

Animal Disease Traceability

General Standards

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Preface

The U.S. Department of Agriculture's (USDA) Animal and Plant Health Inspection Service (APHIS) has established traceability regulations for livestock moving interstate. The purpose of the regulations is to improve the ability of APHIS to trace livestock when disease is found.

The final rule, "Traceability for Livestock Moving Interstate," references this Animal Disease Traceability General Standards document. This general standards document provides details on numbering systems and official identification devices that are authorized under the final rule. Additional information, including listing of official identification devices, is provided at <http://www.aphis.usda.gov/traceability/>.

Section A: Data Standards

Official Identification Numbers - Animals

Official identification numbering systems are fundamental to animal disease programs. Numbers for both individual animals and groups of animals are defined to support methods of official identification for the various species and for meeting production management practices. Official animal identification devices, such as eartags, have an official identification number imprinted on them. Group/lot numbers are associated to the animals through records maintained by individuals responsible for the group throughout the production chain.

Official identification numbers are nationally unique numbers permanently associated with individual animals or groups of animals. Official identification numbers are associated with individual animals or groups of animals through official identification devices or methods. Official identification numbers adhere to one of the following numbering systems:

- National Uniform Eartagging System (NUES)
- Animal identification number (AIN)
- Location-based number system
- Flock-based number system
- Any other numbering system approved by the APHIS Administrator for the official identification of animals

Individual Animal Numbers

Official animal numbering systems provide a way to uniquely identify individual animals. Official identification for certain species is based on identification devices (e.g., official eartags) that have an official animal number imprinted on them. Official identification devices that adhere to these numbering standards are listed in Section B of this report. The following table specifies the format for each official numbering system used for individual animals.

Table 1. Official Identification Numbers				
Data Element	Length	Format	Example	Comments
National Uniform Eartagging System (NUES)	9 or 8	Alphanumeric	23 ELV 4574 PA ELV 4574 23 DX 1234 PA DX 1234	
	[2]		23 PA	Default is State or Tribe numeric code. State postal abbreviation is optional.
	[3] or [2]		ELV AB	See official tag specification in Section C, Table 5, for details on the use of the letters in these positions.
	[4]		4574	4 digits in a chronological numerical sequence.
Animal Identification Number (AIN)¹	15	Numeric	840003456789012	
	[3]		840	The first 3 digits are the country code (840 = USA). (See note below regarding USA and manufacturer codes.)
	[12]		003456789012	The last 12 digits are the animal number. Start number > 3,000,000,000.
Flock-based number with a herd management number	15 Max.	Alphanumeric	MN0456 4275	
	[9] Max.		MN0456	See flock standard below.
	[6] Max.		4275	Unique herd management number.
Location-based number with a herd management number	14 Max.	Alphanumeric	IA123456 123456	
	[8] Max.		IA123456	See LID and PIN standard below.
	[6] Max.		123456	Unique herd management number.
<p>¹The alpha characters USA or the numeric code assigned to the manufacturer of the identification device by the International Committee on Animal Recording may be used as an alternative to the 840 or other prefix representing a U.S. territory; however, only the AIN beginning with the 840 or other prefix representing a U.S. territory will be recognized as official for use on AIN tags applied to animals on or after March 11, 2015.</p> <p>Note: AINs beginning with the 840 prefix may not be applied to animals known to have been born outside the United States.</p>				

Animal Group Identification Numbers

Group/Lot Identification Numbers (GINs)

The use of GINs provides a way to uniquely identify a unit of animals of the same species that is managed as one group throughout the preharvest production chain. The GIN consists of the following:

- One of the location identifiers (premises identification number (PIN) or location identification number (LID)) defined in the following pages
- A six-digit representation of the date on which the group or lot of animals was assembled or date the group was initiated if more than one day (MM/DD/YY)
- Two additional digits, ranging from 01 to 99, for the numbering of different groups or lots of animals assembled on the same premises on the same day. When more than one group of animals is assembled, the groups would be designated consecutively as 01, 02, 03, etc.

Flock Identification Numbers

The National Scrapie Eradication Program furnishes ear tags to sheep and goat producers. The numbering system for these tags combines a nationally unique flock identification number (FIN) with the producer's unique livestock production numbering system. This flock-based numbering system represents an animal group that is associated with one or more locations. The system serves the sheep and goat industries well in their disease control and eradication efforts.

A State or Federal animal health authority assigns the FIN to a group of animals managed as a unit on one or more premises under the same ownership.

The following table specifies the official GINs.

Table 2. Animal Group Identification Numbers				
Data Element	Length	Format	Example	Comments
Group/Lot ID Number (GIN) - Using a PIN	15	Alphanumeric	004T56711221105	
	[7]		004T567	The first 7 characters are the PIN.
	[6]		112211	The next 6 characters are the date the lot was established: MMDDYY.
	[2]		05	The last 2 characters are the number (count 01-99) of the group assembled at a premises on the same day. (01 is the default when one group is assembled.)
Group/Lot ID Number (GIN) ¹ - Using a LID	14 or 16	Alphanumeric	WA123411221105 MN12347811221105	
	[6] or [8]		WA1234 MN123478	The first 6 or 8 characters are the location ID number.
	[6]		112211	The next 6 characters are the date the lot was established: MMDDYY.
	[2]		05	The last 2 characters are the number (count 01-99) of the group assembled at a premises on the same day. (01 is the default when one group is assembled.)
Flock Identification Number (FIN)	9 Max	Alphanumeric		
	[2]		PA	State postal abbreviation required as the first two characters.
	Max of [7]		723456A	FINs exclude the letters I, O, or Q from the characters following the State abbreviation.
¹ LIDs may also use the 7-character format. The check digit must be used as prescribed for PINs.				

Location Numbering Systems

States and Tribes may elect to use location identifiers to support their animal disease traceability plan. Two processes, explained below, support the administration of location identifiers that adhere to the standards defined in Table 3. PINs are available through the PIN allocator, a software application tool that APHIS provides access to for States and Tribes electing to use it. States may also use their own process for administering unique State-issued location identifiers. In these situations the State or Tribe has their own local system and process for issuing location numbers to locations. To avoid confusion in presenting these options in this document, State-

issued location identifiers are referred to as LIDs, and the location numbers States and Tribes obtain through the allocator are referred to as PINs (or standardized PINs). States and Tribes may choose to use other terms in their materials.

States and Tribes are not required to provide PINs or LIDs for the administration of their traceability plans. However, if they choose to use location identifiers to administer their traceability activities, following the standards below will ensure that their information systems are compatible with other traceability and animal health databases.

Location Identification Numbers

LIDs are administered through a State’s or Tribe’s internal system. All LIDs start with the State or Tribe code which makes the LIDs nationally unique. They consist of six or eight alphanumeric characters. Additionally, seven alphanumeric characters may be used only when the last character is a check digit based on ISO 7064:1983, a standard published by the International Organization for Standardization (ISO). Using the State postal abbreviation as the first two characters ensures.

Premises Identification Numbers

States and Tribes may elect to use the PIN in their traceability system. The standardized PIN, obtained through the APHIS PIN allocator, consists of seven alphanumeric characters. The last character is a check digit based on ISO 7064:1983. States may use the State’s postal abbreviation as the first two of the seven characters (for example, OH341T4) unless the State is using a seven-character LID. Tribes may also have codes reserved for use with PINs they administer. The codes for Tribes will be assigned upon request. States and Tribes obtaining PINs from the PIN allocator may use either the Standardized Premises Identification System or a Compliant Premises Identification System. The standardized and compliant systems are defined in the Animal Disease Traceability Information Technology technical document.

The LID and PIN data standards are defined in the following table.

Data Element	Length	Format	Example	Comments
LID ¹	6	Alphanumeric	MN4321	First 2 characters are the State postal abbreviation.
	8	Alphanumeric	CA654321	First 2 characters are the State postal abbreviation.
PIN	7	Alphanumeric	A123R69	Last character is a check digit. ²

¹ States and Tribes may issue LIDs in the 7-character format only when the ISO 7064:1983 check digit is used as the last character.
² The check digit calculation algorithm is based on ISO 7064:1983, “Data Processing – Check Character Systems.” (See Animal Disease Traceability Technical Standards document.)

Note: To avoid confusion with the numbers 0 and 1, the LID and PIN will not contain the letters O or I except when the letters are contained in the State or Tribal code.

State and Tribal Codes

State and Tribal codes used with NUES tags and location identifiers are listed below. Additional codes for Tribes will be established upon request to APHIS.

Table 4. State, Tribe, and Territory Codes					
Sort by Name			Sort by Numeric Code		
Alabama	AL	64	Maine	ME	11
Alaska	AK	96	New Hampshire	NH	12
American Samoa	AS	99	Vermont	VT	13
Arizona	AZ	86	Massachusetts	MA	14
Arkansas	AR	71	Rhode Island	RI	15
California	CA	93	Connecticut	CT	16
Colorado	CO	84	New York	NY	21
Commonwealth of the N. Marianas	MP	98	New Jersey	NJ	22
Connecticut	CT	16	Pennsylvania	PA	23
Delaware	DE	50	Ohio	OH	31
Florida	FL	58	Indiana	IN	32
Georgia	GA	57	Illinois	IL	33
Guam	GU	97	Michigan	MI	34
Hawaii	HI	95	Wisconsin	WI	35
Hualapai Tribe	HT	78	Minnesota	MN	41
Idaho	ID	82	Iowa	IA	42
Illinois	IL	33	Missouri	MO	43
Indiana	IN	32	North Dakota	ND	45
Iowa	IA	42	South Dakota	SD	46
Kansas	KS	48	Nebraska	NE	47
Kentucky	KY	61	Kansas	KS	48
Louisiana	LA	72	Delaware	DE	50
Maine	ME	11	Maryland	MD	51
Maryland	MD	51	Virginia	VA	52
Massachusetts	MA	14	West Virginia	WV	54
Michigan	MI	34	North Carolina	NC	55
Minnesota	MN	41	South Carolina	SC	56
Mississippi	MS	65	Georgia	GA	57
Missouri	MO	43	Florida	FL	58
Montana	MT	81	Virgin Islands (U.S.)	VI	59
Navajo Nation	NN	77	Kentucky	KY	61
Nebraska	NE	47	Tennessee	TN	63

Sort by Name			Sort by Numeric Code		
Nevada	NV	88	Alabama	AL	64
New Hampshire	NH	12	Mississippi	MS	65
New Jersey	NJ	22	Arkansas	AR	71
New Mexico	NM	85	Louisiana	LA	72
New York	NY	21	Oklahoma	OK	73
North Carolina	NC	55	Texas	TX	74
North Dakota	ND	45	Navajo Nation	NN	77
Ohio	OH	31	Hualapai Tribe	HT	78
Oklahoma	OK	73	Montana	MT	81
Oregon	OR	92	Idaho	ID	82
Pennsylvania	PA	23	Colorado	CO	84
Puerto Rico	PR	94	New Mexico	NM	85
Rhode Island	RI	15	Arizona	AZ	86
South Carolina	SC	56	Utah	UT	87
South Dakota	SD	46	Nevada	NV	88
Tennessee	TN	63	Washington	WA	91
Texas	TX	74	Oregon	OR	92
Utah	UT	87	California	CA	93
Vermont	VT	13	Puerto Rico	PR	94
Virgin Islands (U.S.)	VI	59	Hawaii	HI	95
Virginia	VA	52	Alaska	AK	96
Washington	WA	91	Guam	GU	97
West Virginia	WV	54	Commonwealth of the N. Marianas	MP	98
Wisconsin	WI	35	American Samoa	AS	99

In addition to the codes listed above, the two letters “US” may be used as the first two characters on NUES tags.

Country Codes for U.S. Territories

ISO 3166 establishes country codes. The country code for the United States is 840. U.S. Territories may use their ISO country code as the first three characters of the AIN. The following table lists the ISO country codes for the U.S. Territories.

Territory	Code	Territory	Code
American Samoa	016	Northern Mariana Islands	580
Guam	316	Palau	585
Marshall Islands	584	Puerto Rico	630
Micronesia, Federated States of	583	Virgin Islands	850

Section B: Administration of Official Animal Identification Methods and Devices

Official identification methods and devices officially identify an animal or group of animals by applying an official identification number to an animal or associating an official identification number with an animal or group of animals. Tables 1 and 2 in Section A of this report list official animal numbering systems for livestock.


Official identification devices and methods are listed in the title 9 of the *Code of Federal Regulations* (9 CFR), part 86, by species.

Official Eartags

Official eartags, approved for certain species, are tags approved by APHIS that provide official identification numbers for individual animals. Before a manufacturer can produce and sell eartags bearing the official eartag shield, the tag must be approved by APHIS.

A description of the types of official eartags with the specifications and options as well as lists of official eartags that are currently approved are provided on the ADT Website at: <http://www.aphis.usda.gov/traceability/materials.shtml>.

The primary criteria for official eartags include the following:

- Imprinted with an official identification number (see Table 1)
- Official eartag shield The logo is a shield-shaped emblem with the letters "US" inside, representing the official eartag shield.
- Tamper evident, high retention
- Other characteristics defined through tag specification (defined on tag approval applications)

States obtaining official eartags direct from manufacturers may imprint their State's postal abbreviation inside the official eartag shield in lieu of the letters "US". Likewise, Tribes may imprint their alpha code (see Table 4).

Distribution of Official Identification Devices

Proper administration of official identification devices is critical to support animal disease traceability. APHIS provides certain official identification devices to producers to apply to their animals. Distribution records of these devices are to be administered as explained below.

National Uniform Eartagging System

NUES tags have historically been used by animal health officials in animal disease programs. The animal disease traceability framework allows producers to use NUES tags, commonly referred to as "brite" tags, when authorized by the State or Tribal animal health official. The following provides a basic overview of the key points regarding the distribution of NUES tags to producers:

State, Tribal, and Territory animal health officials and accredited veterinarians¹ may provide NUES identification eartags to producers who wish to use them for official identification and other purposes without administering the eartags through a specific disease program. This does not apply to eartags that are specific to a disease program, such as brucellosis calfhood vaccination eartags. This enables producers to use the eartags as a tool to qualify their animals for interstate movement. In such cases, the State, Tribe, or Territory animal health officials will maintain complete oversight for the integrity of the information.

One of the duties of State, Tribal, and Territorial animal health officials providing NUES tags is ensuring sufficient contact information is collected about where NUES eartags are distributed to meet the traceability needs of the State, Tribe, or Territory. At a minimum, the distribution records need to be maintained for 5 years and must include:

- The name of the person the tags are issued to.
- The street address, city, State, and ZIP code where the tags are distributed.
- The identification numbers issued.
- The date the tags were issued.
- The name and contact information of the person issuing the tags.

States and Tribes may use the Animal Identification Management System (AIMS) to maintain NUES tag distribution records.

The use of the AIMS requires the use of either a LID or PIN for each distribution record entered into AIMS. APHIS will, upon request, provide an alternative database that would support the recording of distribution records with the above information only.

More specific details on the administration of NUES eartags is available in VS Memorandum 578.12: Distribution and Use of Official Identification Eartags with Numbers Conforming to the National Uniform Eartagging System (3/15/2011)

Producers considering the use of and availability of NUES tags should contact their State or Tribal animal health official.

Animal Identification Number Devices

AIN device managers and resellers distribute AIN devices with the 840 prefix to producers. State and Federal animal health officials may also use AIN devices when they administer animal disease programs. APHIS, through an application and approval process, approves AIN devices that meet established standards. Approved AIN manufacturers are allocated the 840 numbers and are authorized to imprint or encode the AIN only on their approved devices.

AIN device manufacturers distribute AIN devices through AIN device managers, or may act as an AIN manager themselves. All distribution records of 840 AIN tags administered by AIN managers and State and Federal animal health officials must be reported to the AIMS by the person who has possession of the device when distributing the device to the next individual, whether it is a producer or another reseller. All recipients of AIN devices must first have a LID

¹ Producers may be able to obtain NUES eartags directly from State or Tribal animal health officials depending on the policies established at the State or Tribal level.

or PIN as defined in Section A and provide that number to the person that they are obtaining the devices from. The person responsible for the distribution of the AIN devices is responsible for the entry of the distribution record into AIMS. The record includes the AINs, date of distribution, and LID or PIN/NPN where the devices were distributed. Details of the processes available for completing these distribution records are provided in the AIMS user manual.

Producers electing to use AIN devices may contact the supplier of the tags in their area. The complete listing of AIN devices and the AIN tag manufacturer's information is at http://www.aphis.usda.gov/traceability/downloads/AIN_device_list.pdf.

Sheep and Goat Tags

Administration of official identification requirements for scrapie program tags is explained in the Scrapie Eradication Uniform Methods and Rules document at http://www.aphis.usda.gov/animal_health/animal_diseases/scrapie/downloads/umr_scrapie.pdf.

Premises Identification Number Tags for Slaughter Swine

PIN tags for slaughter swine provide an option to officially identify sows and boars to the premises where they were kept immediately before entering harvest channels. PIN tags for slaughter swine may be obtained from authorized manufacturers. As with the USDA backtag applied at markets, the PIN tag will be collected as an official form of identification to be associated with any blood or tissue samples collected for disease surveillance. If a PIN tag includes a manufacturer printed number that is unique within a herd, the tag would also qualify as an official eartag for interstate movement of individual animals.

Replacement of Official Identification Eartags

Replacement eartags for retagging animals that lose their official eartag are defined in 9 CFR 86.4 (d) removal or loss of official identification devices.

Issuance of Duplicate Official Identification Eartags

Duplicate official identification eartags may be obtained from approved eartag manufacturers when an official eartag was lost and the owner or person responsible for the animal needs to retag the animal with the official identification number of the lost eartag. This may be a standard practice for some breed registries or other genetic companies that use official eartags in their programs. For AIN eartags, the manufacturer will submit a record to AIMS with the information on the reissuance and distribution of the duplicate eartag. Additionally, the eartag manufacturer will imprint the designated symbol on the eartag to reflect that the tag is a duplicate of a previously issued tag. When the duplicate eartag contains radio frequency identification technology, the manufacturer will encode the number in accordance with ISO 11784 for administering transponders.

Approved Tagging Sites

Approved tagging sites are locations authorized by APHIS, State, or Tribal animal health officials where livestock may be officially identified on behalf of their owner or the person in possession, care, or control of the animals when they are brought to the tagging site. In these

cases, livestock required to be officially identified may be moved interstate and officially identified at the approved tagging site.

The animals must be officially identified at the tagging site before they are commingled with animals from other premises or identified by other practices that will ensure the identity of the animal is accurately maintained until tagging. This will ensure the official identification numbers of the eartags are correlated to the owner of the animals (or person responsible) when shipped to the tagging site. For example, a livestock market, acting as an approved tagging site, may use backtags to temporarily identify the animal upon unloading. The approved tagging site, at a minimum, must:

- Obtain official identification eartags as directed by APHIS, State, or Tribal animal health officials.
- Maintain a record of all official identification eartags received for tagging animals at the tagging site.
- Receive animals requiring official identification on behalf of their owner or the person in possession, care, or control of the animals when they are brought to the tagging site agrees to have the animals officially identified in accordance with approved tagging site protocols.
- Maintain tagging records using forms or electronic systems as directed by APHIS, State, or Tribal animal health officials to include, at a minimum:
 - The name of the owner or person responsible for the animals tagged and their street address, city, State, and ZIP code
 - The official identification numbers of the tags applied associated with the owner or person responsible for the animals.
 - The date the official identification eartags were applied.
- Submit the records of tags applied to the designated animal health official as directed by APHIS, State, or Tribal animal health officials.

When animals are moved to an approved tagging site to fulfill the official identification requirements, the interstate certificate of veterinary inspection or other movement document must contain a statement verifying that the official eartags are to be applied at an approved tagging site along with the name and complete address of the tagging site. States will provide public listing of tagging sites.

Entities interested in becoming an approved tagging site should contact their APHIS, State, or Tribal animal health official.