North American Numbering Council (NANC)

Functional Requirements Specification for National Number Pooling

Number Portability Administration Center (NPAC)

Service Management System (SMS)

**Working Version 0.1
for NPAC SMS Release 3.0.0**

December 24, 1998

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Document Change History

12/24/98

1. Original working version, based on the requirements defined by the National Number Pooling Sub-Committee (dated 12/21/98).

2. Updated document to reflect functional requirements in Release 2.0 of the NPAC that impact the requirements defined for National Number Pooling. These are identified by "change bars" with yellow highlighting. The specific R2 change order number is also included.

Release 2.0 Change Orders

0**Change Order** ILL 75 –Validate Due Date is > than the NPA-NXX effect date upon Pending Version Creation
(No impact to Release 3)

1**Change Order** ILL 79 – Notification Recovery
(No impact to Release 3)

2**Change Order** ILL 131 - Creation of old SV for Every Change (Documentation Change Order Only. Functionality was implemented in the 1.1 Release.)
(No impact to Release 3)

3**Change Order** NANC 48 – Multiple Service Provider Ids per SOA Association
(No impact to Release 3)

4**Change Order** NANC 68 – Mass Update Requirements Modification
(No impact to Release 3)

5**Change Order** NANC 83   - NPAC Time Synchronization
(No impact to Release 3)

6**Change Order** NANC 139-Network Data Download to SOA
(Impact to Release 3 in the area of NPA-NXX-X download to SOA and/or Local SMS)

7**Change Order** NANC 201 – Unique Set of Timers
(No impact to Release 3)

8**Change Order** NANC 202 – Unique Set of Business Days/Hours
(No impact to Release 3)

9**Change Order** NANC 203 – Wireless Addition of WSMS DPC and SSN Information
(Impact to Release 3 in the Number Pooling Block Holder Information Data Model and the field edits/population of these additional fields)

10**Change Order** NANC 214 – Conflict Functionality with Due Date = Today
(No impact to Release 3)

11**Change Order** NANC 220 – Wireless Due Date Clarifications
(No impact to Release 3)

Number Pooling Requirements 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:

- Code Holder – The code holder is the LERG assignee of the NPA-NXX.

- 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.

- 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.

- 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 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 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. According to the NPAC definition, this is considered Network data.

- 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.

- De-Pool – Return of a 1K pooled block to the Number Administrator. Also referred to as "un-allocation of the block", or "reclamation" (INC definition).

- Vacant Number – A non-working number.

- 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.

- Snapback – Notification for TN reassignment.

- Contaminated Number – An unavailable number (e.g., working), within a 1K Block, at the time the 1K Block is donated to the Pooling Administrator.

- Pending-like SVs – SVs that contain a status of pending, conflict, cancel-pending, or failed.

- Active-like SVs – SVs that contain a status of active, sending, partial failure, old with a Failed SP List, or disconnect pending.

- 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.

- EDR (Efficient Data Representation) – The ability to represent 1000 TNs as a range.

- EDR within the NPAC – A storage mechanism where a 1K range of TNs is represented, stored, and communicated, as a Range entity.

- Unique Alarmable Error Message (Code) – An individual error message in the NPAC SMS that is only used by the NPAC for the individual Number Pooling requirement where the error message is listed. Alarming of the error message is configurable (i.e., it can be either turned ON or turned OFF).

- Cascading Delete – A delete of an NPA-NXX-X where the NPAC sends deletes of Pooled SV data to non-EDR LSMSs, and sends deletes of Block data to EDR LSMSs. Once all LSMSs have successfully deleted the Pooled data, the status of SVs and the Block is Old, and both Failed SP Lists are all empty, the NPA-NXX-X is deleted.

Approach

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

0 Pre-Port 1K Blocks to a single switch (i.e., all Pooled TNs contain same LRN).

1 EDR (Efficient Data Representation) is captured through the use of "1K Blocks" in the NPAC, and over the SOA-to-NPAC and NPAC-to-LSMS interfaces.

2 The NPA-NXX-X Holder Information in the NPAC is a representation of the 1K Block managed by the Pooling Administrator, and represented in the LERG.

3 The NPAC Customer SOA NPA-NXX-X Indicator 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) to their SOA via the SOA-to-NPAC SMS Interface. (NANC 139)

4 The NPAC Customer LSMS NPA-NXX-X Indicator 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) to their LSMS via the NPAC SMS-to-Local SMS Interface.

5 The NPAC Customer Data Model (logical) and Service Provider Profile (physical) refer to the same information.

6 The NPA-NXX-X Holder Information is broadcast over the SOA-to-NPAC SMS Interface to all Service Providers in that NPAC region (exclusive of those that have filters for the NPA-NXX, and those who have a SOA NPA-NXX-X indicator in the Customer Data Model set to FALSE), for the block allocation of NPA-NXX-X data to the NPA-NXX-X Holder. (NANC 139)

7 The NPA-NXX-X Holder Information is broadcast over the NPAC SMS-to-Local SMS Interface to all Service Providers in that NPAC region (exclusive of those that have filters for the NPA-NXX, and those who have an LSMS NPA-NXX-X indicator in the Customer Data Model set to FALSE), for the block allocation of NPA-NXX-X data to the NPA-NXX-X Holder.

8 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 1K Block from the Code Holder (NPA-NXX owning SP) to the Block Holder (NPA-NXX-X owning SP).

9 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 are found, the NPAC will reject the creation of this NPA-NXX-X. An error message will be generated for the NPAC personnel. Additionally, the NPAC Personnel will be able to view the discrepant TNs (on the screen in the *Pending-Like No-Active Subscription Version and Pending-Like Port-to-Original Subscription Version REPORT* format), then be able to select multiple output destinations for the report, or exit the NPA-NXX-X Creation and continue with other GUI activities.

10 The Pending-Like No-Active Subscription Version and Pending-Like Port-to-Original Subscription Version report will be available to NPAC personnel. The report will contain TN, Old SPID, New SPID, Due Date, and Status.

11 The recipients of the Pending-Like No-Active Subscription Version 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 attempt the NPA-NXX-X creation again.

12 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 NPAC will allow NPAC personnel, via the OpGUI, 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.

13 Once the NPA-NXX-X's Effective Date has been reached, but prior to the Block's activation, snapback messages will go to the Block Holder, and default routing will be the responsibility of the Code Holder. The exception to this is during the de-pool process for the NPA-NXX-X (see #31 below).

14 Once the Block has been created (the record exists in the NPAC SMS and the Creation Timestamp in the Object has been set) in the NPAC, either from a scheduled event on the NPAC, or from a Service Provider SOA sending up the Block, 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 Customer 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 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 Block Create messages over the SOA-to-NPAC SMS Interface will set the SOA Origination to TRUE.

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. A unique alarmable error message (new error message and error number for Block) will be generated and alarm NPAC personnel.

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. A unique alarmable 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 and Pending-Like Port-to-Original 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, Old SPID, New SPID, Due Date, and Status.

22 The recipients of the Pending-Like No-Active Subscription Version 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) by the Code Holder and the NPAC Personnel. Once they are cleaned up, NPAC personnel will attempt the Block creation again (if it is NPAC initiated), or contact the Block Holder SP and inform them that they could re-submit the Block request.

23 If during the broadcast of the Pooled Data (Blocks and SVs), one or more Service Providers cause the Block to go into a Partial Failure or Failed status, the NPAC will generate a unique alarmable message, and NPAC Personnel will be notified of the error, only when the SOA Origination is FALSE (if value is TRUE, existing M&Ps for partial failure or failed conditions will be used). M&P will be established to have NPAC Personnel resolve the broadcast failures with the Service Providers on the Block's Failed SP List.

24 The NPAC will execute a background process, once a day, to check for Block completeness. During this background process, the NPAC will check for active blocks that haven't been verified to contain 1000 SVs (combination of POOL, LISP, LSPP) for that Block.. This is designed to capture any "disconnect requests that were sending on it's way to old", which may result in an orphan TN that does NOT have an Active SV. This background process will be run for the first time within 24 hours of Block Creation (with an Active status), and once every 24 hours thereafter for incomplete Blocks. For missing TNs that are identified during this process, the NPAC will create, activate and broadcast the missing SVs to non-EDR Local SMSs (i.e., self-fixing create, activate and broadcast of missing SVs). Once all 1000 TNs have been accounted for in the NPAC, this Block will no longer be checked by the NPAC.

25 The NPAC will manage the synchronization of, and maintain the integrity of, the data between a Block and the subordinate Pooled Subscription Versions within the Block. This means that, at all times, the LRN and GTT routing data for the Block and all SVs with LNP Type of POOL within the 1K Block, will contain the same values. The status for the Block and status for each SV with LNP Type of POOL within the 1K Block, may not always contain the same value. The matrix to coordinate the status is found in the detailed requirements. The failed SP List for the Block and Failed SP List for each SV with LNP Type of POOL within the 1K Block, may not always contain the same Service Providers. The matrix to coordinate the various Failed SP Lists is found in the detailed requirements.

26 At the time of NPA-NXX-X deletion (i.e., de-pool), the NPAC will check for "pending-like, with Active POOL" SVs. If any are found, the NPAC will reject the Deletion of this NPA-NXX-X. An error message will be generated for the NPAC personnel. Additionally, the NPAC Personnel will be able to view the discrepant TNs (on the screen in the *Pending-Like With Active POOL Subscription Version REPORT* format), then be able to select multiple output destinations for the report, or exit the NPA-NXX-X Deletion and continue with other GUI activities.

27 The Pending-Like With Active POOL Subscription Version report will be available to NPAC personnel. The report will contain TN, Old SPID, New SPID, Due Date, and Status.

28 The recipients of the Pending-Like With Active POOL Subscription Version report (e.g., Pooling Administrator, Block 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 deletion again.

29 The NPAC performs a "cascading delete" when processing an NPA-NXX-X Deletion. This includes sending deletes of Pooled SV data to non-EDR LSMSs, and sending deletes of Block data to EDR LSMSs. Once all LSMSs have successfully deleted the Pooled data (the status of all SVs and the Block is Old, and both Failed SP Lists are empty), the NPA-NXX-X

is deleted. Similar to the NPA-NXX-X Creation, the NPA-NXX-X Deletion is broadcast to the appropriate Service Providers, based on the values in their NPA-NXX-X Indicators.

30 During the de-pooling process, the vacant number treatment responsibility and snapback for TN re-assignment notifications have unique behavior, once the Block has migrated to a status of Old. As defined in #14 above, snapback messages will go to the Block Holder, and default routing will be the responsibility of the Code Holder, once the NPA-NXX-X's Effective Date has been reached. However, in this de-pooling situation, both snapback messages and default routing responsibility will be the Code Holder. So, even though the NPA-NXX-X still exists, it has the same behavior as the "pre-effective date" NPA-NXX-X situation.

31 Once the Block has been deleted in the NPAC, then NPAC processing considers the Block to be "deleted" for the Block Holder, and all snapback messages and default routing will go to the Code Holder. Additionally, the Block is now available to be allocated to another Service Provider.

32 For NPA Split processing, at the start of the Split, the NPAC SMS will automatically create a New NPA-NXX-X to correspond to the Old NPA-NXX-X, and will reject the NPA Split request if the New NPA-NXX-X already exists at the time of the NPA Split entry. The NPAC will remove the New NPA-NXX-X and convert the Block and SVs back to the Old NPA-NXX, if the New NPA-NXX is removed from the NPA Split, prior to the end of PDP. When adding an NPA-NXX-X during an NPA Split, the NPAC will automatically add a corresponding New/Old NPA-NXX-X for an NPA-NXX involved in a Split. During PDP, the NPAC will treat Block data similar to the treatment of SV data (i.e., either the Old or New NPA-NXX can be sent to the NPAC, but the NPAC will broadcast the New NPA-NXX).

33 See Appendix G for Block and SV behavior in a National Number Pooling Environment.

34 The NPAC Customer LSMS EDR Indicator 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).

35 The two new objects that will be broadcast over the interface include the NPA-NXX-X (1K Block) block allocation, and Block for EDR compatible Local SMSs that represent the 1000 TNs of POOL'ed numbers as the 1K Block.

36 The baseline for any requirements that begin with "RR…" is IIS/FRS 1.10.

37 The basis for the National Number Pooling requirements was the Illinois Number Pooling NPAC Release 1.4. This document, *National Number Pooling requirements*, represents the requirements for National Number Pooling functionality.

38

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	during Block de-pool
Contaminated disconnect	Code holder	Code holder	Block holder	Code holder
Non-contaminated	Code holder	Code holder	Block holder	Code holder
Snapback for TN re-assignment				
Contaminated disconnect	Code holder*	Block holder	Block holder	Code holder*
Non-contaminated	N/A	N/A	Block holder	N/A

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

NOTE: for the last column (during Block de-pool), the behavior is the same as the pre-effective date column. A block may still exist in the NPAC SMS with a status of Old. At the time of de-pooling, the Block goes back to the Pooling Administrator and is awaiting re-assignment to the next Block Holder. The NPA-NXX-X may also exist in the NPAC SMS until a Block is successfully deleted from all Local SMSs.

Requirements

Section 3 Modifications

FRS Section 3.1.2

NPAC CUSTOMER DATA MODEL			
Attribute Name	**Type (Size)**	**Required**	**Description**
NPAC Customer ID	C (4)	√	An alphanumeric code which uniquely identifies an NPAC Customer.
NPAC Customer Name	C (40)	√	A unique NPAC Customer Name.
NPAC Customer Allowable Functions	M	√	Each bit in the mask represents a boolean indicator for the following functional options: • SOA Management • SOA Network Data Management • SOA Data Download (NANC 139) • LSMS Network Data Management • LSMS Data Download • LSMS Queries/Audits
• NPAC Customer SOA NPA-NXX-X Indicator (NANC 139)	B	√	A boolean that indicates whether the NPAC Customer accepts NPA-NXX-X downloads from the NPAC SMS to their SOA. The default value is False.
NPAC Customer LSMS NPA-NXX-X Indicator	B	√	A boolean that indicates whether the NPAC Customer accepts NPA-NXX-X downloads from the NPAC SMS to their LSMS. The default value is False.
NPAC Customer LSMS EDR Indicator	B	√	A boolean that indicates whether the NPAC Customer utilizes Efficient Data Representation (EDR) on the LSMS.

NPAC CUSTOMER DATA MODEL			
Attribute Name	**Type (Size)**	**Required**	**Description**
			The default value is False.

NC-1   NPAC Customer SOA NPA-NXX-X Indicator

NPAC SMS shall provide a mechanism to indicate whether a Service Provider supports receiving the NPA-NXX-X data, by downloading this data to their SOA via the SOA to NPAC SMS Interface, using the Number Pooling NPA-NXX-X Object. (NANC 139)

NC-3   NPAC Customer SOA NPA-NXX-X Indicator – Default

NPAC SMS shall default the SOA NPA-NXX-X Indicator to **FALSE**. (NANC 139)

NC-5   NPAC Customer SOA NPA-NXX-X Indicator – Modification

NPAC SMS shall allow the NPAC SMS Administrator to modify the SOA NPA-NXX-X Indicator on the NPAC Customer record. (NANC 139)

NC-10   NPAC Customer LSMS NPA-NXX-X Indicator

NPAC SMS shall provide a mechanism to indicate whether a Service Provider supports receiving the NPA-NXX-X data, by downloading this data to their Local SMS via the NPAC SMS to Local SMS Interface, using the Number Pooling NPA-NXX-X Object.

NC-20   NPAC Customer LSMS NPA-NXX-X Indicator – Default

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

NC-30   NPAC Customer LSMS NPA-NXX-X Indicator – Modification

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

NC-50   NPAC Customer LSMS EDR Indicator

NPAC SMS shall provide a mechanism to indicate whether a Service Provider supports Efficient Data Representation (EDR), by downloading this data to their Local SMS via the NPAC SMS to Local SMS Interface, using the Number Pooling Block Object.

NC-60   NPAC Customer LSMS EDR Indicator – Default

NPAC SMS shall default the EDR Indicator to **FALSE**.

NC-70   NPAC Customer LSMS 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**	**Description**
Version ID	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-XXXX's reside.
Old Service Provider ID	C (4)	√	Old Service Provider ID.
New Service Provider ID	C (4)	√	New Service Provider ID.
TN	TN	√	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)
Status	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	N (9)	√	DPC for 10-digit GTT for CLASS features.

SUBSCRIPTION VERSION DATA MODEL			
Attribute Name	**Type (Size)**	**Required**	**Description**
CLASS SSN	N (3)	√	CLASS SSN for the Subscription Version.
LIDB DPC	N (9)	√	DPC for 10-digit GTT for LIDB features.
LIDB SSN	N (3)	√	LIDB SSN for the Subscription Version.
CNAM DPC	N (9)	√	DPC for 10-digit GTT for CNAM features.
CNAM SSN	N (3)	√	CNAM SSN for the Subscription Version.
ISVM DPC	N (9)	√	DPC for 10-digit GTT for ISVM features.
ISVM SSN	N (3)	√	ISVM SSN for the Subscription Version.
WSMSC DPC (NANC 203)	N (9)	√	DPC for 10-digit GTT for WSMSC features. This field is only required if the service provider supports WSMSC data.
WSMSC SSN	N (3)	√	WSMSC SSN for the Subscription Version. This field is only required if the service provider supports WSMSC data.
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	B		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.

SUBSCRIPTION VERSION DATA MODEL			
Attribute Name	**Type (Size)**	**Required**	**Description**
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	E		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

SUBSCRIPTION VERSION DATA MODEL			
Attribute Name	**Type (Size)**	**Required**	**Description**
			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	B	√	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	C (12)		For future use.
End User Location Value Type	C (2)		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	T		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	C (4)		For future use. The default value is the Facilities Based Service Provider ID.

SUBSCRIPTION VERSION DATA MODEL			
Attribute Name	**Type (Size)**	**Required**	**Description**
Status Change Cause Code	N (2)		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 1 - NPAC SMS Automatic Cancellation 50 - LSR Not Received 51 - FOC Not Issued 52 - Due Date Mismatch 53 - Vacant Number Port 54 - General Conflict

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**.

RR4-3.1   Removal of NPA-NXX – Subscription Version Check

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, exists for the NPA-NXX.

NOTE: RR4-3 in FRS Release 1.10 becomes RR4-3.1 in FRS National Number Pooling. The functionality remains the same.

RR4-3.2   Removal of NPA-NXX – NPA-NXX-X Check

NPAC SMS shall allow the removal of an NPA-NXX by NPAC personnel only if Number Pooling NPA-NXX-X Information**,** does not exist 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**.

RR4-4.2.1   Removal of LRN – Subscription Version Check

NPAC SMS shall allow the removal of an LRN by NPAC personnel only if no Subscription Versions, except for Old or Canceled Subscription Versions, exists and uses the LRN.

NOTE: RR4-4.2 in FRS Release 1.10 becomes RR4-4.2.1 in FRS National Number Pooling. The functionality remains the same.

RR4-4.2.2   Removal of LRN – Block Check

NPAC SMS shall allow the removal of an LRN by NPAC personnel only if Number Pooling Block Information, except for Old with NO Failed SP List, do not exist and do not use the LRN.

Section 3 New Requirements

NUMBER POOLING NPA-NXX-X HOLDER INFORMATION DATA MODEL			
Attribute Name	**Type (Size)**	**Required**	**Description**
NPA-NXX-X ID	N	√	A unique sequential number assigned upon creation of the NPA-NXX-X.
NPA-NXX-X Holder SPID	C(4)	√	The Service Provider Id of the NPA-NXX-X holder.
NPA-NXX-X	N(7)	√	NPA-NXX-X of the 1K Block.
Effective Date	T	√	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	T		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	E		The reason the NPA-NXX-X is being downloaded to the SOA or LSMS. (NANC 139) Valid values are: 0 – new1 1 – delete1 2 – modified 3 – audit-discrepancy

NPA-NXX-X Holder, General

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

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

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-X 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 SOA or Local SMS**

NPAC SMS shall be able to communicate creation, modification, or deletion of NPA-NXX-X data for a Service Provider to SOAs or Local SMSs. (NANC 139)

The contents of the network download are:

?1 Network data:
    39NPAC Customer ID
    40NPAC Customer Name
?2 NPA-NXX-X Download Data:
    41NPA-NXX-X ID
    42NPA-NXX-X Value
    43Effective Date TimeStamp
    44Last Modified Date TimeStamp
    45Download Reason

N-62.1   **Number Pool NPA-NXX-X Holder Information – NPAC SMS download via SOA and/or Local SMS Interface of NPA-NXX-X allocation to the Service Providers**

NPAC SMS shall inform all Service Providers about the allocation of the NPA-NXX-Xs for pooling to the Block Holder via the SOA to NPAC SMS Interface and/or NPAC SMS to Local SMS interface. The NPA-NXX-X data fields sent via the SOA to NPAC SMS interface and/or NPAC SMS to Local SMS interface are: (NANC 139)

?3   NPAC Customer ID
?4   NPAC Customer Name
?5   NPA-NXX-X ID
?6   NPA-NXX-X Value
?7   Effective Date TimeStamp
?8   Last Modified Date TimeStamp
?9   Download Reason

N-62.2   Number Pool NPA-NXX-X Holder Information – NPAC SMS ~~downlaod~~download via Web Bulletin Board of NPA-NXX-X allocation to the Service Providers

?10 NPAC SMS shall inform all Service Providers about the allocation of the NPA-NXX-Xs for pooling to the Block Holder via the Web bulletin board. The NPA-NXX-X data fields sent to the WEB bulletin board are:

?11 NPAC Customer ID
?12 NPAC Customer Name
?13 NPA-NXX-X Value
?14 Effective Date

N-63   Number Pool NPA-NXX-X Holder Information – Service Provider Local SMS 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 Local SMS NPA-NXX-X indicator is **TRUE**.

N-64   Number Pool NPA-NXX-X Holder Information – Service Provider Local SMS NPA-NXX-X Indicator Suppression of Download of ~~SVs~~NPA-NXX-X Object

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 Local SMS NPA-NXX-X indicator is **FALSE**.

N-65   Number Pool NPA-NXX-X Holder Information – Filters for NPA-NXX-X~~s~~ Download to the Local SMS

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

N-66   Number Pool NPA-NXX-X Holder Information – Service Provider SOA 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 SOA to NPAC SMS Interface if the Service Provider's SOA NPA-NXX-X indicator is **TRUE**. (NANC 139)

N-67   Number Pool NPA-NXX-X Holder Information – Service Provider SOA NPA-NXX-X Indicator Suppression of Download of NPA-NXX-X Object

NPAC SMS shall suppress the download of Number Pooling NPA-NXX-X Information, for additions, modifications, and deletions, via the SOA to NPAC SMS Interface if the Service Provider's SOA NPA-NXX-X indicator is **FALSE**. (NANC 139)

N-68   Number Pool NPA-NXX-X Holder Information – Filters for NPA-NXX-X Download to the SOA

NPAC SMS shall apply NPA-NXX Filters to NPA-NXX-X downloads to the SOA(s). (NANC 139)

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.

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

N-71.1   Number Pool NPA-NXX-X Holder Information –OpGUI 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-71.2   Number Pool NPA-NXX-X Holder Information –OpGUI Entry Mechanism for Immediate or Scheduled Block Creation

NPAC SMS shall provide a mechanism for NPAC Personnel to request NPAC Block Creation for either immediate execution, once the Effective Date has been reached, or at a future date/time, via the NPAC Administrative Interface.

N-71.3   Number Pool NPA-NXX-X Holder Information –OpGUI Entry Field for Scheduled Date/Time

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

N-72.1   Number Pool NPA-NXX-X Holder Information –Default for Scheduled Date/Time Entry Field

NPAC SMS shall default the value in the "Scheduled Date/Time for Block Activation" field in the NPAC Administrative Interface, to the Effective Date and 00:01 (HH:MM) Central Time.

N-72.2 **Number Pool NPA-NXX-X Holder Information –Scheduled Date/Time Entry Field Validation**

NPAC SMS shall validate that the "Scheduled Date/Time for Block Activation" field in the NPAC Administrative Interface, is a valid date and time, and is greater than or equal to the Effective Date.

N-73 **Number Pool NPA-NXX-X Holder Information –Use of Scheduled Date/Time and NPAC Origination Entry Fields**

NPAC SMS shall use the value in the "Scheduled Date/Time for Block Activation" field as the date and time, in Central Time, that the Block Creation scheduled event will occur, when the NPAC Origination has been selected by NPAC Personnel while creating NPA-NXX-X Holder information.

N-74 **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 by NPAC Personnel while creating NPA-NXX-X Holder information.

N-75.1 **Number Pool NPA-NXX-X Holder Information – Routing Data Field Level 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 the Subscription Version Data Model upon Block creation scheduling for a Number Pool:

   ?15 NPA-NXX-X Holder SPID
   ?16 NPA-NXX-X
   ?17 LRN
   ?18 Class DPC
   ?19 Class SSN
   ?20 LIDB DPC
   ?21 LIDB SSN
   ?22 CNAM DPC
   ?23 CNAM SSN
   ?24 ISVM DPC
   ?25 ISVM SSN
   ?26 WSMSC DPC (if supported by the Block Holder SOA) (NANC 203)
   ?27 WSMSC SSN (if supported by the Block Holder SOA)

N-75.2 **Number Pool NPA-NXX-X Holder Information – Routing Data LRN Validation**

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

N-76 **Number Pool NPA-NXX-X Holder Information – Modification of Scheduled Date/Time for Block Creation**

NPAC SMS shall allow NPAC Personnel to modify the scheduled date/time for an NPAC initiated Block Creation request, to a different date/time, that is on or after the NPA-NXX-X effective date.

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 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 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-130.1 **Addition of Number Pooling NPA-NXX-X Holder Information – Error Message for Pending-Like No-Active SVs and Pending-Like Port-To-Original SVs**

NPAC SMS shall provide an error dialog that displays the unique error message described in N-100 and N-110, and provides an option for the NPAC Personnel to either, exit the NPA-NXX-X Create request, or generate the Pending-Like No-Active Subscription Version(s) and Pending-Like Port-to-Original Subscription Version(s) Report, in the report format listed in R-70, R-80, R-81, and R-82, to the screen on the NPAC Administrative Interface.

N-130.2   **Addition of Number Pooling NPA-NXX-X Holder Information –Pending-Like No-Active SVs and Pending-Like Port-To-Original SVs Report Selection of Output Destinations**

NPAC SMS shall, after displaying the Pending-Like No-Active Subscription Version(s) and Pending-Like Port-to-Original Subscription Version(s) Report, to the screen, allow the NPAC Personnel to choose an output destination for the report.

N-130.3   **Addition of Number Pooling NPA-NXX-X Holder Information –Pending-Like No-Active SVs and Pending-Like Port-To-Original SVs Report Output Destinations for Multiple Destinations**

NPAC SMS shall, continue to display the Pending-Like No-Active Subscription Version(s) and Pending-Like Port-to-Original Subscription Version(s) Report, to the screen, and allow the NPAC Personnel to choose additional output destinations one at a time, for the report, until the NPAC Personnel requests the closure of the report window.

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.

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 – OpGUI Default**

NPAC SMS shall set 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.

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

NPAC SMS shall, upon successful validation, store the NPA-NXX-X in the NPAC SMS, and broadcast the NPA-NXX-X to the Service Providers.

NPA-NXX-X Holder, Modification

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

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

N-200   **Modification of Number Pool NPA-NXX-X Holder Information - Effective Date versus Current Date**

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

N-210   **Modification of Number Pool NPA-NXX-X Holder Information - Effective Date Update to Scheduled Block Create**

NPAC SMS shall, upon modifying the effective date for an NPA-NXX-X, and where the Block Creation was a scheduled event within the NPAC SMS, also modify the corresponding date for that Block Create scheduled event.

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 NPA-NXX-X Holder creation date plus the value of the NPA-NXX-X Holder Effective Date Window tunable parameter.

N-235 **Modification of Number Pooling NPA-NXX-X Holder Information –**
Successful Validation

NPAC SMS shall, upon successful validation, store the updates to the NPA-NXX-X in the NPAC SMS, and broadcast the updated NPA-NXX-X to the Service Providers.

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 NPA-NXX-X holder information for an NPA-NXX-X as stored in the NPAC SMS.

N-245 **Deletion of Number Pool NPA-NXX-X Holder Information – Single NPA-**
NXX-X at a time from OpGUI

NPAC SMS shall allow NPAC personnel to delete the NPA-NXX-X holder information for a single NPA-NXX-X at a time, via the NPAC Administrative Interface.

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 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 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-280.1 **Deletion of Number Pooling NPA-NXX-X Holder Information – Error Message for Pending-Like With Active POOL SVs and Pending-Like Port-To-Original SVs**

NPAC SMS shall provide an error dialog that displays the unique error message described in N-250 and N-260, and provides an option for the NPAC Personnel to either, exit the NPA-NXX-X Delete request, or generate the Pending-Like With Active POOL Subscription Version(s) and Pending-Like Port-to-Original Subscription Version(s) Report, in the report format listed in R-130, R-140, R-141, and R-142, to the screen on the NPAC Administrative Interface.

N-280.2 **Deletion of Number Pooling NPA-NXX-X Holder Information –Pending-Like With Active POOL SVs and Pending-Like Port-To-Original SVs Report Selection of Output Destinations**

NPAC SMS shall, after displaying the Pending-Like With Active POOL Subscription Version(s) and Pending-Like Port-to-Original Subscription Version(s) Report, to the screen, allow the NPAC Personnel to choose an output destination for the report.

N-280.3 **Deletion of Number Pooling NPA-NXX-X Holder Information –Pending-Like With Active POOL SVs and Pending-Like Port-To-Original SVs Report Output Destinations for Multiple Destinations**

NPAC SMS shall, continue to display the Pending-Like With Active POOL Subscription Version(s) and Pending-Like Port-to-Original Subscription Version(s) Report, to the screen, and allow the NPAC Personnel to choose additional output destinations one at a time, for the report, until the NPAC Personnel requests the closure of the report window.

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, as listed in R9-2, for the Pending-Like With Active POOL Subscription Version(s) and Pending-Like Port-to-Original Subscription Version(s) Report, based on the error condition in N-280.

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 multi-step 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 SOAs and (NANC 139) Local SMSs.

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 List.

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:

46NPA-NXX-X ID – value automatically generated by NPAC.

47NPA-NXX-X Holder SPID – value set to old NPA-NXX-X.

48NPA-NXX-X – value set to the new NPA-NXX, plus the seventh digit of the old NPA-NXX-X.

49Effective Date – value set to the later of, the same field in old NPA-NXX-X, or the start of PDP.

50Creation Date – value set to current date/time.

51Last Modified Date – value set to current date/time.

52Download Reason – value set to "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 exists in the NPAC SMS.

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-66, N-67, and N-68. (NANC 139)

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.

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, 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.

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 NPA-NXX-X holder information for all data as listed in the NPA-NXX-X Holder Information Data Model, for an NPA-NXX-X as stored in the NPAC SMS.

N-360   Query of Number Pool NPA-NXX-X Holder Information – Return of Queried Data

NPAC SMS shall return to the NPAC Personnel or requesting Service Provider all NPA-NXX-Xs that match the query selection criteria, as listed in the NPA-NXX-X Holder Information Data Model, for an NPA-NXX-X as stored in the NPAC SMS.

NPA-NXX-X Holder, Bulk Data Download

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

NPAC SMS shall provide a separate bulk data download file that contains all NPA-NXX-Xs in the NPAC SMS, when generating bulk data download files for Network Data.

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 NPA-NXX-X 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 for Network Data.

NPA-NXX-X Holder, Resync

N-380   Resynchronization of Number Pool NPA-NXX-X Holder Information – Local SMS 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 NPAC Customer LSMS NPA-NXX-X Indicator is set to TRUE.

N-390   Resynchronization of Number Pool NPA-NXX-X Holder Information – Local SMS 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 NPAC Customer LSMS NPA-NXX-X Indicator is set to FALSE.

N-392   Resynchronization of Number Pool NPA-NXX-X Holder Information – NPA-NXX-X resync and queuing of messages to Local SMS

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.

N-394   Resynchronization of Number Pool NPA-NXX-X Holder Information – NPA-NXX-X resync and sending of queued messages to Local SMS

NPAC SMS shall send 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.

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

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.

N-410   Resynchronization of Number Pool NPA-NXX-X Holder Information – SOA NPA-NXX-X Indicator set to TRUE

NPAC SMS shall process a Service Provider request to download Network data over the SOA to NPAC 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 NPAC Customer SOA NPA-NXX-X Indicator is set to TRUE. (NANC 139)

N-420 Resynchronization of Number Pool NPA-NXX-X Holder Information – SOA NPA-NXX-X Indicator set to FALSE

NPAC SMS shall process a Service Provider request to download Network data over the SOA to NPAC 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 NPAC Customer SOA NPA-NXX-X Indicator is set to FALSE. (NANC 139)

N-430 Resynchronization of Number Pool NPA-NXX-X Holder Information – NPA-NXX-X resync and queuing of messages to SOA

NPAC SMS shall queue up a single instance of all messages to the SOA, via the SOA to NPAC SMS Interface, when a Service Provider establishes an association with the NPAC SMS and where the resynchronization flag is set to TRUE. (NANC 139)

N-440 Resynchronization of Number Pool NPA-NXX-X Holder Information – NPA-NXX-X resync and sending of queued messages to SOA

NPAC SMS shall send queued up messages to the SOA, via the SOA to NPAC SMS Interface, when a Service Provider has sent a message to the NPAC SMS that resynchronization has been completed. (NANC 139)

N-450 Resynchronization of Number Pool NPA-NXX-X Holder Information – Filters on NPA-NXX-X resync to SOA

NPAC SMS shall apply NPA-NXX Filters to NPA-NXX-X resynchronization to the SOA(s) via the SOA to NPAC SMS Interface. (NANC 139)

NUMBER POOLING BLOCK HOLDER INFORMATION DATA MODEL			
Attribute Name	**Type (Size)**	**Required**	**Description**
Block ID	N	√	A unique sequential number assigned upon creation of the Block.
Block Holder SPID	C(4)	√	The Service Provider Id of the block holder.
NPA-NXX-X	N(7)	√	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	N (9)	√	DPC for 10-digit GTT for CLASS features for the 1K Block.
CLASS SSN	N (3)	√	CLASS SSN for the 1K Block.
LIDB DPC	N (9)	√	DPC for 10-digit GTT for LIDB features for the 1K Block.
LIDB SSN	N (3)	√	LIDB SSN for the 1K Block.
CNAM DPC	N (9)	√	DPC for 10-digit GTT for CNAM features for the 1K Block.
CNAM SSN	N (3)	√	CNAM SSN for the 1K Block.
ISVM DPC	N (9)	√	DPC for 10-digit GTT for ISVM features for the 1K Block.
ISVM SSN	N (3)	√	ISVM SSN for the 1K Block.
WSMSC DPC (NANC 203)	N (9)	√	DPC for 10-digit GTT for WSMSC features for the 1K Block. This field is only required if the service provider supports WSMSC data.
WSMSC SSN	N (3)	√	WSMSC SSN for the 1K Block. This field is only required if the service provider supports WSMSC data.
Creation Date	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

NUMBER POOLING BLOCK HOLDER INFORMATION DATA MODEL			
Attribute Name	**Type (Size)**	**Required**	**Description**
			begins the broadcasts to the LSMSs).
Activation Broadcast Complete Timestamp	T		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, for the activation of the Block).
Last Modified Timestamp	T		Date and time (GMT) of the Last Modification to the Block.

The initial value is the Creation Timestamp. |
Disconnect Request Time Stamp	T		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, for the disconnect of the Block.
Old Time Stamp	T		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 at least one local SMS system successfully acknowledged the broadcast, for the modification of the Block.
SOA Origination Indicator	B	√	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. |

NUMBER POOLING BLOCK HOLDER INFORMATION DATA MODEL			
Attribute Name	**Type (Size)**	**Required**	**Description**
			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 (1) S - Sending (3) F - Failed (4) PF - Partial Failure (5) O - Old (7)
Download Reason	E		The reason the Block is being downloaded to the SOA or LSMS. Valid values are: 0 – new1 1 – delete1 2 – modified 3 – audit-discrepancy

NUMBER POOLING BLOCK FAILED SP LIST DATA MODEL			
Attribute Name	**Type (Size)**	**Required**	**Description**
Block ID (Key)	N	√	A unique sequential number assigned upon creation of the Block.
SPID	C(4)	√	The Service Provider ID of the discrepant SP.
SP Name	C(40)	√	The NPAC Customer Name of the discrepant SP.

Block Holder, General

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

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 – NPAC Customer 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.

B-30   **Number Pool Block Holder Information – NPAC Customer EDR Indicator Download of SVs**

NPAC SMS shall download Number Pooling Block Information, for additions, modifications, 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-32   **Number Pool Block Holder Information – NPAC Customer EDR Indicator For Requests But Not Retries**

NPAC SMS shall use the EDR Indicator when processing a request for Number Pooling Block Information, but not during the retry functionality (n by m [e.g., 3 by 5]).

B-34   **Number Pool Block Holder Information – Data Integrity for Block and Pooled Subscription Versions**

NPAC SMS shall maintain data integrity for LRN and GTT data, between a Number Pooling Block and the corresponding Subscription Versions with LNP Type of POOL in that 1K Block, in the NPAC SMS.

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

NPAC SMS shall verify the Block Holder SPID attribute of the Block object matches the SPID in the accessControl for SOA Block Activation.

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, upon receiving a block activate request, validate that the SPID and the NPA-NXX-X attributes in the request are the same as the SPID and the NPA-NXX-X in a single entry in the NPA-NXX-X Holder Information.

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, except for a status of Old where the Block's Failed SP List is empty.

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 where the value will be maintained from the Old Block, 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.

B-120   Number Pooling Block Holder Information –Update Notification

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

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

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

**B-140   Number Pooling Block Holder Information – Failed SP List Update for Block
          for EDR Local SMS**

NPAC SMS shall consider an EDR Local SMS to be discrepant and shall update the Block 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 for non-EDR Local SMS**

NPAC SMS shall consider a non-EDR Local SMS to be discrepant and shall update the Block 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, re-send, resync, or mass update.

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

NPAC SMS shall send the Block 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-165.1   **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 with LNP Type of POOL broadcasts to non-EDR Local SMSs, are synchronized, by performing the following:

53The *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.

54The *status* for each Subscription Version shall only be set, once the broadcasts of the Block to all EDR and Subscription Versions to non-EDR Local SMSs has been completed, and a response has been received by all EDR and non-EDR Local SMSs or retries have been exhausted.

55The *status* for the Block shall only be set, once the broadcasts of the Block to all EDR and Subscription Versions to non-EDR Local SMSs has been completed, and a response has been received by all EDR and non-EDR Local SMSs or retries have been exhausted.

56The *status* for the Block shall reflect the information contained in Tables B-165.2, B-165.3, and B-165.4.

57Key for Tables B-165.2, B-165.3, and B-165.4
58Act = Active status
59Act/Part = a mix of both Active status and Partial Failure status
60Part = Partial Failure status
61Part/Fail = a mix of both Partial Failure status and Failed status
62Fail = Failed status
63Old = Old status
64Act/Old = a mix of both Active status and Old status

B-165.2 Number Pooling Block Holder Information – Synchronization of Block Status and Subscription Version Status for Block Creation

NPAC SMS shall set the *status* of a Block for Block Creation, based on the data contained in Table B-165.2.

65

66Table B-165.2 -- Block Creation										
67	68EDR Local SMS			69Non-EDR Local SMS					70 / 71 / 72All Pooled SVs in the Block	73 / 74 / 75 / 76 / 77Block
78	79all EDR Local SMSs respond successfully	80some but not all EDR Local SMSs respond successfully	81none of the EDR Local SMSs respond successfully	82all non-EDR Local SMSs respond successfully to all SVs	83some but not all non-EDR Local SMSs respond successfully to a given SV, but all respond successfully to another SV	84all non-EDR Local SMSs fail a given SV, but respond successfully to another SV	85some but not all non-EDR Local SMSs fail all Pooled SVs	86none of the non-EDR Local SMSs respond successfully	87	88
891	904	91	92	934	94	95	96	97	98Act	99Act
1002	1014	102	103	104	1054	106	107	108	109Act/Part	110Part
1113	1124	113	114	115	116	1174	118	119	120Part	121Part
1224	1234	124	125	126	127	128	1294	130	131Part	132Part
1335	1344	135	136	137	138	139	140	1414	142Part	143Part
144	145	1464	147	1484	149	150	151	152	153Part	154Part

6										
155 7	156	1574	158	159	1604	161	162	163	164Part	165Part
166 8	167	1684	169	170	171	1724	173	174	175Part	176Part
177 9	178	1794	180	181	182	183	1844	185	186Part	187Part
188 10	189	1904	191	192	193	194	195	1964	197Part	198Part
199 11	200	201	2024	2034	204	205	206	207	208Part	209Part
210 12	211	212	2134	**214**	2154	216	217	218	219Part	220Part
221 13	222	223	2244	**225**	226	2274	228	229	230Part/ Fail	231Part
232 14	233	234	2354	**236**	237	238	2394	240	241Part	242Part
243 15	244	245	2464	**247**	248	249	250	2514	252Fail	253Fail

254

255As a summary of the table, the Block's status will be set on Creation to:

256Active, if ALL EDR and non-EDR Local SMSs respond successfully.

257Failed, if ALL EDR and non-EDR Local SMSs respond unsuccessfully, or retries are exhausted.

258Partial Failure, for all other cases.

B-165.3 Number Pooling Block Holder Information – Synchronization of Block Status and Subscription Version Status for Block Modification

NPAC SMS shall set the *status* of a Block for Block Modification, based on the data contained in Table B-165.3.

259Table B-165.3 -- Block Modification										
260	261EDR Local SMS			262Non-EDR Local SMS					263 264 265All Pooled SVs in the Block	266 267 268 269 270Block
271	272all EDR Local SMSs respond successfully	273some but not all EDR Local SMSs respond successfully	274none of the EDR Local SMSs respond successfully	275all non-EDR Local SMSs respond successfully to all SVs	276some but not all non-EDR Local SMSs respond successfully to a given SV, but all respond successfully to another SV	277all non-EDR Local SMSs fail a given SV, but respond successfully to another SV	278some but not all non-EDR Local SMSs fail all Pooled SVs	279none of the non-EDR Local SMSs respond successfully	280	281
282 1	2834	284	285	2864	287	288	289	290	291Act	292Act
293 2	2944	295	296	297	2984	299	300	301	302Act	303Act
304 3	3054	306	307	308	309	3104	311	312	313Act	314Act
315 4	3164	317	318	319	320	321	3224	323	324Act	325Act
326 5	3274	328	329	330	331	332	333	3344	335Act	336Act

337 6	338	3394	340	3414	342	343	344	345	346Act	347Act
348 7	349	3504	351	352	3534	354	355	356	357Act	358Act
359 8	360	3614	362	363	364	3654	366	367	368Act	369Act
370 9	371	3724	373	374	375	376	3774	378	379Act	380Act
381 10	382	3834	384	385	386	387	388	3894	390Act	391Act
392 11	393	394	3954	3964	397	398	399	400	401Act	402Act
403 12	404	405	4064	**407**	4084	409	410	411	412Act	413Act
414 13	415	416	4174	**418**	419	4204	421	422	423Act	424Act
425 14	426	427	4284	**429**	430	431	4324	433	434Act	435Act
436 15	437	438	4394	**440**	441	442	443	4444	445Act	446Act

447As a summary of the table, the Block's status will be set on Modification to:

448Active, for all cases.

B-165.4 Number Pooling Block Holder Information – Synchronization of Block Status and Subscription Version Status for Block Deletion

NPAC SMS shall set the *status* of a Block for Block Deletion, based on the data contained in Table B-165.4.

449Table B-165.4 -- Block Deletion									
450	451EDR Local SMS			452Non-EDR Local SMS					453 454 455All Pooled SVs in the Block	456 457 458 459 460Block
461	462all EDR Local SMSs respond successfully	463some but not all EDR Local SMSs respond successfully	464none of the EDR Local SMSs respond successfully	465all non-EDR Local SMSs respond successfully to all SVs	466some but not all non-EDR Local SMSs respond successfully to a given SV, but all respond successfully to another SV	467all non-EDR Local SMSs fail a given SV, but respond successfully to another SV	468some but not all non-EDR Local SMSs fail all Pooled SVs	469none of the non-EDR Local SMSs respond successfully	470	471
4721	4734	474	475	4764	477	478	479	480	481Old	482Old
4832	4844	485	486	487	4884	489	490	491	492Old	493Old
4943	4954	496	497	498	499	5004	501	502	503Old	504Old
5054	5064	507	508	509	510	511	5124	513	514Old	515Old
5165	5174	518	519	520	521	522	523	5244	525Old	526Old

527 6	528	5294	530	5314	532	533	534	535	536Old	537Old
538 7	539	5404	541	542	5434	544	545	546	547Old	548Old
549 8	550	5514	552	553	554	5554	556	557	558Old	559Old
560 9	561	5624	563	564	565	566	5674	568	569Old	570Old
571 10	572	5734	574	575	576	577	578	5794	580Old	581Old
582 11	583	584	5854	5864	587	588	589	590	591Old	592Old
593 12	594	595	5964	**597**	5984	599	600	601	602Old	603Old
604 13	605	606	6074	**608**	609	6104	611	612	613Act/ Old	614Old
615 14	616	617	6184	**619**	620	621	6224	623	624Old	625Old
626 15	627	628	6294	**630**	631	632	633	6344	635Act	636Act

637

638As a summary of the table, the Block's status will be set on Deletion to:

639Active, if ALL EDR and non-EDR Local SMSs respond unsuccessfully, or retries are exhausted.

640Old, for all other cases.

B-166.1   Number Pooling Block Holder Information – Synchronization of Block Failed SP List and Subscription Version Failed SP List

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

641The ***Block Failed SP List*** for the Block and ***Subscription Versions Failed SP Lists*** for the 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.

642The ***Subscription Versions Failed SP Lists*** for the Subscription Versions shall be set, based on the results of the Block broadcasts to all EDR Local SMSs and the Subscription Version broadcasts to all non-EDR Local SMSs, and a response has been received by all EDR and non-EDR Local SMSs or retries have been exhausted, for Activations, Modifications, and Deletions.

643The ***Block Failed SP List*** for the Block shall be set, based on the results of the Block broadcasts to all EDR Local SMSs and the Subscription Version broadcasts to all non-EDR Local SMSs, and a response has been received by all EDR and non-EDR Local SMSs or retries have been exhausted.

644The ***Block 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.

645The ***Block Failed SP List*** for the Block shall reflect the information contained in Table B-166.2.

646Key for Table B-166.2
647ZFSL = Zero Failed SP List (no SPs in the list)
648Z/S FSL = Zero/Some Failed SP List (mix of both Zero Failed SP List and Some Failed SP List)
649SFSL = Some but not all Failed SP List (some but not all SPs in the list)
650S/A FSL = Some/All Failed SP List (mix of both Some Failed SP List and All Failed SP List)
651AFSL = All Failed SP List (all SPs in the list)

B-166.2 **Number Pooling Block Holder Information – Synchronization of Block Failed SP List and Subscription Version Failed SP List for Block Creation, Modification, or Deletion**

NPAC SMS shall set the *Block Failed SP List* of a Block for updates, based on the data contained in Table B-166.2.

652

653Table B-166.2 – Failed SP List									
654	655EDR Local SMS			656Non-EDR Local SMS					657 658 659All Pooled SVs in the Block	660 661 662 663 664Block
665	666all EDR Local SMSs respond successfully	667some but not all EDR Local SMSs respond successfully	668none of the EDR Local SMSs respond successfully	669all non-EDR Local SMSs respond successfully to all SVs	670some but not all non-EDR Local SMSs respond successfully to a given SV, but all respond successfully to another SV	671all non-EDR Local SMSs fail a given SV, but respond successfully to another SV	672some but not all non-EDR Local SMSs fail all Pooled SVs	673none of the non-EDR Local SMSs respond successfully	674	675
6761	6774	678	679	6804	681	682	683	684	685ZFSL	686ZFSL
6872	6884	689	690	691	6924	693	694	695	696Z/SFSL	697SFSL
6983	6994	700	701	702	703	7044	705	706	707SFSL	708SFSL
7094	7104	711	712	713	714	715	7164	717	718SFSL	719SFSL
720	7214	722	723	724	725	726	727	7284	729SFSL	730SFS

5										L
731 6	732	7334	734	7354	736	737	738	739	740SFSL	741SFSL
742 7	743	7444	745	746	7474	748	749	750	751SFSL	752SFSL
753 8	754	7554	756	757	758	7594	760	761	762SFSL	763SFSL
764 9	765	7664	767	768	769	770	7714	772	773SFSL	774SFSL
775 10	776	7774	778	779	780	781	782	7834	784SFSL	785SFSL
786 11	787	788	7894	7904	791	792	793	794	795SFSL	796SFSL
797 12	798	799	8004	**801**	8024	803	804	805	806SFSL	807SFSL
808 13	809	810	8114	**812**	813	8144	815	816	817S/A FSL	818SFSL
819 14	820	821	8224	**823**	824	825	8264	827	828SFSL	829SFSL
830 15	831	832	8334	**834**	835	836	837	8384	839AFSL	840AFSL

841

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 Failed SP List* when the Service Provider is no longer on the *Subscription Version 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 *Block Failed SP List*.

B-169.1.1   Number Pooling Block Holder Information – Unique Error Message for Partial Failure or Failed Status Update to a Block for Block Activation Requests Initiated by NPAC Personnel

NPAC SMS shall generate a unique alarmable error message when a Block's status is initially set to either Partial Failure or Failed, for Block Activation requests initiated by NPAC Personnel.

B-169.1.2   Number Pooling Block Holder Information – Unique Error Message for Partial Failure Status Update to a Block for SV Completion Check of Block Activation Processing by the NPAC SMS

NPAC SMS shall generate the same unique alarmable error message described in B-169.1.1 when a Block's status is initially set to Partial Failure, as a result of the Subscription Version Completion Check for Block Activation processing by the NPAC SMS, as defined in SV-131, SV-132, SV-133, SV-135, and SV-139.

NOTE: B-169.1.2 applies to both SOA initiated Block Activate requests and NPAC initiated Block Activate Requests.

B-169.2   Number Pooling Block Holder Information – Unique Error Message for Active Status With a Failed SP List Update to a Block

NPAC SMS shall generate a unique alarmable error message when a Block's status is updated to Active with a Failed SP List, for each occurrence, for Block Modification requests initiated by NPAC Personnel.

B-169.3   Number Pooling Block Holder Information – Unique Error Message for Old Status With a Failed SP List Update to a Block

NPAC SMS shall generate a unique alarmable error message when a Block's status is updated to Old with a Failed SP List, for Block Deletion requests that were initiated through the NPA-NXX-X deletion by NPAC Personnel.

B-169.6   Number Pooling Block Holder Information – Block Broadcast Monitoring Mechanism

NPAC SMS shall provide a mechanism to send a recurring page to NPAC Personnel, based on a configurable interval, when a unique alarmable error message is generated as defined in B-169.1.1, B-169.1.2, B-169.2, or B-169.3.

NOTE: The configurable interval will be set by M&P.

B-169.7   Number Pooling Block Holder Information – Block Broadcast Monitoring Mechanism Completion

NPAC SMS shall provide a mechanism to stop the recurring page to NPAC Personnel, whenever the Block's status is set to Active AND the Block Failed SP List is empty, or, the Block's status is set to Old AND the Block Failed SP List is empty.

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 for an NPAC initiated request, from the NPAC Administrative 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-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 the Subscription Version Data Model upon Block creation for a Number Pool:

    ?28 NPA-NXX-X Holder SPID
    ?29 NPA-NXX-X
    ?30 LRN
    ?31 Class DPC
    ?32 Class SSN
    ?33 LIDB DPC
    ?34 LIDB SSN
    ?35 CNAM DPC
    ?36 CNAM SSN
    ?37 ISVM DPC
    ?38 ISVM SSN
    ?39 WSMSC DPC (if supported by the Block Holder SOA) (NANC 203)
    ?40 WSMSC SSN (if supported by the Block Holder SOA)

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.

B-265   **Addition of Number Pooling Block Holder Information – Activation Broadcast Complete Timestamp Update**

NPAC SMS shall update the *Activation Broadcast Complete Timestamp* of the Block upon completion of the broadcast, and the FIRST successful response, for either an EDR or non-EDR Local SMS.

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

NPAC SMS shall update the *status* of the Block upon completion of the Activation broadcast, and a response from ALL EDR and non-EDR Local SMSs, or retries are exhausted, as defined in B-165.1 and B-165.2.

B-275   **Addition of Number Pooling Block Holder Information – Failed SP List Update**

NPAC SMS shall update the *Block Failed SP List* upon completion of the Activation broadcast, and a response from ALL EDR and non-EDR Local SMSs, or retries are exhausted, as defined in B-166.1, and B-166.2.

Block Holder, NPAC Rescheduling of Block Creation

B-280   **Re-Schedule of Number Pooling Block Holder Information – Re-schedule of NPAC Initiated Block Create**

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

B-290   **Re-Schedule of Number Pooling Block Holder Information – Re-schedule of Block Create Scheduling Options**

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-300   **Re-Schedule of Number Pooling Block Holder Information – Reject Re-schedule Based on Status**

NPAC SMS shall allow the re-schedule of a Block Create, if the Block does NOT exist in the NPAC SMS, or if the Block exists with a status of Old without a Failed SP List.

B-302   **Re-Schedule of Number Pooling Block Holder Information – Error Message for pending-like SVs**

NPAC SMS shall provide an error dialog that displays the unique error message described in B-190, and provides an option for the NPAC Personnel to either, exit the Block Create request, or generate the Pending-Like No-Active Subscription Version(s) report, in the report format listed in R-70, R-80, R-81, and R-82, to the screen on the NPAC Administrative Interface, when NPAC Personnel are re-scheduling a Block Creation request for immediate execution.

B-304   **Re-Schedule of Number Pooling Block Holder Information –Pending-Like No-Active SVs Report Output Destinations**

NPAC SMS shall, after displaying the Pending-Like No-Active Subscription Version(s) report to the screen, allow the NPAC Personnel to choose an output destination for the report, when NPAC Personnel are re-scheduling a Block Creation request for immediate execution.

B-306   **Re-Schedule of Number Pooling Block Holder Information –Pending-Like No-Active SVs Report Output Destinations for Multiple Destinations**

NPAC SMS shall, continue to display the Pending-Like No-Active Subscription Version(s) report, to the screen, and allow the NPAC Personnel to choose additional output destinations one at a time, for the report, until the NPAC Personnel requests the closure of the report window, when NPAC Personnel are re-scheduling a Block Creation request for immediate execution.

B-308   **Re-Schedule 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-302, that include print, fax, e-mail, stored to a file, when NPAC Personnel are re-scheduling a Block Creation request for immediate execution.

Block Holder, Modification

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

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

B-317   **Block's SOA Origination Indicator – Suppress Broadcast**

NPAC SMS shall suppress the broadcast to a Local SMS, of a modification to a Block's SOA Origination Indicator.

B-320   **Modification of Number Pooling Block Holder Information – Routing Data**

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 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 Block Holder SPID matches the Service Provider making the request.

B-332   **Modification of Number Pooling Block Holder Information – Selection Criteria**

NPAC SMS shall allow a Service Provider via the SOA to NPAC SMS Interface, to modify Block data by specifying either Block ID, or NPA-NXX-X value and status, in the request.

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

NPAC SMS shall reject and issue an error message to NPAC personnel, Service Provider via the SOA to NPAC SMS Interface, or Service Provider via the NPAC SOA Low-tech Interface, when modifying block holder data, for a 1K Block as stored in the NPAC SMS, and the Block's current status is not active, or the Block has at least one Service Provider in the Failed SP List.

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

NPAC SMS shall, upon processing a valid request to modify a Block, update the status of the Block, at 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 modification of a Block to EDR Local SMSs, via the NPAC SMS to Local SMS Interface.

B-355   **Modification of Number Pooling Block Holder Information – Modify Broadcast Complete Timestamp Update**

NPAC SMS shall update the ***Modify Broadcast Complete Timestamp*** of the Block upon completion of the broadcast, and the FIRST successful response, for either an EDR or non-EDR Local SMS.

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

NPAC SMS shall update the ***status*** of the Block upon completion of the Modification broadcast, and a response from ALL EDR and non-EDR Local SMSs, or retries are exhausted, as defined in B-165.1 and B-165.3.

B-370   **Modification of Number Pooling Block Holder Information – Failed SP List Update**

NPAC SMS shall update the ***Block Failed SP List*** upon completion of the broadcast, and a response from ALL EDR and non-EDR Local SMSs, or retries are exhausted, as defined in B-166.1, and B-166.2.

Block Holder, Deletion

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

NPAC SMS shall not allow NPAC Personnel to request a delete of a Block in the NPAC SMS.NOTE: This is initiated at the NPA-NXX-X level, and is part of a multi-step "cascading delete" process.

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.

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

NPAC SMS shall not allow Service Provider Personnel to request a delete of a Block in the NPAC SMS 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 valid 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.

**B-445   Deletion of Number Pooling Block Holder Information – Disconnect
                Broadcast Complete Timestamp Update**

NPAC SMS shall update the ***Disconnect Broadcast Complete Timestamp*** of the Block upon completion of the broadcast, and the FIRST successful response, for either an EDR or non-EDR Local SMS.

**B-450   Deletion of Number Pooling NPA-NXX-X Holder Information – Status Update
                to Block**

NPAC SMS shall update the ***status*** of the Block upon completion of the Deletion broadcast, and a response from ALL EDR and non-EDR Local SMSs, or retries are exhausted, as defined in B-165.1 and B-165.4.

B-480 **Deletion of Number Pooling NPA-NXX-X Holder Information – Failed SP List Update**

NPAC SMS shall update the ***Block Failed SP List*** upon completion of the broadcast, and a response from ALL EDR and non-EDR Local SMSs, or retries are exhausted, as defined in B-166.1, and B-166.2.

Block Holder, NPA Splits

B-490 **NPA Splits and the Number Pooling Block Holder Information – Recognition of Both Old NPA and New NPA**

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-X in the Block Holder Information.

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

NPAC SMS shall convert the old NPA-NXX to the new NPA-NXX for a Block involved in an NPA Split upon creation in 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 – De-pooling of the Block during PDP**

NPAC SMS shall broadcast a 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.

B-552 **NPA Splits and the Number Pool Block Holder Information – Mass Update that includes one or more Blocks for an NPA-NXX involved in an NPA Split**

NPAC SMS shall accept a *mass update* request that could span one or more Blocks from NPAC personnel, with either the old NPA-NXX or the new NPA-NXX for an NPA-NXX that is currently in permissive dialing.

B-553 **NPA Splits and the Number Pool Block Holder Information – Broadcast of a Mass Update that includes one or more Blocks for an NPA-NXX involved in an NPA Split**

NPAC SMS shall broadcast a *mass update* that could span one or more Blocks to an EDR Local SMS, via the NPAC SMS to Local SMS Interface, using the new NPA-NXX for an NPA-NXX that is currently in permissive dialing.

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 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 Block Holder Information, regardless of the value in the requesting 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.

Block Holder, Filters

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

NPAC SMS shall apply NPA-NXX Filters to Block broadcasts 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, once the Block exists, except for Old with or without a Failed SP List.

B-571 **Number Pool Block Holder Information Use of Number Pool Notification of TN Re-assignment – During De-Pooling**

The NPAC SMS shall send a notification to the Code Holder, and suppress the notification to the Block Holder, when a ported pooled number is disconnected, for TN(s) in the block, when the Block is being de-pooled, and the most recent block contains a status of Old, with a Failed SP List.

NOTE: The notifications characteristics for a disconnect of a ported pooled number, during de-pooling of a Block, with a Block that contains a status of Old with a Failed SP List, is additional functionality that defines Code Holder responsibility and notification messages. In essence, even though the de-pooled Block (i.e., contains a status of Old with a Failed SP List) is post-effective date, it has the behavior of a Block that has NOT been pooled and is in a *pre-effective date* stage. Also, the customer disconnect date notification is going to the Code Holder, but the TN cannot be re-assigned in their inventory.

Block Holder, Re-Send

B-574   **Re-Send of Number Pool Block Holder Information – Filters for Blocks**

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

B-575.1   **Re-Send of Number Pooling Block Holder Information – NPAC Personnel OpGUI Single Block**

NPAC SMS shall allow NPAC Personnel to re-send Block Information, one Block at a time, via the NPAC Administrative Interface.

B-575.2   **Re-Send of Number Pooling Block Holder Information – NPAC Personnel OpGUI One or All Service Providers**

NPAC SMS shall allow NPAC Personnel to re-send Block Information, to a single Service Provider or all Service Providers in the Block Failed SP List, 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 – Failed Block Status Set to Sending**

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 – Partial Failure Block Status Set to Sending**

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 re-send 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, from an old status to a sending status.

B-620   **Re-Send of Number Pool Block Holder Information – Broadcast of Block Data**

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

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

NPAC SMS shall update the *Block Failed SP List* of the Block and the *Subscription Version Failed SP List* of each Subscription Version with LNP Type of POOL, 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 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 response from the Local SMS or if retries have been exhausted, from a sending status, as defined in B-165.1, B-165.2, B-165.3, and B-165.4.

B-636   **Re-Send of Number Pooling Block Holder Information – Failed SP List Update**

NPAC SMS shall update the *Block Failed SP List*, 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 response from the Local SMS or if retries have been exhausted, as defined in B-166.1, and B-166.2.

Block Holder, Bulk Data Downloads

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

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

B-650 **Number Pool Block Holder Information Bulk Download File Creation –
Selection Criteria**

NPAC SMS shall include the Requesting Service Provider, Active and Partial Failure Blocks
Only or Latest View of Block Activity Choice, Time Range in Central Time, and Block Range as
Selection Criteria fields for the Block bulk data download file via the NPAC Administrative
Interface.

B-652.1 **Number Pool Block Holder Information Bulk Download File Creation –
Active and Partial Failure Blocks Only or Latest View of Block Activity
Choice**

NPAC SMS shall allow NPAC Personnel to select either *Active and Partial Failure Blocks Only*
or *Latest View of Block Activity*, and shall use the selected choice, for Block data.

B-652.2 **Number Pool Block Holder Information Bulk Download File Creation – Data
in Active Blocks Only Choice**

NPAC SMS shall use the *Active and Partial Failure Blocks Only* selection to only include Blocks
with a status of either Active or Partial Failure in the Block Bulk Data Download file.

B-652.3 **Number Pool Block Holder Information Bulk Download File Creation – Data
in Latest View of Block Activity Choice**

NPAC SMS shall use the *Latest View of Block Activity* selection to include all Blocks, regardless
of status, in order to capture activation, modification, and deletion transactions for Block data,
but only include the latest instance of the Block in the Block Bulk Data Download file, for a
given NPA-NXX-X, when a Block has more than one activity (e.g., addition, then modification)
within the specified time range.

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 that were broadcast during
the specified Time Range.

B-655 **Number Pool Block Holder Information Bulk Download File Creation – Block
Range Fields**

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

NOTE: If the Block 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.

B-657   **Number Pool Block Holder Information Bulk Download File Creation – Selection Criteria Combinations**

NPAC SMS shall edit the selection criteria combination as shown in the table below:

	Time Range	**Block Range**
Active and Partial Failure Blocks Only	Rejected	Optional
Latest View of Block Activity	Required	Optional

Such that a combination of:

- Active with a Time Range shall be rejected.
- Latest View shall require a Time Range.
- Block Range shall be optional for both Active and Latest View.

B-660   **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 Blocks in the NPAC SMS, regardless of the value in the Service Provider's EDR Indicator.

B-662   **Number Pool Block Holder Information Bulk Data Download – Block Results Sort Order**

NPAC SMS shall sort the Block Bulk Data Download file, in ascending order based on the value in the NPA-NXX-X attribute.

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 in GMT or Block Range entry fields, where the Time Range in GMT includes the starting time in GMT and ending time in GMT based on the Activation Start Timestamp/Disconnect Broadcast Timestamp/Modify Broadcast Timestamp, 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 Maximum Download Duration and Maximum Number of Download Records, as defined in the Functional Requirements Specification' s Appendix C, for Blocks that can be resynchronized by a Local SMS.

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 Maximum Download Duration or Maximum Number of Download Records 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, 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.

B-730   Number Pool Block Holder Information Resynchronization – Update to Failed SP List

NPAC SMS shall update the *Block Failed SP List* and *Subscription Version Failed SP List*, by removing the resyncing Local SMS, upon a successful response to a resynchronization request to a previously failed EDR Local SMS, as defined in B-166.1 and B166.2.

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-165.1, B-165.2, B-165.3, and B-165.4.

Block Holder, Mass Update

B-760   Block Holder Information Mass Update – OpGUI Selection Criteria

NPAC SMS shall provide SPID, LNP Type, and TN Range Selection Criteria for mass updates, on the NPAC Administrative Interface.

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

NPAC SMS shall allow NPAC Personnel to select any single LNP Type, or none, as Selection Criteria for mass updates, on the NPAC Administrative Interface.

NOTE: If a single LNP Type is selected, then only that LNP Type will be used, otherwise, if no LNP Type is selected, then no restriction is imposed on the LNP Type as a selection criteria.

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, and issue an error message, if the TN Range and LNP Type of either POOL or none, is entered as Selection Criteria, 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 reject a mass update request to a Block, if the Block's *status* is NOT active, or if the *Block Failed SP List* contains one or more Service Providers.

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.

B-800   Block Holder Information Mass Update – Download of SVs of Type POOL to non-EDR Local SMS

NPAC SMS shall NOT break up Subscription Versions of LNP Type POOL in a 1K Block, when downloading Number Pooling Block Information, for mass updates, via the NPAC SMS to Local SMS Interface, to non-EDR Local SMSs.

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/current service provider SOA systems for Subscription Versions with LNP Type of POOL.

NOTE: This includes creation, modification, deletion, re-send, resync, and mass update.

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

NPAC SMS shall apply NPA-NXX Filters to subscription version 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.

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 Subscription Version 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.

SV-6   **Number Pooling Subscription Version Information – Data Integrity for Pooled Subscription Versions and Block**

NPAC SMS shall maintain data integrity for SPID, LRN and DPC/SSN data, between Subscription Versions with LNP Type of POOL in a 1K Block, and the corresponding Number Pooling Block, in the NPAC SMS.

Subscription Version, Addition for Number Pooling

SV-10   **Addition of Number Pooling Subscription Version Information – Subscription Data**

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 active/partial failure/disconnect pending/old with a Failed SP List/sending, immediately after successfully creating 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:

?41 Version ID - Automatically generated by NPAC SMS.
?42 LRN - Value set to same field in Block.
?43 Old Service Provider ID - Value set to owner of NPA-NXX.
?44 New Service Provider ID - Value set to NPA-NXX-X Holder SPID field in Block.
?45 TN - Telephone Number associated with this Subscription Version.
?46 LNP Type - Value set to "POOL".
?47 Status - Value initially set to "Sending".
?48 CLASS DPC - Value set to same field in Block.
?49 CLASS SSN - Value set to same field in Block.
?50 LIDB DPC - Value set to same field in Block.
?51 LIDB SSN - Value set to same field in Block.
?52 CNAM DPC - Value set to same field in Block.
?53 CNAM SSN - Value set to same field in Block.
?54 ISVM DPC - Value set to same field in Block.
?55 ISVM SSN - Value set to same field in Block.
?56 WSMSC DPC - Value set to same field in Block. (NANC 203)
?57 WSMSC SSN - Value set to same field in Block.
?58 New Service Provider Due Date - Value set to current date.
?59 Old Service Provider Due Date - Value set to current date.
?60 Old Service Provider Authorization - Value set to "TRUE".
?61 New Service Provider Create Time Stamp - Value set to current date/time.
?62 Old Service Provider Authorization Time Stamp - Value set to current date/time.
?63 Activation Request Time Stamp - Value set to current date/time.
?64 Activation Broadcast Date - Value set to current date.

?65 Activation Broadcast Complete Time Stamp - Value set to current date/time, once the broadcast is complete (Local SMS has responded).
?66 Disconnect Request Time Stamp - Value set to all zeros.
?67 Disconnect Broadcast Time Stamp - Value set to all zeros.
?68 Disconnect Broadcast Time Stamp - Value set to all zeros.
?69 Disconnect Broadcast Complete Time Stamp - Value set to all zeros.
?70 Effective Release Date - Value set to all zeros.
?71 Customer Disconnect Date - Value set to all zeros.
?72 Pre-Cancellation Status - Value set to NULL.
?73 Old Service Provider Cancellation Time Stamp - Value set to all zeros.
?74 New Service Provider Cancellation Time Stamp - Value set to all zeros.
?75 Cancellation Time Stamp - Value set to all zeros.
?76 Old Time Stamp - Value set to all zeros.
?77 Conflict Time Stamp - Value set to all zeros.
?78 Conflict Resolution Time Stamp - Value set to all zeros.
?79 Create Time Stamp - Value set to current date/time.
?80 Modified Time Stamp - Value set to current date/time.
?81 Porting to Original - Value set to "FALSE".
?82 End User Location Value - Value set to "no value".
?83 End User Location Value Type - Value set to "no value".
?84 Modify Request Time Stamp - Value set to all zeros.
?85 Modify Broadcast Time Stamp - Value set to all zeros.
?86 Modify Broadcast Complete Time Stamp - Value set to all zeros.
?87 Billing ID - Value set to "no value".
?88 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-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 – 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 completion of the broadcast, and a response from ALL EDR and non-EDR Local SMSs, or retries are exhausted, as defined in B-165.1 and, B-165.2, B-165.3, and B-165.4.

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

NPAC SMS shall update the ***Subscription Version 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, an unsuccessful response from at least one Local SMS, and a response from ALL EDR and non-EDR Local SMSs, or retries are exhausted, as defined in B-166.1 and B-166.2.

Subscription Version, Block Create Validation of Subscription 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 individual TNs exist for the Block, with an LNP Type of either:

- POOL, where the status is active, or
- LSPP/LISP, where the status is active/partial failure/disconnect pending.

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

NOTE: NPAC shall NOT perform this Block Create Validation Process once all 1000 TNs have been accounted for in the 1K Block.

SV-132   Block Create Validation of Subscription Versions – First Time Execution of Subscription Version Completion Check

NPAC SMS shall run the Block Create Validation Process within 24 hours of Block Creation where the Block status is active.

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

NPAC SMS shall, upon finding any missing TNs with a status of Old without a Failed SP List, in the 1K Block, upon performing the Subscription Version Completion Check defined in SV-131, log an information message, create a Subscription Version with LNP Type of POOL in the NPAC SMS using the routing data in the Block, and set the status to sending, for both the Block and the Subscription Version.

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 defined in SV-133, broadcast the Subscription Version(s) with LNP Type of POOL, 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 Versions to all non-EDR Local SMSs, or retries are exhausted, as defined in B-165.1, B-165.2, B-165.3, and B-165.4.

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

NPAC SMS shall update the ***Block Failed SP List*** of the Block based on the results of the broadcast of the Subscription Versions to all non-EDR Local SMSs, or retries are exhausted, as defined in B-166.1 and B-166.2.

SV-140   **Block Create Validation of Subscription Versions – Subscription Version Logging**

NPAC SMS shall upon finding any missing TNs within the 1K Block during the Block Create Validation Process, log an information message, and continue processing.

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 Code 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 Holder Information, where the new Service Provider is the Code 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 prior to the existence of the Block 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 Block Holder, in an inter-service provider port-to-original port for a TN within the 1K Block, once 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 and Prior to the Existence of the Block

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, where there is no active Subscription Version 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, once 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, once 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

NPAC SMS shall update the *status* of each Subscription Version with LNP Type of POOL for each TN in the 1K Block, upon completion of the broadcast, and a response from All EDR and non-EDR Local SMSs, or retries are exhausted, as defined in B-165.1 and, B-165.2, B-165.3, and B-165.4.

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

NPAC SMS shall update the *Subscription Version 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, an unsuccessful response from at least one Local SMS, and a response from ALL EDR and non-EDR Local SMSs, or retries are exhausted, as defined in B-166.1 and B-166.2.

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 valid 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 – Status Update to Subscription Versions

NPAC SMS shall update the *status* of a particular Subscription Version with LNP Type of POOL for each TN in the 1K Block, upon completion of the broadcast, a response for the Block to all EDR Local SMSs and that particular Subscription Version to non-EDR Local SMSs, or retries are exhausted, as defined in B-165.1, B-165.2, B-165.3, and B-165.4.

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

NPAC SMS shall update the *Subscription Version 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, an unsuccessful response from at least one Local SMS, and a response from ALL EDR and non-EDR Local SMSs, or retries are exhausted, as defined in B-166.1 and B-166.2.

Subscription Version, Disconnect and Port-To-Original in a Number Pooling Environment

SV-390 – Disconnect Subscription Version or Port-To-Original – Pooled Number Block Default Routing Restoration

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, except for a status of Old, with or without a Block Failed SP List.

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

NPAC SMS shall notify the Block Holder of the Subscription Version Customer Disconnect Date and Effective Release Date, for a ported pooled Subscription Version that is being disconnected, 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 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 pooled Subscription Version, where the TN is within the 1K Block.

SV-422.1 – Disconnect Subscription Version – Updates to the Status for Disconnect

NPAC SMS shall update the *Status* of the individual subscription version(s) broadcast to the EDR Local SMSs, and the individual subscription version(s) broadcast to the non-EDR Local SMSs, upon completion of the disconnect broadcast to ALL EDR and non-EDR Local SMSs.

SV-422.2 – Disconnect Subscription Version – Setting of the Status for Disconnected SV

NPAC SMS shall, upon broadcasting the *delete* of the Subscription Version to EDR Local SMSs, and *create* of Subscription Version to non-EDR Local SMSs, set the status of the Subscription Version being *disconnected* to:

- Active, if ALL EDR and non-EDR Local SMSs, fail the broadcast.
- Old, for all other cases.

SV-422.3 – Disconnect Subscription Version – Setting of the Status for Newly Created SV

NPAC SMS shall, upon broadcasting the *delete* of the Subscription Version to EDR Local SMSs, and *create* of Subscription Version to non-EDR Local SMSs, set the status of the Subscription Version being *created to reinstate default routing* to:

- Active, if all non-EDR Local SMSs, respond successfully to the broadcast.

- Failed, if all non-EDR Local SMSs, fail the broadcast, or retries are exhausted.

- Partial Failure, for all other cases.

SV-423.1 – Disconnect Subscription Version – Updates to the Status for Port-to-Original

NPAC SMS shall update the *Status* of the individual subscription version(s) broadcast to the EDR Local SMSs, the individual subscription version(s) broadcast to the non-EDR Local SMSs, and the individual subscription version(s) representing the port-to-original request, upon completion of the Port-To-Original broadcast to ALL EDR and non-EDR Local SMSs.

SV-423.2 – Disconnect Subscription Version – Setting of the Status for Port-to-Original SV

NPAC SMS shall, upon broadcasting the *delete* of the Subscription Version to EDR Local SMSs, and *create* of Subscription Version to non-EDR Local SMSs, set the status of the Subscription Version being *ported-to-original* to:

- Old, if ALL EDR and non-EDR Local SMSs, respond successfully to the broadcast.

- Failed, if ALL EDR and non-EDR Local SMSs, fail the broadcast, or retries are exhausted.

- Partial Failure, for all other cases.

SV-423.3 – Disconnect Subscription Version – Setting of the Status for Port-to-Original SV that was active prior to the PTO activation request

NPAC SMS shall, upon broadcasting the *delete* of the Subscription Version to EDR Local SMSs, and *create* of Subscription Version to non-EDR Local SMSs, set the status of the previously active Subscription Version being *disconnected due to the port-to-original request* to:

- Active, if ALL EDR and non-EDR Local SMSs, fail the broadcast.
- Old, for all other cases.

SV-423.4 – Disconnect Subscription Version – Setting of the Status for Port-to-Original for Newly Created SV

NPAC SMS shall, upon broadcasting the *delete* of the Subscription Version to EDR Local SMSs, and *create* of Subscription Version to non-EDR Local SMSs, set the status of the Subscription Version being *created to reinstate default routing for the port-to-original request* to:

- Active, if all non-EDR Local SMSs, respond successfully to the broadcast.

- Failed, if all non-EDR Local SMSs, fail the broadcast, or retries are exhausted.

- Partial Failure, for all other cases.

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

NPAC SMS shall update the *Subscription Version Failed SP List* of the individual subscription version(s) that were broadcast to the EDR Local SMSs with the discrepant Local SMS(s), , upon completion of the broadcast of the *delete* of the Subscription Version(s) to EDR Local SMSs, and the *create* of the Subscription Version(s) to non-EDR Local SMSs.

NOTE: The NPAC SMS will roll up the Subscription Version Failed SP List so that the SV that was active prior to the disconnect request (SV1) contains the Failed SP List for both SV1 and SV2, as defined in the IIS Flows for Disconnect of a Ported Pooled Number.

SV-426 – Disconnect Subscription Version – Updates to the Failed SP List for Port-To-Original

NPAC SMS shall update the *Subscription Version Failed SP List* of the individual subscription version(s) that were sent up in the Port-to-Original Activate request by the SOA with the discrepant Local SMS(s), upon completion of the broadcast of the *delete* of the Subscription Version(s) to EDR Local SMSs, and the *create* of the Subscription Version(s) to non-EDR Local SMSs.

NOTE: The NPAC SMS will roll up the Subscription Version Failed SP List so that the SV that was pending prior to the port-to-original request (SV2) contains the Failed SP List for both SV2 and SV3, as defined in the IIS Flows for a Port-To-Original of a Ported Pooled Number.

Subscription Version, NPA Splits

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

NPAC SMS shall broadcast the new NPA-NXX using Subscription Versions with LNP Type of POOL, for an addition, modification, deletion, re-send, resync, or mass update, 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 requesting Service Provider's EDR Indicator.

Subscription Version, Re-Send for Number Pooling

SV-451   **Re-Send of Number Pooling Subscription Version Information – NPAC Personnel OpGUI**

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.

SV-452   **Re-Send of Number Pooling Subscription Version Information – Subscription Versions sent to discrepant non-EDR Local SMS**

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

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**

NPAC SMS shall update the *Subscription Version 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 Re-Send**

NPAC SMS shall update the *status* of the Subscription Version(s) and 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 response from the Local SMS or if retries have been exhausted, from a sending status, as defined in B-165.1, B-165.2, B-165.3, and B-165.4.

SV-516   **Re-Send of Number Pooling Subscription Version Information –Failed SP List Update to Subscription Version after Re-Send**

NPAC SMS shall update the *Subscription Version Failed SP List* of the Subscription Version(s) with LNP Type of POOL in the 1K 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 response from the Local SMS, or if retries have been exhausted, as defined in B-166.1 and B-166.2.

Subscription Version, Re-Send of Disconnect and Port-To-Original in a Number Pooling 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 pooled TN, where the TN is contained within a Pooled 1K Block.

SV-519.1   Re-Send of Subscription Version Information – Disconnect TN within a Pooled 1K Block to EDR Local SMS

NPAC SMS shall, for a re-send of a disconnect Subscription Version of a ported pooled TN, where the TN is contained within a Pooled 1K Block, re-broadcast the Delete request of the Subscription Version that was active prior to the disconnect broadcast to a discrepant EDR Local SMS.

NOTE: The NPAC SMS will re-send an M-DELETE, to an EDR Local SMS, of the Subscription Version (SV1) that was active prior to the disconnect request (SV2), as defined in the IIS Flows for Disconnect of a Ported Pooled Number.

SV-519.2   Re-Send of Subscription Version Information – Disconnect TN within a Pooled 1K Block to non-EDR Local SMS

NPAC SMS shall, for a re-send of a disconnect Subscription Version of a ported pooled TN, where the TN is contained within a Pooled 1K Block, re-broadcast the Create request of the Subscription Version that was created to restore default routing to a discrepant non-EDR Local SMS.

NOTE: The NPAC SMS will re-send an M-CREATE, to a non-EDR Local SMS, of the Subscription Version (SV2) that was created to restore default routing (SV1), although the Failed SP List resides on SV1, as defined in the IIS Flows for Disconnect of a Ported Pooled Number.

SV-520.1   Re-Send of Subscription Version Information –Port-To-Original TN within a Pooled 1K Block to EDR Local SMS

NPAC SMS shall, for a re-send of a Port-To-Original Subscription Version of a ported pooled TN, where the TN is contained within a Pooled 1K Block, re-broadcast the Delete request of the Subscription Version that was active prior to the Port-To-Original broadcast to a discrepant EDR Local SMS.

NOTE: The NPAC SMS will re-send an M-DELETE, to an EDR Local SMS, of the Subscription Version (SV1) that was active prior to the Port-To-Original request (SV2), even though the Failed SP List resides on SV2, as defined in the IIS Flows for a Port-To-Original of a Ported Pooled Number.

SV-520.2   Re-Send of Subscription Version Information –Port-To-Original TN within a Pooled 1K Block to non-EDR Local SMS

NPAC SMS shall, for a re-send of a Port-To-Original Subscription Version of a ported pooled TN, where the TN is contained within a Pooled 1K Block, re-broadcast the Create request of the Subscription Version that was created to restore default routing, and shall NOT re-broadcast the Delete request of the Subscription Version that was active prior to the Port-To-Original broadcast to a discrepant non-EDR Local SMS.

NOTE: The NPAC SMS will re-send an M-CREATE, to a non-EDR Local SMS, of the Subscription Version (SV3) that was created to restore default routing, and will NOT re-send an M-DELETE of the Subscription Version (SV1) that was active prior to the Port-To-Original request (SV2), even though the Failed SP List resides on SV2, as defined in the IIS Flows for a Port-To-Original of a Ported Pooled Number.

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.

Subscription Version, Resynchronization

SV-522   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.

SV-530   Number Pooling Subscription Version Information Resynchronization – 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 resync, to determine the message to resync, for a disconnect or a Port-To-Original Subscription Version of a ported pooled TN, where the TN is contained within a Pooled 1K Block.

SV-540   Number Pooling Subscription Version Information Resynchronization – Disconnect TN within a Pooled 1K Block to EDR Local SMS

NPAC SMS shall, for a resync of a disconnect Subscription Version of a ported pooled TN, where the TN is contained within a Pooled 1K Block, allow the EDR Local SMS to recover the Delete request of the Subscription Version that was active prior to the disconnect broadcast to an EDR Local SMS.

NOTE: The NPAC SMS will resync an M-DELETE, to an EDR Local SMS, of the Subscription Version (SV1) that was active prior to the disconnect request (SV2), as defined in the IIS Flows for Disconnect of a Ported Pooled Number.

SV-550   Number Pooling Subscription Version Information Resynchronization – Disconnect TN within a Pooled 1K Block to non-EDR Local SMS

NPAC SMS shall, for a resync of a disconnect Subscription Version of a ported pooled TN, where the TN is contained within a Pooled 1K Block, allow the non-EDR Local SMS to recover the Create request of the Subscription Version that was created to restore default routing to a non-EDR Local SMS.

NOTE: The NPAC SMS will resync an M-CREATE, to a non-EDR Local SMS, of the Subscription Version (SV2) that was created to restore default routing (SV1), even though the Failed SP List resides on SV1, as defined in the IIS Flows for Disconnect of a Ported Pooled Number.

SV-560   Number Pooling Subscription Version Information Resynchronization –Port-To-Original TN within a Pooled 1K Block to EDR Local SMS

NPAC SMS shall, for a resync of a Port-To-Original Subscription Version of a ported pooled TN, where the TN is contained within a Pooled 1K Block, allow the EDR Local SMS to recover the Delete request of the Subscription Version that was active prior to the Port-To-Original broadcast to an EDR Local SMS.

NOTE: The NPAC SMS will resync an M-DELETE, to an EDR Local SMS, of the Subscription Version (SV1) that was active prior to the Port-To-Original request (SV2), even though the Failed SP List resides on SV2, as defined in the IIS Flows for a Port-To-Original of a Ported Pooled Number.

SV-570   Number Pooling Subscription Version Information Resynchronization – Port-To-Original TN within a Pooled 1K Block to non-EDR Local SMS

NPAC SMS shall, for a resync of a Port-To-Original Subscription Version of a ported pooled TN, where the TN is contained within a Pooled 1K Block, allow the non-EDR Local SMS to recover the Create request of the Subscription Version that was created to restore default routing, and shall NOT allow the non-EDR Local SMS to recover the Delete request of the Subscription Version that was active prior to the Port-To-Original broadcast to a non-EDR Local SMS.

NOTE: The NPAC SMS will resync an M-CREATE, to a non-EDR Local SMS, of the Subscription Version (SV3) that was created to restore default routing, and will NOT resync an M-DELETE of the Subscription Version (SV1) that was active prior to the Port-To-Original request (SV2), even though the Failed SP List resides on SV2, as defined in the IIS Flows for a Port-To-Original of a Ported Pooled Number.

Section 8 New Requirements

Audit Processing

The Audit processing that is described in this section deals with Subscription Versions with LNP Type of POOL. Audit processing for Subscription Versions with LNP Type of LSPP or LISP is "Business As Usual" functionality and is captured in the existing FRS.

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:

842 Validate that the audit request is valid (existing FRS functionality).

843 Validate that the Block associated with the TN contained in the Subscription Version(s), exists in the NPAC SMS.

844 Send queries of TN Range, or TN Range with Activation Timestamp, to non-EDR Local SMSs that are accepting downloads for the given NPA-NXX.

845 Send queries of Block **AND** TN Range or TN Range with Activation Timestamp, to EDR Local SMSs that are accepting downloads for the given NPA-NXX.

846 Process non-EDR Local SMS responses using same functionality as audits for LSPP and LISP Subscription Versions.

847 Process EDR Local SMS responses for the Block by doing a comparison. If a discrepancy exists, the NPAC SMS data is considered "correct", and a correction should be sent to the EDR Local SMS.

848 Process EDR Local SMS responses for Subscription Versions, as follows:

849 LSPP and LISP – Use existing audit functionality

850 POOL – "No Data" is correct response, SVs for other LNP Types need to be deleted.

851 Send audit results and notification of discrepancies, back to requesting SOA, only for TN Range that was requested, even if other TNs were affected because of EDR Local SMS.

852 Suppress status change and attribute change notifications to the Block Holder SOA.

A-10   Audit Discrepancy and Results Notifications for Pooled Number Subscription Versions to Requesting SOA

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-15   Audit Discrepancy and Results Notifications for Pooled Number Subscription Versions for Audited TNs

NPAC SMS shall, for audits of Subscription Versions with LNP Type of POOL, only send back notifications to the requesting SOA, of the audited TNs, even if other TNs were modified.

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   **Audit for Pooled Numbers and Block to EDR Local SMS**

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

A-50   **Audit Response – Ignore missing SVs for Pooled Ports at EDR Local SMS**

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

A-60   **Audit Response – Delete erroneous SVs for Pooled Ports at EDR Local SMS**

NPAC SMS shall consider a query 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   **Audit Response – Compare NPAC SMS Block to Service Provider Block at EDR Local SMS**

NPAC SMS shall conduct a comparison of the Block sent back in the audit response by the EDR Local SMS, to the Block stored in the NPAC SMS.

A-90   **Audit Response – Block Missing from EDR Local SMS**

NPAC SMS shall consider a query response of No Data related to a Block, for a Block that exists in the NPAC SMS, other than a status of Old, as a discrepant response from an EDR Local SMS, and shall send a Block Create/Activate message.

A-100   **Audit Response – Block Discrepant at EDR Local SMS**

NPAC SMS shall consider a query response with mis-matched data for a Block, as a discrepant response from an EDR Local SMS, and shall send a Block Modify message.

A-110   Audit Response – Extra Block at EDR Local SMS

NPAC SMS shall consider a query response of an existing Block, for a Block that has been de-pooled, as a discrepant response from an EDR Local SMS, and shall send a Block Delete message.

A-120   Audit Processing – Skipping In-Progress Blocks

NPAC SMS shall skip the audit of a Block with a status of Sending, by NOT sending a query for the Block, and shall send back a notification to the requesting SOA, of no discrepancies found for the Block.

Section 9 New Requirements

Reports Processing

RR9-7   Pooled Number Reports – OpGUI Report Generation

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 Reports – Query functions

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

RR9-8   Pooled Number Reports – 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 Reports – Block Holder Default Routing 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 Reports – Pooled TNs in a NPA-NXX-X Report

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 Reports – Pooled TNs in a NPA-NXX-X Report 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)
LNP Type
Activation Start Time Stamp
SP Name
Status

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

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 Reports – Pending-Like No-Active and Pending-Like Port-to-Original Subscription Versions Report 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 Reports – Pending-Like No-Active and Pending-Like Port-to-Original Subscription Versions Report 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 Reports – Pending-Like No-Active and Pending-Like Port-to-Original Subscription Versions Report Page Break

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

R-130   **Pooled Number Reports – Pending-Like With Active POOL Subscription Versions Report**

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.

R-140   **Pooled Number Reports – Pending-Like With Active POOL Subscription Versions Report 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 Reports – Pending-Like With Active POOL Subscription Versions Report 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)

R-142   **Pooled Number Reports – Pending-Like With Active POOL Subscription Versions Report Page Break**

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

Section 12 New Requirements

Migration for National Number Pooling

M-10   **National Number Pooling Migration – Conversion of Blocks for 1.4 Pooling**

NPAC SMS shall provide a mechanism for Pooled Data in a pre-EDR environment, to be converted to Pooled Data in an EDR environment, prior to the live date for the National Number Pooling Release in the NPAC SMS.

NOTE: The Subscription Versions with LNP Type of POOL will remain in the NPAC SMS, and a corresponding NPA-NXX-X and EDR Block will be created in the NPAC SMS, but will not be broadcast over the Interface.

M-20   **National Number Pooling Migration – Setting of NPA-NXX-X Indicators**

NPAC SMS shall provide a mechanism for the NPAC Customer SOA NPA-NXX-X Indicator (NANC 139) and the NPAC Customer LSMS NPA-NXX-X Indicator, in the NPAC Customer Data Model, to be set for all Service Providers, prior to the live date for the National Number Pooling Release in the NPAC SMS.

M-30   **National Number Pooling Migration – Setting of EDR Indicators**

NPAC SMS shall provide a mechanism for the NPAC Customer LSMS EDR Indicator, in the NPAC Customer Data Model, to be set for all Service Providers, prior to the live date for the National Number Pooling Release.

Appendix C – System Tunables

BLOCK TUNABLES				
Tunable Name	**Tunable Variable Name**	**Default Value**	**Units**	**Valid Range**
NPA-NXX-X Holder Information Effective Date	NPA-NXX-X Holder Information Effective Date	5	business days	5-360
Minimum length of time between the Creation date and the effective date when creating or modifying 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

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

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

0001|2853|303-123-6|19980101155555|19980105000000|0(CR) (NPA-NXX-X 1)
0001|2864|303-124-4|19980101155556|19980105000000|0(CR) (NPA-NXX-X 2)

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.

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.

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 TIME Range is keyed off the Activation Broadcast Complete Timestamp. 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|3031231|1234567890|0001|19960916152337|
123456789|123|123456789|123|123456789|123|123456789|123|
||0(CR)  (end of Block 1)
0002|3031241|1234567891|0001|19960825011010|
123456789|123|123456789|123|123456789|123|123456789|123|
123456789|123|0(CR)          (end of Block 2)
0003|3031251|1234567892|19960713104923|
123456789|123|123456789|123|123456789|123|123456789|123|
123456789|123|0(CR)          (end of Block 3)
```

Field Number	EXPL...	...FILE
1	Block...	
2	NPA-...	
3	LRN	1234567890
4	New Current Service Provider Id	0001
5	Activation Timestamp	19960916152337 (yyyymmddhhmmss)
6	CLASS DPC	123456789
7	CLASS SSN	123
8	LIDB DPC	123456789
9	LIDB SSN	123
10	ISVM DPC	123456789

EXPLANATION OF THE FIELDS IN THE BLOCK DOWNLOAD FILE		
Field Number	**Field Name**	**Value in Example**
11	ISVM SSN	123
12	CNAM DPC	123456789
13	CNAM SSN	123
14	WSMSC DPC (NANC 203)	Not present if LSMS or SOA does not support the WSMSC DPC as shown in this example. If it were present the value would be in the same format as other DPC data.
15	WSMSC SSN	Not present if LSMS or SOA does not support the WSMSC DPC as shown in this example. If it were present the value would be in the same format as other SSN data.
164	Download Reason	0

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

Appendix G – Block and SV Behavior Matrix

9/18/98

NPAC SMS Processing in a Number Pooling
Environment

For SOA-Initiated and NPAC-Initiated Requests of

Blocks

And

Subscription Versions

Including

LSMS Broadcasts (EDR and non-EDR)

Definitions:

853N/A = Not Applicable **(cannot get into this situation)**

854BAU = Business As Usual (i.e., same as it works today)

Scenario: Block Behavior, <u>Pre-Effective Date</u> 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)	N/A	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	N/A
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)	N/A	N/A
Disconnect Block	N/A (no such message exists)	N/A	N/A

Scenario: Sub-Block Behavior, <u>On or After Effective Date</u> 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 sends to NPAC	NPAC internal processing	NPAC sends to non-EDR LSMS	NPAC sends to 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, the initiating SOA can either send up TN range queries, or request this information from NPAC personnel.
		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	N/A
Activate Block	N/A (no such message exists)	N/A	N/A
Modify Active Block	New NPAC functionality.	Individual SVs (TN	A single block object

SOA/NPAC sends to NPAC	NPAC internal processing	NPAC sends to non-EDR LSMS	NPAC sends to EDR LSMS

	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 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, the initiating SOA can either send up TN range queries, or request this information from NPAC personnel.
		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.

Disconnect Block	N/A (no such message exists)	N/A	N/A

Scenario: Subscription Version Behavior, <u>Pre-Effective Date</u> 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.	N/A	N/A

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.
	
	Endif.		

Create SV, PTO	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")**	N/A	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")**	N/A	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")**	N/A	N/A

SOA/NPAC sends to NPAC	NPAC internal processing	NPAC sends to non-EDR LSMS	NPAC sends to EDR LSMS

Scenario: Subscription Version Behavior, <u>Post-Effective Date, but Pre-Activation Date</u> 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.	BAU	BAU
	Previous SV does not exist → reject request.	N/A	N/A
Create SV, LISP	Previous SV exists → BAU.	BAU	BAU
	Previous SV does not exist → reject request.	N/A	N/A
Create SV, PTO	Previous SV exists → reject request.	N/A	N/A
	Previous SV does not exist → BAU (fail the request).	BAU	BAU
Create SV, POOL	Reject message, send error back to SOA	N/A	N/A
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	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	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	N/A

Scenario: Subscription Version Behavior, <u>Post-Activation Date</u> 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	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 → N/A.	N/A	N/A
Create SV, LISP	Previous SV exists → BAU.	BAU	BAU
	Previous SV does not exist → N/A.	N/A	N/A
Create SV, PTO	Previous SV exists → validates that the requesting SP is the Block Holder.	N/A	N/A
	Previous SV does not exist → BAU (fail the request).	BAU	BAU
Create SV, POOL	Reject message, send error back to SOA	N/A	N/A
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	Send an M-DELETE for the SV.

SOA sends to NPAC	NPAC internal processing	NPAC sends to non-EDR LSMS	NPAC sends to EDR LSMS
	A notification is sent to the Block Holder SOA.	sub-block holder.	
Disconnect SV, POOL	Reject message, send error back to SOA	N/A	N/A

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