Barcode Pilot Trip Report

Start Date: August 3, 2010
End Date: September 5, 2010

By: Gina Bald, Deputy Project Manager
November 29, 2010

Background

The I-Suite Barcode Pilot Team (hereafter referred to as 'Pilot Team') achieved great success in 2009 with a limited deployment of barcode technology at incidents in the Supply Unit. The results are outlined in the 2009 Barcode Pilot Trip Report located at http://isuite.nwcg.gov.

To build on the project's success and to gain additional exposure and acceptance, the project was tasked by Tory Henderson, Branch Chief – Equipment and Chemicals, and Sarah Fisher, Branch Chief – Incident Business Practices, to expand the pilot in 2010 to the following Geographic Areas with pre-identified Incident Management Teams (IMTs):

- Southwest
- Northwest
- Northern Rockies
- Rocky Mountain

The following IMTs volunteered to participate:

- Southwest: VanBruggen Type 1; Hughes Type 1; Nelson, Type 2
- Northwest: Pendleton, Type 1; Rapp, Type 2; Batten, Type 2; Barnett, Type 2
- Northern Rockies: Turman, Type 1; Heintz, Type 2; McNitt, Type 2; Kusiko, Type 2
- Rocky Mountain; Pechota, Type 2

In addition, the two California IMTs (McGowan and Pincha-Tulley) who piloted in 2009 agreed to once again participate.

The number of barcode kits was increased to 6 kits in order to support the pilot expansion. Additional kit items were added as result of 2009 Pilot Lessons Learned (i.e., Laptop Tents, sturdier printers). The San Dimas Technology and Development Center assisted in assembling and shipping the kits. The kits were pre-positioned as follows:

- Northern Rockies Fire Cache: 2 kits
- LeGrande Fire Cache: 1 kit
- Redmond Fire Cache: 1 kit
- McGowan Type 1 IMT: 1 kit
- Pincha-Tulley Type 1 IMT: 1 kit

Supply module bugs found in the 2009 Pilot were fixed. In addition, requested enhancements discovered during the 2009 Pilot were implemented (Exchanges, Replacements, Release Waybills, and Reports).

2010 Pilot Team members:

- Gina Bald, I-Suite Deputy Project Manager
- Donna Tate, I-Suite Project Lead
- Jeff Park, USFS, WO Financial Management Systems, Senior Systems Accountant
- Ruben Amiragov, San Dimas Technology and Development Center, Engineering Technician

- Hallie Toews, Contractor, RTL
- Mark Paskett, I-Suite Development Contractor, SabiOso, Inc.

The Pilot Team, software, and equipment were ready for deployment on July 26, 2010.

Assignments

The Pilot team was mobilized to three incidents during the 2010 Pilot: Rooster Rock, Scott Mountain, and Harris Complex

Rooster Rock Incident

On August 2, Central Oregon IMT Rapp was mobilized to the Rooster Rock Incident, Deschutes National Forest. The Pilot Team arrived at Rooster Rock ICP on August 3 and departed August 10. Pilot Team members mobilized:

- Donna Tate (arrived August 3, departed August 10)
- Gina Bald (arrived August 5, departed August 10)
- Jeff Park (arrived August 3, departed August 8)

The Pilot Team arrived at the incident at 2200 hours and received a briefing from the IMT Computer Technical Specialist (CTSP). An immediate assessment of the situation was completed.

I-Suite Version 10.01 had been deployed the previous week and the CTSP had not yet upgraded the team laptops. It was identified that the critical path to initial setup required that all laptops be upgraded to I-Suite Version 10.1 before any other setup activity. Installation of Version 10.01 would ensure that Supply Module bug fixes and enhancements made over the winter would be available to test. This update also included Security and other enhancements. The upgrade to Version 10.1 required testing of an installation bug related to MSXML 6. A workaround to the install was tested with success. The uninstall of I-Suite Version 9.01 and the installation of ISuite 10.01 on all team laptops was completed early on August 4.

The LeGrande Cache Barcode Kit was delivered to the incident on August 3 and the Pilot Team began installation of the networking and barcode equipment on August 4. The Incident Command Post (ICP) was located at Sisters Middle School. This layout allowed the Supply Unit to be located at a suitable location for successful connection to the I-Suite Server. Connection was made via a 350 foot direct line of sight from the Medical Unit (where a hub was already in place for connection to the server) to the Supply Unit.

The barcode equipment had been configured to work on a DHCP network schema. Before setup could begin, it was necessary to reprogram the laptops, printer, and wireless bridges to the static IP configuration utilized by the IMT. The laptops were configured quickly; however it took awhile to set up the wireless bridges due to incomplete documentation. (Note: Documentation has since been corrected) Correct instructions were found and success with the bridges' IP changes was completed by mid-afternoon. The root and remote bridges were successfully working and the barcode kit laptops and scanners were set up.

Information on the Pilot was included in the Incident Action Plan (IAP) for August 4 and as a handout. Two computers, two handheld scanners, and a printer were set up at the front supply table. An additional computer and scanner were set up in the Pilot Team work area. The manual paper system was run concurrently with the automated process for contingency purposes. Incident Barcode cards were issued at the Supply Unit.

This IMT did not track the issue of consumable items (i.e., batteries, flagging, canteens) in their manual process. We requested that consumable items be tracked in the automated process to test bug fixes and enhancements made to the Supply Module. The IMT was open to this request.

A Camp Crew from Burns, OR was assigned to the Supply Unit. With lessons learned from past incidents, the decision was made to have the Crew begin using the I-Suite Supply module as soon as it was operational. This provided them ownership in the process and they embraced the learning opportunity.

I-Suite Accounts were created for Camp Crew members and Supply Module training was provided to the Crew and Supply Unit overhead. The Pilot Team set up operations and a printer in a yurt across the street from the Supply Unit. This proved to be an excellent setup as we were able to monitor operations, without impacting the unit, thus creating a sense that they were operating the application and equipment without the Pilot Team, but support was close by and available when needed.

It was determined that two of the scanners were not working properly. Further investigation indicated that the batteries had gone dead over the winter and the scanners had lost memory of the initial setup. There was no documentation on how to initially setup the scanners. (Note: Documentation has been developed for initial setup of scanners).

Based on smooth operations, number of incident resources, and IMT acceptance of the processes, it was proposed to the Supply Unit Leader that manual tracking stop and to go completely automated. The IMT was receptive and manual operations were ceased, placing all reliance for issues and returns on the automated process. All previous manual records were entered into I-Suite for a complete history.

Power to the Supply Unit for lights, computers, and networking equipment was provided by a small gas generator. There were instances when the generator ran out of gas or encountered other problems. As a result, connection to the I-Suite server was lost when this occurred. Issues and/or returns were documented on a General Message Form and entered into the automated system when connection to the server was restored. Past incident experience in Supply Units show that a larger diesel generator works much better, particularly one with a light tower for mounting networking equipment.

Due to the generator problems and the resulting power fluctuations, equipment troubleshooting determined that the barcode kit switch had been damaged. A switch was provided by the CTSP until a replacement one could be purchased. The system was quickly restored. (Note: A replacement switch arrived the next day. An Uninterruptable Power Supply (UPS) will be purchased for each barcode kit to guard against power outages and fluctuations).

The ICBS-R Shipping List imports were tested and ran successfully. On the third full day of the bar code implementation, Supply Unit personnel were operating mostly independent of the Pilot

Team and figuring out roadblocks or questions on their own. On August 7 - 10, returns to the Redmond Fire Cache were entered and automated Release to Cache Waybills created.

Incident Demobilization began on August 7. Incident Barcode Cards were collected in the Supply Unit after a resource's issue history was reviewed for trackable and/or durable items to be returned and before checkout sheets were signed.

Lessons Learned

Notable Successes at this Incident

1. The location of the ICP in a school allowed the Supply Unit to be located fairly close for successful connection to the I-Suite Server.
2. On Day 2, the Supply Unit went paperless for Issues/Returns. This meant that a resource could be helped at any computer (i.e., didn't need to look for equipment, crew, or overhead issue sheet). This sped up the process since a resource's sheet didn't have to be looked for in the folder.
3. After some initial reluctance, the IMT was very receptive to use of the application after seeing how simple it was to operate and the advantages provided.
4. The Wireless Networking Equipment worked very well.
5. The Facilities Unit was very accommodating in providing a yurt for the Pilot Team.
6. The CTSP(s) support was excellent. The Pilot illustrated the fact that if barcoding is fully implemented in the future, an additional CTSP will be need to help in the Supply Unit for setup and support.
7. The Camp Crew quickly learned the Supply Module and needed very little support after Day 2.
8. The ICBS-R Import of Shipping Lists was successful and very helpful to the Supply Unit Leader to know which items and quantities to expect on the next Cache truck. This helped the Supply Unit anticipate and plan for the shipment.
9. The ICBS-R Import provided property numbers for trackable items.
10. The Property Reports were very helpful to keep track of trackable items assigned to locations (i.e., Division A, Staging Areas).
11. The laptop tents proved very beneficial in helping against glare and keeping the laptops a little cleaner. They also aided in putting the equipment away much easier and quicker at night.
12. The Lessons Learned from previous assignments aided in quickly setting up the equipment and implementing Supply Unit Business Processes for success.
13. Briefing the Camp Crew and Receiving and Distribution Managers upon arrival was instrumental in them taking ownership.
14. Produced Waybills for items Released to Cache. Information was copied from handwritten notes and the automated system caught mistakes in NFES numbers and descriptions. Automated Waybill sorted items in numerical NFES number order for easy searches.
15. The Contingency plan was activated when the generator shut down. Manual process was implemented and automated process picked up when the generator was back in service.
16. Even though the focus of the Pilot Team was the Supply Unit barcode project, we were available to help all I-Suite users and discovered bugs in the Cost, Time, and Demob modules.
17. The Pilot Team developed a Hardware Binder to be included in Barcode kits which includes instructions on setting up Wireless Bridges, Scanners, Printer IP address, and performing the ICBS-R Shipping List Import.

18. Valuable lessons were learned about power fluctuations and damage to equipment. An UPS will be included in each Barcode Kit.
19. Resources were very excited about participating in the barcode pilot and proactive in presenting their card(s).

Limitations or Special Needs at this Incident

1. The gas generator had problems. Suggest putting a larger diesel generator with a light tower in the Supply Unit.
2. Bugs were found in the Supply module and will be fixed in a Supply Pilot Release for future pilot incidents.
3. The Barcode kit equipment was configured for a 10. DHCP network. Having to change for a static IP schema took time to re-configure equipment. Documentation has been developed for faster setups in the future.

After Action Review (AAR)

An AAR was held with the Supply Unit Leaders, Logistic Section Chief, and CTSPs. The following comments were captured:

What Went Well

- The Pilot received good input and suggestions from IMT
- Bugs were found (purpose of test)
- System up and running quickly
- Accountability factor – ties a person to an item, higher level of accountability with the appearance of computers, cards, etc.
- System is basically functional
- User friendly
- Being able to produce issue reports for resources that are staying with Type 3 organization

What Can We do Better?

- Better and stable power to the Supply Unit
- Fix application bugs
- Concern if this is fully implemented, will need someone in the Supply Unit tied to the system and goes with the team on mobilization. The IMT Succession Planning Project may limit the number of team members.
- Need training this Winter on the Supply Module
- Need to work on the timing of when the I-Suite Server and final database backup can be made to hand over to the local unit. Previously, it was dependent on when Finance was finished. Will now have to consider when Supply is finished with Release to Cache Waybills

The Pilot Team attended the IMT's AAR on August 9. The following comments regarding the Barcode Pilot were captured:

- Trainee CTSP really helped and is essential with bar codes
- Pilot bar code system has bugs but overall worked well and improved accountability. Call out was quick.

- Continue to test drive pilot bar code system on next reasonable sized incident.
- Seek THSP/SCKN to attach to team to take lead in bar code system
- Develop protocols for bar code system
- Involve CTSP more in bar code system setup

After the AAR, we had the opportunity to meet Mark Rapp, Incident Commander. We expressed our appreciation for allowing us to test on the incident and to extend our thanks to the IMT for their support, participation, and the accommodations provided.

Closeout

On August 10, all network, computer, and barcode equipment installed for the pilot was taken down and re-boxed. Refurbishment of the kit was completed by the Pilot Team. The barcode kit was transported to the Redmond Fire Cache for shipment to the LeGrande Fire Cache.

Scott Mountain Incident

On August 23, Pendleton's Type 1 IMT was mobilized to the Scott Mountain Incident, Willamette National Forest. Pilot Team members mobilized:

- Jeff Park (arrived August 24, departed August 29)
- Hallie Toews (arrived August 24, departed August 28)
- Donna Tate (arrived August 27, departed August 29)
- Gina Bald (arrived August 27, departed September 1)

The Pilot Team arrived at the incident at 1900 hours on August 24 and completed an immediate assessment of the situation. They received a status briefing from the IMT CTSPs. There was no power to camp which inhibited the setup of the networking and barcode equipment. After evaluation of the situation, the determination was made to wait until morning to begin the actual setup.

Installation of the Barcode equipment began on the morning of August 25. A 600 foot direct line of sight from the top of the CTSP trailer to a tree (only place to mount equipment) next to the Supply Unit was found.

The initial plan was to get the network working at the CTSP trailer. This was the first incident to use the EnGenius devices recommended from the 2009 Barcode Pilot. Immediate connection was made with the Client Bridge. Connection with the Access Point was unsuccessful. After significant effort and a lack of solutions, the Access Point was reset resulting in a successful connection with a laptop using the default 192.xx IP address. Once in, the Access Point was reset to the 10.10.10.5 that was marked on the unit. Successful connectivity was achieved with the laptops assigned in the 10.xx configuration. Setup of the devices was completed using a tripod mounted on top of the CTSP trailer and a tree located just outside the Supply yurt. It was discovered that a small generator was used for power and did not provide enough clean power. A decision was made to continue setup after the local utility company had installed power poles later

in the day. Clean power was received in the evening and connection between the Access Point and Client Bridge was achieved.

After the wireless network work was completed, work began on establishing I-Suite connection and scanner hook up.

The IMT agreed to go fully automated once the network and equipment were up. Previous supply issues tracked manually were entered into the system.

There continued to be scanner communication problems. The scanners included in the kit were new and different models than the ones used in the 2009 Pilot. It was decided to order the Barcode Pilot Kit located at the LeGrande Fire Cache since it had been successfully used on the Rooster Rock incident and the scanners were known to work.

Work continued on troubleshooting the scanners. After much testing, specific auditory handshakes between the scanner and computer were identified. By using the knowledge of these handshakes, specific operating instructions and troubleshooting documents were created and successfully tested.

The Pilot Team received word that another Pilot Team (Heintz) was ordered for the Harris Complex in Idaho. On August 29, Pilot Team members were sent to the new incident. One Pilot Team member remained at the incident to closeout on September 1. Attempts were made to use the Release Permanent functionality with no success due to known bugs. The IMT produced waybills manually.

Attended the Logistics Section AAR. General consensus was that barcodes are a positive move at incidents and the IMT would like to see the momentum going with the project.

The Barcode kits were refurbished at the incident and returned to their respective caches. Remaining Pilot Team member departed for the Harris Complex on September 1.

Lessons Learned

Notable Successes at this Incident

1. Contact with Finance Section Chief at IMT at mobilization gave Pilot team a head's up to assemble team and equipment
2. Contact with Logistics Section Chief at mobilization to explain Supply Unit location and power needs
3. Supply Unit was located in an area of ICP for good line of sight to I-Suite Server
4. Documentation of solutions and working procedures for the scanners and EnGenius wireless devices was developed, tested, and finalized
5. Clean power to ICP was installed by local power utility company
6. Success working with CTSPs
7. Suggestions received from CTSP on labeling network equipment for easier setup
8. Demob working in Communication Unit would radio Supply to see if a resource needed to report to Supply to return items. Supply would check supply issues and reply yes or no if resource needed to checkout with Supply.

9. The IMT liked the kit laptop tents (recommendation from 2009 Pilot) and purchased three for use in their internet café.

Limitations or Special Needs at this Incident

1. The UPS and scanners from the kit were not charged the first morning. The recommendation is to charge scanners and UPS from a power source upon arrival at the incident when they are directly out of an un-used kit or one that has been sitting for a long time.
2. Access Point not set to IP address labeled on unit and limited instructions to reset were found. Documentation was developed on how to set up the EnGenius devices if not working out of the box.
3. Connection and set up was challenging using DHCP since connection was intermittent and was never sure if an IP was assigned or not when trying to ping the Client Bridge, etc. When connecting over the remote wireless, at least during initial setup, it was awkward using DHCP. Static IP addresses were assigned in the Supply Unit and this is recommended for the future.
4. Scanner reliability was not adequate based on existing documentation. Through significant testing, utilizing a multitude of scenarios, proper procedures were documented to have scanners work on a consistent basis.
5. Directions to UPS not written and vendor directions confusing. The UPS was not working correctly and would cycle on and off. Unable to get consistent power through the UPS. The solution here seems to be to plug in the UPS upon arrival to give it a chance to charge before initial use. However this needs validation.
6. The Software Developer's priority is to fix the bugs with Release to Cache Waybills

Harris Complex

On August 28, received a call that Heintz' Type 2 team was being mobilized to the Harris Complex in Idaho. Pilot Team members travelled from the Scott Mountain incident to setup up the barcode equipment. A barcode kit from the Missoula Fire Cache was transported to the incident.

The Pilot Team arrived in Boise on August 30 to meet with the IMT at the Idaho State Lands Division Office. After receiving a briefing, the Pilot Team proceeded to the incident to assess the logistics for the deployment of the network and equipment. The ICP was in an open field with an approximate 300' direct line of site between the CTSP trailer and the proposed Supply Unit location.

There was no power in ICP and it was not expected that the I-Suite database would be up until the next day. The Pilot Team travelled back to Boise to pick up a UPS for the kit and to set up and test equipment. The current version of I-Suite was installed on the Supply Unit laptops. The EnGenius wireless devices and the charged scanner were setup at a hotel for testing. The Access Point and Client Bridge communicated immediately. The scanners were connected and immediately worked. All the lessons learned at the Scott Mountain incident were successfully applied.

The IMT was operating on a 10.1.1.x IP configuration, and it was determined that the kit laptops and wireless units needed to be changed to conform. There were no issues resetting all the devices or connecting into the ICP network.

At the ICP, two telescoping poles were obtained from Communications. These sturdy metal poles, in four foot lengths, were coupled together to place a 12 foot pole at the CTSP trailer and a 8 foot pole, attached to the Supply yurt. The only delay in getting up and running was the placement of a generator for power. The entire network was in place within 1-2 hours. Once power was received all aspects of the system were fully functional.

This incident used a Terminal Server/Thin Client equipment environment. While this environment typically provides a great testing ground with the ability to only install I-Suite on one machine, this time it was a bit of a hindrance. In a non-Thin Client deployment of the Supply Pilot Beta version, I-Suite is only applied to the server machine to upgrade the database and on the laptops using the Supply Module. As a result, the Beta version of I-Suite is only visible on the login screen for Supply users. At this incident, all users needed to be made aware that the Pilot Beta version was running and that it would display on the login screen for I-Suite from the server. This caused minimal concern from the non-supply users.

From the start, the supply requests were managed by the Receiving and Distribution Manager (RCDM). This was a plus for the project from a training perspective. In past deployments, the Camp Crew typically documented and distributed the issues/returns. This did not allow the Supply Unit team members the necessary training to implement on future incidents. We recommend more team member involvement on future incidents.

The Software Developer joined the Pilot Team to work on remaining Supply Modules bugs and enhancements. The priority was to begin work on a redesign of the Release Waybill functionality and a new report that provides a list of all received items to assist in preparing the waybill for release. The report was created and was very well received and useful in the preparation to return items to the Cache. The Waybill redesign was not completed before incident closeout, but limited testing of the concept and functionality was accomplished. The developer will continue working on this item and hopefully it can be tested this year.

The new Exchange and Replacement functionalities were tested. A few defects and missed requirements were found, documented, and forwarded to the developer for inclusion in the next Supply Pilot Beta release.

Lessons Learned

Notable Successes at this Incident

1. With the lessons learned at previous incidents, the setup was a 100% success
2. The team and pilot were well accepted and embraced by the team
3. Development of Release Worksheet Report. Greatly accepted by team. Great timesaver
4. Implemented Exchanges and Replacements
5. Lessons learned from previous incidents put in place. Documentation worked well.
6. Development of Items Currently Issued Report
7. Team appreciated having I-Suite Support at the incident

8. The developer was on-site to fix bugs on the spot and provide support. This is also beneficial to the developer to observe business processes and needs.
9. The RCDMs adapted well to automating the supply operations and provided great feedback for improvements.

Limitations or Special Needs at this Incident

1. As at previous incidents, the UPS was temperamental in use prior to attaining a good charge.
2. Dust is still a major issue even within the enclosed yurt.
3. Need to look at a way to verify that what the resource received is the same as what is entered in the system. Options could include a system generated receipt or encouraging a business process to repeat the order back to the customer.
4. The wireless equipment seemed to drop fairly frequently. An eyeball adjustment of the wireless bridges seemed to improve the connection. There may be some options from another CTSP that is very familiar with the EnGenius bridges that could improve performance.
5. Exchanges seemed like a big missing piece during last year's pilot, but recent observations do not support this finding. Unless the Supply Unit plans on fully utilizing the inventory option in I-Suite, exchanging 'like' items may be a process that is not ready for automation. (For example, trading a broken tent for a new tent). This need may come in time as the Supply Module gains acceptance and may resurface as a priority on future incidents.
6. The value of the ability to flag issues as replacements was validated on this incident, but a missed requirement to include replacements on the issue report did not allow full testing and validation.
7. Fixing Release and Waybill of items to the Cache continues to be the pilot team and IMTs' priority that would add the most benefit to the Supply Module.

Conclusion

The assignments this Fire Season were very beneficial in learning more about Waybills and the networking/scanning equipment. Additionally, the Pilot Team was able to improve user documentation. There was great acceptance by Teams and Resources; the expectation for incident barcoding is out there. Unfortunately, there were missed incident opportunities due to non-Pilot Teams being mobilized and most Pilot Teams not receiving incident assignments.

A conference call was held on November 15 with Sarah Fisher, Business Lead and Branch Chief - Incident Business Finance and Tory Henderson - Branch Chief Equipment and Chemicals to discuss future barcoding plans. The decision was made to keep the momentum going and continue the Supply Barcode Pilot in 2011. The pilot will be opened to all Geographic Areas and all IMTs to allow for more exposure, use, and findings. The Pilot Team will be working with the IMTs on how to manage this with a limited number of support personnel and kits. The challenge will be the training and independent use of I-Suite and Supply Barcoding by Supply Unit personnel.

Appendix A

Incident Supply Module Findings presented to SabiOso Developer for Defect Fix or Enhancement

Rooster Rock Incident

Note: Some of these items may have occurred since the incident database was updated from 9.01 to 10.01. Starting an incident with a 10.01 database may not have these issues.

1. **Import Shipment Screen**
    - Rename 'Import Shipment' button at bottom to 'Import File'
    - Rename 'Receive Shipment' button at bottom to 'Import Shipment'

These changes will make it more intuitive to the user when saving received items and knowing what to do next. Item entered into QC #1350

2. **Checkout Form**

Resources with subordinates are not showing outstanding issues on 221. Entered into QC #1351

3. **Supply All Persons View**: Not sorting on Column Click. Entered in QC #1353

4. **Release (Permanent)**
    - **Quick Release Box:** First time sizing of property number field doesn't show the entire number. Have to grab the top of the column to resize. If you leave the box, it will not save the resize. Remaining in the box maintains the resize.
    - **Quick Release Box:** For a trackable item, why is NFES # there? For example, item is an 870 and then it puts NFES #870 in the property number dropdown list. Do we need it repeated? If it wasn't there, then would leave more room for property number and eliminate need for resizing property number. (Check this on bottom grid)
    - **Bottom grid** needs a slider bar so that user can review the list if it has many items. The scroll bar at the left is hard to grab at the bottom.
    - **Need a Preview Screen** before saving so that items can be previewed before saving and producing the WayBill
5. **WayBills**
    - Preview shows the previous WayBill
    - If a trackable item is issued, won't allow a release. Have to return item first. Need a one stop return and release. Have a prompt: Do you want to return item from Resource? Yes, then can release item.
    - Bottom Grid: Would be nice to have last item entered to appear at the top of the grid. It is sorting by NFES number and have to scroll or arrow down to find last item entered.
    - Bottom Grid: Same issue with resizing of property number field to see entire number.
6. **Reports for Release (Permanent)**
    - Need a report that shows items at incident with room to enter a quantity. Currently, RCDM handwrites all items that are going to be entered onto the waybill. Having a report would save a lot of time and confusion when unable to read handwriting. Report would be sorted by name alphabetically and also show NFES # (look at Manual – Inventory Count Report – may work for us, but we have the following error with it: Receive error:

Crystal Report Viewer, The Visual BasicUFL that implements this function is missing or U21com.dll is missing).

7. **Reports Current Inventory**
   - If a property number has 3 digits at the end, the last digit is cutoff when printed (OK when previewed)
8. **WayBill Quantity Calculations**
   - Waybill is printing different quantities than what is entered. Verified this by looking at supply item history. In history, quantity shows the correct amount entered. Waybill prints out another quantity. It seems to happen when item is selected twice to enter multiple quantities. For example: NFES 2081, enter 60. Do it again and enter 60. The WayBill will show another number and sometime number doesn't make sense.
   - Along with the above problem, sometime when you do the above process (enter 60, enter 60 again), quantity in lower grid will show 1 (resets it back to default?)
9. **WayBill Hazardous Materials**
   - Not populating hazardous material fields when a hazardous item is included on the waybill. Donna was able to get this to work on her test DB. But, for her, when there are multiple hazardous material items, it doesn't show any of them.
10. **Release Waybill**
    - Need to be able to save a pending waybill and return to it later to add additional items.
11. **WayBill**
    - Feedback from Redmond Cache:
      - In Shipped from field: Enter Incident Name, City and State
      - Populate Accounting/Mgmt Code field
12. **Catalog**
    - Missing: Poles, NFES 89 & 83, Cloth NFES 251, Goggles NFES 318
13. **Property Report**
    - When an item is transferred, report shows both resource/location transferred from and transferred to on the report. The report should only show current issue, not a history of where item has been.
14. **Reports Needed**
    - All items received from cache. This is a report that is needed for the closeout package.
15. **Release**
    - Show Items All - Quick Release
      - Enter NFES #, item info shows in the box (unit of issue, item name, etc.)
      - Save item and the NFES #, Item name and description do not show in the bottom grid.
      - Unable to Remove or change Item.
16. **Field Sizing:** There are several areas of the application where the view on field sizes could be increased or decreased to properly show the contents of some fields while not over using the screen to display other. Most specifically the property numbers on trackable property do not display the ending numbers, which are critical to identification of the item.
    - **Solution:** Review display lengths and expand where necessary while contracting some fields needing less space. The goal would be to display all items on one screen, but also to display the full field for critical items like the Resource Name, Item Description, Category and Property Number.
      - **<u>Top Box (Issue to, Return From, etc)</u>**

        Request # (Reduce Length)

Resource Name (Increase Length)
Agency (Reduce Length)
Home Unit (Reduce Length)
Kind Code (Reduce Length and remove Code from title)
Contractor (Reduce Length and remove Code from title)
Status code (Reduce Length and remove Code from title)

- **Item Name screen**

  NFES # (Reduce Length)
  Resource Name (Increase Length)
  Item Description (Increase Length)
  Property Number (Increase Length)
  Category (Increase Length)
  Unit of Issue (Change to Units and Reduce Length)
  Ready for Issue Quantity (Change to Ready Qty and Reduce Length)
  Remarks (Increase if available real estate to do so)

- **Shopping Cart screen**

  Property Number (Increase Length)
  Item Description (Increase Length)
  Transaction Qty (Change to Trans Qty or just Qty and Reduce Length)
  Property Number (Increase Length)
  Category (Increase Length)
  Unit of Issue (Change to Units and Reduce Length)
  Remarks (Increase if available real estate to do so)

Scott Mountain Incident

Release Permanent

1. Quick Release
Intermittently finds NFES #. Found this on NFES 1848, 4381. Tab after entering NFES#.

2. Quick Release
Info in top of box (NFES #, description, UI, Item Name, etc) is empty. Save item, puts in the shopping cart with the above info (NFES #, etc.) blank. Can't Remove/Change Release Item or Save Items. Puts at the top of Shopping List. Does this on various NFES # (1291, 0026, 0136). Seems to happen when a large number of items have been entered.

Try to Remove/Change Release from Shopping Cart, receive error and doesn't remove item.

Try to Save Item from Shopping Cart, receive error and doesn't save

Go to another module, receive message 'You have items selected to Release, but have not done so. If you do not Release them before changing to another location, items will be removed and not issued. Save all items? Click Yes.
Can't exit app. Have to answer No to save items to close app.

Doesn't generate Waybill from Release Permanent Screen.

3. Not putting hazardous material information on the HazMat Section of Waybill (NFES 00687)

4. Quick Release. Puts a different qty on printed waybill that what is in the Shopping Cart. Seems to happen when an item is entered a second time. Example: NFES Item 1172, qty 1; enter same item again with qty of 5. Shows a qty of 6 in shopping cart, enter 7 on waybill.

5. Quick Release. NFES 1172. Entered both items separately for a total qty of 6. Shows 1 qty in shopping cart. Save item. On waybill, shows qty of 2.

6. Quick Release. Type NFES # for Kit, Logistics. Select Property Number, Save. Puts in Shopping Cart, but property # is not populated. Use Advanced Search for same item, puts all info (incl. property #) in Shopping Cart.

7. Catalog Missing NFES #1660

8. Need to have Waybill every so often in case connection to server is lost. Lose all work completed and have to start over.

9. Need to add LeGrande Cache to Cache List

10. Unable to change Release to Location once you have started putting items in Shopping Cart.

11. Intermittently unable to find an NFES item either by Advanced Search or typing in Quick Release Box, Go to another computer and able to find item by either of the above methods.

Harris Complex

1. Issue Report
   Show Standard Issue and/or Replacements on Report
2. Remove Exchanges (At Incident) from Supply Dropdown Menu
3. Items Currently Issued Report, Resource/Location: List if item is Consumable, Durable, or Trackable
4. Items Currently Issued Report, Supply Item: Put a NFES Number Label
5. Release Worksheet Report: Put a Statement under Title, "Items Received at Incident"
6. Release Worksheet Report: Prints a Blank Line with a barcode