# **National Number Pooling Requirements**

**November 3, 1998** 

Based on results of Denver meeting, 10/26-30

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### **Document Change History**

#### 5/20/98

- 1. Updated definitions, added "blank directory" and "TN re-assignment" table.
- 2. Updated section 3, added initial requirements for NPA-NXX and LRN validation. Updated NPAC Customer Data Model (for EDR flag). Also, Number Pooling NPA-NXX-X Holder Information Model, and requirements RR3-27.1 through RR3-34.1, RR3-25, and RR3-26. Also added initial requirements for Block discussion.
- 3. Updated section 8, issue with audit and notification suppression to SOA, depending on value of ERD flag to LSMS.
- 4. Updated section 9, consolidated requirements for reports.

#### 6/1/98

- 1. Updated definition for "vacant number treatment".
- 2. Updated NPA-NXX-X and Block sections based on discussion.
- 3. Added comments to SV section related to discussion in Chicago.

#### 6/29/98

1. Re-worked most areas of document, to accommodate new direction (i.e., sub-blocks over the SOA).

#### 8/17/98

- 1. Updated NPA-NXX-X Holder section for issues discussed in Denver.
- 2. Incorporated new requirements for "pending-like, no active" edits.

#### 8/31/98

- 1. Updated all sections.
- 2. Put in sub-section headers and re-numbered all sections based on functionality.

### 10/9/98

- 1. Updates based on 9/16/98 (Seattle), 9/21-25/98 (Kansas City), and 10/5-10/7 (New Orleans) Number Pooling meetings.
- 2. Changed references for Block and Sub-Block to match those found in the GMDO, ASN, and IIS flows. The Block is now referred to as "NPA-NXX-X" and the Sub-Block is now referred to as the "Block".
- 3. Added requirements for NPA-NXX-X notification.
- 4. Added requirements to capture the necessary synchronization that must be performed by the NPAC SMS for Block and associated Subscription Versions, within a 1K Range.

### 11/3/98

1. <u>Updates based on 10/26-30 (Denver) Number Pooling meeting.</u>

### **Number Pooling Requirement Overview**

The National Number Pooling Requirements document provides a set of requirements developed by NANC T&O, as a "target architecture" approach for a national solution to Number Pooling.

### **Glossary**

The following definitions apply in the requirements that follow:

- 1 Code Holder The code holder is the LERG assignee of the NPA-NXX.
- 2 Block Holder The recipient Service Provider of a 1K Block from the code holder. Also defined as the NPA-NXX-X holder in the LERG.
- NPA-NXX-X A range of 1000 pooled TNs within the NPA-NXX, beginning with a station of n000, and ending with n999, where n is a value between 0 and 9. From an NPAC perspective, this is considered Network Data.
- Block A range of 1000 pooled TNs within the NPA-NXX, beginning with a station of n000, and ending with n999, where n is a value between 0 and 9.
- 5 Pre-Port Porting of an entire block of TN's from the code holder to the block holder on, or after, the effective date of the pool. This is supported by for the National Number Pooling architecture.
- Port on Demand Porting of a single TN or range of TN's from the code holder to the block holder at a time desired by the block holder that is on, or after, the effective date of the pool. This is NOT supported for by the National Number Pooling architecture.
- Number Pooling NPA-NXX-X Holder Information –Data in the NPAC SMS that contains the first 7-digits of a range of TN's, the block holder (service provider), and the effective date of the block. Also referred to as "dash X" data. According to the NPAC definition, this is considered Network data.
- 8 Number Pooling Block Information Data in the NPAC SMS that contains the first 7-digits of a 1K range of TN's, default routing for a block of TNs, and the activation timestamp of the TN's within the 1K range. Also referred to as "Block" data.
- 9 De-Pool Return of a 1K pooled block to the Number Administrator. Also referred to as "un-allocation of the block".
- 10 Vacant Number A non-working number.
- 11 Vacant Number Treatment A recorded announcement played to the calling party, when the NPA-NXX of the TN they have dialed is valid, but the 10-digit TN is not a working number.
- Default Routing Restoration reinstatement of the default routing for the TN as defined in the applicable block information, in order to provide vacant number treatment.
- 13 Snapback Notification for TN reassignment.
- 14 Contaminated Number An unavailable number (e.g., working), within a 1K Block, at the time the 1K Block is donated to the Pooling Administrator.

- 15 Pending-like SVs SVs that contain a status of pending, conflict, cancelpending, or failed.
- Active-like SVs SVs that contain a status of active, sending, partial failure, old with a Failed SP List, or disconnect pending.
- 17 Effective Date The date that is considered to be the "ownership switchover" date for the 1K Block from the Code Holder (NPA-NXX owning SP) to the Block Holder (NPA-NXX-X owning SP). This is the date published by the LERG, and is also used by the Pooling Administrator and the NPAC.
- 18 EDR (Efficient Data Representation) The ability to represent 1000 TNs as a range.
- 19 EDR within the NPAC A storage mechanism where a 1K range of TNs is represented, stored, and communicated, as a single Block Range entity (i.e., a Block that equates to the 1000 TNs within the 1K range).

The following table portrays "vacant number treatment" responsibility and "snapback for TN re-assignment" notifications throughout each phase of number pooling, once the Block has been donated to the Pooling Administrator:

Vacant Number Treatment	Pre effective date	post effective date	post Block activation
Contaminated disconnect	Code holder	Code holder	Block holder
Non-contaminated	Code holder	Code holder	Block holder
Snapback for TN			
re-assignment			
Contaminated disconnect	Code holder*	Block holder	Block holder
Non-contaminated	N/A	N/A	Block holder

\* = Code Holder receives a notification but CANNOT reassign this TN.

### **Approach**

At the present time, the National Number Pooling approach includes the following:

- 1. Pre-Port 1K Blocks to a single switch (i.e., all 1000 TNs contain same LRN).
- 2. EDR (Efficient Data Representation) is captured through the use of "1K Bblocks" in the NPAC, and over the SOA-to-NPAC and NPAC-to-LSMS interfaces.
- 3. The NPA-NXX-X Holder Information in the NPAC is the same as the 1K Block managed by the Pooling Administrator, and represented in the LERG.
- 4. A new boolean in the NPAC Customer Data Model will be added to indicate whether or not the Service Provider accepts NPA-NXX-X downloads from the NPAC (TRUE = yes, FALSE = no).
- 5. The NPA-NXX-X Holder Information is broadcast over the NPAC-to-LSMS interface to all Service Providers in that NPAC region (exclusive of those that have filters for the NPA-NXX, and those who have an NPA-NXX-X indicator in the Customer Data Model set to FALSE), for the opening of NPA-NXX-X data to the NPA-NXX-X Holder, just like NPA-NXX openings today.
- 6. The NPA-NXX-X Holder Information's "Effective Date" is the date the LERG, the Pooling Administrator, and the NPAC, consider to be the "ownership switchover" date for the IK Block from the Code Holder (NPA-NXX owning SP) to the Block Holder (NPA-NXX-X owning SP).
- 7. At the time of NPA-NXX-X creation, the NPAC will check for "pending-like, no-active" SVs or pending-like Port-To-Original SVs. If any arc found, the NPAC will reject the creation of this NPA-NXX-X. An error message (new error message and error number for NPA-NXX-X) will be generated for the NPAC personnel. Additionally, the NPAC Personnel will be able to view the discrepant TNs by navigating to screen that displays the erroneous TNsn "error dialog with a transition mechanism" will be developed that allows the NPAC personnel to easily generate the Pending-Like No-Active Subscription Version report and Pending-Like Port-to-Original Subscription Version report (e.g., user gets prompted for reports, "Print the reports now, O.K. / Cancel").
- 8. The Pending-Like No-Active Subscription Version report and Pending-Like Port-to-Original Subscription Version report will be available ereated that is visible to NPAC personnel. The report will contain TN, SV ID, Old SP, New SP, Due Date, and Status.
- 9. The recipients of the Pending-Like No-Active Subscription Version report and Pending-Like Port-to-Original Subscription Version report (e.g., Pooling Administrator, Code Holder) will have their own M&P (outside of NPAC) to clean up these SVs (either cancel or activate). Once they are cleaned up, NPAC personnel will await notification from the Pooling-Administrator prior to attempting the NPA-NXX-X creation again (need input from INC before proceeding with this one).
- 10. The NPA-NXX-X Holder Information is broadcast over the NPAC-to-LSMS interface, when the SP's NPA-NXX-X flag in the SP Profile record in the NPAC, is set to TRUE (non-NPA-NXX-X compatible LSMSs do not receive a broadcast, since the SP's NPA-NXX-X flag is set to FALSE).
- 11. Once the NPA-NXX-X has been created on the NPAC, the Code Holder is prohibited from performing intra-service provider ports. If TNs were missed during the Code Holder's

pre-donation intra-port activities, then NPAC personnel only are allowed to perform these intra-service provider port creates of SVs with no previously active SV, on behalf of the Code Holder. The subsequent activate of these LISP ports can be performed by either the Code Holder or NPAC personnel. \_The NPAC will allow NPAC personnel, via the Ops GUI, to create these LISP ports up to the effective date (11:59p of the day prior to the effective date), and to activate these LISP ports up to the Block's activation date/time. The Code Holder can also assist in the activation of the LISP ports up to the Block's activation date/time.

- 12. The TN Range in the NPA-NXX-X and Block are the same.
- 13. Once the NPA-NXX-X's Effective Date has been reached, the Block will be created (either from a scheduled event on the NPAC, or from a SOA sending up the Block).
- 14. Once the Block has been created in the NPAC, then NPAC processing considers the Block to be "activated" for the Block Holder, and all snapback messages and default routing will go to the Block Holder.
- 15. The Block Holder Information is broadcast over the NPAC-to-LSMS interface, when the SP's LSMS EDR flag in the SP Profile record in the NPAC, is set to TRUE (non-EDR-LSMSs get individual SVs, since the SP's LSMS EDR flag is set to FALSE).
- 16. The Block Holder Information's "Activation Timestamp" is the date/time the NPAC-broadcasts sub-block or SV data to the applicable LSMSs. Only at this point in time are all-SPs notified of the "ownership switchover" date for the 1K Block from the Code Holder (NPA-NXX owning SP) to the Block Holder (NPA-NXX-X owning SP).
- 17. <u>Block Create messages over the SOA-to-NPAC SMS Interface will set the SOA Origination to TRUE.</u>
- 18. The Block Holder Information's SOA notification is broadcast over the SOA to NPAC Interface, when the SOA Origination on the Block record is set to TRUE.
- 19. At the time of Block creation by the NPAC (attempted on or after the NPA-NXX-X's Effective Date), the NPAC will check for "pending-like, no- active" SVs. If any are found, the NPAC will reject the creation of this Block. An error message (new error message and error number for Block) will be generated for the NPAC personnel. An "error dialog with a transition mechanism" will be developed that allows the NPAC personnel to easily generate the Pending-Like No-Active Subscription Version report (e.g., user gets prompted for report, "Print the report now, O.K. / Cancel").
- 20. At the time of Block creation by the SP's SOA (attempted on or after the NPA-NXX-X's Effective Date), the NPAC will check for "pending-like, no- active" SVs. If any are found, the NPAC will reject the creation of this Block. An error message (new error message and error number for Block, but no alarm to NPAC Personnel) will be generated and sent back to the SP's SOA. A new M&P will require the SP to contact NPAC personnel (USA) and request the generation of the Pending-Like No-Active Subscription Version report.
- 21. The Pending-Like No-Active Subscription Version and Pending-Like Port-to-Original Subscription Version report will be created and will contain TN, SV ID, Old SP, New SP, Due Date, and Status.
- 22. Block Create messages over the SOA-to-NPAC SMS Interface will set the SOA Origination to TRUE.
- 23. The recipients of this report (e.g., Pooling Administrator, Code Holder) will have their own M&P (outside of NPAC) to clean up these SVs (either cancel or activate) by the Code Holder and the NPAC Personnel. Once they are cleaned up, NPAC personnel will await

notification from the	prior to attempting the Block creation again (if it is
notification from the	prior to attempting the block eleation again (if it is
NDAC initiated) or contacting the Plack	Holder SP and informing them that they could re-
NIAC initiated), of contacting the block	Troider of and informing them that they could re-
submit the Block request (need input fro	om INC) <del>.</del>

- 24. Once the Block has been created on the NPAC, most of the NPAC functionality remains the same. The differences include, Port-To-Original (PTO) must now be the NPA-NXX-X-Holder SP, PTO activates and all disconnects broadcast different SV data to non-EDR LSMSs (M-CREATE) and EDR LSMSs (M-DELETE).
- 25. See Appendix F attachment \_\_\_\_\_ for Block and SV behavior in a National Number Pooling Environment-
- 26. A new boolean in the NPAC Customer Data Model will be added to indicate whether or not the Service Provider accepts NPA-NXX-X downloads from the NPAC (TRUE = yes, FALSE = no).
- 27. A new boolean in the NPAC Customer Data Model will be added to indicate whether or not the Service Provider uses Efficient Data Representation on the Local SMS (TRUE = yes, FALSE = no).
- 28. The two new objects that will be broadcast over the interface include the NPA-NXX-X (1K Block) openings (similar to today's code opening of NPA-NXX), and Block for EDR compatible Local SMSs that represent lace the 1000 TNs of POOL'ed numbers within as the 1K Block.
- 29. The baseline for any requirements that begin with "RR..." is HS/FRS 1.10.
- 30. The baseline for the National Number Pooling requirements wais the Illinois Number Pooling NPAC Release 1.4.

The following table portrays "vacant number treatment" responsibility and "snapback for TN re-assignment" notifications throughout each phase of number pooling, once the Block has been donated to the Pooling Administrator:

Vacant Number Treatment	Pre effective date	post effective date	post Block activation
Contaminated disconnect	Code holder	Code holder	Block holder
Non-contaminated	<u>Code holder</u>	<u>Code holder</u>	Block holder
Snapback for TN			
re-assignment			
Contaminated disconnect	Code holder*	Block holder	Block holder
Non-contaminated	N/A	<u>N/A</u>	Block holder

\* = Code Holder receives a notification but CANNOT reassign this TN.

## Requirements

### **Section 3 Modifications**

### FRS Section 3.1.2

NPAC CUSTOMER DATA MODEL					
Attribute Name	Type (Size)	Required	<u>Description</u>		
NPAC Customer ID	<u>C (4)</u>		An alphanumeric code which uniquely identifies an NPAC Customer.		
NPAC Customer Name	<u>C (40)</u>		A unique NPAC Customer Name.		
NPAC Customer Allowable Functions	<u>M</u>		Each bit in the mask represents a boolean indicator for the following functional options:  ?1 SOA Management  ?2 SOA Network Data Management  ?3 LSMS Network Data Management  ?4 LSMS Data Download  ?5 LSMS Queries/Audits		
NPAC Customer NPA-NXX-X Indicator	<u>B</u>		A boolean that indicates whether the NPAC Customer accepts NPA-NXX-X downloads from the NPAC SMS.  The default value is False.		
NPAC Customer LSMS EDR Indicator	В		A boolean that indicates whether the NPAC Customer utilizes Efficient Data Representation (EDR) on the LSMS.  The default value is False.		

### **SPEDR**-10 Service Provider NPA-NXX-X Indicator

NPAC SMS shall provide a mechanism to indicate whether a for the Service Provider supports receiving to indicate whether or not they manage the 1K Block using NPA-NXX-X data, and want Number Pooling Block Information by downloadinged this data to their Local SMS via the NPAC SMS to Local SMS Interface, using the Number Pooling NPA-NXX-X Object.

### **SPEDR-20** Service Provider NPA-NXX-X Indicator – Default

NPAC SMS shall default the NPA-NXX-X Indicator to FALSE.

### **SPEDR-30** Service Provider NPA-NXX-X Indicator – Modification

NPAC SMS shall allow the NPAC SMS Administrator to modify the NPA-NXX-X Indicator on the NPAC Customer record.

### EDR-40 Service Provider NPA-NXX-X Indicator - Downloads

NPAC SMS shall download NPA-NXX-X data, via the NPAC SMS to Local SMS Interface if the indicator is TRUE.

### **SPEDR-50** Service Provider EDR Indicator

NPAC SMS shall provide a mechanism to indicate whether a for the Service Provider supports to indicate whether or not they manage the 1K Block using Efficient Data Representation (EDR), and want Number Pooling Block Information downloadinged this data to their Local SMS via the NPAC SMS to Local SMS Interface, using the Number Pooling Block Object.

### **SPEDR-60** Service Provider EDR Indicator – Default

NPAC SMS shall default the EDR Indicator to FALSE.

### **SPEDR-70** Service Provider EDR Indicator – Modification

NPAC SMS shall allow the NPAC SMS Administrator to modify the EDR Indicator on the NPAC Customer record.

## FRS Section 3.1.3

SUBSCRIPTION VERSION DATA MODEL			
Attribute Name	Type (Size)	Required	<u>Description</u>
<u>Version ID</u>	N		A unique sequential number assigned upon creation of the Subscription Version.
LRN	TN		The LRN is an identifier for the switch on which portable NPA-NXX-XXX-X's reside.
Old Service Provider ID	<u>C (4)</u>		Old Service Provider ID.
New Service Provider ID	<u>C (4)</u>		New Service Provider ID.
TN	<u>TN</u>		Subscription Version telephone number.
Local Number Portability Type	E		Number Portability Type. Valid enumerated values are:  LSPP - Local Inter-Service Provider Portability (0)  LISP - Local Intra-Service Provider Portability (1)  POOL - Pooled Block Number Port (2)
<u>Status</u>               	E		Status of the Subscription Version.  The default value is P for Pending.  Valid enumerated values are:  X - Conflict (0)  A - Active (1)  P - Pending (2)  S - Sending (3)  F - Failed (4)  PF - Partial Failure (5)  DP - Disconnect Pending (6)  O - Old (7)  C - Canceled (8)  CP - Cancel Pending (9)
CLASS DPC	<u>N (9)</u>		DPC for 10-digit GTT for CLASS features.
CLASS SSN	<u>N (3)</u>		CLASS SSN for the Subscription Version.
LIDB DPC	<u>N (9)</u>		DPC for 10-digit GTT for LIDB features.
LIDB SSN	<u>N (3)</u>		LIDB SSN for the Subscription Version.
<u>CNAM DPC</u>	<u>N (9)</u>		DPC for 10-digit GTT for CNAM features.

CNAM SSN	<u>N (3)</u>	CNAM SSN for the Subscription Version.
ISVM DPC	<u>N (9)</u>	DPC for 10-digit GTT for ISVM features.
ISVM SSN	<u>N (3)</u>	ISVM SSN for the Subscription Version.
New Service Provider Due Date	T	The due date planned by the new Service Provider for Subscription Version Transfer.
Old Service Provider Due Date	T	The due date planned by the old Service Provider for Subscription Version Transfer.
Old Service Provider Authorization	<u>B</u>	A boolean indicator set by the old Service Provider to indicate authorization or denial of Transfer of Service for the Subscription Version to the new Service Provider.
New Service Provider Create Time Stamp	T	The date and time that the New Service Provider authorized Transfer of Service of the Subscription Version.
Old Service Provider Authorization Time Stamp	T	The date and time that the old Service Provider authorized Transfer of Service for the Subscription Version.
Activation Request Time Stamp	T	The date and time that the Subscription Version activation request was made by the new Service Provider.
Activation Broadcast Date	T	The date and time that broadcasting began to all local SMS systems for the activation of the Subscription Version.
Activation Broadcast Complete Time Stamp	T	The date and time that at least one Local SMS system successfully acknowledged the broadcast or the retries were exhausted for the activate.
Disconnect Request Time Stamp	T	The date and time that the Subscription Version disconnect request was made by the local Service Provider.
Disconnect Broadcast Time Stamp	T	The date and time that broadcasting began to all local SMS systems for the disconnect of the Subscription Version.
Disconnect Broadcast Complete Time Stamp	T	The date and time that at least one Local SMS system successfully acknowledged the broadcast or the retries were exhausted for the disconnect.
Effective Release Date	T	The date that the Subscription Version is to be deleted from all Local SMS systems.
Customer Disconnect Date	T	The date that the Customer's service was disconnected.
Pre-Cancellation Status	<u>E</u>	Status of the Subscription Version prior to cancellation. Valid enumerated values are:

		X - Conflict (0) P - Pending (2) DP - Disconnect Pending (6)
Old Service Provider Cancellation Time Stamp	T	The date and time that the Old Service Provider acknowledged that the Subscription Version be canceled.
New Service Provider Cancellation Time Stamp	T	The date and time that the New Service Provider acknowledged that the Subscription Version be canceled.
Cancellation Time Stamp	T	The date and time that the Subscription Version became canceled.
Old Time Stamp	T	The date and time that the Subscription Version became old.
Conflict Time Stamp	T	The date and time that the Subscription Version was last placed in conflict.
Conflict Resolution Time Stamp	T	The date and time that the resolution of a Subscription Version in conflict is acknowledged.
Create Time Stamp	T	The date and time that this Subscription Version record was created.
Modified Time Stamp	T	The date and time that this Subscription Version record was last modified.
		The default value is the Create Time Stamp.
Porting to Original	<u>B</u>	A boolean that indicates whether the Subscription Version created is to be ported back to the original Service Provider.
		The default value is False.
End User Location Value	<u>C (12)</u>	For future use.
End User Location Value Type	<u>C (2)</u>	For future use.
Modify Request Timestamp	T	The date and time that the Subscription Version Modify request was made.
Modify Broadcast Timestamp	T	The date and time that broadcasting began to all local SMS systems for the modification of the Subscription Version.
Modify Broadcast Complete Timestamp	Τ	The date and time that all local SMS systems successfully acknowledged or the retries were exhausted for the modification of the Subscription Version
Billing ID	<u>C (4)</u>	For future use.

		The default value is the Facilities Based Service Provider ID.
Status Change Cause Code	<u>N (2)</u>	Used to specify reason for conflict when old Service Provider Authorization is set to False, or to indicate NPAC SMS initiated cancellation. Valid values are: 0 - No value 54 - General Conflict 50 - LSR Not Received 51 - FOC Not Issued 52 - Due Date Mismatch 53 - Vacant Number Port 55 - NPAC SMS Automatic Conflict from Cancellation 1 - NPAC SMS Automatic Cancellation

**Table 0-1 Subscription Version Data Model** 

### **RX3-3.1 Service Provider NPA-NXX Data Deletion**

NPAC SMS shall allow Service Providers to delete their NPA- NXX data via the NPAC SMS to Local SMS interface or the SOA to NPAC SMS interface provided the changes do not cause any updates to the Subscription Versions, Number Pooling NPA-NXX-X or Block Information.

#### **RR4-3** Removal of NPA-NXX

NPAC SMS shall allow the removal of an NPA-NXX by NPAC personnel only if no Subscription Versions, except for Old or Canceled Subscription Versions, or Number Pooling NPA-NXX-X or Block Information, exists for the NPA-NXX.

#### **RX3-3.2** Service Provider LRN Data Deletion

NPAC SMS shall allow Service Providers to delete their LRN data via the NPAC SMS to Local SMS interface or the SOA to NPAC SMS interface provided the changes do not cause any updates to the Subscription Versions or Number Pooling Block Information.

#### **RR4-4.2 Removal of LRN**

NPAC SMS shall allow the removal of an LRN by NPAC personnel only if no Subscription Versions, except for Old or Canceled Subscription Versions or Number Pooling Block Information, except for Old with NO Failed SP List, exists for the LRN.

### **Section 3 New Requirements**

NUMBER POOLING NPA-NXX-X HOLDER INFORMATION DATA MODEL				
Attribute Name	<u>Type</u> (Size)	Required	<u>Description</u>	
NPA-NXX-X ID	N		A unique sequential number assigned upon creation of the NPA-NXX-X.	
NPA-NXX-X Holder SPID	<u>C(4)</u>		The Service Provider Id of the NPA-NXX-X holder.	
NPA-NXX-X	<u>N(7)</u>		NPA-NXX-X of the 1K Block.	
Effective Date	<u>T</u>		The effective date of the 1K Block. The time for this field will be stored in GMT, but equivalent to 00:00:00 network data time CST.	
Creation Date	<u>T</u>		The date and time (GMT) that this NPA-NXX-X Holder record was created.	
Last Modified Date	T		The date and time (GMT) of the Last Modification to this NPA-NXX-X Holder record.  The default value is the Creation Timestamp.	
Download Reason				

### **NPA-NXX-X Holder, General**

N-10 Number Pool NPA-NXX-X Holder Information – NPAC Personnel GUI

NPAC SMS shall allow NPAC Personnel to add, modify, delete, and query NPA-NXX-X Holder information via the NPAC Administrative Interface.

N-11 Number Pool NPA-NXX-X Holder Information –GUI Entry Field for NPAC or SOA Origination

NPAC SMS shall provide a mechanism for NPAC Personnel to select NPAC Origination or SOA Origination for the Block data, when creating NPA-NXX-X Holder information, via the NPAC Administrative Interface.

## N-12 Number Pool NPA-NXX-X Holder Information – Routing Data for NPAC Origination

NPAC SMS shall require NPAC Personnel to enter applicable Block routing data, via the NPAC Administrative Interface, when the NPAC Origination has been selected while creating NPANXX-X Holder information.

### N-15 Number Pool NPA-NXX-X Holder Information –GUI Entry Field

NPAC SMS shall include the "Scheduled Time" as an entry field in the format of HH:MM, for the NPA-NXX-X Holder information via the NPAC Administrative Interface.

## N-16 Number Pool NPA-NXX-X Holder Information –Default for Entry Field

NPAC SMS shall default the value in the "Scheduled Time" field in the NPAC Administrative Interface, to 00:01 (HH:MM).

### N-17 Number Pool NPA-NXX-X Holder Information –Use of Entry Field

NPAC SMS shall use the value in the "Scheduled Time" field as the time that the Block Creation scheduled event will occur for NPAC initiated Block Holder data.

# N-20 Number Pool NPA-NXX-X Holder Information – Service Provider Request

NPAC SMS shall reject a request from a Service Provider SOA via the SOA to NPAC SMS Interface, or Service Provider via the NPAC SOA Low-tech Interface, to add, modify, or delete, NPA-NXX-X Holder information as stored in the NPAC SMS.

## N-30 Number Pool NPA-NXX-X Holder Information – NPA-NXX Validation

NPAC SMS shall validate that the NPA-NXX specified in the addition of Number Pooling NPA-NXX-X Holder information is a valid NPA-NXX defined in the NPAC SMS.

## N-40 Number Pool NPA-NXX-X Holder Information – NPA-NXX Effective Date

NPAC SMS shall validate that the effective date of the NPA-NXX-Xblock is equal to, or greater than, the effective date of the NPA-NXX as defined in the NPAC SMS.

# N-50 Number Pool NPA-NXX-X Holder Information – Duplicate NPA-NXX-X Validation

NPAC SMS shall validate that the NPA-NXX-X specified in the addition of Number Pooling NPA-NXX-X Holder Information is not a duplicate for another entry in the Number Pooling NPA-NXX-X Holder Information.

## N-61 Number Pool NPA-NXX-X Holder Information – NPAC SMS download of network data to the Local SMS

NPAC SMS shall be able to communicate creation, modification, or deletion of NPA-NXX-X data for a Service Provider to Local SMSs.

#### The contents of the network download are:

- ?6 Network data:
  - NPAC Customer ID
  - NPAC Customer Name
- ?7 NPA-NXX-X Download Data:
  - NPA-NXX-X ID
  - NPA-NXX-X Value
  - Effective Date TimeStamp
  - Last Modified Date TimeStamp
  - Download Reason

# N-62 Number Pool NPA-NXX-X Holder Information – NPAC SMS notification of NPA-NXX-X availability to the Service Providers

NPAC SMS shall inform all Service Providers about the availability of the NPA-NXX-Xs for poolrting via the NPAC SMS to Local SMS interface or the Web bulletin board. The NPA-NXX-X data fields sent via the NPAC SMS to Local SMS interface are:

- ?8 NPAC Customer ID
- ?9 NPAC Customer Name
- ?10 NPA-NXX-X ID
- ?11 NPA-NXX-X Value
- ?12 Effective Date TimeStamp
- ?13 Last Modified Date TimeStamp
- ?14 Download Reason

#### The NPA-NXX-X data fields sent to the WEB bulletin board are:

- ?15 NPAC Customer ID
- ?16 NPAC Customer Name
- ?17 NPA-NXX-X Value
- ?18 Effective Date

## N-63 Number Pool NPA-NXX-X Holder Information – Service Provider NPA-NXX-X Indicator Download of NPA-NXX-X Object

NPAC SMS shall download Number Pooling NPA-NXX-X Information, for additions, modifications, and deletions, using the Number Pooling NPA-NXX-X Object, via the NPAC SMS to Local SMS Interface if the Service Provider's NPA-NXX-X indicator is **TRUE**.

## N-64 Number Pool NPA-NXX-X Holder Information – Service Provider NPA-NXX-X Indicator Download of SVs

NPAC SMS shall suppress the download of Number Pooling NPA-NXX-X Information, for additions, modifications, and deletions, via the NPAC SMS to Local SMS Interface if the Service Provider's NPA-NXX-X indicator is **FALSE**.

## N-65 Number Pool NPA-NXX-X Holder Information – Filters for NPA-NXX-Xs

NPAC SMS shall apply NPA-NXX Filters to NPA-NXX-X downloads to the Local SMS(s).

### N-70 Number Pool NPA-NXX-X Holder Information – Validation Error

NPAC SMS shall report an error to the NPAC Personnel and reject the addition or modification of Number Pooling NPA-NXX-X Holder information if validation errors occur as defined in Requirements N-30, N-40, N-50, N-90, N-160, N-200 , and N-230.

### CMA to update numbers once requirements are finalized.

### NPA-NXX-X Holder, NPAC Scheduling of Block Creation

### N-71 Number Pool NPA-NXX-X Holder Information –GUI Entry Field

NPAC SMS shall include the "Scheduled Time on the Effective Date" as an entry field in the format of HH:MM, for the NPA-NXX-X Holder information via the NPAC Administrative Interface.

## N-72 Number Pool NPA-NXX-X Holder Information –Default for Entry Field

NPAC SMS shall default the value in the "Scheduled Time on the Effective Date" field in the NPAC Administrative Interface, to 00:01 (HH:MM).

### N-73 Number Pool NPA-NXX-X Holder Information –Use of Entry Field

NPAC SMS shall use the value in the "Scheduled Time on the Effective Date" field as the time that the Block Creation scheduled event will occur on the Effective Date for NPAC initiated Block Holder data.

### **NPA-NXX-X Holder, Addition**

# N-80 Addition of Number Pooling NPA-NXX-X Holder Information – Required Fields

NPAC SMS shall require NPAC personnel to specify the NPA-NXX-X Holder SPID, the NPA-NXX-X, and the Effective Date, as defined in the Number Pooling NPA-NXX-X Holder Information data model.

## N-90 Addition of Number Pooling NPA-NXX-X Holder Information – SPID Validation

NPAC SMS shall validate that the NPA-NXX-X Holder SPID is a valid Service Provider in the NPAC SMS.

## N-100 Addition of Number Pooling NPA-NXX-X Holder Information – Check for Pending-Like No-Active SVs

NPAC SMS shall reject the request and issue an unique alarmable error message to the NPAC personnel at the time of NPA-NXX-X Creation, if there are any TNs within the 1K Block, that contain an SV, with a status of pending/conflict/cancel-pending/failed, and where a currently active SV does NOT exist, for the given TN.

# N-110 Addition of Number Pooling NPA-NXX-X Holder Information – Check for Pending-Like Port-To-Original SVs

NPAC SMS shall reject the request and issue an unique alarmable error message to the NPAC personnel at the time of NPA-NXX-X Creation, if there are any TNs within the 1K Block, that contain an SV, with a status of pending/conflict/cancel-pending/failed, and where the SV is a Port-To-Original port, for the given TN.

# N-130 Addition of Number Pooling NPA-NXX-X Holder Information – Error MessageReport for Pending-Like No-Active SVs and Pending-Like Port-To-Original SVs

NPAC SMS shall provide an "error dialog with a transition mechanism" that displays the unique error message described in N-9100 and N-1100, and upon completion of the request, the list of Pending-Like No-Active Subscription Version(s) and Pending-Like Port-to-Original Subscription Version(s) for TNs within the 1K Block, will be made available to NPAC Personnel with minimal navigation on the NPAC Administrative Interface and allows the NPAC Personnel to perform an easy one-button mouse click generation of the Pending-Like No-Active Subscription Version report and Pending-Like Port-to-Original Subscription Version report to the NPAC personnel of all of the TNs that are generated at the time of NPA-NXX-X Creation, for pending-like no-active SVs and pending-like Port-To-Original SVs, for TNs within the 1K Block.

### N-131 Addition of Number Pooling NPA-NXX-X Holder Information — Output Destination for Pending-Like No-Active SVs and Pending-Like Port-To-Original SVs

NPAC SMS shall provide output destination options, as listed in R9-2, for the Pending-Like No-Active Subscription Version(s) and Pending-Like Port-to-Original Subscription Version(s) Report, based on the error condition in N-130.

### N-140 Addition of Number Pooling NPA-NXX-X Holder Information Effective Date – Tunable Parameter

NPAC SMS shall provide a NPA-NXX-X Holder Effective Date Window tunable parameter which is defined as the minimum length of time between the current date and the effective date, when Creating a NPA-NXX-X in the NPAC SMS.

NOTE: Need to add an entry in Appendix C, System Tunables, that this new tunable has a default value of 5, units is business days, and valid range is between 5 and 360.

### N-150 Addition of Number Pooling NPA-NXX-X Holder Information Effective Date – Tunable Parameter Default

NPAC SMS shall default the NPA-NXX-X Holder Effective Date Window tunable parameter to five (5) business days.

**NOTE:** The value of five (5) business days is selected because of the first port notifier, and this would affect SPs operationally if this value is set to less than five business days.

### N-160 Addition of Number Pooling NPA-NXX-X Holder Information Effective Date – Validation

NPAC SMS shall verify that the Effective Date for the NPA-NXX-X Holder data is equal to, or greater than, the current date plus the value of the NPA-NXX-X Holder Effective Date Window tunable parameter.

### N-170 Addition of Number Pooling NPA-NXX-X Holder Information Effective Date – Ops GUI Default

NPAC SMS shall default the time portion of the Effective Date Timestamp to 00:00 Central Time, and not allow the NPAC Personnel to modify the Time portion of the Effective Date, on the NPAC Administrative Interface GUI screen.

## N-180 Addition of Number Pooling NPA-NXX-X Holder Information NPA-NXX-X Holder SPID – Validation

NPAC SMS shall allow the value of the NPA-NXX-X Holder SPID to be equal to the value of the SPID that owns the NPA-NXX.

### **NPA-NXX-X Holder, Modification**

### N-190 Modification of Number Pool NPA-NXX-X Holder Information – Effective Date Modification from GUI

NPAC SMS shall allow NPAC personnel to modify the block holder effective date for an NPA-NXX-X 1K Block as stored in the NPAC SMS via the NPAC Administrative Interface.

## N-200 Modification of Number Pool NPA-NXX-X Holder Information - Effective Date

NPAC SMS shall allow the NPAC personnel to modify the effective date for an NPA-NXX-X 1K Block if the current date is less than the effective date for the NPA-NXX-X1K Block.

### N-220 Modification of Number Pool NPA-NXX-X Holder Information Effective Date – Tunable Parameter Modification

NPAC SMS shall allow the NPAC SMS Administrator to modify the NPA-NXX-X Holder Effective Date Window tunable parameter.

### N-230 Modification of Number Pool NPA-NXX-X Holder Information Effective Date – Validation

NPAC SMS shall verify that the modification of the Effective Date for the NPA-NXX-X Holder data is equal to, or greater than, the block creation date plus the value of the NPA-NXX-X Holder Effective Date Window tunable parameter.

### **NPA-NXX-X Holder, Deletion**

## N-240 Deletion of Number Pool NPA-NXX-X Holder Information – NPA-NXX-X Data

NPAC SMS shall allow NPAC personnel to delete the block holder information for an NPANXX-X 1K Block as stored in the NPAC SMS.

## N-250 Deletion of Number Pooling NPA-NXX-X Holder Information – Check for Pending-Like and Active POOL SVs

NPAC SMS shall reject the request and issue an unique alarmable error message to the NPAC personnel at the time of NPA-NXX-X Deletion, if there are any TNs within the 1K Block, that contain an SV with a status of pending/conflict/cancel-pending/failed where the Old SP is equal to the NPA-NXX-X Holder SPID, and the current active SV is LNP Type of POOL.

# N-260 Deletion of Number Pooling NPA-NXX-X Holder Information – Check for Port-to-Original SVs

NPAC SMS shall reject the request and issue an unique alarmable error message to the NPAC personnel at the time of NPA-NXX-X Deletion, if there are any TNs within the 1K Block, that contain an SV, where the SV is a Port-To-Original port.

## N-265 Deletion of Number Pooling NPA-NXX-X Holder Information – Check for non-Active Block

NPAC SMS shall reject the request and issue an error message to the NPAC personnel at the time of NPA-NXX-X Deletion, if the associated Block, contains a status other than Active, or the Failed SP List contains any SPIDs.

## N-280 Deletion of Number Pooling NPA-NXX-X Holder Information – Report for Pending-Like and Active POOL SVs

NPAC SMS shall provide an "error dialog with a transition mechanism" that displays the unique error message described in N-2450- and N-260, and upon completion of the request, the list of Pending-Like and Active POOL Subscription Version(s) where the current active SV contains LNP Type of POOL, and Pending-Like Port-to-Original Subscription Version(s) for TNs within the 1K Block, will be made available to NPAC Personnel with minimal navigation on the NPAC Administrative Interface and allows the NPAC Personnel to perform an easy one-button mouse click generation of the Pending-Like Active POOL Subscription Version report and Port-To-Original Pending Subscription Version report, to the NPAC personnel of all of the error messages that are considered in error at the time of NPA-NXX-X Deletion, for pending-like SVs, where the Old SP is equal to the NPA-NXX-X Holder SPID and the current active SV contains LNP Type of POOL, or Port-To-Original SVs, for TNs within the 1K Block.

### N-281 Deletion of Number Pooling NPA-NXX-X Holder Information — Output Destination for Pending-Like and Active POOL SVs and Pending-Like Port-To-Original SVs

NPAC SMS shall provide output destination options for the Pending-Like and Active POOL Subscription Version(s) and Pending-Like Port-to-Original Subscription Version(s) Report, based on the error message in N-280, that include print, fax, e-mail, stored to a file.

# N-290 Deletion of Number Pool NPA-NXX-X Holder Information – Block and Subscription Version Data Dependency

NPAC SMS shall delete the NPA-NXX-X Holder Information for a 1K Block, through a multistep process that includes:

- Broadcasting the delete of SVs to non-EDR Local SMSs.
- Broadcasting the delete of Blocks to the EDR Local SMSs.
- Receiving a successful response from all EDR and non-EDR Local SMSs.
- Updating all SVs and Blocks on the NPAC SMS.
- Deleting the NPA-NXX-X Holder information from the NPAC SMS.
- Broadcasting the delete of NPA-NXX-X to the NPA-NXX-X enabled Local SMSs.
- Receiving a successful response from all NPA-NXX-X enabled Local SMSs.
- Deleting the NPA-NXX-X Holder information from the NPAC SMS.

# N-295 Deletion of Number Pool NPA-NXX-X Holder Information – NPA-NXX-X Dependency

NPAC SMS shall only delete the NPA-NXX-X Holder Information after successfully updating all associated SVs and Blocks to a status of Old with NO Failed SP Listcompleting all previous steps defined in N-290.

### NPA-NXX-X Holder, NPA Splits

# N-300 NPA Splits and the Number Pool NPA-NXX-X Holder Information – New NPA Split Automatic Create of New NPA-NXX-X

NPAC SMS shall automatically create a new NPA-NXX-X in the Number Pooling NPA-NXX-X Information, when a valid request is made to add an NPA Split, if the old NPA-NXX-X exists, but the new NPA-NXX-X does NOT exist in the Number Pooling NPA-NXX-X Information.

# N-301 NPA Splits and the Number Pool NPA-NXX-X Holder Information – New NPA Split Error Message if New NPA-NXX-X Already Exists

NPAC SMS shall reject the request and generate an error message to the NPAC Personnel when a request is made to add an NPA Split, and the new NPA-NXX-X already exists in the Number Pooling NPA-NXX-X Information.

# N-302 NPA Splits and the Number Pool NPA-NXX-X Holder Information – New NPA Split Field Values for Automatic Add of New NPA-NXX-X

NPAC SMS shall populate the fields for the automatically generated new NPA-NXX-X in the Number Pooling NPA-NXX-X Information, when a request is made to add an NPA Split, as follows:

- NPA-NXX-X ID -- automatically generated by NPAC.
- NPA-NXX-X Holder SPID set as same value as old NPA-NXX-X.
- <u>NPA-NXX-X set to the same value as the new NPA-NXX, plus the seventh digit of the old NPA-NXX-X.</u>
- <u>Effective Date -- set to the later of, the same field in old NPA-NXX-X, or the start of PDP.</u>
- <u>Creation Date -- set to the System Date.</u>
- Last Modified Date -- set to the System Date.
- Download Reason set to the value of "new1".

# N-303 NPA Splits and the Number Pool NPA-NXX-X Holder Information – New NPA Split, Skip Block and Subscription Version Create

NPAC SMS shall NOT schedule the Creation of a Block and Subscription Versions with LNP Type of POOL, for an NPA-NXX-X that is automatically generated by the NPAC SMS in the Number Pooling NPA-NXX-X Information, as a result of a request to add an NPA Split.

NOTE: The Block and SVs will be created at PDP Start based on Block and SV split requirements.

## N-310 NPA Splits and the Number Pool NPA-NXX-X Holder Information – NXX Removal from NPA Split prior to the end of PDP

NPAC SMS shall upon the removal of an NPA-NXX from an NPA Split *prior to the end* of permissive dialing, remove the new NPA-NXX-X from the NPA-NXX-X Holder Information.

## N-320 NPA Splits and the Number Pool NPA-NXX-X Holder Information – Addition of an NPA-NXX-X involved in an NPA Split

NPAC SMS shall, upon entry of an NPA-NXX-X in the Number Pooling NPA-NXX-X Holder Information, automatically add an entry for the new/old NPA-NXX-X for an NPA-NXX involved in an NPA Split, if the old NPA-NXX is scheduled for permissive dialing or currently in permissive dialing.

NOTE: Therefore, if entering the new NPA-NXX-X, then the old NPA-NXX-X will be automatically added; and if entering the old NPA-NXX-X, then the new NPA-NXX-X will be automatically added.

# N-325 NPA Splits and the Number Pool NPA-NXX-X Holder Information – Broadcast of Addition or Deletion of NPA-NXX-X Split Data

NPAC SMS shall broadcast NPA-NXX-X data that is added or deleted for an NPA Split, as defined in requirements N-61, N-62, N-63, N-64, and N-65.

# N-326 NPA Splits and the Number Pool NPA-NXX-X Holder Information – Deletion of Old NPA-NXX-X at the end of permissive dialing

NPAC SMS shall automatically delete the old NPA-NXX-X from the Number Pooling NPA-NXX-X Holder Information, upon reaching the end of the permissive dialing period for the old NPA-NXX of the NPA-NXX-X.

## N-300 NPA Splits and the Number Pool NPA-NXX-X Holder Information – New NPA Split

NPAC SMS shall reject a request to add an NPA Split, if the old NPA-NXX-X and new NPA-NXX-X do NOT exist in the Number Pooling NPA-NXX-X Information.

## N-310 NPA Splits and the Number Pool NPA-NXX-X Holder Information – NXX Removal from NPA Split prior to the end of PDP

NPAC SMS shall upon the removal of an NPA-NXX from an NPA Split *prior to the end* of permissive dialing, remove the new NPA-NXX-X from the NPA-NXX-X Holder Information.

# N-320 NPA Splits and the Number Pool NPA-NXX-X Holder Information – Addition of an NPA-NXX involved in an NPA Split

NPAC SMS shall add an entry for the new NPA-NXX-X for an NPA-NXX involved in an NPA Split upon entry of the Number Pooling NPA-NXX-X Holder Information, if the old NPA-NXX is scheduled for permissive dialing or currently in permissive dialing.

## N-325 NPA Splits and the Number Pool NPA-NXX-X Holder Information – Broadcast of Addition of NPA-NXX-X Split Data

NPAC SMS shall broadcast NPA-NXX-X data that is added for an NPA Split, as defined in requirements N-61, N-62, N-63, N-64, and N-65, upon entry of the Number Pooling NPA-NXX-X Holder Information.

### **NPA-NXX-X Holder, First Port Notification**

## N-330 Number Pool NPA-NXX-X Holder information notification of First Port

NPAC SMS shall notify all accepting Local SMSs and SOAs of the NPA-NXX-X, effective date, and owning Service Provider when an NPA-NXX is being ported for the first time immediately after creation validation of a Number Pooling NPA-NXX-X.

NPAC SMS shall upon creation of the Number Pooling NPA-NXX-X Holder Information, send a first port notification for the NPA-NXX if there have not been any previous ports for the NPA-NXX.

### **NPA-NXX-X Holder, Query**

## N-340 Query of Number Pool NPA-NXX-X Holder Information – NPAC Personnel

NPAC SMS shall allow NPAC personnel, Service Provider SOA via the SOA to NPAC SMS Interface, Local SMS via the NPAC SMS to Local SMS Interface, or Service Provider SOA via the NPAC SOA Low-tech Interface, to query the block holder information for all data as listed in the NPA-NXX-X Holder Information Data Model, for an NPA-NXX-X 1K Block as stored in the NPAC SMS.

## N-350 Query of Number Pool Filtered NPA-NXX-X Holder Information – Service Provider Personnel

NPAC SMS shall allow a Service Provider SOA via the SOA to NPAC SMS Interface, Service Provider Local SMS via the NPAC to Local SMS Interface, or Service Provider via the NPAC SOA Low-tech Interface, to query filtered NPA-NXX-Xs, for all data as listed in the NPA-NXX-X Holder Information Data Model, for a 1K Block as stored in the NPAC SMS.

## N-360 Query of Number Pool Filtered NPA-NXX-X Holder Information – Return of Queried DataNPA-NXX Not Provided

NPAC SMS shall return to the NPAC Personnel or requesting Service Provider all filtered NPA-NXX-Xs that match the query selection criteria for a given Service Provider, as listed in the NPA-NXX-X Holder Information Data Model, for an NPA-NXX-X1K Block as stored in the NPAC SMS, when the NPA-NXX is NOT input upon a Filter NPA-NXX-X Query, by the Service Provider SOA via the SOA to NPAC SMS Interface, Service Provider Local SMS via the NPAC to Local SMS Interface, or Service Provider via the NPAC SOA Low-tech Interface.

# N-370 Query of Number Pool Filtered NPA-NXX-X Holder Information – NPA-NXX Provided

NPAC SMS shall return to the requesting Service Provider up to ten filtered NPA-NXX-Xs for a given Service Provider, as listed in the NPA-NXX-X Holder Information Data Model, for a 1K Block as stored in the NPAC SMS, when the NPA-NXX is input upon a Filter NPA-NXX-X Query, by the Service Provider SOA via the SOA to NPAC SMS Interface, Service Provider Local SMS via the NPAC to Local SMS Interface, or Service Provider via the NPAC SOA Lowtech Interface.

### NPA-NXX-X Holder, Bulk Data Download

## N-371 Number Pool NPA-NXX-X Holder Information Bulk Download File — Inclusion of NPA-NXX-X Data on the GUI

NPAC SMS shall provide a mechanism for NPAC Personnel to indicate whether NPA-NXX-X data should be included or excluded when requesting a bulk data download file for Network data, via the NPAC Administrative Interface.

# N-372 Number Pool NPA-NXX-X Holder Information Bulk Download File - Using the Input Data and Not the NPA-NXX-X Indicator

NPAC SMS shall use the NPAC Personnel's input data to determine whether to include or exclude NPA-NXX-X data, and shall NOT use the value in the Service Provider's NPA-NXX-X Indicator, when creating a bulk data download file for Network data.

# N-373 Number Pool NPA-NXX-X Holder Information Bulk Download File - File containing all NPA-NXX-X Data

NPAC SMS shall provide a bulk data download file that contains all NPA-NXX-Xs in the NPAC SMS.

# N-374 Number Pool NPA-NXX-X Holder Information Bulk Download File - Filters for NPA-NXX-X Data

NPAC SMS shall apply NPA-NXX Filters to NPA-NXX-Xs in the creation of a bulk data download file.

# N-375 Number Pool NPA-NXX-X Holder Information Bulk Download File – FTP Sub-Directory

NPAC SMS shall automatically put the bulk data download file into the FTP sub-directory of the Service Provider, based on SPID, that requested the creation of the bulk data download file.

### NPA-NXX-X Holder, Resync

## N-380 Resynchronization of Number Pool NPA-NXX-X Holder Information – NPA-NXX-X Indicator set to TRUE

NPAC SMS shall process a Service Provider request to download Network data over the NPAC SMS to Local SMS Interface, when a Service Provider establishes an association with the resynchronization flag set to TRUE, and the download of NPA-NXX-X (or ALL) is TRUE, and shall *send* the NPA-NXX-X portion of the Network data when the Service Provider's NPA-NXX-X Indicator is set to TRUE.

## N-390 Resynchronization of Number Pool NPA-NXX-X Holder Information – NPA-NXX-X Indicator set to FALSE

NPAC SMS shall process a Service Provider request to download Network data over the NPAC SMS to Local SMS Interface, when a Service Provider establishes an association with the resynchronization flag set to TRUE, and the download of NPA-NXX-X (or ALL) is TRUE, and shall *suppress* the NPA-NXX-X portion of the Network data when the Service Provider's NPA-NXX-X Indicator is set to FALSE.

## N-400 Resynchronization of Number Pool NPA-NXX-X Holder Information – Filters on NPA-NXX-X resync

NPAC SMS shall apply NPA-NXX Filters to NPA-NXX-X resynchronization to the Local SMS(s) via the NPAC SMS to Local SMS Interface.

NUMBER POOLING BLOCK HOLDER INFORMATION DATA MODEL				
Attribute Name	Type (Size)	Required	<u>Description</u>	
Block ID	N		A unique sequential number assigned upon creation of the Block.	
Block Holder SPID	<u>C(4)</u>		The Service Provider Id of the block holder.	
NPA-NXX-X	<u>N(7)</u>		NPA-NXX-X of the 1K Block.	
LRN	TN		The LRN is an identifier for the switch on which the pooled NPA-NXX-X resides for the 1K Block.	
CLASS DPC	<u>N (9)</u>		DPC for 10-digit GTT for CLASS features for the 1K Block.	
CLASS SSN	<u>N (3)</u>		CLASS SSN for the 1K Block.	
LIDB DPC	<u>N (9)</u>		DPC for 10-digit GTT for LIDB features for the 1K Block.	
LIDB SSN	<u>N (3)</u>		LIDB SSN for the 1K Block.	
CNAM DPC	<u>N (9)</u>		DPC for 10-digit GTT for CNAM features for the 1K Block.	
CNAM SSN	<u>N (3)</u>		CNAM SSN for the 1K Block.	
ISVM DPC	<u>N (9)</u>		DPC for 10-digit GTT for ISVM features for the 1K Block.	
ISVM SSN	<u>N (3)</u>		ISVM SSN for the 1K Block.	
<u>Creation Date</u>	T		The date and time (GMT) that this Block Holder record was created.	
Activation Start Timestamp	T		Date and time (GMT) of the Start of the Activation. This field defines the date and time of the start of the activation request (i.e., the date and time the NPAC begins the broadcasts to the LSMSs).	
Activation Complete Timestamp	Τ		Date and time (GMT) of the Completion of the Activation. This field defines the date and time of the completion of the activation request (i.e., the date and time the NPAC receives at least one Local SMS acknowledgment of the broadcast, or the retries were exhausted for the activate).	
Last Modified Timestamp	<u>T</u>		Date and time (GMT) of the Last Modification to the Block.	
			The initial value is the Creation Timestamp.	
Disconnect Request Time Stamp	<u>T</u>		The date and time that the Block disconnect request was made by the NPAC personnel.	

Disconnect Broadcast Time Stamp	T	The date and time that broadcasting began to all local SMS systems for the disconnect of the Block.
Disconnect Broadcast Complete Time Stamp	T	The date and time that at least one Local SMS system successfully acknowledged the broadcast or the retries were exhausted for the disconnect.
Old Time Stamp	<u>T</u>	The date and time that the Block became old.
Modify Request Timestamp	T	The date and time that the Block Modify request was made.
Modify Broadcast Timestamp	T	The date and time that broadcasting began to all local SMS systems for the modification of the Block.
Modify Broadcast Complete Timestamp	T	The date and time that all local SMS systems successfully acknowledged or the retries were exhausted for the modification of the Block.
SOA Origination Indicator	<u>B</u>	A boolean that indicates whether or not the NPA-NXX-X Holder's SOA initiated the Block over the SOA to NPAC SMS Interface, and whether or not to send notifications to the SOA.  This attribute will be initially set by the NPAC SMS at the time of Block creation.  If originated by SOA, value is TRUE.  If originated by NPAC, value is FALSE.
Status	E	Status of the Block.  The initial value is S for Sending.  Valid enumerated values are:  A - Active (10)  S - Sending (31)  F - Failed (42)  PF - Partial Failure (53)  O - Old (74)

### **Block Holder, General**

### **B-10** Number Pool Block Holder Information – NPAC Personnel GUI

NPAC SMS shall allow NPAC Personnel to add, modify, or query Block Holder information via the NPAC Administrative Interface.

# B-20 Number Pool Block Holder Information – Service Provider EDR Indicator Download of Block Object

NPAC SMS shall download Number Pooling Block Information, for additions, modifications, deletions, re-sends, and resync using the Number Pooling Block Object, via the NPAC SMS to Local SMS Interface if the EDR indicator is **TRUE**, at the time a request is processed by the NPAC SMS.

NOTE: The EDR Indicator will be used by the NPAC SMS when processing a request, but not during the retry functionality (n by m [e.g., 3 by 5]).

## B-30 Number Pool Block Holder Information – Service Provider EDR Indicator Download of SVs

NPAC SMS shall download Number Pooling Block Information, for additions, modifications, and deletions, re-sends, and resyncs, using individual subscription versions with LNP Type of POOL, for the TNs within the range of the 1K Block, via the NPAC SMS to Local SMS Interface if the EDR indicator is **FALSE**, at the time a request is processed by the NPAC SMS.

## **B-40** Number Pool Block Holder Information – Service Provider Validation

NPAC SMS shall verify the NPA-NXX-X Holder SPID attribute of the Block object matches the SPID in the accessControl.

#### **B-50** Number Pool Block Holder Information – SPID Validation

NPAC SMS shall verify the SPID of the accessControl matches the owner of the association.

## B-60 Number Pool Block Holder Information – NPA-NXX-X Data Validation

NPAC SMS shall validate the following two attributes are contained in a single NPA-NXX-X entry in the Number Pooling NPA-NXX-X Holder Information in the NPAC SMS:

- NPA-NXX-X Holder SPID in the Block is equal to the NPA-NXX-X Holder SPID.
- NPA-NXX-X in the Block is equal to the NPA-NXX-X.

## B-70 Number Pool Block Holder Information – NPA-NXX-X Effective Date

NPAC SMS shall reject a request to create a Block if the current date is prior to the effective date of the Number Pooling NPA-NXX-X as defined in the NPAC SMS.

#### **B-80** Number Pool Block Holder Information – LRN Validation

NPAC SMS shall validate that the LRN specified in the addition or modification of Number Pooling Block Holder information is a valid LRN defined in the NPAC SMS for the Block Holder.

### **B-90** Number Pool Block Holder Information – Duplicate Block Validation

NPAC SMS shall validate that the NPA-NXX-X specified in the addition of Number Pooling Block Holder Information does not already exist in the Number Pooling Block Holder Information.

### **B-100** Number Pool Block Holder Information – SOA Origination Values

NPAC SMS shall set the SOA Origination to TRUE for Blocks sent over the SOA to NPAC SMS Interface, and to FALSE for Blocks that were created by NPAC personnel, except for those that were automatically generated by the NPAC as a result of an NPA Split.

#### **B-110** Number Pool Block Holder Information – Validation Error

NPAC SMS shall report an error to the user and reject the addition or modification of Number Pooling Block Holder information if validation errors occur as defined in B-40, B-50, B-60, B-70, B-80, B-90, B-180, \_\_\_\_, and \_\_\_\_B-250.

### CMA to update numbers once requirements are finalized.

## **B-120** Number Pooling Block Holder Information – Status Update Notification

NPAC SMS shall *send* all SOA notifications to the current SP (the block holder) for status updates on Blocks, when the Block SOA Origination is TRUE.

# **B-130** Number Pooling Block Holder Information – Status Update Notification Suppression

NPAC SMS shall *suppress* all SOA notifications to the current SP (the block holder) for status updates on Blocks, when the Block SOA Origination is FALSE.

## B-140 Number Pooling Block Holder Information – Failed SP List Update for Block

NPAC SMS shall consider an EDR Local SMS to be discrepant and shall update the Block's Failed SP List, based on an EDR Local SMS failing to process the Block Object, for an addition, modification, deletion, re-send, resync, or mass update.

# **B-150** Number Pooling Block Holder Information – Failed SP List Update for Subscription Versions

NPAC SMS shall consider a non-EDR Local SMS to be discrepant and shall update the Block's Failed SP List, based on a non-EDR Local SMS failing to process one or more Subscription Versions, with LNP Type of POOL, within the Block, for an addition, modification, deletion, resend, resync, or mass update.

## B-160 Number Pooling Block Holder Information – Failed SP List Sent to Block Holder

NPAC SMS shall send the Block's Failed SP List, to the current SP (the block holder) via the SOA to NPAC SMS Interface, along with the SOA notification for status update of the Block, when the Block SOA Origination is TRUE, and the broadcast to one or more Local SMSs fail.

# B-165 Number Pooling Block Holder Information – Synchronization of Block Status and Subscription Version Status

NPAC SMS shall ensure that the *status* for Block broadcasts to EDR Local SMSs and Subscription Versions broadcasts to non-EDR Local SMSs, are synchronized, by performing the following:

- The *status* for the Block and Subscription Versions shall cross-reference one another and contain the results of the broadcast of the Block to the EDR Local SMSs, and the broadcast of the Subscription Versions to the non-EDR Local SMSs.
- The *status* for the Subscription Versions shall only be set, once the broadcasts to all EDR and non-EDR Local SMSs has been completed.
- The *status* for the Block shall only be set, once the broadcasts to all EDR and non-EDR Local SMSs has been completed.
- The *status* for the Block shall be based on the summary of all Subscription Versions with LNP Type of POOL within the 1K Block.
- The *status* for the Block shall reflect the information contained in Table B-165.
- Key for Table B-165
- <u>A = all EDR Local SMSs respond successfully</u>
- B = some but not all EDR Local SMSs respond successfully
- <u>C</u> = none of the EDR Local SMSs respond successfully
- D = all non-EDR Local SMSs respond successfully
- E = some by not all non-EDR Local SMSs respond successfully
- F = none of the non-EDR Local SMSs respond successfully
- Act = Active status
- Act/Part = a mix of both Active status and Partial Failure status
- Part = Partial Failure status
- Part/Fail = a mix of both Partial Failure status and Failed status
- Fail = Failed status

Table B-165(1) Block Creation								
EDR Local SMS		Non-EDR Local SMS			• <u>Poole</u>	•		
• <u>A</u>	• <u>B</u>	• <u>C</u>	• <u>D</u>	• <u>E</u>	• <u>F</u>	• <u>SVs</u>	Block	
•	•	•	•	•	•	• <u>Act</u>	• Act	
•	•	•	•	•	•	• Act/P	• <u>Part</u>	
						<u>art</u>		
						• <u>or</u>		
						• <u>Part</u>		
•	•	•	•	•	•	• Act/P	• Part	

						<u>art</u>	
						• <u>or</u>	
						• <u>Part</u>	
•	•	•	•	•	•	• Part	• <u>Part</u>
•	•	•	•	•	•	• Part	• <u>Part</u>
•	•	•	•	•	•	• Part	• <u>Part</u>
•	•	•	•	•	•	• Part	• <u>Part</u>
•	•	•	•	•	•	• <u>Part/</u>	• <u>Part</u>
						<u>Fail</u>	
						• <u>or</u>	
						• <u>Fail</u>	
•	•	•	•	•	•	• <u>Fail</u>	• <u>Fail</u>

•

Table B-165(2) Block Modification								
EDR Local SMS			Non-EDR Local SMS			• <u>Poole</u>	• D1 1	
• <u>A</u>	• <u>B</u>	• <u>C</u>	• <u>D</u>	• <u>E</u>	• <u>F</u>	<u>d</u> • <u>SVs</u>	<u>Block</u>	
•	•	•	•	•	•	• <u>Act</u>	• Act	
•	•	•	•	•	•	• Act	• Act	
•	•	•	•	•	•	• <u>Act</u>	• Act	
•	•	•	•	•	•	• <u>Act</u>	• Act	
•	•	•	•	•	•	• <u>Act</u>	• Act	
•	•	•	•	•	•	• <u>Act</u>	• <u>Act</u>	
•	•	•	•	•	•	• <u>Act</u>	• Act	
•	•	•	•	•	•	• Act	• Act	
•	•	•	•	•	•	• <u>Act</u>	• Act	

Table B-165(3) Block Deletion							
EDR Local SMS			• Non-EDR Local SMS			• <u>Poole</u>	• D1 1
• <u>A</u>	• <u>B</u>	• <u>C</u>	• <u>D</u>	• <u>E</u>	• <u>F</u>	<u>d</u> • <u>SVs</u>	<u>Block</u>
•	•	•	•	•	•	• <u>Old</u>	• <u>Old</u>
•	•	•	•	•	•	• <u>Old</u>	• <u>Old</u>
•	•	•	•	•	•	• <u>Old</u>	• <u>Old</u>
•	•	•	•	•	•	• <u>Old</u>	• <u>Old</u>
•	•	•	•	•	•	• <u>Old</u>	• <u>Old</u>
•	•	•	•	•	•	• <u>Old</u>	• <u>Old</u>
•	•	•	•	•	•	• <u>Old</u>	• <u>Old</u>
•	•	•	•	•	•	• <u>Old</u>	• <u>Old</u>
•	•	•	•	•	•	• Act	• Act

• The *status* for the Block and Subscription Versions shall cross-reference one another and contain the results of the broadcast of the Block to the EDR Local SMSs, and the broadcast of the Subscription Version to the non-EDR Local SMSs. Therefore, if a *non-EDR* Local SMS fails the broadcast of one or more Subscription Versions, the *status* of the Block and the individually failed Subscription Versions within the 1K Block, shall contain the same *status* ("Failed" if all Local SMSs were unsuccessful, "Partial Failure" if only some of the Local SMSs were unsuccessful, or "Active" if all of the Local SMSs were successful).

B-166 Number Pooling Block Holder Information – Synchronization of Block Failed SP List and Subscription Version Failed SP List

NPAC SMS shall ensure that the *Failed SP List* for Block broadcasts to EDR Local SMSs and Subscription Versions broadcasts to non-EDR Local SMSs, are synchronized, by performing the following:

- The *Failed SP List* for the Block and Subscription Versions shall cross-reference one another and contain the results of the broadcast of the Block to the EDR Local SMSs, and the broadcast of the Subscription Version to the non-EDR Local SMSs. Therefore, if an *EDR* Local SMS fails the broadcast of the Block, the *Failed SP List* of the Block and all Subscription Versions within the 1K Block, shall contain the same *Failed SP List* (all SPIDs if all Local SMSs were unsuccessful, some SPIDs if only some of the Local SMSs were unsuccessful, or no SPIDs if all of the Local SMSs were successful).
- The *Failed SP List* for the Subscription Versions shall only be set, once the broadcasts to all EDR and non-EDR Local SMSs has been completed.
- The *Failed SP List* for the Block shall only be set, once the broadcasts to all EDR and non-EDR Local SMSs has been completed.
- The *Failed SP List* for the Block shall be based on the summary of all Subscription Versions with LNP Type of POOL within the 1K Block.
- The *Failed SP List* for the Block shall reflect the information contained in Table B-166.
- Key for Table B-166
- <u>A = all EDR Local SMSs respond successfully</u>
- B = some but not all EDR Local SMSs respond successfully
- C = none of the EDR Local SMSs respond successfully
- D = all non-EDR Local SMSs respond successfully
- E = some by not all non-EDR Local SMSs respond successfully
- F = none of the non-EDR Local SMSs respond successfully
- | ZFSL = Zero Failed SP List (no SPs in the list)
- SFSL = Some but not all Failed SP List (some but not all SPs in the list)
- AFSL = All Failed SP List (all SPs in the list)

• <u>Table B-166 – Failed SP List</u>													
EDR Local SMS			Non-EDR Local SMS			• Poole •							
• <u>A</u>	• <u>B</u>	• <u>C</u>	• <u>D</u>	• <u>E</u>	• <u>F</u>	• <u>SVs</u> <u>Block</u>							
•	•	•	•	•	•	• ZFSL • ZFSL							
•	•	•	•	•	•	• Z/S FSL • or • SFSL							
•	•	•	•	•	•	• Z/S							
•	•	•	•	•	•	• <u>SFSL</u> • <u>SFSL</u>							
•	•	•	•	•	•	• <u>SFSL</u> • <u>SFSL</u>							
•	•	•	•	•	•	• <u>SFSL</u> • <u>SFSL</u>							
•	•	•	•	•	•	• <u>SFSL</u> • <u>SFSL</u>							
•	•	•	•	•	•	• <u>S/A</u> • <u>SFSL</u> <u>FSL</u>							

•	•	•	•	•	•	•	<u>AFS</u>	•	<u>AFS</u>
							$\underline{\mathbf{L}}$		<u>L</u>

• The *Failed SP List* for the Block and Subscription Versions shall cross-reference one another and contain the results of the broadcast of the Block to the EDR Local SMSs, and the broadcast of the Subscription Version to the non-EDR Local SMSs. Therefore, if a *non-EDR* Local SMS fails the broadcast of one or more Subscription Versions, the *Failed SP List* of the Block and the individually failed Subscription Versions within the 1K Block, shall contain the same *Failed SP List* (all SPIDs if all Local SMSs were unsuccessful, some SPIDs if only some of the Local SMSs were unsuccessful, or no SPIDs if all of the Local SMSs were successful).

B-167 Number Pooling Block Holder Information – Synchronization of Block Failed SP List and Subscription Version Failed SP List for the last failed Subscription Version in the 1K Block

NPAC SMS shall remove a non-EDR Service Provider from the Block's *Failed SP List* when the Service Provider is no longer on the *Failed SP List* for ALL subscription versions in the 1K Block.

B-168 Number Pooling Block Holder Information – Synchronization of Block Failed SP List and Subscription Version Failed SP List for the Block

NPAC SMS shall remove an EDR Service Provider from ALL subscription version's *Failed SP List* when the Service Provider is no longer on the *Failed SP List* for the Block.

B-169 Number Pooling Block Holder Information – Unique Error Message for Partial Failure or Failed Status Update to a Block

NPAC SMS shall generate a unique alarmable error message when a Block's status is updated to either Partial Failure or Failed.

NOTE: The NPAC SMS shall NOT use the unique alarmable error described in B-169 for Block's where the SOA Origination is TRUE.

#### **Block Holder, Addition**

#### **B-170** Addition of Number Pooling Block Holder Information

NPAC SMS shall allow NPAC personnel or Service Provider via the SOA to NPAC SMS Interface to request the creation of a Number Pooling Block.

B-180 Addition of Number Pooling Block Holder Information – Required Data

NPAC SMS shall require NPAC personnel or Service Provider via the SOA to NPAC SMS Interface to specify the Block Holder SPID, the NPA-NXX-X, and the initial routing information, as defined in the Number Pooling Block Holder Information.

# B-190 Addition of Number Pooling Block Holder Information – Check for pending-like SVs for NPAC Personnel

NPAC SMS shall reject the request and issue a unique alarmable error message to the **NPAC personnel** at the time of Block Creation from the NPAC Administrative Interface or the Service Provider SOA via the SOA to NPAC SMS Interface, if there are any TNs within the 1K Block, that contain an SV, with a status of pending/conflict/cancel-pending/failed, and where a currently active SV does NOT exist, for the given TN.

# B-210 Addition of Number Pooling Block Holder Information – Error Message to SOA for pending-like SVs

NPAC SMS shall reject the request and issue an error message to the **SOA** at the time of Block Creation from the SOA via the SOA to NPAC SMS Interface, if there are any TNs within the 1K Block, that contain an SV, for a given TN in the 1K Block, with a status of pending/conflict/cancel-pending/failed, and where a currently active SV does NOT exist, for the given TN.

# **B-240** Addition of Number Pooling Block Holder Information – Error MessageReport for pending-like SVs and Port-To-Original SVs

NPAC SMS shall provide an "error dialog with transition mechanism" that displays the unique error message described in B-190, and allows the user to perform an easy one-button mouse click generation of the report to the NPAC personnel of all of the TNs that are considered in error at the time of Block Creation, for pending-like SVs, for TNs within the 1K Block and upon completion of the request, the list of Pending-Like No-Active Subscription Version(s) for TNs within the 1K Block, will be made available to NPAC Personnel with minimal navigation on the NPAC Administrative Interface.

# B-241 Addition of Number Pooling Block Holder Information – Output Destination for Pending-Like No-Active SVs

NPAC SMS shall provide output destination options for the Pending-Like No-Active Subscription Version(s) Report, based on the error message in B-240, that include print, fax, e-mail, stored to a file.

## B-242 Addition of Number Pooling Block Holder Information – Reschedule of NPAC Initiated Block Create

NPAC SMS shall provide a mechanism for NPAC Personnel to re-schedule a Block Create, after the effective date of the NPA-NXX-X, via the NPAC Administrative Interface.

# B-243 Addition of Number Pooling Block Holder Information – Reschedule of NPAC Initiated Block Create

NPAC SMS shall provide a mechanism where the re-schedule of a Block Create, can be immediately executed or scheduled for a future date/time.

## B-250 Addition of Number Pooling Block Holder Information – Field-level Data Validation

NPAC SMS shall perform field-level data validations to ensure that the value formats for the following input data, is valid according to the formats specified in Table 3-10x upon Block creation for a Number Pool:

NPA-NXX-X Holder SPID

NPA-NXX-X

LRN

Class DPC

Class SSN

LIDB DPC

LIDB SSN

**CNAM DPC** 

**CNAM SSN** 

**ISVM DPC** 

**ISVM SSN** 

### B-260 Addition of Number Pooling Block Holder Information – Broadcast of Block Data

NPAC SMS shall, upon successfully creating a Block, set the Block's status to sending, and broadcast an addition of a Block, to EDR Local SMSs, via the NPAC SMS to Local SMS Interface, upon successful creation of the Pooled Block in the NPAC SMS with a status of sending.

# B-270 Addition of Number Pooling Block Holder Information – Active Status Update

NPAC SMS shall update the status of the Block upon successful completion of the broadcast, and any retries, to ALL EDR and non-EDR Local SMSs, as defined in B-165from a sending status to an active status.

# B-280 Addition of Number Pooling Block Holder Information – Partial failure Status Update

NPAC SMS shall update the status of the Block upon completion of the broadcast to all EDR and non-EDR Local SMSs, and a successful response from at least one, but not all Local SMSs, from a sending status to a partial failure status.

### **B-290** Addition of Number Pooling Block Holder Information – Failed Status Update

NPAC SMS shall update the status of the Block upon completion of the broadcast to all EDR and non-EDR Local SMSs, and a successful response from NONE of the Local SMSs, from a sending status to a failed status.

### **Block Holder, Modification**

#### **B-315** Block's SOA Origination Indicator – NPAC Personnel GUI

NPAC SMS shall allow NPAC Personnel to modify the SOA Origination information Indicator on the NPAC Block record, via the NPAC Administrative Interface.

#### **B-320** Modification of Number Pooling Block Holder Information

NPAC SMS shall allow NPAC personnel, Service Provider via the SOA to NPAC SMS Interface, or Service Provider via the NPAC SOA Low-tech Interface, to modify the sub-block holder default routing information (LRN, DPC(s), and SSN(s)), for a 1K Block as stored in the NPAC SMS.

### **B-330 Modification of Number Pooling Block Holder Information – SPID Validation**

NPAC SMS shall allow a Service Provider via the SOA to NPAC SMS Interface or Service Provider via the NPAC SOA Low-tech Interface, to modify Block data for Blocks where the NPA-NXX-X Holder SPID matches the Service Provider making the request.

### B-335 Modification of Number Pooling Block Holder Information – Current status and Failed SP List

NPAC SMS shall allow NPAC personnel, Service Provider via the SOA to NPAC SMS Interface, or Service Provider via the NPAC SOA Low-tech Interface, to modify the block holder data, for a 1K Block as stored in the NPAC SMS, when the Block's current status is active, and the Block does NOT have any Service Providers in the Failed SP List.

## B-340 Modification of Number Pooling Block Holder Information –Status Update

NPAC SMS shall, upon processing a request to modify a Block, update the status of the Block, atupon the start of the broadcast of a Block modification to the Local SMSs, from an active status to a sending status.

#### B-350 Modification of Number Pooling Block Holder Information – Broadcast of Block Data

NPAC SMS shall, upon successfully modifying a Block and setting the Block's status to sending, broadcast a modifications of a Block to EDR Local SMSs, via the NPAC SMS to Local SMS Interface, upon modification of the Pooled Block in the NPAC SMS.

## **B-360** Modification of Number Pooling Block Holder Information – Active Status Update

NPAC SMS shall update the status of the Block upon completion of the broadcast, and any retries, to ALL EDR and non-EDR Local SMSs, as defined in B-165whether or not the broadcasts were successful, from a sending status to an active status.

#### **Block Holder, Deletion**

#### **B-400 Deletion of Number Pool Block Holder Information – NPAC**

NPAC SMS shall reject a request to delete a Block by NPAC personnel.

#### **B-410** Deletion of Number Pool Block Holder Information – SOA

NPAC SMS shall reject a request to delete a Block by a Service Provider via the SOA to NPAC SMS interface, and will return an error message to the , SOA not authorized.

#### **B-415** Deletion of Number Pool Block Holder Information – LTI

NPAC SMS shall reject a request to delete a Block by a Service Provider via the NPAC SOA Low-tech Interface, and will return an error message to the LTI user.

# B-430 Deletion of Number Pooling NPA-NXX-X Holder Information – Sending Status Update to Block

NPAC SMS shall, upon processing a request to delete an NPA-NXX-X, update the status of the Block at the start of the broadcast to the Local SMSs, from an active status to a sending status.

### B-440 Deletion of Number Pool NPA-NXX-X Holder Information – Broadcast of Block Data

NPAC SMS shall, upon setting the Block's status to sending, broadcast a delete of a Block, to EDR LSMSs, via the NPAC SMS to Local SMS Interface, upon updating the Pooled Block in the NPAC SMS to a sending status.

#### <u>B-450</u> <u>Deletion of Number Pooling NPA-NXX-X Holder Information – Old</u> Status Update to Block

NPAC SMS shall update the status of the Block upon completion of the broadcast, and any retries, to ALL EDR and non-EDR Local SMSs, as defined in B-165and a successful response from at least one Local SMS, from a sending status to an old status.

# B-460 Deletion of Number Pooling NPA-NXX-X Holder Information – Failed Status Update to Block and Subscription Versions

NPAC SMS shall update the status of the Block upon completion of the broadcast to the ALL EDR and non-EDR Local SMSs, and a successful response from NONE of the Local SMSs, from a sending status to an active status.

### **Block Holder, NPA Splits**

## B-490 NPA Splits and the Number Pooling Block Holder Information – Modification

NPAC SMS shall upon the start of permissive dialing for an NPA Split, convert the old NPA-NXX to the new NPA-NXX in the Number Pooling Block Information.

# B-500 NPA Splits and the Number Pooling Block Holder Information – NXX Removal from Split

NPAC SMS shall upon the removal of an NPA-NXX from an NPA Split, after the start of permissive dialing, reinstate the original NPA for the NXX in the Block Holder Information.

# B-510 NPA Splits and the Number Pool Block Holder Information – Addition of an NPA-NXX involved in an NPA Split

NPAC SMS shall convert the old NPA-NXX to the new NPA-NXX for an NPA-NXX involved in an NPA Split upon creationentry into the Number Pooling Block Holder Information, if the old NPA-NXX is currently in permissive dialing.

# B-520 NPA Splits and the Number Pool Block Holder Information – Addition of a Block for an NPA-NXX involved in an NPA Split

NPAC SMS shall accept a Block *create* request from NPAC personnel or a Service Provider via the SOA to NPAC SMS Interface, with either the old NPA-NXX or the new NPA-NXX for an NPA-NXX that is currently in permissive dialing.

# B-530 NPA Splits and the Number Pool Block Holder Information – Broadcast of a Block Create for an NPA-NXX involved in an NPA Split

NPAC SMS shall broadcast a Block *create* to an EDR Local SMS, via the NPAC SMS to Local SMS Interface, by sending a Block using the new NPA-NXX for an NPA-NXX that is currently in permissive dialing.

# B-540 NPA Splits and the Number Pool Block Holder Information – Modification of a Block for an NPA-NXX involved in an NPA Split

NPAC SMS shall accept a Block *modify active* request from NPAC personnel or a Service Provider via the SOA to NPAC SMS Interface, with either the old NPA-NXX or the new NPA-NXX for an NPA-NXX that is currently in permissive dialing.

# B-550 NPA Splits and the Number Pool Block Holder Information — Broadcast of a Block Modify Active for an NPA-NXX involved in an NPA Split

NPAC SMS shall broadcast a Block *modify active* to an EDR Local SMS, via the NPAC SMS to Local SMS Interface, by sending a Block using the new NPA-NXX for an NPA-NXX that is currently in permissive dialing.

# B-551 NPA Splits and the Number Pool Block Holder Information – Depooling of the Block during PDP

NPAC SMS shall broadcast a scoped and filtered Block *delete* request to an EDR Local SMS, via the NPAC SMS to Local SMS Interface, by sending a Block using the new NPA-NXX for an NPA-NXX that is currently in permissive dialing.

NOTE: NPAC SMS shall set the SOA Origination to TRUE for a Block associated with the new NPA-NXX, if the Block associated with the old NPA-NXX is currently set to TRUE.

NPAC SMS shall set the SOA Origination to FALSE for a Block associated with the new NPA-NXX, if the Block associated with the old NPA-NXX is currently set to FALSE.

### **Block Holder, Query**

#### **B-555** Query of Number Pool Block Holder Information – NPAC Personnel

NPAC SMS shall allow NPAC Personnel to query the block holder information for all data as listed in the Block Holder Information Data Model, for a 1K Block as stored in the NPAC SMS.

### B-556 Query of Number Pool Filtered Block Holder Information – Service Provider Personnel

NPAC SMS shall allow a Service Provider SOA via the SOA to NPAC SMS Interface, Service Provider Local SMS via the NPAC SMS to Local SMS Interface, or Service Provider via the NPAC SOA Low-tech Interface, to query Blocksfiltered NPA-NXX-Xs, for all data as listed in the Block Holder Information Data Model, for a 1K Block as stored in the NPAC SMS, regardless of the value in the Service Provider's EDR Indicator.

# B-557 Query of Number Pool Filtered Block Holder Information – Query Block

NPAC SMS shall return, to the NPAC Personnel or requesting Service Provider, all Block data that match the query selection criteria, as listed in the Block Holder Information, for a Block as stored in the NPAC SMSon query requests by NPAC personnel, SOA via the SOA to NPAC SMS Interface, Local SMS via the NPAC SMS to Local SMS Interface, or Service Provider via the NPAC SOA Low-tech Interface.

### **Block Holder, Filters**

#### **B-560** Number Pool Block Holder Information – Filters for Blocks

NPAC SMS shall apply NPA-NXX Filters to Block broadcasts downloads to the Local SMS(s).

### **Block Holder, Default Routing Restoration**

### B-570 Number Pool Block Holder Information Use of Number Pool Default Routing Information – Existing Block

The NPAC SMS shall use the default routing restoration information in the Number Pooling Block Holder Information as the block holder default routing, when a ported pooled number is disconnected or port to original port is activated, and returns the TN(s) to the block, on or after the activation start timestamp of the block.

## **B-571** Number Pool Block Holder Information Use of Number Pool Default Routing Information – Block Status of Old

The NPAC SMS shall send a notification to the Code Holder, when a ported pooled number is disconnected or port to original port is activated, for TN(s) in the block, and the most recent block contains a status of old, with or without a Failed SP List.

### **Block Holder, Re-Send**

## B-575 Re-Send of Number Pooling Block Holder Information – NPAC Personnel GUI

NPAC SMS shall allow NPAC Personnel to re-send Block Information via the NPAC Administrative Interface.

## B-576 Re-Send of Number Pooling Block Holder Information – Use of EDR Indicator for Re-Send data

NPAC SMS shall use the value in the Service Provider's EDR Indicator to determine the type of data to re-send to the Service Provider, when a re-send request is initiated.

### B-577 Re-Send of Number Pooling Block Holder Information – Re-Send to EDR Local SMS

NPAC SMS shall re-send Block Information to an EDR Local SMS, by re-sending the previously failed Block Object, via the NPAC SMS to Local SMS Interface.

### **B-578** Re-Send of Number Pooling Block Holder Information – Re-Send to non-EDR Local SMS

NPAC SMS shall re-send Block Information to a non-EDR Local SMS, by re-sending the previously failed Subscription Version(s), via the NPAC SMS to Local SMS Interface.

# B-580 Re-Send of Number Pooling Block Holder Information – Sending Status Update to Failed Block

NPAC SMS shall update the status of the failed Block, specified in the re-send request, at the start of the re-send to the Local SMSs, from a failed status to a sending status.

# B-590 Re-Send of Number Pooling Block Holder Information – Sending Status Update to Partial failure Block

NPAC SMS shall update the status of the partial failure Block, specified in the re-send request, at the start of the re-send to the Local SMSs, from a partial failure status to a sending status.

# B-600 Re-Send of Number Pooling Block Holder Information – Sending Status Update to Active Block

NPAC SMS shall update the status of the active Block, with a Failed SP List, specified in the resend request, at the start of the re-send to the Local SMSs, from an active status to a sending status.

## B-610 Re-Send of Number Pooling Block Holder Information – Sending Status Update to Old Block

NPAC SMS shall update the status of the old Block, with a Failed SP List, specified in the re-send request, at the start of the re-send to the Local SMSs, specified in the re-send request, from an old status to a sending status.

#### B-620 Re-Send of Number Pool NPA-NXX-X Holder Information – Broadcast of Block Data

NPAC SMS shall, upon setting the Block's status to sending, broadcast a re-sends of a Block, to EDR LSMSs, via the NPAC SMS to Local SMS Interface, upon updating the Pooled Block in the NPAC SMS to a sending status.

# **B-630** Re-Send of Number Pooling Block Holder Information – Update to Failed SP List

NPAC SMS shall update the Failed SP List of the Block by removing the previously failed Local SMS, upon a successful re-send to a previously failed Local SMS.

# B-635 Re-Send of Number Pooling Block Holder Information – Status Update to Block after Successful Re-Send

NPAC SMS shall update the status of the Block, specified in the re-send request for a Block Creation, Modification, or Deletion, at the completion of the re-send to the Local SMS, and a successful response from the Local SMS, from a sending status, as defined in B-165.based on the following:

• If the status prior to the re-send was *failed*, and the Failed SP list contains at least one SPID, then the status is set to *partial failure*.

- If the status prior to the re-send was *partial failure*, and the Failed SP list contains at least one SPID, then the status is set to *partial failure*.
- If the status prior to the re-send was *failed*, and the Failed SP list is now empty, then the status is set to *active*.
- If the status prior to the re-send was *partial failure*, and the Failed SP list is now empty, then the status is set to *active*.
- If the status prior to the re-send was *active*, and the Failed SP list contains at least one SPID, then the status is set to *active*.
- If the status prior to the re-send was *active*, and the Failed SP list is now empty, then the status is set to *active*.

### B-636 Re-Send of Number Pooling Block Holder Information —Status Update to Block after Un-Successful Re-Send

NPAC SMS shall update the status of the Block, specified in the re-send request, at the completion of the re-send to the Local SMS, and an **un-successful or missing** response from the Local SMS, from a sending status, based on the following:

- If the status prior to the re-send was *failed*, then the status is set to *failed*.
- If the status prior to the re-send was *partial failure*, then the status is set to *partial failure*.
- If the status prior to the re-send was *active*, then the status is set to *active*.

### **Block Holder, Bulk Data Downloads**

#### B-640 Number Pool Block Holder Information Bulk Download File Creation – Active Blocks

NPAC SMS shall allow NPAC personnel to request a bulk data download file for active Block data via the NPAC Administrative Interface.

#### B-650 Number Pool Block Holder Information Bulk Download File Creation – BlockSelection Criteria

NPAC SMS shall include the Requesting Service Provider, Time Range in Central Time, and NPA-NXX-X Range as entry Selection Criteria fields for the Block bulk data download file via the NPAC Administrative Interface.

#### B-654 Number Pool Block Holder Information Bulk Download File Creation – Time Range Fields

NPAC SMS shall use the first Time Range entry field as an inclusive start range, and the second Time Range entry field as an inclusive ending range, for Block data.

#### B-655 Number Pool Block Holder Information Bulk Download File Creation – NPA-NXX-X Range FieldsBlock

NPAC SMS shall use the first NPA-NXX-X Range entry field as an inclusive start range, and the second NPA-NXX-X Range entry field as an inclusive ending range, for Block data.

NOTE: If the NPA-NXX-X Range was 303-242-2 through 303-355-6, the inclusive range would contain all Blocks within the TN Range of 303-242-2000 through 303-355-6999.

# <u>B-660</u> Number Pool Block Holder Information Bulk Data Download – Block Results

NPAC SMS shall provide a bulk data download file, based on the selection criteria, that contains all active Blocks in the NPAC SMS, regardless of the value in the Service Provider's EDR Indicator.

### B-670 Number Pool Block Holder Information Bulk Data Download – Filters for Blocks

NPAC SMS shall apply NPA-NXX Filters to Blocks in the creation of bulk data download files.

# **B-680** Number Pool Block Holder Information Bulk Data Download – FTP Sub-Directory

NPAC SMS shall automatically put the bulk data download file into the FTP sub-directory of the Service Provider, based on SPID, that requested the creation of the bulk data download file.

### **Block Holder, Resync**

#### **B-690** Number Pool Block Holder Information Resynchronization – Block

NPAC SMS shall process a Service Provider request to download Block data over the NPAC SMS to Local SMS Interface, when a Service Provider establishes an association with the resynchronization flag set to TRUE, and requests Block data based on criteria sent to the NPAC SMS upon association.

## B-691 Number Pool Block Holder Information Resynchronization – Block Criteria

NPAC SMS shall accept criteria for Block data, of either Time Range or Block Range entry fields, where the Time Range includes the starting time and ending time, and the Block Range includes the starting Block and ending Block.

NOTE: If the Block Range was 303-242-2 through 303-355-6, the range would contain all Blocks within the TN Range of 303-242-2000 through 303-355-6999.

# B-695 Number Pool Block Holder Information Resynchronization – Block Range Tunable Parameters

NPAC SMS shall use the existing Subscription Version tunables for Time Range and Maximum Number of Records, provide a Block Range Maximum Resynchronization tunable parameter which is defined as the maximum number of for Blocks that can be resynchronized by a Local SMS.

# B-696 Number Pool Block Holder Information Resynchronization – Block Range Tunable Parameter Default

NPAC SMS shall default the Block Range Maximum Resynchronization tunable parameter to 100 records.

## **B-697** Number Pool Block Holder Information Resynchronization – Block Range Tunable Parameter Modification

NPAC SMS shall allow the NPAC Administrator to modify the Block Range Maximum Resynchronization tunable parameter.

# B-698 Number Pool Block Holder Information Resynchronization – Rejection of Block Criteria

NPAC SMS shall reject a resynchronization request, if the criteria of either Time Range or Block Range, exceeds the current values of the Time Range or Block Range tunables.

# B-700 Number Pool Block Holder Information Resynchronization – Block resync and queuing of messages

NPAC SMS shall queue up a single instance of all messages to the Local SMS, via the NPAC SMS to Local SMS Interface, when a Service Provider establishes an association with the NPAC SMS and where the resynchronization flag is set to TRUE.

# B-710 Number Pool Block Holder Information Resynchronization – Block resync and sending of queued messages

NPAC SMS shall send, in order, queued up messages to the Local SMS, via the NPAC SMS to Local SMS Interface, when a Service Provider has sent a message to the NPAC SMS that resynchronization has been completed.

# B-720 Number Pool Block Holder Information Resynchronization – Filters on Block resync

NPAC SMS shall apply NPA-NXX Filters to Block resynchronization to the Local SMS(s), via the NPAC SMS to Local SMS Interface.

## <u>B-730</u> Number Pool Block Holder Information Resynchronization – Update to Failed SP List

NPAC SMS shall update the Failed SP List of the Block by removing the resyncing Local SMS, upon a successful response to a resynchronization request to a previously failed EDR Local SMS.

# **B-740** Number Pool Block Holder Information Resynchronization – Status Update to Block after Successful Resynchronization

NPAC SMS shall update the status of the Block, specified in the resynchronization request for a Block Creation, Modification, or Deletion, at the completion of the resynchronization to the Local SMS, as defined in B-165.based on the following:

- If the status prior to the resynchronization was *failed*, and the Failed SP list contains at least one SPID, then the status is set to *partial failure*.
- If the status prior to the resynchronization was *partial failure*, and the Failed SP list contains at least one SPID, then the status is set to *partial failure*.
- If the status prior to the resynchronization was *failed*, and the Failed SP list is now empty, then the status is set to *active*.
- If the status prior to the resynchronization was *partial failure*, and the Failed SP list is now empty, then the status is set to *active*.
- If the status prior to the resynchronization was *active*, and the Failed SP list contains at least one SPID, then the status is set to *active*.
- If the status prior to the resynchronization was *active*, and the Failed SP list is now empty, then the status is set to *active*.

### **Block Holder, Mass Update**

#### **B-750** Block Holder Information Mass Update – NPAC Personnel

NPAC SMS shall allow NPAC Personnel to initiate a mass update of Block data via the NPAC Administrative Interface.

#### B-760 Block Holder Information Mass Update – GUI Selection Criteria

NPAC SMS shall provide SPID, LNP Type, and TN Block Range Selection Criteria for mass updates, on the NPAC Administrative Interface, by allowing the NPAC Personnel to input two 7-digit fields, which will be used to update all Blocks and Subscription Versions within the two 7-digit ranges.

#### **B-761** Block Holder Information Mass Update – LNP Type Options

NPAC SMS shall allow NPAC Personnel to select any combination of LNP Type as Selection Criteria for mass updates, on the NPAC Administrative Interface.

NOTE: This allows any of the seven combinations of LNP Type (LISP only, LSPP only, POOL only, LISP and LSPP, LISP and POOL, LSPP and POOL, all three).

#### **B-762** Block Holder Information Mass Update – Update Fields

NPAC SMS shall allow NPAC Personnel, via a mass update, to update the block holder default routing information (LRN, DPC(s), and SSN(s)), for a 1K Block as stored in the NPAC SMS.

# **B-763** Block Holder Information Mass Update – Block Intersection Rejection

NPAC SMS shall reject a mass update request by NPAC Personnel, if the TN Range entered as Selection Criteria, includes a TN that does NOT end in 000 or 999, and intersects an existing 1K Block as stored in the NPAC SMS, other than Blocks with a status of old.

#### **B-764** Block Holder Information Mass Update – Block Status Validation

NPAC SMS shall apply mass update modifications to a Block, if the Block's status is active, and the Block's Failed SP List is empty.

# B-770 Block Holder Information Mass Update – Block Range Values for Subscription Versions

NPAC SMS shall append 000 to the end of the first 7-digit field that is used for Block Range, and shall append 999 to the end of the second 7-digit field that is used for Block Range, in order to define the TN range that should be used for mass update.

## B-780 Block Holder Information Mass Update – Download to EDR Local SMS

NPAC SMS shall download Number Pooling Block Information, for mass updates, using the Number Pooling Block Object, via the NPAC SMS to Local SMS Interface, when the Service Provider's EDR Indicator is **TRUE**, at the time of the mass update request.

# B-790 Block Holder Information Mass Update – Download to non-EDR Local SMS

NPAC SMS shall download Number Pooling Block Information, for mass updates, using Subscription Version(s) with LNP Type of POOL, via the NPAC SMS to Local SMS Interface, when the Service Provider's EDR Indicator is **FALSE**, at the time of the mass update request.

### **Section 5 New Requirements**

### **Subscription Version, General**

#### SV-1 Number Pooling Subscription Version Information – Reject Messages

NPAC SMS shall reject a message from NPAC personnel, a Service Provider SOA via the SOA to NPAC SMS Interface, a Service Provider LSMS via the NPAC SMS to Local SMS Interface, or a Service Provider via the NPAC SOA Low-tech Interface, to Create, Modify, Cancel, Set to Conflict, Activate, or Disconnect, a Subscription Version with an LNP Type of POOL.

# **SV-2** Number Pooling Subscription Version Information – Suppression of Notifications

NPAC SMS shall suppress all notifications to the old and new service provider SOA systems for Subscription Versions with LNP Type of POOL.

#### SV-3 Number Pooling Subscription Version Information – Filters for "Pooled Number" Subscription Versions

NPAC SMS shall apply NPA-NXX Filters to subscription version downloads broadcasts to the Local SMSs, for Subscription Versions with LNP Type of POOL.

# SV-4 Number Pooling Subscription Version Information – Broadcast of Subscription Data

NPAC SMS shall broadcast an addition, modification, or deletion of Subscription Versions, with LNP Type of POOL, to non-EDR LSMSs, via the NPAC SMS to Local SMS Interface, upon successful update of the 1K Block in the NPAC SMS, for Subscription Versions with LNP Type of POOL.

# SV-5 Number Pooling Subscription Version Information – Failed SP List Update for Block

NPAC SMS shall consider an EDR Local SMS to be discrepant and shall update the Failed SP List for all Subscription Versions with LNP Type of POOL in the 1K Block, based on an EDR Local SMS failing to process the Block Object, for an addition, modification, deletion, re-send, resync, or mass update.

### **Subscription Version, Addition for Number Pooling**

# <u>SV-10</u> <u>Addition of Number Pooling Subscription Version Information – Subscription Data</u>

NPAC SMS shall create individual subscription versions, with LNP Type of POOL, for each TN within the 1K Block, that does not already exist with a status of pending/conflict/cancel-pending/failureactive/partial failure/disconnect pending/old with a Failed SP List/sending, immediately after successfully creating a Number Pooling Block Holder Information in the NPAC SMS.

# SV-20 Addition of Number Pooling Subscription Version Information – Create "Pooled Number" Subscription Version

NPAC SMS shall automatically populate the following data upon Subscription Version creation for a Pooled Number port:

Version ID - Automatically generated by NPAC SMS.

LRN - Value set to same field in Block.

Old Service Provider ID - Value set to owner of NPA-NXX.

New Service Provider ID - Value set to NPA-NXX-X Holder SPID field in Block.

TN - Telephone Number associated with this Subscription Version.

LNP Type - Value set to "POOL".

Status - Value initially set to "Sending".

CLASS DPC - Value set to same field in Block.

CLASS SSN - Value set to same field in Block.

LIDB DPC - Value set to same field in Block.

LIDB SSN - Value set to same field in Block.

CNAM DPC - Value set to same field in Block.

CNAM SSN - Value set to same field in Block.

ISVM DPC - Value set to same field in Block.

ISVM SSN - Value set to same field in Block.

New Service Provider Due Date - Value set to current date.

Old Service Provider Due Date - Value set to current date.

Old Service Provider Authorization - Value set to "TRUE".

New Service Provider Create Time Stamp - Value set to current date/time.

Old Service Provider Authorization Time Stamp - Value set to current date/time.

Activation Request Time Stamp - Value set to current date/time.

Activation Broadcast Date - Value set to current date.

Activation Broadcast Complete Time Stamp - Value set to current date/time, once the broadcast is complete (either Local SMS has responded or retries have been exhausted).

Disconnect Request Time Stamp - Value set to all zeros.

Disconnect Broadcast Time Stamp - Value set to all zeros.

Disconnect Broadcast Time Stamp - Value set to all zeros.

Disconnect Broadcast Complete Time Stamp - Value set to all zeros.

Effective Release Date - Value set to all zeros.

Customer Disconnect Date - Value set to all zeros.

Pre-Cancellation Status - Value set to NULL.

Old Service Provider Cancellation Time Stamp - Value set to all zeros.

New Service Provider Cancellation Time Stamp - Value set to all zeros.

<u>Cancellation Time Stamp - Value set to all zeros.</u>

Old Time Stamp - Value set to all zeros.

Conflict Time Stamp - Value set to all zeros.

Conflict Resolution Time Stamp - Value set to all zeros.

Create Time Stamp - Value set to current date/time.

Modified Time Stamp - Value set to current date/time.

Porting to Original - Value set to "FALSE".

End User Location Value - Value set to "no value".

End User Location Value Type - Value set to "no value".

Modify Request Time Stamp - Value set to all zeros.

Modify Broadcast Time Stamp - Value set to all zeros.

Modify Broadcast Complete Time Stamp - Value set to all zeros.

Billing ID - Value set to "no value".

Status Change Cause Code - Value set to "no value".

SV-30 Addition of Number Pooling Subscription Version Information
Create "Pooled Number" Subscription Version – Bypass of Existing
Subscription Versions

NPAC SMS shall upon finding an existing subscription version with an active, partial failure, disconnect pending, old with a failed SP list, or sending status for any TNs within the 1K Block, will bypass and not alter that TN/subscription version, log an information message, and continue processing.

#### SV-40 Addition of Number Pooling Subscription Version Information Create "Pooled Number" Subscription Version - Validation Failure Notification

NPAC SMS shall send an appropriate error message to the originating NPAC personnel user if any of the validations listed in Requirements \_\_\_, \_\_\_, and \_\_fail upon Subscription Version creation for a Pooled Number port.

CMA Comment need to update requirements list above, once numbers are finalized.

SV-50 Addition of Number Pooling Subscription Version Information Create "Pooled Number" Subscription Version - Validation Failure - No Create

NPAC SMS shall not create a new Subscription Version, if any of the validations fail listed in Requirements \_\_\_, \_\_\_, and \_\_\_ upon Subscription Version creation for a Pooled Number port.

CMA Comment need to update requirements list above, once numbers are finalized.

SV-60 Addition of Number Pooling Subscription Version Information
Create "Pooled Number" Subscription Version - Validation Success - Create
New

NPAC SMS shall create a new Subscription Version with LNP Type of POOL, for each non-contaminated TN in the 1K Block, after successfully creating the corresponding Block.

# SV-70 Addition of Number Pooling Subscription Version Information Create "Pooled Number" Subscription Version - Set to Sending

NPAC SMS shall set a Subscription Version of LNP Type POOL in the 1K Block, to sending upon successful subscription creation.

# SV-90 Addition of Number Pooling Subscription Version Information – Active Status Update

NPAC SMS shall update the status of each Subscription Version with LNP Type of POOL for each TN in the 1K Block, upon successful completion of the broadcast, and any retries, to ALL EDR and non-EDR Local SMSs, as defined in B-165from a sending status to an active status.

## SV-100 Addition of Number Pooling Subscription Version Information – Partial failure Status Update

NPAC SMS shall update the status of each Subscription Version with LNP Type of POOL for each TN in the 1K Block of an EDR failure, or specific Subscription Version(s) of a non-EDR failure, upon completion of the broadcast to ALL EDR and non-EDR Local SMSs, and a successful response from at least one, but not all Local SMSs, from a sending status to a partial failure status.

# SV-110 Addition of Number Pooling Subscription Version Information – Failed Status Update

NPAC SMS shall update the status of each Subscription Version with LNP Type of POOL for each TN in the 1K Block of an EDR failure, or specific Subscription Version(s) of a non-EDR failure, upon completion of the broadcast to ALL EDR and non-EDR Local SMSs, and a successful response from NONE of the Local SMSs, from a sending status to a failed status.

### SV-121 Addition of Number Pooling Subscription Version Information – Failed SP List

NPAC SMS shall update the Failed SP List with the discrepant Local SMS of the individual subscription version(s) with LNP Type of POOL, upon completion of the activation broadcast to All EDR and non-EDR Local SMSs, and an unsuccessful response from at least one Local SMS.

### <u>Subscription Version, Block Create Validation of Subscription</u> Versions

# SV-131 Block Create Validation of Subscription Versions – Subscription Version Completion Check

NPAC SMS shall, upon successful completion of a Block Create request, where the Block status is active, verify that 1000 TNs exist for the Block, with an LNP Type of either POOL, LSPP, or LISP.

NOTE: NPAC shall perform this 1000 TN verification until all 1000 TNs have been accounted for in the 1K Block.

# SV-133 Block Create Validation of Subscription Versions – Subscription Version Create for Missing TNs

NPAC SMS shall, upon finding any missing TNs in the 1K Block defined in SV-101, create a Subscription Version with LNP Type of POOL in the NPAC SMS, using the routing data in the Block, and setting the status to sending.

# SV-135 Block Create Validation of Subscription Versions – Subscription Version Broadcast to non-EDR Local SMS

NPAC SMS shall, for any missing TNs in the 1K Block, broadcast the Subscription Version(s) to all non-EDR Local SMSs, via the NPAC SMS to Local SMS Interface.

# SV-137 Block Create Validation of Subscription Versions – Block Status Update

NPAC SMS shall update the status of the Block based on the results of the broadcast of the Subscription Version(s) to all non-EDR Local SMSs, as defined in B-165.

#### SV-139 Block Create Validation of Subscription Versions – Block Failed SP List Update

NPAC SMS shall update the Failed SP List of the Block based on the results of the broadcast of the Subscription Version(s) to all non-EDR Local SMSs, as defined in B-166.

### Subscription Version, Create in a Number Pooling Environment

#### SV-160 Create Intra-Service Provider Port – NPAC Personnel After NPA-NXX-X Creation

NPAC SMS shall allow NPAC personnel to create intra-service provider ports for a TN within the 1K Block, after the Creation of the NPA-NXX-X and up to the NPA-NXX-X's Effective Date, only where the new/old Service Provider is the CodeNPA-NXX-X Holder SPID, and a previously active SV does NOT exist in the NPAC SMS.

## SV-170 Create Intra-Service Provider Port – SOA After NPA-NXX-X Creation

NPAC SMS shall reject an intra-service provider Subscription Version Create message for a TN within the 1K Block, from a Service Provider SOA via the SOA to NPAC SMS Interface, or Service Provider via the NPAC SOA Low-tech Interface, after the Creation of the NPA-NXX-X, where the new Service Provider is the CodeNPA-NXX-X Holder SPID, and a previously active SV does NOT exist in the NPAC SMS.

## SV-180 Create Inter-Service Provider Port-to-Original Port – NPAC and SOA After NPA-NXX-X Creation

NPAC SMS shall reject an inter-service provider Port-to-Original Subscription Version Create message for a TN within the 1K Block, from NPAC Personnel, a Service Provider SOA via the SOA to NPAC SMS Interface, or Service Provider via the NPAC SOA Low-tech Interface, after the Creation of the NPA-NXX-X, and a previously active SV does NOT exist in the NPAC SMS.

### SV-190 Create Inter-Service Provider Port-to-Original Subscription Version - After Block Activation

NPAC SMS shall validate that the New Service Provider is the NPA-NXX-X Holder, in an interservice provider port-to-original port for a TN within the 1K Block, onceafter the activation of the Block exists in the NPAC SMS.

### SV-195 Create Pending Provider Port – NPAC Personnel or Service Provider After Block Activation

NPAC SMS shall allow NPAC personnel, a Service Provider SOA via the SOA to NPAC SMS Interface, or Service Provider via the NPAC SOA Low-tech Interface, to create inter-service provider ports or intra-service provider ports for a TN within the 1K Block, when the currently active Subscription Version(s) is LNP Type POOL, and the Block's status is active, with an empty Failed SP List.

### Subscription Version, Activate in a Number Pooling Environment

#### SV-200 Activate Intra-Service Provider Port – After NPA-NXX-X Creation

NPAC SMS shall allow NPAC personnel, a Service Provider SOA via the SOA to NPAC SMS Interface, or Service Provider via the NPAC SOA Low-tech Interface, to activate intra-service provider ports for a TN within the 1K Block, onceup to the Activation of the Block exists in the NPAC SMS.

# SV-210 Activate Port-to-Original Subscription Version – Broadcast of Subscription Data Creation

The NPAC SMS shall broadcast a new Subscription Version Create to a non-EDR Local SMS, upon activating a port-to-original Subscription Version, where the TN is within the range of a 1K Block, onceafter the activation of the Block exists in the NPAC SMS.

# SV-220 Activate Port-to-Original Subscription Version – Broadcast of Subscription Data Deletion

The NPAC SMS shall broadcast a Subscription Version Delete to an EDR Local SMS, upon activating a port-to-original Subscription Version, where the TN is within the range of a 1K Block, onceafter the activation of the Block exists in the NPAC SMS.

### Subscription Version, Modification for Number Pooling

## SV-230 Modification of Number Pooling Subscription Version Information – Subscription Data

NPAC SMS shall automatically apply the updates to the attributes of the individual subscription versions with LNP Type of POOL, for each TN within the 1K Block after successfully modifying a Number Pooling Block in the NPAC SMS.

# SV-240 Modification of Number Pooling Subscription Version Information – Status Update to Sending

NPAC SMS shall update the status of the individual subscription versions with LNP Type of POOL, for each TN within the 1K Block, upon the start of the broadcast of a Block Modification to the Local SMSs, from an active status to a sending status, after successfully modifying a Number Pooling Block in the NPAC SMS.

# SV-270 Modification of Number Pooling Subscription Version Information – Status Update to Active

NPAC SMS shall update the status of each Subscription Version with LNP Type of POOL in the 1K Block, upon completion of the broadcast to All EDR and non-EDR Local SMSs, from a sending status to an active status.

### SV-280 Modification of Number Pooling Subscription Version Information – Failed SP List

NPAC SMS shall update the Failed SP List with the discrepant Local SMS of the individual subscription version(s) with LNP Type of POOL, upon completion of the modification broadcast to All EDR and non-EDR Local SMSs, and an unsuccessful response from at least one Local SMS.

### **Subscription Version, Deletion for Number Pooling**

# SV-330 Deletion of Number Pooling Subscription Version Information – Sending Status Update to Subscription Versions

NPAC SMS shall, upon processing a request to delete an NPA-NXX-X, update the status of the Subscription Versions with LNP Type of POOL in the 1K Block, at the start of the broadcast to all EDR and non-EDR Local SMSs, from an active status to a sending status.

## SV-335 Deletion of Number Pooling Subscription Version Information – Broadcast of Subscription Version Data

NPAC SMS shall, upon setting the Subscription Versions with LNP Type of POOL in the 1K Block status to sending, broadcast a delete of Subscription Versions with LNP Type of POOL in the 1K Block, to non-EDR LSMSs, via the NPAC SMS to Local SMS Interface.

# SV-350 Deletion of Number Pooling Subscription Version Information – Old Status Update to Subscription Versions

NPAC SMS shall update the status of a particular the Subscription Versions with LNP Type of POOL in the 1K Block, upon completion of the broadcast, and any retries, of the Block to all EDR Local SMSs and that particular Subscription Version to non-EDR Local SMSs, and a successful response from at least one Local SMS, as defined in B-165 from a sending status to an old status.

## SV-360 Deletion of Number Pooling Subscription Version Information – Failed Status Update

NPAC SMS shall update the status of the Subscription Versions with LNP Type of POOL in the 1K Block, upon completion of the broadcast to all EDR and non-EDR Local SMSs, and a successful response from NONE of the Local SMSs, from a sending status to an active status.

## SV-365 Deletion of Number Pooling Subscription Version Information – Failed SP List

NPAC SMS shall update the Failed SP List with the discrepant Local SMS of the individual subscription version(s) with LNP Type of POOL, upon completion of the deletion broadcast to All EDR and non-EDR Local SMSs, and an unsuccessful response from at least one Local SMS.

# <u>Subscription Version, Disconnect and Port-To-Original in a Number Pooling Environment</u>

# <u>SV-390 – Disconnect Subscription Version or Port-To-Original – Pooled Number Block Default Routing Restoration</u>

The NPAC SMS shall reinstate the Block default routing, block holder Service Provider Id and the LNP Type to POOL for a subscription version upon a disconnect for a ported TN, or an activate for a Port-To-Original TN, belonging to the 1K Block, once the Block exists in the NPAC SMS.

#### SV-400 - Disconnect Subscription Version - Customer Disconnect Date Notification for Pooled Number

NPAC SMS shall notify the new Service Provider (the block owner) of the Subscription Version Customer Disconnect Date and Effective Release Date, for a ported pooled Subscription Version, prior to reinstating the default routing.

## SV-410 – Disconnect Subscription Version – Broadcast of Subscription Data Creation

The NPAC SMS shall broadcast a new Subscription Version Create to a non-EDR Local SMS, upon a disconnect of a ported non-pooled Subscription Version, where the TN is within the 1K Block.

### SV-420 – Disconnect Subscription Version – Broadcast of Subscription Data Deletion

The NPAC SMS shall broadcast a Subscription Version Delete to an EDR Local SMS, upon a disconnect of a ported non-pooled Subscription Version, where the TN is within the 1K Block.

#### SV-425 – Disconnect Subscription Version – Updates to the Failed SP List

NPAC SMS shall update the Failed SP List with the discrepant Local SMS of the individual subscription version(s) with LNP Type of POOL, that were *active prior to the disconnect* broadcast and used to indicate the status of the previously active Subscription Version(s) that is being disconnected, upon completion of the disconnect broadcast to All EDR and non-EDR Local SMSs, and an unsuccessful response from at least one Local SMS.

#### <u>SV-426 – Disconnect Subscription Version – Updates to the Failed SP List</u>

NPAC SMS shall update the Failed SP List with the discrepant Local SMS of the individual subscription version(s) with LNP Type of POOL, that were *pending prior to the disconnect broadcast and used to indicate the status of the Port-To-Original Subscription Version(s)*, upon completion of the disconnect broadcast to All EDR and non-EDR Local SMSs, and an unsuccessful response from at least one Local SMS.

### **Subscription Version, NPA Splits**

# <u>SV-430 NPA Splits and the Number Pool Block Holder Information – Broadcast of Subscription Versions for an NPA-NXX involved in an NPA Split</u>

NPAC SMS shall convert the old NPA-NXX to the new NPA-NXX when broadcasting Subscription Versions with LNP Type of POOL, to a non-EDR Local SMS, via the NPAC SMS to Local SMS Interface, for an NPA-NXX that is currently in permissive dialing.

### Subscription Version, Query

#### SV-440 Query Subscription Version – LNP Type of POOL

NPAC SMS shall return Subscription Versions with LNP Type of POOL that match the query selection criteria, on query requests by NPAC personnel, SOA via the SOA to NPAC SMS Interface, Local SMS via the NPAC SMS to Local SMS Interface, or Service Provider via the NPAC SOA Low-tech Interface, regardless of the value in the Service Provider's EDR Indicator.

### Subscription Version, Re-Send for Number Pooling

### SV-451 Re-Send of Number Pooling Subscription Version Information – NPAC Personnel GUI

NPAC SMS shall prevent NPAC Personnel from re-sending a Subscription Version with LNP Type of POOL, via the NPAC Administrative Interface.

NOTE: The re-send of SVs with LNP Type of POOL to non-EDR Local SMSs shall be initiated from the Block Re-send on the NPAC Administrative GUI.

# <u>SV-452 Re-Send of Number Pooling Subscription Version Information – Subscription Versions sent to non-EDR Local SMS</u>

NPAC SMS shall re-send Subscription Versions to a non-EDR Local SMS via the NPAC SMS to Local SMS Interface, when a re-send request to a non-EDR Local SMS is initiated to a Blockby the NPAC SMS.

#### SV-460 Re-Send of Number Pooling Subscription Version Information – Sending Status Update to Failed Subscription Versions for Block Activation

NPAC SMS shall update the status of the failed Subscription Versions with LNP Type of POOL in the 1K Block, at the start of the re-send to the Local SMSs, from a failed status to a sending status.

#### SV-470 Re-Send of Number Pooling Subscription Version Information – Sending Status Update to Partial failure Subscription Versions for Block Activation

NPAC SMS shall update the status of the partial failure Subscription Versions with LNP Type of POOL in the 1K Block, at the start of the re-send to the Local SMSs, from a partial failure status to a sending status.

#### SV-480 Re-Send of Number Pooling Subscription Version Information – Sending Status Update to Active Subscription Version for Block Modification or Deletion

NPAC SMS shall update the status of the active Subscription Version with LNP Type of POOL in the 1K Block, with a Failed SP List, at the start of the re-send to the Local SMSs, from an active status to a sending status.

# SV-490 Re-Send of Number Pooling Subscription Version Information – Sending Status Update to Old Subscription Version for Block Deletion

NPAC SMS shall update the status of the old Subscription Version with LNP Type of POOL in the 1K Block, with a Failed SP List, at the start of the re-send to the Local SMSs, from an old status to a sending status.

# SV-510 Re-Send of Number Pooling Subscription Version Information – Update to Failed SP List for Block Activation

NPAC SMS shall update the Failed SP List of the Subscription Version(s) with LNP Type of POOL in the 1K Block, by removing the previously failed Local SMS, upon a successful re-send to a previously failed Local SMS.

# SV-515 Re-Send of Number Pooling Subscription Version Information – Status Update to Subscription Version after Successful Re-Send

NPAC SMS shall update the status of the Subscription Version(s), specified in the re-send request, at the completion of the re-send to the Local SMS, and a **successful** response from the Local SMS, from a sending status, based on the following:

- If the status prior to the re-send was for a *failedCreate*, and the Failed SP list contains at least one SPID, then the status is set to *partial failure*.
- If the status prior to the re-send was *partial failure*, and the Failed SP list contains at least one SPID, then the status is set to *partial failure*.
- If the status prior to the re-send was for a *failedCreate*, and the Failed SP list is now empty, then the status is set to *active*.
- If the status prior to the re-send was *partial failure*, and the Failed SP list is now empty, then the status is set to *active*.
- If the status prior to the re-send was for a *activeModify*, and the Failed SP list contains at least one SPID, then the status is set to *active*.
- If the status prior to the re-send was *active*, and the Failed SP list is now empty, then the status is set to *active*.
- If the re-send was for a **Disconnect**, then the status is set to **old**.

# SV-516 Re-Send of Number Pooling Subscription Version Information — Status Update to Subscription Version after Un-Successful Re-Send

NPAC SMS shall update the status of the Subscription Version(s), specified in the re-send request, at the completion of the re-send to the Local SMS, and an **un-successful or missing** response from the Local SMS, from a sending status, based on the following:

- If the status prior to the re-send was for a *failedCreate*, and the Failed SP List contains all SPIDS, then the status is set to *failed*.
- If the status prior to the re-send was for a *partial failureCreate*, and the Failed SP List contains some but not all SPIDS, then the status is set to *partial failure*.
- If the status prior to the re-send was for a *activeModify*, then the status is set to *active*.
- If the re-send was for a **Disconnect**, and the Failed SP List contains all SPIDS, then the status is set to **active**.
- If the re-send was for a *Disconnect*, and the Failed SP List contains some but not all SPIDS, then the status is set to *old*.

# SV-517 Re-Send of Number Pooling Subscription Version Information — Status Update to Block after all Subscription Versions are Successfully re-sent

NPAC SMS shall update the status of the corresponding Block after all Subscription Versions with LNP Type of POOL in the 1K Block, have been re-sent to the Local SMSs, as follows:

- If the status of all Subscription Versions with LNP Type of POOL in the 1K Block is *failed*, then the status of the Block is set to *failed*.
- If the status of all Subscription Versions with LNP Type of POOL in the 1K Block is *partial failure*, then the status of the Block is set to *partial failure*.
- If the status of all Subscription Versions with LNP Type of POOL in the 1K Block is *active*, then the status of the Block is set to *active*.
- If the status of all Subscription Versions with LNP Type of POOL in the 1K Block is *old*, then the status of the Block is set to *old*.
- If the status of all Subscription Versions with LNP Type of POOL in the 1K Block is a combination of either *active/partial failure* or *partial failure/failed*, then the status of the Block is set to *partial failure*.
- If the status of all Subscription Versions with LNP Type of POOL in the 1K Block is a combination of *active/old*, then the status of the Block is set to *old*.

### <u>Subscription Version, Re-Send in a Number Pooling</u> Environment

#### SV-518 Re-Send of Subscription Version Information – Disconnect or Port-To-Original of a TN within a Pooled 1K Block

NPAC SMS shall examine a Service Provider's EDR Indicator, at the time of re-send, to determine the message to re-send, for a disconnect or a Port-To-Original Subscription Version of a ported non-pooled TN, where the TN is contained within a Pooled 1K Block.

### **Subscription Version, Bulk Data Downloads**

## SV-521 Bulk Download File Creation – Pooled Subscription Versions Filtered for EDR Local SMS

NPAC SMS shall filter out Subscription Versions with LNP Type of POOL for Bulk Data

Download files of Subscription Version data, when the requesting Service Provider has an EDR Indicator set to TRUE.

### <u>Subscription Version, Resynchronization</u>

SV-522 Addition of Number Pooling Subscription Version Information Resynchronization – Filters on Subscription Versions Resync

NPAC SMS shall filter out Subscription Versions with LNP Type of POOL for Resynchronization of Subscription Version data, when the resyncing Service Provider has an EDR Indicator set to TRUE.

### **Subscription Version, Mass Updates**

SV-530 Addition of Number Pooling Subscription Version Information Mass Update of "Pooled Number" Subscription Versions - Rejection

NPAC SMS shall reject a request to perform a mass update on Subscription Versions with an LNP Type of POOL.

### **Section 8 New Requirements**

### **Audit Processing**

### A-1 Audit Processing for Blocks and Pooled Number Subscription Versions

NPAC SMS shall process an audit request of a **Block** by performing the following steps:

- Validate that the Block exists in the NPAC SMS.
- Perform an internal integrity check within the NPAC SMS to ensure that the Block and all Subscription Versions with LNP Type of POOL within the 1K Block, contain the same data.
- If any of the Subscription Versions are out of sync in the NPAC SMS, update those Subscription Versions in the NPAC SMS, issue a unique alarmable error message, then continue processing.
- Once the integrity check is complete, broadcast the Block and TN Range to the EDR Local SMS, per requirement A-40, and the TN Range to the non-EDR Local SMS.

#### A-2 Audit Processing for Pooled Number Subscription Versions

NPAC SMS shall process an audit request of a **Subscription Version(s) with LNP Type of POOL**, by performing the following steps:

- <u>Validate that the Block associated with the TN contained in the Subscription Version(s), exists in the NPAC SMS.</u>
- Perform an internal integrity check within the NPAC SMS to ensure that the Block and all Subscription Versions with LNP Type of POOL within the audited TN Range, contain the same data.
- If any of the Subscription Versions are out of sync in the NPAC SMS, update those Subscription Versions in the NPAC SMS, issue a unique alarmable error message, then continue processing.
- If any of the Subscription Versions in the audited TN Range are out of sync in the NPAC SMS, then perform an internal integrity check on all Subscription Versions with LNP Type of POOL in the 1K, even for those outside of the audited TN Range.
- Once the integrity check is complete, broadcast the query of the Block and audited TN Range to the EDR Local SMS, per requirement A-40, and the query of the audited TN Range to the non-EDR Local SMS.

#### A-3 Audit Processing for Erroneous Pooled Number Subscription Versions

NPAC SMS shall, for Subscription Versions that failed the internal integrity check, broadcast a correction for the erroneous Subscription Versions to all non-EDR Local SMSs.

# A-10 Audit Discrepancy and Results Notifications for Pooled Number Subscription Versions

NPAC SMS shall, for audits of Subscription Versions with LNP Type of POOL, send notifications of discrepancies found and audit results to the requesting SOA.

# A-20 Audit Status Attribute Value Change Notification Suppress for Pooled Number Subscription Versions

NPAC SMS shall, for audits of Subscription Versions with LNP Type of POOL, suppress status change notifications for discrepancy corrections to the block holder SOA (current SP).

# A-30 Audit Attribute Value Change Notification Suppress for Pooled Number Subscription Versions

NPAC SMS shall, for audits of Subscription Versions with LNP Type of Pool suppress, attribute change notifications for discrepancy corrections to the block holder SOA (current SP).

#### A-40 Flow of Audit Execution – Pooled Numbers to EDR Local SMS

NPAC SMS shall send a query for a Block and a query for Subscription Version(s), resulting from the TN or TN Range audit request, to an EDR Local SMS that is accepting Block and Subscription Version data download for the given NPA-NXX-X via the NPAC SMS to Local SMS Interface.

#### A-50 Ignore missing SVs for Pooled Ports at EDR Local SMS

NPAC SMS shall not consider a query response of No Data, as a discrepancy from an EDR Local SMS, for a Subscription Version with LNP Type of POOL.

#### A-60 Delete erroneous SVs for Pooled Ports at EDR Local SMS

NPAC SMS shall consider a query response which response, which contains a Subscription Version, as a discrepancy from an EDR Local SMS, for a Subscription Version with LNP Type of POOL, by sending a Subscription Version Delete message for the Subscription Version.

### A-80 Compare NPAC SMS Block to Service Provider Block at EDR Local SMS

NPAC SMS shall conduct a comparison of the Block belonging to the Service Provider to its owns Block.

#### A-90 Add Block to Service Provider at EDR Local SMS

NPAC SMS shall, following the comparison of its own Block to the Service Provider's Block, add a Block found to be absent in the Service Provider's Local SMS, by sending a Block Create/Activate message.

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#### A-100 Modify Block to Service Provider at EDR Local SMS

NPAC SMS shall, following the comparison of its own Block to the Service Provider's Block, modify a Block found to be in error in the Service Provider's Local SMS, by sending a Block Modify message.

#### A-110 Delete Discrepant Block to Service Provider at EDR Local SMS

NPAC SMS shall, following the comparison of its own Block to the Service Provider's Block, delete a Block found to be erroneously present in the Service Provider's Local SMS, by sending a Block Delete message.

### **Section 9 New Requirements**

### **Reports Processing**

#### **RR9-7 Pooled Number Report**

NPAC SMS shall support reports that list the pooled number range and the block holder for NPAC personnel using the NPAC Administrative Interface and Service Provider personnel using the NPAC SOA Low-tech Interface.

#### **R-10 Pooled Number Report – Query functions**

NPAC SMS shall support pooled number reports that allow queries on any combination of SPID, NPA-NXX-X ID, and TN Range, where the NPAC SMS returns all TNs that meet the selection criteria.

#### **R-20** Pooled Number Report – Filters

NPAC SMS shall support pooled number reports that allow filters on any combination of LNP Type (POOL, LSPP, LISP), where the NPAC SMS returns all TNs that meet the selection criteria.

#### RR9-8 Pooled Number Block holder default routing Report

NPAC SMS shall support a report that list the number pool range, the block holder, and the block holder default routing information for NPAC personnel using the NPAC Administrative Interface and Service Provider personnel using the NPAC SOA Low-tech Interface.

## R-25 Pooled Number Block holder default routing Report – Report Data Elements

NPAC SMS shall support a report that lists the number pool range, the block holder, and the block holder default routing information, that contains the following data elements:

**Block ID** 

NPA-NXX-X

Effective Date

LRN

**DPC** 

SSN

#### R-30 Pooled Number Report – Numbers in a NPA-NXX-X

NPAC SMS shall support a report that list all Active-Like numbers in a 1K block (NPA-NXX-X) for a block holder, for NPAC personnel using the NPAC Administrative Interface and Service Provider personnel using the NPAC SOA Low-tech Interface.

#### R-40 Pooled Number Report – Numbers in a NPA-NXX-X Data Elements

NPAC SMS shall support a report that lists all Active-Like numbers in a 1K Block for a block holder, that contains the following data elements:

TN (primary sort)

SV id

LNP Type

Aactivation dateStart Time Stamp

SP Name

StatusLRN

#### R-50 Pooled Number Report – NPA-NXX-X Holder History

NPAC SMS shall support a report that contains NPA-NXX-X Holder History for a 1K Block, for NPAC personnel using the NPAC Administrative Interface and Service Provider personnel using the NPAC SOA Low-tech Interface.

### R-60 Pooled Number Report – NPA-NXX-X Holder History Data Elements

NPAC SMS shall support a report that contains NPA-NXX-X Holder History for a 1K Block, that contains the following data elements:

Code Holder NPA-NXX-X Holder TN Range Effective Date

## R-70 Pooled Number Report – Pending-Like No-Active and Pending-Like Port-to-Original Subscription Versions

NPAC SMS shall support a report, used for NPA-NXX-X and Block Creation, that contains a list of all numbers in a 1K Block, that currently have a Subscription Version with a status of pending/conflict/cancel-pending/failure, and where no active Subscription Version exists, or have a Subscription Version with a status of pending/conflict/cancel-pending/failure, and where the Subscription Version is a Port-to-Original port, for NPAC personnel using the NPAC Administrative Interface and Service Provider personnel using the NPAC SOA Low-tech Interface.

# R-80 Pooled Number Report – Pending-Like No-Active and Pending-Like Port-to-Original Subscription Versions Data Elements

NPAC SMS shall support a report, used for NPA-NXX-X and Block Creation, that contains a list of all numbers in a 1K Block, that currently have a Subscription Version with a status of pending/conflict/cancel-pending/failure, and where no active Subscription Version exists, or have a Subscription Version with a status of pending/conflict/cancel-pending/failure, and where the Subscription Version is a Port-to-Original port, that contains the following data elements:

TN

Old Service Provider SPID

New Service Provider SPID

Due Date

Status

# R-81 Pooled Number Report – Pending-Like No-Active and Pending-Like Port-to-Original Subscription Versions Sort Priority

NPAC SMS shall sort the report listed in R-80, in the following order:

New Service Provider SPID (primary sort)

TN (secondary sort)

# R-82 Pooled Number Report – Pending-Like No-Active and Pending-Like Port-to-Original Subscription Versions Page Break

NPAC SMS shall page break the report listed in R-80, for every change in SPID.

## R-90 Pooled Number Report – <u>Pending-Like Port-to-Original <del>Pending</del></u> Subscription Versions

NPAC SMS shall support a report, used for NPA-NXX-X and Block Creation, that contains a list of all numbers in a 1K Block, that currently have a Port-to-Original Subscription Version with a status of pending/conflict/cancel-pending/failure, for NPAC personnel using the NPAC Administrative Interface and Service Provider personnel using the NPAC SOA Low-tech Interface.

#### R-100 Pooled Number Report – <u>Pending-Like Port-to-Original Pending</u>-Subscription Versions Data Elements

NPAC SMS shall support a report, used for NPA-NXX-X and Block Creation, that contains a list of all numbers in a 1K Block, that currently have a Port-to-Original Subscription Version with a status of pending/conflict/cancel-pending/failure, that contains the following data elements:

TN

Old Service Provider

New Service Provider

Due Date

Status

### R-110 Pooled Number Report – Contaminated Active-Like Subscription Versions

NPAC SMS shall support a report, used for de-pooling, that contains a list of all numbers in a 1K Block, that currently have a Subscription Version with a status of active/partial failure/disconnect pending/sending/old with a Failed SP List, for NPAC personnel using the NPAC Administrative Interface and Service Provider personnel using the NPAC SOA Low-tech Interface.

### R-120 Pooled Number Report – Contaminated Active-Like Subscription Versions Data Elements

NPAC SMS shall support a report, used for de-pooling, that contains a list of all numbers in a 1K Block, that currently have a Subscription Version with a status of active/partial failure/disconnect pending/sending/old with a Failed SP List, that contains the following data elements:

TN Old Service Provider New Service Provider Due Date Status

# R-130 Pooled Number Report – Pending-Like Active and POOL Subscription Versions

NPAC SMS shall support a report, used for de-pooling, that contains a list of all numbers in a 1K Block, that currently have a Subscription Version with a status of pending/conflict/cancel-pending/failure, and where the currently active Subscription Version is LNP Type of POOL, for NPAC personnel using the NPAC Administrative Interface and Service Provider personnel using the NPAC SOA Low-tech Interface.

#### R-140 Pooled Number Report – Pending-Like and Active POOL Subscription Versions Data Elements

NPAC SMS shall support a report, used for de-pooling, that contains a list of all numbers in a 1K Block, that currently have a Subscription Version with a status of pending/conflict/cancel-pending/failure, and where the currently active Subscription Version is LNP Type of POOL, that contains the following data elements:

TN
Old Service Provider SPID
New Service Provider SPID
Due Date
Status

#### R-141 Pooled Number Report – Pending-Like and Active POOL Subscription Versions Sort Priority

NPAC SMS shall sort the report listed in R-140, in the following order:

New Service Provider SPID (primary sort)

TN (secondary sort)

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### R-142 Pooled Number Report – Pending-Like and Active POOL Subscription Versions Page Break

NPAC SMS shall page break the report listed in R-140, for every change in SPID.

# **Delta between 1.4 Pooling and National Pooling**

# National Requirements that supercede functionality in the 1.4 Requirements

N-180 Addition of Number Pooling NPA-NXX-X Holder Information NPA-NXX-X Holder SPID – Validation

NPAC SMS shall allow the value of the NPA-NXX-X Holder SPID to be equal to the value of the SPID that owns the NPA-NXX.

# 1.4 Requirements that have been removed from the National Requirements

#### RR9-5 Pooled Ported Number Report

NPAC SMS shall support reports that list the ported numbers in a pooled number range for a block holder for NPAC personnel using the NPAC Administrative Interface and Service Provider personnel using the NPAC SOA Low-tech Interface.

#### RR9-6 Pooled Non-Ported Number Block holder default routing Report

NPAC SMS shall support reports that list the non-ported numbers in a pooled number range for a block holder for NPAC personnel using the NPAC Administrative Interface and Service Provider personnel using the NPAC SOA Low-tech Interface.

# **Appendix C – System Tunables**

BLOCK TUNABLES					
Tunable Name	Tunable Variable Name	Default Value	<u>Units</u>	<u>Valid</u> <u>Range</u>	
NPA-NXX-X Holder Information Effective Date	NPA-NXX-X Holder Information Effective Date	<u>5</u>	business days	<u>5-360</u>	
Minimum length of time between the current date and the effective date when creating an NPA-NXX-X					

**Table C-6 Block Tunables** 

# **Appendix E – Bulk Data Download File Formats**

# **NPA/NXX-X Download File**

The NPA/NXX-X download block contains two records in the file, individual fields are pipe delimited, with a carriage return(cR) after each NPA-NXX-X record. The breaks in the lines and the parenthesized comments are solely for ease of reading and understanding. There are no selection criteria for these files: all data is included.

The "Value in Example" column in Table E-5 directly correlates to the values for the first NPA/NXX-X in the download file example, as seen in Figure E-5.

The file name for the NPA-NXX-X download file will be in the format:

NPANXXX.DD-MM-YYYYHH24MISS (The NPANXXX portion is the literal string "NPANXXX".)

The NPA-NXX-X file given in the example would be named:

NPANXXX.11-02-1998133022

EXPLA	EXPLANATION OF THE FIELDS IN THE NETWORK NPA/NXX-X DOWNLOAD FILE			
Field Numbe r	Field Name	<u>Value in Example</u>		
1	Service Provider Id	0001		
<u> 2</u>	NPA-NXX-X Id	2853		
<u> 3</u>	NPA-NXX-X Value	<u>303-123-6</u>		
4	Creation TimeStamp	<u>19980101155555</u>		
<u>5</u>	Effective TimeStamp	19980105000000		
<u>6</u>	Download Reason	<u>0</u>		

Table E-5 Explanation of the Fields in the Network NPA/NXX-X Download File

0001 2853 303-123-6 199860101155555 199860105000000 0(CR)	(NPA-NXX-X 1)
0001 2864 303-124-4 199860101155556 199860105000000 0(CR)	(NPA-NXX-X 2)

Figure E-5 Network NPA/NXX-X Download File Example

# **Block Download File**

The following table describes each field of the sample Block download file. This download file example contains data for three Blocks, with three lines for each Block. Each Block is one record in the file, pipe delimited, with a carriage return(CR) between each Block. The breaks in the lines and the parenthesized comments are solely for ease of reading and understanding.

<u>Table E-6 describes the entries for Block 1: The "Value in Example" column directly correlates to the values for Block 1 in the download file example, as seen in Figure E-6.</u>

Blocks in the download file are selected by a combination of NPA-NXX-X begin and end range, as well as TIME begin and end range. The file name for the Block download file will be in the format:

#### NPANXXX-NPANXXX.DD-MM-YYYYHH24MISS- DD-MM-YYYYHH24MISS

The NPANXXX-NPANXXX values map to the NPA-NXX-X selection criteria and the time values map to the time selection criteria.

The Block file given in the example would be named:

3031235-3031252.07-11-1996091222-09-17-1996153344

The files available for LSMS compares will be defined as one or more NPA-NXX-Xs per file.

0001 3031235 1234567890 0001 19960916152337
123456789 123 123456789 123 123456789 123 123456789 123
123456789012 12 0001  0 0(CR) (end of Block 1)
0002 3031241 1234567891 0001 19960825011010
123456789 123 123456789 123 123456789 123 123456789 123
123456789013 13 0001 0 0(CR) (end of Block 2)
0003 3031251 1234567892 19960713104923
123456789 123 123456789 123 123456789 123 123456789 123
123456789014 13 0001 0 0(CR) (end of Block 3)

Figure E-6 Block Download File Example

	EXPLANATION OF THE FIELDS IN THE BLOCK DOWNLOAD FILE			
Field Numbe r	Field Name	Value in Example		
1	Block Id	000000001		
2	NPA-NXX-X	3031231		
<u>3</u>	LRN	1234567890		
4	New Current Service Provider Id	0001		
<u>5</u>	Activation Timestamp	19960916152337 (yyyymmddhhmmss)		

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<u>6</u>	CLASS DPC	123456789
<u> 7</u>	<u>CLASS SSN</u>	<u>123</u>
<u> 8</u>	LIDB DPC	123456789
9	<u>LIDB SSN</u>	<u>123</u>
10	ISVM DPC	123456789
11	ISVM SSN	<u>123</u>
12	<u>CNAM DPC</u>	123456789
<u> 13</u>	<u>CNAM SSN</u>	<u>123</u>
14	Download Reason	<u>0</u>

Table E-6 Explanation of the Fields in The Block Download File

# **Appendix F – Block and SV Behavior Matrix**

9/18/98

NPAC SMS Processing in a Number Pooling

<u>Environment</u>

For SOA-Initiated and NPAC-Initiated Requests of

Blocks
And
Subscription Versions

Including
LSMS Broadcasts (EDR and non-EDR)

### **Definitions:**

- N/A = Not Applicable (cannot get into this situation)
- BAU = Business As Usual (i.e., same as it works today)

# Scenario: Block Behavior, Pre-Effective Date for the Block in the Block Holder Table

The table below shows the SOA/NPAC message sent, and the behavior of the NPAC based on the sent message, for Block behavior.

SOA/NPAC sends to NPAC	NPAC internal processing	NPAC sends to non-EDR LSMS	NPAC sends to EDR LSMS
Create/Activate Block	Reject message, send error back to SOA/NPAC (not allowed to perform this activity prior to block effective date)	<u>N/A</u>	N/A
Modify Pending Block	N/A (no such message exists)	N/A	N/A
Cancel Block	N/A (no such message exists)	N/A	<u>N/A</u>
Activate Block	N/A (no such message exists)	N/A	N/A
Modify Active Block	Reject message, send error back to SOA/NPAC (because no object found)	<u>N/A</u>	N/A
Disconnect Block	N/A (no such message exists)	N/A	N/A

# Scenario: Sub-Block Behavior, On or After Effective Date for the Block in the Block Holder Table

The table below shows the SOA/NPAC message sent, and the behavior of the NPAC based on the sent message, for Sub-Block behavior.

SOA/NPAC	NPAC internal processing	NPAC sends to	NPAC sends to
sends to NPAC		non-EDR LSMS	EDR LSMS
Create/Activate Block	New NPAC functionality.  Perform appropriate validation on block.  If error is encountered, Provide error message (need to have M&P to resolve issue). This includes the pending-like, no-active SVs, plus all the normal SV-like error conditions (LRN, range, etc.). Send error to SOA when SOA Origination = TRUE. Exit the process.  Else, Create block and SV data on the NPAC (sending status). Send block update (sending status) to SOA when SOA Origination = TRUE. For SV data, loop through 1000 TNs. If contaminated*, skip. Else, Create an SV with type POOL. Endif, End loop. Send appropriate data to LSMSs. If successful to LSMSs, Update block and SV data (active status). Else, Update block and SV data (failed or partially failed, with a failed SP List). Endif. Send block update to SOA when SOA Origination = TRUE, Suppress SV data updates to SOA.  Endif. * = Contaminated numbers include, active, partial failure, disconnect pending, old with a Failed SP List, sending. In the case where a broadcast fails to an SP, the block assumes an "all or nothing" perspective. Therefore, a broadcast failure to an SP for either the block object, or one or more SVs, is considered a failure to the SP, and is returned if the originating SP sent the request (SOA Origination = TRUE). If one or more individual SVs fail, the originating SOA will not know the specific TNs that failed to the non-EDR SP, but will know the discrepant SP. In order to identify the specific TNs that failed to the non-EDR SP, but will know the discrepant SP. In order to identify the specific TNs that failed to the non-EDR SP, but will know the discrepant SP. In order to identify the specific TNs that failed to the non-EDR SP, but will know the discrepant SP. In order to identify the specific TNs that failed to the non-EDR SP, but will know the discrepant SP. In order to identify the specific TNs that failed to the non-EDR SP, but will know the discrepant SP. In order to identify the specific TNs that failed to the non-EDR SP, the initiating SOA can either send up TN r	Individual SVs (TN Range M-ACTION) with type POOL, for each newly created TN (non-contaminated) in the Block.  (the newly created ones are defined in the previous box)	A single block object for the 1K range of TNs in the Block.
Modify Pending Block	N/A (no such message exists)	N/A	N/A
Cancel Block	N/A (no such message exists)	N/A	<u>N/A</u>
Activate Block	N/A (no such message exists)	N/A	<u>N/A</u>
Modify Active Block	New NPAC functionality.	Individual SVs (TN	A single block object

	Perform appropriate validation on block (request must be for current block that exists on NPAC).  If error is encountered, Provide error message (need to have M&P to resolve issue). This includes the existence of the block on the NPAC, validation that it belongs to the requesting SPID, etc. Send error to SOA when SOA Origination = TRUE. Exit the process.  Else, Update block and SV data on the NPAC (sending status). Send block update (sending status) to SOA when SOA Origination = TRUE. For SV data, loop through 1000 TNs. If SV contains type POOL, update SV with new routing data. Else, skip, Endif, End loop. Send appropriate data to LSMSs. If successful to LSMSs, Update block and SV data (active status). Else, Update block and SV data (active, with a failed SP List). Endif, Send block update to SOA when SOA Origination = TRUE. Suppress SV data updates to SOA.  Endif.  In the case where a broadcast fails to an SP, the block assumes an "all or nothing" perspective. Therefore, a broadcast failure to an SP for either the block object, or one or more SVs, is considered a failure to the SP, and is returned if the originating SP sent the request (SOA)	Range M-ACTION), for each TN in the 1K range that currently contain LNPType = POOL, in the Block.	for the 1K range of TNs in the Block.
	In the case where a broadcast fails to an SP, the block assumes an "all or nothing" perspective. Therefore, a broadcast failure to an SP for either the block object, or one or more SVs, is considered a failure to		
Disconnect Block	N/A (no such message exists)	N/A	<u>N/A</u>

# Scenario: Subscription Version Behavior, Pre-Effective Date for the Block in the Block Holder Table

The table below shows the SOA/NPAC message sent, and the behavior of the NPAC based on the sent message, for a TN within the 1K Pooled Block.

SOA/NPAC sends to NPAC	NPAC internal processing	NPAC sends to non-EDR LSMS	NPAC sends to EDR LSMS
Create SV, LSPP	Previous SV exists BAU.	BAU	BAU
	Previous SV does not exist reject request.	<u>N/A</u>	<u>N/A</u>
Create SV, LISP	If initiated by SOA,  Previous SV exists BAU.  Previous SV does not exist reject request.		
	Else (it was initiated by NPAC), Previous SV exists BAU. Previous SV does not exist BAU. This functionality will remain to allow a code holder to intra-port working numbers that were missed during the initial clean up process, prior to block donation. It was determined by the sub-committee to only allow this to be performed by NPAC personnel, once the block has been created in the block holder table, regardless of effective date.		
Create SV, PTO	Endif.  Reject message, send error back to SOA/NPAC.	N/A	N/A
Create SV, POOL	Reject message, send error back to SOA/NPAC.	N/A	N/A
Modify Pending SV, LSPP	BAU	N/A	N/A
Modify Pending SV, LISP	BAU	N/A	N/A
Modify Pending SV, PTO	BAU (NPAC will return error message "object not found")	<u>N/A</u>	N/A
Modify Pending SV, POOL	BAU (NPAC will return error message "object not found")	N/A	N/A
Activate SV, LSPP	BAU	BAU	BAU
Activate SV, LISP	BAU	BAU	BAU
Activate SV, PTO	BAU (NPAC will return error message "object not found")	<u>N/A</u>	N/A
Activate SV, POOL	BAU (NPAC will return error message "object not found")	N/A	N/A
Modify Active SV, LSPP	BAU	BAU	BAU
Modify Active SV, LISP	BAU	BAU	BAU
Modify Active SV, POOL	BAU (NPAC will return error message "object not found")	N/A	N/A
Disconnect SV, LSPP	BAU	BAU	BAU
Disconnect SV, LISP	BAU	BAU	BAU
Disconnect SV, POOL	BAU (NPAC will return error message "object not found")	<u>N/A</u>	N/A

# Scenario: Subscription Version Behavior, Post-Effective Date, but Pre-Activation Date for the Block in the Block Holder Table

The table below shows the SOA/NPAC message sent, and the behavior of the NPAC based on the sent message, for a TN within the 1K Pooled Block.

SOA sends to NPAC	NPAC internal processing	NPAC sends to non-EDR LSMS	NPAC sends to EDR LSMS
Create SV, LSPP	Previous SV exists BAU. Previous SV does not exist reject request.	BAU	BAU
Create SV, LISP	Previous SV exists BAU.	N/A BAU	N/A BAU
	Previous SV does not exist reject request.	<u>N/A</u>	<u>N/A</u>
Create SV, PTO	Previous SV exists reject request. Previous SV does not exist BAU (fail the request).	N/A BAU	N/A BAU
Create SV, POOL	Reject message, send error back to SOA	<u>N/A</u>	<u>N/A</u>
Modify Pending SV, LSPP	BAU	BAU	BAU
Modify Pending SV, LISP	BAU	BAU	BAU
Modify Pending SV, PTO	BAU	BAU	BAU
Modify Pending SV, POOL	BAU (NPAC will return error message "object not found")	BAU	BAU
Activate SV, LSPP	BAU	BAU	BAU
Activate SV, LISP	BAU	BAU	BAU
Activate SV, PTO	BAU (NPAC will return error message "object not found" because the CREATE was prohibited)	N/A	<u>N/A</u>
Activate SV, POOL	BAU (NPAC will return error message "object not found")	N/A	<u>N/A</u>
Modify Active SV, LSPP	BAU	BAU	BAU
Modify Active SV, LISP	BAU	BAU	BAU
Modify Active SV, POOL	BAU (NPAC will return error message "object not found")	N/A	N/A
Disconnect SV, LSPP	Disconnect notification goes to the Block Holder SOA, not the Code Holder SOA.	BAU	BAU
Disconnect SV, LISP	Disconnect notification goes to the Block Holder SOA, not the Code Holder SOA.	BAU	BAU
Disconnect SV, POOL	BAU (NPAC will return error message "object not found")	N/A	<u>N/A</u>

# Scenario: Subscription Version Behavior, Post-Activation Date for the Block in the Block Holder Table

The table below shows the SOA message sent, and the behavior of the NPAC based on the sent message, for a TN within the 1K Pooled Block.

SOA sends to	NPAC internal processing	NPAC sends to	NPAC sends to	
NPAC		non-EDR LSMS EDR LSMS		
Create SV, LSPP	Previous SV exists BAU.	BAU	BAU	
	Previous SV does not exist N/A.	<u>N/A</u>	<u>N/A</u>	
Create SV, LISP	Previous SV exists BAU.	BAU	BAU	
	Previous SV does not exist N/A.	N/A	<u>N/A</u>	
Create SV, PTO	Previous SV exists validates that the requesting SP is the Block Holder	N/A	<u>N/A</u>	
	Previous SV does not exist BAU (fail the request).	BAU	BAU	
Create SV, POOL	Reject message, send error back to SOA	<u>N/A</u>	<u>N/A</u>	
Modify Pending SV, LSPP	BAU	BAU BAU		
Modify Pending SV, LISP	BAU	BAU	BAU	
Modify Pending SV, PTO	BAU	BAU	BAU	
Modify Pending SV, POOL	BAU (NPAC will return error message "object not found")	N/A	N/A	
Activate SV, LSPP	BAU	BAU	BAU	
Activate SV, LISP	BAU	BAU	BAU	
Activate SV, PTO	PTO (must be Block Holder) processing will send an M-CREATE instead of today's M-DELETE to the non-EDR LSMSs, and send an M-DELETE to the EDR LSMSs (to remove the SV, and revert back to the sub-block).	Send an M-CREATE for the SV, with type POOL, using the routing data for sub- block holder.	Send an M-DELETE for the SV.	
Activate SV, POOL	BAU (NPAC will return error message "object not found")	N/A	N/A	
Modify Active SV, LSPP	BAU	BAU BAU		
Modify Active SV, LISP	BAU	BAU	BAU	
Modify Active SV, POOL	Reject message, send error back to SOA	N/A	N/A	
Disconnect SV, LSPP	Disconnect processing will send an M-CREATE instead of today's M-DELETE to the non-EDR LSMSs, and send an M-DELETE to the EDR LSMSs (to remove the SV, and revert back to the sub-block).  A notification is sent to the Block Holder SOA.	Send an M-CREATE for the SV, with type POOL, using the routing data for sub- block holder.	Send an M-DELETE for the SV.	
Disconnect SV, LISP	Disconnect processing will send an M-CREATE instead of today's M-DELETE to the non-EDR LSMSs, and send an M-DELETE to the EDR LSMSs (to remove the SV, and revert back to the sub-block).	Send an M-CREATE for the SV, with type POOL, and routing for sub-block holder.  Send an M-DELETE for the SV.		

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	A notification is sent to the Block Holder SOA.		
Disconnect SV, POOL	Reject message, send error back to SOA	<u>N/A</u>	<u>N/A</u>

Scenario:	Block/Su	bscrip	tion V	ersion	Migrat	tion F	Plan

The table below lists the open issues for an SP migrating from the current environment (individual SVs) to the EDR environment (Blocks representing a Pool of 1000 TNs).

Duplicate TNs. When an SP migrates from a non-EDR to an EDR environment, the existing POOL'ed TNs need to be			
"cleaned up" (migrated from individual SVs to a single Block).			

**End of Document**