Commitment:** 50% during Implementation, 15% after program commencement

**Dennis Palmer - SLC Project Implementation Advisor**

**Relevant to the SLVHD's Needs:** Dennis has more than 27 years experience in the I/M industry focused on program development, design, implementation and management.

**Career Achievements:** Dennis is a proven leader in the I/M industry and directly managed five I/M program implementations and was Executive Implementation Manager in nine others.

**Background:** Dennis assists in ongoing operations as a program specialist to the Applus+ operations team. Dennis previously served as a chairperson of the North American Regional Advisory Group (RAG) of CITA, a leading international non-profit dedicated to advancements in road safety.

**Agency Communication & Collaboration:** Dennis will advise Applus+' SLC Implementation Team during program transition. He will assist the Project Implementation Manager in ensuring all program deliverables are met as intended. He will also participate in work groups and progress meetings between SLVHD agency personnel and Applus+.

**SLC Time Commitment:** 50% during Implementation, 15% after program commencement

**Timothy Raml - Director of Operations - Equipment**

**Relevant to the SLVHD's Needs:** Timothy has the demonstrated expertise to design and develop custom analyzers and workstations per customer requirements and to deploy the accompanying software to ensure stable equipment functionality.

**Career Achievements:** Timothy has more than 14 years experience as a software and hardware design engineer and an extensive background in developing I/M test equipment and specifications for vehicle testing programs.

**Background:** Timothy has provided leadership managing the Applus+ team of hardware engineers responsible for producing custom test analyzers including assembly and finalizing workstation specifications.

**Agency Communication & Collaboration:** Via regularly-scheduled work meetings and IPT sessions, Timothy will communicate to the SLVHD agency progress in installation efforts, implementing all equipment hardware, upgrades, and other equipment deliverables and thereafter ensuring full functionality and operation throughout the entire SLC network.

**Scope of Authority:** Tim will provide leadership for the Equipment Development Team during implementation and will consult with the SLVHD regularly thereafter to ensure equipment meets SLVHD satisfaction standards and provides optimal functionality throughout program operations.

**SLC Time Commitment:** 50% during Implementation, 25% after program commencement

**Todd Burns - Field Service Manager (SLC-based)**

**Qualifications and Work Experience:** Todd has more than 15 years experience in I/M and related technologies; customer service training, practices and supporting systems; and the automotive and repair service industry. As Customer Service Manager for the Applus+ I/M Massachusetts program, Todd provided critical leadership to the Massachusetts Customer Service Department. He managed the network's internal call center, industry outreach, logistical equipment operations, and training of 1,500 program participants annually. Previously, Todd was Assistant Program Manager and Technical Services and Support Manager for the Rhode Island Emissions and Safety Testing Program, where he managed client support hotlines, program training centers, compliance auditing, and computer systems and networks. Todd's experience and success in I/M customer service and customer relations will be a critical component in the success of the SLVHD program.

**SLC Time Commitment:** 100% during Implementation and after program commencement

Additionally contributing to the successful implementation of SLC deliverables are the following Applus+ personnel:

- + Michael Yancey Daum – Network Security Manager
- + Greg Werner – Production & Facilities Manager
- + Bhavesh Patel – Dashboard Development Team
- + Tim Schwantes – Software Engineer
- + Prem Rajadattan – Dashboard Development Team
- + Victor McCartney – Electronic Hardware Design Manager
- + Ramesh Ganasan – Dashboard Development Team

✦ Andy Scaife – Database Architect

✦ Tim Builer – Equipment Software Manager

✦ Jason Fredrick – Corporate Controller

**Current Network Station Staffing:** The SLVHD will benefit from having experienced, knowledgeable station staffing already in place beginning on day one of the new program. Applus+ foresees no reason to recruit or add to the private stations' staffing levels.

#### **Addendum Section 8.4.3.1**

##### **Addendum Section 8.4.3.1.1**

The Program Manager, Barton Richter, will be 100% locally-based in Salt Lake County for the duration of the contract.

##### **Addendum Section 8.4.3.1.2**

Nitin Oberoi, Software Development Manager, and his team of database engineers have been assigned to all duties pertaining to implementing and executing VID development and data migration, as well as ensuring its continuous functionality throughout the contract.

##### **Addendum Section 8.4.3.1.3**

Nitin Oberoi, Software Development Manager, along with his team of software development engineers have been assigned to all duties pertaining to developing, implementing, and generating reports.

##### **Addendum Section 8.4.3.1.4**

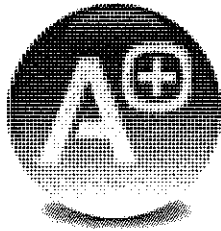
Tim Raml, Director of Operations – Equipment, along with his team of engineers have been assigned to all duties pertaining to developing and implementing UTAH2011 analyzers.

##### **Addendum Section 8.4.3.1.5**

Applus+' corporate officers are illustrated in the Organizational Chart in *Section 8.4.2*. Officers participating in the SLC I/M program are included in the biographies also listed within *Section 8.4.2*.

#### **8.4.4 Subcontractors**

As noted in Exhibit 1, Applus+ is a full-service I/M provider with in-house, custom-engineered OBD, TSI, and Diesel testing equipment technology. Applus+ developed and customized an enhanced vehicle information database and a modular Reporting Dashboard – both of which are currently in use in many of our I/M programs. Additionally, Applus+ is very proud of its ISO-certified Quality Management System that augments every facet of design and development processes as well as project management services. Therefore, due to a comprehensive I/M offering, Applus+ will not be utilizing subcontractors to fulfill the requirements of this RFP.



# **PRICE PROPOSAL**



