Release 3 Change Order Requirements – 517/182116/1998

The following change orders are included in Release 3 and are documented in detail below:

ILL 5 – Round Robin LSMS – * NEEDS WORK *

ILL 8 – Establish Portability Areas

ILL 9 – Portability Area Specific Tunables

ILL 10 - Portability Area Billing Enhancements

ILL 17 - Report Size Warning

ILL 23 - Detailed Integrity Sampling Report

ILL 58 - Owning SP for TN in Audit Report

ILL 130 - Application Level Errors (ASN.1 impact) – * NEEDS WORK *

ILL 183 - Download of Service Provider Data (ASN.1 impact)

NANC 34 – AuditServiceProvIdRange (ASN.1 impact)

NANC 44 – Effective Release Data Validation

NANC 87 – RR5-39 requirement modification

NANC 98 – TSAP data required in FRS

NANC 122 - Enhanced Key Expiration Strategy – * NEEDS WORK *

NANC 147 - Version ID rollover strategy – * NEEDS WORK *

NANC 153 - Download file creation by SP for Application of Filters

~~NANC 169 - Delta Download File Creation by Time Range~~

NANC 174 - Removal of SOA and LSMS combined association

NANC 175 – Timestamp default when not set

Downtime Required	Yes	No
Recommendation Explanation		

Installation	Staged	Flash Cut
Recommendation Explanation		

Release ?? Checklist

The following is a checklist to insure all LNPA working group input is completed before forwarding of a release to the LLC's. All items should be Y or N/A before forwarding of the release content to the LLC's.

Category	Complete
FRS Requirements	Y or N or N/A
IIS Text Modifications	
IIS Flows	
GDMO	
ASN.1	
Business Process Flows	
Test Cases	

Note: Change Orders that have been clarifications to previously documented Release 3 change orders have been merged in this document as indicated in the table below and will not be referenced separately as release 3 requirements.

Requirement Retained	Requirement Merged and Removed
ILL 8	NANC 119

Change Order Number: ILL 5

IMPACT/CHANGE ASSESSMENT

FRS	IIS	ASN.1	GDMO	~~Lockheed~~ NPAC	SOA	LSMS
	Y			?		

Round-Robin Broadcasts across LSMS associations

The NPAC SMS should support multiple LSMS associations and manage distributing transactions across the associations. For example, to improve performance and throughput, an LSMS may want to start another association for network/subscription downloads. The NPAC SMS would accept the association, manage security (as is done today), and distribute network/subscription PDUs across the 2 or more associations. One message would only be sent over one association.

Requirement 1 -

NPAC SMS shall distribute transactions across multiple Local SMS or SOA associations for the same association functions from Local SMS or SOA systems using the round robin algorithm.

ISSUES/DISCUSSIONS:

I think there should be some IIS verbiage and some more requirements.

SOA associations should be treated independently from LSMS associations for the same association functions?

Change Order Number: ILL 8

IMPACT/CHANGE ASSESSMENT

FRS	IIS	ASN.1	GDMO	~~Lockheed~~ NPAC	SOA	LSMS
Y				Y		

Portability Areas

Establishment of Portability Areas (NPA-NXX groupings, such as a LATA or MSA) should be done within the NPAC SMS to support state groupings.

FRS changes are as follows:

The following assumptions/requirements should be added for portability area support in Section 3 of the FRS:

Requirement (FRS section 3) – State Portability Area Definition

NPAC SMS shall support state portability areas that contain a unique identifier, the state portability area name, and an associated list of NPA-NXXs as defined in table 3-X.

Attribute Name	Type (Size)	Required	Description
Portability Area ID	N	X	A unique sequence number assigned upon creation of a portability area.
Portability Area Name	C(40)	X	A unique name of a portability area.
Portability Area NPA-NXX List	List	X	A list of NPA-NXX values.

Assumption (FRS section 3) – NPA-NXX unique to State Portability Area

An NPA-NXX can only be associated with one state portability area.

Requirement (FRS section 3)- Addition of a State Portability Area

NPAC SMS shall allow NPAC personnel to add a state portability area to be supported by the NPAC SMS.

Requirement (FRS section 3)- Modification of a State Portability Area

NPAC SMS shall allow NPAC personnel to modify a state portability area supported by the NPAC SMS.

Requirement (FRS section 3)- Deletion of a State Portability Area

NPAC SMS shall allow NPAC personnel to delete a state portability area supported by the NPAC SMS.

The following requirements should be added for state portability area support in Section 9 of the FRS:

Requirement (FRS section 9) – State Portability Area Report

NPAC SMS shall support state portability area reports to list NPA-NXX for a list of one or more states for NPAC personnel using the NPAC Administrative Interface.

Change Orders 9 and 10 must be taken into consideration with this change order.
It has been requested that the following requirement be included for state portability areas in addition to the requirements to add, delete, and modify:

RR3-24 Viewing of the State Portability Area NPAC SMS shall allow NPAC personnel to delete a state portability area supported by the NPAC SMS.

Change Order Number: ILL 9

IMPACT/CHANGE ASSESSMENT

FRS	IIS	ASN.1	GDMO	~~Lockheed~~ NPAC	SOA	LSMS
Y				Y		

Portability Area Specific Tunables

Establishment of portability area Tunable Parameters should be made to allow timing and feature functionality to vary by portability area within a Regional NPAC to satisfy potential regulatory differences.

The FRS modifications are as follows:

New Section 3 Requirements –

Requirement - Unique Tunable Values for State

NPAC SMS shall support separate tunable values as defined in Appendix C for each state.

Requirement – State Specific Tunable Parameters Creation

NPAC SMS shall support creation of unique set of tunable parameters for a state by NPAC personnel using the NPAC Administrative interface.

Requirement – State Specific Tunable Parameters Modification

NPAC SMS shall support modification of tunable parameters for a state by NPAC personnel using the NPAC Administrative interface.

Requirement – State Specific Tunable Parameters Deletion

NPAC SMS shall support deletion of a unique set of tunable parameters for a state by NPAC personnel using the NPAC Administrative interface.

Requirement – State Specific Tunable Parameters Default

NPAC SMS shall support creation of a default set of tunable parameters by NPAC personnel using the NPAC Administrative interface for use by states that do not have a unique set of tunable parameters defined.

Modified Section 9 Requirements -

RX9-1 Service and Network Data Reports

NPAC SMS shall support the following service and network data reports for NPAC personnel using the NPAC Administrative Interface and Service Provider personnel using the NPAC SOA Low Tech interface:

1. NPAC Service Tunable Parameters Report (by state)
2. List of Service Provider's LRNs
3. Open NPA-NXXs List

This change order must be taken in consideration with change order 8.

Change Order Number: ILL 10

IMPACT/CHANGE ASSESSMENT

FRS	IIS	ASN.1	GDMO	~~Lockheed~~ NPAC	SOA	LSMS
Y				Y		

Billing Enhancements

Performance of Cost Reapportionment and billing on a portability area basis should be made to allow for different cost recovery methods employed or mandated by regulatory agencies, if applicable.

The following changes should be made to the FRS in section 11:

R11-1 Toggling the Generation of Usage Measurements

NPAC SMS shall allow the NPAC administrator to turn on and off the recording of Service Provider usage statistics for the service elements per state.

R11-2 Generating Usage Measurements for NPAC Resources

NPAC SMS shall measure and record the usage of NPAC resources on a per Service Provider basis per state.

R11-4 Generating Usage Measurements for Allocated Mass Storage

NPAC SMS shall generate usage measurements for the allocated mass storage (number of records stored) for each Service Provider per service provider.

R11-5 Generating Usage Measurements for the Number of Messages Processed by type

NPAC SMS shall measure the number of messages processed by type for each Service Provider per state.

R11-6 Generating Usage Measurements for the Number of Messages Downloaded

NPAC SMS shall measure the number of messages downloaded to each Service Provider per state.

R11-9 Billing Report Types

NPAC SMS shall be capable of creating the following billing reports:

- Login Session Per Service Provider
- Allocated Mass Storage (per state)
- Messages Processed by type (to include download data and data resent by request)
- Audits Requested and Processed
- Requested Report Generation
- Service Establishment (to include Service Provider establishment, user login ID addition to the NPAC SMS, and mechanized Interface Activation)

R11-11 Billing Report Creation by NPAC Personnel

NPAC SMS shall allow NPAC personnel to create billing reports for all Service Provider usage per state. For all report types in R11-9 and R11-10, the NPAC personnel will be able to specify whether the report is an aggregation/summary of stored data or a detailed report containing every item stored for the report type.

R11-12 Billing Report Creation by Service Provider

NPAC SMS shall allow Service Providers to gather billing report data on only their NPAC SMS usage per state. Service Providers will not be able to create reports on any other Service Provider's usage. For all report types in R11-9 and R11-10, the NPAC SMS shall create an aggregation/summary of stored data for the report type.

Modified Section 9 Requirements -

RX9-4 System Reports

NPAC SMS shall support the following system reports for NPAC system administration personnel using the NPAC Administrative Interface:

8. Overall CPU System Utilization
9. Storage Utilization (by state)
10. NPAC SMS Application Performance (SOA/LSMS Downloads per Second)
11. NPAC SMS Application Performance (SOA/LSMS Subscription Activation Time)
12. NPAC SMS-SOA Link Utilization
13. NPAC SMS-LSMS Link Utilization
14. NPAC SMS Application Performance (SOA/LSMS Response Time)
15. NPAC SMS Application Performance (Interface Transaction Rate)
16. NPAC SMS Application Performance (Provider SMS Database Sampling)

This change order must be taken into consideration with change order 8.

Change Order Number: ILL 17

IMPACT/CHANGE ASSESSMENT

FRS	IIS	ASN.1	GDMO	~~Lockheed~~ NPAC	SOA	LSMS
				Y		

Report Size Warning

A request was made to warn the user of the NPAC GUI of the size of a report before its creation to prevent accidental creation of large reports.

A report size warning would be displayed to the user of the NPAC SOA Low-tech or NPAC Administrative Interface before the report is created in number of pages. The user would then be given the option to continue or cancel. If the user chooses to cancel, then they should be returned to the report generation screen and be allowed to modify the report options or exit.

R9-14 Report Size Warning

NPAC SMS shall indicate the number of pages to be created in a report before actual creation of a report to the NPAC personnel using the NPAC Administrative Interface or Service Provider personnel using the NPAC SOA Low-tech Interface.

R9-15 Report Cancellation

NPAC SMS shall support the cancellation of a report after the report size warning by the NPAC personnel using the NPAC Administrative Interface or Service Provider personnel using the NPAC SOA Low-tech Interface.

ISSUE/DISCUSSION:

Do we want a requirement for the functionality in this last sentence of the description above or is this implementation specific.

Change Order Number: ILL 23

IMPACT/CHANGE ASSESSMENT

FRS	IIS	ASN.1	GDMO	~~Lockheed~~ NPAC	SOA	LSMS
Y				Y		

Detailed Integrity Sample Results Report

A request was made for an additional NPAC SMS report for detailed integrity sample results. This report would list all of the discrepancies found for a given Data Integrity Sampling by service provider.

The data integrity report is used to determine the percentage of synchronization between the NPAC SMS and Local SMS. The report is run at a tunable frequency (default 1 week) for a random sample of a tunable number of TN's (default of 1000).

The current requirement reads:

RR9-1 Data Integrity Report

NPAC SMS shall generate an NPAC SMS data integrity report.

It should be reworded to read:

NPAC SMS shall generate an NPAC SMS data integrity report that includes the following information:

- The percentage of syncronization between the NPAC SMS and the Local SMS systems.
- A difference indicator which indicates one of the following:
  - Mismatch between the NPAC SMS and local SMS
  - Record missing in local SMS
  - No discrepancies found
- For each discrepancy found the Service Provider of the LSMS were the discrepancy was found.

ISSUES/DISCUSSION:

There is an issue being discussed on whether the discrepancies found during the data integrity sample should be fixed when found by the NPAC SMS.

There was a request that the M&P support be discussed.

Change Order Number: ILL 58

IMPACT/CHANGE ASSESSMENT

FRS	IIS	ASN.1	GDMO	~~Lockheed~~ NPAC	SOA	LSMS
Y				Y		

Single Audit Report Modification

For each discrepancy listed in the single audit report, the service provider serving the TN should be specified in addition to the service provider who has a discrepancy for that TN. A service provider could use this information to insure that audits requested by their personnel are only run on TN's owned by that service provider, could use this information.

FRS requirement R8-21.2 is as follows:

R8-21.2 Audit Report Contents

NPAC SMS shall generate an audit report containing the following information:
- Audit request parameters, which identified the scope of the audit.
- Date and Time of Audit.
- Progress indication.
- Service Provider network, which contains database conflict.
- A difference indicator which indicates one of the following:
  - Mismatch between the NPAC SMS and local SMS
  - Record missing in local SMS
  - An audit failure
  - No discrepancies found

This requirement would be modified to add the bullet that follows:

- Identification of SP owning the TN for which the discrepancy was found.

Change Order Number: ILL 130

IMPACT/CHANGE ASSESSMENT

FRS	IIS	ASN.1	GDMO	~~Lockheed~~ NPAC	SOA	LSMS
	Y	?	?	Y	Y	Y

Application Level Errors

Errors in the SOA interface are being treated as CMIP errors, which may sometimes make it difficult for a SOA to know the true reason for an error from the NPAC SMS. Therefore, a meaningful error message should be indicated to its users. It has been requested that application level error be defined where appropriate and returned as text to the SOA.

Change Order Number: ILL 183

IMPACT/CHANGE ASSESSMENT

FRS	IIS	ASN.1	GDMO	~~Lockheed~~ NPAC	SOA	LSMS
	Y	Y		Y	Y	Y

Download of Service Provider Data ASN.1 Issue

The NetworkDataDownload ASN.1 definition is as follows:

```
NetworkDownloadData ::= SET OF SEQUENCE {
    service-prov-data [0] SEQUENCE {
         service-prov-id ServiceProvId,
        service-prov-name ServiceProvName
             OPTIONAL
   },
   service-prov-npa-nxx-data [1]
        NPA-NXX-DownloadData OPTIONAL,
   service-prov-lrn-data [2] LRN-DownloadData
        OPTIONAL
}
```

NPA-NXX_DownloadData and LRN-DownloadData both have down load reason, which basically specify whether to add, delete or modify instances, however, service_prov_data does not have download reason. There is not a way to indicate that a serviceProvNetwork object has been deleted in a network data download.

The ASN.1 would be modified as follows:

```
NetworkDownloadData ::= SET OF SEQUENCE {
    service-prov-data [0] SEQUENCE {
         service-prov-id ServiceProvId,
        service-prov-name ServiceProvName
```

```
            OPTIONAL,
        Service-prov-download-reason
            DownloadReason
    },
    service-prov-npa-nxx-data [1]
        NPA-NXX-DownloadData OPTIONAL,
    service-prov-lrn-data [2] LRN-DownloadData
        OPTIONAL
}
```

ISSUE/DISCUSSION:

Backwards compatibility. In general how do we want to handle situations like this one?

Change Order Number: NANC 34

IMPACT/CHANGE ASSESSMENT

FRS	IIS	ASN.1	GDMO	~~Lockheed~~ NPAC	SOA	LSMS
	Y	Y		Y	Y	Y

AuditServiceProvIdRange ASN.1 Modification

It has been suggested that serviceProvName be modified to be ServiceProvId in the AuditServiceProvIdRange ASN.1. ServiceProvId is guaranteed to be unique.

The ASN.1 for AuditServiceProvIdRange would be as follows:

```
AuditServiceProvIdRange ::= CHOICE {
   allServiceProvs [0] NULL,
   serviceProv [1] ServiceProvName,
   serviceProvId [2] ServiceProvId

}
```

The existing ASN.1 is as follows:

```
AuditServiceProvIdRange ::= CHOICE {
    allServiceProvs [0] NULL,
    serviceProv [1] ServiceProvName
}
```

Expanding the choice rather than removing or renaming the name field would support backward compatibility.

Change Order Number: NANC 44

IMPACT/CHANGE ASSESSMENT

FRS	IIS	ASN.1	GDMO	~~Lockheed~~ NPAC	SOA	LSMS
Y				Y		

Effective Release Date Validation

The effective release date is on optional value that can be used in conjunction with a disconnect. This is the date the NPAC removes the subscription from the LSMS's. Without this date the NPAC doesn't do any data validation on the customer disconnect date, but does an immediate broadcast to remove the subscription from the LSMS's. If a subscription is erroneously entered without this date, a customer would be removed from the LSMS's in error. It has been decided that the NPAC will validate the effective release date to insure that it is greater than or equal to the disconnect date. If the effective release date is not greater than or equal to the disconnect date, then the disconnect request will be rejected with an invalid attribute for the effective release date. If the effective release date is not specified it is assumed to be the date of the request.

The following requirements should be added in the FRS section 5:

AR5-3 Effective Release Date Default

If the effective release date is not specified it is assumed to be the current date.

RR5-23.3 Disconnect Subscription Version – Effective Release Date Validation

NPAC SMS shall validate that the Effective Release Date is greater than or equal to the Customer Disconnect Date.

RR 5-23.4 Disconnect Subscription Version - Validation Failure Notification

NPAC SMS shall send an appropriate error message to the originating NPAC personnel or SOA to NAPC SMS interface if any of the validations fail upon Subscription Version Disconnect of an existing Subscription Version.

RR 5-23.5 Disconnect Subscription Version - Validation Failure - No Update

NPAC SMS shall not proceed with the disconnect if any of the validations fail upon Subscription Version Disconnect for an existing Subscription Version.

Change Order Number: NANC 87

IMPACT/CHANGE ASSESSMENT

FRS	IIS	ASN.1	GDMO	~~Lockheed~~ NPAC	SOA	LSMS
Y				Y		

RR5-39 requirement modification

The inclusion of the cancelled state in RR 5-39, we believe, is in error. We believe that the only valid states, that a non-old or new service provider should be able to view, is old or active. No previously pending version should be viewable.

Both NPAC vendors allow any service provider to get a subscription with a status of canceled. The functionality that allows non-old or new service providers to view cancelled subscription versions must be removed.

Change Order Number: NANC 98

IMPACT/CHANGE ASSESSMENT

FRS	IIS	ASN.1	GDMO	~~Lockheed~~ NPAC	SOA	LSMS
Y				Y		

TSAP data required in FRS

Table 3-4 in the FRS, NPAC Customer Network Address Data Model, indicates that the TSAP is a required field. The table should be modified to make the TSAP a required field.

Some SOA/LSMS vendor implementations do not use TSAP addresses. Both NPAC vendors currently have implemented a work around to the problem that allows the TSAP address to be optional.

Change Order Number: NANC 122

IMPACT/CHANGE ASSESSMENT

FRS	IIS	ASN.1	GDMO	~~Lockheed~~ NPAC	SOA	LSMS
Y	Y			?	?	?

Enhance Key Expiration Strategy

It has been requested that the key exchange strategy be revised for a more secure implementation. The strategy would be as follows:

A key status of "in-use" implies that a key may be re-used throughout the life (runtime) of an application. If the application is restarted, it is important that the same key does NOT get reloaded.

A key status of "expired" implies that a key may not be re-used at any time.

NPAC logic:

- When the NPAC reads a private key into memory for it's first use, it should take care to load a key without an "in-use" status. It should then update the selected key, setting it's status to "in-use."
- When the NPAC receives a bind request from a service provider, it should load the service provider public key, and set the public key's status to "in-use."
- When the NPAC detects an access control violation on a bind request, it should update the service provider public key setting the public key status to "expired."
- When the NPAC detects an access control violation on a cmise request, it should update both it's private key and the service provider public key, setting their status to "expired."
- When the NPAC receives an abort from the service provider, it should assume that the service provider aborted due to an access control validation. It should update both it's private key and the service provider public key, setting their status to "expired."

Service Provider logic:

- When the service provider reads a private key into memory for it's first use, it should update that key, setting it's status to "in-use."
- When the service provider receive's an abort on an association which is not yet connected (no bind response received):
- if the abort includes npacAssociationUserInfo AND the error code = ACCESS_DENIED, it should update it's private key to "expired."
- If the above is not true, it should perform no update of it's private key status.

- When the service provider receive's a bind response and detects a violation in access control, it should update both it's private key and the NPAC public key, setting their status to "expired."
- When the service provider receive's a bind response with valid access control, it should update the NPAC public key, setting it's status to "in-use."
- When the service provider receive's an abort on an association, which has been, connected (a bind response received with valid access control) it should assume the NPAC has aborted due to an access control violation. It should therefore update both it's private key and the NPAC public key, setting their status to "expired."

Change Order Number: NANC 147

IMPACT/CHANGE ASSESSMENT

FRS	IIS	ASN.1	GDMO	~~Lockheed~~ NPAC	SOA	LSMS
Y				Y	Y	Y

Version ID Rollover Strategy

Currently there is no strategy defined for rollover if the maximum value for any of the id fields (sv id, lrn id, or npa-nxx id) is reached. One should be defined so that the vendor implementations are in sync. Currently the max value used by Lockheed is a 4 byte signed integer and for Perot it is a 4 byte-unsigned integer.

ISSUES/DISCUSSION:

A strategy on how we look for conflicts for new version id's must be developed as well as a method to provide warnings when conflicts are found.

Change Order Number: NANC 153

IMPACT/CHANGE ASSESSMENT

FRS	IIS	ASN.1	GDMO	~~Lockheed~~ NPAC	SOA	LSMS
Y				Y		

Download file creation by SP for application of Filters

It has been requested that subscription version downloads files used for disaster recovery, be created by specification of SPID so that the SP's filters can be applied. This would create a file only for all the NPA-NXX's in which the service provider is interested.

R3-8.2 Off-line batch updates for Local SMS Disaster Recovery – Filter Application

NPAC SMS shall support an off-line batch download as defined in R3-8 for a specific service provider applying the filters defined for that service provider when creating the Subscription Versions.

~~**Change Order Number: NANC 169**~~

~~**IMPACT/CHANGE ASSESSMENT**~~

~~Delta Download File Creation by Time Range~~

~~It has been requested that a requirement be added to the FRS to allow for creation of a delta download files by time range. This change is expected to help with a service provider get back into sync with the NPAC after an extended outage when the database becomes large.~~

~~**R3-8 Off-line batch updates for Local SMS Disaster Recovery**~~

~~NPAC SMS shall support an off-line batch download as defined in R3-8 that includes only the Subscription Version and Service Provider Network data created in a specified time range.~~

Change Order Number: NANC 174

IMPACT/CHANGE ASSESSMENT

FRS	IIS	ASN.1	GDMO	~~Lockheed~~ NPAC	SOA	LSMS
	Y	Y		Y		

Removal of SOA and LSMS combined association

The NPAC SMS definition of system type includes a definition for a combined LSMS and SOA association. Lockheed currently supports this functionality; however, it was determined that it was unnecessary.

Lockheed will need to change code to remove this functionality. This change order is linked to ILL 181.

The ASN.1 for system type would be changed from:

```
SystemType ::= ENUMERATED {
   soa(0),
   local-sms(1),
   soa-and-local-sms(2),
   npac-sms(3) --value is only valid for AccessControl
         definition
}
to:
SystemType ::= ENUMERATED {
   soa(0),
```

local-sms(1),
npac-sms(3) --value is only valid for AccessControl
definition
}

Change Order Number: NANC 175

IMPACT/CHANGE ASSESSMENT

FRS	IIS	ASN.1	GDMO	~~Lockheed~~ NPAC	SOA	LSMS
	Y			Y	Y	Y

Timestamp default when not set

Lockheed uses a 'not specified' format 00000000000000.0Z to indicate a timestamp that has not been set, Perot uses 1/1/90 00:00. There is currently no reference in the IIS or FRS as to what the default should be.

It was initialing requested that the value 00000000000000.0Z be used and documented in the IIS. Rec. X.208: 1988, Specification of ASN.1 references ISO 8601 for the established date format. ISO 8601 defines acceptable date formats. However per ISO 8601, all zeros (0) for year, month, etc. are invalid values. Therefore, by the definition of the ISO standard 00000000000000.0Z is an invalid date/time stamp. The IBM stack will not allow the .0Z date/time stamp since they conform to the specifications. To comply with the .0Z date/time stamp would require a IBM TMN stack change.

Conditional packages for the timestamps should be added to the GDMO.

Backward Compatibility

The following table indicates if a change order is Backward Compatible (BC) and gives further detail if the change order is not backwards compatible or if there is a question about backwards compatibility.

Change Order Description	BC?	Notes
ILL 5- Round-robin Broadcasts across LSMS associations		
ILL 8- Portability Areas	Y	No impact to SOA or LSMS vendors. NPAC SMS functionality only.
ILL 9- Portability Area Specific Tunables	Y	No impact to SOA or LSMS vendors. NPAC SMS functionality only.
ILL 10- Billing Enhancements	Y	No impact to SOA or LSMS

		vendors. NPAC SMS functionality only.
ILL 17- Report Size Warning	Y	No impact to SOA or LSMS vendors. NPAC SMS functionality only.
ILL 23- Detailed Integrity Sample Results Report	Y	No impact to SOA or LSMS vendors. NPAC SMS functionality only.
ILL 58- Single Audit Report Modification	Y	No impact to SOA or LSMS vendors. NPAC SMS functionality only.
ILL 130- Application Level Errors	?	
ILL 183- Download of Service Provider Data ASN.1 Issue	N	In the current change order definition the ASN.1 would be incompatible.
NANC 34- AuditServiceProvIdRange ASN.1 Modification	Y	
NANC 44- Effective Release Date Validation	Y	New error may be received.
NANC 87- RR5-39 Requirement Modification	Y	No impact to SOA or LSMS vendors. NPAC SMS functionality only.
NANC 98- TSAP Data Required in FRS	Y	No impact to SOA or LSMS vendors. NPAC SMS functionality only.
NANC 122- Enhanced Key Expiration Strategy	?	
NANC 147- Version ID Rollover Strategy	?	
NANC 153 Download file creation by SP for application of Filters	Y	No impact to SOA or LSMS vendors. NPAC SMS functionality only.
NANC 174- Removal of SOA and LSMS combined association	Y	No impact to SOA or LSMS vendors. No SOA or LSMS vendor was using the functionality being removed in live operations. SOA and LSMS vendors may want to review their products to insure this functionality was not implemented.
NANC175- Timestamp default when not set	?	