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Developed by:

**National Identification Development Team**

*"A cooperative effort of industry and government"*

[www.usaip.info](http://www.usaip.info)

*Protecting American Animal Health*

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## **EXECUTIVE SUMMARY**

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Protecting American animal agriculture by safeguarding animal health is vital to the wellbeing of all U. S. citizens. It promotes human health; provides wholesome, reliable, and secure food resources; mitigates national economic threats; and enhances a sustainable environment. Essential to achieving this goal is an efficient and effective animal identification program.

Building upon previously established and successful animal health and animal identification programs involving many animal industries, an industry-state-federal partnership, aided by the National Institute for Animal Agriculture (NIAA), was formed in 2002 to more uniformly coordinate a national animal identification plan. This resulting plan, requested by the United States Animal Health Association (USAHA) and facilitated by USDA's Animal and Plant Health Inspection Service (APHIS), was formulated in 2003 for presentation at the October, 2003 annual meeting of the USAHA. More than 100 animal industry and state-federal government professionals representing more than 70 allied associations/organizations collectively assessed and suggested workable improvements to the plan to meet future U. S. animal identification needs.

Fundamental to controlling any disease threat, foreign or domestic, to the nation's animal resources is to have a system that can identify individual animals or groups, the premises where they are located, and the date of entry to that premises. Further, in order to achieve optimal success in controlling or eradicating an animal health threat, the ability to retrieve that information within 48 hours of confirmation of a disease outbreak and to implement intervention strategies is necessary. The USAIP is focused on utilizing state-of-the-art national and international standards with the best available and practical technologies. It is dynamic and flexible, and will incorporate new and proven technologies as they become available. States' needs in implementing animal identification will receive priority within the uniformity provided by federal oversight.

The USAIP currently supports the following species and/or industries: bison, beef cattle, dairy cattle, swine, sheep, goats, camelids (alpacas and llamas), horses, cervids (deer and elk), poultry (eight species including game birds), and aquaculture (eleven species). Implementation will be in three phases: Phase I involves premises identification; Phase II involves individual or group/lot identification for interstate and intrastate commerce; and Phase III involves retrofitting remaining processing plants and markets and other industry segments with appropriate technology that will enhance our ability to track animals throughout the livestock marketing chain to protect and improve the health of the national herd. Initial implementation will focus on the cattle, swine, and small ruminant industries. In transition, the USAIP recommends that:

- all states have a premises identification system in place by July, 2004; unique, individual or group/lot numbers be available for issuance by February, 2005;
- all cattle, swine, and small ruminants possess individual or group/lot identification for interstate movement by July, 2005;
- all animals of the remaining species/industries identified above be in similar compliance by July, 2006.

These standards will apply to all animals within the represented industries regardless of their intended use as seedstock, commercial, pets or other personal uses.

It is well acknowledged that costs associated with the USAIP will be substantial and that a public/private funding plan is justified. Significant state and federal costs will be incurred in overseeing, maintaining, updating, and improving necessary infrastructure. Continued efforts will be required to seek federal and state financial support for this integral component of safeguarding animal health in protecting American animal agriculture.

## **INTRODUCTION**

The United States Animal Identification Plan defines the standards and framework for implementing a phased-in national animal identification system.

### **Goal**

To achieve a traceback system that can identify all animals and premises potentially exposed to an animal with a Foreign Animal Disease (FAD) within 48 hours after discovery.

Achieving this goal will enhance the efficiency and effectiveness of current animal\* health regulatory programs.

*\* This Plan currently includes all domestic cattle, bison, swine, sheep, goats, cervids (deer and elk), equine, poultry, game birds, aquaculture, camelids (llamas, alpacas, etc.), ratites (ostriches, emus, etc.).*

### **The Need for Animal Identification**

**Maintaining the health and economic viability of US animal agriculture is critical to the industry and to the safety of the U.S. food supply**, and, therefore, is the focus of the National Identification Plan. Establishing the requirements for animal identification that provide the necessary infrastructure to monitor animal diseases, to support their control or eradication, and to establish an adequate emergency management response system provides the foundation of the “system” for the national program.

Maintaining the health of the U.S. animal herd is the most urgent issue for the industry and is the focus of the plan. The benefits of a national animal identification system include:

- Enhanced disease control and eradication capabilities for rapid containment of foreign animal disease outbreaks and enhanced ability to respond to biosecurity threats.
- Enables the industry to meet the demands of domestic and international consumers for source-verified products. This ability enables producers to maintain and build market access.
- Mitigation of threats to biosecurity of the food supply, either intentional or unintentional.

# OVERVIEW OF US ANIMAL IDENTIFICATION PLAN

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## **Brief History**

While the history of efforts to develop a national animal identification plan dates back over three decades, most recently the National Institute for Animal Agriculture (NIAA) created and coordinated the efforts of the National Identification Task Force in 2002. More than 70 national livestock industry organizations were invited to participate on the Task Force.

This Task Force developed the National Identification Work Plan (NIWP). This document was presented and accepted by the United States Animal Health Association (USAHA) in October, 2002 as a guideline to establish a national animal identification system to enhance animal disease monitoring, surveillance, control and eradication in the U.S. USAHA passed a resolution requesting USDA/APHIS to establish a National Animal Identification Development Team that would use the NIWP as a guideline to establish a national plan. The US Animal Identification Plan reflects the work of this ID Development Team.

## **The USAIP Development Team**

To formalize the industry-state-federal partnership, the USAIP Development Team was named in the Spring of 2003. The Team is composed of a Steering Committee and five subcommittees, including: Communications, Governance, Information Technology, Standards and Transition. The ID Team roster is listed in Appendix F.

## **Time Table - 2003**

The Steering Committee and Subcommittees initiated the discussion to advance the 2002 National Identification Plan in early 2003. The following are specific target dates to achieve presentation of the USAIP at the October 2003 USAHA meeting.

- September 2: USAIP Preliminary Draft distributed to Development Team and Animal Health Official Steering Committee
- September 10 - 11: Development Team revises draft document (KC meeting)
- September 29: US Animal Identification Plan distributed electronically (email and posted on website)
- October 1: US Animal Identification Plan distributed to Development Team and Animal Health Officials via mail
- October 14: USAIP Report to USAHA Livestock Identification Committee

The National Institute for Animal Agriculture (NIAA) plans to host an ID INFO Expo 2004 the first part of 2004. This venue will provide the opportunity for stakeholders to have extensive discussions on the USAIP.

## II. COMMUNICATIONS

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The U.S. Animal Identification Plan (USAIP) must be well-communicated with parties involved in the production and marketing of food animals and livestock. The communication plan will create awareness and understanding of:

- The need for identification
- The value of premises and animal identification to industry stakeholders
- The short and long term plans of the industry to establish a national ID system
- The basic components of a national ID system and the importance of each (Premises ID, Individual ID, Lot ID, ID Devices, etc.)
- Stakeholder requirements

The goal of the communication plan is to prepare and implement a strategy to inform and educate stakeholders on the USAIP and develop needed resources and delivery systems to ensure industry understanding and support.

### II. A. Communication Objectives

1. Facilitate information flow among the USAIP development team subcommittees in order to ensure efficient and effective communication.
2. Identify industry segments and stakeholders responsible for making a national identification system successful.
3. Develop communications delivery systems to promote timely, user-friendly formats for stakeholders to access information in the USAIP involving:
  - a. Periodic news releases communicating progress of plan development and significant events concerning animal identification.
  - b. A public Internet Website to provide updated information with the address of [www.usaip.info](http://www.usaip.info).
  - c. Provision of a “communications coordinator” to ensure that communication systems are as effective and functional as possible.
4. Develop “template” communications tools for various stakeholder segments of the industry. These templates will be species and segment directed and may consist of fact sheets, brochures, videos, CDs, or other media based on the audience being reached.
5. Develop and train “outreach teams” to take the messages of the USAIP to the stakeholders in the industry. These teams will consist of key individuals and groups most appropriate to deliver information and training to stakeholder groups.

## III. STANDARDS

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To achieve the “48-hour” traceback objective, the movement of individual animals, or “units of animals”, must be recorded. Reporting this information to a central database or creating a seamlessly linked local database infrastructure could enhance traceback. Animal agriculture has demonstrated its willingness to adopt the necessary identification system for each species in order to protect the health of the national herd. Industry and government are committed to resolving issues regarding confidentiality and security to protect and improve the health of the national herd. Standards for certain data elements are essential for a successful information system in which data is shared among states and the federal government, as well as being provided or linked through certified commercial service providers. The key data elements requiring standards include:

- A uniform premises identification system
- A uniform, nationally recognizable numbering system for individual animal identification
- A uniform, nationally recognizable numbering system for a group or lot of animals
- A uniform numbering system for Non-producer Participants

Additionally, standards are required for identification devices to ensure minimum performance standards are achieved as well as standards associated with the integration of automated data collection systems. Such standards include:

- Visual identification methods and devices for official use in livestock
- Electronic identification methods and devices for official use in livestock

### III.A. Premises Identification

The USAIP 48-hour traceback objective requires that the information system records an animal’s or unit of animals’ origin and its movement to other locations for its entire life. Such locations are referred to as “premises”. Identifying these premises with a single and unique number is essential to trace animals potentially exposed to disease. If more than one premises number is used for the same location, animals subject to contagious disease can go undetected. Therefore, the establishment of a unique location identifier is required by the US Animal Identification Plan.

#### III.A.1. Definition of a premises

The diversity of the environments in which we manage livestock makes the definition of such locations quite complex. For purposes of the USAIP, the following defines a premises:

“ A premises is an identifiable physical location that, in the judgment of the State Animal Health Official or Area Veterinarian in Charge, and when appropriate in consultation with the affected producer, represents a unique and describable geographic entity (where activity affecting the health and/or traceability of food producing animals may occur) or represents the producer contact location when extensive grazing operations exist.”

\* A grazing location is a geographic area defined by the producer where his stock resides at some time during their life and where minimal or no facilities or physical structures exist. This area is not easily definable and turnover of stock may occur frequently. If in the judgment of State and Federal animal health officials it does not meet the premises definition it will not be required to have a premises ID assigned. Animal movements will be recorded and maintained at a central location identified with a premises ID number and all movements into commerce will be reported from that premises. A geographic description of grazing locations should be recorded in the state premises system.

*Acknowledgment: This premises definition is a result of the efforts of a Working Group established from the Standards Subcommittee. The Standards Subcommittee has not had an opportunity to approve this work and it should not be assumed that this is an accepted standard until the subcommittee has reviewed this recommendation. At the same time, the Standards Subcommittee acknowledges the expertise of the working group and considers it important that this proposed definition be made available for comment by a wider audience.*

*\*Note: Consultation with the State or Federal Animal Health Official is on an as need basis when the localities of the entity warrant additional consideration to ensure the producer's needs are addressed. Decisions on whether multiple premises identification numbers are needed should be based on epidemiologic links and/or the likelihood of disease transmission between the premises. For instance, if an owner has multiple premises, and animals are frequently moved among those premises, then one premises number can be used, and all locations should be associated with that number. However, if a location has animals owned by others moving in and out, a separate premise number should be considered.*

Uniquely assigned premises numbers to all locations in the livestock and poultry production chain, including animal production operations, markets, assembly points, exhibitions, processing plants, etc., will increase the accuracy and efficiency of the identification system. The ability to link the information to a premises is achieved by a unique premises identification number.

**Standard: US Premises Identification Number** (revised July 15, 2003)

The National Premises Identification Number provides a unique number across the entire United States for locations involved in animal agriculture and links that location to the entity that participates in animal production and/or commerce.

The field specification for the National Premises Identification Number is defined below.

US Premises Identification Number			
Field Structure	Type	Example	Comments
7 Character	Alphanumeric	A123R69	Right most character is a check digit <sup>1</sup>

<sup>1</sup> See Appendix E for the check digit formula

**III. A. 2. Administration of Premises System**

The administration and management of the premises system is the responsibility of each state department of agriculture (or as established by the appropriate governing body within the state). They may operate their own system or one developed by a private company, the USDA, or those established through regional alliances. Regardless, the states, utilizing a certified state premises system, have the responsibility to identify premises within the geographic area for which they are responsible. The States will interface or link with the Premises Allocator System, administered by the USDA, to obtain a nationally unique premises number (see Appendix C. Premises Identification Number Allocator).

The following apply to the administration of a premises:

- Premises information shall be kept confidential and only partial data will be available to authorized officials.
- A location will maintain the same Premises Number when sold intact. A historic record providing the previous contact information and the dates that information was associated with the premises must be maintained on the state premises system.
- Production locations that have multiple species must have one unique Premises Identification Number.
- Owners with multiple production units and/or holding units will consult with their State Animal Health Official or Area Veterinarian in Charge to determine if multiple

premises identification numbers are required. Establishing multiple premises identification numbers should be based on epidemiologic links and/or the likelihood of disease transmission among the premises.

- The owner of the premises, or person designated by the owner of the premises, must register their location(s) and must keep the required information current.
- The state will electronically update new and revised premises records to the National Premises Repository as prescribed.

### II.A.3. Premises Data Element Standards

The unique premises identification number is the “key” to the National Premises ID Repository and what allows authorized users to access necessary information, in particular the contact person of a premises when an animal health official needs to initiate communication when investigating an animal disease problem. To support traceback functions, communication with individuals responsible for the premises must be made in a timely manner. While the owner of the operation is often the appropriate contact person for the premises, the legal ownership of the premises is not a requirement of the system. Rather, the name of the person on record is the person who is to be contacted when a traceback is performed. The entity that registers the premises determines who the appropriate contact person is. Additional information, such as address, phone, GPS coordinates, etc., provides the ability to establish communication with a production unit/operation where an animal is or has been located.

Establishing information standards is key for the successful integration of the premises identification system. The USDA, APHIS, VS is to provide a centralized National Premises Repository for all premises that each state issues along with the required information for each premises as defined below. This “master” national premises repository provides for the immediate lookup access by authorized users to validate any premises in the country. Such database is designed to be secure, accessible only to authorized users. As well, the database is to be exempt from FOIA (Freedom of Information Act).

The National Premises Repository will be a critical component of the electronic Interstate Certificate of Veterinary Inspection (ICVI) to ensure that animal movements are recorded with the accurate premises number.

#### **Standard: Data Elements for the National Premises Repository**

The following chart defines the fields (data elements) that are required by the National Premises Repository.

<b>Data Elements - National Premises Repository</b>		
Field Name	Type	Length
US Premises ID Number	Alphanumeric	7
Name of Entity	Alphanumeric	30
Owner or Appropriate Contact Person*	Alphanumeric	30
Street Address	Alphanumeric	30
City	Alphanumeric	20
State	Alpha	2
Zip/Postal Code	Numeric	9
Contact Phone Number	Numeric	15
Operation Type	Character	1
Date Activated	Date (YYYYMMDD)	8
Date Retired	Date (YYYYMMDD)	8
Reason Retired	Character	1
* The contact person should be the person the animal health official is to communicate with when performing a traceback (as determined by the entity).		

**Standard: State/Local Premises Identification Systems**

The State Premises system will collect and maintain the information required by the National Premises Repository. In addition, the states will maintain the historic data for 20 years. This will provide Animal Health Officials with the proper contact reference when the current contact person was not associated with the premises during the period being researched in a traceback situation.

<b>Data Elements - State Premises Database</b>		
<b>Field Name</b>	<b>Type</b>	<b>Length</b>
US Premises ID Number	Alphanumeric	7
Name of Entity	Alphanumeric	30
Owner or Appropriate Contact Person*	Alphanumeric	30
Street Address	Alphanumeric	30
City	Alphanumeric	20
State	Alpha	2
Zip/Postal Code	Numeric	9
Contact Phone Number	Numeric	15
Operation Type	Character	1
Date Activated	Date (YYYYMMDD)	8
Date Retired	Date (YYYYMMDD)	8
Reason Retired	Character	1
Historic Data**		
Previous Contact Person	Alphanumeric	30
Previous Contact Person Phone	Numeric	15
Previous Contact Person - Start Date	Date (YYYYMMDD)	8
Previous Contact Person - End Date	Date (YYYYMMDD)	8
GPS		
Longitude	Degree/Minutes	
Latitude	Degree/Minutes	
Alternative Phone Numbers **	Numeric	15
<p>* The contact person should be the person the animal health official is to communicate with when performing a traceback (as determined by the entity).</p> <p>** Requires facility to store multiple records.</p>		

**Standard: List Codes**

Certain fields are predefined for list standards that will allow the data to be selected and stored consistently. Such list standards are listed below.

List Codes					
Field Name	Type	Length	Field Name	Type	Length
	List Options	Stored As		List Options	Stored As
<b>Species</b>	Character	3	<b>Sex</b>	Character	1
	Bovine (Bison and Cattle)	BOV		Male	M
	Camelid (Alpaca & Llama)	CAM		Female	F
	Equine (Horses)*	EQU		Neutered/castrated male	C
	Porcine (Swine)	POR		Neutered/spayed female	S
	Ovine (Sheep)	OVI		Mixed (used only in groups)	X
	Caprine (Goats)	CAP			
	Cervids	CER			
	Deer	DEE			
	Elk	ELK			
	<i>* Equine industry will expand as necessary</i>		<b>Operation Type</b>	Character	1
	Poultry	POU		Clinic	C
	Chickens	CHI		Exhibition	E
	Turkeys	TUR		Laboratory	L
	Geese	GEE		Market/Collection Point	M
	Ducks	DUC		Production Unit*	P
	Pheasants	PHE		Port of Entry	B
	Guineas	GUI		Quarantine Facility	Q
	Quail	QUA		Slaughter Plant	S
	Pigeon	PGN		Tagging Site	T
				Rendering	R
				Non-producer participants	N
				<i>* Hunt Ranches, etc. included</i>	
	Aquaculture	AQU	<b>Premises - Reason for Retired</b>	Character	1
	Trout	TRO		Error (Reported in error)	E
	Salmon	SAL		Developed (Operation terminated resulting from commercial development)	D
	Catfish	CTF		Merged	M
	Tilapia	TIL		Split	S
	Striped Bass	SBA			
	Shrimp	SHR			
	Crawfish	CRA			
	Oysters	OYS			
	Clams	CLM			
	Scallops	SLP			
	Mussels	MSL			

### III. B. US Non-producer Participant Numbers

The USAIP provides for the establishment of Non-producer Participants who have authorized responsibilities as defined in the Governance section of this report. These participants may submit information to the designated databases. Data they supply will be associated with their Non-producer Participant Number so proper controls and integrity measures of the data can be maintained. The USDA will establish enrollment/application procedures for Non-producer Participants and will be responsible for the allocation of unique Non-producer Participant Numbers to such entities/individuals.

#### Standard: US Non-producer Participant Numbers

The Non-producer Participant Number is a unique 7-character field as presented in the following chart.

US Non-producer Participant Numbers			
Field Structure	Type	Example	Comments
7	Alphanumeric	H892345	USDA will allocate unique numbers to approved Non-producer Participants

A US Non-producer Participant number needs to must be obtained from USDA/APHIS before data can be uploaded to the national system. This allows the submitting Non-producer Participant to be contacted in the event of error in the file they submit.

### III. C. Animal Identification

Two types or levels of animal ID are necessary to support animal disease management programs: individual animal and “group/lot” identification. Individual animal identification is needed for tracking animals that are destined to be commingled with animals outside of the production system in which they were born as they move through the production chain. While certain traceback functions can be achieved with Premises ID alone it cannot be used to record an individual animal’s movement through multiple marketing and commingling points. In this instance, individual animal identification is necessary.

Group/Lot ID can be used in species where groups of animals are assembled from within the same production system and tracking is achieved through recording of group movements and the maintenance of required production record elements. In the event animals identified through Group/Lot ID become commingled with animals outside the production system, individual animal identification becomes necessary. Groups are defined as static or dynamic and described in more detail in the Group/Lot section below. The identification number for units of animals is referred to as “Group/Lot ID”.

#### III.C.1. Individual Animal Numbers

The collective livestock industries agree that a national numbering system is most effective when individual ID is required. However, with several “official” numbering systems in use today, achieving a single national numbering system can only be accomplished through a planned transition. The standard for the single national numbering system should be:

- Compatible with national numbering systems already established in other countries
- Avoid duplication of any existing numbers

Current numbering systems considered official for the interstate movement of livestock include:

- USDA uniform state series code
- Breed registration numbers
- Premises ID used in combination with a unique herd management ID

Additionally, the American Identification Number and the RFID code number in ISO compliant transponders is to be recognized as an official number by an interim rule during a transition period according to the USAIP (see Section VI.E.2.).

The goal of 48-hour traceback, most likely, will require the use of Radio Frequency Identification technology to automate the recording of animal movements. ISO 11784 establishes the unique code of each transponder contained within the 64 bit code as a three digit ISO country code plus 12 numeric characters.

**Standard: US Animal Identification Numbering System**

To support the successful transition and integration of RFID technology, the US Animal Identification Plan will adopt the ISO code structure as the standard for the country’s national animal numbering system (same code structure for RFID codes and visual national numbers).

The US Animal Identification Number (USAIN) will become recognized as an official animal number as set forth in the Governance section of the USAIP and is defined as:

<b>US Animal Identification Number (USAIN)</b>			
<b>Field Structure</b>	<b>Type</b>	<b>Example</b>	<b>Comments</b>
3	Numeric	840	
12	Numeric	123456789012	Start number > 2,000,000,000

*Note: Both fields stored and transferred in numeric format.*

*Note: The format of the American Identification Numbering system is similar to the ISO standard for the RFID code structure, but it does differ. The American Identification Number contains a check digit and its field character specification is alpha numeric. To avoid confusion with the American Identification Numbering System and duplication of those existing numbers, the USAIN will start at 2,000,000,000. Previously allocated American Identification Numbers, but not assigned to a production unit, may be recalled so procedures set forth for the administration of USAIN can be applied for those numbers.*

Within each species, it is realized that certain management objectives will require individual identification even if premises ID is adequate for an animal disease program. Genetic programs, for example, require individual identification. When such ID is required, it is recommended that the official US Animal Identification Number be used.

### III.C.2. Group/Lot Identification

Group/Lot ID is used in industries where production practices involve management by groups. In such cases, there is no traceback advantage to individual identification. Thus, individual animals will not be identified; instead, groups of animals can be tracked using appropriate group identifiers and production records. A unique and standardized number will be necessary to track groups of animals at the national level in a central database.

An animal production system can use Group/Lot Identification if the producer is able to demonstrate to the satisfaction of state animal health officials that, through group identification and production records, 48-hour traceback can be accomplished to all premises with animals potentially exposed to disease.

#### Standard: US Group/Lot Identification Numbering System

Group/Lot ID will consist of the National Premises ID of the location where the group was established and a six digit numerical number reflecting the date the group was created. This format will result in a unique number; for example: A2345671003002

US Group/Lot Identification Number			
Field Structure	Type	Example	Comments
7	Alphanumeric	A234567	First 7 characters is the entity's US Premises ID Number
6	Date (MMDDYY)	100302	

Group/Lot ID is an option for any species in which animals move as a group through the production chain and when such identification will meet the requirements of 48-hour traceback. Requirements for Group/Lot ID may vary by species.

#### III.C.2.1 Group/Lot ID for Swine

##### Production Records

In addition to the required fields for Group/Lot ID, production records will be necessary for utilization of Group/Lot ID. These records must be kept at the local level for two years after group retirement or "end group". The production records must meet the necessary requirements to internally track all group pig movements and those records must be readily available to USDA if a significant animal health event occurs. The following production information is required to utilize Group/Lot ID:

- Animal additions
  - Source G/L ID(s) or source premise(s)
  - Date entered
  - Number of head
- Removals
  - Removal Date
  - Removal Type (Sales, Transfers, Death)
- Destination
  - G/L ID(s)
  - Premise(s)
- Inventory reconciliation

### Static Groups

- Static groups are a definable number of animals that are assembled and maintained for a definable period of time. Animals produced in using all-in/all-out production are a typical example of a static group.
- Static groups remain intact as a group and may move from premises to premises.
- Live animals leaving static groups can be moved to a dynamic group within the same production system or to harvest without individual animal ID.
- Two static groups can be combined to form a new static group if the new group is all-in/all-out; i.e., the group inventory goes to zero and the group is ended.

### Dynamic Groups

- Dynamic groups are premises-based groups that exist for an indeterminate amount of time and can have animals move in and out. Animals produced in continuous flow production are a typical example of a dynamic group
- An animal can exist in only one dynamic group in a lifetime without individual ID.
- Live animals leaving dynamic groups can become a static group in the same production system or moved to harvest without individual ID.
- In species that have diseases of concern with incubation periods of 30 months or longer, only the non-breeding animals can exist in dynamic groups.

### Commingling Outside the Production System

- Group identified animals that enter concentration points where commingling with animals outside a single production system occurs will require individual ID.

### **III.C.2.2 Group/Lot ID for Other Species**

Specific requirements for other species that utilize Group/Lot ID to record movements will be established.

### **III.D. Identification Devices**

The official identification of an individual animal requires the attachment of a device to the animal with the appropriate identification number printed on it or electronically encoded in the chip. Two methods to identify animals are described – visible identification and radio frequency technology, both utilizing eartag devices to attach the US Animal Identification Number to the animal. Visible tags with no transponder are referred to as Visible ID Tags and tags with RFID technology are referred to as RFID Tags.

*Note: Other methods of visible identification, i.e. tattoos, are referenced separately.*

While most of the parameters or specifications of such devices will be established by the marketplace, some basic performance standards are necessary. Required visible information printed will be the official US logo and the complete official number. Optional visible information is allowed as long as the ability to read the tag is not compromised. The visible state postal code will not be required on National ID devices.

### III.D.1 Visible Identification Tags

Basic standards for visible identification devices are listed below.

#### Standard: Visible Identification Tags

All Official Identification Tags must meet the following requirements:

<b>Visible Identification Tags</b>	
<b>Standards and Requirements for Visible Identification Tags</b>	
<b>Issue</b>	<b>Standard</b>
<b>Code Structure</b>	ISO 11784 Radio Frequency Identification of Animals
<b>Technical Concepts</b>	ISO 11785 Radio Frequency Identification of Animals
<b>Method of Attachment</b>	Eartag attachment
<b>Placement</b>	Left ear
<b>Comments</b>	The entire code structure is a 64 bit number, of which bits 16-26 are the country code and bits 27-64 are the animal number
<b>Comments</b>	Other forms of attachment may be considered when experience from throughout the industry warrants.

### III.D.2. Radio Frequency Identification

Radio Frequency Identification (RFID) devices are the most common form of electronic identification used in animal agriculture today. Other technologies, including bar codes and 2-D symbology, if used, must have appropriate standards established. Other biometrics that store measures in digital formats will require standardization as they mature and enter the marketplace. At this time, the primary area of focus is to foster the adoption of national standards for the use of RFID devices in animals.

#### Standard: Radio Frequency Identification of Animals

Radio frequency identification devices used for official animal identification must be ISO compliant. Various methods of attaching the RFID device to the animal exist, including implants, boluses, tags (eartags) and tag attachments (cylinder devices that fit over the stem of the male ear tag when applied to the animal). The most widely used method in animal agriculture is the eartag device. The utilization of the eartag method will be used as the standard RFID method until more experience is gained with the utilization of other methods. Requirements listed above for visual identification tags apply equally to tags that incorporate RFID technology.

<b>Radio Frequency Identification of Animals</b>		
Issue	Standard	Comments
<b>Code Structure</b>	ISO 11784 Radio Frequency Identification of Animals	The entire code structure is a 64 bit number, of which bits 16-26 are the country code and bits 27-64 are the animal number
<b>Technical Concepts</b>	ISO 11785 Radio Frequency Identification of Animals	
<b>Method of Attachment</b>	Eartag attachment	Other forms of attachment may be considered when experience from throughout the industry warrants.
<b>Placement</b>	Left ear	

- RFID Tags - Performance and Device Standards

The following chart summarizes the standards and performance requirements for Official Identification devices that incorporate radio frequency technology. As technology advances, equipment and device standards will need to be tailored to best meet species-specific needs.

<b>RFID Tags</b>	
<b>Performance and Devices Standards</b>	
▪	Transponders are to be encoded with the US country code (840).
▪	The official number encoded within each transponder must not be able to be altered.
▪	The required visible US logo and the AIN will be printed on the transponder portion of the tag.
▪	Tags are to be of tamper-evident construction i.e. if an installed tag is removed, either the transponder will no longer operate or there is evidence the tag has been tampered with.
▪	The tag shall not be capable of causing chemical contamination of meat or edible offal, damage to the hide, or be capable of adversely affecting the health and well being of the animal following attachment.
▪	There should be no apparent physical deterioration (other than color) in tags due to ultraviolet radiation, rain, heat and cold or other environmental influences over its expected lifetime.
▪	The transponder within the tag shall be reliably machine-readable for the expected lifetime of the animal.
▪	Manufacturers will provide species-specific application standards.
▪	When applied in a manner approved by the supplier, the average tag loss is not to exceed 1% per annum after insertion. Environment conditions and species differences may require the accepted loss rate to be modified.
▪	The minimum height for numbers/letters is to be 5 mm. The minimum height and width of the official logo is to be 5 mm. Species differences may require the accepted size to be modified.
▪	The printing and tag color contrast of the official logo, lettering and numbers are to remain readable (at 0.75 m) for the expected lifetime of the tag.
▪	Only approved devices for use in the National Identification System will use the US logo.

- Testing and Auditing RFID Tag Performance

The Oversight Board (or an appointed technical committee) shall be responsible for the accreditation of tags for use under this program. This accreditation shall be based on species appropriate evaluation and may include laboratory trials, field trials, and review of existing data, as appropriate.

The Oversight Board will also approve third party verifiers and testing laboratories.

- RFID Reader Standards

The Oversight Board (or an appointed technical committee) shall be responsible for the accreditation of readers for use under this program, particularly as technology changes. This accreditation shall be based on species appropriate evaluation and may include laboratory trials, field trials, and review of existing data, as appropriate.

<b>RFID Readers</b>	
<b>Performance and Standards for RFID Readers</b>	
▪	All RFID transceivers (ear tag readers or reader systems) must be ISO 11785 compliant. In other words, the RFID readers should be capable of decoding both half duplex (HDX) and full duplex (FDX-B) ISO 11784 compliant transponders.
▪	RFID transceivers / data collection systems should have the capability to enter tag data manually.
▪	RFID transceivers (ear tag readers) must have a species and application specific minimum read distance with all transponders (ear tags) as certified by the Oversight Board.
▪	All RFID transceivers (ear tag readers and reader systems) must be capable of communicating to an external device via RS232 (industry standard data cable).
▪	All RFID transceivers (ear tag readers) and necessary peripherals exposed to the environment of the application should be water and shock resistant.

### **III.E. Other Identification Methods**

*(Text pending)*

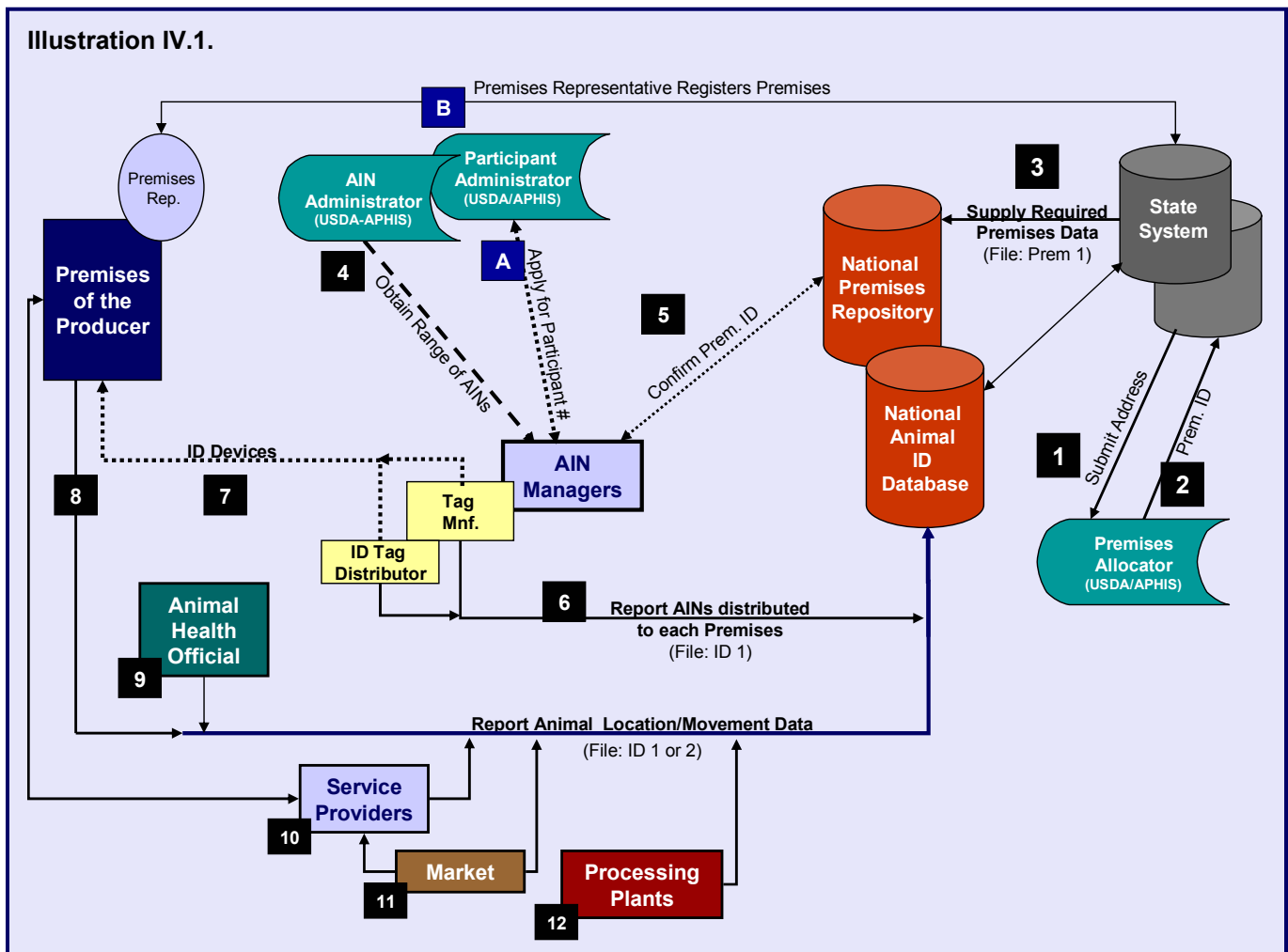
#### **III. E. 1. Tattoos**

*(Text pending)*

## IV. Information System

The US Animal Identification Plan requires an information system and infrastructure to support the 48-hour traceback objective. The overall system must allow for the identification of each premises, and the recording of the US Animal Identification Numbers and the US Group/Lot Identification Numbers. Additionally, the system must associate the animal ID data to each premises where the animal or group was located and the specific dates the animal(s) was at the location(s).

The following flow chart provides an overview of how premises and animal numbers are allocated and how animal movement/location records are received from various sectors of the industry. A step-wise explanation follows.



The primary components of the information system include the Premises and Animal Systems.

#### IV.A. Premises System

The Premises System includes the Premises Identification Number Allocator (Premises Allocator), the State Premises System/Databases (State System) and the National Premises Repository (Premises Repository).

- Premises Allocator: The national uniqueness of each premises identification number is achieved through this program that all state (or regional) systems interact with when administering the assignment of premises numbers. (*Appendix C provides a more complete explanation of the Premises Allocator system.*)
- State System: The state premises system (database) provides for the administration of premises enrollments according to the national requirements. While each state will be required to adhere to the national standards and requirements, other functionality and data collection is at the discretion of the state. To avoid confusion/conflicts, the state administers the enrollment of premises within their geographic area (or boundary of the multiple states working together).
- National Premises Repository: This premises repository centralizes agreed-to data that certain Non-producer Participants need access to when performing their roles. For example, USAIN Managers must interact with the Premises Repository to confirm that a producer has a valid Premises Identification Number before processing the distribution of official ID tags to that producer.

The data in the Premises Repository is received from certified state systems (see Section VI.D.2 for requirements of a certified state system).

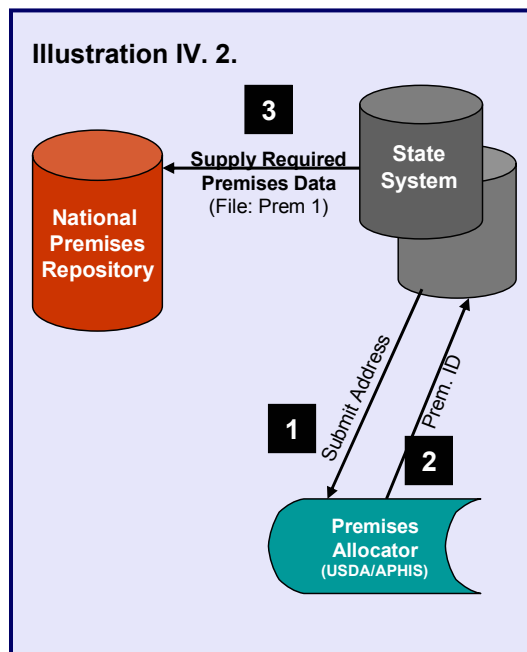
The enrollment, or identification process, of a premises is initiated by an individual from the premises or someone representing the premises (depicted in Illustration IV.1. reference B.) The following explains various functions of the information system as represented in Illustration IV.1.

#### Brief Premises System Flow Chart Description

**1:** The state system premises enrollment begins by requiring the producer or operator of an entity to provide the address (or legal description if no address is available) of the premises. The state system, through a machine-to-machine interface, passes the address to the Premises Allocator. The Premises Allocator determines if the address is valid and if the address has previously been allocated a US Premises Number.

**2:** When the address is valid and has no premises ID on record, the Premises Allocator returns the next available sequential premises number to the state system. If a US Premises ID Number is on record, the Allocator will return that premises number.

The state system completes the identification/enrollment process of the premises, collecting as a minimum the data elements required by the Premises Repository.



3: The state system updates the Premises Repository according to prescribed update procedures and file format specifications. This includes updates of new and revised premises records daily and monthly “master” updates. The “master” updates contain all records from the State System.

The file format of the upload file from the state system to the Prem Repository is defined in the file format, “Premises Upload Record Format” (File: Prem 1) in Appendix B.

#### IV.B. Animal System

The Animal System includes the National Animal Identification Database (ID DB) that associates the USAIN to a Premises. Other functions include the USAIN Administrator and USAIN Managers. The USAIN Administrator, a function of USDA/APHIS, will allocate USAINs to USAIN Managers. USAIN Managers are individuals or firms who are responsible for the administration of identification tags with the USAINs to a producer’s premises (see Certified USAIN Managers, Section VI.E.).

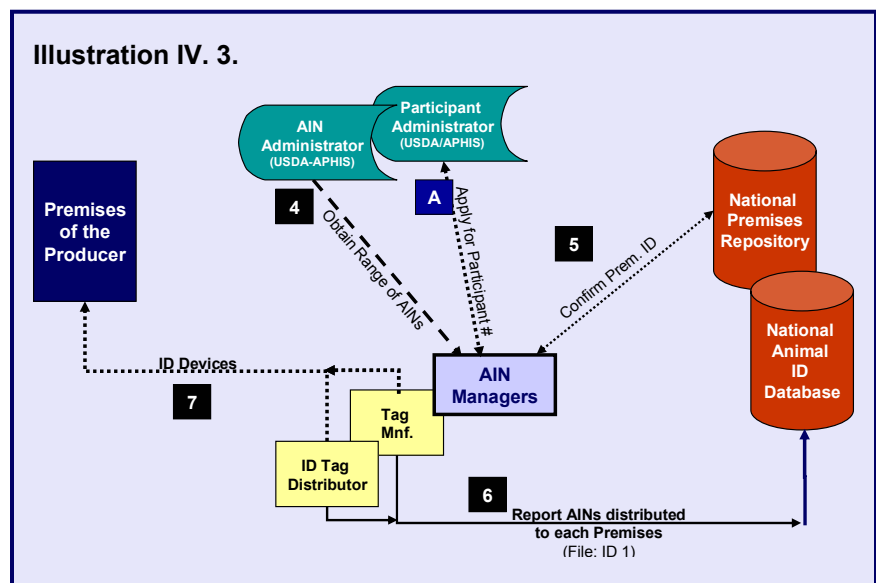
- National Animal Identification Database: The ID DB is a centralized database that receives records from both producers and Non-producer Participants, including but not limited to, the allocation of USAIN to a premises, records of animal sightings, movements, and termination. Access to the ID DB is restricted to state and federal animal health officials when information is required to perform their responsibility for maintaining the health of the US herd.
- USAIN Administrator: The USDA/APHIS will administer the allocation of AINs to certified USAIN Managers according to the requirements outlined in the Governance section.
- USAIN Managers: Individuals, organizations/companies, state departments of agriculture, etc., may be USAIN Managers. Only USAIN Managers certified by the USDA will be allocated US Animal Identification Numbers. USAIN Managers are responsible for the single assignment (allocation) of AINs from within their block and reporting the allocation of AINs to a premises by its US Premises Number to the ID DB. A USAIN Manager, in many cases, will work collectively with various resources (tag manufacturers, tag distributors, etc.) in the delivery of ID devices to a producer, yet they remain responsible for the completeness and accuracy of the data.

#### Brief USAIN Administration and ID Tag Distribution Flow Chart

**A:** The USAIN Manager will first apply to the USDA/APHIS for a Non-producer Participant Number (see Appendix D).

**4:** USDA/APHIS allocates US Animal Identification Numbers to certified USAIN Managers (see Appendix D).

**5:** USAIN Managers access the Premises Repository to validate if the reported premises number of the producer is correct. If the US Premises ID Number is correct, the USAIN



Manager provides official identification devices to the producer/premises.

*Note: Official Identification devices can only be provided to entities that have a valid premises identification number.*

**6:** The USAIN Manager reports the USAINs to the ID DB that were printed or encoded on the identification devices as the order is processed or the tags are purchased.

**7:** The ID devices are drop shipped or sold direct to the premises.

The “USAIN/Animal Transaction” file (File: ID #1) is used to upload the file from the USAIN Manager to the National Animal ID Database and is described in Appendix B.

### Brief Animal Event/Transaction Record Flow Chart

Records that provide animal location and movements are received from various sectors of the industry (producers, animal health officials, service providers, markets and slaughter plants). Such inputs are obtained through the integration of the USAIN/Animal Transaction file (File: ID #1 or # 2).

**8:** Producers can submit records direct from their farm/ranch to the ID DB.

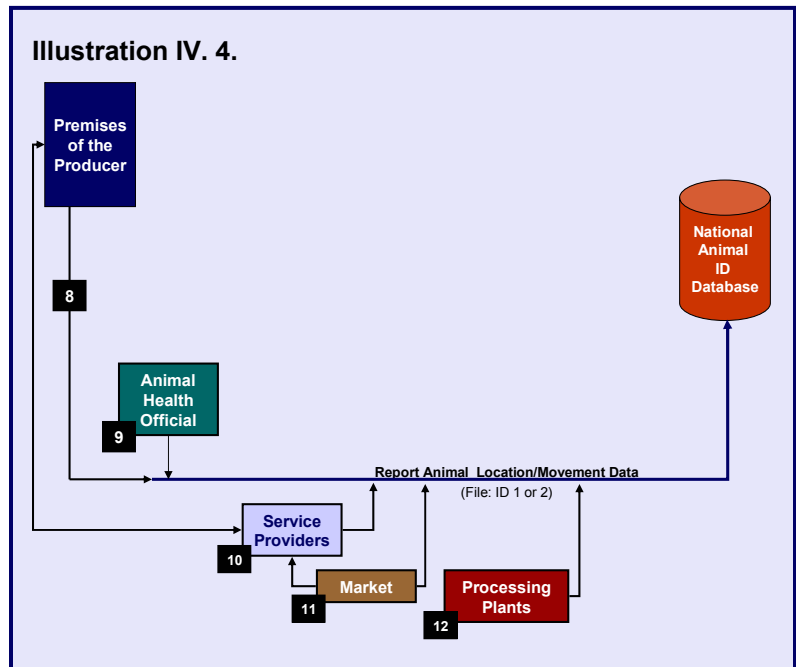
**9:** Animal transaction records are reported from Animal Health Officials when conducting animal/herd testing programs, completing electronic Interstate Certificate of Veterinary Inspection, etc.

**10:** Service Providers that offer herd management services to producers, through proper agreements with their clients, submit animal location/movement data.

**11:** Records obtained from the market, in particular ones collected from the RFID system, are automatically sent to the National ID DB.

**12:** The record of the animal’s termination is submitted by the processing plant.

The interaction of the National ID DB and the State system is represented by reference line 13 in illustration IV.1.



## **IV.C. Data Access**

### **IV.C.1. Premises Repository**

It is understood that state and federal animal health officials need access to the premises repository in animal traceback situations. Any other access to the premises repository will be limited to authorized users who have “look up” capability to validate information necessary to perform their roles as Non-producer Participants. For example, a key factor in assuring animals are tracked to the correct location is the accurate recording of the premises ID that the animal is associated with. An invalid or incorrect premises ID that was submitted to the national repository could delay the 48-hour traceback requirement. Therefore, certain organizations that are authorized Non-producer Participants will need access to premises information for validation purposes.

### **IV.C.2. Interface**

The two main interface needs that were identified require that Non-producer Participants need lookup of single premises ID and certain Non-producer Participants need offline capabilities to obtain validation on a group of premises ID in one single batch process. Therefore, the following interfaces need to be made available:

- Manual access to the premises repository via a secure web site
- Direct automated secure calls using internet file transmission to the premises repository to obtain a return file with the requested validation results.

### **IV.C.3. Functionality**

Based on the various data needs, different search capabilities need to exist. Since the difference in upfront development cost would be a minor issue, the plan calls for a system that has flexibility in mind. The recommendation is to have three levels of access by which premises data and error validation can be obtained.

#### ▪ Level 1: Validation of premises ID

This is a minimum level of access to the premises repository that would allow a user to type in a premises ID (could also include the state the premise was issued), or electronically upload one and retrieve a message indicating the premise ID was found, or not found, or if the ID itself is incorrect (i.e., incorrect check digit). No information regarding the premises would be returned. A similar procedure is currently available in Canada for tag distributors.

#### ▪ Level 2: Obtaining address information on a single premises ID

This secondary level of access to the premises repository would allow a user to enter a premises ID and retrieve the address information for that premise. The same validation used under user level 1 would also take place. For example, this level of access would be required if a service provider needs to validate that a premise ID for a producer is the correct one.

#### ▪ Level 3: Complete search capability

The third level would only be used if a user needs access to the premises repository to search the repository based on name and address. This level could be restricted by states if needed. For example, a USDA animal health official would have search access to all premises information in the repository, while a state health official could only access premises in his/her state.

#### **IV.C.4. Security**

Recognizing the security and privacy issues, the plan calls for the following requirements:

- Access to the premises repository is based upon logging into the system using a user name and password.
- Based upon level of access to the premises repository, a user will be assigned one of the three levels of access described above.
- Based upon level of access to the premises repository, a user will be assigned access to specific state(s).
- User name and password and level of access are issued and maintained by USDA/APHIS after the USAIP Non-producer Participant has passed the application process for having access to the premises repository (see Governance section for application procedure).
- Secure web site access with various security layers between the web servers and database to avoid the introduction of viruses, or hackers to access the database.
- No data can be edited in the database via the website (read only to authorized users)

#### **IV.C.5. National Animal Identification Database**

It is recognized that approved federal and state animal health officials would need access to the animal ID database(s) in the case of an animal traceback situation within a state, or across states. It is also recognized that approved state officials might only have access to records for animals that reside within their state. No other individuals will have access to the Animal ID database(s).

#### **IV.C.6. Security**

Recognizing the security and privacy issues, the plan calls for the following requirements which are similar to requirements for accessing the premises repository:

- Access to the animal ID database is based upon logging into the system using a user name and password.
- Based upon level of access to the animal ID database, a user might be assigned access to animals that reside (or have resided) in a specific state.
- User name and password and level of access are issued and maintained by USDA/APHIS after the USAIP Non-producer Participant has passed the application process for having access to the animal ID database (see Governance section for application procedure).
- Secure web site access with various security layers between the web servers and database to avoid the introduction of viruses, or hackers to access the database.
- No data can be edited in the database via the website (read only to authorized users)

#### **IV.D. Data Validation**

As information will be supplied by many USAIP Non-producer Participants to the national system, it is key that some type of validation is in place to maintain the accuracy of the data at

the national level. Recognizing that higher levels of accuracy will require a higher cost to maintain the national system, procedures that catch data errors need to reflect the need for a high level accuracy, but also minimize the burden of error handling on USAIP Non-producer Participants who supply data.

Most errors that are found will probably be small in terms of impact on the national system; therefore, it is recommended that depending on the severity of the error, records will be stored in the system, their error codes and a field indicating the level of severity of the error will be stored with the record. The errors would be electronically reported to the USAIP Non-producer Participant who supplied the data, and basically allow the data supplier on a voluntary basis to fix the errors and resubmit the corrected data if they elect to do so.

For more severe errors such as using an incorrect allocation of USAIN numbers, or an incorrect record format, records will also be loaded into the animal ID database, but would be labeled with a higher level of error severity and would be excluded from any general data queries. The errors would be electronically reported to the data supplier, and basically allow the data supplier to fix the errors and resubmit the corrected data. Depending on the severity of the errors, the organization might need to be directly contacted. These error rules will be posted on the Web site and be available for each organization that will be sending records.

More details of the error checking protocols are explained in Appendix G.

#### **IV.D.1 Data File Transmission**

Data files submitted to the national system need to be sent to a central location. A universal method of transmission will need to be implemented to meet the various industry needs. Only Non-producer Participants with the appropriate level of security will have access to the central location to transmit data files. As data files will be uploaded any time of the day and day of the week, the system receiving the data files needs to be up and running 7 days a week and 24 hours per day. To cleanout previously transmitted data files, after 20 days files will be removed.

#### **IV.D.2. Data integrity**

To ensure an audit trail is maintained, all errors will be stored in the database including the error codes and a level of severity associated with the type of error. If the error was caused due to a conflict with a previously submitted record, both errors will be labeled as errors. The database administrator will need to develop a level severity (convert the proposed error type codes to an error level of a scale from 1 to 5).

To ensure the integrity of the database, it is deemed necessary for USDA/APHIS to develop a certification program that data providers will need to adhere to. The certification process will include guidelines and standards for organizations submitting records. An organization submitting records to the national system will need to agree to adhere to the guidelines and standards before their Non-producer Participant ID is issued to them.

The database administrator will monitor the integrity and quality of the information sent to the database. At any date USDA/APHIS can revoke the right to upload information to the national system if the organization is not adhering to the certification process.

## V. Implementation Plan

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The Development Team acknowledges that the achievement of the 48-hour traceback system will require years to fully implement. It has established basic requirements that need to be achieved as essential components for the overall national ID program. In addition, the Development Team recognizes the differences between species regarding the current status of their identification systems. Therefore, each species group will develop “phase-in” plans in which their industry will implement specific functions and/or protocols that support the implementation of USAIP.

*Note: The issues of confidentiality of the data and access to it, including FOIA, must be adequately addressed by the USAIP before the industry will support its implementation. Furthermore, agriculture is to be designated as a critical infrastructure (see Appendix H., Secretary Veneman’s statement to the Gilmore Commission).*

The implementation of the US Animal Identification Plan is recognized as a complete program, yet is accomplished through the establishment of several priority requirements that are necessary regardless of the species group. These include systems and capabilities that must be functioning by designated dates. Additionally, rules and regulations that will be part of the Code of Federal Regulations (CFR) are summarized in the Governance section.

### V.A.1. Premises Identification

The foundation of the overall system is the establishment of a National Premises Identification System which is to become operational by July 2004. To have an operational National Premises Identification System the Premises Allocator, National Premises Repository, and the state systems must be operational. Target dates are listed in the following chart.

The following guiding principles are offered to support the effective implementation of premises identification within each state by the state authorities:

1. Require that animals presented for sale or lease have a recorded US Premises Identification Number of the seller / leasor.
2. Require that animals purchased or leased have a recorded US Premises Identification Number of the buyer / leasee.
3. Require that animals presented for slaughter have a recorded US Premises Number from the immediate owner. Animals moving directly to slaughter from herds of origin or local Group/Lot identified feeding operations, need not be individually identified but allowed travel under an US Premise Number and/or local Group/Lot identification.
4. Grant the authority and give necessary instructions to official responsible entities that can help facilitate the assignment of US Premises Numbers.

*Note: While the states might vary in their timetables to implement their state premises systems, the “standardized” State Premises System provided by the USDA is to be made available early 2004. The utilization of the USAIN is contingent on the state having a certified premises system. The goal is to have all states operational (using the standardized system or another USDA certified system) by July 2004.*

### V.A.2. Animal ID

The legal requirements, in particular the Code of Federal Regulations (CFR) and associated logistics for numbering systems and official identification devices, are additional basic requirements. Additionally, the system for assigning approved Non-producer Participants their numbers, allocating US Animal Identification Numbers to USAIN Managers, and reporting allocated numbers to the National ID Database all need to be developed and operational to initiate the USAIP.

### V.A.3. Animal Tracking

The infrastructure for the reporting of animal locations and movements is necessary to track animal movements. Point of Origin (or animal's premises when tagged) is achieved through the allocation/distribution of USAIN Tags to a premises for individual animals. The source of data is from USAIN Managers who report the distribution of USAIN Tags to the National ID Database. Therefore, the National ID Database needs to provide this initial function by April 2004 and fully operational by September 2004.

The National Animal ID Database is to receive the record of interstate movements; thus, the integration with the electronic Interstate Certificate of Veterinary Inspection" (ICVI) should be achieved by mid 2004 (full compliance July 2005).

Intrastate commerce movements, while the responsibility of each state, must have standardized protocols to ensure basic uniformity among the states to support the national system. However, the differences among the states are significant; thus, each state will be responsible for administering their intrastate movements permit system to best meet their needs. The state movement permits system will be developed and implemented by July 2006.

The infrastructure to obtain animal sighting records at markets and termination records at processing plants will be established at priority locations and will progress over time. The infrastructure is to be in place by July 2004 to support the collection of such data by establishments that are the initial suppliers of such data.

Data from systems managed by private companies and certified by the USDA as a Non-producer Participant will have proper protocols established by July 2004. The infrastructure for recording Group/Lot animal movements can occur locally.

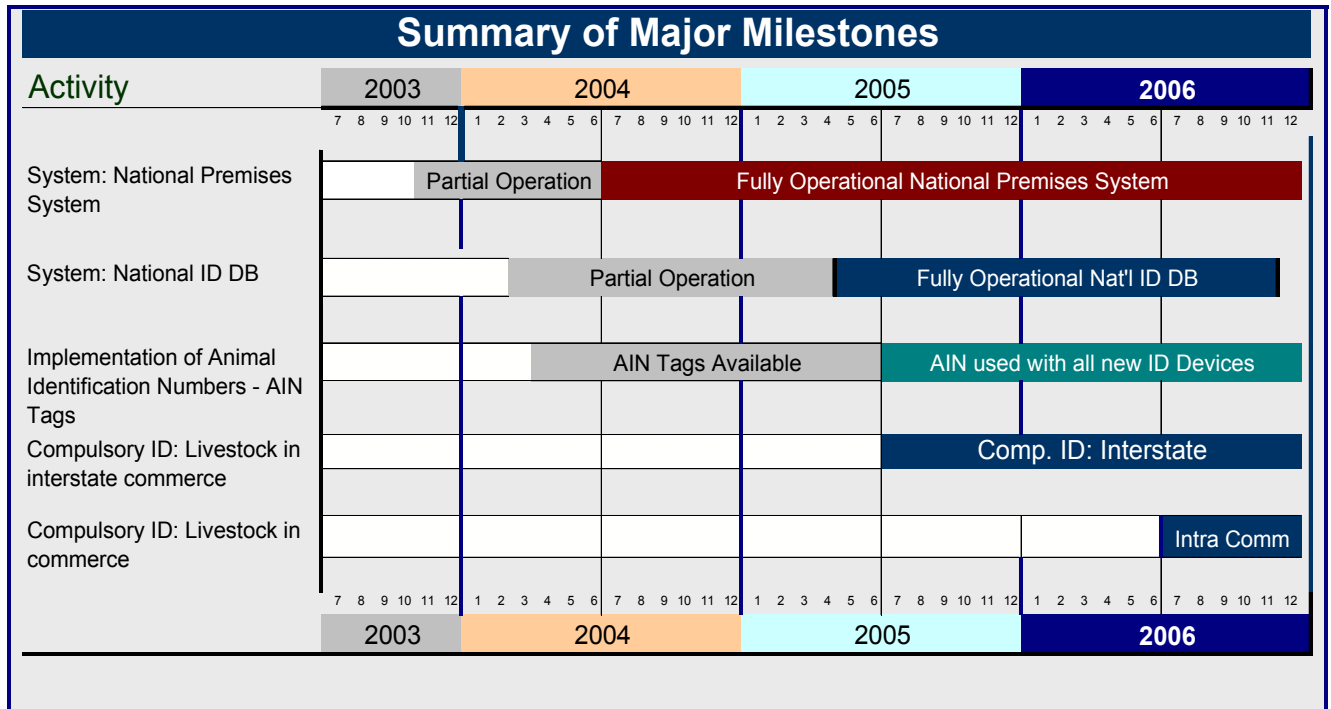
*Note regarding compliance as the USAIP is implemented: It is acknowledged that situations exist where producers do not market livestock on a routine basis, and thus, may not appear on a state animal health authority's current active list of producers. In such scenarios there might be situations where a producer has not obtained a premises number as they are unaware of the premises requirement. To ensure the marketing of cattle remains timely and efficient in these situations, it is recommended that the marketing entity be given the authority to apply a USAIN tag to the livestock (at the seller's expense) and to sell the cattle involved. Within 24 hours of the sale, the marketing entity would provide that producer's information to the state animal health authority to facilitate the recording and issuance of a US Premises Number for the appropriate premises. The AINs applied to the producer's livestock would be associated to the new Premises ID following procedures established for approved tagging sites. The reporting of the sales transaction would then be submitted to the National ID database according to established requirements for all normal sales. It is also recommended that the marketing entity be provided reasonable compensation for their assistance in reconciling such situations.*

**Summary of Basic Requirements:**

The following charts summarize the basic requirements that must be achieved to initiate implementation of individual species phase-in plans.

<b>USAIP Basic Requirements</b>			
<b>System Requirements and/or Capabilities</b>			
<b>ISSUE</b>	<b>Date</b>		<b>Comments</b>
	<u>Available</u>	<u>Complete or Required</u>	
<b>National Premises System</b>		July 2004	Fully Operational
Premises Allocator	October 2003	January 2004	Required for states to obtain US Premises ID Numbers.
National Premises Repository	March 2004	July 2004	States upload to the Premises Repository. USAIN Managers use Premises Repository to validate client's US Premises ID Number.
State Standardized Premises System	January 2004	April 2004	Standard State Premises System available for states to utilize - provided by USDA.
State Systems Operational	*	July 2004	* The state must issue premises numbers to have USAIN used in their state.
<b>Non-producer Participants</b>	January 2004		System to allocate approved Non-producer Participants their number; required for USAIN Managers and others entities.
<b>National ID Database</b>	April 2004	Sept. 2004	Initially, ID Database will receive record of USAIN distributed to a premises. Complete system will receive data from other Non-producer Participants.
<b>Animal ID</b>			
Allocating AINs to certified USAIN Managers		Feb. 2004	
Certified USAIN Managers interact with the Premises Repository		March 2004	Need to validate US Premises ID Numbers. A premises ID is required for any premises to receive USAIN Tags.
USAIN Managers report the allocation of AINs to the National Identification Database		April 2004	Provides "point of origin" (point of tagging) and is the initial record to the National ID Database.
<b>Animal Tracking</b>			
Electronic Certificates of Veterinary Inspection Interstate Health Certificates	July 2004	July 2005	Integration with the National ID Database to receive interstate movement records electronically.
Integration with systems provided by service providers	July 2005		Opportunity to receive location records from industry Non-producer Participants.
Intrastate movement permit system	July 2005	July 2006	State system maintains intrastate commerce movements and others prescribed by state statute.
Packing Plants	July 2004	July 2005	Submit record of animal termination.
Markets / Assembly Points	July 2004	July 2005	Submit record of animal movement.

The major milestones to achieve the ultimate 48-hour traceback objective are summarized below.



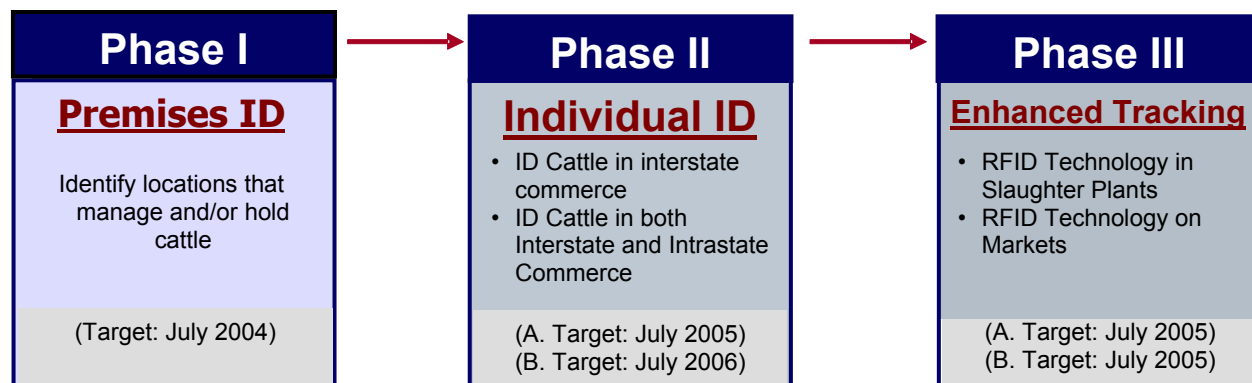
**V. B. Implementation by Species Groups**

The identification and infrastructure varies among the species groups. The utilization of individual animal identification and/or Group/Lot ID is dependent on the management practices of a particular species. An animal production system can use Group/Lot Identification if the producer is able to demonstrate to the satisfaction of state animal health officials that, through group identification and production records, traceback to all premises with direct contacts of a suspect animal can occur in 48 hours.

**V. B. 1. Cattle**

The 2002 Work Plan presented a phase-in plan for cattle with differing minimum identification requirements within each phase. Considering the urgency that the United States attain a program with timely traceback capability, the current USAIP calls for the immediate implementation of the long-term identification methods. Specifically, cattle that require individual identification will be identified when the identification program is initiated with an official tag bearing the US Animal Identification Number (USAIN) versus a tag with only the premises identification number. The preferred technology is radio frequency, but remains contingent on adequate funding to support the introduction of RFID tags versus visible identification tags. The Development Team also feels this approach will be more clearly understood as the identification practices will be established when the program is initiated instead of making changes to the “tag numbering” format over time.

The USAIP Cattle Phase-in Plan provides for a rapid progression to track the movement of cattle from a premises as they enter commerce. This primary objective is illustrated in the following charts.



▪ **Phase I - Premises ID**

All premises that manage and/or hold cattle are to be identified through the state premises system to achieve a national premises system. As noted earlier, premises identification is a prerequisite to individual animal identification, and thus, must be initiated to meet the requirements of the US Animal Identification Number System.

▪ **Phase II - Individual Animal ID for Cattle moved for Commerce**

The primary timetable requirements established in Phase II for cattle are:

- All cattle that enter interstate commerce are to be officially identified and their movement is to be reported to the National Animal Identification Database through the electronic Interstate Certificate of Veterinary Inspection (ICVI). Target: July 2005.
- All cattle that enter commerce (intrastate and interstate) must be identified with an official RFID tag prior to leaving their current premises and such movements are reported to the National Animal Identification Database. Target: July 2006

Exception to the requirement includes:

- fed cattle moving from a feedlot direct to a slaughter plant
- cattle moving from their premises of birth direct to slaughter
- cattle moving to another premises when they remain under the same person's control (ownership) and when they are not co-mingled with cattle from other premises.

Approved tagging services and tagging sites will provide alternatives for producers to tag their cattle in cases when facilities at one's premises are not available.

▪ **Phase III**

The integration of RFID readers will be initiated as cattle volumes with RFID tags warrant. The system capabilities are to be available July 2004 with significant integration by July 2005.

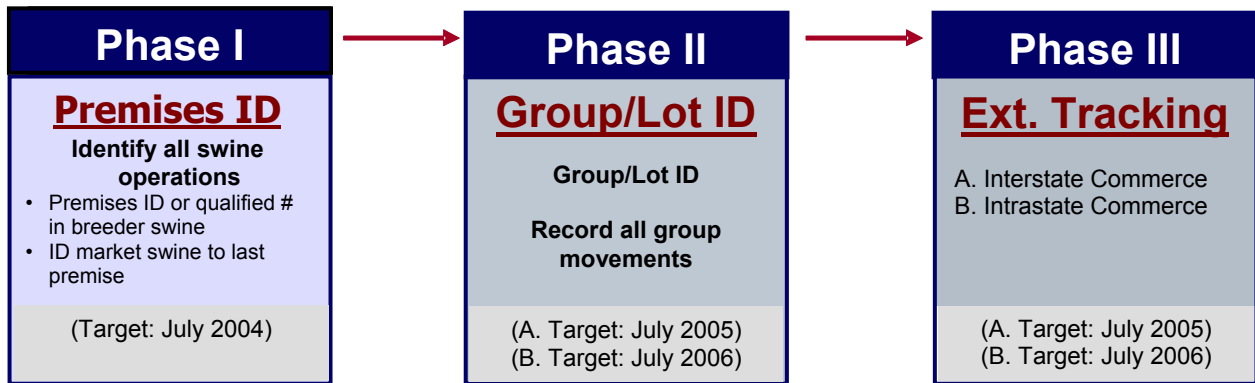
USDA inspected cattle slaughter plants and state licensed markets are to have RFID readers in place by July 2005.

*Note: Target dates are dependent on the successful implementation of the Basic Requirements noted on page 30.*

**V. B. 2. Swine**

The swine industry has had mandatory identification requirements since 1988. These requirements encompass swine movements in interstate commerce and interstate swine movements within a production system. In addition, market swine are identified back to their owner at federally inspected plants. Thus, in regards to swine identification, interstate movements are already being tracked. It should also be recognized that most market swine are tracked as groups for production management purposes and detailed group movement records exist locally today. Although most producers track group movements, a standard for Group/Lot ID will provide other producers with a mechanism to adopt this concept, give this valid swine identification method national credibility, and embrace the National Premises ID System.

Three phases are recommended to improve traceback / trace forward in pork production for disease management purposes and are illustrated in the following charts.



▪ **Phase I – Premises ID**

Phase I provides for the implementation of the National Premises Identification System. This will allow the swine industry to enhance identification of culled breeder swine and market swine to the last premises. Phase I will also address improvements that can be made in swine identification for the purpose of disease management.

For the breeding herd, Phase I will require, as a minimum, the application of an ear tag with visual premises identification in all replacement breeder swine as they enter the breeding herd. The replacement breeder swine suppliers and/or breeding herd managers may prefer to use official individual identification devices with the US Animal Identification Number (USAIN) for breeder animals. However, for disease management purposes, it is imperative that the “last premises” ID is readily available. A premises ID tag may be administered to replacement breeding stock in addition to an existing USAIN.

Phase I for the identification of market swine to their last premises will be accomplished with two options:

- 1) All premises with market swine will have their unique national US Premises ID Number printed in bar code format on sheets of adhesive labels. Alternatively, the bar codes can be printed on the actual travel documents. Regardless, the premises ID will be a part of the travel documents as animals are marketed and presented to the packer/processor at delivery. Upon arrival to the packer/processor, the premises ID bar code is scanned linking the lot tattoo number and owner to the premises ID.

- 2) Pork producers can use the official individual identification devices with the US Animal Identification Number on each pig if that system provides the “last premises” identification. If not, then Option 1 is preferred for optimal disease management purposes.

Implementation Date: July 2004

▪ **Phase II – Group/Lot ID**

9CFR 71.19 provides for the interstate movement of groups/lots of pigs within a production system based on specified production record requirements, written agreements with state animal health officials and regular veterinary inspections. 9CFR 71.19 confirms USDA’s recognition of pork production records maintained locally as adequate identification for pigs. Pork producers will be allowed to continue pig movement and tracking under this rule.

As described in the standards, Group/Lot ID (G/L ID) will be a combination of the US Premises ID Number identifying the location where the group was created and the date the group was established. Group/Lot definitions and details are described in the Standards section of this document.

The G/L ID standards will be required of all pork producers using Group/Lot ID. The recording and maintenance of those data will occur at the local level and be made available to USDA in the event of a significant animal health event. In the future when the resources, confidentiality assurances, and value become a reality, the transition to reporting Group/Lot movements to a national repository can occur seamlessly.

Implementation: July 2004

- Electronic Data Collection

As with the USAIN, an electronic data collection system will be designed to ensure Group/Lot data accuracy and minimize burdens on producers to record and report data.

Implementation: July 2005

▪ **Phase III – Tracking**

Although animal tracking can occur at the local level, the reporting of animal movements and locations provides the necessary data to accomplish animal tracking in a single database at a national level.

- Electronic Reporting Interstate Movements

The interstate movements of swine are reported through the integration of the Electronic Certificates of Veterinary Inspection Interstate Health Certificates

Implementation Target Date: July 2005

- Electronic Reporting Intrastate and Interstate Movements

The intrastate and interstate movement of swine is reported through the integration of the Electronic Certificates of Veterinary Inspection Interstate Health Certificates.

Implementation Target Date: July 2006, except as provided by 9CFR71.19.

*Note: At this time the need to report swine group/lot movements where no change in ownership has occurred to a national repository requires a demonstration of added value and assurances of confidentiality and security.*

**V.B.3. Alpaca and Llama** (*Text Pending*)

**V.B.4. Aquaculture** (*Text Pending*)

**V.B.5. Deer and Elk** (*Text Pending*)

**V.B.6. Equine** (*Text Pending*)

**V.B.7. Goats** (*Text Pending*)

**V.B.8. Poultry** (*Text Pending*)

**V.B.9. Proposed National Sheep USAIP Implementation Plan**

▪ **Phase I**

In Phase I the Sheep industry will continue their identification with existing mandatory and voluntary visual scrapie ID programs as currently structured. These programs include:

- Premises ID using visual tags (metal and plastic) as well as individual animal ID
- Tag orders are placed electronically or by telephone to the state VS office and are electronically transmitted to the tag manufacturer and
- Payment for tags is made by USDA/APHIS.

The ID program will continue as described above for another year or two to provide a sense of stability and continuity to these industries that have had significant ID changes over the past 3 years.

**Field Performance Evaluation**

APHIS, with assistance from commercial component sources, would fund an 18-month comparative field performance evaluation of components of RFID sheep tracking system components (tags, boluses, static antenna/-readers, hand readers) used in typical environments (range and farm, humid and arid, temperature extremes, large flocks and small). A third party would conduct this evaluation.

The overall goal of the field performance evaluation is to identify a set of components that as documented performance that meets the needs in current environments (farm, range, feedlot/pastures, auction markets, commercial transport, slaughterhouse) and that can do so without unduly interfering with the normal movement of animals around the USA.

- Components to be tested and documented:
  - RFID ear tags & boluses from commercial sources
  - RFID handheld readers
  - RFID antenna/readers from commercial sources
- Animal types in which to test the components
  - Range ewes and rams
  - Commercial farm flock (ewes and rams)
  - Seedstock and Stud flock (ewes and rams)
  - Hobby flock (fiber) ewes and rams

- Emphasis would be placed on addressing this issues:
  - What works in the primary field environments that will occur in a national system (and how well),
  - What doesn't work well in any of the above environments,
  - What needs improving,
  - What pleases the co-operating users,
  - What frustrates them,
  - Tag loss rates in the various environments
  - Infection % and concerns from insertion of ear tags
  - Tag reading % for the various tags in the range of reading systems.
  - Recommended insertion sites in the ear or elsewhere
  - Recommended insertion/application time in animal's life
  - Throughput rates – number of sheep read per hour
  - Strategy for non-readable id in farm/ranch and market settings
  - Reader/antenna:
    - Durability in all weather and normal working conditions
    - Ability to read tags from multiple sources (including tags w both FDX-B and HDX technology).
    - Throughput in the field. How many animals can pass through/by the antenna per hour and be read accurately?
    - Impact on animal flow in the various locations. How many/minute or hr. moved up the chute without the antenna. How many moved up the chute w. the antenna(s) in place
    - Effect on speed and accuracy when presented with varying sizes, ages, breeds of sheep and goats.
    - Ability to cope with 110-120 v. AC power variations and battery input situations
    - Ability to be set up in the field on a temporary basis for loading and unloading animals in isolated situations.
    - Ease of rapid repair/replacement if a reader or antenna fails for any reason.
  - User acceptability & "friendliness" of ear tags.
    - Ease/speed of installation
    - User evaluation of applicator comfort.
  - User acceptability of reader/antennas. User evaluations to be obtained from::
    - Auction markets
    - Loading facilities (on/off semi trailers at sites other than slaughterhouses and auction markets)
    - On farm
    - Entry point to slaughterhouses
    - Shows/fair
  - Breeds differ in ear size and strength. How does this impact ear tag performance?
  - Environments that cause higher losses occur (woven wire, brush)
  - Numbers on the ear tags:
    - Is there a practical reason to have the premise number printed on an RFID tag
    - How useful to the sheep or goat industry is the visual individual ID number? Should the industry request that this be a larger size to make it more readable?

- Trials to start on or before July 1, 2004 - and continue through Dec 31, 2005 if sheep and goat industry & APHIS deem necessary. Reports of progress sent monthly to the lead university and APHIS as well as to the sources of commercial equipment.

The actual change from the current scrapie premises number-based system to the US Premises Identification Number will occur when the National Premises System is fully operational. In the meantime the users will continue to apply tags with the present premises numbering system.

- **Phase II**

If the tests of RFID ID components suggest that a tracking system is practical and funding is secured and made available to the industry, the transition from a solely visual identification system to a combination of RFID and visual devices would begin voluntarily in March 2006.

The combination of RFID and visual tags would become mandatory in July 2006 at which time no other form of official tag can be used. The transition can begin earlier on a voluntary basis if the first year of field trials successfully demonstrates that RFID tags are satisfactory to users in a range of circumstances and if USDA/APHIS provides funding for the RFID devices.

RFID devices are planned to be printed with herd management ID along with USAIN number, US Premises Number and other necessary information. The visual ID will be necessary for accurate data recording during field necropsies and other scenarios where a reader isn't available.

Stationary readers and antenna's can begin to be installed at official movement sites (markets, loading yards, packing plants) from January 2006 onwards. A training program to educate the primary users needs to be developed and made available prior to this time. USDA/APHIS or another government entity will be expected to provide these devices.

Group/Lot ID will be permitted (as described in III.C.2.) when sheep move as a unit.

- **Phase III**

Based on the assumption that Phases I and II have progressed satisfactorily, all sheep that move from one premises to another premises would be required to have official RFID tags in their ears and all movements would be submitted electronically to the National ID Database.

Target date: July 2008.

## **VI. Governance**

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### **VI. A. Overview**

Governance of the U.S. Animal Identification Plan (USAIP) will be a joint federal/state responsibility with appropriate oversight and input from industry. To ensure uniformity of operation across the United States, the Animal Plant Health Inspection Service (APHIS) and individual state animal health entities will be called upon to develop and administer key elements of the Plan. The overall governance of the Plan will become the responsibility of the U.S. Animal Identification Oversight Board under guidelines developed by the National Identification Development Team and identified in this section of the Plan.

The Oversight Board will have the responsibility to oversee, evaluate, and make recommendations to partners relative to the proper performance and maintenance of the USAIP, including appropriate monitoring of all the following program elements at both the federal and state levels:

- Administration of the official numbering systems (individual, groups, premises).
- Criteria for approving USAIP Non-producer Participants.
- Criteria for the evaluation and certification of USAIN Managers by APHIS.
- Approval process for official identification devices in accordance with the established standards.
- Administration of the National Premises Repository and National Animal ID Database, including access authorization rules.
- Animal ID partnerships and cooperative agreements between federal and state entities and/or state-to-state agreements.
- Appropriate security measures to protect data (FOIA issues, unauthorized disclosure, etc.).

In addition to the Oversight Board, species-specific oversight groups will be appointed by the industry to address specific or unique identification issues impacting their particular species. Recommendations from oversight groups shall be directed to the attention of the Oversight Board.

Following the endorsement of this Plan by the U.S. Animal Health Association, the Oversight Board will begin its governance responsibilities in partnership with APHIS and the individual state entities charged with the legal responsibility for administration of this Plan within their individual states. The Oversight Board will encourage APHIS and the individual state entities to proceed to implement the governance recommendations contained within this Section of the Plan through the promulgation of appropriate rulemaking at both the federal and state levels, so as to efficiently implement and maintain, to the extent practical, a uniform USAIP.

Once this Plan is fully implemented, maintenance of the Plan will become an important on-going process that must be continually addressed. Due to unforeseeable issues, inevitable change in production practices, vast species differences, continued producer participation, input, and oversight will be encouraged on the Oversight Board according to the guidelines recommended in this section.

#### **VI. A.1. U.S. Animal Identification Oversight Board - Structure**

The Oversight Board shall conduct all oversight functions necessary to ensure effective implementation of this Plan in the time frames specified in this Plan. Further, the Oversight Board shall provide continuing oversight to ensure that the goals and objectives specified in this Plan are achieved, so as to maintain the integrity of this Plan.

The Oversight Board shall be established by the respective Animal Identification Committees of USAHA and NIAA as a specifically designated entity to have broad oversight of the entire USAIP including both federal, state and industry participation and performance.

The original Oversight Board shall consist of no more than 21 individuals to be selected in the following manner:

- Twelve (12) representatives from industry as follows:
  - Six (6) from the major animal species (beef, dairy, equine, sheep and goat , poultry and swine)
  - One (1) from other animal species included in the USAIP
  - Five (5) at-large allied animal industry representatives with the caveat that no one sector of animal agriculture may have more than two representatives on the Oversight Board at any time
- Four (4) representatives from the federal level and four (4) representatives from the state level. All four (4) representatives from the federal level shall be designated by USDA
- One (1) person from USDA/APHIS shall be designated as the Board Coordinator and serve as an ad hoc non-voting member.

Within three (3) months following USAHA endorsement of this Plan, a process shall be established by USAHA and NIAA in consultation with the USAIP Steering Committee for selection of Oversight Board Members.

USAHA and NIAA shall consider the following criteria for selection of Oversight Board members:

- The nominee should be currently associated with the animal industry in an active capacity, such as a producer, commodity or allied industry representative or active state employee.
- The nominee should be nominated by some other person, group or state, depending on whether the nominee is being nominated from an industry sector or to represent a group of states or states within a region of the U.S.
- The nominee should provide credentials that indicate a competent level of expertise relating to oversight and maintenance of the USAIP.

#### **VI. A.2. Monitoring the Overall Performance of the USAIP**

The success of the USAIP is contingent on the completeness of the data and timeliness with which it is reported. The Oversight Board will establish procedures to ensure adequate performance levels of the overall system are continuously achieved. This will ensure that the system functions according to expectations if a real situation calls for a 48-hour traceback.

Auditing procedures will be implemented to establish benchmarks for ongoing comparisons/evaluations of the system. The data will subsequently form the basis of acceptable “tolerance” or “performance”. Data that will be captured includes, but is not limited to lost tags, re-reads, failed tags, read-time, percent of required records submitted, percent of records reported within the required time frame, etc.

**VI. A.3. Confidentiality of Producer Information**

Procedures and processes will be established at the federal and state level to protect the integrity and confidentiality of all information that an owner or custodian of livestock is required to file on their premises and/or livestock as a specific requirement of the USAIP. Agriculture is to be designated as a critical infrastructure (see Appendix H. Secretary Veneman’s statement to the Gilmore Commission). As a result, all critical infrastructure information required by the USAIP is to be protected from public disclosure.

**VI.B. State and Federal Roles/Responsibilities**

The USAIP will be achieved through shared responsibilities of state and federal agencies. These responsibilities are summarized in the following chart.

State and Federal Responsibilities	
State Government	USDA
Maintain State Premises Database (system)	Certify USAIP Non-producer Participants
Submit premises data to National Premises Repository	Administer Premises Allocator Program
Maintain intrastate animal movement database	Administer allocation of US Animal Identification Numbers
Report interstate movement to National ID DB	Administer National Premises Repository
	Administer National Animal ID Database

**VI.C. Non-producer Participants**

The USAIP provides for the establishment of Non-producer Participants” (see definition on Non-producer Participant” in Appendix A.) who have authorized responsibilities as defined in the following table. These participants may submit information to the designated databases using File: ID #1 and/or File: ID #2. Data they supply will be associated with their Non-producer Participant Number so proper controls and integrity measures of the data can be implemented, including error handling procedures.

Licensed markets and cattle dealers/order buyers will submit required information to the National ID Database within 48 hours of the sale transaction. Slaughter plants will submit the required data within 48-hours of the animal’s termination.

Non-producer Participants		
Name	Non-producer Participant Type	Role and/or Responsibility
Animal Health Official - Government	1	
Animal Health Official - Accredited Veterinarians	2	
USAIN Managers	3	Receives allocation of and administers US Animal Identification Numbers. Validates premises identification of entity receiving the USAIN Tags and reports allocation of USAIN by Premises ID to the National Animal ID Database
USAIN Tag Manufacturers	4	Manufactures official identification devices
USAIN Tag Distributors	5	Distributes official identification devices. Note: May also be USAIN Managers.
Laboratories	6	Diagnostic laboratories that submit data to the national databases
Order Buyers/Dealers	7	When individuals act as agents for the purchasing of livestock they will have their Non-producer Participant Number recorded at markets in lieu of a premises number
Service Providers	8	Submits animal records to the National Animal Identification Database
Tagging Services/Sites	9	Apply tags on behalf of producer and submits File ID#1 to National ID DB

The USDA will establish enrollment/application procedures for Non-producer Participants and will be responsible for the allocation of unique Non-producer Participant Numbers to such entities/individuals. The Non-producer Participant Number is a unique 7-character field and is defined in the Standards section of this report.

#### VI. D. Premises Identification

USDA/APHIS shall promulgate regulations, effective July 2004, that mandate a uniform national premises information system that will support the recording of animal movements for both intrastate and interstate commerce. The definition of a premises and the national premises identification number is presented in Section III. A.

##### VI. D. 1. Administration of Premises Identification Numbering Systems

USDA/APHIS shall be responsible for the allocation of nationally unique premises identification numbers in accordance with the national standard. The Premises Allocator Program, through a secure web-based interface with certified state systems, will be administered by USDA/APHIS. The functionality of the Premises Allocator is explained in Appendix C.

The Premises Allocator, in addition to allocating unique premises numbers to an address or legal land description, will maintain a record of the premises identification numbers allocated and the address associated with each Premises number.

APHIS may begin to issue premises identification numbers to a state if requested, as soon as the Premises Allocator System is in place. In return the state is required to meet all standards and requirements currently defined in the USAIP. This will allow producers to immediately obtain an official premises identification number that will not need to be changed in the future.

#### **VI. D. 2. State Premises Systems**

USDA/APHIS will publish standards that state premises systems must adhere to and operational requirements that must be achieved to have a certified state premises system. The regulations shall specify the information defined in File: Prem #1 (see Appendix B) as the premises information that shall be uploaded from each state system to populate the National Premises Repository and that each state is responsible for the administration of the premises within the geographic area for which it has responsibility. Only certified state premises systems (see definition in Appendix A) will have access to the Premises Allocator Program (see Appendix C).

The standards and operational requirements shall be utilized by USDA/APHIS to periodically review all state premises systems employed for identifying all locations within their state boundaries that contain livestock that need to be identified under the USAIP.

States shall submit their premises ID plans for review and share all data and information requested by USDA/APHIS. Any critical infrastructure information that is requested will be kept confidential. The Oversight Board shall develop appropriate mechanisms to evaluate the performance of each state relative to their ability to supply timely, creditable and updated premises location information, so as to ensure compatible and efficient functionality of the USAIP

The following chart summarizes the primary requirements of a certified state premises system.

<b>State Premises System</b>
<b>Standards and Requirements for a Certified State Premises System</b>
<ul style="list-style-type: none"><li>▪ Utilize the Premises Allocator following prescribed protocols to assign premises identification numbers to a location in accordance with the definitions of a premises</li></ul>
<ul style="list-style-type: none"><li>▪ Collect and maintain required information as presented in Standard: National Premises Data Elements</li></ul>
<ul style="list-style-type: none"><li>▪ Collect and maintain “state maintained” information as presented in Standard: State Premises Data Elements</li></ul>
<ul style="list-style-type: none"><li>▪ Maintain database of all premises registered, including historic premises data for 20 years.</li></ul>
<ul style="list-style-type: none"><li>▪ Submit File: Prem #1 to the National Premises Repository for new and revised premises daily and complete set of premises monthly.</li></ul>
<ul style="list-style-type: none"><li>• All information should be collected and maintained to meet the requirements of the critical infrastructure information protection (assure confidentiality).</li></ul>

#### **VI. D. 3. National Premises Repository**

USDA/APHIS is responsible for the administration of the National Premises Repository. All data maintained in the National Premises Repository is obtained from certified state premises

systems. This Premises Repository centralizes data that certain USAIP Non-producer Participants need access to when performing their roles. For example, certified USAIN Managers must interact with the Premises Repository to confirm that a producer has a valid Premises Identification Number before processing the distribution of official ID tags to that producer.

## **VI. E. US Animal Identification Numbering Systems**

### **VI. E. 1 US Animal Identification Numbering System**

By July 2004, APHIS will establish appropriate regulations to implement and control a uniform, national, single US Animal Identification Numbering system to be known as the US Animal Identification Numbering (USAIN) System. The unique USAIN will permit a single animal to be identified with a lifetime number that can be printed on a visual tag, encoded on an RFID transponder or a combination of both. The regulations will specify that APHIS will control the allocation of US Animal Identification Numbers to Certified USAIN Managers. The regulations shall also permit a damaged or lost USAIN Tag to be replaced with another USAIN Tag that should be cross-referenced to the animal's original national number. The USAIN system shall accommodate identification of appropriate species of livestock that can be identified as individual animals so as to permit practical tracking from birth to slaughter in both intrastate and interstate commerce.

- **Authorized Use of the USAIN**  
Use of the US Animal Identification Number is only authorized when the entity involved is in compliance with the prescribed requirements in Section III. C.1. The use of the USAIN by any entity or individual without full compliance is subject to applicable state and/or federal penalties. The representation and utilization of the animal number with the 840 country code implies full compliance with the prescribed requirements above, and all devices carrying the USAIN are considered official identification by the USDA (see Section VI.F. Official ID Devices in this section for explanation of the US Logo).

The USAIN shall utilize the code structure defined in ISO 11784: Radio Frequency Identification of Animals (see Section III. Standard for US Animal Identification Number and Appendix F).

- **Role of USDA/APHIS regarding the USAIN System**  
USDA/APHIS will administer the US Animal Identification Numbering (USAIN) System and have final authority to make decisions regarding the administration of the USAIN System. It is imperative that APHIS implement proper controls that will ensure the uniqueness of the individual USAIN numbers and that necessary information relative to the distribution of the numbers is properly maintained. USDA/APHIS, through a formal Agreement, will only allocate USAINs to Certified USAIN Managers. USDA/APHIS will maintain a record of the numbers allocated to each USAIN Manager.

USDA/APHIS will also enforce compliance with the USAIN Manager Agreement and, deny or withdraw the approval of an USAIN Manager for noncompliance with the Agreement, including failure to maintain required records, failure to upload required information to the National Animal ID Database or failure to correlate USAIN with premises and/or issuing duplicate numbers. Following a decision to suspend or terminate a noncompliant USAIN Manager, any USAIN not yet assigned to a premises would be retracted and the non-compliant USAIN Manager would immediately be denied access to the National Premises

Repository. The denial or withdrawal of approval of an USAIN Manager could be appealed to USDA/APHIS through the standard appeal process.

### Certified USAIN Managers

USAIN identification devices will be distributed through USAIN Managers who will be approved by USDA/APHIS to issue official identification devices with the USAIN. Producers will purchase identification tags from USAIN Managers. USAIN Managers may be state agencies, commercial service providers, DHIA, breed registries, tag companies or other approved entities. USDA/APHIS will develop in consultation with the Oversight Board the requirements for selection and performance of USAIN Managers, including how USAIN Managers are to be routinely evaluated. The performance of USAIN Managers will be periodically reviewed by USDA/APHIS and reported to the Oversight Board. An USAIN Manager must meet the following requirements:

<b>USAIN Managers</b>	
<b>Requirements for a Certified USAIN Manager</b>	
▪	Demonstrate a functioning computerized system, compatible with USAIP standards, that ensures the uniqueness of the allocated USAIN
▪	Submits the required record of allocated numbers by premises using File: ID#1 to the National Animal ID Database in accordance with prescribed protocols.
▪	Maintain a database that stores the manufacturer and tag type (SKU number) that each number was imprinted on and/or encoded, in particular if the device was electronic (RFID) and/or visual.
▪	Capability to validate that only USAIN's allocated to them were actually issued and those issued numbers are printed and/or encoded on officially approved devices.
▪	Furnish official identification devices to producers as prescribed by the policy on official identification devices.
▪	Educate customers on the proper use of official identification devices

Applicants selected by USDA/APHIS to be USAIN Managers will be issued an USAIP Non-producer Participant Number, user name and password to access the National Premises Repository. The level of access for USAIN Managers to the Premises Repository will be determined by USDA/APHIS. They will be required to execute an agreement with USDA/APHIS that sets forth their responsibilities and duties.

### **VI. E. 2. Transitional Recognition of the American Identification Numbering system and the ISO code structure for radio frequency identification devices**

These unique numbering systems, through an interim rule effective January 1, 2004 will be considered official identification during the established transition period when they meet the following requirements.

- **Radio Frequency Identification Tags**

RFID eartags will be accepted as official identification devices through the transition period when:

- the tag attachment contains an ISO transponder (see definition in Appendix A)
- is attached to the animal's ear with a tamper resistant eartag (one time use)
- has the RFID code imprinted on the tag

- **American Identification Numbers**

Visible identification devices with the American Identification number that meet the following requirements will be accepted as official through the established transition period when:

- the American Identification Number is imprinted on a tamper resistant eartag (one-time use).

When an animal with either number is moved in interstate commerce, the RFID Code or American Identification Number attached to the animal must be recorded on the interstate health certificate to provide a record of the premises that the animal is being moved from.

*Note: The transition period is the date the interim regulation becomes effective (target date: January 2004) through July 2006.*

### **VI. E. 3. Phase out of existing official numbering systems**

The USDA/APHIS and states will terminate the distribution of all identification tags with the Uniform State Series number by July 1, 2005. The recognition of any number other than the USAIN for unique and official identification of an individual animal within certain species groups will be ended July 1, 2006 (see Section V.B. Implementation by Species Group). After this date, such animals requiring unique individual identification will meet the identification requirements according to the USAIP.

### **VI. F. Official Identification Devices**

USDA/APHIS will promulgate appropriate regulations to require all official ID devices, including individual and lot premises ID tags distributed after July 2005, to utilize the USAIN or premises numbering system.

The USAIN and the U.S. logo will be imprinted on official identification devices. Identification devices will be approved by USDA/APHIS through protocols established by the USAIP Development Team (presented in Section III. Standards) and reviewed by the Oversight Board.

USDA/APHIS and all cooperating state animal ID agencies shall promulgate regulations, as appropriate and/or necessary, that will permit state and federal animal health authorities to enforce the following current provisions of federal law relative to regulations governing the USAIP, so as to prohibit any person from:

- Removing an official identification device or causing the removal of one unless the animal is terminated (exception: unless the USAIN is illegible or the RFID device malfunctions)
- Causing the application of an approved USAIN tag from an animal to another animal
- Causing the application of an official USAIN tag to an animal that is currently carrying an official USAIN tag
- Altering an official USAIN tag to change its national number or to make the national number unreadable
- Selling or providing a tag bearing the US logo unless so authorized

### **VI.G. Animal Identification Requirements**

USDA/APHIS will promulgate appropriate regulations to mandate official identification of all classes of animals (individuals, lots or groups), effective July 2005, moving in interstate commerce. The regulations shall also specify that such movements are reported to the National Animal Identification Database.

USDA/APHIS will also work with states to promulgate appropriate regulations to mandate, effective July 2006, official identification of all livestock (individual, lots or groups) moving in intrastate commerce (see definition in Appendix A) per existing requirements. Such movements are to be reported to the National Animal Identification Database.

## **VI. H. Producer Responsibility**

### VI.H.1. Premises Registration

The owner of the premises, or person designated by the owner of the premises must register their location(s) and must keep the required information current. All individuals who own or lease livestock are responsible for having a US Premises Number for the holding location(s) of their livestock.

### VI.H.2. Animal Identification

USDA/APHIS shall promulgate appropriate regulations effective July 1, 2006 to place the legal responsibility on the producer to have any animal or lot of animals properly identified under the USAIP. The regulations shall clearly indicate that the producer holding<sup>1</sup> the animal(s) at the current premises must be held solely responsible for ensuring that each animal or lot of animals is properly identified when required prior to its movement. Producers are urged to utilize identification methods described in the USAIP as soon they become available.

When proper identification requires an USAIN tag, the tag must be properly attached to the individual animal prior to the animal leaving its current premises or at the location of an approved tagging site.

The new regulations will permit approved tagging sites for producers to utilize if facilities are not available to permit animals to be properly identified at current premises, provided such movement is approved by the appropriate state animal health authority. An approved tagging site is a location that has applied to and been approved by USDA/APHIS to provide this service. In such situations, animals must be moved to the authorized facility directly from their herd of origin without commingling with other animals.

Auction markets are not required to tag animals that arrive at their facility untagged; however, they are not prevented from applying to become an approved tagging site if they desire.

<sup>1</sup> *Pertains to the individual who owns the animal. For leased animals the person leasing the animal is responsible.*

## VI. I. Summary of Required Rules and/or Regulations

The following chart summarizes actions required to establish appropriate rules and regulations.

Summary of Regulation Requirements			
Issue	Date		Comments
	"Preliminary" Rule	CFR	
<b>Numbering Systems</b>			
Premises	January 2004	TBD	
Non-producer Participants	January 2004	TBD	Required to approve individual who will participate in the administration of the USAIP
Group/Lot ID	January 2004	TBD	
US Animal Identification Number (USAIN)	January 2004	TBD	
<b>Official Devices</b>			
Recognize USAIN	January 2004	TBD	
Recognize RFID technology	January 2004	TBD	
<b>Premises ID Required</b>		July 1, 2004	
<b>Interstate Commerce of Livestock</b> - ID'd with USAIN or Group/Lot ID		July 1, 2005	Require reporting of interstate commerce movements
<b>Intrastate Commerce of Livestock</b> - ID'd with USAIN or Group/Lot ID		July 1, 2006	Require reporting of intrastate commerce movements
Producer Compliance		July 1, 2006	

## VI. H. USAIP Budget

Earlier this year, Year One funds were requested through the Commodity Credit Corporation (CCC) for initial financial support of the USAIP. These funds, pending their assignment, will be utilized on priorities to establish certain foundation requirements and to support other activities of the program. These priorities included:

- Communication Plan
  - Development of communications tools including fact sheets, FAQ's and presentations; development process to take the plan to the stakeholders'; develop a functional website for information sharing/distribution.
- Governance
  - Obtain necessary resources to start rulemaking procedures, carry out support functions, personnel to manage the national database infrastructure.
  - Funds to support states in developing enabling legislation to support the implementation of premises identification.
- Information Technology
  - Development of uniform State Premises System, National Premises Repository and Animal Identification Numbering Allocation System.
  - Funds for states to implement premises identification within their area.

- Pilot Projects
  - Projects in key states and with different species to test the system. Assessment of current systems to document lessons learned in previous implementation processes.
  
- Transition
  - Begin to build RFID infrastructure in key locations (markets, slaughter establishments, border crossings, and field locations).
  - Furnish RFID tags, applicators and supplies to producers in key locations.
  - Field staff to administer programs.

The following chart provides a broad overview of the dollars required to implement the USAIP following the initial start up explained above. These projections were based on some basic guidelines and assumptions. It is acknowledged that more specifics to the final implementation plan will provide more details to direct the preparation of final budget. The following budget is provided as an estimate to reflect anticipated financial requirements.

<b>USAIP - Preliminary Projection for Financial Requirements</b>					
	<b>Year 2</b>	<b>Year 3</b>	<b>Year 4</b>	<b>Year 5</b>	<b>Year 6</b>
<b>Information System</b>					
System Development	\$5,000,000	\$4,000,000	\$1,000,000		
System Maintenance	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000
Support Resources	\$5,043,533	\$10,087,067	\$15,130,600	\$15,130,600	\$15,130,600
Sub Total	\$10,053,533	\$14,097,067	\$16,140,600	\$15,140,600	\$15,140,600
<b>Data Collection Infrastructure</b>					
Market readers	\$16,380,000	\$3,931,200	\$3,938,000	\$3,770,800	\$3,770,800
Slaughter readers	\$2,083,600	\$3,182,433	\$1,309,400	\$1,309,400	\$1,114,600
Field readers	\$680,000	\$966,000	\$1,252,000	\$858,000	\$858,000
Sub Total	\$19,143,600	\$8,079,633	\$6,499,400	\$5,938,200	\$5,743,400
<b>ID Devices</b>					
Tags	\$34,319,082	\$66,972,541	\$99,626,000	\$99,626,000	\$99,626,000
Applicators, etc.	\$7,318,600	\$9,148,250	\$9,148,250	\$1,829,650	\$1,829,650
Sub Total	\$41,637,682	\$76,120,791	\$108,774,250	\$101,455,650	\$101,455,650
<b>Total</b>	<b>\$70,834,815</b>	<b>\$98,297,491</b>	<b>\$131,414,250</b>	<b>\$122,534,450</b>	<b>\$122,339,650</b>

Documentation and the references that support the above projections will be presented at future stakeholder meetings (including the 2003 USAHA meeting).

# **APPENDIX**

## **Appendix A. Glossary of Terms**

### **American Identification Number**

The American Identification Number was adopted in 1998 by the Council on Dairy Cattle Breeding to facilitate developing national programs that not only enhance genetic progress but also animal disease control and eradication. The number is defined as a 12 character field prefixed with “USA”. The American ID number, as an alphanumeric field, cannot be encoded in the ISO transponder. The American Identification Numbering system will be phased out (or merged with) the US Animal Identification Number as it is implemented.

### **Animals**

Consist of those species shown in the species field name listed in section III.A.3.

### **Breeding Cattle**

Sexually intact cattle of either sex, with the exception of veal calves and heifers moving direct to a terminal feedlot.

### **Check Digit**

A decimal (or alphanumeric) digit added to a number for the purpose of detecting the sorts of errors humans typically make on data entry.

### **Country code**

A 3-digit numeric code representing the name of a country in accordance with ISO 3166.

### **Electronic Identification (EID)**

An identification method that utilizes electronic technology, including, but not limited to bar codes, 2-D symbology, and radio frequency.

### **US Group/Lot Identification Number**

The identification number used to uniquely identify a “unit of animals” of the same species that is managed together as one group throughout the preharvest production chain.

### **Individual Animal Identification**

A means of identification that provides the capability to differentiate one animal from another. Official individual animal identification uses methods that meet the definition of official identification.

### **Identification Methods**

A means of identifying an animal, including ear tags, brands, breed registry certificates, etc.

### **Intrastate Movement**

Movement that does not cross a state line and does not meet criteria for entering interstate commerce.

### **Intrastate Commerce**

Movement that involves commingling or change of ownership, but does not cross a state line nor meet criteria for entering interstate commerce.

## **ISO**

International Organization of Standards.

### **ISO Transponder**

RFID device that transmits its transponder code according to ISO 11784/11785 when activated by an ISO transceiver and that has been evaluated and approved for conforming to these standards by the International Committee on Animal Recording

### **ISO Transceiver (Reader)**

Transceiver that reads at least both ISO FDX-B and ISO HDX transponders as defined in ISO 11784/11785.

### **Mandatory Identification**

A state and/or federal identification requirement that defines which livestock must be identified according to established protocols.

### **National Identification System**

An identification system that, through established standards and defined data elements, allows for the compatibility of systems while providing the efficient availability of agreed-to information across each segment of the industry.

### **Official identification Device**

An identification device that is approved by USDA/APHIS for use in the USAIP. Official identification devices carry the US Shield and meet the established standards.

### **Official Identification**

A method of identification defined in the CFR that is acceptable when the USAIP requires the identification of an animal or group/lot of animals.

### **Official Identification Numbers**

Numbering systems recognized in the CFR; alpha-numeric National Uniform Ear tagging System or valid premises identification number that is used in conjunction with the producer's livestock production numbering system. The USAIP directs the establishment of the US Animal Identification Number as the sole official identification number over an agreed-to period of time.

### **Premises**

A premises is a location as determined by the State Animal Health Official or Area Veterinarian in Charge in consultation with the producer or operator of an entity that participates in animal production or commerce. The incorporation of premises in the USAIP provides the ability to determine the location where an animal(s) was at a certain location for a given duration.

### **Transponder code**

Code as programmed in the transponder and defined in ISO 11784 (Table 1) and ISO 11785.

### **National Premises Identification System**

A means of uniquely identifying a premises and associating it with agreed to information on an information system, including contact information when communication to the premises is necessary.

### **Non-producer Participant**

A person or entity who will engage in the USAIP in one or more designated roles, that in many instances will require that they provide data to the national identification database. Such entities include USAIN Manager, USAIN Tag Distributor, Animal Health Official, Diagnostic Laboratory, etc.

### **Radio Frequency Identification (RFID)**

An ID device that utilizes radio frequency technology. The RFID device or method of identification includes ear tags, bolus, implants (inject), and tag attachments (transponders applied during the tagging process).

### **US Animal Identification Plan (USAIP)**

The animal identification plan for the United States, that through collaboration of industry and government, provides the infrastructure to support animal disease surveillance, monitoring, control and eradication.

### **US Animal Identification Number (USAIN)**

The US Animal Identification Number (USAIN) will evolve into the sole national numbering system for the official identification of individual animals in the United States. The format contains 15 digits with the first three being the country code (840 for the United States). The USAIN follows the ISO Standard for Radio Frequency of Animals; thus, can be encoded in an ISO transponder or printed on a visual tag.

### **USAIN Distributor**

A person or entity who is authorized to distribute USAIN Tags.

### **USAIN Manager**

A person or entity that is certified by USDA/APHIS to receive US Animal Identification Numbers. Additionally, they oversee the distribution of USAIN Tags with the animal numbers allocated to them in accordance with the prescribed requirements.

*Note: USAIN Managers can be tag manufacturers that sell identification devices direct to a producer or through their distributor. In some cases, other entities such as state departments of agriculture, breed associations, DHIA, service providers, veterinarian clinics, etc., will be ID Tag Distributors that will be USAIN Managers as well and perform the function referred to as an ID Tag Distributor.*

### **US Premises Identification Number**

The official premises identification number for the United States. The number is nationally unique and has no meaning itself. The premises number is associated with an address or legal land description. The field specification for the Premises Identification Number is:

- 7 characters (right most character is a check digit)

### **USAIN Tag**

Official identification devices that have the US Animal Identification Number (USAIN) printed or encoded on the identification device (normally a visible eartag or an RFID tag attachment). Only official identification devices may carry the US Shield.

### **Write Once Read Many (WORM)**

Distinguishing a transponder that can be partly or totally programmed once by the user, and thereafter only read.

## Appendix B. File Format Descriptions

- **Premises Upload Record Format**

The following format describes the file that each state/regional premises system will utilize to update records to the national premises repository. The file naming convention is defined as:

Non-producer Participant ID number+YYYYMMDDHHMMSS time stamp and .PRM file extension.

For example: X23456720030801032312.PRM

<b>Premises Upload Record Format (File: Prem #1)</b>				
<b>File Header Record (One Record)</b>				
No.	Field Description	Data Type	Size	Example
1	Non-producer Participant Number	Character	7	X234567
2	Transmission Date	Numeric	12	YYYYMMDDHHMM
3	Record Count	Numeric	8	100
4	E-mail Address	Character	60	Bill.smith@Dataprovider.com
<b>Record Description (Multiple Records)</b>				
No.	Field Description	Data Type	Size	Example
1	US Premises ID Number	Character	7	T234W67
2	Name of Entity	Character	30	
3	Owner or Appropriate Contact Person	Character	30	
4	Street Address	Character	30	
5	City	Character	20	
6	State	Character	2	
7	Zip/Postal Code	Numeric	9	
8	Operation Type	Character	1	(M for Market, etc.)
9	Contact Phone Number	Numeric	15	
10	Date Activated	Character	8	YYYYMMDD
11	Date Retired	Character	8	YYYYMMDD
12	Reason Retired	Numeric	2	

• **USAIN/Animal Transaction Record**

Animal records submitted to the National Animal Identification database will utilize the following file format specifications. The file naming convention is defined as:

Non-producer Participant ID number+YYYYMMDDHHMMSS time stamp and .IND file extension. For example: X23456720030801032312.IND

USAIN/Animal Transaction Record (File: ID #1)					
File Header Record (One Record)					
No.	Field Description	Data Type	Size	Example	
1	Non-producer Participant Number	Character	7	X123456	
2	Transmission Date	Numeric	12	YYYYMMDDHHMM	
3	Record Count	Numeric	8	100	
4	E-mail Address	Character	60	bill.smith@Dataprovider.com	
Record Description (Multiple Records)					
Field No.	Field Description	Data Type	Size	Required	Example
1	Event Type Code	Numeric	2	Y	1
2	Sighting/Reporting Premise ID	Character	7	Y	
3	Source/Destination Premise ID	Character	7	N	
4	Event Date & Time	Numeric	12	Y	YYYYMMDDHHMM 200308011223
5	USAIN Number Used	Boolean	1	Y	0 (False) / 1 (True, then Field 6 is required, default)
6	Animal ID number	Numeric	15	Y	Until USAIN number is the only approved animal ID identifier. Other official ID numbers need to be reported in fields 15 thru 18
7	Species	Character	3	N	
8	ID Electronically Read	Boolean	1	Y	0 (False default) / 1 (True)
9	Animal Date of Birth	Character	8	N	YYYYMMDD 20020101
10	Age of Animal	Character	3	N	(M)onth, (D)ay, (Y)ear i.e. M11
11	Sex	Character	1	N	(M)ale, (F)emale, (C)astrated/neutered male, (S)payed/neutered female
12	Breed of Animal	Character	2	N	See document Breed codes US and Can1.pdf
13	Remarks	Character	50	N	Description/other comments
14	Status	Character	1	N	(C)orrection
15	Alternate Animal ID 1	Character	17	N	Alternate pre-existing official Identification number if USAIN not available, Lot ID number if animal has USAIN number and was moved out of a lot, old USAIN number if tag replaced
16	Alternate Animal ID Type 1	Character	1	N	(A)merican ID, (U)SDA eartag, (R)FID, (B)reed registry number, (L)ot number, (T)attoo, required if Alternate ID (field 15) is provided, R(E)placement USAIN number if event code 6 used
17	Alternate Animal ID 2	Character	17	N	Second alternate pre-existing official Identification number if USAIN not available, or Lot ID number if animal has USAIN number and was moved out of a lot
18	Alternate Animal ID Type 2	Character	1	N	(A)merican ID, (U)SDA eartag, (R)FID, (B)reed registry number, (L)ot number, (T)attoo, required if Alternate ID (field 17) is provided

Record format: Comma delimited, double quotes around fields that include a comma terminate a record with an EOL character and the file with an EOF character.

Animal Event Codes	
Event Code #	Description
1	Tag allocated – National USAIN number is allocated to a premises
2	Tag applied - National Animal ID tag is applied to an animal
3	Moved in – Animal is moved into a premise
4	Moved out – Animal is moved out of a premise
5	Lost Tag – New tag is applied to an animal that lost a tag and previous USAIN is unknown
6	Replaced Tag or Re-Tagged – New tag is applied to an animal that lost a tag and previous USAIN is known
7	Imported – Animal is imported into the U.S.
8	Exported – Animal is exported out of the U.S.
9	Sighting – Animal has a confirmed sighting at a location, no movement has occurred. (Ex: vet sighting)
10	Slaughtered – Animal was sent to slaughter.
11	Died – Animal died of natural causes or euthanized at the farm/ranch
12	Tag retired – Tag retired by producer, packing house, etc.
13	Animal Missing (lost stolen, etc)
14	ICVI – Certificate of veterinary inspection

### Field Description Explanations

- **Non-producer Participant Number**  
The Non-producer Participant number is an identifier code for the organization that submitted the information to the National system. In case errors occur in processing the data the organization submitting the data can be contacted. A Non-producer Participant number needs to be obtained from USDA/APHIS before an organization is able to upload information to the National system.
- **Transmission Date**  
The date the file was created and transmitted to the National system.
- **Record Count**  
The number of records that should be included in the file. This provides an additional check to indicate the file was transmitted in its entirety.
- **E-mail address**  
This should be the e-mail address of the person who needs to be contacted in regards to any data errors when processing the file.
- **Event Type Code**  
Any event that identifies the geographical location of an animal at a point in time is considered a sighting or movement event.

- **Sighting Premise ID or Reporting Premise ID**  
Premise where the animal sighting/movement has taken place. The premises where the animal was last seen.
- **Source/Destination Premise ID**  
If an animal moves from one premise to another premise and the sighting/reporting premise knows the source or destination premise ID, this information can be provided in the Source/Destination Premise ID field. If the event type is “moved in”, this field could be used to report the source premise where the animal came from. If the event type was “moved out”, this field could be used to report where the animal was sent.
- **ID electronically read**  
Identifies if the event that was recorded was based on the animal ID being read through an RFID reader.
- **Status**  
Indicator if the record for this animal event is a correction to a previous record that was uploaded.
- **Alternate Animal ID**  
Up to two pre-existing official ID numbers such as American ID, USDA series numbers, RFID and Breed registry numbers can be used during the transition period if an USAIN number is not yet available. If an alternate US Animal Identification Number is used, an alternate animal ID type code must be submitted to define the type of alternate ID. The Alternate ID and identifier together should create a unique ID for the animal. In the case an animal loses a tag, this field can be used to report the previous USAIN number of the animal. The alternate ID type code must reflect an “R” to indicate the replaced USAIN number.  
The alternate ID and type code fields will be phased out in the future and these fields will only be used to report the USAIN number of an animal that lost a tag.

The secondary use of the alternate animal ID field requires that if an animal was previously assigned to a Lot ID and received an individual animal ID (USAIN number), the Lot ID# the animal was originally assigned to needs to be supplied in the Alternate animal ID field, and the Alternate animal ID type field needs to reflect that the number entered is a Lot ID.

• **Group/Lot Movement Record**

Group/Lot records submitted to the National Animal Identification database will utilize the following file format specifications. The file naming convention is defined as:

Non-producer Participant ID number+YYYYMMDDHHMMSS time stamp and .LOT file extension.

For example: X23456720030801032312.LOT

Group/Lot Movement Record Format(File: ID #2)					
File Header Record (One Record)					
No.	Field Description	Data Type	Size	Example	
1	Non-producer Participant Number (source of data)	Character	7	X123456	
2	Transmission Date	Numeric	12	YYYYMMDDHHMM	
3	Record Count	Numeric	8	100	
4	E-mail Address	Character	60	bill.smith@ Dataprovider.com	
Record Description (Multiple Records)					
Field	Field Description	Data Type	Size	Required	Example
1	Event Type Code	Numeric	2	Y	1
2	Premise ID	Character	7	Y (Required when event code is 2, 3, or 4)	YYYYMMDDHHMM 200308011223
3	Event Date & Time	Numeric	12	Y	
4	Lot ID number	Character	13	Y	G/L ID number is comprised of Premises ID and date the lot was established
5	G/L Subset Identifier	Character	30	N	Used to identify subset such as a barn
6	Group Type	Character	1	Y	(S)tatic, (D)ynamic
7	Species	Character	3	Y	
8	Event Remark	Character	50	N	
9	Status	Character	1	N	(C)orrection

Record format: Comma delimited, double quotes around fields that include a comma terminate a record with an EOL character and the file with an EOF character.

Group/Lot Event Codes	
Event Code #	Description
1	Begin Group/Lot, Group/Lot of animals was established at a premise
2	Moved Group/Lot in, Group/Lot of animals was moved into a premise
3	Moved Group/Lot out, Group/Lot of animals moved out of a premise
4	Sighting Lot has a confirmed sighting at a location, no movement has occurred (i.e. vet sighting)
5	End Group/Lot, Group/Lot inventory is zero

## Appendix C. Premise Identification Number Allocator

The Premises Identification Number Allocator (Premises Allocator) is a secured internet system that provides the allocation of the nationally unique premises numbers for a specific location in the U.S. State departments of agriculture with a USDA certified Premises Identification System will have authorized access to the Premises ID Allocator. The development and maintenance of the Premises ID Allocator will be administered by the USDA.

*Note: As explained in the Premises Identification section, the administration and management of the premises number and associated information is the responsibility of each state Department of Agriculture (or as established by the appropriate governing body within the state).*

- **Goal**

The goal of the Premises Allocator is to validate a location using an address or other legal land description and to allocate a national premises number to the location. The single allocation system ensures the uniqueness of a premises identification number for the entire United States and should minimize the allocation of multiple numbers to the same location.

- **Acquiring a Premises Identification Number**

Two means of acquiring a Premises Identification Number is provided. One option is for the state administrator to access the system direct through the established URL. The second is for the state to have their premises system interfaced with the Premises Allocator.

In either situation, premises (address) information is submitted by the authorized user or interfaced state premises system. A National Premises Identification Number is returned by the Allocator when a match is made between the submitted address and the national postal system. In situations where an address cannot be validated (no legal address matches) a message will be returned indicating that no address “match” is on record. A procedure to handle situations when no match is found will allow the state premises administrator to manually obtain a US Premises ID Number if the submitted information was in fact correct.

### Accessing the Premises Allocator without a system interface

Authorized users may log on to the Premises Allocator System at the established URL. The user will enter the required information into the Premises Allocator screens. When an address match is found, a premises number may be requested by the user. The premises number returned and displayed on the Premises Allocator screen will then be entered into the state system.

### Interface between State Premises System and the Premise ID Allocator

A seamless “behind the scenes” standardized interface will be established for the state premises systems in which servlets are used to obtain a premise number. This process will be done in two steps.

Step 1) Address validation

The state premises system will supply an address via a servlet for a premises. The table below lists the address items that can be supplied, including the mandatory items.

Field Descriptions submitted to Premises Allocator			
Field Name	Format	Required	Comments
Address Number	Character	N	Primary address number, can contain 0-9, a-z/- and space
Pre Directional	Character	N	Select S/N/E/W/SW/SE/NE/NW
Street Name	Character	Y	Can contain a-z and space
Street Suffix	Character	N	Select from Road, Lane, Avenue, etc.
Post Directional	Character	N	Select S/N/E/W/SW/SE/NE/NW
Secondary Address Identifier	Character	N	Select APT/DEPT/FL/LOT/RM/STE/UNIT/../#
Secondary Address Range	Character	N	Can contain 0-9, a-z/- and space
City	Character	N	Can contain a-z and space
State	Character	N	Select from dropdown
Zip	Numeric	Y	Can contain 0-9, secondary 4 digits are optional

The Premise Allocator will validate the address through a comparison to existing U.S. mail addresses. If a match is found on the submitted address the Allocator will first return the postal address that is found as it is on record in the postal address system. If no match is found an exception or error report will be returned. The user requesting a premise ID will have to resubmit a corrected address or contact the local Premises ID Administrator to resolve the conflict.

#### Step 2) Obtaining the premises identification number

Assuming an address match is found in the validation process, the user will confirm that the returned address is correct. When the user confirms the address is correct a second servlet will be used to obtain the premise ID number. If a premise ID number was previously allocated to the submitted address, the original premise ID number will be returned to the local system.

#### Administering “no address match” scenarios

A key component is to validate the address against the national postal system. In the cases when an address cannot be found, a “no address match” exception report will be returned to the State Premises System. The user has the option to change the address that was originally submitted for resubmitting to the Premises Allocator. In situations where the user provides evidence that the address is correct, the state premises administrator can verify its correctness and use the online Premises Allocator interface with CEAH to obtain a premises ID through the exception handling processes.

#### **Converting Premises systems**

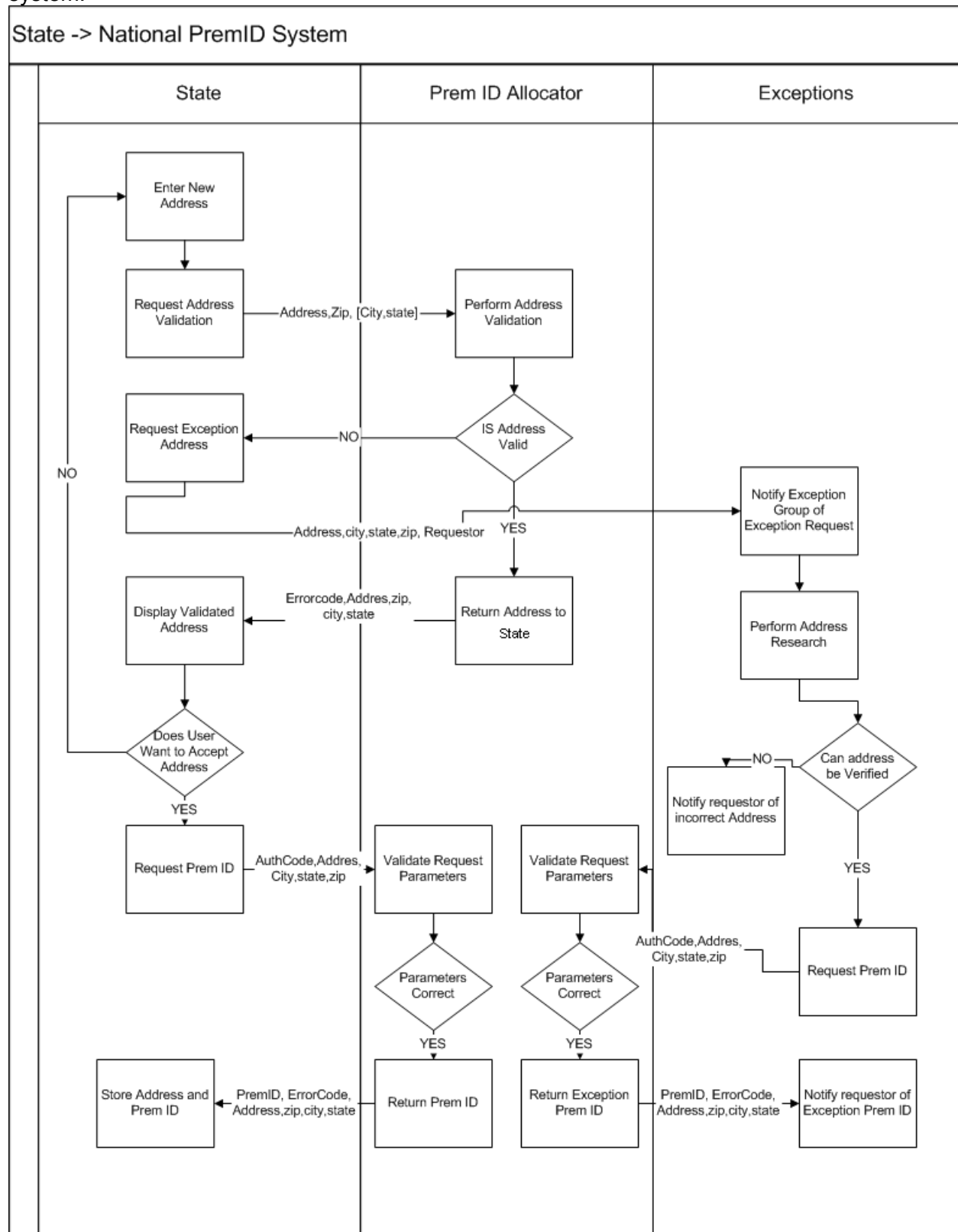
For states to conform to the national standard, it will be key that states that have a premises ID system in place need to convert previously issued premises ID’s to the new format. For states to convert over, it will be necessary to allow the premises allocator to process a file that includes address information for previously issued premises ID. A file will need to be returned that includes a cross reference between the old premises ID and the newly assigned premises ID.

It will be the states responsibility to address any exceptions. The most likely exceptions will be that an address is invalid, or a premises ID has been previously allocated to the same address. States will need to merge recorded information associated with duplicate premises ID to resolve the exceptions. It is recommended that states develop an infra-structure (including IT and human resources) that will manage the exceptions that are returned to them. This might require setting up some temporary database tables to store exceptions and have the ability to re-submit any corrected data to obtain a premises ID.

Below is a recommended file layout to submit and obtain premises ID in the new format:

Premises Conversion File Format			
Field Name	Format	Required	Comments
Current Premise ID	Character	Y	Current State US Premises ID Number (MI1234)
Address Number	Character	N	Primary address number, can contain 0-9, a-z/- and space
Pre Directional	Character	N	Select S/N/E/W/SW/SE/NE/NW
Street Name	Character	Y	Can contain a-z and space
Street Suffix	Character	N	Select from Road, Lane, Avenue, etc.
Post Directional	Character	N	Select S/N/E/W/SW/SE/NE/NW
Secondary Address Identifier	Character	N	Select APT/DEPT/FL/LOT/RM/STE/UNIT../#
Secondary Address Range	Character	N	Can contain 0-9, a-z/- and space
City	Character	N	Can contain a-z and space
State	Character	N	Select from dropdown
Zip	Numeric	Y	Can contain 0-9, secondary 4 digits are optional
New Premises ID	Character	Y	New national US Premises ID Number (A234567)
Exception	Character	N	Used when no valid address or land description met requirements of Premises Allocator

The following illustrates the flow of data between the Prem Allocator and the state system.



## Appendix D. Non-producer Participant and USAIN allocation data

Data items to be collected when a Non-producer Participant is enrolled:

Non-producer Participant Associated Data				
Record Description (Multiple Records)				
No.	Field Description	Data Type	Size	Example
1	Non-producer Participant ID Number	Character	7	T234W67
2	Name of Entity	Character	30	
3	Owner or Appropriate Contact Person	Character	30	
4	Street Address	Character	30	
5	City	Character	20	
6	State	Character	2	
7	Zip/Postal Code	Numeric	9	
8	Non-producer Participant Type	Numeric	2	(1, Federal Animal Health official, 2, Accredited veterinarian, 3, USAIN Manager, etc..)
9	Contact Phone Number	Numeric	15	
10	Secondary Phone Number	Numeric	15	
11	E-mail Address	Character	30	
10	Premises states that can be accessed *	Character	2	US for all states, or for example NM
11	Premises access security level	Numeric	1	0..3 (0 is no access)
12	Animal access security level	Numeric	1	??
13	Date Activated	Character	8	YYYYMMDD
14	Date Inactivated	Character	8	YYYYMMDD
15	Reason Inactivated	Numeric	2	

\* A Non-producer Participant can be granted access to multiple states, so this could require multiple records.

### Security access data

Data items to be collected to grant a Non-producer Participant access to the National premises system:

User Access Security Login/Password				
Record Description (Multiple Records)				
No.	Field Description	Data Type	Size	Example
1	Non-producer Participant ID Number	Character	7	T234W67
2	User full name*	Character	30	
3	User Name*	Character	12	
4	Password*	Character (encrypted)	12	
5	Date Activated*	Character	8	YYYYMMDD
6	Date Inactivated*	Character	8	YYYYMMDD

\* Multiple users can be associated with a Non-producer Participant

### USAIN allocation data

Data Items to be collected by USDA/APHIS to store USAIN allocations to Non-producer Participants.

USAIN Allocation Data				
Record Description (Multiple Records)				
No.	Field Description	Data Type	Size	Example
1	Non-producer Participant ID Number	Character	7	T234W67
2	Start USAIN Number*	Numeric	15	
3	End USAIN Number*	Numeric	15	
4	Date Allocated*	Character	8	YYYYMMDD

\* A Non-producer Participant can receive multiple series of USAIN numbers

## Appendix E. ISO 7064 Mod 37,2 Calculation of Alphanumeric Check digit

This Appendix shows how to calculate the check character for a given number. The calculation is based on the donation number string excluding the leading '=' symbol and the flag characters.

The steps in the process are as follows:

- (1) For each character in the string determine its check value as required by ISO 7064 (see Table I).
- (2) For each character determine its weighted check value by multiplying the check value from (1) by the nth power of 2 where n is the position of the character from the right-hand end of the string.
- (3) Sum the weighted check values from (2).
- (4) Find the modulus 37 value of the sum from (3).
- (5) Subtract the value obtained in (4) from 38.
- (6) Find the modulus 37 value of the result of (5). This is the 37,2 check sum.

The calculated check sum is used to generate both the barcode check characters used in the flag positions of the ISBT128 barcode and the eye-readable check digit character. The barcode check characters are determined by adding 60 to the check sum. The eye-readable check digit character is determined by cross referencing the check sum to Table I.

Char	0	1	2	3	4	5	6	7	8	9	A	B	C	D
Value	0	1	2	3	4	5	6	7	8	9	10	11	12	13
Char	E	F	G	H	I	J	K	L	M	N	O	P	Q	R
Value	14	15	16	17	18	19	20	21	22	23	24	25	26	27
Char	S	T	U	V	W	X	Y	Z	see below					
Value	28	29	30	31	32	33	34	35	36					

**Table II** Example of calculating a check digit

<b>Donation number G65432</b>				
<b>Position from right</b>	<b>n 2</b>	<b>Character</b>	<b>ISO7064 value</b>	<b>Weighted</b>
<b>(n)</b>			<b>(step 1)</b>	<b>value</b>
				<b>(step 2)</b>
6	64	G	16	1024
5	32	6	6	192
4	16	5	5	80
3	8	4	4	32
2	4	3	3	12
1	2	2	2	4
Step 3		Sum of weighted values		1344
Step 4		Sum mod 37		12
Step 5		Subtract from 38		16
Step 6		Mod 37		16
ISO 37,2 check sum =				16
barcode check digit characters =				76
eye-readable check digit =				G

## Appendix F. International Standard - Radio frequency identification of animals

ISO 11784 Radio frequency identification of animals - Code Structure	
<p><b>1. Scope</b></p> <p>This International Standard specifies the structure of the radio frequency (RF) identification code for animals.</p> <p>RF identification of animals requires that the bits transmitted by a transponder are interpretable by a transceiver. Usually the bit stream contains data bits, defining the identification code and a number of bits to ensure correct reception of the data bits. This International Standard specifies the structure of the identification code.</p> <p>This International Standard does not specify the characteristics of the transmission protocols between transponder and transceiver. These characteristics are the subject of ISO 11785.</p> <p>Note – A procedure for the allocation of the manufacturer's code is under study.</p> <p><b>2. Conformance</b></p> <p>The unique individual identification codes transmitted by a transponder are in conformance with this International Standard provided they meet the requirements of clause 5.</p> <p><b>3. Normative reference</b></p> <p>The following standard contains provisions which, through reference in this text, constitute provisions of this International Standard. At the time of publication, the edition indicated was valid. All standards are subject to revision, and parties to agreements based on this International Standard are encouraged to investigate the possibility of applying the most recent edition of the standard indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.</p> <p>ISO 3166-1993, <i>Codes for the representation of names of countries.</i></p>	<p><b>4. Definitions</b></p> <p>4.1 <b>animal code</b>: Bit pattern to identify an animal.</p> <p>4.2 <b>bit pattern</b>: Sequence of binary digits or bits [0,1].</p> <p>4.3 <b>code field</b>: Group of bits in the identification code with a specific meaning.</p> <p>4.4 <b>country code</b>: Bit pattern to define the country where the transponder was issued.</p> <p>4.5 <b>data block</b>: Additional group of bits with a specific meaning.</p> <p>4.6 <b>flag</b>: Single bit with a specific meaning.</p> <p>4.7 <b>identification code</b>: Part of the code that is used for identification (control codes such as header, trailer and checksum are excluded).</p> <p>4.8 <b>manufacturer's code</b>: Bit pattern identifying the manufacturer of the transponder.</p> <p>4.9 <b>national identification code</b>: Code field with a unique number within a country.</p> <p>4.10 <b>transceiver</b>: Device used to communicate with a transponder.</p> <p>4.11 <b>transponder</b>: Device which transmits its stored information when activated by a transceiver and may be able to store new information.</p> <p><b>5. Description of code structure</b></p> <p>The code in the transponder is split up into a number of code fields, each with its own meaning. Each field is coded in natural binary with the high-order bit being leftmost. The structure of the code shall be as specified in Table 1. Bit number 1 in the code is the most significant bit (MSB), bit number 64 is the least significant bit (LSB).</p> <p>The combination of country code and national identification code provides a unique worldwide identification number.</p>

**Table 1 - Code Structure**

<b>Bit No.</b>	<b>Information</b>	<b>Combinations</b>	<b>Description</b>
1	Flag for animal (1) or non-animal (0) application.	2	This bit signals whether the transponder is used for animal identification or not. In all animal applications this bit shall be 1.
2 - 15	Reserved field.	16 384	Fourteen bits of code are reserved for future use.
16	Flag indicating the existence of a data block (1) or no data block (0).	2	This bit signals that additional data is to be received (e.g., physiological data, measured by a device which combines identification and monitoring). This bit shall be 1 if additional information is appended to the identification code, otherwise it shall be 0.
17 - 26	ISO 3166 numeric-3 country code.	1 024	Country codes from 900 to 998 may be used to refer to individual manufacturers of transponders. Country code 999 is used to indicate that the transponder is a test transponder and need not contain a unique identification number.
27 - 64	National identification code.	274 877 906 944	Unique number within a country.
<p>Notes:</p> <ol style="list-style-type: none"> <li>1. The method to distinguish between animal and non-animal applications using bit No. 1 allows the code structure to be recognized electronically. However, this requires that future standards on RF identification in other fields will adhere to this convention.</li> <li>2. The length of the national identification code was chosen to have enough combinations available for all animals in a large country. Moreover, the uniqueness of a code is expected to be maintained over thirty years.</li> <li>3. It is a national responsibility to ensure the uniqueness of the national identification code. If necessary, number series may be allocated to species and/or manufacturers, but this will not be standardized. Ideally every country should maintain a central database in which all issued codes are stored, together with a reference to the database where the information concerning the associated animal can be retrieved.</li> </ol>			

## ISO 11785 Radio frequency identification of animals - Technical Concept (Abbreviated)

### 1. Scope

This International Standard specifies how a transponder is activated and how the stored information is transferred to a transceiver.

### 2. Conformance

Transponders are in conformance with this International Standard provided they meet the requirements given in clause 6 of ISO 11785. Transceivers are in conformance with this International Standard provided they meet the requirements given in clause 6 and annex A, if the latter is applicable.

**Table 1. Summary of the FDX and HDX Systems**

Parameter	FDX System	HDX System
Activation frequency	134.2 kHz	134.2 kHz
Modulation	AM_PSK	FSK
Return frequencies	129.0 kHz to 133.2 kHz 135.2 kHz to 139.4 kHz	124.2 kHz 134.2 kHz (0)
Encoding	Modified DBP	NRZ
Bit rate	4 194 bit/s	7 762.5 bits/s (1) 8 387.5 bits/s (0)
Telegram structure:		
- Header	11	8
- Identification code	64	64
- Error detection code	16	16
- Trailer	24	24
- Control bits	13	-

## Appendix G. Error Handling Procedures

When either the Premises record, Animal record, or Lot ID record are submitted to the National database, error checking will be done on the record prior to adding to the database. If the record fails to pass the error checking, an error record will be created and returned to the sender. The error record will contain the submitted record, along with a 4 digit error code(s) and a date and time stamp (GMT) of when the record was received (or processed) at the end of the record. To limit the number of error codes, the maximum number of error codes that will be returned is limited to 5, and will be added to the end of the submitted record and be delimited with a comma. (example, 2001,2005,2010,..) The error codes will be listed in order of importance, so the most important ones to appear first.

Once the complete file is processed, the file with errors will be made available to the sender. An email will be sent to the organization that sent the file summarizing actions of the record. The error file will not be attached to the e-mail. The e-mail message will contain the following information;

- One summary per header record
- Process Date
- Number of records submitted,
- Number of records containing errors.
- Summary of type of records
- Percentage of records with errors, and useable records
- Name of the file containing errors.
- Hyperlink link is provided to the error file
- Hyper link to list of error descriptions

To ensure e-mail messages can be returned, for each file type the header records of each file must contain a valid email address of the sender.

The error records to be available via HTTP for each organization that submitted them. Error files will be available for 90 days, then they will be archived. To access the HTTP site, each organization submitting records will need User ID and Passwords to download error files. The sender can download the error records at their convenience and take appropriate action.

The following file naming convention will be used to return error file. Each file name will include the initial uploaded file name with a different file extension. Depending on the type of file that is uploaded, the following file extensions will be used:

- “.EPR” for premises records
- “.ELO” for lot records
- “.EIN” for animal records

### Error Codes

The format of the error codes is based on a 4 digit numeric code. The error code is constructed as follows;

- Pos 1; Grouping of error records;  
1 = Premise Upload Records sent to the National Premises Repository DB from the State Premises DB.

2 = USAIN/Animal Transaction Records sent to the National Animal ID DB.

3 = Lot ID Transaction Records sent to the National Animal ID DB.

Pos 2-4: three digit error code (numbering within the type of error)

Code Example: 1003 = Error code #3 under the Premise errors.

2003 = Error code #3 under Animal errors.

10 error code numbers were skipped at a time per category, so new codes can be inserted at a later date. Description of the error codes were kept as specific and self explanatory as possible.

## **Types of errors**

When premises information is processed, the following is assumed:

- Premise ID address is validated.
- Premise ID is validated
- The states are in control of the data they submit, and the National Premises Repository overwrites or adds any data they get from a state based on Premise ID. The address will not be checked against the postal office database.

Note: for date checking;

Format Incorrect- indicates the date is too long or contains alpha characters.

Future date- indicates the date has not happened yet.

Invalid- indicated that the;

- Year is outside of an acceptable range of within the past 30 years.
- Month is outside of the 01-12 range
- Day is outside of the range for that month. Example: Jan must be 1-31...

## Appendix H.

### **Secretary Veneman submits statement to Gilmore Commission regarding USDA's role in protecting U.S. from terrorism.**

Chairman Gilmore and distinguished members of the Commission, thank you for the opportunity to share the Department of Agriculture's (USDA) role in protecting our country from terrorism with the Advisory Panel to Assess Domestic Response Capabilities for Terrorism Involving Weapons of Mass Destruction.

When the Gilmore Commission was established four years ago, few Americans foresaw the profound way that terrorism could affect us, and very few understood the potential impact of weapons of mass destruction. This Commission, however, has been on the forefront of both of these issues, which are now central not only to American foreign policy, but also to the work of every department within the Federal government. I commend the Commission for its role in heightening awareness of these issues, for bringing more accountability to the government and for its recommendations for improving homeland security.

In its latest report, the Commission considers the economic impact of a significant attack against American agriculture and finds that, "the downstream effect of a major act of terrorism against this highly valuable industry would likely be enormous." Indeed, with one in eight American jobs directly involved in, or dependent upon agriculture, the economic impact of an attack on this sector could be the most important threat we face.

**I want to commend the Commission, too, for observing that because agriculture was not recognized as a critical infrastructure when critical infrastructures were initially identified, agriculture did not benefit from the heightened awareness of terrorist threats that were paid to other sectors. As you further note, though, the Bush Administration has recognized this oversight, designated agriculture as a critical infrastructure in its National Strategy, and has taken strong steps toward protecting it. Addressing the new threat requires extraordinary vision, new thinking and the ability to look at the much larger issue – the protection of our citizens against potential threats.**

We have seen the devastation, destruction and loss of lives – to say nothing about the damage to our economy – caused by the events of that horrible day, September 11, 2001. It is something that nobody wants to see repeated. It is why all of us are considering the important issues of homeland security and how we can best prepare for and prevent future attacks. However, preparedness also requires us to consider how we can best ready this nation – and the infrastructure which supports it – to respond in the event of another attack.

*Note: The full report can be obtained at: <http://animalagriculture.org/newsarchives/2003/Sep12/Gilmore.htm>*

Source: USDA

September 9, 2003

## Appendix I. National Identification Development Team Roster

National Identification Development Team		
<b>Steering Committee</b>		
Tri-chairs: Valerie Ragan, MD; Neil Hammerschmidt, WI; Robert Fourdraine, WI John Adams, VA; Mark Engle, CO; Clarence Siroky, ID; Scott Stuart, CO; John Wiemers, IL Gary Wilson, OH; Cindy Wolf, MN; Taylor Woods, MO		
<b>Communications Subcommittee</b>		
Co-chairs: Scott Stuart, CO and Cindy Wolf, MN		
Karen Batra, Washington, DC James D. Cain, NC Linda Campbell, VA Pete Crow, CO Basil Eastwood, Washington, DC Madelaine Fletcher, MD	Sharon Curtis Granskog, IL Greg Ibach, NE Wes Ishmael, TX James Jarrett, GA Steve Kay, CA John Maday, CO	Judy Malone, CO John McBride, MO David Morris, Washington, DC Ben Richey, IA Glenn Slack, KY
<b>Governance Subcommittee</b>		
Co-chairs: John Adams, VA and Clarence Siroky, ID		
Jon Caspers, IA John Enck, PA John Green, CO Bob Hillman, TX	Dick Jurgens, IL Joe Miller, Washington, DC Robert Norton, AL Ken Olson, IL	John Ragan, Washington, DC Gary Tauchen, WI George Teagarden, KS Gary Weber, Washington, DC
<b>Information Technology Subcommittee</b>		
Chair: Robert Fourdraine, WI		
Curtis Borchers, NE Tyler Brown, MO Susan J. Buroker, WI Ken Crandall, UT Robert Dickens, NC Jennifer Fernandes Hanf, CA Niels Fogt, MO Bruce Golden, CO	Kathy Hagin, CA Rodney Howe, CO Michael John, MO John Mass, CA Kevin Maher, IA Gary Marsh, CA Stu Marsh, AZ Brett, McConkey, CAN	Tim Niedecken, TX David Nolan, AR Tim O'Neill, CO Matt Perrier, MO Ron Prorok, SD Ross Simpson, CO Glenn Smith, GA Victor Velez, CA
<b>Standards Subcommittee</b>		
Co-Chairs: Mark Engle, CO and John Wiemers, IL		
Fred Bourgeois, LA Allen Bright, NE John Carter, NC James Case, CA James Collins, MN Darrin Drollinger, WI David Farnum, IA	Glenn Fischer, TX Cara Gerken, OK David Greene, MD Cheryl Hall, MD Steve Hennager, IA Jay Mattison, WI Phyllis Menden, WI	James McKean, IA Stan Potratz, IA James Riva, Washington, DC Julie Stitt, CAN Joan Dean Rowe, CA John Schiltz, IA Lisa Villella, MO
<b>Transition Subcommittee</b>		
Co-chairs: Taylor Woods, MO and Gary Wilson, OH		
Richard Bowman, MN Matt Brockman, TX Bruce Dokkebakken, MN Velmar Green, MI Kent Haden, MO	Locke Karriker, OK Rick Keith, NE Jim Leafstedt, SD Rosemary LoGiudice, IL Nancy Robinson, MO	Paul Rodgers, WV Bob Smith, OK Mark Spire, KS Steve Stanec, NE



