

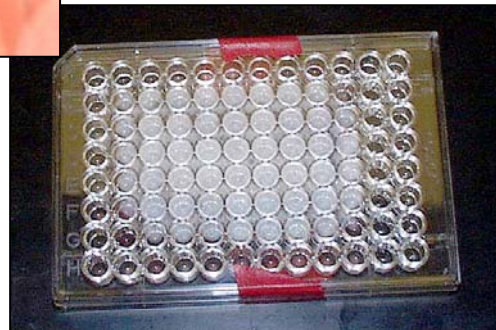
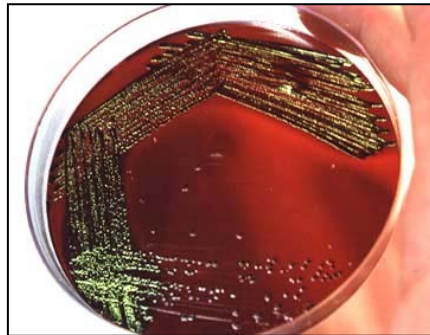
# **FECAL COLIFORM STRAIN IDENTIFICATION PROJECT**

## **FINAL PROJECT COMPLETION REPORT**

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## EXECUTIVE SUMMARY

Contamination of surface and groundwaters by fecal coliform bacteria is one of the most common water quality problems facing state and federal water resource managers. Presence of these bacteria indicate a possible health risk and numbers exceeding state standards may prohibit human consumption and recreation uses. Management practices designed to alleviate fecal contamination depend upon correct identification of animal and source areas. Bacterial source tracking (BST) techniques are currently under development which may allow discrimination of different animal sources and facilitate management efforts. The objectives of this study were to (1) conduct an extensive literature review and collaborative interaction among other research labs to isolate candidate methodologies that would reliably identify source organisms for fecal coliform strains from monitored stream and lake sites and (2) design, field test and calibrate a proposed fecal strain identification monitoring procedure which might be implemented by state water-resource managers within South Dakota.

A literature review and evaluation of 300 references covering 15 genotypic and phenotypic BST techniques was conducted and each methodology was scored relative to overall accuracy, multispecies accuracy, reproducibility, cost per sample, turnover time, required man power, expertise required, product availability, lab set-up cost, lab safety and practical applicability. Results of this review suggest that pulsed field gel electrophoresis, antibiotic resistance analysis and carbon utilization profiling might be optimal techniques providing adequate source resolution and reproducibility at reasonable cost. Following consultation with state water resource managers, it was decided to focus development and field testing on antibiotic resistance analysis (ARA).

A state database of nearly 2800 *E. coli* isolates were collected from 7 different host animals within the Middle Rockies, Northwestern Glaciated Plains, Northwestern Great Plains and Northern Glaciated Plains ecoregions. These isolates were challenged using multiple concentrations of eight antibiotics in the ARA laboratory of Dr. Valerie Harwood (University of South Florida). Discriminant analysis performed on results of this ARA testing revealed an average rate of correct classification (ARCC) of 32.6% for the entire database irrespective of ecoregion. ARCC values increased 9.8% when isolates were analyzed separately for each ecoregion. Pooling isolates into fewer groups increased ARCC's. ARCC's increased to 65.3% when source animals were grouped into human and non-human sources.

Results of this effort demonstrate ecoregion differences in ARA profiles and support efforts to develop BST database sets within smaller subregions or on a watershed scale. Furthermore, pooling isolate data into fewer groups with larger numbers of isolates increased ARCC's but at the expense of increasing variability and the minimum detectable percentage required to differentiate different sources.

The ARA methodology did not provide sufficient discriminatory power to differentiate large numbers of source animals using this standard database. However, differentiation between human and non-human sources appears possible using this methodology.

## **ACKNOWLEDGMENTS**

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# INTRODUCTION

## Fecal Pollution Indicator Organisms

Monitoring for fecal pollution of waters that are used for drinking, recreation and/or industry is important for public health and economic reasons. Pathogens introduced from fecal contamination can lead to disease in humans and livestock and economic losses to industries that depend on high water quality (Bernhard and Field, 2000). Contamination of water with human waste can introduce microorganisms causing a variety of infectious diseases such as typhoid, salmonellosis, and cholera (Scott et al., 2002).

Detection of fecal pollution indicator organisms has been used as a tool for decades in helping determine if water has been polluted with feces. Good indicator organisms should ideally only be associated with feces and not be native to aquatic and/or soil environments, be rapidly detected, easily counted and have similar survival characteristics to pathogens of concern.

Indicator bacteria that have been used to detect fecal pollution include *Bifidobacterium* spp., fecal streptococci and enterococci, and coliform bacteria (Scott et al., 2002; Toranzos et al., 2002). Coliform bacteria include several genera in the family *Enterobacteriaceae* that are aerobic/facultatively anaerobic, Gram-negative, non-spore forming rods fermenting lactose with acid and gas production in 24-48 hours at 35° C. Amongst these, *Escherichia coli* has been frequently used as a fecal pollution indicator organism. It is a thermotolerant coliform (fecal coliform), having the same traits as other coliforms but additionally being able to grow and metabolize at 44.5 +/- 0.2° C (Toranzos

et al., 2002). *Escherichia coli* is used as an indicator organism in water quality testing because it is easily cultured and counted, and is more fecal-specific than other coliforms like *Klebsiella* which have no exact fecal link (Rose and Grimes, 2001). The presence of *E. coli* in water is highly correlated with fecal contamination from warm-blooded hosts (especially mammals (including humans) and birds) (Toranzos et al., 2002).

Fecal contamination may arise from inefficient sewage treatment plants, leaking septic tanks, agricultural runoff and wildlife. The standard fecal coliform count methods that have been used to monitor water quality were not designed or able to pinpoint the specific source (animal or human) of fecal pollution. Recently, a variety of methods have been devised to establish the source of fecal pollution. These methods (microbiological, genotypic, phenotypic, and chemical) may facilitate monitoring efforts and contribute toward effective management of fecal contamination to surface and subsurface waters (Scott et al., 2002).

### **Utility of Bacterial Source Tracking**

The goal of bacterial source tracking is to identify the source (human or animal) causing fecal contamination (Rosen, 2002). Knowing these sources can allow management decisions that reduce contributions from these sources. Bacterial source tracking methods allow tracking sources of fecal pollution and can play a major role in the development of total maximum daily loads (TMDLs) as described below.



EPA reports data that are submitted by states on pollution problems of rivers, lakes and estuaries. The level of bacteria and pathogens present based on fecal indicator studies frequently exceeds water quality standards. A water body or part of a river that surpasses these criteria is listed by the states (EPA's 303(d) list) and may prompt extra effort to improve the quality of that water body. A TMDL specifies the maximum amount of a pollutant that a body of water can receive and still meet water quality standards, and allocates that amount to the pollutant sources (point and nonpoint) (<http://www.epa.gov/owow/tmdl/iintro.html>). Using TMDL information, management practices can be implemented to reduce loadings of contaminants within levels capable of supporting designated uses.

### **Bacterial Source Tracking Methods**

Several methods are currently available for bacterial source tracking. Although some of the methods have been in use for several years, all of the BST methods are still being developed and/or evaluated to varying degrees (Hagedorn, 2004). In the first part of this study, a literature search was conducted to document which BST methods have been used, and evaluated their advantages and disadvantages, as well as evaluating their economic cost. The following summary of BST methods covers those evaluated and compared in the initial stages of this project, with emphasis on methods that are used fairly commonly in the BST field (Jorgenson et al., 2002). Unless otherwise noted, all of the BST methods listed require that a reference database of bacterial isolates be obtained to compare unknown isolates to. The methods listed are those that received the most consideration for different reasons, and do not include methods such as randomly

amplified polymorphic DNA (RAPD), multilocus enzyme electrophoresis (MLEE), fatty acid methyl ester analysis (FAME), phage typing, DNA sequencing, plasmid analysis (PA), or amplified fragment length polymorphism (AFLP). For more information about these methods see Jorgenson et al. (2002), Stewart and Stoeckel (2004), or Scott et al. (2002).

### **Repetitive Element-PCR**

Repetitive element-PCR is a form of DNA fingerprinting. PCR primers are used that correspond to interspersed repetitive DNA sequences present in various locations of the bacterial genome, generating a gel banding fingerprint that can be specific for a bacterial strain (reviewed by Jorgenson, et al., 2002; Scott et al., 2002). Types of repetitive element PCR analyses that have been used in BST studies include repetitive extragenic palindromic sequence PCR (REP-PCR), enterobacterial repetitive intergenic consensus sequence PCR, and PCR with extragenic repeating elements (BOX-PCR) (reviewed by Scott et al., 2002).

The REP-PCR technique is a genotypic method for BST. It has been used by some BST research groups, who have found problems in its reproducibility (i.e., one bacterial strain may produce more than one banding pattern in duplicate samples) (Scott et al., 2002). It was not chosen for use in our study, due largely to its high cost/sample, setup cost, and degree of expertise needed to run samples.

### **Pulsed Field Gel Electrophoresis (PFGE)**

This genotypic method usually involves isolation of genomic DNA from a pure culture of bacteria, followed by digestion of the DNA with rare-cutting restriction endonuclease enzymes. Digested DNA is then loaded onto a special electrophoretic gel apparatus across which an electric field is passed in a pulsed manner. The change in the electric field allows large DNA fragments to be separated in size in a well-resolved manner. The resulting PFGE gel fingerprint obtained can then be compared to the fingerprint of other bacterial isolates. PFGE has proven useful in studying relatedness between bacterial isolates and epidemiologic research. The PFGE method has not received as much use in BST studies as some of the other methods, but its use will probably increase. Advantages of PFGE include very good reproducibility of results, and sensitivity to small differences in DNA samples. Its drawbacks include extended analysis time (2-4 days) required for preparing sample DNA, and expensive, specialized equipment (reviewed by Jorgenson et al., 2002; Scott et al., 2002). Although the SDSU researchers who completed this study did not make use of PFGE (due to high cost/sample, initial setup cost, and degree of expertise needed to run samples), later in the study bacterial isolates were sent to the State Public Health Lab in Pierre where PFGE analysis of the *E. coli* strains could be conducted.

### **Ribotyping**

Another genotypic method, ribotyping, has received a good deal of attention in BST studies. In this DNA fingerprinting technique, genomic DNA of pure cultures of bacteria are digested with restriction endonuclease enzymes. Fragments of the digested DNA are separated by gel electrophoresis, followed by transfer of DNA bands to a solid membrane

support by Southern blotting. The Southern blot is hybridized with labeled oligonucleotide probes complementary to highly conserved ribosomal RNA (rRNA) genes. Hybridization banding patterns are documented and compared between bacterial strains. The method is labor intensive and costly compared to most other BST methods, but can be very reproducible in a lab that is dedicated to its use (reviewed by Jorgenson et al., 2002; Scott et al., 2002). Although the SDSU research team did not make use of ribotyping (due to its cost/sample, setup cost, and technical expertise required), later in this study bacterial isolates were sent to Dr. Mansour Samadpour's laboratory in Seattle, WA for ribotyping analysis.

### **Serotyping**

A phenotypic method using immunologic technique, serotyping arrives at serogroups of bacteria based on whether the bacterial cells have different types of somatic (O) antigens present on the bacterial cell surface. This method requires that a large amount of antisera be available for use in typing strains (reviewed by Jorgenson et al., 2002; Scott et al., 2002). This method was not adopted for this study due, in part, to possible problems with reproducibility of the assay, product availability (antisera), and initial setup costs.

### **Carbon Source Utilization**

Carbon source utilization is a phenotypic method used in some BST studies. These assays investigate utilization of a series of carbon sources by pure cultures of bacteria generating metabolic fingerprints that can be compared between bacterial isolates. A commonly used, commercially available form of this assay is produced by Biolog, where over 90 different carbon sources can be assayed in one microtiter plate (reviewed by

Jorgenson, 2002). In a recent BST study (Harwood et al., 2003), carbon source utilization testing was found to be a better predictor of source when enterococci were the bacterial indicators rather than *E. coli*. However, this method has not yet received much attention in BST studies (Stewart and Stoeckel, 2004). Carbon source utilization (Biolog plate) assay was not used in the present study due in part to potential problems with overall accuracy and reproducibility (Jorgenson et al., 2002).

### **Antibiotic Resistance Analysis (ARA)**

ARA (a phenotypic analysis) is thought to reflect the selection pressure that different bacteria experience in different environments. Bacteria present in the intestinal tract of different animal species are subject to different types and concentrations of antibiotics at different frequencies. Over evolutionary time, selection pressure within the animal species is thought to select for bacterial microflora having specific fingerprints of susceptibility and resistance to antibiotics (Scott et al., 2002). In ARA analysis, each bacterial isolate is challenged against multiple concentrations of several antibiotics via replica plating (Stewart and Stoeckel, 2004). After incubation of plates for a specific time interval, growth or absence of growth is scored and compared to the ARA profiles (fingerprints) of other bacteria. The ARA fingerprints are analyzed by discriminant (or cluster) analysis and compared to a reference database of bacterial isolates from known animal and human sources, to identify a bacterial isolate as having originated from a human or animal source. The ARA method has been used frequently in BST studies due to its relative simplicity and low cost. Some of its limitations include plasmid-borne antibiotic resistance gene transfer between bacterial strains changing bacterial ARA profiles over time, and potential variability between bacterial strains in different animal

hosts receiving different diets and different antibiotics and/or antibiotic doses (Scott et al., 2002). ARA was chosen as the BST method to use for this study, due to its low cost, relative simplicity, and frequent use in other BST studies.

### **Project Objectives**

The objectives of this project were to (1) conduct an extensive literature review and collaborative interaction among other research labs to isolate candidate methodologies that would reliably identify source organisms for fecal coliform strains from monitored stream and lake sites and (2) design, field test and calibrate a proposed fecal strain identification monitoring procedure which might be implemented by state water-resource managers.

# METHODS

## Phase I: Evaluation and Selection of BST Methods

Over 300 published scientific articles were reviewed, summarized and presented as an annotated bibliography within the Phase I report. Fifteen BST methods were evaluated (Table 1) and scored based upon 10 criteria (Table 2). South Dakota Department of Health staff were consulted regarding state laboratory application of candidate methods. In addition, DENR staff were consulted regarding application needs.

Overall accuracy and multispecies accuracy were graded on these terms: 90-100% would receive a 1 rating, 80-90% would receive a 2 rating, 70-80% would receive a 3 rating, and 60-70% would receive a 4 rating. Multispecies accuracy is the measure of the test when more than one kind of strains are tested.

Reproducibility was measured on a scale of 1-4, with 1 being Excellent, 2 Good, 3 Moderate, and 4 being Poor. Reproducibility is the measure of how many times a method is done and how many times was the test correct in identifying the strain.

Cost per sample was graded on a scale of 1-4, with 1 being \$10-\$30 per isolate, 2 \$30-\$60 per isolate, 3 \$60-\$90 per isolate, and 4 anything over \$90 per isolate.

Turnover time was graded as the amount of time it takes to get the result. 1-3 days was graded as 1, 3-5 days as 2, 5-7 as 3 and 7-10 as 4.

Man Power was graded as the amount of people needed to perform the experiment. 1 person equals 1, 2 equals 2, 3 equals 3 and 4 equals 4. Man-power is important because it is a major factor in the amount of money a firm has to put towards the testing.

Level of expertise was measured as the amount of education required for the technician conducting the experiment. Expertise was measured on a +/- scale: (+) meaning expertise is needed and (-) meaning minimal expertise is needed. This is important because it will cost a firm to hire someone with more experience versus someone with minimal experience.

Product availability was applied to the automated kits and some of the reagents used. This was measured on a +/- scale; (-) meaning it is readily available and (+) meaning it is not readily available.

Set-up cost was graded on a scale of 1-5, with 1 being \$0-\$1000, 2 \$1000-\$10,000, 3 \$10,000-\$20,000, and 4 \$20,000 or more.

Lab safety was scored to provide an evaluation of hazard involved with the test. This characteristic was also graded on a scale of 1-4, 1 meaning low risk and 4 high risk. 1 is Excellent, 2 Good, 3 Moderate and 4 poor.

Practical Application was scored to evaluate the ease with which the method could be adopted for use. This attribute was scored 1-4. 1 is excellent, 2 good, 3 moderate and 4 poor.

## **Phase II: Development of a South Dakota ARA Database**

Based upon results of the Phase I literature review, SDSU proposed to design a fecal strain identification procedure using antibiotic resistance analysis which might be implemented by state agency field personnel. ARA is cost effective, provides moderate accuracy and has been applied to water quality monitoring applications. In addition, collaborating microbiologists in Florida would provide a standard set of laboratory protocols and comparison with regional data base information from other parts of the country.

### **Ecoregion Framework**

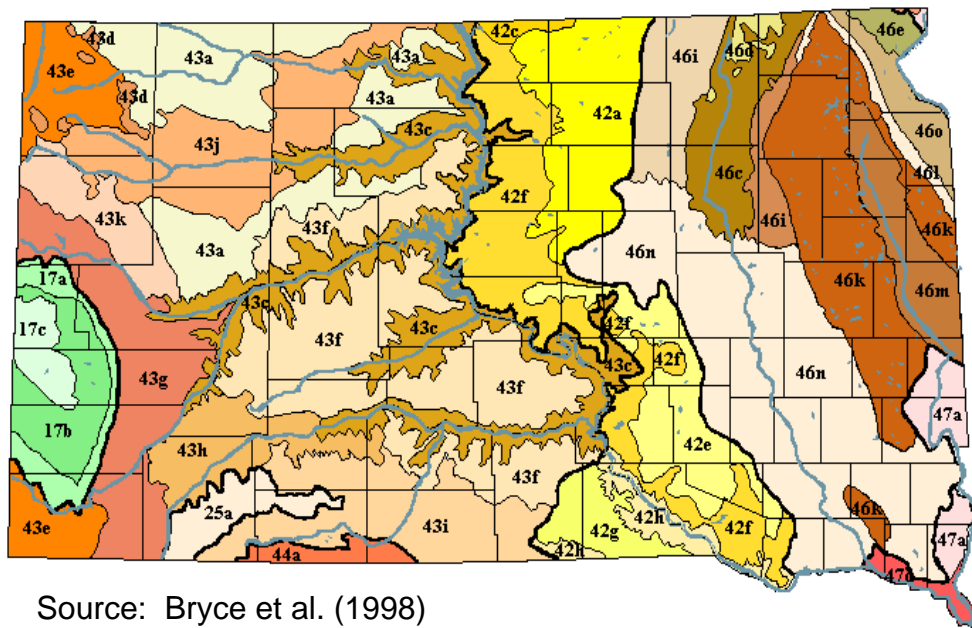
Contemporary water quality monitoring and management programs utilize regionalization schemes (e.g., ecoregions) to account for natural spatial variation. This variation is caused by regional differences in climate, parent material, landform, soils, vegetative cover and land use. For this study, samples were collected from four South Dakota ecoregions to account for spatial variability in bacterial strains.

- Middle Rockies (Black Hills) – West River
- Northwestern Great Plains – West River



- Northwestern Glaciated Plains – East River
- Northern Glaciated Plains – East River

The state of South Dakota is divided into seven Level III ecoregions (Fig x). An ecoregion has similar soils, land use, potential natural vegetation and land form (Bryce et al. 1998). Four ecoregions comprise the bulk of land area within South Dakota. These are the Middle Rockies (17), the Northwestern Great Plains (43), the Northwestern Glaciated Plains (42), and the Northern Glaciated Plains (46). Isolates for the state ARA database were collected from these four ecoregions.



**Figure 1. Ecoregion framework for collection of bacterial source tracking samples from source animals in South Dakota.**

## **Collection and Isolation of Bacteria**

Eight major source animals were selected by South Dakota DENR as the basis for a statewide, ecoregion-based database. Source animals selected included cattle (beef and dairy), pigs, poultry (turkeys and chickens), sheep, humans, horses, dogs, and cats. Poultry samples were collected only from the NWGIP and NGP due to low numbers and horses were added for the MR and NWGrP to address differing numbers of these two source animals across the state. Human samples were collected from wastewater treatment plants. Approximately 20 samples of each source animal were taken from each ecoregion and 5 *E. coli* isolates were cultured per sample to provide a statewide database of approximately 2800 isolates.

Fecal samples from cattle, sheep, pigs, dogs, cats, horses, and poultry are taken with a sterile swab placed into fresh excrement. These swabs were placed to a test tube containing a small amount of phosphate buffered saline and placed on ice. Grab samples (200 ml) were taken from wastewater and stream water sources. Samples were refrigerated in the field prior to laboratory processing.

Once in the lab, fecal samples were streaked onto mFC agar plates. These plates were wrapped in plastic wrap, placed into Zip-loc bags and double-bagged using a large stomacher bag. Bags were then placed into a water bath (44.5° C) for 18-24 hours. Wastewater samples were diluted to  $10^{-4}$ ,  $10^{-5}$ , and  $10^{-6}$  while stream water samples were diluted to  $10^{-1}$  and  $10^{-2}$ . One milliliter of each undiluted sample was also mixed with approximately 25 ml of sterile water and filtered. Clean stream water samples were not

diluted. A 50 ml, a mix of 10 ml sample and approximately 15 ml sterile water and a mixture of 1 ml with approximately 25 ml sterile water was used. The three dilutions of stream water were filtered by vacuum filtration and three plates per dilution were prepared. Plate samples were filtered through a 0.45 um pore size membrane filter. Once filtered the membrane filter was placed onto a 47 mm petri dish containing mFC agar. These were prepared and incubated in the water bath in the same manner as solid waste fecal samples.

Following incubation, possible positive *E. coli* isolates were subcultured onto ChromAgar and incubated for 24-48 hours (37° C). Following this second incubation, presumptive *E. coli* isolates turned blue. These colonies were probed with sterile toothpicks and transferred to a 96 microwell plate. Each well contained 150 ul of EC-MUG broth. Positive (*E. coli*) and negative (*Klebsiella spp.*) controls were inoculated on these plates. Each plate was incubated in the dark (37° C) for 24-48 hrs.

MUG positive isolates were transferred to LB broth tubes for storage. Colonies in LB broth were used to inoculate tryptic soy agar (TSA) deeps. TSA agar deeps were incubated (37° C) for 24-48 hours. When growth in the vials was observed, isolates were shipped to Florida using overnight delivery for antibiotic resistance analysis. Cryovials (70 ul of culture and 30 ul of glycerol) were maintained in the cryofreezer (-80° C) as vouchers.

## ARA Analysis

TSA deeps received in Florida were checked and inoculated into microwell plates to undergo EC-MUG assay. Once isolates were confirmed to be positive for *E. coli*, they were prepared for ARA stamping. Antibiotic plates used in the assay consisted of TSA and different concentrations of an antibiotic (Table 1). These plates were laid out in order from low to high concentrations. A TSA plate without antibiotic was also included as a control.

**Table 1. Antibiotic treatments used in ARA analysis of isolated *E. coli* collected from South Dakota source animals.**

Antibiotic	Treatment Concentration (ug/ml)			
	Low	Low-Med	Med-High	High
Amoxicillin	5	10	15	20
Cephalothin	10	25	50	100
Chlortetracycline	20	40	60	80
Erythromycin	20	50	100	200
Gentamicin	20	40	60	80
Moxalactam	5	10	15	20
Ofloxacin	5	10	15	20
Tetracycline	20	40	60	80

A sterile, sampling replicator was used to stamp treatment plates. The replicator was placed into microwell plates for a few seconds, lifted out and stamped onto antibiotic plates placed in treatment order and finishing with the control plates. The replicator was not re-inoculated between plates. Once the last plate was stamped, the replicator was placed into 70 % ethanol. Stamped ARA and TSA plates were incubated (37° C) overnight.

Following incubation, plates were evaluated for presence or absence of growth. Raw data consisted of presence or absence of growth at each treatment concentration for several antibiotics. Results were recorded on ARA data input sheets and discriminant analysis was performed on the entire library and the unknowns. Rates of correct classification (RCC) were calculated for isolates from each source animal within each ecoregion and average rates of correct classification (ARCC) were estimated from RCC's for each source animal. These results were returned to South Dakota for further analysis.

## **RESULTS**

### **Evaluation of BST Methods**

Based upon criteria evaluations and discussions with state agencies, carbon utilization analysis, antibiotic resistance analysis and pulsed field gel electrophoresis were recommended for further development as candidate bacterial source tracking (BST) methods (Table 2).

Carbon utilization and antibiotic resistance analysis methods provide moderately accurate and cost-effective screening analyses. Each of these phenotypic methods focuses on outward expression of differences among bacterial strains. Application of each method would require development of a regional standards database consisting of approximately 1000 isolates from various source animals.

Pulsed field gel electrophoresis would provide higher accuracy but at a greater cost per sample. This molecular method identifies DNA differences among bacterial strains. A regional strain database would also be required for application of this technique. In

addition, laboratory instrumentation, expendable materials and personnel expertise are much higher for this method. The South Dakota Department of Health laboratory has the instrumentation and expertise to implement all of these methods.

**Table 2. Criteria scoring for the evaluation of bacterial source tracking methods.**

Attribute	Source Tracking Method															
	Rep-PCR	RFLP	RAPD	PFGE	MLEE	FAME	ARA	Phage Typing	DNA Sequencing	Ribo Typing	Bio Typing	Sero Typing	Biolog	PA	AFLP	
Number of Studies	11	5	11	15	4	5	15	10	5	11	6	4	10	5	10	
Overall Accuracy	2	2	2	2	2	3	2	2	1	2	2	2	3	3	2	
Multispecies Accuracy	2	2	2	2	2	3	3	2	1	3	4	3	3	3	2	
Reproducible	1	2	3	2	2	2	3	3	1	3	3	3	3	3	1	
Cost/Sample	4	1	1	3	1	2	1	1	4	3	1	1	2	1	1	
Turnover Time	1	2	2	2	2	1	1	1	2	2	2	1	1	1	1	
Man Power	1	1	1	1	2	1	1	1	1	1	1	1	1	1	1	
Level of Expertise	+	+	+	+	+	+	-	+	+	+	-	-	-	+	+	
Product Availability	-	+	+	-	+	-	-	-	-	-	-	+	-	-	+	
Setup Cost	3	3	2	3	3	4	1	1	4	3	1	3	1	2	4	
Lab Safety	3	2	2	2	2	3	3	1	3	2	1	1	1	2	2	
Practical Application	1	4	3	1	4	4	2	2	4	2	4	3	2	3	4	
<b>Total Scores</b>	<b>18</b>	<b>21</b>	<b>20</b>	<b>18</b>	<b>22</b>	<b>23</b>	<b>15</b>	<b>14</b>	<b>21</b>	<b>21</b>	<b>17</b>	<b>18</b>	<b>15</b>	<b>19</b>	<b>20</b>	

\*Shaded methods were those selected by SD DENR for further consideration.

Rep-PCR = Repetitive Extragenic Palindromic Sequence PCR

PA = Plasmid Analysis

MLEE = Multilocus Enzyme Electrophoresis

ARA = Antibiotic resistance analysis

PFGE = Pulsed field gel electrophoresis

FAME = Fatty acid methyl ester

AFLP = Amplified fragment length polymorphism

RAPD = Randomly amplified polymorphic DNA

RFLP = Restriction Fragment Length Polymorphism

Pulsed field gel electrophoresis, antibiotic resistance analysis and Biolog were three methods with acceptable criteria values. Of these three methods, PFGE was determined to cost the most per sample to implement (Table 3). Antibiotic resistance analysis was selected by SD DENR for development due to its low cost and relatively high accuracy.

**Table 3. Cost estimates for sample processing using PFGE, ARA and Biolog BST methods.**

<b>Method</b>	<b>Vendor</b>	<b>Price per Sample</b>
Antibiotic Resistance	Paleoscience Inc.	\$35 per isolate
	Dr. Mansour Samadpour – Univ. Washington	\$10-\$15 per isolate
	Dr. Valerie Harwood – Univ. South Florida	\$4 per isolate
	Dr. Charles Hagedorn – VPI	\$10 per isolate
	Biological Consulting Services – Florida	\$15 per isolate
Carbon Utilization	Geneva Labs – Wisconsin	\$55 per isolate
	INX Corporation – Florida	\$45 per isolate
	Dr. Charles Hagedorn – VPI	\$10 per isolate
PFGE	Johns Hopkins Microbiology Services	\$75 per isolate
	Paleoscience Inc.	\$280 per isolate
	South Dakota Dept. Health	\$50 per isolate
	Dr. Charles Hagedorn - VPI	\$30 per isolate
	Dr. Mansour Samadpour – Univ. Washington	\$20-\$40 per isolate

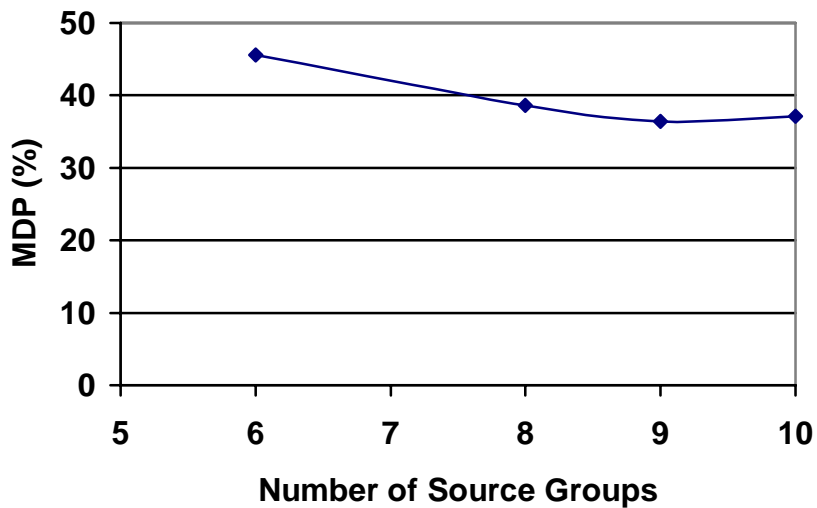
## **Summary and Evaluation of Field Isolates**

### **Defining a Significant Signal**

Estimation of an “expected frequency of misclassification” (Harwood et al. 2000; Whitlock et al. 2002) provides a probability-based criterion to evaluate source signatures. The expected frequency of misclassification for each source animal is calculated by dividing the total number of isolates misclassified into a given source divided by the total number of isolates within the library not from that source (Whitlock et al. 2002). Thus, the average expected frequency of misclassification among all source animals and its standard deviation can be calculated. Whitlock et al. (2002) used four times the standard deviation of the average expected frequency of misclassification as a lower limit to classify a signal as “significant”. Wiggins et al. (2003) coined this number as the



“minimum detectable percentage” (MDP). The MDP for the entire South Dakota ARA database was found to be 37.1%. Thus, any unknown signal exceeding 37.1% would be considered significantly above natural background variation and would likely constitute a significant contributor to a fecal coliform sample. MDP values generally increased as source animals were pooled to form larger groupings (Fig 2).

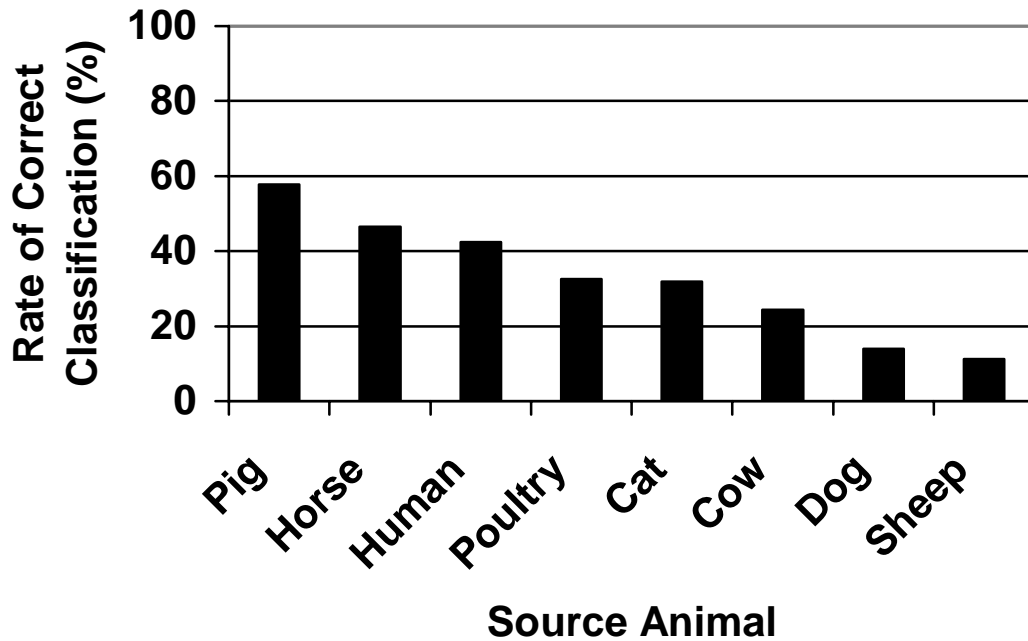


**Figure 2. Changes in minimal detectable percentage as source animal groups are pooled to fewer but larger groups.**

### **Source Animal ARA Signatures**

A total of 2,789 isolates were collected from eight source animals in four ecoregions within South Dakota. Rates of correct classification (RCC) for each source animal across all ecoregions were highest for chickens (56.7%) and lowest for sheep samples (10.3%) with intermediate levels observed from other source animals (Fig 3). The average rate of correct classification (ARCC) for all animal sources combined and across all ecoregions was 32.6%. ARCC's are calculated by averaging RCC's observed for each source animal. The average frequency of misclassification for this model was 8.1% and the

minimum detectable percentage required to detect a significant source was 37.1% (Table 4).



**Figure 3. ARA rates of correct classification (RCC) observed for different source animals sampled from four ecoregions in South Dakota.**

Several subsequent discriminant analyses were performed on the data with larger pooled groupings. Initially, beef cattle isolates and dairy cow isolates were pooled into a cow category. RCC's and the ARCC for this library grouping were higher than those observed from the full, independent isolate library. In addition, the minimum detectable percentage required to differentiate a significant source signal from an isolate group in an unknown sample improved slightly from 37.1% to 36.4%. Chicken isolates again had the highest rates of correct classification, followed by pig and horse isolates. Sheep and dog isolates were most frequently misclassified (Table 5).

**Table 4. Rates of correct classification, misclassification and minimum detectable percentage for the full South Dakota ARA library with all source animals.**

Source	bcw		cat		chk		dcw		dog		hrs		pig		shp		Trk		hum		Tot (ni)	#CC (#)	#MC (#)	RCC (%)
	CC	MC	CC	MC	CC	MC	CC	MC	CC	MC	CC	MC	CC	MC	CC	MC	CC	MC						
bcw	51			11		13		114		3		17		51		17		2		30	309	51	258	16.5
cat		13	109			5		70		33		139		4		4		6		13	396	109	287	7.5
chk		0		5	17			1		0		3		4		0		0		0	30	17	13	56.7
dcw		5		3		2	53			1		7		15		1		0		8	95	53	42	55.8
dog		8		60		2		128	54			80		31		1		4		28	396	54	342	13.6
hrs		0		22		2		58		3	95			13		0		0		7	200	95	105	47.5
pig		12		21		27		42		11		27	202			13		25		20	400	202	198	50.5
shp		27		24		22		80		7		66		106	41			9		18	400	41	359	10.3
trk		5		0		10		6		0		0		81		6	51			1	160	51	109	31.9
hum		18		53		4		142		30		44		36		6		18	52		403	52	351	12.9
TotMC		88		199		87		641		88		383		341		48		64		125	2789		ARCC=	32.3
(n-ni)		2480		2393		2759		2694		2393		2589		2389		2389		2629		2386		<u>AFM</u>	<u>FMsd</u>	<u>MDP</u>
FM		0.035		0.083		0.032		0.238		0.037		0.148		0.143		0.020		0.024		0.052		0.081	0.072	37.1

#CC – number of isolates correctly classified  
 #MC – number of isolates misclassified  
 RCC – rate of correct classification  
 ARCC – average rate of correct classification  
 TotMC – total number misclassified  
 FM – frequency of misclassification  
 AFM – average frequency of misclassification  
 FMsd – standard deviation of frequency of misclassification  
 MDP – minimum detectable percentage

**Table 5. Rates of correct classification, misclassification and minimum detectable percentage for the South Dakota ARA library with beef cattle and dairy cow isolates pooled as cow.**

Source	cat		chk		cow		dog		hrs		pig		shp		trk		Hum		Tot (ni)	#CC (#)	#MC (#)	RCC (%)
	CC	MC	CC	MC	CC	MC	CC	MC	CC	MC	CC	MC	CC	MC	CC	MC	CC	MC				
cat	125			5		18		33		139		4		5		6		61	396	125	271	31.6
chk		6	17				0		0		3		4		0		0	0	30	17	13	56.7
cow		27		15	98				5		24		66		22		2	145	404	98	306	24.3
dog		76		2		20	55				80		31		4		4	124	396	55	341	13.9
hrs		26		2		1		3	95				13		0		0	60	200	95	105	47.5
pig		27		27		22		11		27	203				13		25	45	400	203	197	50.8
shp		29		22		37		7		66		106	45				9	79	400	45	355	11.3
trk		0		10		9		0		0		82		6	51			2	160	51	109	31.9
hum		60		4		32		30		44		36		9		18	170		403	170	233	42.2
TotMC		251		87		139		89		383		342		59		64		516	2789		ARCC=	34.4
(n-ni)		2393		2759		2385		2393		2589		2389		2389		2629		2386		<u>AFM</u>	<u>FMsd</u>	<u>MDP</u>
FM		0.105		0.032		0.058		0.037		0.148		0.143		0.025		0.024		0.216		0.088	0.069	36.4

#CC – number of isolates correctly classified  
 #MC – number of isolates misclassified  
 RCC – rate of correct classification  
 ARCC – average rate of correct classification  
 TotMC – total number misclassified  
 FM – frequency of misclassification  
 AFM – average frequency of misclassification  
 FMsd – standard deviation of frequency of misclassification  
 MDP – minimum detectable percentage

The third discriminant analysis was performed on the library with beef cattle and dairy cow isolates pooled as cow and chicken and turkey isolates pooled as poultry (Table 6). Very little was gained from this isolate pooling. Rates of correct classification for pig isolates increased from 50.8% to 57.8% but RCC's for other source animal groups largely remained the same. The ARCC for this pooled set decreased slightly to 32.6%. The average frequency of misclassification increased slightly to 9.8% while the MDP increased to 38.6%.

The fourth discriminant analysis was performed on the library as above but also with dog and cat isolates pooled as pet and sheep isolates eliminated from the library (due to low numbers of isolates). RCC's for all remaining categories increased as did the overall ARCC (40.8%). However, the average frequency of misclassification also increased to 12.3% and the MDP value for this pooling increased to 45.6% (Table 7).

The final discriminant analysis was performed on the library with all source groups except wastewater samples pooled as non-human. Wastewater isolates were assumed to carry a predominantly human signal. Thus, this final analysis involved only two isolates groups, human and non-human. Rates of correct classification for both groups were well over 60% and the ARCC for this analysis was 65.3%, indicating a high ability to differentiate between human and non-human signals using the database (Fig 4).

**Table 6. Rates of correct classification, misclassification and minimum detectable percentage for the South Dakota ARA library with beef and dairy pooled as cow and chicken and turkey pooled as poultry.**

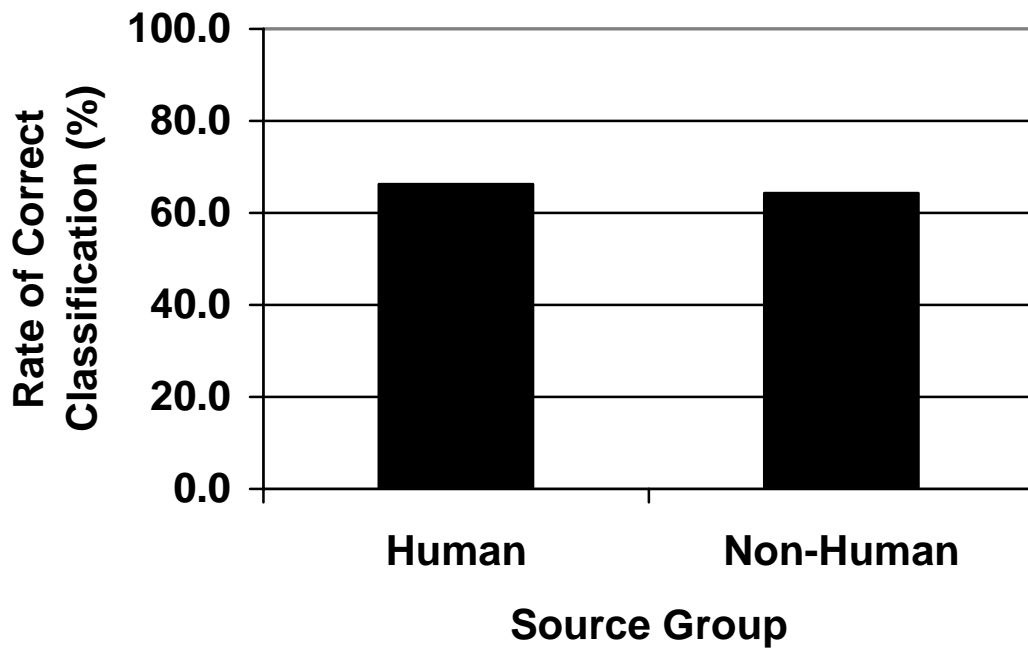
Source	cat		cow		dog		hrs		pig		plt		shp		hum		Tot (ni)	#CC (#)	#MC (#)	RCC (%)	
	CC	MC	CC	MC	CC	MC	CC	MC	CC	MC	CC	MC	CC	MC	CC	MC					
cat	126			18		33		139		4		9		6		61	396	126	270	31.8	
cow		27	98			5		24		78		5		22		145	404	98	306	24.3	
dog		76		20	55			80		32		5		4		124	396	55	341	13.9	
hrs		26		1		3	93			16		1		0		60	200	93	107	46.5	
pig		27		22		11		27	231			24		13		45	400	231	169	57.8	
plt		6		9		0		3		102	62			6		2	190	62	128	32.6	
shp		29		37		7		66		124		13	45			79	400	45	355	11.3	
hum		61		32		30		44		37		19		9	171		403	171	232	42.4	
TotMC		252		139		89		383		393		76		60		516	2789		ARCC=	32.6	
(n-ni)		2393		2385		2393		2589		2389		2599		2389		2386			AFM	FMsd	MDP
FM		0.105		0.058		0.037		0.148		0.165		0.029		0.025		0.216			0.098	0.072	38.6

#CC – number of isolates correctly classified  
 #MC – number of isolates misclassified  
 RCC – rate of correct classification  
 ARCC – average rate of correct classification  
 TotMC – total number misclassified  
 FM – frequency of misclassification  
 AFM – average frequency of misclassification  
 FMsd – standard deviation of frequency of misclassification  
 MDP – minimum detectable percentage

**Table 7. Rates of correct classification, misclassification and minimum detectable percentage for the South Dakota ARA library with beef and dairy pooled as cow, chicken and turkey pooled as poultry, dog and cat pooled as pet and sheep isolates eliminated.**

Source	cow		hrs		pet		pig		plt		hum		Tot (ni)	#CC (#)	#MC (#)	RCC (%)
	CC	MC	CC	MC	CC	MC	CC	MC	CC	MC	CC	MC				
cow	103			25		28		80		20		148	404	103	301	25.5
hrs		1	97			24		13		1		64	200	97	103	48.5
pet		40		224	215			38		15		260	792	215	577	27.1
pig		22		29		25	236			31		57	400	236	164	59.0
plt		6		3		6		107	66			2	190	66	124	34.7
hum		41		44		60		40		16	202		403	202	201	50.1
TotMC		110		325		143		278		83		531	2389		ARCC=	40.8
(n-ni)		1985		2189		1597		1989		2199		1986		<u>AFM</u>	<u>FMsd</u>	<u>MDP</u>
FM		0.055		0.149		0.090		0.140		0.038		0.267		0.123	0.083	45.6

#CC – number of isolates correctly classified  
 #MC – number of isolates misclassified  
 RCC – rate of correct classification  
 ARCC – average rate of correct classification  
 TotMC – total number misclassified  
 FM – frequency of misclassification  
 AFM – average frequency of misclassification  
 FMsd – standard deviation of frequency of misclassification  
 MDP – minimum detectable percentage



**Figure 4. Rates of correct classification for human and non-human isolates collected from four ecoregions in South Dakota.**

### **Ecoregion ARA Signatures**

Source animal isolates were collected from Northern Glaciated Plains, Northwestern Glaciated Plains, Northwestern Great Plains and Middle Rockies ecoregions within South Dakota. These four ecoregions combined account for most of the land area within South Dakota. Because soils, potential natural vegetation, land use and land form vary among these landscape areas, it was anticipated that ARA profiles for the same source animal might vary significantly from one ecoregion to another. Discriminant analyses were performed on approximately 700 isolates collected from each ecoregion.

Rates of correct classification for isolates from each source animal varied tremendously from one ecoregion to the next, suggesting high interregional variability (Table 8). RCC

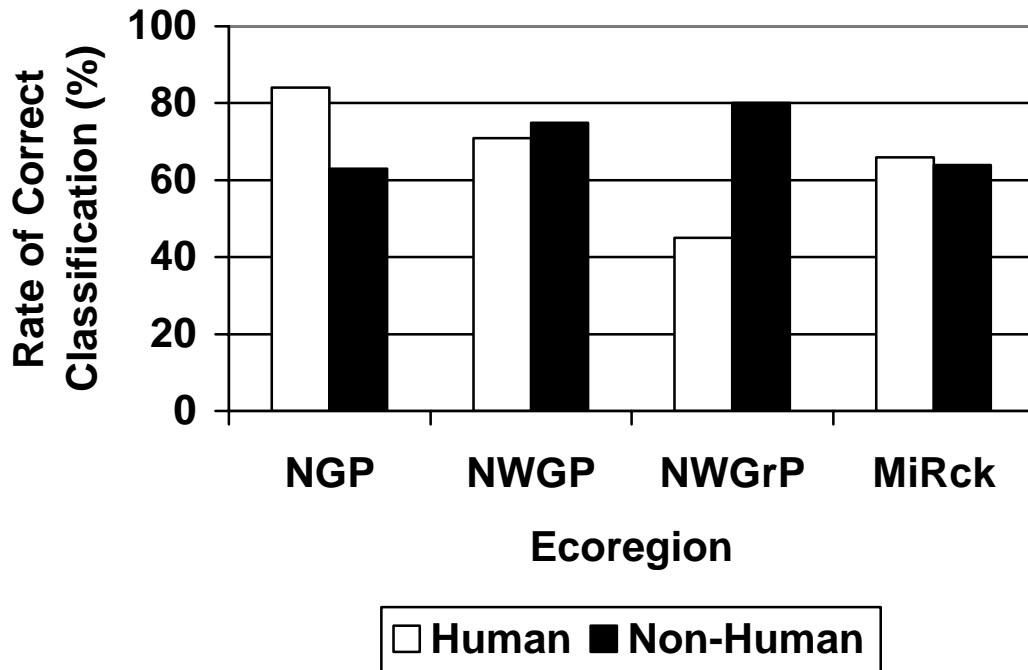


ranges among isolates of the same source animal were highest for cats and pigs and lowest for horses and dogs. The highest average rate of correct classification across all source animals was from the Northern Glaciated Plains Ecoregion (46) and the lowest from the Northwestern Great Plains (43).

**Table 8. Rates of correct classification (RCC) and average rates of correct classification (ARCC) for isolates collected from different known source animals in four ecoregions of South Dakota. All values are percentages.**

<b>Region</b>	<b>Cat RCC</b>	<b>Dog RCC</b>	<b>Cow RCC</b>	<b>Pig RCC</b>	<b>Poultry RCC</b>	<b>Sheep RCC</b>	<b>Horse RCC</b>	<b>Human RCC</b>	<b>ARCC</b>
<b>MiRck</b>	49.0	40.0	30.3	55.0	-	20.2	56.0	42.3	<b>41.8</b>
<b>NWGrP</b>	25.0	42.1	26.3	28.7	-	40.8	69.0	16.0	<b>35.4</b>
<b>NWGP</b>	31.0	56.0	41.8	74.7	37.8	30.7	-	43.1	<b>45.0</b>
<b>NGP</b>	71.9	45.5	20.4	54.8	64.1	33.7	-	40.2	<b>47.2</b>
<b>Range</b>	<b>46.9</b>	<b>16.0</b>	<b>21.4</b>	<b>46.0</b>	<b>26.3</b>	<b>20.6</b>	<b>13.0</b>	<b>27.1</b>	

Rates of correct classification for pooled isolates (Human vs Non-Human) were generally greater than 60% (Fig 5). Thus, pooling the isolates into fewer but larger groups again had the effect of increasing RCC's. Non-human ARCC's were generally less variable among regions than human values which ranged from just over 40% in the NWGrP to over 80% in the NGP.



**Figure 5. RCC's for human and non-human isolate groups collected from Northern Glaciated Plains (NGP), Northwestern Glaciated Plains (NWGP), Northwestern Great Plains (NWGrP) and Middle Rockies (MiRck) ecoregions in South Dakota.**

### **Comparison of Unknowns Against the Database**

Two types of unknown samples were collected for analysis. Four suspected unknowns (SU) were collected from grazed pastures in each ecoregion. These samples were collected from surface water bodies flowing through areas of suspected cattle fecal contamination by cattle. Four additional true unknown samples (TU) were collected from surface bodies without suspected anthropogenic sources. Twenty five isolates were cultured from each unknown sample with the exception of one sample obtained from Spring Creek near Rapid City, SD. Only 17 isolates from this unknown sample grew.

**Table 9. Rates of correct classification obtained from suspected and true unknown samples from each ecoregion in South Dakota. All bolded values exceeded the minimal detectable percentage for the South Dakota ARA database.**

<b>Region</b>	<b>Type*</b>	<b>Cat</b>	<b>Dog</b>	<b>Cow</b>	<b>Pig</b>	<b>Poultry</b>	<b>Sheep</b>	<b>Horse</b>	<b>Human</b>
<b>MiRck</b>	Susp	-	28.0	-	-	-	-	<b>68.0</b>	4.0
	True	-	25.0	13.0	<b>56.0</b>	-	6.0	-	-
<b>NWGrP</b>	Susp	4.0	24.0	8.0	-	-	28.0	36.0	-
	True	4.0	12.0	-	4.0	-	-	<b>80.0</b>	-
<b>NWGP</b>	Susp	<b>84.0</b>	-	4.0	-	-	8.0	-	-
	True	16.0	<b>68.0</b>	-	-	4.0	4.0	-	4.0
<b>NGP</b>	Susp	<b>64.0</b>	4.0	-	-	-	-	-	32.0
	True	<b>48.0</b>	8.0	-	-	4.0	-	-	36.0

\*All suspected samples were collected from pastures with grazing cattle except that from the MiRck ecoregion which contained both cattle and horses

Few of the unknown samples had overwhelming signals from any one source (Table 9).

The results of these analyses suggest complex signals from more than one source animal (based upon the MDP calculated for the South Dakota database) for half of the unknown samples. More interestingly, while all of the suspected unknowns were collected from grazed pastures, cattle (the suspected source) did not provide a significant signal from any of the unknown samples. Cats provided a significant signal from both suspected and true unknown samples in the NGP ecoregion and horses provided a significant signal in the MiRck and NWGrP ecoregion unknowns.

### **Quality Assurance-Quality Control**

Despite poor classification of unknown isolates using the ARA database, QA/QC results indicated high reproducibility among duplicate isolates collected from the same source animal. A total of 270 isolates were collected in duplicate throughout the course of the study. These isolates were randomly selected and processed alongside their duplicates. Paired ARA results for these isolates are shown in Appendix F. These results suggest high reproducibility among duplicate ARA analyses.

## DISCUSSION

Results of ARA analysis of 2789 *E. coli* isolates used in this study suggest significant variation in source animal isolate signals among the four ecoregions in South Dakota. The average rate of correct classification (ARCC) among source animals in the entire database after pooling the 2789 isolates from the four major ecoregions was 32.6%. This is well below ARCC values observed from other ARA studies with smaller isolate numbers collected from more restricted geographic areas, such as individual watersheds (Burnes 2003; Whitlock et al. 2002; Wiggins 2002; Hagedorn et al. 1999). When each ecoregion was analyzed separately, the ARCC increased to an average of 42.4% for each ecoregion. Despite these low classification rates, a high degree of reproducibility was observed from ARA analysis of duplicate isolates, completed as part of the quality assurance/quality control component of the study.

Rates of correct classification (RCC's) for the same animal sources varied from ecoregion to ecoregion within South Dakota. This intraregional variability may be attributed to differences in climate, water quality, food resources and/or animal management practices (Hagedorn, 2004). While not unexpected, these results may explain the low ARCC's observed within a statewide study by comparison to other studies which have focused on individual stream reaches and small watersheds (e.g., Burnes 2003; Sinton et al. 1993; Wiggins et al. 1999). Furthermore, these results would suggest that use of ARA methods for bacterial source tracking may require generation of

site-specific databases, making the method potentially cost-prohibitive for most state agencies.

No single BST method exists that all investigators agree is best for all purposes and situations. Most BST methods require reference databases of microbial isolates, which require considerable effort and resources to both obtain and maintain. As the field of BST research has continued to develop, the consensus number of bacterial isolates needed to establish a useful database has increased to the point where a thousand or more bacterial isolates are considered to be needed for one watershed. Studies with databases of only a few hundred bacterial isolates can provide high ARCC values, but such values are illusory and misleading (Harwood, personal communication). If a BST method is needed at the state level, ARA would be as economical as any other existing method, and as useful for many applications.

ARCC values in this study increased significantly to well over 60% when the number of source animals was reduced through data pooling. These results are consistent with those reported by other ARA studies and demonstrate an increase in discriminatory power when fewer source groups are under consideration (Hagedorn 2004). The degree to which ARA data can be pooled without compromising the original intent of bacterial source tracking would then depend on the level of source discrimination required by monitoring agencies. Evaluating the benefits and costs of greater source animal discriminatory power against the cost of database construction and maintenance should

be established by practicing agencies as part of a planning effort prior to the commitment of limited monitoring funds toward collection of useless data.

Antibiotic resistance analysis is one of several library-based BST methods which rely on a set of geographic-specific standards (a library) against which to type bacterial sources. This library should be developed against a backdrop of planning decisions regarding (1) antibiotics (and concentration levels) to use for challenging microbial populations, (2) numbers and types of source animals from which to develop the library, (3) minimum numbers of isolates needed to generate reliable source identifications, (4) geographic area covered by the library and (5) maintenance efforts required to maintain the usefulness of the library against temporal changes in microbial phenotypes. It should be remembered that the antibiotics that were used in the current study were not selected on any basis relating to use of antibiotics in South Dakota. Rather, they were selected based on experience and studies in Florida (Harwood, personal communication), a state having very different climate, selective pressures on microorganisms associated with animals, and antibiotics prescribed for livestock, domestic animals, and humans. Other workers have shown that the same bacterial strain database tested with different numbers and/or types of antibiotics can yield different ARCC values (Wiggins et al., 1999). To test this hypothesis, antibiotics could be selected for ARA analysis that are more closely related to antibiotics used in animal and human medicine in South Dakota. The same library of *E. coli* isolates used in this study could be analyzed again with such a battery of antibiotics, to see if the results are similar to or different from the results reported in this study.

To the authors' knowledge, this is the first study to develop and evaluate a statewide ARA database within an ecoregion framework. U.S. EPA ecoregions have been used throughout the nation as a framework for water-quality monitoring and management efforts (Omernik 1995). These regions are defined based upon similarities in potential natural vegetation, land form, soils and land use. Thus, variability in natural resources within each ecoregion is normally lower than variability between ecoregions. Because animal management and needs for antibiotic use and administration are likely to exhibit greater similarity within ecoregions versus between ecoregions, it was hypothesized that BST fingerprints would also vary regionally. Separate analysis of standard source animal isolates revealed higher rates of correct classification than was observed from the statewide database. Thus, use of an ecoregion framework appears to improve BST discrimination and should be considered in future implementation of statewide fecal coliform monitoring and assessment. As discussed below, it is likely that subdivision of landscape areas into smaller units more homogeneous units, such as individual watersheds, would be a valuable approach.

The results indicate that a moderately sized isolate database in South Dakota is unable to provide satisfactory rates of correct classification. The number of source animals used, the use of *E. coli*, and the overall geographic area of the study were contributing factors to low ARCC's. However, ARCC's for human and non-human categories were satisfactory. This may indicate that large geographic study areas should have a limit as to the number of sources used. The lack of multi-species accuracy in this study is of concern to the South Dakota DENR water quality managers that would be involved in the

implementation of this or other BST methods. The possibility of using this method as a first-tier test in conjunction with a more powerful genotypic method may be the future of large geographic area studies such as this one. If large states like South Dakota attempt to set up an ARA program for BST, it might be wise to divide the major ecoregions into smaller subregions or even watersheds. Furthermore, different regional selective pressures influence antibiotic resistance in animals and humans. Thus, every ARA database should be kept relevant by adding a certain number of new isolates each year.

Some of the source animals examined in this study were not distributed uniformly throughout the state, so that some ecoregions did not have the number of source animals (poultry especially) desired in the framework of the study. Also, some potential sources of fecal contamination of waters (such as waterfowl and mammalian wildlife) were intentionally not selected for study. Source animals utilized in this effort were selected by state water quality managers to represent those groups likely to contribute significant signals to surface waters. The specific source animals used in this study should be kept clearly in mind, so that if future events warrant the investigation of other fecal sources, this study can be clearly understood for what was and was not examined. Each database should be maintained and supplemented over time, to make sure that the database reflects the population of *E. coli* and/or other microbes used for BST found in the region at a point in time. The bacterial database obtained for this study should be managed so it is dynamic, not static. New isolates must be added to make sure changes that occur in ecological conditions that might influence microbial populations are reflected in the database.



The *E. coli* library developed for this study has been or will be analyzed by at least two other methods other than ARA. The isolates will be analyzed by pulsed field gel electrophoresis (PFGE) at the State Public Health Laboratory in Pierre; and will also be characterized by ribotyping. When the results of these two other analytical methods are available, they should be compared to the ARA results to determine differences in the ability of the methods to differentiate human from animal isolates, and/or to differentiate between bacterial isolates from different human and animal sources.

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## APPENDIX A Distribution of Isolates by Ecoregion

<b>Ecoregion</b>	<b>Middle Rockies</b>	<b>NW Glaciated Plains</b>	<b>NW Great Plains</b>	<b>Northern Glaciated Plains</b>	<b>Total</b>
Beef cow	78	67	89	75	309
Cat	100	100	100	96	396
Chicken	–	18	–	12	30
Dairy cow	21	36	10	28	95
Dog	100	100	95	101	396
Horse	100	–	100	–	200
Pig	100	95	101	104	400
Sheep	95	101	103	101	400
Turkey	–	80	–	80	160
Waste Water	99	102	100	102	403
					2789
Unknowns	42	50	50	50	192
Duplicates					270

## Appendix B ARA Data for the Middle Rockies

Sample	Collection Date	Source	Isolate Number	Antibiotics in ug/L							
				AMX	CEP	CHL	ERY	GEN	MOX	OFL	TET
17BCBC1#1	51303	beefcow	760	5	10	80	50	0	0	0	80
17BCBC1#2	51303	beefcow	761	5	10	0	50	0	0	0	0
17BCBC1#3	13003	beefcow	142	0	10	0	50	0	0	0	0
17BCBC1#4	51303	beefcow	762	5	10	40	50	0	0	0	20
17BCBC1#5	51303	beefcow	763	5	10	80	50	0	0	0	80
17BCBC10#1	11304	Beefcow	2507	20	50	80	20	0	0	0	80
17BCBC10#2	11304	Beefcow	2516	5	10	0	50	0	0	0	0
17BCBC10#3	11304	Beefcow	2517	10	10	0	50	0	0	0	0
17BCBC10#4	11304	Beefcow	2518	5	10	0	20	0	0	0	0
17BCBC10#5	11304	Beefcow	2519	5	10	0	20	0	0	0	0
17BCBC11#1	11304	Beefcow	2657	20	10	0	20	0	0	0	0
17BCBC11#2	11304	Beefcow	2658	5	10	0	20	0	0	0	0
17BCBC11#3	11304	Beefcow	2659	5	10	0	20	0	0	0	0
17BCBC11#4	11304	Beefcow	2660	0	0	0	20	0	0	0	0
17BCBC11#5	11304	Beefcow	2661	5	10	0	50	0	0	0	0
17BCBC13#1	11304	Beefcow	2589	5	10	40	20	0	0	0	20
17BCBC13#2	11304	Beefcow	2590	5	10	40	20	0	0	0	0
17BCBC13#3	11304	Beefcow	2591	5	10	0	50	0	0	0	0
17BCBC2#2	21403	beefcow	178	5	25	40	50	0	0	0	20
17BCBC3#1	40103	beefcow	490	5	25	40	20	0	0	0	0
17BCBC3#2	13003	beefcow	144	5	10	0	100	0	0	0	20
17BCBC3#3	40103	beefcow	489	10	25	80	50	0	0	0	80
17BCBC3#4	40103	beefcow	525	5	25	20	50	0	0	0	0
17BCBC3#5	40103	beefcow	635	10	25	40	50	0	0	0	20
17BCBC4#1	40103	beefcow	456	10	10	60	50	0	0	0	40
17BCBC4#2	21403	beefcow	227	5	10	80	50	0	0	0	80
17BCBC4#3	40103	beefcow	485	20	25	80	50	0	0	0	80
17BCBC4#4	13003	beefcow	63	5	10	60	50	0	0	0	80
17BCBC4#5	21403	beefcow	179	5	10	80	50	0	0	0	80
17BCBC5#1	11304	Beefcow	3157	5	10	80	50	0	0	0	80
17BCBC5#2	11304	Beefcow	3158	5	10	40	20	0	0	0	0
17BCBC5#3	11304	Beefcow	3159	5	10	80	20	0	0	0	80
17BCBC5#4	11304	Beefcow	3164	5	0	20	20	0	0	0	0
17BCBC5#5	11304	Beefcow	3165	5	10	40	20	0	0	0	0
17BCBC6#1	11304	Beefcow	3114	5	10	80	20	0	0	0	80
17BCBC6#2	11304	Beefcow	3119	10	10	80	50	0	0	0	80
17BCBC6#3	11304	Beefcow	3120	20	10	80	50	0	0	0	80
17BCBC6#4	11304	Beefcow	3121	5	10	80	20	0	0	0	80
17BCBC6#5	11304	Beefcow	3122	20	10	80	0	0	0	0	80
17BCBC9#1	11304	Beefcow	2434	5	10	20	20	0	0	0	0
17BCBC9#2	11304	Beefcow	2435	10	10	20	50	0	0	0	0
17BCBC9#3	11304	Beefcow	2492	0	0	80	20	0	0	0	80
17BCBC9#4	11304	Beefcow	2493	5	0	0	20	0	0	0	0
17BCBC9#5	11304	Beefcow	2494	20	50	80	20	0	0	0	80
17BCBFR1#1	40103	beefcow	522	5	10	20	50	0	0	0	0
17BCBFR1#2	40103	beefcow	516	5	10	80	50	0	0	0	80
17BCBFR1#4	21403	beefcow	207	5	0	60	50	0	0	0	20
17BCBFR1#5	21403	beefcow	192	5	10	0	50	0	0	0	0
17BCBFR2#1	21403	beefcow	243	5	10	20	50	0	0	0	0
17BCBFR2#2	21403	Beefcow	186	5	0	20	20	0	0	0	0
17BCBFR2#3	21403	beefcow	162	5	10	20	20	0	0	0	0
17BCBFR2#4	21403	beefcow	163	5	10	20	20	0	0	0	0

17BCBL1#1	120203	Beefcow	1894	0	10	0	50	0	5	0	0
17BCBL1#2	120203	Beefcow	1895	5	10	80	50	0	0	0	60
17BCBL1#3	21403	beefcow	238	5	10	0	50	0	0	0	0
17BCBL1#3	120203	Beefcow	1896	0	10	0	50	0	5	0	40
17BCBL1#4	21403	beefcow	200	5	10	60	50	0	0	0	40
17BCBL1#4	120203	Beefcow	1897	0	10	0	50	0	5	0	40
17BCBL1#5	120203	Beefcow	1898	5	10	60	50	0	5	0	60
17BCBL2#1	120203	Beefcow	1899	5	10	0	50	0	0	0	40
17BCBL2#2	120203	Beefcow	1900	0	10	0	20	0	5	0	20
17BCBL2#3	120203	Beefcow	1901	0	10	0	50	0	10	0	20
17BCBL2#4	120203	Beefcow	1902	0	10	0	50	0	0	0	0
17BCBL2#5	120203	Beefcow	1903	5	0	80	50	0	5	0	80
17BCBL3#1	21403	beefcow	161	5	10	80	50	0	0	0	80
17BCBL3#2	13003	beefcow	60	5	10	0	50	0	0	0	0
17BCBL3#3	13003	beefcow	61	5	10	0	50	0	0	0	0
17BCBL3#4	13003	beefcow	62	5	100	40	50	0	0	0	80
17BCBL4#1	120203	Beefcow	2171	5	10	0	50	0	0	0	0
17BCBL4#2	120203	Beefcow	2172	5	10	0	50	0	0	0	0
17BCBL4#3	120203	Beefcow	2173	5	10	0	50	0	0	0	0
17BCBL4#4	120203	Beefcow	2174	5	10	0	50	0	0	0	0
17BCBL4#5	120203	Beefcow	2175	5	10	0	50	0	0	0	0
17BCBPW1#1	13003	beefcow	70	5	10	20	50	0	0	0	40
17BCBPW1#2	21403	beefcow	248	5	10	20	50	0	0	0	0
17BCBPW1#3	13003	beefcow	71	5	10	20	50	0	0	0	40
17BCBPW1#4	13003	beefcow	72	5	10	0	50	0	0	0	0
17BCBPW1#5	13003	beefcow	73	5	10	20	50	0	0	0	20
17CC6#1	82603	Cat	1467	5	10	0	50	0	0	0	0
17CC6#2	82603	Cat	1468	5	25	0	50	0	0	0	0
17CC6#3	82603	Cat	1469	5	25	0	50	0	0	0	0
17CC6#4	82603	Cat	1470	5	25	0	50	0	0	0	0
17CC6#5	82603	Cat	1471	5	25	0	50	0	0	0	0
17CC7#1	82603	Cat	1462	5	25	0	50	0	0	0	0
17CC7#2	82603	Cat	1463	0	25	0	50	0	0	0	0
17CC7#3	82603	Cat	1464	0	25	0	50	0	0	0	0
17CC7#4	82603	Cat	1465	0	25	0	50	0	0	0	0
17CC7#5	82603	Cat	1466	0	10	0	50	0	0	0	0
17CCC1#1	71503	Cat	1063	0	10	0	100	0	0	0	0
17CCC1#2	71503	Cat	1064	0	0	0	50	0	0	0	0
17CCC1#3	71503	Cat	1075	5	10	0	50	0	0	0	0
17CCC1#4	71503	Cat	1076	10	10	80	50	0	0	0	80
17CCC1#5	71503	Cat	1087	5	25	0	50	0	0	0	0
17CCC2#1	71503	Cat	1118	0	25	0	20	0	0	0	0
17CCC2#2	71503	Cat	1119	0	25	0	50	0	0	0	0
17CCC2#3	71503	Cat	1120	0	10	0	20	0	0	0	0
17CCC2#4	71503	Cat	1121	0	10	0	50	0	0	0	0
17CCC2#5	71503	Cat	1122	0	10	0	50	0	0	0	0
17CCC3#1	71503	Cat	1053	0	10	0	50	0	0	0	0
17CCC3#2	71503	Cat	1054	0	10	0	20	0	0	0	0
17CCC3#3	71503	Cat	1055	0	10	0	50	0	0	0	0
17CCC3#4	71503	Cat	1056	0	10	0	50	0	0	0	0
17CCC3#5	71503	Cat	1057	0	10	0	20	0	0	0	0
17CCC4#1	71503	Cat	1123	0	10	0	50	0	0	0	0
17CCC4#2	71503	Cat	1124	0	10	0	20	0	0	0	0
17CCC4#3	71503	Cat	1125	0	10	0	20	0	0	0	0
17CCC4#4	71503	Cat	1126	0	10	0	50	0	0	0	0
17CCC4#5	71503	Cat	1127	0	10	0	50	0	0	0	0
17CCC5#1	91603	Cat	1652	5	10	0	50	0	0	0	0

17CCC5#2	82603	Cat	1431	5	25	0	50	0	0	0	0
17CCC8#1	82603	Cat	1508	5	10	0	50	0	0	0	0
17CCC8#2	82603	Cat	1509	5	10	0	50	0	0	0	0
17CCC8#3	82603	Cat	1510	5	10	0	100	0	0	0	0
17CCC8#4	82603	Cat	1511	5	10	0	50	0	0	0	0
17CCC8#5	82603	Cat	1512	5	10	0	50	0	0	0	0
17CCL1#1	71503	Cat	1113	0	10	0	20	0	0	0	0
17CCL1#2	71503	Cat	1114	0	0	0	50	0	0	0	0
17CCL1#3	71503	Cat	1115	0	0	0	50	0	0	0	0
17CCL1#4	71503	Cat	1116	0	10	0	50	0	0	0	0
17CCL1#5	71503	Cat	1117	0	0	0	20	0	0	0	0
17CCL10#1	11304	cat	2722	5	10	0	20	0	0	0	0
17CCL10#2	11304	cat	2723	5	10	0	20	0	0	0	0
17CCL10#3	11304	cat	2732	5	10	0	20	0	0	0	0
17CCL10#4	11304	cat	2733	5	10	0	20	0	0	0	0
17CCL10#5	11304	cat	2734	5	10	0	20	0	0	0	0
17CCL11#1	11304	cat	2851	20	10	0	20	0	0	0	0
17CCL11#2	11304	cat	2852	20	25	0	20	0	0	0	0
17CCL11#3	11304	cat	2853	20	10	0	20	0	0	0	0
17CCL11#4	11304	cat	2854	20	10	0	20	0	0	0	0
17CCL11#5	11304	cat	2899	20	10	0	20	0	0	0	0
17CCL12#1	11304	cat	2830	5	10	0	20	0	0	0	0
17CCL12#2	11304	cat	2839	5	10	0	50	0	0	0	0
17CCL12#3	11304	cat	2840	5	10	0	20	0	0	0	0
17CCL12#4	11304	cat	2841	5	25	0	50	0	0	0	0
17CCL12#5	11304	cat	2842	5	10	0	20	0	0	0	0
17CCL17#1	11304	cat	2264	5	10	20	20	0	0	0	0
17CCL17#2	11304	cat	2265	5	10	20	20	0	0	0	0
17CCL17#3	11304	cat	2266	5	10	20	20	0	0	0	0
17CCL18#1	11304	cat	2863	5	10	0	20	0	0	0	0
17CCL18#2	11304	cat	2864	10	10	0	20	0	0	0	0
17CCL18#3	11304	cat	2865	5	10	0	20	0	0	0	0
17CCL18#4	11304	cat	2866	10	25	0	20	0	0	0	0
17CCL18#5	11304	cat	2875	20	10	0	20	0	0	0	0
17CCL19#1	11304	cat	2187	5	10	20	20	0	0	0	0
17CCL19#2	11304	cat	2188	5	10	20	50	0	0	0	0
17CCL19#3	11304	cat	2189	5	10	0	50	0	0	0	0
17CCL19#4	11304	cat	2190	5	10	0	50	0	0	0	0
17CCL19#5	11304	cat	2191	5	10	0	50	0	0	0	0
17CCL2#1	82603	Cat	1439	5	25	0	20	0	0	0	0
17CCL2#2	82603	Cat	1440	5	25	0	20	0	0	0	0
17CCL2#3	82603	Cat	1441	5	25	0	50	0	0	0	0
17CCL2#4	82603	Cat	1442	5	10	0	20	0	0	0	0
17CCL2#5	82603	Cat	1447	5	25	0	20	0	0	0	0
17CCL3#1	82603	Cat	1416	20	10	0	20	0	0	0	0
17CCL3#2	82603	Cat	1417	20	25	0	20	0	0	0	0
17CCL3#3	82603	Cat	1418	20	25	0	50	0	0	0	0
17CCL3#4	82603	Cat	1423	20	10	0	20	0	0	0	0
17CCL3#5	82603	Cat	1424	20	50	0	100	0	0	0	0
17CCL4#1	82603	Cat	1448	5	50	0	100	0	0	0	0
17CCL4#2	82603	Cat	1449	5	25	0	50	0	0	0	0
17CCL4#3	82603	Cat	1450	5	50	0	100	0	0	0	0
17CCL4#4	82603	Cat	1451	5	25	0	20	0	0	0	0
17CCL4#5	82603	Cat	1452	5	25	0	20	0	0	0	0
17CCL6#1	11304	cat	3016	5	10	20	20	0	0	0	0
17CCL6#2	11304	cat	3017	5	10	20	20	0	0	0	0
17CCL6#3	11304	cat	3018	5	10	0	20	0	0	0	0

17CCL6#4	11304	cat	3019	5	10	0	20	0	0	0	0
17CCL6#5	11304	cat	3020	5	10	0	20	0	0	0	0
17CCL7#1	11304	cat	3044	5	10	0	20	0	0	0	0
17CCL7#2	11304	cat	3045	5	10	20	20	0	0	0	0
17CCL7#3	11304	cat	3046	5	10	0	20	0	0	0	0
17CCL7#4	11304	cat	3051	5	10	0	20	0	0	0	0
17CCL7#5	11304	cat	3052	5	10	0	20	0	0	0	0
17CCL8#1	11304	cat	3058	5	10	0	20	0	0	0	0
17CCL8#2	11304	cat	3059	5	10	0	20	0	0	0	0
17CCL8#3	11304	cat	3060	5	10	0	20	0	0	0	0
17CCL8#4	11304	cat	3061	5	10	0	20	0	0	0	0
17CCL8#5	11304	cat	3062	5	10	0	20	0	0	0	0
17DCDC1#1	21403	dairy	239	5	10	0	20	0	0	0	0
17DCDC1#2	51303	dairy	755	5	10	80	50	0	0	0	0
17DCDC2#1	13003	dairy	101	5	10	60	50	0	0	0	80
17DCDC2#2	21403	dairy	173	5	10	80	50	0	0	0	80
17DCDC2#3	13003	dairy	102	5	50	80	100	0	0	0	80
17DCDC2#4	13003	dairy	103	5	25	0	50	0	0	0	0
17DCDC2#5	13003	dairy	104	0	10	0	20	0	0	0	0
17DCDC5#1	11304	dairy	2756	5	10	80	20	0	0	0	80
17DCDC5#2	11304	dairy	2757	5	10	80	50	0	0	0	80
17DCDC5#3	11304	dairy	2758	5	10	80	20	0	0	0	80
17DCDC5#4	11304	dairy	2759	5	10	0	20	0	0	0	0
17DCDC5#5	11304	Dairy	2768	5	25	80	20	0	0	0	80
17DCDL1#1	120203	Dairy	2181	5	0	0	50	0	0	0	0
17DCDL1#2	120203	Dairy	2182	5	0	0	50	0	0	0	0
17DCDL1#3	120203	Dairy	2183	5	10	0	20	0	0	0	0
17DCDL1#4	120203	Dairy	2184	5	10	0	20	0	0	0	0
17DCDL1#5	120203	Dairy	2185	5	10	0	50	0	0	0	0
17DCDL2#1	40103	dairy	511	5	25	80	50	0	0	0	80
17DCDL2#2	40103	dairy	512	5	10	40	100	0	0	0	20
17DCDL2#4	91802	dairy	1	0	0	0	50	0	0	0	0
17DCDL2#5	40103	dairy	479	5	10	40	50	0	0	0	0
17DDC1#1	71503	Dog	1093	0	10	0	50	0	0	0	0
17DDC1#2	71503	Dog	1094	0	10	0	50	0	0	0	0
17DDC1#3	71503	Dog	1095	0	10	0	50	0	0	0	0
17DDC1#4	71503	Dog	1096	0	10	0	50	0	0	0	0
17DDC1#5	71503	Dog	1097	0	10	0	50	0	0	0	0
17DDC2#1	71503	Dog	1103	5	10	0	50	0	0	0	0
17DDC2#2	71503	Dog	1104	5	10	0	50	0	0	0	0
17DDC2#3	71503	Dog	1105	5	10	0	50	0	0	0	0
17DDC2#4	71503	Dog	1106	0	10	0	50	0	0	0	0
17DDC2#5	71503	Dog	1107	5	10	0	50	0	0	0	0
17DDC3#1	82603	Dog	1536	5	10	0	20	0	0	0	0
17DDC3#2	82603	Dog	1528	10	10	0	100	0	0	0	0
17DDC3#3	82603	Dog	1520	5	10	0	50	0	0	0	0
17DDC3#4	82603	Dog	1420	5	25	0	50	0	0	0	0
17DDC3#5	82603	Dog	1421	5	10	0	50	0	0	0	0
17DDC4#1	71503	Dog	1070	5	25	0	50	0	0	0	0
17DDC4#1	82603	Dog	1530	5	10	0	50	0	0	0	0
17DDC4#2	71503	Dog	1071	5	10	0	50	0	0	0	0
17DDC4#2	82603	Dog	1531	5	10	0	100	0	0	0	0
17DDC4#3	71503	Dog	1072	5	10	0	50	0	0	0	0
17DDC4#3	82603	Dog	1532	5	10	0	100	0	0	0	0
17DDC4#4	71503	Dog	1073	5	10	0	50	0	0	0	0
17DDC4#4	82603	Dog	1533	5	10	0	50	0	0	0	0
17DDC4#5	71503	Dog	1074	5	10	0	50	0	0	0	0

17DDC4#5	82603	Dog	1534	10	10	0	100	0	0	0	0
17DDC5#1	82603	Dog	1453	5	25	0	50	0	0	0	0
17DDC5#2	82603	Dog	1454	5	10	0	50	0	0	0	0
17DDC5#3	82603	Dog	1459	5	10	0	50	0	0	0	0
17DDC5#4	82603	Dog	1460	5	25	0	50	0	0	0	0
17DDC5#5	82603	Dog	1461	5	25	0	50	0	0	0	0
17DDC6#1	82603	Dog	1472	5	25	0	50	0	0	0	0
17DDC6#2	82603	Dog	1473	5	25	0	50	0	0	0	0
17DDC6#3	82603	Dog	1474	5	10	0	20	0	0	0	0
17DDC6#4	82603	Dog	1475	5	25	0	100	0	0	0	0
17DDC6#5	82603	Dog	1476	5	10	0	50	0	0	0	0
17DDL1#1	71503	Dog	1088	0	10	0	50	0	0	0	0
17DDL1#2	71503	Dog	1089	0	0	0	50	0	0	0	0
17DDL1#3	71503	Dog	1090	0	0	0	50	0	0	0	0
17DDL1#4	71503	Dog	1091	0	10	0	50	0	0	0	0
17DDL1#5	71503	Dog	1092	0	10	0	20	0	0	0	0
17DDL10#1	11304	Dog	2984	5	0	0	20	0	0	0	0
17DDL10#2	11304	Dog	2983	5	10	0	20	0	0	0	0
17DDL10#3	11304	Dog	2974	5	10	0	20	0	0	0	0
17DDL10#4	11304	Dog	2973	5	0	0	20	0	0	0	0
17DDL10#5	11304	Dog	2972	0	10	0	20	0	0	0	0
17DDL11#1	11304	Dog	2470	5	0	0	20	0	0	0	0
17DDL11#2	11304	Dog	2471	5	10	0	20	0	0	0	0
17DDL11#3	11304	Dog	2480	10	10	0	50	0	0	0	0
17DDL11#4	11304	Dog	2481	5	0	0	20	0	0	0	0
17DDL11#5	11304	Dog	2482	10	10	0	20	0	0	0	0
17DDL12#1	11304	Dog	3063	5	10	0	20	0	0	0	0
17DDL12#2	11304	Dog	3064	10	10	0	50	0	0	0	0
17DDL12#3	11304	Dog	3065	5	10	0	20	0	0	0	0
17DDL12#4	11304	Dog	3066	5	25	0	20	0	0	0	0
17DDL12#5	11304	Dog	3067	5	10	0	20	0	0	0	0
17DDL13#1	11304	Dog	3053	5	10	0	20	0	0	0	0
17DDL13#2	11304	Dog	3054	5	10	0	20	0	0	0	0
17DDL13#3	11304	Dog	3055	5	10	0	20	0	0	0	0
17DDL13#4	11304	Dog	3056	10	10	0	50	0	0	0	0
17DDL13#5	11304	Dog	3057	5	10	0	20	0	0	0	0
17DDL2#1	71503	Dog	1108	0	10	0	50	0	0	0	0
17DDL2#2	71503	Dog	1109	0	10	0	20	0	0	0	0
17DDL2#3	71503	Dog	1110	5	10	0	50	0	0	0	0
17DDL2#4	71503	Dog	1111	5	10	0	50	0	0	0	0
17DDL2#5	71503	Dog	1112	5	10	0	50	0	0	0	0
17DDL3#1	71503	Dog	1065	5	10	0	50	0	0	0	0
17DDL3#1	80503	Dog	1372	0	10	80	50	0	0	0	80
17DDL3#2	71503	Dog	1066	5	10	0	50	0	0	0	0
17DDL3#2	80503	Dog	1384	0	10	80	50	0	0	0	80
17DDL3#3	71503	Dog	1067	5	10	0	50	0	0	0	0
17DDL3#3	80503	Dog	1394	0	10	60	50	0	0	0	80
17DDL3#4	71503	Dog	1068	5	10	0	50	0	0	0	0
17DDL3#4	80503	Dog	1402	5	10	80	50	0	0	0	80
17DDL3#5	71503	Dog	1069	5	10	0	50	0	0	0	0
17DDL3#5	80503	Dog	1410	5	10	80	50	0	0	0	80
17DDL4#1	80503	Dog	1387	5	10	0	50	0	0	0	0
17DDL4#2	80503	Dog	1388	0	10	60	50	60	0	0	80
17DDL4#3	80503	Dog	1389	0	0	0	20	0	0	0	0
17DDL4#4	80503	Dog	1390	0	10	80	50	0	0	0	80
17DDL4#5	80503	Dog	1391	5	10	0	20	0	0	0	0
17DDL5#1	82603	Dog	1488	5	25	0	50	0	0	0	0

17DDL5#2	82603	Dog	1489	5	25	0	50	0	0	0	0
17DDL5#3	82603	Dog	1490	5	25	0	50	0	0	0	0
17DDL5#4	82603	Dog	1491	10	25	0	50	0	0	0	0
17DDL5#5	82603	Dog	1492	5	25	0	50	0	0	0	0
17DDL6#1	82603	Dog	1514	15	10	0	100	0	0	0	0
17DDL6#2	82603	Dog	1515	0	10	0	20	0	0	0	0
17DDL6#3	82603	Dog	1516	10	10	0	50	0	0	0	0
17DDL6#4	82603	Dog	1517	10	10	0	50	0	0	0	0
17DDL6#5	82603	Dog	1518	10	25	0	100	0	0	0	0
17DDL8#1	11304	Dog	2786	5	10	0	50	0	0	0	0
17DDL8#2	11304	Dog	2787	5	10	0	50	0	0	0	0
17DDL8#3	11304	Dog	2788	5	10	0	20	0	0	0	0
17DDL8#4	11304	Dog	2789	5	10	0	20	0	0	0	0
17DDL8#5	11304	Dog	2790	5	10	0	50	0	0	0	0
17DDL9#1	11304	Dog	2387	5	10	0	50	0	0	0	0
17DDL9#2	11304	Dog	2388	5	10	20	20	0	0	0	0
17DDL9#3	11304	Dog	2397	5	25	20	20	0	0	0	0
17DDL9#4	11304	Dog	2398	5	10	20	20	0	0	0	0
17DDL9#5	11304	Dog	2399	10	10	20	50	0	0	0	0
17HHC1#1	11304	Horse	2342	5	10	20	20	0	0	0	0
17HHC1#2	11304	Horse	2351	5	10	20	20	0	0	0	0
17HHC1#3	11304	Horse	2352	10	10	20	20	0	0	0	0
17HHC1#4	11304	Horse	2408	10	25	20	20	0	0	0	0
17HHC1#5	11304	Horse	2409	10	25	20	20	0	0	0	0
17HHC2#1	11304	Horse	3139	5	10	20	20	0	0	0	0
17HHC2#2	11304	Horse	3140	0	0	20	20	0	0	0	0
17HHC2#3	11304	Horse	3141	5	10	20	20	0	0	0	0
17HHC2#4	11304	Horse	3142	5	0	20	20	0	0	0	0
17HHC2#5	11304	Horse	3143	0	0	20	20	0	0	0	0
17HHC3#1	11304	Horse	3038	5	0	0	0	0	0	0	0
17HHC3#2	11304	Horse	3047	0	0	20	20	0	0	0	0
17HHC3#3	11304	Horse	3048	5	10	0	20	0	0	0	0
17HHC3#4	11304	Horse	3049	5	10	0	20	0	0	0	0
17HHC3#5	11304	Horse	3050	5	10	0	20	0	0	0	0
17HHC4#1	11304	Horse	2291	5	10	0	20	0	0	0	0
17HHC4#2	11304	Horse	2292	5	10	0	20	0	0	0	0
17HHC4#3	11304	Horse	2293	5	25	80	50	0	0	0	80
17HHC4#4	11304	Horse	2294	5	10	0	50	0	0	0	0
17HHC4#5	11304	Horse	2303	5	10	80	20	0	0	0	80
17HHC5#1	11304	Horse	3134	5	0	20	20	0	0	0	0
17HHC5#2	11304	Horse	3135	0	0	20	20	0	0	0	0
17HHC5#3	11304	Horse	3136	0	0	20	20	0	0	0	0
17HHC5#4	11304	Horse	3137	5	10	20	20	0	0	0	0
17HHC5#5	11304	Horse	3138	10	10	20	20	0	0	0	0
17HHC6#1	11304	Horse	2554	5	10	0	50	0	0	0	0
17HHC6#2	11304	Horse	2555	5	10	0	50	0	0	0	0
17HHC6#3	11304	Horse	2564	10	10	0	20	0	0	0	0
17HHC6#4	11304	Horse	2565	5	10	0	20	0	0	0	0
17HHC6#5	11304	Horse	2566	5	10	0	50	0	0	0	0
17HHC7#1	11304	Horse	3186	5	10	80	20	0	0	0	80
17HHC7#2	11304	Horse	3187	5	10	40	50	0	0	0	0
17HHC7#3	11304	Horse	3196	5	10	20	20	0	0	0	0
17HHC7#4	11304	Horse	3197	5	10	20	20	0	0	0	0
17HHC7#5	11304	Horse	3198	5	0	0	20	0	0	0	0
17HHL1#1	11304	Horse	2648	10	25	0	20	0	0	0	0
17HHL1#2	11304	Horse	2649	5	10	0	20	0	0	0	0
17HHL1#3	11304	Horse	2654	10	10	0	20	0	0	0	0



17HHL1#4	11304	Horse	2655	5	10	0	20	0	0	0	0
17HHL1#5	11304	Horse	2656	5	10	0	20	0	0	0	0
17HHL2#1	11304	Horse	2800	5	10	0	20	0	0	0	0
17HHL2#2	11304	Horse	2801	5	10	0	20	0	0	0	0
17HHL2#3	11304	Horse	2802	20	25	0	50	0	0	0	0
17HHL2#4	11304	Horse	2803	20	25	0	50	0	0	0	0
17HHL2#5	11304	Horse	2808	20	100	0	100	0	0	0	0
17HHL3#1	11304	Horse	3078	5	0	0	20	0	0	0	0
17HHL4#1	11304	Horse	2772	5	10	0	20	0	0	0	0
17HHL4#2	11304	Horse	2773	5	10	0	20	0	0	0	0
17HHL4#3	11304	Horse	2774	5	10	0	20	0	0	0	0
17HHL4#4	11304	Horse	2775	5	10	0	20	0	0	0	0
17HHL4#5	11304	Horse	2776	10	10	0	20	0	0	0	0
17HHL5#1	11304	Horse	2777	20	25	80	20	0	0	0	80
17HHL5#2	11304	Horse	2778	20	10	80	50	0	0	0	80
17HHL5#3	11304	Horse	2779	20	10	80	50	0	0	0	80
17HHL5#4	11304	Horse	2784	5	10	0	50	0	0	0	0
17HHL5#5	11304	Horse	2785	20	10	80	20	0	0	0	80
17HHL6#1	11304	Horse	2791	5	10	0	50	0	0	0	0
17HHL6#2	11304	Horse	2796	5	0	0	0	0	0	0	0
17HHL6#3	11304	Horse	2797	5	10	0	20	0	0	0	0
17HHL6#4	11304	Horse	2798	5	10	0	20	0	0	0	0
17HHL6#5	11304	Horse	2799	5	10	0	50	0	0	0	0
17HHL7#1	11304	Horse	2671	10	10	0	50	0	0	0	0
17HHL7#2	11304	Horse	2672	5	10	0	20	0	0	0	0
17HHL7#3	11304	Horse	2673	0	10	0	20	0	0	0	0
17HHL7#4	11304	Horse	2678	5	10	0	20	0	0	0	0
17HHL7#5	11304	Horse	2679	5	0	0	20	0	0	0	0
17HHL8#1	11304	Horse	3021	5	0	0	20	0	0	0	0
17HHL8#2	11304	Horse	3022	0	0	0	0	0	0	0	0
17HHL8#3	11304	Horse	3027	5	0	0	20	0	0	0	0
17HHL8#4	11304	Horse	3028	5	0	0	20	0	0	0	0
17HHL8#5	11304	Horse	3029	5	0	0	20	0	0	0	0
17HHL9#1	11304	Horse	2634	5	10	0	50	0	0	0	0
17HHL9#2	11304	Horse	2635	0	0	0	20	0	0	0	0
17HHL9#3	11304	Horse	2636	5	10	0	20	0	0	0	0
17HHL9#4	11304	Horse	2637	0	10	0	20	0	0	0	0
17HHL9#5	11304	Horse	2642	5	10	0	20	0	0	0	0
17HHPW1#1	11304	Horse	2792	5	10	0	20	0	0	0	0
17HHPW1#2	11304	Horse	2793	10	10	0	20	0	0	0	0
17HHPW1#3	11304	Horse	2794	10	25	0	20	0	0	0	0
17HHPW1#4	11304	Horse	2795	10	10	0	50	0	0	0	0
17HHPW1#5	11304	Horse	2804	5	10	0	50	0	0	0	0
17HHPW2#1	11304	Horse	2515	5	50	0	20	0	0	0	0
17HHPW2#2	11304	Horse	2444	5	10	0	50	0	0	0	0
17HHPW2#3	11304	Horse	2445	0	0	0	0	0	0	0	0
17HHPW2#4	11304	Horse	2446	5	0	0	20	0	0	0	0
17HHPW2#5	11304	Horse	2447	5	10	0	20	0	0	0	0
17HHPW3#1	11304	Horse	3144	5	10	20	20	0	0	0	0
17HHPW3#2	11304	Horse	3145	5	10	80	20	0	0	0	80
17HHPW3#3	11304	Horse	3146	0	0	0	20	0	0	0	0
17HHPW3#4	11304	Horse	3147	5	10	20	50	0	0	0	0
17HHPW3#5	11304	Horse	3148	5	10	20	50	0	0	0	0
17HHPW4#1	11304	Horse	2986	5	0	0	20	0	0	0	0
17HHPW4#2	11304	Horse	2995	5	10	0	50	0	0	0	0
17HHPW4#3	11304	Horse	2996	5	10	0	20	0	0	0	0
17HHPW4#4	11304	Horse	2997	10	10	0	20	0	0	0	0

17HHPW4#5	11304	Horse	2998	5	10	0	50	0	0	0	0
17HHPW5#1	11304	Horse	2495	5	10	80	50	0	0	0	80
17HHPW5#2	11304	Horse	2504	5	10	0	20	0	0	0	0
17HHPW5#3	11304	Horse	2505	20	10	80	20	0	0	0	80
17HHPW5#4	11304	Horse	2506	0	10	0	20	0	0	0	0
17PPC1#1	13003	Pig	47	0	10	0	50	0	0	0	0
17PPC1#2	13003	Pig	48	0	10	0	50	0	0	0	0
17PPC1#3	13003	Pig	49	0	10	0	50	0	0	0	0
17PPC1#4	13003	Pig	50	5	10	0	50	0	0	0	0
17PPC1#5	13003	Pig	51	5	10	0	50	0	0	0	0
17PPC2#1	21403	Pig	231	5	10	20	20	0	0	0	0
17PPC2#2	13003	Pig	52	5	25	0	100	0	0	0	0
17PPC2#3	21403	Pig	230	10	25	20	50	0	0	0	0
17PPC2#4	13003	Pig	94	5	10	0	50	0	0	0	0
17PPC2#5	21403	Pig	187	20	10	80	100	0	0	0	80
17PPC3#1	11304	Pig	2329	0	25	80	20	0	0	0	80
17PPC3#2	11304	Pig	2330	0	10	80	20	0	0	0	80
17PPC3#3	11304	Pig	2339	0	10	80	20	0	0	0	80
17PPC3#4	11304	Pig	2340	0	10	80	20	0	0	0	80
17PPC3#5	11304	Pig	2341	0	10	80	20	0	0	0	80
17PPC4#1	11304	Pig	3189	0	0	80	0	0	0	0	80
17PPC4#2	11304	Pig	3190	5	10	80	50	0	0	0	80
17PPC4#3	11304	Pig	3191	5	10	80	50	0	0	0	80
17PPC4#4	11304	Pig	3192	5	10	80	20	0	0	0	80
17PPC4#5	11304	Pig	3193	0	0	80	0	0	0	0	80
17PPC5#1	11304	Pig	3109	0	0	80	0	0	0	0	80
17PPC5#2	11304	Pig	3110	0	0	80	0	0	0	0	80
17PPC5#3	11304	Pig	3111	20	10	80	50	20	0	0	80
17PPC5#4	11304	Pig	3112	20	10	80	20	40	0	0	80
17PPC5#5	11304	Pig	3113	5	0	80	20	0	0	0	80
17PPC7#1	11304	Pig	2221	0	0	80	0	0	0	0	80
17PPC7#2	11304	Pig	2222	0	0	80	20	0	0	0	80
17PPC7#3	11304	Pig	2231	0	10	80	0	0	0	0	80
17PPC7#4	11304	Pig	2232	0	10	80	20	0	0	0	80
17PPC7#5	11304	Pig	2233	0	0	80	20	0	0	0	80
17PPC8#1	11304	Pig	2611	5	25	80	20	0	0	0	80
17PPC8#2	11304	Pig	2612	5	10	80	20	0	0	0	80
17PPC8#3	11304	Pig	2613	5	10	80	20	0	0	0	80
17PPC8#4	11304	Pig	2618	5	10	80	20	0	0	0	80
17PPC8#5	11304	Pig	2619	5	10	80	50	0	0	0	80
17PPC9#1	11304	Pig	2680	0	10	80	0	0	0	0	80
17PPC9#2	11304	Pig	2681	5	10	80	20	0	0	0	80
17PPC9#3	11304	Pig	2682	0	10	80	0	0	0	0	80
17PPC9#4	11304	Pig	2683	0	10	80	0	0	0	0	80
17PPC9#5	11304	Pig	2684	0	10	80	0	0	0	0	80
17PPL#3	13003	Pig	140	0	0	0	50	0	0	0	0
17PPL#4	13003	Pig	141	20	10	80	100	0	0	0	80
17PPL1	91802	Pig	4	5	10	80	50	0	0	0	80
17PPL10#1	11304	Pig	2920	5	25	0	20	0	0	0	0
17PPL10#2	11304	Pig	2921	5	10	20	20	0	0	0	0
17PPL10#3	11304	Pig	2922	5	10	20	20	0	0	0	0
17PPL10#5	11304	Pig	2927	5	10	40	20	0	0	0	0
17PPL11#1	11304	Pig	2666	20	25	80	50	40	0	0	80
17PPL11#2	11304	Pig	2667	0	10	80	0	0	0	0	80
17PPL11#3	11304	Pig	2668	0	10	80	0	0	0	0	80
17PPL11#4	11304	Pig	2669	0	10	80	0	0	0	0	80
17PPL11#5	11304	Pig	2670	10	10	80	20	0	0	0	80

17PPL12#1	11304	Pig	3208	0	0	20	50	0	0	0	0
17PPL12#2	11304	Pig	3209	0	0	20	50	0	0	0	0
17PPL12#3	11304	Pig	3210	0	0	0	0	0	0	0	0
17PPL12#4	11304	Pig	3211	5	0	20	50	0	0	0	0
17PPL12#5	11304	Pig	3212	5	10	80	50	0	0	0	80
17PPL2	91802	Pig	3	20	0	80	20	0	5	0	80
17PPL4#1	120203	Pig	2120	5	10	0	50	0	0	0	0
17PPL4#2	120203	Pig	2121	5	10	0	50	0	0	0	0
17PPL4#3	120203	Pig	2122	0	0	0	20	0	0	0	0
17PPL4#4	120203	Pig	2127	5	10	80	50	0	0	0	80
17PPL4#5	120203	Pig	2128	5	10	40	50	0	0	0	60
17PPL5	91802	Pig	2	0	0	0	20	0	0	0	0
17PPL5#1	120203	Pig	1920	20	0	80	50	0	0	0	80
17PPL5#2	120203	Pig	1921	10	10	0	50	0	5	0	0
17PPL5#3	120203	Pig	1932	10	0	0	50	0	5	0	0
17PPL5#4	120203	Pig	1933	20	0	80	50	0	0	0	80
17PPL5#5	120203	Pig	1944	20	0	80	50	0	0	0	80
17PPL6#1	120203	Pig	2005	5	10	80	50	0	0	0	80
17PPL6#2	120203	Pig	2006	5	10	80	50	0	0	0	80
17PPL6#3	120203	Pig	2007	5	10	80	50	0	0	0	80
17PPL6#4	120203	Pig	2008	20	10	0	50	0	5	0	0
17PPL6#5	120203	Pig	2009	20	0	0	50	0	10	0	0
17PPL8#1	120203	Pig	1995	5	10	80	50	0	0	0	80
17PPL8#2	120203	Pig	1996	5	10	80	50	0	5	0	80
17PPL8#3	120203	Pig	1997	5	10	0	50	0	5	0	0
17PPL8#4	120203	Pig	1998	5	10	0	20	0	10	0	0
17PPL8#5	120203	Pig	1999	5	10	0	50	0	5	0	0
17PPL9#1	120203	Pig	2134	5	10	0	50	0	0	0	0
17PPL9#2	120203	Pig	2139	10	10	80	100	0	0	0	80
17PPL9#3	120203	Pig	2140	10	10	80	100	0	0	0	80
17PPL9#4	120203	Pig	2141	5	10	80	50	0	0	0	80
17PPL9#5	120203	Pig	2142	10	10	80	100	0	0	0	80
17PPPW2#1	11304	Pig	3039	20	10	80	20	40	0	0	80
17PPPW2#2	11304	Pig	3040	10	10	80	20	0	0	0	80
17PPPW2#3	11304	Pig	3041	5	10	80	20	0	0	0	80
17PPPW2#4	11304	Pig	3042	5	0	0	20	0	0	0	0
17PPPW2#5	11304	Pig	3043	5	10	40	20	0	0	0	0
17PPPW3#1	11304	Pig	3030	5	10	80	20	0	0	0	80
17PPPW3#2	11304	Pig	3031	5	10	0	20	0	0	0	0
17PPPW3#3	11304	Pig	3032	5	10	0	20	0	0	0	0
17PPPW3#4	11304	Pig	3033	5	10	0	20	0	0	0	0
17PPPW3#5	11304	Pig	3034	5	10	20	50	0	0	0	0
17PPW1#1	11304	Pig	2372	5	10	0	50	0	0	0	0
17PPW1#2	11304	Pig	2377	5	10	0	50	0	0	0	0
17PPW1#3	11304	Pig	2378	5	10	80	20	0	0	0	80
17PPW1#4	11304	Pig	2379	5	10	80	50	0	0	0	40
17PPW1#5	11304	Pig	2380	0	10	80	0	0	0	0	80
17PPW4#1	11304	Pig	3015	5	10	80	50	0	0	0	80
17ShSL1	91802	Sheep	5	5	0	0	20	0	0	0	0
17ShSL2	91802	Sheep	9	20	10	80	50	0	0	0	80
17ShSL2#5	91802	Sheep	6	0	0	80	50	0	0	0	80
17ShSL3	91802	Sheep	8	5	0	0	20	0	0	0	0
17ShSL4	91802	Sheep	7	5	10	0	20	0	0	0	0
17SSC1#1	21403	Sheep	166	5	0	0	50	0	0	0	0
17SSC1#2	21403	Sheep	175	0	0	0	20	0	0	0	0
17SSC1#3	13003	Sheep	97	0	0	0	20	0	0	0	0
17SSC1#4	13003	Sheep	95	5	25	0	50	0	0	0	0

17SSC1#5	21403	Sheep	222	5	10	0	20	0	0	0	0
17SSC10#1	11304	Sheep	2685	5	10	0	20	0	0	0	0
17SSC10#2	11304	Sheep	2614	5	25	20	20	0	0	0	20
17SSC10#3	11304	Sheep	2615	5	10	0	20	0	0	0	0
17SSC10#4	11304	Sheep	2616	5	10	0	20	0	0	0	0
17SSC10#5	11304	Sheep	2617	5	10	0	20	0	0	0	0
17SSC12#1	11304	Sheep	2195	5	10	20	50	0	0	0	0
17SSC12#2	11304	Sheep	2196	5	10	20	50	0	0	0	0
17SSC12#3	11304	Sheep	2197	5	10	20	50	0	0	0	0
17SSC12#4	11304	Sheep	2198	5	10	20	50	0	0	0	0
17SSC2#1	21403	Sheep	245	5	10	20	20	0	0	0	0
17SSC2#4	21403	Sheep	210	5	0	80	20	0	0	0	80
17SSC3#1	13003	Sheep	96	5	50	80	100	0	0	0	80
17SSC3#2	21403	Sheep	212	5	10	20	50	0	0	0	0
17SSC3#3	21403	Sheep	208	5	10	80	50	0	0	0	80
17SSC3#4	21403	Sheep	240	5	10	20	20	0	0	0	0
17SSC3#5	42203	Sheep	660	5	0	0	20	0	0	0	0
17SSC4#1	11304	Sheep	2410	5	10	80	50	0	0	0	80
17SSC4#2	11304	Sheep	2411	20	10	80	20	0	0	0	80
17SSC4#4	11304	Sheep	2420	10	25	20	20	0	0	0	0
17SSC4#5	11304	Sheep	2421	5	10	20	20	0	0	0	0
17SSC5#1	11304	Sheep	3123	5	0	40	50	0	0	0	0
17SSC5#2	11304	Sheep	3124	5	10	20	20	0	0	0	0
17SSC5#3	11304	Sheep	3125	5	10	20	20	0	0	0	0
17SSC5#4	11304	Sheep	3126	5	10	20	20	0	0	0	0
17SSC5#5	11304	Sheep	3128	10	10	20	20	0	0	0	0
17SSC6#1	11304	Sheep	3149	5	10	20	50	0	0	0	0
17SSC6#2	11304	Sheep	3150	5	0	0	20	0	0	0	0
17SSC6#3	11304	Sheep	3151	5	10	20	50	0	0	0	0
17SSC6#4	11304	Sheep	3091	5	0	20	50	0	0	0	0
17SSC6#5	11304	Sheep	3092	5	0	20	50	0	0	0	0
17SSC7#1	11304	Sheep	2422	20	10	80	50	20	0	0	80
17SSC7#2	11304	Sheep	2423	5	10	80	50	0	0	0	80
17SSC7#3	11304	Sheep	2432	5	25	80	50	0	0	0	80
17SSC7#5	11304	Sheep	2433	5	10	80	20	0	0	0	80
17SSC8#1	11304	Sheep	3129	20	10	80	50	60	0	0	80
17SSC8#2	11304	Sheep	3130	0	0	80	20	0	0	0	80
17SSC8#3	11304	Sheep	3131	5	10	80	20	0	0	0	80
17SSC8#4	11304	Sheep	3132	5	0	80	20	0	0	0	80
17SSC8#5	11304	Sheep	3133	5	10	80	50	0	0	0	80
17SSC9#1	11304	Sheep	3171	5	10	80	50	0	0	0	0
17SSC9#2	11304	Sheep	3176	5	0	60	20	0	0	0	0
17SSC9#3	11304	Sheep	3177	10	10	40	20	0	0	0	0
17SSC9#4	11304	Sheep	3178	5	10	40	50	0	0	0	0
17SSC9#5	11304	Sheep	3179	10	25	80	50	0	0	0	80
17SSFR1#2	21403	Sheep	171	5	0	20	50	0	0	0	0
17SSFR1#5	40103	Sheep	524	5	25	20	50	0	0	0	0
17SSL16#1	11304	Sheep	3218	5	10	80	50	0	0	0	80
17SSL16#2	11304	Sheep	3219	5	0	0	20	0	0	0	0
17SSL16#3	11304	Sheep	3220	5	0	20	20	0	0	0	0
17SSL16#4	11304	Sheep	3221	5	10	0	50	0	0	0	0
17SSL16#5	11304	Sheep	3222	5	0	0	20	0	0	0	0
17SSL2#1	13003	Sheep	145	5	10	0	50	0	0	0	0
17SSL3#1	120203	Sheep	2129	5	10	0	50	0	0	0	0
17SSL3#2	120203	Sheep	2130	5	10	0	50	0	0	0	0
17SSL3#3	120203	Sheep	2131	5	10	0	50	0	0	0	0
17SSL3#4	120203	Sheep	2132	5	10	0	50	0	0	0	0

17SSL3#5	120203	Sheep	2133	5	10	0	50	0	0	0	0
17SSL4#1	120203	Sheep	1909	0	0	80	50	0	0	0	80
17SSL4#2	120203	Sheep	1846	0	0	80	100	0	0	0	80
17SSL4#3	120203	Sheep	1847	0	0	80	50	0	0	0	80
17SSL4#4	120203	Sheep	1848	0	0	80	50	0	0	0	80
17SSL4#5	120203	Sheep	1849	0	0	80	50	0	5	0	80
17SSL5#1	120203	Sheep	1904	5	0	0	20	0	0	0	0
17SSL5#2	120203	Sheep	1905	5	10	0	20	0	0	0	0
17SSL5#3	120203	Sheep	1906	5	10	0	20	0	0	0	0
17SSL5#4	120203	Sheep	1907	5	0	0	20	0	0	0	0
17SSL5#5	120203	Sheep	1908	5	10	0	20	0	10	0	0
17SSL6#1	11304	Sheep	3203	5	0	20	20	0	0	0	0
17SSL6#2	11304	Sheep	3204	20	10	80	50	0	0	0	80
17SSL6#3	11304	Sheep	3205	5	0	0	20	0	0	0	0
17SSL6#4	11304	Sheep	3206	5	10	20	20	0	0	0	0
17SSL6#5	11304	Sheep	3207	15	25	20	50	0	0	0	0
17SSL7#1	11304	Sheep	2606	10	25	0	50	0	0	0	0
17SSL7#2	11304	Sheep	2607	5	10	0	0	0	0	0	0
17SSL7#3	11304	Sheep	2608	5	10	80	50	0	0	0	80
17SSL7#4	11304	Sheep	2609	5	10	0	20	0	0	0	20
17SSL7#5	11304	Sheep	2610	5	10	80	50	0	0	0	80
17SSPW1#1	21403	Sheep	155	5	10	0	50	0	0	0	0
17SSPW1#5	13003	Sheep	59	0	10	0	50	0	0	0	0
17SSPW14#1	11304	Sheep	2290	5	10	0	20	0	0	0	0
17SSPW14#2	11304	Sheep	2295	5	10	0	20	0	0	0	0
17SSPW14#3	11304	Sheep	2296	5	10	0	20	0	0	0	0
17SSPW14#4	11304	Sheep	2297	5	10	0	20	0	0	0	0
17SSPW14#5	11304	Sheep	2298	5	10	0	20	0	0	0	0
17SSPW2#3	21403	Sheep	237	5	10	40	50	0	0	0	20
17WWFR1#1	71503	Wastewater	1200	5	0	20	20	0	0	0	0
17WWFR1#10	62403	Wastewater	1049	10	25	20	50	0	0	0	0
17WWFR1#11	71503	Wastewater	1213	0	10	80	50	40	0	0	80
17WWFR1#12	62403	Wastewater	1050	0	10	80	50	60	0	0	80
17WWFR1#13	71503	Wastewater	1214	0	0	80	50	40	0	0	80
17WWFR1#14	62403	Wastewater	1051	5	10	0	50	0	0	0	0
17WWFR1#15	71503	Wastewater	1215	0	0	0	20	0	0	0	0
17WWFR1#16	62403	Wastewater	1052	0	10	0	50	0	0	0	0
17WWFR1#17	71503	Wastewater	1216	0	0	0	20	0	0	0	0
17WWFR1#18	71503	Wastewater	1217	15	25	0	50	0	0	0	0
17WWFR1#19	62403	Wastewater	1026	0	10	80	50	40	0	0	80
17WWFR1#2	71503	Wastewater	1201	0	10	80	50	60	0	0	80
17WWFR1#20	71503	Wastewater	1218	5	10	0	50	20	0	0	20
17WWFR1#21	71503	Wastewater	1219	0	10	0	20	0	0	0	0
17WWFR1#22	71503	Wastewater	1223	10	10	0	50	0	0	0	0
17WWFR1#23	71503	Wastewater	1224	20	25	80	100	20	0	0	40
17WWFR1#24	71503	Wastewater	1225	0	0	0	20	0	0	0	0
17WWFR1#25	62403	Wastewater	1027	10	25	20	50	0	0	0	0
17WWFR1#26	62403	Wastewater	1028	20	25	0	50	0	0	0	0
17WWFR1#27	62403	Wastewater	1029	0	0	0	20	0	0	0	0
17WWFR1#28	62403	Wastewater	1030	20	10	80	100	0	0	0	80
17WWFR1#29	62403	Wastewater	1031	15	25	20	50	0	0	0	0
17WWFR1#3	71503	Wastewater	1202	0	10	0	50	0	0	0	0
17WWFR1#30	62403	Wastewater	1032	0	0	0	20	0	0	0	0
17WWFR1#31	62403	Wastewater	1033	0	0	0	50	0	0	0	0
17WWFR1#32	71503	Wastewater	1226	0	10	0	50	0	0	0	0
17WWFR1#33	62403	Wastewater	1016	5	10	0	50	0	0	0	0
17WWFR1#34	62403	Wastewater	1017	0	10	20	50	0	0	0	0

17WWFR1#35	62403	Wastewater	1018	5	25	20	50	0	0	0	0
17WWFR1#36	62403	Wastewater	1019	20	25	20	50	0	0	0	0
17WWFR1#38	71503	Wastewater	1228	20	25	80	100	0	0	0	80
17WWFR1#39	62403	Wastewater	1020	20	10	80	100	0	0	0	80
17WWFR1#4	71503	Wastewater	1203	10	25	0	50	0	0	0	0
17WWFR1#40	62403	Wastewater	1021	20	25	20	50	0	0	0	0
17WWFR1#41	62403	Wastewater	1022	5	10	20	50	0	0	0	0
17WWFR1#42	62403	Wastewater	1023	10	25	20	50	0	0	0	0
17WWFR1#43	62403	Wastewater	1024	10	25	20	50	0	0	0	0
17WWFR1#44	71503	Wastewater	1229	5	10	80	20	80	0	0	80
17WWFR1#45	62403	Wastewater	1025	10	25	20	50	0	0	0	0
17WWFR1#46	62403	Wastewater	1015	20	25	0	50	0	0	0	0
17WWFR1#47	71503	Wastewater	1230	10	10	80	50	40	0	0	80
17WWFR1#48	71503	Wastewater	1235	10	10	0	50	0	0	0	0
17WWFR1#49	62403	Wastewater	1014	20	10	80	100	0	0	0	80
17WWFR1#5	71503	Wastewater	1204	10	25	0	50	0	0	0	0
17WWFR1#50	62403	Wastewater	1013	20	25	20	50	0	0	0	0
17WWFR1#6	71503	Wastewater	1025	10	25	0	50	0	0	0	0
17WWFR1#7	71503	Wastewater	1206	0	0	0	50	0	0	0	0
17WWFR1#8	71503	Wastewater	1207	20	25	0	50	0	0	0	0
17WWFR1#9	71503	Wastewater	1212	10	10	0	50	0	0	0	0
17WWL1#1	120203	Wastewater	2043	5	5	0	50	0	0	0	0
17WWL1#10	120203	Wastewater	2056	5	10	0	50	0	0	0	0
17WWL1#11	120203	Wastewater	2057	5	10	0	50	0	0	0	0
17WWL1#12	120203	Wastewater	2058	5	10	0	50	0	0	0	0
17WWL1#13	120203	Wastewater	2059	10	10	0	50	0	0	0	0
17WWL1#14	120203	Wastewater	2060	5	10	0	50	0	5	0	0
17WWL1#15	120203	Wastewater	2061	5	10	0	50	0	0	0	0
17WWL1#16	120203	Wastewater	2062	5	10	0	50	0	0	0	0
17WWL1#17	120203	Wastewater	2067	5	10	0	50	0	5	0	0
17WWL1#18	120203	Wastewater	2068	5	10	0	50	0	0	0	0
17WWL1#19	120203	Wastewater	2069	5	10	0	50	0	0	0	0
17WWL1#2	120203	Wastewater	2044	5	5	0	50	0	0	0	0
17WWL1#20	120203	Wastewater	2070	5	10	0	50	0	0	0	0
17WWL1#21	120203	Wastewater	2071	5	10	0	50	0	5	0	0
17WWL1#22	120203	Wastewater	2072	5	10	0	20	0	5	0	0
17WWL1#23	120203	Wastewater	2073	5	10	0	50	0	0	0	0
17WWL1#24	120203	Wastewater	2074	5	10	0	50	0	0	0	0
17WWL1#25	120203	Wastewater	2079	0	0	0	20	0	0	0	0
17WWL1#26	120203	Wastewater	2080	5	0	0	20	0	0	0	0
17WWL1#27	120203	Wastewater	2081	5	10	0	20	0	0	0	0
17WWL1#28	120203	Wastewater	2082	20	10	80	50	0	0	0	80
17WWL1#29	120203	Wastewater	2083	5	10	0	20	0	5	0	0
17WWL1#3	120203	Wastewater	2045	0	10	0	20	0	0	0	0
17WWL1#30	120203	Wastewater	2084	5	25	0	20	0	5	0	0
17WWL1#31	120203	Wastewater	2085	5	10	0	50	0	5	0	0
17WWL1#32	120203	Wastewater	2086	5	10	0	50	0	5	0	0
17WWL1#33	120203	Wastewater	2091	5	10	0	50	0	5	0	0
17WWL1#34	120203	Wastewater	2092	20	10	80	50	0	0	0	80
17WWL1#35	120203	Wastewater	2093	5	10	0	50	0	0	0	0
17WWL1#36	120203	Wastewater	2094	5	10	0	50	0	0	0	0
17WWL1#37	120203	Wastewater	2095	20	10	80	50	0	0	0	80
17WWL1#38	120203	Wastewater	2096	5	10	0	50	0	0	0	0
17WWL1#39	120203	Wastewater	2097	20	25	0	20	0	5	0	0
17WWL1#4	120203	Wastewater	2046	5	10	0	50	0	0	0	0
17WWL1#40	120203	Wastewater	2098	5	10	0	50	0	5	0	0
17WWL1#41	120203	Wastewater	2099	5	10	0	50	0	0	0	0

17WWL1#42	120203	Wastewater	2100	5	10	0	50	0	5	0	0
17WWL1#43	120203	Wastewater	2101	5	10	0	50	0	0	0	0
17WWL1#44	120203	Wastewater	2102	0	0	0	50	0	0	0	0
17WWL1#45	120203	Wastewater	2103	5	10	0	50	0	0	0	0
17WWL1#46	120203	Wastewater	2104	5	10	0	50	0	0	0	0
17WWL1#47	120203	Wastewater	2105	5	10	0	50	0	0	0	0
17WWL1#48	120203	Wastewater	2106	10	10	0	50	0	0	0	0
17WWL1#49	120203	Wastewater	2107	5	10	0	50	0	0	0	0
17WWL1#5	120203	Wastewater	2047	20	0	0	50	0	0	0	0
17WWL1#50	120203	Wastewater	2108	20	10	0	50	0	0	0	0
17WWL1#6	120203	Wastewater	2048	5	10	0	50	0	0	0	0
17WWL1#7	120203	Wastewater	2049	5	10	0	50	0	0	0	0
17WWL1#8	120203	Wastewater	2050	5	10	0	50	0	5	0	0
17WWL1#9	120203	Wastewater	2055	5	10	0	50	0	0	0	0

## Appendix C ARA Data for the Northwestern Great Plains

Sample	Collect Date	Source	Isolate Number	Antibiotics in ug/L							
				AMX	CEP	CHL	ERY	GEN	MOX	OFL	TET
43BCBB2#1	40103	Beefcow	517	5	10	80	50	0	0	0	0
43BCBB2#2	13003	beefcow	64	5	25	0	50	0	0	0	0
43BCBB2#3	13003	beefcow	65	5	25	0	50	0	0	0	0
43BCBB2#4	13003	beefcow	66	5	25	0	50	0	0	0	0
43BCBB2#5	13003	beefcow	67	5	10	0	50	0	0	0	0
43BCBB4#1	13003	beefcow	124	5	10	0	100	0	0	0	0
43BCBB4#3	13003	beefcow	125	5	10	0	100	0	0	0	0
43BCBB4#4	13003	beefcow	126	5	10	0	100	0	0	0	0
43BCBB4#5	13003	beefcow	127	5	10	0	100	0	0	0	0
43BCBBN1#1	21403	beefcow	183	5	10	20	50	0	0	0	0
43BCBBN1#2	21403	beefcow	228	5	10	60	50	0	0	0	20
43BCBBN1#4	21403	beefcow	158	5	10	60	50	0	0	0	0
43BCBBN1#5	21403	beefcow	217	5	10	20	50	0	0	0	0
43BCBBN2#1	13003	beefcow	53	5	10	0	50	0	0	0	0
43BCBBN2#4	21403	beefcow	226	5	10	0	50	0	0	0	0
43BCBBN2#5	21403	beefcow	205	10	10	20	50	0	0	0	0
43BCBH1#1	21403	beefcow	188	5	10	80	50	0	0	0	80
43BCBH1#2	13003	beefcow	110	0	10	80	50	0	0	0	80
43BCBH1#3	13003	beefcow	109	0	10	60	50	0	0	0	80
43BCBH1#4	13003	beefcow	75	0	10	80	50	0	0	0	80
43BCBH1#5	13003	beefcow	74	0	10	80	50	0	0	0	80
43BCBH2#5	21403	beefcow	182	5	10	20	100	0	0	0	0
43BCBJ1#2	13003	beefcow	100	0	0	0	50	0	0	0	80
43BCBJ1#3	13003	beefcow	98	5	10	0	50	0	0	0	20
43BCBJ1#4	13003	beefcow	107	5	25	0	50	0	0	0	0
43BCBJ1#5	13003	beefcow	99	5	25	0	50	0	0	0	0
43BCBJA1#1	13003	beefcow	69	5	10	0	50	0	0	0	0
43BCBJA1#2	13003	beefcow	105	5	25	0	50	0	0	0	0
43BCBJA1#3	13003	beefcow	106	5	25	0	50	0	0	0	0
43BCBJA1#4	21403	beefcow	172	10	10	20	100	0	0	0	0
43BCBJA2#1	13003	beefcow	118	5	25	0	200	0	0	0	0
43BCBJA2#2	13003	beefcow	119	5	50	0	200	0	0	0	0
43BCBJA2#3	21403	beefcow	225	5	10	80	50	0	0	0	40
43BCBJA2#4	21403	beefcow	234	5	10	20	50	0	0	0	0
43BCBJA2#5	13003	beefcow	120	5	25	0	100	0	0	0	0
43BCBL1#1	120203	Beefcow	1858	0	0	80	20	0	5	0	80
43BCBL1#2	120203	Beefcow	1859	0	0	80	20	0	0	0	80
43BCBL1#3	120203	Beefcow	1860	0	10	80	20	0	0	0	80
43BCBL1#4	120203	Beefcow	1861	0	0	80	20	0	0	0	80
43BCBL1#5	120203	Beefcow	1870	0	0	80	20	0	0	0	80
43BCBL2#1	120203	Beefcow	1857	5	10	20	50	0	0	0	0
43BCBL2#2	120203	Beefcow	1862	5	10	80	20	0	0	0	80
43BCBL2#3	120203	Beefcow	1863	5	10	0	50	0	0	0	0
43BCBL2#4	120203	Beefcow	1864	5	10	0	50	0	5	0	0
43BCBL2#5	120203	Beefcow	1865	5	10	0	50	0	5	0	0
43BCBL3#1	120203	Beefcow	1884	5	10	80	50	0	5	0	80
43BCBL3#2	120203	Beefcow	1885	0	0	80	50	0	0	0	80
43BCBM1#1	13003	beefcow	54	5	25	80	50	0	0	0	80
43BCBM1#2	13003	beefcow	55	0	10	20	50	0	0	0	60
43BCBM1#3	13003	beefcow	56	5	10	0	50	0	0	0	0
43BCBM1#4	13003	beefcow	57	5	25	0	50	0	0	0	0
43BCBM1#5	13003	beefcow	58	5	10	0	50	0	0	0	0



43BCBM2#1	21403	beefcow	247	5	10	80	50	0	0	0	80
43BCBM2#3	21403	beefcow	199	20	10	80	50	0	0	0	80
43BCBM2#4	21403	beefcow	215	5	10	20	50	0	0	0	0
43BCBM2#5	21403	beefcow	185	5	10	80	50	0	0	0	80
43BCBP1#1	13003	beefcow	87	0	10	40	100	0	0	0	60
43BCBP1#2	13003	beefcow	117	5	10	0	100	0	0	0	0
43BCBP1#3	13003	beefcow	86	10	10	0	100	0	0	0	0
43BCBP1#4	13003	beefcow	85	5	50	0	100	0	0	0	0
43BCBP1#5	13003	beefcow	84	5	10	0	50	0	0	0	0
43BCBPE1	91802	beefcow	10	5	0	80	50	0	5	0	80
43BCBPE1#2	40103	beefcow	475	15	10	80	50	0	0	0	80
43BCBPE1#5	42203	beefcow	691	5	10	0	50	0	0	0	0
43BCBPE2#1	42203	beefcow	692	5	10	0	20	0	0	0	0
43BCBPE2#2	21403	beefcow	211	5	10	60	20	0	0	0	20
43BCBPE2#4	21403	beefcow	174	5	10	20	50	0	0	0	0
43BCBPE2#5	21403	beefcow	193	5	10	80	50	0	0	0	80
43BCBPE3	91802	beefcow	12	0	0	80	50	0	0	0	80
43BCBPE3#1	21403	beefcow	164	10	10	20	20	0	0	0	0
43BCBPE3#2	13003	beefcow	108	5	25	0	50	0	0	0	0
43BCBPE3#3	21403	beefcow	209	10	10	20	50	0	0	0	0
43BCBPE3#4	13003	beefcow	76	5	10	0	50	0	0	0	0
43BCBPE3#5	13003	beefcow	68	5	50	0	100	0	0	0	0
43BCBPE4	91802	beefcow	16	0	0	80	50	0	0	0	80
43BCBT1#1	21403	beefcow	219	0	10	20	50	0	0	0	0
43BCBT1#2	21403	beefcow	214	5	10	0	50	0	0	0	0
43BCBT1#3	21403	beefcow	203	5	10	20	50	0	0	0	0
43BCBT1#4	21403	beefcow	216	5	10	20	50	0	0	0	0
43BCBT1#5	21403	beefcow	195	5	10	20	50	0	0	0	0
43BCBT2#1	21403	beefcow	233	5	10	80	100	0	0	0	80
43BCBT2#2	21403	beefcow	206	10	10	80	20	0	0	0	80
43BCBT2#4	21403	beefcow	232	5	10	80	50	0	0	0	80
43BCBT2#5	21403	beefcow	198	20	10	80	20	0	0	0	80
43BCBZ1#1	13003	beefcow	111	5	25	0	100	0	0	0	0
43BCBZ1#2	13003	beefcow	83	5	50	0	200	0	0	0	0
43BCBZ1#3	13003	beefcow	82	5	25	0	50	0	0	0	0
43BCBZ1#4	21403	beefcow	201	5	10	20	50	0	0	0	0
43BCBZ1#5	13003	beefcow	112	5	25	0	100	0	0	0	0
43CCPE1#1	71503	Cat	1164	0	10	0	50	0	0	0	0
43CCPE1#2	71503	Cat	1159	5	10	0	50	0	0	0	0
43CCPE1#3	71503	Cat	1158	5	10	0	50	0	0	0	0
43CCPE1#4	71503	Cat	1157	0	10	0	20	0	0	0	0
43CCPE1#5	71503	Cat	1156	0	10	0	50	0	0	0	0
43CCPE10#1	82603	Cat	1425	20	100	80	50	0	0	0	80
43CCPE10#2	82603	Cat	1426	0	10	0	20	0	0	0	0
43CCPE10#3	82603	Cat	1427	5	10	80	50	0	0	0	80
43CCPE10#4	82603	Cat	1428	15	25	0	50	0	0	0	0
43CCPE10#5	82603	Cat	1429	15	25	0	50	0	0	0	0
43CCPE11#1	82603	Cat	1503	0	10	0	50	0	0	0	0
43CCPE11#2	82603	Cat	1504	5	10	0	50	0	0	0	0
43CCPE11#3	82603	Cat	1505	0	25	0	50	0	0	0	0
43CCPE11#4	82603	Cat	1506	0	10	0	50	0	0	0	0
43CCPE11#5	82603	Cat	1507	5	10	0	50	0	0	0	0
43CCPE12#1	11304	cat	2662	5	10	0	20	0	0	0	0
43CCPE12#2	11304	cat	2663	5	10	0	20	0	0	0	0
43CCPE12#3	11304	cat	2664	5	10	0	20	0	0	0	0
43CCPE12#4	11304	cat	2665	10	10	0	20	0	0	0	0
43CCPE12#5	11304	cat	2674	5	10	0	20	0	0	0	0

43CCPE13#1	11304	cat	2557	5	25	0	20	0	0	0	0
43CCPE13#2	11304	cat	2558	5	10	0	20	0	0	0	0
43CCPE13#3	11304	cat	2559	5	25	0	20	0	0	0	0
43CCPE13#4	11304	cat	2560	5	25	0	20	0	0	0	0
43CCPE13#5	11304	cat	2561	5	10	0	20	0	0	0	0
43CCPE14#1	11304	cat	2548	5	10	0	20	0	0	0	0
43CCPE14#2	11304	cat	2549	5	10	0	20	0	0	0	0
43CCPE14#3	11304	cat	2550	0	50	0	20	0	0	0	0
43CCPE14#4	11304	cat	2551	5	10	0	20	0	0	0	0
43CCPE14#5	11304	cat	2556	5	10	0	20	0	0	0	0
43CCPE15#1	11304	cat	2539	5	10	0	50	0	0	0	0
43CCPE15#2	11304	cat	2544	5	10	0	50	0	0	0	0
43CCPE15#3	11304	cat	2545	5	10	0	20	0	0	0	0
43CCPE15#4	11304	cat	2546	5	10	0	20	0	0	0	0
43CCPE15#5	11304	cat	2547	10	10	0	50	0	0	0	0
43CCPE16#1	11304	cat	3079	5	10	0	20	0	0	0	0
43CCPE16#2	11304	cat	3080	5	10	0	20	0	0	0	0
43CCPE16#3	11304	cat	3081	5	10	0	20	0	0	0	0
43CCPE16#4	11304	cat	3082	5	10	0	20	0	0	0	0
43CCPE16#5	11304	cat	3023	5	10	0	20	0	0	0	0
43CCPE17#1	11304	cat	3068	10	10	0	50	0	0	0	0
43CCPE17#2	11304	cat	3069	10	10	0	20	0	0	0	0
43CCPE17#3	11304	cat	3070	5	10	0	20	0	0	0	0
43CCPE17#4	11304	cat	3071	10	10	0	20	0	0	0	0
43CCPE17#5	11304	cat	3072	10	10	0	20	0	0	0	0
43CCPE18#1	11304	cat	3180	0	10	80	20	0	0	0	0
43CCPE18#2	11304	cat	3181	10	0	80	20	0	0	0	0
43CCPE18#3	11304	cat	3182	5	0	80	20	0	0	0	0
43CCPE18#4	11304	cat	3183	0	0	80	20	0	0	0	0
43CCPE18#5	11304	cat	3188	0	10	80	20	0	0	0	0
43CCPE19#1	11304	cat	2331	5	10	0	20	0	0	0	0
43CCPE19#2	11304	cat	2332	5	10	20	20	0	0	0	0
43CCPE19#3	11304	cat	2333	5	10	20	20	0	0	0	0
43CCPE19#4	11304	cat	2334	5	10	0	20	0	0	0	0
43CCPE19#5	11304	cat	2335	5	10	20	50	0	0	0	0
43CCPE2#1	71503	Cat	1183	10	10	0	20	0	0	0	0
43CCPE2#2	71503	Cat	1182	10	10	0	20	0	0	0	0
43CCPE2#3	71503	Cat	1181	0	10	0	20	0	0	0	0
43CCPE2#4	71503	Cat	1180	0	10	0	20	0	0	0	0
43CCPE2#5	71503	Cat	1179	10	10	0	20	0	0	0	0
43CCPE20#1	11304	cat	3007	5	0	0	20	0	0	0	0
43CCPE20#2	11304	cat	2962	5	10	0	20	0	0	0	0
43CCPE20#3	11304	cat	2961	0	0	60	50	0	0	0	20
43CCPE20#4	11304	cat	2960	0	0	60	20	0	0	0	0
43CCPE20#5	11304	cat	2959	5	10	0	20	0	0	0	0
43CCPE3#1	71503	Cat	1146	0	10	0	50	0	0	0	0
43CCPE3#2	71503	Cat	1145	0	10	0	50	0	0	0	0
43CCPE3#3	71503	Cat	1144	0	10	0	50	0	0	0	0
43CCPE3#4	71503	Cat	1143	0	10	0	50	0	0	0	0
43CCPE3#5	71503	Cat	1142	0	10	0	50	0	0	0	0
43CCPE4#1	71503	Cat	1077	0	10	0	20	0	0	0	0
43CCPE4#2	71503	Cat	1078	0	10	0	20	0	0	0	0
43CCPE4#3	71503	Cat	1079	0	10	0	20	0	0	0	0
43CCPE4#4	71503	Cat	1080	0	10	0	20	0	0	0	0
43CCPE4#5	71503	Cat	1081	0	10	0	50	0	0	0	0
43CCPE5#1	82603	Cat	1483	5	10	0	50	0	0	0	0
43CCPE5#2	82603	Cat	1484	0	0	0	50	0	0	0	0

43CCPE5#3	82603	Cat	1485	0	0	0	50	0	0	0	0
43CCPE5#4	82603	Cat	1486	5	10	0	50	0	0	0	0
43CCPE5#5	82603	Cat	1487	5	25	0	50	0	0	0	0
43CCPE6#1	82603	Cat	1493	0	0	0	50	0	0	0	0
43CCPE6#2	82603	Cat	1494	0	10	0	50	0	0	0	0
43CCPE6#3	82603	Cat	1495	0	0	0	50	0	0	0	0
43CCPE6#4	82603	Cat	1496	5	10	0	50	0	0	0	0
43CCPE6#5	82603	Cat	1497	5	10	0	50	0	0	0	0
43CCPE7#1	82603	Cat	1430	10	10	0	50	0	0	0	0
43CCPE7#2	82603	Cat	1435	5	10	0	20	0	0	0	0
43CCPE7#3	82603	Cat	1436	0	10	0	50	0	0	0	0
43CCPE7#4	82603	Cat	1437	5	25	0	50	0	0	0	0
43CCPE7#5	82603	Cat	1438	5	25	0	50	0	0	0	0
43CCPE8#1	82603	Cat	1411	5	10	0	20	0	0	0	0
43CCPE8#2	82603	Cat	1412	15	10	0	20	0	0	0	0
43CCPE8#3	82603	Cat	1413	5	10	0	20	0	0	0	0
43CCPE8#4	82603	Cat	1414	0	10	0	50	0	0	0	0
43CCPE8#5	82603	Cat	1415	5	10	0	50	0	0	0	0
43CCPE9#1	82603	Cat	1432	5	25	0	50	0	0	0	0
43CCPE9#2	11304	cat	2744	5	10	0	20	0	0	0	0
43CCPE9#3	11304	cat	2745	5	10	0	20	0	0	0	0
43CCPE9#4	11304	cat	2746	5	10	0	20	0	0	0	0
43CCPE9#5	11304	cat	2747	5	10	0	20	0	0	0	0
43DCDB1#1	40103	dairy	483	15	25	80	100	0	0	0	0
43DCDB2	91802	dairy	11	5	0	0	50	0	0	0	0
43DCDB3	91802	dairy	13	5	10	0	50	0	0	0	0
43DCDB4	91802	dairy	14	5	0	20	50	0	0	0	20
43DCDB5	91802	dairy	15	5	0	60	50	0	0	0	40
43DCDT1#1	13003	dairy	148	0	0	0	50	0	0	0	0
43DCDT1#3	40103	dairy	491	5	10	20	50	0	0	0	0
43DCDT1#4	13003	dairy	149	5	0	0	50	0	0	0	0
43DCDT1#5	51303	dairy	785	5	10	0	50	0	0	0	0
43DCDT1#2	21403	dairy	197	5	10	80	50	0	0	0	80
43DDPE1#1	82603	Dog	1477	5	25	0	20	0	0	0	0
43DDPE1#2	82603	Dog	1478	20	25	0	50	0	0	0	0
43DDPE1#3	82603	Dog	1479	20	50	0	50	0	0	0	0
43DDPE1#4	82603	Dog	1480	20	50	0	50	0	0	0	0
43DDPE1#5	82603	Dog	1481	20	25	0	100	0	0	0	0
43DDPE10#1	11304	Dog	2900	5	10	0	20	0	0	0	0
43DDPE10#2	11304	Dog	2901	0	0	0	20	0	0	0	0
43DDPE10#3	11304	Dog	2902	5	10	0	20	0	0	0	0
43DDPE10#4	11304	Dog	2911	5	25	0	20	0	0	0	0
43DDPE10#5	11304	Dog	2912	5	0	0	20	0	0	0	0
43DDPE11#1	11304	Dog	2534	5	10	0	50	0	0	0	0
43DDPE11#2	11304	Dog	2535	5	10	0	20	0	0	0	0
43DDPE11#3	11304	Dog	2536	5	10	0	50	0	0	0	0
43DDPE11#4	11304	Dog	2537	5	10	80	50	0	0	0	80
43DDPE11#5	11304	Dog	2538	5	10	0	50	0	0	0	0
43DDPE12#1	11304	Dog	3166	5	25	40	50	0	0	0	0
43DDPE12#2	11304	Dog	3167	5	25	80	20	0	0	0	0
43DDPE12#3	11304	Dog	3168	10	10	80	50	0	0	0	0
43DDPE12#4	11304	Dog	3169	20	10	80	20	0	0	0	80
43DDPE12#5	11304	Dog	3170	10	10	80	50	0	0	0	0
43DDPE13#1	11304	Dog	3152	5	10	20	20	0	0	0	0
43DDPE13#2	11304	Dog	3153	5	10	40	50	0	0	0	0
43DDPE13#3	11304	Dog	3154	5	10	20	20	0	0	0	0
43DDPE13#4	11304	Dog	3155	5	10	20	50	0	0	0	0

43DDPE13#5	11304	Dog	3156	5	10	40	50	0	0	0	0
43DDPE14#1	11304	Dog	2913	5	0	0	20	0	0	0	0
43DDPE14#2	11304	Dog	2914	5	10	0	20	0	0	0	0
43DDPE14#3	11304	Dog	2923	5	10	0	20	0	0	0	0
43DDPE14#4	11304	Dog	2924	5	10	0	20	0	0	0	0
43DDPE14#5	11304	Dog	2925	5	10	0	20	0	0	0	0
43DDPE15#1	11304	Dog	2675	5	25	0	20	0	15	0	0
43DDPE15#2	11304	Dog	2676	5	50	0	20	0	0	0	0
43DDPE15#3	11304	Dog	2677	20	10	0	20	0	0	0	0
43DDPE15#4	11304	Dog	2686	5	10	0	20	0	0	0	0
43DDPE15#5	11304	Dog	2687	20	10	0	20	0	0	0	0
43DDPE16#1	11304	Dog	2299	5	25	20	20	0	0	0	0
43DDPE16#2	11304	Dog	2300	5	25	20	20	0	0	0	0
43DDPE16#3	11304	Dog	2301	10	25	0	20	0	0	0	0
43DDPE16#4	11304	Dog	2302	5	10	20	20	0	0	0	0
43DDPE16#5	11304	Dog	2307	5	10	20	20	0	0	0	0
43DDPE17#1	11304	Dog	3194	20	10	40	20	0	0	0	0
43DDPE17#2	11304	Dog	3195	20	10	20	20	0	0	0	0
43DDPE17#3	11304	Dog	3200	20	10	80	20	0	0	0	80
43DDPE17#4	11304	Dog	3201	20	10	80	20	0	0	0	80
43DDPE17#5	11304	Dog	3202	20	10	40	20	0	0	0	0
43DDPE19#1	11304	Dog	2308	5	10	20	50	0	0	0	0
43DDPE19#2	11304	Dog	2309	5	10	20	50	0	0	0	0
43DDPE19#3	11304	Dog	2310	5	10	20	50	0	0	0	0
43DDPE19#4	11304	Dog	2311	5	10	20	50	0	0	0	0
43DDPE19#5	11304	Dog	2312	5	10	20	50	0	0	0	0
43DDPE2#1	71503	Dog	1098	0	10	0	100	0	0	0	0
43DDPE2#2	71503	Dog	1099	0	10	0	50	0	0	0	0
43DDPE2#3	71503	Dog	1100	5	10	0	50	0	0	0	0
43DDPE2#4	71503	Dog	1101	5	10	80	100	0	0	0	80
43DDPE2#5	71503	Dog	1102	0	10	0	20	0	0	0	0
43DDPE20#1	11304	Dog	3115	5	10	40	20	0	0	0	0
43DDPE20#2	11304	Dog	3116	5	10	20	50	0	0	0	0
43DDPE20#3	11304	Dog	3117	5	10	20	20	0	0	0	0
43DDPE20#4	11304	Dog	3118	5	10	20	50	0	0	0	0
43DDPE20#5	11304	Dog	3127	5	10	20	50	0	0	0	0
43DDPE3#1	71503	Dog	1058	0	10	0	50	0	0	0	0
43DDPE3#2	71503	Dog	1059	0	10	0	50	0	0	0	0
43DDPE3#3	71503	Dog	1060	0	10	0	100	0	0	0	0
43DDPE3#4	71503	Dog	1061	0	10	0	50	0	0	0	0
43DDPE3#5	71503	Dog	1062	0	10	0	50	0	0	0	0
43DDPE4#1	30304	Dog	2785	20	50	20	20	0	0	0	0
43DDPE4#2	30304	Dog	2786	20	50	20	50	0	0	0	0
43DDPE4#3	30304	Dog	2787	20	50	40	50	0	0	0	0
43DDPE4#4	30304	Dog	2788	20	50	20	50	0	0	0	0
43DDPE4#5	30304	Dog	2789	20	50	20	50	0	0	0	0
43DDPE5#1	71503	Dog	1082	0	10	80	100	0	0	0	80
43DDPE5#2	71503	Dog	1083	0	10	80	100	0	0	0	80
43DDPE5#3	71503	Dog	1084	0	10	80	100	0	0	0	80
43DDPE5#4	71503	Dog	1085	5	10	80	100	0	0	0	80
43DDPE5#5	71503	Dog	1086	5	10	80	100	0	0	0	80
43DDPE6#1	82603	Dog	1537	5	10	0	100	0	0	0	0
43DDPE6#2	82603	Dog	1529	5	10	0	50	0	0	0	0
43DDPE6#3	82603	Dog	1521	10	25	0	50	0	0	0	0
43DDPE6#4	82603	Cat	1513	5	10	0	50	0	0	0	0
43DDPE6#5	82603	Dog	1422	0	10	0	50	0	0	0	0
43DDPE7#1	82603	Dog	1535	5	10	0	50	0	0	0	0

43DDPE7#2	82603	Dog	1527	20	10	80	50	0	0	0	80
43DDPE7#3	82603	Dog	1519	20	10	60	50	0	0	0	80
43DDPE7#4	82603	Dog	1482	5	10	0	50	0	0	0	0
43DDPE7#5	82603	Dog	1419	15	25	0	50	0	0	0	0
43DDPE8#1	82603	Dog	1522	10	10	0	100	0	0	0	0
43DDPE8#2	82603	Dog	1523	5	25	0	50	0	0	0	0
43DDPE8#3	82603	Dog	1524	5	10	0	50	0	0	0	0
43DDPE8#4	82603	Dog	1525	10	10	0	100	0	0	0	0
43DDPE8#5	82603	Dog	1526	5	25	0	50	0	0	0	0
43DDPE9#1	82603	Dog	1498	5	10	0	50	0	0	0	0
43DDPE9#2	82603	Dog	1499	10	25	0	100	0	0	0	0
43DDPE9#3	82603	Dog	1500	5	25	0	100	0	0	0	0
43DDPE9#4	82603	Dog	1501	10	25	0	100	0	0	0	0
43DDPE9#5	82603	Dog	1502	10	10	0	100	0	0	0	0
43HHB1#1	91603	Horse	1555	5	10	0	50	0	0	0	0
43HHB1#1	11304	Horse	2845	5	10	0	20	0	0	0	0
43HHB1#2	91603	Horse	1556	5	10	0	50	0	0	0	0
43HHB1#2	11304	Horse	2846	5	10	0	20	0	0	0	0
43HHB1#3	91603	Horse	1557	5	10	0	50	0	0	0	0
43HHB1#3	11304	Horse	2847	5	10	0	20	0	0	0	0
43HHB1#4	91603	Horse	1558	5	10	0	50	0	0	0	0
43HHB1#4	11304	Horse	2848	5	10	0	20	0	0	0	0
43HHB1#5	91603	Horse	1559	5	10	0	50	0	0	0	0
43HHB1#5	11304	Horse	2849	5	10	0	20	0	0	0	0
43HHB2#1	11304	Horse	2345	5	10	20	50	0	0	0	0
43HHB2#2	11304	Horse	2346	5	10	20	20	0	0	0	0
43HHB2#3	11304	Horse	2347	5	10	20	20	0	0	0	0
43HHB2#4	11304	Horse	2348	5	10	0	20	0	0	0	0
43HHB2#5	11304	Horse	2349	5	10	0	20	0	0	0	0
43HHB3#1	11304	Horse	3073	5	0	0	20	0	0	0	0
43HHB3#2	11304	Horse	3074	5	10	0	20	0	0	0	0
43HHB3#3	11304	Horse	3075	5	0	0	20	0	0	0	0
43HHB3#4	11304	Horse	3076	10	10	0	20	0	0	0	0
43HHB3#5	11304	Horse	3077	5	10	0	20	0	0	0	0
43HHB4#1	11304	Horse	2643	20	10	0	20	0	0	0	0
43HHB4#2	11304	Horse	2644	5	10	0	20	0	0	0	0
43HHB4#3	11304	Horse	2645	20	50	0	20	0	0	0	0
43HHB4#4	11304	Horse	2646	5	10	0	20	0	0	0	0
43HHB4#5	11304	Horse	2647	5	10	0	20	0	0	0	0
43HHBN1#1	91603	Horse	1575	5	10	0	50	0	0	0	0
43HHBN1#2	91603	Horse	1576	5	10	0	50	0	0	0	0
43HHBN1#3	91603	Horse	1577	5	10	0	50	0	0	0	0
43HHBN1#4	91603	Horse	1578	5	25	0	50	0	0	0	0
43HHBN1#5	91603	Horse	1579	5	10	0	50	0	0	0	0
43HHBN2#1	91603	Horse	1595	0	10	0	20	0	0	0	0
43HHBN2#2	91603	Horse	1596	5	10	0	20	0	0	0	0
43HHBN2#3	91603	Horse	1597	5	10	0	20	0	0	0	0
43HHBN2#4	91603	Horse	1598	5	10	0	20	0	0	0	0
43HHBN2#5	91603	Horse	1599	10	10	0	50	0	0	0	0
43HHC1#1	91603	Horse	1605	0	10	0	20	0	0	0	0
43HHC1#2	91603	Horse	1606	0	10	0	20	0	0	0	0
43HHC1#3	91603	Horse	1607	5	10	0	50	0	0	0	0
43HHC1#4	91603	Horse	1608	0	10	0	20	0	0	0	0
43HHC1#5	91603	Horse	1609	5	10	0	50	0	0	0	0
43HHD1#1	91603	Horse	1615	5	10	0	20	0	0	0	0
43HHD1#2	91603	Horse	1616	5	10	0	20	0	0	0	0
43HHD1#3	91603	Horse	1617	5	10	0	50	0	0	0	0

43HHD1#4	91603	Horse	1618	5	10	0	50	0	0	0	0
43HHD1#5	91603	Horse	1619	5	10	0	20	0	0	0	0
43HHFR2#1	11304	Horse	2234	5	10	20	20	0	0	0	0
43HHFR2#2	11304	Horse	2243	5	10	20	50	0	0	0	0
43HHFR2#3	11304	Horse	2244	5	10	20	50	0	0	0	0
43HHFR2#4	11304	Horse	2245	0	10	20	50	0	0	0	0
43HHFR2#5	11304	Horse	2246	5	10	20	50	0	0	0	0
43HHH1#1	91603	Horse	1600	5	10	0	50	0	0	0	0
43HHH1#2	91603	Horse	1601	5	10	0	50	0	0	0	0
43HHH1#3	91603	Horse	1602	0	10	0	50	0	0	0	0
43HHH1#4	91603	Horse	1603	0	10	20	50	0	0	0	80
43HHH1#5	91603	Horse	1604	5	10	0	20	0	0	0	0
43HHH2#1	91603	Horse	1585	5	10	0	50	0	0	0	0
43HHH2#2	91603	Horse	1586	5	10	0	50	0	0	0	0
43HHH2#3	91603	Horse	1587	5	10	0	50	0	0	0	0
43HHH2#4	91603	Horse	1588	5	10	0	50	0	0	0	0
43HHH2#5	91603	Horse	1589	5	10	0	50	0	0	0	0
43HHHA1#1	91603	Horse	1550	5	10	0	50	0	0	0	0
43HHHA1#2	91603	Horse	1551	10	25	0	50	0	0	0	0
43HHHA1#3	91603	Horse	1552	5	25	0	50	0	0	0	0
43HHHA1#4	91603	Horse	1553	5	10	0	50	0	0	0	0
43HHHA1#5	91603	Horse	1554	5	10	0	50	0	0	0	0
43HHJA1#1	91603	Horse	1580	5	10	0	50	0	0	0	0
43HHJA1#2	91603	Horse	1581	5	10	0	50	0	0	0	0
43HHJA1#3	91603	Horse	1582	5	25	0	20	0	0	0	0
43HHJA1#4	91603	Horse	1583	5	25	0	20	0	0	0	0
43HHJA1#5	91603	Horse	1584	5	25	0	20	0	0	0	0
43HHM1#1	91603	Horse	1570	10	10	0	50	0	0	0	0
43HHM1#2	91603	Horse	1571	5	10	0	50	0	0	0	0
43HHM1#3	91603	Horse	1572	10	10	0	50	0	0	0	0
43HHM1#4	91603	Horse	1573	0	10	0	50	0	0	0	0
43HHM1#5	91603	Horse	1574	5	10	0	50	0	0	0	0
43HHM2#1	91603	Horse	1590	0	10	0	50	0	0	0	0
43HHM2#2	91603	Horse	1591	5	10	0	50	0	0	0	0
43HHM2#3	91603	Horse	1592	5	10	0	50	0	0	0	0
43HHM2#4	91603	Horse	1593	10	25	0	50	0	0	0	0
43HHM2#5	91603	Horse	1594	5	10	0	50	0	0	0	0
43HHPE1#1	11304	Horse	2640	5	10	0	20	0	0	0	0
43HHPE1#2	11304	Horse	2641	5	10	0	50	0	0	0	0
43HHPE1#3	11304	Horse	2650	5	10	80	20	0	0	0	80
43HHPE1#4	11304	Horse	2651	5	10	80	20	0	0	0	80
43HHPE1#5	11304	Horse	2652	5	10	0	20	0	0	0	0
43HHTD1#1	91603	Horse	1565	5	10	0	20	0	0	0	0
43HHTD1#2	91603	Horse	1566	5	10	0	50	0	0	0	0
43HHTD1#3	91603	Horse	1567	5	10	0	50	0	0	0	0
43HHTD1#4	91603	Horse	1568	10	10	0	20	0	0	0	0
43HHTD1#5	91603	Horse	1569	5	25	0	50	0	0	0	0
43HHTD2#1	91603	Horse	1560	5	10	0	50	0	0	0	0
43HHTD2#2	91603	Horse	1561	5	10	0	20	0	0	0	0
43HHTD2#3	91603	Horse	1562	10	50	0	50	0	0	0	0
43HHTD2#4	91603	Horse	1563	10	10	0	20	0	0	0	0
43HHTD2#5	91603	Horse	1564	5	25	0	50	0	0	0	0
43HHZ1#1	91603	Horse	1610	5	10	0	20	0	0	0	0
43HHZ1#2	91603	Horse	1611	5	10	0	20	0	0	0	0
43HHZ1#3	91603	Horse	1612	5	10	0	20	0	0	0	0
43HHZ1#4	91603	Horse	1613	5	10	0	50	0	0	0	0
43HHZ1#5	91603	Horse	1614	5	10	0	20	0	0	0	0

43PPB1#1	13003	Pig	132	0	0	80	50	0	0	0	80
43PPB1#2	13003	Pig	133	5	10	80	100	0	0	0	80
43PPB1#4	13003	Pig	134	0	0	80	50	0	0	0	80
43PPB1#5	13003	Pig	151	0	10	0	50	0	0	0	0
43PPB2#1	120203	Pig	2148	5	0	80	50	0	0	0	80
43PPB2#2	120203	Pig	2149	5	0	80	50	0	0	0	80
43PPB2#3	120203	Pig	2150	5	0	80	50	0	0	0	80
43PPB2#4	120203	Pig	2159	5	10	80	50	0	0	0	80
43PPB2#5	120203	Pig	2160	5	10	80	50	0	0	0	80
43PPB3#1	120203	Pig	1927	20	10	80	50	0	0	0	80
43PPB3#2	120203	Pig	1928	20	0	80	50	0	0	0	80
43PPB3#3	120203	Pig	1929	5	0	80	50	0	0	0	80
43PPB3#4	120203	Pig	1930	20	0	80	50	0	0	0	80
43PPB3#5	120203	Pig	1931	20	10	80	50	0	0	0	80
43PPB4#1	120203	Pig	1958	5	10	80	50	0	0	0	80
43PPB4#2	120203	Pig	1959	0	0	0	50	0	0	0	0
43PPB4#3	120203	Pig	1960	0	0	80	0	0	0	0	80
43PPB4#4	120203	Pig	1961	0	0	80	0	0	0	0	80
43PPB4#5	120203	Pig	1962	0	0	80	20	0	0	0	80
43PPB5#1	11304	Pig	3100	20	10	80	20	0	0	0	80
43PPB5#2	11304	Pig	3101	5	0	80	50	0	0	0	80
43PPB5#3	11304	Pig	3102	5	0	80	20	0	0	0	80
43PPB5#4	11304	Pig	3107	5	0	20	20	0	0	0	0
43PPB5#5	11304	Pig	3108	20	10	80	20	0	0	0	80
43PPB6#1	11304	Pig	3095	0	0	80	0	0	0	0	80
43PPB6#2	11304	Pig	3096	5	0	80	0	0	0	0	80
43PPB6#3	11304	Pig	3097	0	0	80	0	0	0	0	80
43PPB6#4	11304	Pig	3098	0	0	80	20	0	0	0	80
43PPB6#5	11304	Pig	3099	5	0	80	50	0	0	0	80
43PPH1#1	11304	Pig	2436	20	10	80	20	0	0	0	80
43PPH1#2	11304	Pig	2437	20	25	80	50	0	0	0	80
43PPH1#3	11304	Pig	2438	5	10	0	20	0	0	0	0
43PPH1#4	11304	Pig	2439	20	10	80	50	0	0	0	80
43PPH1#5	11304	Pig	2440	10	50	0	50	0	0	0	0
43PPH2#1	11304	Pig	2441	5	50	0	50	0	0	0	0
43PPH2#2	11304	Pig	2442	5	10	0	50	0	0	0	0
43PPH2#3	11304	Pig	2443	5	10	0	50	0	0	0	0
43PPH2#4	11304	Pig	2448	5	10	0	20	0	0	0	0
43PPH2#5	11304	Pig	2449	5	25	0	50	0	0	0	0
43PPJ2#1	21403	Pig	202	5	10	20	50	0	0	0	0
43PPJ2#3	13003	Pig	121	0	10	0	20	0	0	0	0
43PPJ2#4	21403	Pig	204	5	10	20	50	0	0	0	0
43PPJ2#5	21403	Pig	180	5	10	20	50	0	0	0	0
43PPJ3#1	13003	Pig	122	0	10	0	50	0	0	0	0
43PPJ3#2	13003	Pig	123	5	25	0	50	0	0	0	0
43PPM1#1	13003	Pig	116	5	10	0	50	0	0	0	0
43PPM1#2	13003	Pig	88	5	25	0	100	0	0	0	0
43PPM1#3	13003	Pig	89	5	25	0	50	0	0	0	0
43PPM1#4	21403	Pig	223	5	10	20	50	0	0	0	0
43PPM1#5	21403	Pig	246	20	10	80	50	0	0	0	80
43PPM2#1	13003	Pig	91	0	10	80	50	0	0	0	80
43PPM2#2	13003	Pig	143	0	10	0	50	0	0	0	0
43PPM2#3	13003	Pig	92	0	25	0	50	0	0	0	0
43PPM2#5	13003	Pig	93	0	10	0	50	0	0	0	0
43PPM3#2	21403	Pig	189	10	10	20	50	0	0	0	0
43PPM3#3	13003	Pig	90	5	100	0	100	0	0	0	80
43PPM3#4	21403	Pig	159	5	25	20	50	0	0	0	0

43PPM4#1	11304	Pig	2855	5	10	0	20	0	0	0	0
43PPM4#2	11304	Pig	2856	5	25	0	20	0	0	0	0
43PPM4#3	11304	Pig	2857	5	10	0	20	0	0	0	0
43PPM4#4	11304	Pig	2858	5	10	0	20	0	0	0	0
43PPM4#5	11304	Pig	2859	5	0	0	20	0	0	0	0
43PPM5#1	11304	Pig	2860	0	0	0	20	0	0	0	0
43PPM5#2	11304	Pig	2861	5	25	0	20	0	0	0	0
43PPM5#3	11304	Pig	2862	0	10	80	20	0	0	0	0
43PPM5#4	11304	Pig	2867	5	25	0	20	0	0	0	0
43PPM5#5	11304	Pig	2868	10	25	0	20	0	0	0	0
43PPM6#1	11304	Pig	2869	10	25	0	20	0	0	0	0
43PPM6#2	11304	Pig	2870	5	25	0	20	0	0	0	0
43PPM6#3	11304	Pig	2871	5	10	0	20	0	0	0	0
43PPM6#4	11304	Pig	2872	5	0	0	20	0	0	0	0
43PPM6#5	11304	Pig	2873	5	10	0	20	0	0	0	0
43PPM7#1	11304	Pig	3223	5	10	0	20	0	0	0	0
43PPM7#2	11304	Pig	3160	5	10	40	50	0	0	0	0
43PPM7#3	11304	Pig	3161	5	0	40	50	0	0	0	0
43PPM7#4	11304	Pig	3162	5	10	80	50	0	0	0	80
43PPM7#5	11304	Pig	3163	5	10	80	50	0	0	0	80
43PPM8#1	11304	Pig	3213	5	10	20	20	0	0	0	0
43PPM8#2	11304	Pig	3214	5	10	20	50	0	0	0	0
43PPM8#3	11304	Pig	3215	5	10	20	20	0	0	0	0
43PPM8#4	11304	Pig	3216	5	10	20	50	0	0	0	0
43PPM8#5	11304	Pig	3217	10	25	40	50	0	0	0	0
43PPPE1#1	11304	Pig	2653	5	0	0	20	0	0	0	0
43PPPE2#1	11304	Pig	2336	5	25	20	20	0	0	0	0
43PPPE2#2	11304	Pig	2337	0	10	80	50	0	0	0	80
43PPPE2#3	11304	Pig	2338	20	10	80	50	0	0	0	80
43PPPE2#4	11304	Pig	2343	20	100	20	50	0	0	0	0
43PPPE2#5	11304	Pig	2344	5	10	80	50	0	0	0	80
43PPT1#1	13003	Pig	129	0	10	0	100	0	0	0	0
43PPT1#2	13003	Pig	130	0	0	0	50	0	0	0	0
43PPT1#5	13003	Pig	131	0	0	80	50	0	0	0	80
43PPZ1#1	11304	Pig	2450	5	10	0	20	0	0	0	0
43PPZ1#2	11304	Pig	2451	20	10	80	20	0	0	0	80
43PPZ1#3	11304	Pig	2452	5	10	0	50	0	0	0	0
43PPZ1#4	11304	Pig	2453	5	25	0	20	0	0	0	0
43PPZ1#5	11304	Pig	2454	5	10	0	20	0	0	0	0
43PPZ2#1	11304	Pig	2455	5	50	0	50	0	5	0	0
43PPZ2#2	11304	Pig	2460	10	10	0	20	0	0	0	0
43PPZ2#3	11304	Pig	2461	5	10	0	20	0	0	0	0
43PPZ2#4	11304	Pig	2462	5	10	0	20	0	0	0	0
43PPZ2#5	11304	Pig	2463	0	10	80	20	0	0	0	80
43SSB1#1	120203	Sheep	2152	5	10	0	20	0	0	0	0
43SSB1#2	120203	Sheep	2153	10	10	0	50	0	0	0	20
43SSB1#3	120203	Sheep	2154	5	10	0	20	0	0	0	0
43SSB1#4	120203	Sheep	2155	5	10	0	20	0	0	0	0
43SSB1#5	120203	Sheep	2156	0	10	0	20	0	0	0	0
43SSB10#1	11304	Sheep	2192	5	10	0	50	0	0	0	0
43SSB10#2	11304	Sheep	2193	5	10	0	20	0	0	0	0
43SSB10#3	11304	Sheep	2194	5	10	0	20	0	0	0	0
43SSB10#4	11304	Sheep	2199	5	10	0	20	0	0	0	0
43SSB10#5	11304	Sheep	2200	5	10	0	50	0	0	0	0
43SSB11#1	11304	Sheep	2261	10	25	80	20	0	0	0	80
43SSB11#2	11304	Sheep	2262	5	10	20	20	0	0	0	0
43SSB11#3	11304	Sheep	2263	5	10	20	50	0	0	0	0



43SSB2#3	21403	Sheep	190	10	10	20	50	0	0	0	0
43SSB2#4	13003	Sheep	114	5	10	0	50	0	0	0	0
43SSB2#5	21403	Sheep	169	0	10	80	20	0	0	0	80
43SSB3#4	40103	Sheep	467	0	25	80	100	0	0	0	80
43SSB3#5	40103	Sheep	621	10	10	20	100	0	0	0	0
43SSB4#1	21403	Sheep	241	5	10	80	50	0	0	0	80
43SSB4#3	21403	Sheep	165	5	10	80	50	0	0	0	80
43SSB4#4	21403	Sheep	176	5	10	80	50	0	0	0	80
43SSB5#1	120203	Sheep	1871	5	10	0	20	0	0	0	0
43SSB5#2	120203	Sheep	1872	5	10	60	20	0	0	0	80
43SSB5#3	120203	Sheep	1873	0	0	0	0	0	0	0	0
43SSB5#4	120203	Sheep	1882	5	10	0	20	0	0	0	0
43SSB5#5	120203	Sheep	1883	5	10	80	50	0	10	0	80
43SSB6#1	120203	Sheep	2186	0	10	0	50	0	0	0	0
43SSB6#2	120203	Sheep	2123	10	10	0	50	0	0	0	0
43SSB6#3	120203	Sheep	2124	0	10	0	50	0	0	0	0
43SSB6#4	120203	Sheep	2125	0	10	0	50	0	0	0	0
43SSB6#5	120203	Sheep	2126	10	25	0	50	0	0	0	0
43SSFR3#1	11304	Sheep	2206	5	10	0	20	0	0	0	0
43SSFR3#2	11304	Sheep	2211	5	10	20	50	0	0	0	0
43SSFR3#3	11304	Sheep	2212	5	10	0	20	0	0	0	0
43SSFR3#4	11304	Sheep	2213	5	10	20	20	0	0	0	0
43SSFR3#5	11304	Sheep	2214	5	10	20	20	0	0	0	0
43SSL1#1	120203	Sheep	1889	5	10	80	50	0	5	0	80
43SSL1#2	120203	Sheep	1890	0	0	80	50	0	0	0	80
43SSL1#3	120203	Sheep	1891	5	10	80	50	80	5	0	80
43SSL1#4	120203	Sheep	1892	5	10	80	50	0	0	0	80
43SSL1#5	120203	Sheep	1893	0	10	0	20	0	0	0	0
43SSL2#1	120203	Sheep	1843	5	10	80	20	0	5	0	80
43SSL2#2	120203	Sheep	1844	5	10	80	20	0	0	0	80
43SSL2#3	120203	Sheep	1845	5	10	80	20	0	0	0	80
43SSL2#4	120203	Sheep	1850	5	10	80	20	0	0	0	80
43SSL2#5	120203	Sheep	1851	5	10	80	20	0	0	0	80
43SSL3#1	120203	Sheep	1852	5	10	40	50	0	0	0	80
43SSL3#2	120203	Sheep	1853	5	10	80	50	0	0	0	80
43SSL3#3	120203	Sheep	1854	5	10	80	50	0	5	0	80
43SSL3#4	120203	Sheep	1855	5	10	80	50	0	0	0	80
43SSL3#5	120203	Sheep	1856	5	25	80	100	0	0	0	80
43SSL4#1	120203	Sheep	1838	5	25	80	50	0	5	0	80
43SSL4#2	120203	Sheep	1839	5	10	80	50	0	0	0	80
43SSL4#3	120203	Sheep	1840	5	10	80	50	0	0	0	80
43SSL4#4	120203	Sheep	1841	5	10	80	50	0	5	0	80
43SSL4#5	120203	Sheep	1842	5	10	80	20	0	5	0	80
43SSM1#1	21403	Sheep	157	5	10	0	50	0	0	0	0
43SSM1#3	21403	Sheep	191	5	25	20	50	0	0	0	0
43SSM1#5	13003	Sheep	113	0	0	0	50	0	0	0	0
43SSM2#2	13003	Sheep	77	5	10	0	50	0	0	0	0
43SSM2#3	13003	Sheep	78	5	10	0	50	0	0	0	0
43SSM2#5	13003	Sheep	79	5	10	0	50	0	0	0	0
43SSM3#1	11304	Sheep	2625	5	10	0	20	0	0	0	0
43SSM3#2	11304	Sheep	2630	10	10	0	50	0	0	0	0
43SSM3#3	11304	Sheep	2631	10	25	0	50	0	0	0	0
43SSM3#4	11304	Sheep	2632	5	10	0	0	0	0	0	0
43SSM3#5	11304	Sheep	2633	10	25	0	50	0	0	0	0
43SSM4#1	11304	Sheep	2620	5	10	80	20	0	0	0	80
43SSM4#2	11304	Sheep	2621	0	0	80	20	0	0	0	80
43SSM4#3	11304	Sheep	2622	0	10	0	0	0	0	0	0

43SSM4#4	11304	Sheep	2623	5	10	0	0	0	0	0	0
43SSM4#5	11304	Sheep	2624	0	0	80	0	0	0	0	80
43SSM5#1	11304	Sheep	2809	5	10	0	50	0	0	0	0
43SSM5#2	11304	Sheep	2810	10	10	80	20	0	0	0	80
43SSM5#3	11304	Sheep	2811	10	25	80	20	0	0	0	80
43SSM5#4	11304	Sheep	2812	5	25	80	20	0	0	0	80
43SSM5#5	11304	Sheep	2813	10	25	80	20	0	0	0	80
43SSM6#1	11304	Sheep	2823	0	10	80	20	0	0	0	80
43SSM6#2	11304	Sheep	2824	5	10	20	20	0	0	0	0
43SSM6#3	11304	Sheep	2825	0	10	80	20	0	0	0	80
43SSM6#4	11304	Sheep	2826	0	0	80	20	0	0	0	80
43SSM6#5	11304	Sheep	2827	0	0	0	20	0	0	0	0
43SSMI#2	13003	Sheep	80	5	25	0	50	0	0	0	0
43SSMI#4	13003	Sheep	81	0	0	0	50	0	0	0	0
43SSP1#1	40103	Sheep	617	20	25	80	50	20	0	0	80
43SSP1#2	40103	Sheep	468	5	10	20	20	0	0	0	0
43SSP1#3	21403	Sheep	184	0	0	20	20	0	0	0	0
43SSPE1#1	21403	Sheep	177	5	0	0	20	0	0	0	0
43SSPE1#2	40103	Sheep	619	20	25	80	50	20	0	0	80
43SSPE1#3	21403	Sheep	156	5	10	0	100	0	0	0	0
43SSPE1#4	21403	Sheep	167	5	10	0	50	0	0	0	0
43SSPE2#3	21403	Sheep	242	5	10	20	50	0	0	0	0
43SSPE2#5	13003	Sheep	115	0	0	0	20	0	0	0	0
43SST1#1	13003	Sheep	128	5	10	0	50	0	0	0	0
43SST1#2	40103	Sheep	482	10	25	80	50	0	0	0	80
43SST1#3	40103	Sheep	478	5	25	80	50	0	0	0	80
43SST1#4	13003	Sheep	146	5	10	60	50	0	0	0	80
43SST1#5	13003	Sheep	147	0	0	0	50	0	0	0	0
43SST4#1	11304	Sheep	2350	0	10	0	20	0	0	0	0
43SST4#2	11304	Sheep	2279	0	10	0	20	0	0	0	0
43SST4#3	11304	Sheep	2280	0	10	0	20	0	0	0	0
43SST4#4	11304	Sheep	2281	0	10	0	20	0	0	0	0
43SST4#5	11304	Sheep	2282	0	0	0	20	0	0	0	0
43WWPE1#1	71503	Waste Water	1236	0	10	0	20	0	0	0	0
43WWPE1#10	62403	Waste Water	980	15	25	40	50	0	0	0	0
43WWPE1#11	71503	Waste Water	1240	0	10	0	50	0	0	0	0
43WWPE1#12	62403	Waste Water	981	20	10	80	50	80	0	0	80
43WWPE1#13	62403	Waste Water	982	20	10	60	50	40	0	0	60
43WWPE1#14	71503	Waste Water	1241	0	0	0	20	0	0	0	0
43WWPE1#15	71503	Waste Water	1242	20	10	80	50	0	0	0	80
43WWPE1#16	62403	Waste Water	983	20	10	80	50	20	0	0	80
43WWPE1#17	71503	Waste Water	1247	20	10	80	50	0	0	0	80
43WWPE1#18	62403	Waste Water	984	20	10	80	50	0	0	0	80
43WWPE1#19	62403	Waste Water	985	20	10	80	50	0	0	0	80
43WWPE1#2	71503	Waste Water	1237	0	10	0	50	0	0	0	0
43WWPE1#20	71503	Waste Water	1248	0	10	0	50	0	0	0	0
43WWPE1#21	62403	Waste Water	986	0	10	0	50	0	0	0	0
43WWPE1#22	62403	Waste Water	987	0	10	0	50	0	0	0	0
43WWPE1#23	71503	Waste Water	1249	0	10	0	20	0	0	0	0
43WWPE1#24	62403	Waste Water	988	20	25	60	50	40	0	0	80
43WWPE1#25	71503	Waste Water	1250	5	10	0	50	0	0	0	0
43WWPE1#26	71503	Waste Water	1251	0	10	0	20	0	0	0	0
43WWPE1#27	71503	Waste Water	1252	0	0	0	20	0	0	0	0
43WWPE1#28	62403	Waste Water	989	5	10	20	50	0	0	0	0
43WWPE1#29	62403	Waste Water	990	5	10	20	50	0	0	0	0
43WWPE1#3	62403	Waste Water	975	20	10	80	50	60	0	0	80
43WWPE1#30	62403	Waste Water	991	5	10	0	20	0	0	0	0

43WWPE1#31	71503	Waste Water	1253	0	10	0	20	0	0	0	0
43WWPE1#32	62403	Waste Water	992	20	10	80	50	0	0	0	80
43WWPE1#33	62403	Waste Water	993	20	10	80	50	0	0	0	80
43WWPE1#34	62403	Waste Water	994	5	10	0	50	0	0	0	0
43WWPE1#35	62403	Waste Water	995	0	10	0	20	0	0	0	0
43WWPE1#36	71503	Waste Water	1254	0	10	0	100	0	0	0	0
43WWPE1#37	62403	Waste Water	1036	20	10	80	50	0	0	0	80
43WWPE1#38	62403	Waste Water	1037	5	10	0	50	0	0	0	0
43WWPE1#39	62403	Waste Water	1038	0	10	0	50	0	0	0	20
43WWPE1#4	62403	Waste Water	976	5	10	80	50	0	0	0	80
43WWPE1#40	62403	Waste Water	1039	5	10	20	50	0	0	0	0
43WWPE1#41	62403	Waste Water	1040	5	10	0	20	0	0	0	0
43WWPE1#42	62403	Waste Water	1041	5	25	20	100	0	0	0	0
43WWPE1#43	62403	Waste Water	1042	5	10	40	50	0	0	0	0
43WWPE1#44	71503	Waste Water	1255	0	0	0	50	0	0	0	0
43WWPE1#45	71503	Waste Water	1256	0	10	0	50	0	0	0	0
43WWPE1#46	62403	Waste Water	1043	5	10	0	50	0	0	0	0
43WWPE1#47	62403	Waste Water	1045	20	10	60	50	0	0	0	60
43WWPE1#48	62403	Waste Water	1046	5	10	20	50	0	0	0	0
43WWPE1#49	62403	Waste Water	1047	0	10	0	50	0	0	0	0
43WWPE1#50	62403	Waste Water	1048	5	25	0	50	0	0	0	0
43WWPE1#50	71503	Waste Water	1238	0	10	0	50	0	0	0	0
43WWPE1#6	62403	Waste Water	977	10	10	40	50	0	0	0	40
43WWPE1#7	71503	Waste Water	1239	0	10	20	20	0	0	0	0
43WWPE1#8	62403	Waste Water	978	5	10	0	50	0	0	0	0
43WWPE1#9	62403	Waste Water	979	0	10	0	50	0	0	0	0
43WWPE2#1	11304	Waste Water	2562	5	10	0	20	0	0	0	0
43WWPE2#10	11304	Waste Water	2575	5	10	0	20	0	0	0	0
43WWPE2#11	11304	Waste Water	2580	5	10	0	50	0	0	0	0
43WWPE2#12	11304	Waste Water	2581	5	25	0	50	0	0	0	0
43WWPE2#13	11304	Waste Water	2582	5	10	0	20	0	0	0	0
43WWPE2#14	11304	Waste Water	2583	5	10	0	20	0	0	0	0
43WWPE2#15	11304	Waste Water	2584	5	10	0	50	0	0	0	0
43WWPE2#16	11304	Waste Water	2585	0	0	0	20	0	0	0	0
43WWPE2#17	11304	Waste Water	2586	5	10	0	50	0	0	0	0
43WWPE2#18	11304	Waste Water	2587	5	10	0	50	0	0	0	0
43WWPE2#19	11304	Waste Water	2592	10	10	0	50	0	0	0	0
43WWPE2#2	11304	Waste Water	2563	5	10	0	20	0	0	0	0
43WWPE2#20	11304	Waste Water	2593	5	10	0	50	0	0	0	0
43WWPE2#21	11304	Waste Water	2464	5	10	0	50	0	0	0	0
43WWPE2#22	11304	Waste Water	2465	10	10	0	50	0	0	0	0
43WWPE2#23	11304	Waste Water	2466	5	10	0	20	0	0	0	0
43WWPE2#24	11304	Waste Water	2467	0	0	0	20	0	0	0	0
43WWPE2#25	11304	Waste Water	2472	5	10	0	50	0	0	0	0
43WWPE2#26	11304	Waste Water	2473	5	10	0	20	0	0	0	0
43WWPE2#27	11304	Waste Water	2474	0	0	80	20	0	0	0	80
43WWPE2#28	11304	Waste Water	2475	5	10	0	50	0	0	0	0
43WWPE2#29	11304	Waste Water	2476	0	0	0	20	0	0	0	0
43WWPE2#3	11304	Waste Water	2568	0	10	0	50	0	0	0	0
43WWPE2#30	11304	Waste Water	2477	10	10	0	50	0	0	0	0
43WWPE2#31	11304	Waste Water	2478	5	0	60	20	0	0	0	20
43WWPE2#32	11304	Waste Water	2479	0	0	0	20	0	0	0	0
43WWPE2#33	11304	Waste Water	2484	20	100	0	100	0	0	0	0
43WWPE2#34	11304	Waste Water	2485	5	10	0	20	0	0	0	0
43WWPE2#35	11304	Waste Water	2486	5	10	0	20	0	0	0	0
43WWPE2#36	11304	Waste Water	2487	5	10	0	20	0	0	0	0
43WWPE2#37	11304	Waste Water	2488	5	10	0	50	0	0	0	0

43WWPE2#38	11304	Waste Water	2489	0	0	0	20	0	0	0	0
43WWPE2#39	11304	Waste Water	2490	0	0	80	50	0	0	0	80
43WWPE2#4	11304	Waste Water	2569	0	10	0	20	0	0	0	0
43WWPE2#40	11304	Waste Water	2491	5	50	0	20	0	0	0	0
43WWPE2#41	11304	Waste Water	2594	0	10	0	20	0	0	0	0
43WWPE2#42	11304	Waste Water	2595	0	10	0	20	0	0	0	0
43WWPE2#43	11304	Waste Water	2596	5	10	0	50	0	0	0	0
43WWPE2#44	11304	Waste Water	2597	5	10	0	20	0	0	0	0
43WWPE2#45	11304	Waste Water	2598	5	10	20	50	0	0	0	0
43WWPE2#46	11304	Waste Water	2599	5	10	0	20	0	0	0	0
43WWPE2#47	11304	Waste Water	2528	5	10	20	50	0	0	0	0
43WWPE2#48	11304	Waste Water	2529	20	25	80	20	0	0	0	80
43WWPE2#49	11304	Waste Water	2530	5	10	0	50	0	0	0	0
43WWPE2#5	11304	Waste Water	2570	5	10	0	20	0	0	0	0
43WWPE2#50	11304	Waste Water	2531	5	10	80	20	0	0	0	80
43WWPE2#6	11304	Waste Water	2571	5	10	0	20	0	0	0	0
43WWPE2#7	11304	Waste Water	2572	5	10	0	50	0	0	0	0
43WWPE2#8	11304	Waste Water	2573	5	10	80	20	0	0	0	80
43WWPE2#9	11304	Waste Water	2574	5	10	0	50	0	0	0	0

## Appendix C. ARA Data for the NW Glaciated Plains

Sample	Collection Date	Source	Isolate Number	Antibiotics in ug/L							
				AMX	CEP	CHL	ERY	GEN	MOX	OFL	TET
42BCBA1#1	120203	Beefcow	1866	5	10	0	50	0	15	0	0
42BCBA1#2	120203	Beefcow	1867	5	10	0	50	0	5	0	0
42BCBA1#3	120203	Beefcow	1868	5	10	0	50	0	5	0	0
42BCBA1#4	120203	Beefcow	1869	10	10	20	20	0	0	0	20
42BCBA1#5	120203	Beefcow	1874	5	10	0	100	0	0	0	0
42BCBB1#1	31303	beefcow	297	5	25	20	50	0	0	0	0
42BCBB1#1	102803	Beefcow	1821	10	25	80	50	0	0	0	80
42BCBB1#2	31303	beefcow	296	5	0	20	50	0	0	0	0
42BCBB1#2	102803	Beefcow	1822	10	25	80	50	0	0	0	80
42BCBB1#3	31303	beefcow	263	5	25	80	50	0	0	0	80
42BCBB1#3	102803	Beefcow	1823	10	25	80	50	0	0	0	80
42BCBB1#4	31303	beefcow	262	5	10	20	50	0	0	0	40
42BCBB1#4	102803	Beefcow	1824	5	25	80	50	0	0	0	80
42BCBB1#5	31303	beefcow	261	5	10	60	50	0	0	0	80
42BCBB1#5	102803	Beefcow	1825	5	25	80	50	0	0	0	80
42BCBB2#1	31303	beefcow	274	5	10	60	50	0	0	0	80
42BCBB2#1	102803	Beefcow	1785	10	25	80	20	0	0	0	80
42BCBB2#2	31303	beefcow	311	5	25	20	50	0	0	0	0
42BCBB2#2	102803	Beefcow	1786	5	25	80	20	0	0	0	80
42BCBB2#3	31303	beefcow	310	5	10	60	50	0	0	0	80
42BCBB2#3	102803	Beefcow	1787	0	0	80	50	0	0	0	80
42BCBB2#4	31303	beefcow	309	5	10	20	50	0	0	0	40
42BCBB2#4	102803	Beefcow	1788	5	25	80	20	0	0	0	80
42BCBB2#5	31303	beefcow	308	5	25	20	50	0	0	0	0
42BCBB2#5	102803	Beefcow	1789	10	25	80	20	0	0	0	80
42BCBC2#1	102803	Beefcow	1833	10	25	0	50	0	0	0	0
42BCBC2#2	102803	Beefcow	1834	5	10	80	50	0	0	0	80
42BCBC2#3	102803	Beefcow	1835	5	10	80	50	0	0	0	80
42BCBC2#4	102803	Beefcow	1836	10	25	0	50	0	0	0	0
42BCBC2#5	102803	Beefcow	1837	10	50	0	50	0	0	0	0
42BCBCM1#1	31303	beefcow	301	5	10	20	50	0	0	0	0
42BCBCM1#2	31303	beefcow	320	0	0	20	50	0	0	0	0
42BCBCM1#3	31303	beefcow	321	5	10	20	50	0	0	0	0
42BCBCM1#3	40103	beefcow	509	20	25	80	100	0	0	0	80
42BCBCM1#4	31303	beefcow	322	5	10	20	50	0	0	0	0
42BCBCM1#4	40103	beefcow	508	15	25	40	100	0	0	0	80
42BCBCM1#5	31303	beefcow	323	5	10	40	20	0	0	0	20
42BCBCM2#1	31303	beefcow	285	5	10	20	50	0	0	0	0
42BCBCM2#2	31303	beefcow	284	5	10	0	20	0	0	0	0
42BCBCM2#3	31303	beefcow	277	0	10	20	50	0	0	0	0
42BCBCM2#4	31303	beefcow	276	0	10	20	50	0	0	0	0
42BCBCM2#5	31303	beefcow	300	5	10	20	50	0	0	0	0
42BCBD1#1	120203	Beefcow	1990	5	10	0	50	0	15	0	0
42BCBD1#2	120203	Beefcow	1991	5	10	0	50	0	5	0	0
42BCBD1#3	120203	Beefcow	1992	5	10	0	50	0	0	0	0
42BCBD1#4	120203	Beefcow	1993	5	10	0	50	0	5	0	0
42BCBD1#5	120203	Beefcow	1994	5	10	0	50	0	0	0	0
42BCBJ1#1	60303	beefcow	907	0	10	20	50	0	0	0	0
42BCBJ1#2	60303	beefcow	908	5	10	20	50	0	0	0	0
42BCBJ1#3	60303	beefcow	909	0	10	20	50	0	0	0	0
42BCBJ1#4	60303	beefcow	910	5	25	20	100	0	0	0	0
42BCBJ1#5	60303	beefcow	911	5	10	20	50	0	0	0	0

42BCBMC1#1	120203	Beefcow	1880	5	10	0	50	0	5	0	0
42BCBMC1#2	120203	Beefcow	1881	5	10	0	50	0	10	0	0
42BCBMC1#3	120203	Beefcow	1886	5	10	20	100	0	0	0	0
42BCBMC1#4	120203	Beefcow	1887	5	10	0	50	0	0	0	40
42BCBMC1#5	120203	Beefcow	1888	5	10	0	50	0	0	0	0
42BCBMC2#1	11304	Beefcow	2268	10	25	0	20	0	0	0	0
42BCBMC2#2	11304	Beefcow	2269	5	10	20	50	0	0	0	0
42BCBMC2#3	11304	Beefcow	2270	5	10	20	20	0	0	0	0
42BCBMC2#4	11304	Beefcow	2327	5	10	20	20	0	0	0	0
42BCBMC2#5	11304	Beefcow	2328	20	10	20	20	0	0	0	0
42BCBW1#1	120203	Beefcow	2063	5	10	0	50	0	0	0	0
42BCBW1#2	120203	Beefcow	2064	5	10	0	50	0	0	0	0
42BCBW1#3	120203	Beefcow	2065	5	10	0	50	0	0	0	0
42BCBW1#4	120203	Beefcow	2066	5	10	0	50	0	0	0	0
42BCBW1#5	120203	Beefcow	2075	5	10	0	50	0	0	0	0
42CCH1#1	80503	Cat	1377	0	10	0	20	0	0	0	0
42CCH1#2	80503	Cat	1378	0	10	0	20	0	0	0	0
42CCH1#3	80503	Cat	1379	5	10	0	20	0	0	0	0
42CCH1#4	80503	Cat	1380	5	10	20	50	0	0	0	20
42CCH1#5	80503	Cat	1381	5	10	20	50	0	0	0	20
42CCH10#1	11304	cat	2367	10	25	20	20	0	0	0	0
42CCH10#2	11304	cat	2368	5	10	0	20	0	0	0	0
42CCH10#3	11304	cat	2369	5	10	0	20	0	0	0	0
42CCH10#4	11304	cat	2370	20	25	0	20	0	0	0	0
42CCH10#5	11304	cat	2371	5	10	0	20	0	0	0	0
42CCH11#1	11304	cat	3083	5	0	20	50	0	0	0	0
42CCH11#2	11304	cat	3084	5	10	20	50	0	0	0	0
42CCH11#3	11304	cat	3085	5	10	20	50	0	0	0	0
42CCH11#4	11304	cat	3086	5	10	20	50	0	0	0	0
42CCH11#5	11304	cat	3087	5	10	20	50	0	0	0	0
42CCH12#1	11304	cat	2906	5	25	0	20	0	0	0	0
42CCH12#2	11304	cat	2907	10	25	0	20	0	0	0	0
42CCH12#3	11304	cat	2908	10	10	0	20	0	0	0	0
42CCH12#4	11304	cat	2909	5	0	0	20	0	0	0	0
42CCH12#5	11304	cat	2910	5	10	0	20	0	0	0	0
42CCH13#1	11304	cat	2915	5	10	0	20	0	0	0	0
42CCH13#2	11304	cat	2916	5	25	0	20	0	0	0	0
42CCH13#3	11304	cat	2917	5	25	0	20	0	0	0	0
42CCH13#4	11304	cat	2918	15	25	60	20	0	0	0	80
42CCH13#5	11304	cat	2919	5	10	0	20	0	0	0	0
42CCH15#1	11304	cat	2201	5	25	20	20	0	0	0	0
42CCH15#2	11304	cat	2202	5	10	20	20	0	0	0	0
42CCH15#3	11304	cat	2203	5	10	20	50	0	0	0	0
42CCH15#4	11304	cat	2204	10	10	20	50	0	0	0	0
42CCH15#5	11304	cat	2205	5	10	20	20	0	0	0	0
42CCH16#1	11304	cat	2252	5	10	20	20	0	0	0	0
42CCH16#2	11304	cat	2253	10	10	20	20	0	0	0	0
42CCH16#3	11304	cat	2254	5	10	20	20	0	0	0	0
42CCH16#4	11304	cat	2259	10	10	20	20	0	0	0	0
42CCH16#5	11304	cat	2260	10	10	20	20	0	0	0	0
42CCH17#1	11304	cat	2224	10	25	80	50	0	0	0	40
42CCH17#2	11304	cat	2225	10	25	80	50	0	0	0	40
42CCH17#3	11304	cat	2226	10	25	80	50	0	0	0	40
42CCH17#4	11304	cat	2227	10	25	80	50	0	0	0	40
42CCH17#5	11304	cat	2228	10	25	80	50	0	0	0	40
42CCH18#1	11304	cat	2238	5	10	0	20	0	0	0	0
42CCH18#2	11304	cat	2239	5	10	20	20	0	0	0	0

42CCH18#3	11304	cat	2240	5	10	20	20	0	0	0	0
42CCH18#4	11304	cat	2241	5	10	0	20	0	0	0	0
42CCH18#5	11304	cat	2242	5	10	20	20	0	0	0	0
42CCH19#1	11304	cat	2247	10	25	20	20	0	0	0	0
42CCH19#2	11304	cat	2248	5	10	0	20	0	0	0	0
42CCH19#3	11304	cat	2249	10	25	20	20	0	0	0	0
42CCH19#4	11304	cat	2250	5	10	20	20	0	0	0	0
42CCH19#5	11304	cat	2251	10	10	20	20	0	0	0	0
42CCH2#1	80503	Cat	1346	0	10	0	20	0	0	0	0
42CCH2#2	80503	Cat	1358	0	10	0	20	0	0	0	0
42CCH2#3	80503	Cat	1370	0	10	0	20	0	0	0	0
42CCH2#4	80503	Cat	1382	0	10	0	20	0	0	0	0
42CCH2#5	80503	Cat	1392	0	10	0	20	0	0	0	0
42CCH20#1	11304	cat	2576	20	25	0	20	0	0	0	0
42CCH20#2	11304	cat	2577	0	10	0	20	0	0	0	0
42CCH20#3	11304	cat	2578	20	10	0	20	0	0	0	0
42CCH20#4	11304	cat	2579	20	10	0	20	0	0	0	0
42CCH20#5	11304	cat	2588	20	25	0	20	0	0	0	0
42CCH22#1	11304	cat	2769	5	10	0	20	0	0	0	0
42CCH22#2	11304	cat	2770	5	10	0	20	0	0	0	0
42CCH22#3	11304	cat	2771	0	10	0	20	0	0	0	0
42CCH22#4	11304	cat	2828	5	10	0	20	0	0	0	0
42CCH22#5	11304	cat	2829	5	10	0	20	0	0	0	0
42CCH3#1	80503	Cat	1335	5	10	0	20	0	0	0	0
42CCH3#2	80503	Cat	1336	0	10	0	50	0	0	0	0
42CCH3#3	80503	Cat	1337	0	10	0	50	0	0	0	0
42CCH3#4	80503	Cat	1338	0	10	0	50	0	0	0	0
42CCH3#5	80503	Cat	1339	0	10	0	50	0	0	0	0
42CCH4#1	80503	Cat	1373	0	10	0	20	0	0	0	0
42CCH4#2	80503	Cat	1374	0	10	0	20	0	0	0	0
42CCH4#3	80503	Cat	1375	0	10	0	20	0	0	0	0
42CCH4#4	80503	Cat	1376	0	10	0	20	0	0	0	0
42CCH4#5	80503	Cat	1385	0	10	0	20	0	0	0	0
42CCH5#1	80503	Cat	1403	5	10	0	50	0	0	0	0
42CCH5#2	80503	Cat	1404	5	10	40	50	60	0	0	80
42CCH5#3	80503	Cat	1405	5	10	0	50	0	0	0	0
42CCH5#4	80503	Cat	1406	5	10	80	50	0	0	0	80
42CCH5#5	80503	Cat	1407	5	10	0	50	0	0	0	0
42CCH6#1	80503	Cat	1353	5	10	0	20	0	0	0	0
42CCH6#2	80503	Cat	1354	5	10	20	50	0	0	0	20
42CCH6#3	80503	Cat	1355	5	10	20	50	0	0	0	20
42CCH6#4	80503	Cat	1356	5	10	20	50	0	0	0	0
42CCH6#5	80503	Cat	1357	5	10	0	50	0	0	0	0
42CCH7#1	11304	cat	2353	5	10	0	20	0	0	0	0
42CCH7#2	11304	cat	2354	10	10	20	20	0	0	0	0
42CCH7#3	11304	cat	2355	10	10	20	20	0	0	0	0
42CCH7#4	11304	cat	2356	5	10	0	20	0	0	0	0
42CCH7#5	11304	cat	2357	10	25	20	20	0	0	0	0
42CCH8#1	11304	cat	2358	5	10	20	20	0	0	0	0
42CCH8#2	11304	cat	2359	5	25	20	50	0	0	0	0
42CCH8#3	11304	cat	2360	5	25	0	20	0	0	0	0
42CCH8#4	11304	cat	2365	5	10	0	20	0	0	0	0
42CCH8#5	11304	cat	2366	5	10	0	20	0	0	0	0
42CCH9#1	11304	cat	2874	5	10	0	20	0	0	0	0
42CCH9#2	11304	cat	2879	5	10	0	20	0	0	0	0
42CCH9#3	11304	cat	2880	5	10	0	20	0	0	0	0
42CCH9#4	11304	cat	2881	0	10	0	20	0	0	0	0

42CCH9#5	11304	cat	2882	5	10	0	20	0	0	0	0
42ChChB1#1	31303	Chicken	260	20	100	80	50	0	0	0	80
42ChChB1#2	31303	Chicken	249	20	100	80	50	0	0	0	80
42ChChB1#3	31303	Chicken	368	20	100	80	50	0	0	0	80
42ChChB1#4	31303	Chicken	367	20	100	80	50	0	0	0	80
42ChChB1#5	31303	Chicken	273	20	100	80	50	0	0	0	80
42ChChB2#1	31303	Chicken	272	5	25	80	50	0	0	0	80
42ChChB2#2	31303	Chicken	265	5	10	80	50	0	0	0	80
42ChChB2#3	31303	Chicken	264	5	10	80	50	0	0	0	80
42ChChB2#4	31303	Chicken	254	5	10	80	50	0	0	0	80
42ChChB2#5	31303	Chicken	253	5	25	80	50	0	0	0	80
42ChChJ1#1	60303	Chicken	894	5	10	0	20	0	0	0	0
42ChChJ1#2	60303	Chicken	905	5	25	0	20	0	0	0	0
42ChChJ1#3	60303	Chicken	906	5	25	0	20	0	0	0	0
42ChChJ1#4	60303	Chicken	917	5	25	0	50	0	0	0	0
42ChChJ1#5	60303	Chicken	919	5	25	0	0	0	0	0	0
42ChChJ2#3	60303	Chicken	881	0	0	0	20	0	0	0	0
42ChChJ2#4	60303	Chicken	882	0	0	0	20	0	0	0	0
42ChChJ2#5	60303	Chicken	893	5	10	80	50	0	0	0	80
42DCDB1#1	31303	dairycow	289	10	10	20	50	0	0	0	0
42DCDB1#2	31303	dairycow	288	5	10	20	50	0	0	0	0
42DCDB1#3	31303	dairycow	287	5	10	20	50	0	0	0	0
42DCDB1#4	31303	dairycow	286	5	0	20	50	0	0	0	0
42DCDB1#5	31303	dairycow	275	5	10	20	50	0	0	0	0
42DCDB2#1	31303	dairycow	358	5	10	0	50	0	0	0	0
42DCDB2#2	31303	dairycow	353	5	10	0	50	0	0	0	0
42DCDB2#3	31303	dairycow	365	5	10	0	50	0	0	0	0
42DCDB2#4	31303	dairycow	252	5	10	0	50	0	0	0	0
42DCDB2#5	31303	dairycow	251	5	10	0	50	0	0	0	0
42DCDG1#1	120203	dairycow	1946	5	10	0	50	0	0	0	0
42DCDG1#2	120203	dairycow	1947	5	10	0	50	0	0	0	0
42DCDG1#3	120203	dairycow	1948	5	25	20	50	0	0	0	0
42DCDG1#4	120203	dairycow	1949	5	10	0	50	0	0	0	0
42DCDG1#5	120203	dairycow	1950	5	10	20	50	0	5	0	0
42DCDG2#1	120203	Dairycow	1934	5	25	0	50	0	0	0	0
42DCDG2#2	120203	dairycow	1935	5	10	0	50	0	0	0	0
42DCDG2#3	120203	dairycow	1936	5	10	0	50	0	5	0	0
42DCDG2#4	120203	dairycow	1937	5	10	0	50	0	5	0	0
42DCDG2#5	120203	dairycow	1938	5	10	0	50	0	0	0	0
42DCDG2#5	120203	Dairycow	2030	5	25	0	50	0	5	0	0
42DCDG3#1	120203	Dairycow	1980	5	10	80	50	0	0	0	80
42DCDG3#2	120203	Dairycow	1981	5	10	0	50	0	0	0	0
42DCDG3#3	120203	Dairycow	1982	5	0	0	50	0	5	0	0
42DCDG3#4	120203	Dairycow	1983	5	10	0	50	0	0	0	0
42DCDG3#5	120203	Dairycow	1984	5	10	0	50	0	0	0	0
42DCDW1#1	102803	dairycow	1804	5	10	0	100	0	0	0	0
42DCDW1#2	102803	dairycow	1805	5	10	0	50	0	0	0	0
42DCDW1#3	102803	dairycow	1806	5	25	0	50	0	0	0	0
42DCDW1#4	102803	dairycow	1807	5	10	0	50	0	0	0	0
42DCDW1#5	102803	dairycow	1808	5	10	0	100	0	0	0	0
42DCDW2#1	11304	Dairycow	2930	20	25	80	20	0	0	0	80
42DCDW2#2	11304	Dairycow	2931	5	10	0	20	0	0	0	0
42DCDW2#3	11304	Dairycow	2932	20	25	80	20	0	0	0	80
42DCDW2#4	11304	Dairycow	2933	5	25	0	20	0	0	0	0
42DCDW2#5	11304	Dairycow	2934	5	10	0	20	0	0	0	0
42DDH1#1	42203	Dog	661	5	10	0	50	0	0	0	0
42DDH1#2	42203	Dog	662	5	10	0	50	0	0	0	0



42DDH1#3	42203	Dog	663	5	10	0	50	0	0	0	0
42DDH1#4	42203	Dog	664	5	10	0	50	0	0	0	0
42DDH1#5	42203	Dog	665	20	10	0	50	0	0	0	0
42DDH10#1	11304	Dog	2814	5	10	0	20	0	0	0	0
42DDH10#2	11304	Dog	2815	5	10	0	20	0	0	0	0
42DDH10#3	11304	Dog	2820	5	10	0	20	0	0	0	0
42DDH10#4	11304	Dog	2821	5	25	20	50	0	0	0	0
42DDH10#5	11304	Dog	2822	5	10	20	20	0	0	0	0
42DDH11#1	11304	Dog	2688	20	10	0	20	0	0	0	0
42DDH11#2	11304	Dog	2689	20	10	0	50	0	0	0	0
42DDH11#3	11304	Dog	2690	5	10	0	20	0	0	0	0
42DDH11#4	11304	Dog	2691	20	10	0	20	0	0	0	0
42DDH11#5	11304	Dog	2692	5	10	0	50	0	0	0	0
42DDH14#1	120203	Dog	2166	5	0	0	50	0	0	0	0
42DDH14#2	120203	Dog	2167	0	10	0	20	0	0	0	0
42DDH14#3	120203	Dog	2168	5	10	0	20	0	0	0	0
42DDH14#4	120203	Dog	2169	0	10	0	20	0	0	0	0
42DDH14#5	120203	Dog	2170	5	0	0	20	0	0	0	0
42DDH15#1	11304	Dog	2276	20	25	0	20	0	0	0	0
42DDH15#1	11304	Dog	2883	0	10	0	20	0	0	0	0
42DDH15#2	11304	Dog	2277	5	10	0	20	0	0	0	0
42DDH15#2	11304	Dog	2884	5	0	0	20	0	0	0	0
42DDH15#3	11304	Dog	2278	5	10	0	20	0	0	0	0
42DDH15#3	11304	Dog	2885	0	0	0	20	0	0	0	0
42DDH15#4	11304	Dog	2283	5	10	0	20	0	0	0	0
42DDH15#4	11304	Dog	2886	5	10	0	20	0	0	0	0
42DDH15#5	11304	Dog	2284	5	10	20	50	0	0	0	0
42DDH15#5	11304	Dog	2891	20	10	0	20	0	0	0	0
42DDH16#1	11304	Dog	2229	5	10	0	20	0	0	0	0
42DDH16#2	11304	Dog	2230	5	10	0	20	0	0	0	0
42DDH16#3	11304	Dog	2235	5	10	0	20	0	0	0	0
42DDH16#4	11304	Dog	2236	5	10	20	20	0	0	0	0
42DDH16#5	11304	Dog	2237	5	10	20	20	0	0	0	0
42DDH18#1	11304	Dog	2271	5	10	20	20	0	0	0	0
42DDH18#2	11304	Dog	2272	5	10	20	20	0	0	0	0
42DDH18#3	11304	Dog	2273	5	10	20	50	0	0	0	0
42DDH18#4	11304	Dog	2274	5	10	20	50	0	0	0	0
42DDH18#5	11304	Dog	2275	5	10	0	50	0	0	0	0
42DDH19#1	11304	Dog	2215	20	10	20	20	0	0	0	0
42DDH19#2	11304	Dog	2216	0	10	20	20	0	0	0	0
42DDH19#3	11304	Dog	2217	20	10	0	20	0	0	0	0
42DDH19#4	11304	Dog	2218	20	10	20	20	0	0	0	0
42DDH19#5	11304	Dog	2223	20	10	0	20	0	0	0	0
42DDH2#1	42203	Dog	656	5	10	0	50	0	0	0	0
42DDH2#2	42203	Dog	666	5	10	0	20	0	0	0	0
42DDH2#3	42203	Dog	667	5	10	0	20	0	0	0	0
42DDH2#4	42203	Dog	668	5	10	0	50	0	0	0	0
42DDH2#5	42203	Dog	678	0	0	0	20	0	0	0	0
42DDH20#1	11304	Dog	2313	20	25	0	20	0	0	0	0
42DDH20#2	11304	Dog	2314	20	25	0	20	0	0	0	0
42DDH20#3	11304	Dog	2319	20	10	0	20	0	0	0	0
42DDH20#4	11304	Dog	2320	20	10	0	20	0	0	0	0
42DDH20#5	11304	Dog	2321	20	10	0	20	0	0	0	0
42DDH21#1	11304	Dog	2285	5	10	20	20	0	0	0	0
42DDH21#2	11304	Dog	2286	5	10	20	50	0	0	0	0
42DDH21#3	11304	Dog	2287	10	10	20	50	0	0	0	0
42DDH21#4	11304	Dog	2288	5	10	20	20	0	0	0	0

42DDH21#5	11304	Dog	2289	5	10	0	20	0	0	0	0
42DDH22#1	11304	Dog	2322	5	10	20	20	0	0	0	0
42DDH22#2	11304	Dog	2323	5	10	20	20	0	0	0	0
42DDH22#3	11304	Dog	2324	5	10	20	50	0	0	0	0
42DDH22#4	11304	Dog	2325	5	10	20	20	0	0	0	0
42DDH22#5	11304	Dog	2326	5	10	20	20	0	0	0	0
42DDH3#1	80503	Dog	1327	0	10	0	50	0	0	0	0
42DDH3#2	80503	Dog	1328	5	10	0	50	0	0	0	0
42DDH3#3	80503	Dog	1329	0	25	0	50	0	0	0	0
42DDH3#4	80503	Dog	1330	0	10	0	50	0	0	0	0
42DDH3#5	80503	Dog	1331	5	10	0	50	0	0	0	0
42DDH4#1	80503	Dog	1395	5	10	0	50	0	0	0	0
42DDH4#2	80503	Dog	1396	5	10	0	50	0	0	0	0
42DDH4#3	80503	Dog	1397	5	10	0	50	0	0	0	0
42DDH4#4	80503	Dog	1398	5	10	0	50	0	0	0	0
42DDH4#5	80503	Dog	1399	5	10	0	50	0	0	0	0
42DDH5#1	80503	Dog	1365	5	10	0	20	0	0	0	0
42DDH5#2	80503	Dog	1366	5	10	0	50	0	0	0	0
42DDH5#3	80503	Dog	1367	0	10	0	20	0	0	0	0
42DDH5#4	80503	Dog	1368	0	10	0	20	0	0	0	0
42DDH5#5	80503	Dog	1369	0	10	0	20	0	0	0	0
42DDH6#1	80503	Dog	1306	0	10	0	50	0	0	0	0
42DDH6#2	80503	Dog	1307	0	10	0	50	0	0	0	0
42DDH6#3	80503	Dog	1308	0	10	0	50	0	0	0	0
42DDH6#4	80503	Dog	1309	0	10	0	50	0	0	0	0
42DDH6#5	80503	Dog	1310	5	10	0	50	0	0	0	0
42DDH7#1	80503	Dog	1311	0	10	0	20	0	0	0	0
42DDH7#2	80503	Dog	1312	5	10	0	50	0	0	0	0
42DDH7#3	80503	Dog	1313	0	10	0	50	0	0	0	0
42DDH7#4	80503	Dog	1314	0	10	0	20	0	0	0	0
42DDH7#5	80503	Dog	1315	0	10	0	20	0	0	0	0
42DDH8#1	80503	Dog	1349	5	10	0	50	0	0	0	0
42DDH8#2	80503	Dog	1350	5	10	0	50	0	0	0	0
42DDH8#3	80503	Dog	1351	5	10	0	50	0	0	0	0
42DDH8#4	80503	Dog	1352	5	10	0	20	0	0	0	0
42DDH8#5	80503	Dog	1361	5	10	0	50	0	0	0	0
42DDH9#1	120203	Dog	2143	0	0	0	20	0	0	0	0
42DDH9#2	120203	Dog	2144	0	0	0	50	0	0	0	0
42DDH9#3	120203	Dog	2145	15	10	0	50	0	0	0	0
42DDH9#4	120203	Dog	2146	0	0	0	20	0	0	0	0
42DDH9#5	120203	Dog	2151	0	10	0	20	0	0	0	0
42PP1#1	120203	Pig	2157	0	10	80	50	0	0	0	80
42PP1#2	120203	Pig	2158	0	10	80	50	0	0	0	80
42PP1#3	120203	Pig	2163	0	10	80	50	0	0	0	80
42PP1#4	120203	Pig	2164	0	10	80	50	0	0	0	80
42PP1#5	120203	Pig	2165	0	0	80	20	0	0	0	80
42PPA1#1	31303	Pig	317	0	10	80	50	0	0	0	80
42PPA1#2	31303	Pig	316	20	10	80	50	0	0	0	80
42PPA1#3	31303	Pig	315	20	50	80	50	0	0	0	80
42PPA1#4	31303	Pig	314	5	10	60	20	0	0	0	80
42PPA1#5	31303	Pig	307	0	10	80	50	0	0	0	80
42PPA2#1	31303	Pig	278	20	10	80	50	0	0	0	80
42PPA2#2	31303	Pig	291	0	25	80	20	0	0	0	80
42PPA2#3	31303	Pig	292	20	10	80	20	0	0	0	80
42PPA2#4	31303	Pig	293	20	10	80	50	0	0	0	80
42PPA2#5	31303	Pig	294	20	10	80	50	0	0	0	80
42PPB1#1	31303	Pig	349	5	25	0	50	0	0	0	0

42PPB1#1	71503	Pig	1234	0	0	80	20	0	0	0	80
42PPB1#2	31303	Pig	344	5	10	80	50	0	0	0	80
42PPB1#2	71503	Pig	1243	20	10	80	50	0	0	0	80
42PPB1#3	31303	Pig	343	20	10	80	50	0	0	0	80
42PPB1#3	71503	Pig	1244	0	0	80	50	0	0	0	80
42PPB1#4	31303	Pig	342	0	0	0	50	0	0	0	0
42PPB1#4	71503	Pig	1245	0	0	80	50	0	0	0	80
42PPB1#5	31303	Pig	341	5	10	20	50	0	0	0	0
42PPB1#5	71503	Pig	1246	0	0	80	50	0	0	0	80
42PPB2#1	31303	Pig	352	5	10	80	50	0	0	0	80
42PPB2#1	62403	Pig	940	0	0	80	20	0	0	0	80
42PPB2#2	31303	Pig	366	0	10	0	50	0	0	0	0
42PPB2#2	62403	Pig	941	5	10	80	50	60	0	0	80
42PPB2#3	31303	Pig	360	0	0	80	50	0	0	0	80
42PPB2#3	62403	Pig	942	5	10	80	50	40	0	0	80
42PPB2#4	31303	Pig	359	0	10	0	50	0	0	0	0
42PPB2#4	62403	Pig	943	0	0	80	20	0	0	0	80
42PPB2#5	31303	Pig	351	0	0	0	50	0	0	0	0
42PPB2#5	62403	Pig	944	5	10	80	50	60	0	0	80
42PPCM1#1	31303	Pig	337	20	10	80	200	0	0	0	80
42PPCM1#2	31303	Pig	255	20	10	80	50	0	0	0	80
42PPCM1#3	31303	Pig	256	20	10	80	200	0	0	0	80
42PPCM1#4	31303	Pig	269	20	25	80	50	0	0	0	80
42PPCM1#5	31303	Pig	270	20	10	80	200	0	0	0	80
42PPCM2#1	31303	Pig	302	20	10	80	200	0	0	0	80
42PPCM2#2	31303	Pig	303	20	25	80	50	0	0	0	80
42PPCM2#3	31303	Pig	304	20	0	80	50	0	0	0	80
42PPCM2#4	31303	Pig	305	5	10	80	50	0	0	0	80
42PPCM2#5	31303	Pig	306	20	10	80	50	0	0	0	80
42PPD1#1	31303	Pig	325	0	0	80	20	20	0	0	80
42PPD1#2	31303	Pig	354	0	10	80	50	0	0	0	80
42PPD1#3	31303	Pig	336	0	0	80	20	0	0	0	80
42PPD1#4	31303	Pig	271	0	10	60	50	0	0	0	80
42PPD1#5	31303	Pig	350	0	10	60	50	0	0	0	80
42PPD2#1	31303	Pig	361	20	10	80	50	0	0	0	80
42PPD2#2	31303	Pig	362	20	10	20	20	0	0	0	80
42PPD2#3	31303	Pig	332	20	10	60	20	0	0	0	80
42PPD2#4	31303	Pig	333	20	10	60	20	0	0	0	80
42PPD2#5	31303	Pig	324	20	10	60	20	0	0	0	80
42PPE2#1	40103	Pig	375	15	10	80	50	0	0	0	80
42PPE2#2	40103	Pig	376	20	10	80	50	0	0	0	80
42PPE2#3	40103	Pig	377	5	10	80	50	0	0	0	80
42PPE2#4	40103	Pig	378	20	10	80	50	0	0	0	80
42PPE2#5	40103	Pig	379	10	10	80	200	0	0	0	80
42PPJ1#1	60303	Pig	924	20	10	80	50	0	0	0	80
42PPJ1#2	60303	Pig	925	0	0	80	100	0	0	0	80
42PPJ1#3	60303	Pig	926	0	0	80	100	0	0	0	80
42PPJ1#4	60303	Pig	927	0	10	80	20	0	0	0	80
42PPJ1#5	60303	Pig	928	20	25	80	20	0	0	0	80
42PPJ3#1	11304	Pig	2850	20	10	80	50	0	0	0	80
42PPJ3#2	11304	Pig	2780	20	10	80	50	0	0	0	80
42PPJ3#3	11304	Pig	2781	20	10	80	50	0	0	0	80
42PPJ3#4	11304	Pig	2782	20	10	80	20	0	0	0	80
42PPJ3#5	11304	Pig	2783	20	10	80	50	0	0	0	80
42PPMC1#1	11304	Pig	2836	5	10	20	50	0	0	0	0
42PPMC1#2	11304	Pig	2837	0	0	0	20	0	0	0	0
42PPMC1#3	11304	Pig	2838	5	25	0	50	0	0	0	0

42PPMC1#4	11304	Pig	2843	0	0	0	20	0	0	0	0
42PPMC1#5	11304	Pig	2844	5	25	0	50	0	0	0	0
42PPP2#1	120203	Pig	2025	10	10	80	50	0	5	0	80
42PPP2#2	120203	Pig	2026	20	25	80	50	0	5	0	80
42PPP2#3	120203	Pig	2027	20	10	80	50	0	5	0	80
42PPP2#4	120203	Pig	2028	20	10	80	50	0	5	0	80
42PPP2#5	120203	Pig	2029	20	10	80	50	0	15	0	80
42PPS1#1	120203	Pig	2020	20	10	80	50	0	0	0	80
42PPS1#2	120203	Pig	2021	20	25	80	100	0	0	0	80
42PPS1#3	120203	Pig	2022	20	0	80	50	0	0	0	80
42PPS1#4	120203	Pig	2023	5	10	0	50	0	5	0	0
42PPS1#5	120203	Pig	2024	20	25	80	50	0	5	0	80
42PPW1#1	102803	Pig	1768	15	25	0	50	0	20	0	0
42PPW1#2	102803	Pig	1769	10	25	0	50	0	0	0	0
42PPW1#3	102803	Pig	1770	5	10	80	50	0	0	0	80
42PPW1#4	102803	Pig	1771	0	10	80	50	0	0	0	80
42PPW1#5	102803	Pig	1772	5	10	20	50	0	0	0	0
42PPW2#1	102803	Pig	1797	20	10	80	100	0	0	0	80
42PPW2#2	102803	Pig	1798	20	25	80	100	0	0	0	80
42PPW2#3	102803	Pig	1799	20	25	80	50	0	0	0	80
42PPW2#4	102803	Pig	1800	5	10	80	50	0	0	0	80
42PPW2#5	102803	Pig	1801	5	10	20	50	0	0	0	40
42SSA1#1	11304	Sheep	2831	0	10	80	20	0	0	0	80
42SSA1#2	11304	Sheep	2832	0	10	80	20	0	0	0	80
42SSA1#3	11304	Sheep	2833	5	10	80	20	0	0	0	80
42SSA1#4	11304	Sheep	2834	0	10	80	0	0	0	0	80
42SSA1#5	11304	Sheep	2835	0	10	80	20	0	0	0	80
42SSB1#2	30304	Sheep	2790	20	25	80	50	0	0	0	80
42SSB2#1	120203	Sheep	2010	5	10	80	50	0	0	0	80
42SSB2#2	120203	Sheep	2011	20	10	80	50	0	0	0	80
42SSB2#3	120203	Sheep	2012	10	10	80	50	0	0	0	80
42SSB2#4	120203	Sheep	2013	5	10	80	50	0	0	0	80
42SSB2#5	120203	Sheep	2014	5	10	80	50	0	0	0	80
42SSB3#1	120203	Sheep	2135	5	0	60	20	0	0	0	80
42SSB3#2	120203	Sheep	2136	10	10	80	50	0	0	0	80
42SSB3#3	120203	Sheep	2137	20	10	80	50	0	0	0	80
42SSB3#4	120203	Sheep	2138	0	10	60	50	0	0	0	80
42SSB3#5	120203	Sheep	2147	10	10	80	50	0	0	0	80
42SSC1#1	120203	Sheep	2109	0	0	80	50	0	0	0	80
42SSC1#2	120203	Sheep	2110	5	10	80	50	0	0	0	80
42SSC1#3	120203	Sheep	2111	5	10	40	50	0	0	0	80
42SSC1#4	120203	Sheep	2112	5	10	80	50	0	0	0	80
42SSC1#5	120203	Sheep	2113	5	25	80	50	0	0	0	80
42SSC2#1	102803	Sheep	1773	5	25	0	50	0	0	0	0
42SSC2#2	102803	Sheep	1774	10	10	0	50	0	0	0	0
42SSC2#3	102803	Sheep	1775	5	25	0	50	0	0	0	20
42SSC2#4	102803	Sheep	1776	5	10	0	50	0	0	0	20
42SSC2#5	102803	Sheep	1777	5	10	0	50	0	0	0	0
42SSC4#1	102803	Sheep	1803	20	10	80	50	0	0	0	80
42SSC4#2	102803	Sheep	1814	10	10	80	50	0	0	0	80
42SSC4#3	102803	Sheep	1815	20	10	80	50	0	0	0	80
42SSC4#4	102803	Sheep	1826	5	25	0	50	0	0	0	0
42SSC4#5	102803	Sheep	1827	5	10	0	50	0	0	0	0
42SSCM1#1	120203	Sheep	1951	0	0	80	50	0	10	0	80
42SSCM1#2	120203	Sheep	1952	5	0	0	50	0	10	0	0
42SSCM1#3	120203	Sheep	1953	0	0	80	50	0	5	0	80
42SSCM1#4	120203	Sheep	1954	5	10	40	50	0	5	0	80

42SSCM1#5	120203	Sheep	1955	5	10	0	50	0	0	0	0
42SSCM2#1	120203	Sheep	1985	0	0	80	50	0	5	0	80
42SSCM2#2	120203	Sheep	1986	0	0	80	50	0	0	0	80
42SSCM2#3	120203	Sheep	1987	5	0	80	50	0	5	0	80
42SSCM2#4	120203	Sheep	1988	5	0	80	50	0	0	0	80
42SSCM2#5	120203	Sheep	1989	0	0	80	50	0	0	0	80
42SSH1#1	120203	Sheep	2115	20	10	60	50	0	0	0	80
42SSH1#2	120203	Sheep	2116	5	10	0	50	0	0	0	0
42SSH1#3	120203	Sheep	2117	5	0	0	50	0	0	0	0
42SSH1#4	120203	Sheep	2118	20	10	40	50	0	0	0	60
42SSH1#5	120203	Sheep	2119	0	10	0	20	0	0	0	0
42SSH2#1	120203	Sheep	2114	20	100	80	50	0	0	0	80
42SSH2#2	120203	Sheep	2051	5	10	0	50	0	5	0	0
42SSH2#3	120203	Sheep	2052	0	0	0	20	0	0	0	0
42SSH2#4	120203	Sheep	2053	5	10	0	20	0	0	0	0
42SSH2#5	120203	Sheep	2054	5	0	0	50	0	0	0	0
42SSH3#1	120203	Sheep	2015	5	10	0	50	0	5	0	0
42SSH3#2	120203	Sheep	2016	5	10	0	50	0	20	0	0
42SSH3#3	120203	Sheep	2017	5	10	0	50	0	0	0	0
42SSH3#4	120203	Sheep	2018	20	100	80	50	0	5	0	80
42SSH3#5	120203	Sheep	2019	5	10	0	20	0	0	0	0
42SSHY2#1	120203	Sheep	2076	5	10	20	50	0	0	0	20
42SSHY2#2	120203	Sheep	2077	5	10	20	50	0	0	0	20
42SSHY2#3	120203	Sheep	2078	5	10	20	50	0	0	0	20
42SSHY2#4	120203	Sheep	2087	5	10	20	50	0	0	0	20
42SSHY2#5	120203	Sheep	2088	5	10	20	50	0	0	0	20
42SSHY3#1	120203	Sheep	2176	5	10	0	20	0	0	0	0
42SSHY3#2	120203	Sheep	2177	0	10	0	50	0	0	0	0
42SSHY3#3	120203	Sheep	2178	0	10	0	50	0	0	0	0
42SSHY3#4	120203	Sheep	2179	5	0	0	20	0	0	0	0
42SSHY3#5	120203	Sheep	2180	0	0	0	20	0	0	0	0
42SSJ1#1	120203	Sheep	1945	5	0	0	50	0	0	0	0
42SSJ1#2	120203	Sheep	1956	5	10	0	50	0	0	0	0
42SSJ1#3	120203	Sheep	1957	5	10	60	20	0	0	0	80
42SSJ1#4	120203	Sheep	1968	5	0	0	50	0	0	0	0
42SSJ1#5	120203	Sheep	1969	0	0	0	20	0	0	0	0
42SSJ2#1	120203	Sheep	2000	0	10	60	0	0	5	0	0
42SSJ2#2	120203	Sheep	2001	5	10	80	50	0	5	0	80
42SSJ2#3	120203	Sheep	2002	5	10	80	50	0	5	0	80
42SSJ2#4	120203	Sheep	2003	5	10	80	20	0	5	0	80
42SSJ2#5	120203	Sheep	2004	5	10	0	20	0	0	0	0
42SSMC1#1	120203	Sheep	1939	0	0	80	50	0	0	0	80
42SSMC1#2	120203	Sheep	1940	0	0	80	50	0	10	0	80
42SSMC1#3	120203	Sheep	1941	10	10	0	50	0	10	0	0
42SSMC1#4	120203	Sheep	1942	10	10	0	50	0	0	0	0
42SSMC1#5	120203	Sheep	1943	5	10	60	20	0	0	0	80
42SSMC2#1	120203	Sheep	1875	0	10	80	50	0	0	0	80
42SSMC2#2	120203	Sheep	1876	5	10	0	50	0	5	0	40
42SSMC2#3	120203	Sheep	1877	0	10	80	50	0	5	0	80
42SSMC2#4	120203	Sheep	1878	5	10	80	50	0	5	0	80
42SSMC2#5	120203	Sheep	1879	5	10	0	50	0	10	0	0
42SSW1#1	102803	Sheep	1792	5	10	80	50	0	0	0	80
42SSW1#2	102803	Sheep	1793	5	25	80	50	0	0	0	80
42SSW1#3	102803	Sheep	1794	10	50	20	100	0	0	0	40
42SSW1#4	102803	Sheep	1795	5	25	80	50	0	0	0	80
42SSW1#5	102803	Sheep	1796	10	25	20	50	0	0	0	0
42SSW2#1	102803	Sheep	1780	5	25	80	20	0	0	0	80

42SSW2#2	102803	Sheep	1781	0	0	80	50	0	0	0	80
42SSW2#3	102803	Sheep	1782	5	10	0	50	0	0	0	0
42SSW2#4	102803	Sheep	1783	5	10	0	50	0	0	0	0
42SSW2#5	102803	Sheep	1784	10	25	80	50	0	0	0	80
42SSW3#1	102803	Sheep	1816	10	25	0	50	0	0	0	0
42SSW3#2	102803	Sheep	1817	15	25	20	100	0	0	0	0
42SSW3#3	102803	Sheep	1818	10	25	0	50	0	0	0	0
42SSW3#4	102803	Sheep	1819	10	25	0	50	0	0	0	0
42SSW3#5	102803	Sheep	1820	10	25	20	100	0	0	0	0
42TTA1#1	31303	Turkey	357	20	10	40	20	0	0	0	80
42TTA1#2	31303	Turkey	363	5	10	80	50	20	0	0	80
42TTA1#3	31303	Turkey	329	20	25	80	50	0	0	0	80
42TTA1#4	31303	Turkey	338	20	10	60	50	0	0	0	80
42TTA1#5	31303	Turkey	346	20	10	60	50	0	0	0	80
42TTA2#1	31303	Turkey	318	5	10	80	50	60	0	0	80
42TTA2#2	31303	Turkey	290	5	10	80	50	0	0	0	80
42TTA2#3	31303	Turkey	282	20	25	60	20	0	0	0	80
42TTA2#4	31303	Turkey	281	0	10	60	20	0	0	0	80
42TTA2#5	31303	Turkey	268	0	0	80	50	0	0	0	80
42TTA3#1	31303	Turkey	319	0	10	60	20	40	0	0	80
42TTA3#2	31303	Turkey	295	5	10	80	50	40	0	0	80
42TTA3#3	31303	Turkey	283	5	10	80	50	40	0	0	80
42TTA3#4	31303	Turkey	280	5	10	80	50	40	0	0	80
42TTA3#5	31303	Turkey	279	5	10	80	50	0	0	0	80
42TTA4#1	31303	Turkey	348	0	10	80	50	0	0	0	80
42TTA4#2	31303	Turkey	355	5	10	80	50	0	0	0	80
42TTA4#3	31303	Turkey	364	5	10	80	50	0	0	0	80
42TTA4#4	31303	Turkey	330	5	10	80	50	40	0	0	80
42TTA4#5	31303	Turkey	331	0	10	60	50	0	0	0	80
42TTB1#1	62403	Turkey	970	20	25	80	50	80	0	0	80
42TTB1#2	62403	Turkey	971	20	10	80	20	60	0	0	80
42TTB1#3	62403	Turkey	972	20	25	80	50	0	0	0	80
42TTB1#4	62403	Turkey	973	20	25	80	50	80	0	0	80
42TTB1#5	62403	Turkey	974	20	25	80	50	80	0	0	80
42TTB2#1	71503	Turkey	1262	0	0	80	20	0	0	0	80
42TTB2#2	71503	Turkey	1263	0	0	80	50	0	0	0	80
42TTB2#3	71503	Turkey	1264	20	10	80	20	0	0	0	80
42TTB2#4	71503	Turkey	1265	0	0	80	50	0	0	0	80
42TTB2#5	71503	Turkey	1266	0	0	80	50	0	0	0	80
42TTB3#1	62403	Turkey	950	20	0	80	50	0	0	0	80
42TTB3#2	62403	Turkey	951	0	0	80	50	0	0	0	80
42TTB3#3	62403	Turkey	952	0	0	80	50	0	0	0	80
42TTB3#4	62403	Turkey	953	0	0	80	50	0	0	0	80
42TTB3#5	62403	Turkey	954	0	0	80	50	0	0	0	80
42TTCM1#1	31303	Turkey	250	0	0	80	20	60	0	0	80
42TTCM1#2	31303	Turkey	313	20	10	80	50	20	0	0	80
42TTCM1#3	31303	Turkey	312	5	10	80	50	0	0	0	80
42TTCM1#4	31303	Turkey	299	0	10	80	20	80	0	0	80
42TTCM1#5	31303	Turkey	298	0	0	60	20	40	0	0	80
42TTCM2#1	31303	Turkey	326	0	10	60	20	40	0	0	80
42TTCM2#2	31303	Turkey	327	0	10	80	50	0	0	0	80
42TTCM2#3	31303	Turkey	328	0	10	80	20	0	0	0	80
42TTCM2#4	31303	Turkey	339	20	100	80	50	40	0	0	80
42TTCM2#5	31303	Turkey	340	20	10	60	20	0	0	0	80
42TTD1#1	31303	Turkey	257	20	25	80	50	0	0	0	80
42TTD1#2	31303	Turkey	258	5	25	20	50	0	0	0	0
42TTD1#3	31303	Turkey	334	5	10	20	50	0	0	0	0

42TTD1#4	31303	Turkey	335	5	10	80	50	0	0	0	80
42TTD1#5	31303	Turkey	267	20	10	60	50	0	0	0	80
42TTD2#1	31303	Turkey	345	0	10	60	20	40	0	0	80
42TTD2#2	31303	Turkey	356	5	25	80	20	0	0	0	80
42TTD2#3	31303	Turkey	347	0	10	80	50	0	0	0	80
42TTD2#4	31303	Turkey	259	20	25	80	50	20	0	0	80
42TTD2#5	31303	Turkey	266	20	10	60	50	0	0	0	80
42TTE1#1	40103	Turkey	416	20	100	80	50	0	0	0	80
42TTE1#2	40103	Turkey	445	20	10	80	20	0	0	0	80
42TTE1#3	40103	Turkey	446	20	10	80	20	0	0	0	80
42TTE1#4	40103	Turkey	447	20	10	80	50	0	0	0	80
42TTE1#5	40103	Turkey	448	20	10	80	50	0	0	0	80
42TTE2#2	40103	Turkey	567	5	10	80	50	40	0	0	80
42TTE2#3	40103	Turkey	566	5	10	80	50	0	0	0	80
42TTE2#4	40103	Turkey	565	5	10	80	50	40	0	0	80
42TTE2#5	40103	Turkey	564	20	25	80	50	40	0	0	80
42TTE3#1	40103	Turkey	573	0	10	80	50	0	0	0	80
42TTE3#1	40103	Turkey	598	5	10	80	50	0	0	0	80
42TTE3#2	40103	Turkey	599	5	10	80	50	0	0	0	0
42TTE3#3	40103	Turkey	600	5	10	80	50	0	0	0	0
42TTE3#4	40103	Turkey	601	0	0	80	50	0	0	0	0
42TTE3#5	40103	Turkey	602	0	10	80	50	40	0	0	0
42TTE4#1	40103	Turkey	380	20	25	80	20	0	0	0	80
42TTE4#2	40103	Turkey	423	20	10	80	20	0	0	0	80
42TTE4#3	40103	Turkey	424	5	10	80	50	0	0	0	80
42TTE4#4	40103	Turkey	425	5	25	80	100	0	0	0	80
42TTE4#5	40103	Turkey	426	5	25	80	100	0	0	0	80
42TTJ1#1	60303	Turkey	912	0	10	80	20	0	0	0	80
42TTJ1#2	60303	Turkey	913	0	10	80	50	0	0	0	80
42TTJ1#3	60303	Turkey	914	0	10	80	50	0	0	0	80
42TTJ1#4	60303	Turkey	915	0	10	80	50	0	0	0	80
42TTJ1#5	60303	Turkey	916	0	10	80	50	0	0	0	80
42WW1#11	40103	Waste Water	538	20	25	0	100	0	0	0	0
42WW1#12	40103	Waste Water	539	20	50	20	100	0	0	0	0
42WW1#13	40103	Waste Water	540	5	10	20	100	0	0	0	0
42WW1#14	40103	Waste Water	541	5	10	80	100	0	0	0	0
42WW1#15	40103	Waste Water	542	10	25	20	100	0	0	0	0
42WW1#16	40103	Waste Water	543	20	10	20	50	0	0	0	0
42WW1#21	40103	Waste Water	550	5	10	0	50	0	0	0	0
42WW1#22	40103	Waste Water	551	5	10	20	50	0	0	0	0
42WW1#23	40103	Waste Water	552	20	25	20	50	0	0	20	80
42WW1#24	40103	Waste Water	553	5	10	80	50	0	0	0	0
42WW1#25	40103	Waste Water	554	10	10	20	100	0	0	0	0
42WW1#26	40103	Waste Water	555	20	10	20	50	0	0	0	0
42WW1#31	40103	Waste Water	562	5	25	20	50	0	0	0	0
42WW1#32	40103	Waste Water	563	10	10	20	50	20	0	0	0
42WWB1#1	80503	Waste Water	1271	0	10	0	50	0	0	0	0
42WWB1#10	80503	Waste Water	1280	10	25	0	50	0	0	0	0
42WWB1#11	80503	Waste Water	1281	5	10	0	50	0	0	0	0
42WWB1#12	80503	Waste Water	1282	20	25	0	50	0	0	0	0
42WWB1#13	80503	Waste Water	1283	5	10	0	50	0	0	0	0
42WWB1#14	80503	Waste Water	1284	0	0	0	50	0	0	0	0
42WWB1#15	80503	Waste Water	1285	20	100	0	50	0	0	0	0
42WWB1#16	80503	Waste Water	1286	5	10	0	50	0	0	0	0
42WWB1#17	80503	Waste Water	1287	5	10	0	50	0	0	0	0
42WWB1#18	80503	Waste Water	1288	5	10	0	50	0	0	0	0
42WWB1#19	80503	Waste Water	1289	5	10	0	50	0	0	0	0

42WWB1#2	80503	Waste Water	1272	0	10	0	50	0	0	0	0
42WWB1#20	80503	Waste Water	1290	0	10	0	20	0	0	0	0
42WWB1#21	80503	Waste Water	1291	5	10	0	100	0	0	0	0
42WWB1#22	80503	Waste Water	1292	5	10	0	20	0	0	0	0
42WWB1#23	80503	Waste Water	1293	0	10	0	50	0	0	0	0
42WWB1#24	80503	Waste Water	1294	5	10	0	20	0	0	0	0
42WWB1#25	80503	Waste Water	1295	0	10	0	50	0	0	0	0
42WWB1#26	80503	Waste Water	1296	5	10	0	50	0	0	0	0
42WWB1#27	80503	Waste Water	1297	0	10	0	20	0	0	0	0
42WWB1#28	80503	Waste Water	1298	5	10	0	50	0	0	0	0
42WWB1#29	80503	Waste Water	1299	0	0	0	50	0	0	0	0
42WWB1#3	80503	Waste Water	1273	5	10	0	50	0	0	0	0
42WWB1#30	80503	Waste Water	1300	0	10	0	50	0	0	0	0
42WWB1#31	80503	Waste Water	1301	0	10	0	20	0	0	0	0
42WWB1#32	80503	Waste Water	1302	5	10	80	50	0	0	0	80
42WWB1#33	80503	Waste Water	1303	20	25	0	50	0	0	0	0
42WWB1#34	80503	Waste Water	1304	10	10	80	50	0	0	0	80
42WWB1#35	80503	Waste Water	1305	5	10	80	50	0	0	0	80
42WWB1#4	80503	Waste Water	1274	5	10	0	20	0	0	0	0
42WWB1#5	80503	Waste Water	1275	20	25	80	50	0	0	0	80
42WWB1#6	80503	Waste Water	1276	0	10	0	50	0	0	0	0
42WWB1#7	80503	Waste Water	1277	5	10	0	20	0	0	0	0
42WWB1#8	80503	Waste Water	1278	5	10	0	50	0	0	0	0
42WWB1#9	80503	Waste Water	1279	5	10	0	50	0	0	0	0
42WWH1#1	40103	Waste Water	369	5	10	0	20	0	0	0	0
42WWH1#10	40103	Waste Water	420	5	10	20	20	0	0	0	0
42WWH1#11	40103	Waste Water	381	0	10	0	20	0	0	0	0
42WWH1#12	40103	Waste Water	382	5	10	0	50	0	0	0	0
42WWH1#13	40103	Waste Water	383	5	10	20	50	20	0	0	0
42WWH1#14	40103	Waste Water	384	5	10	20	200	0	0	0	0
42WWH1#15	40103	Waste Water	385	5	10	20	50	0	0	0	0
42WWH1#16	40103	Waste Water	386	5	10	20	50	0	0	0	0
42WWH1#17	40103	Waste Water	421	5	10	20	100	0	0	0	0
42WWH1#18	40103	Waste Water	422	5	0	40	50	0	0	0	80
42WWH1#19	40103	Waste Water	429	10	10	80	50	20	0	0	80
42WWH1#2	40103	Waste Water	370	5	10	0	20	0	0	0	0
42WWH1#20	40103	Waste Water	430	20	10	80	50	0	0	0	80
42WWH1#21	40103	Waste Water	393	5	10	20	50	0	0	0	0
42WWH1#22	40103	Waste Water	394	5	10	20	20	0	0	0	0
42WWH1#23	40103	Waste Water	395	20	25	20	50	0	0	0	0
42WWH1#24	40103	Waste Water	396	20	10	20	50	0	0	0	0
42WWH1#25	40103	Waste Water	397	20	10	20	50	0	0	0	0
42WWH1#26	40103	Waste Water	398	5	10	20	50	0	0	0	0
42WWH1#27	40103	Waste Water	431	5	10	80	50	0	0	0	80
42WWH1#28	40103	Waste Water	432	5	10	80	50	0	0	0	80
42WWH1#29	40103	Waste Water	433	5	10	80	50	0	0	0	80
42WWH1#3	40103	Waste Water	371	5	10	0	50	0	0	0	0
42WWH1#30	40103	Waste Water	434	5	10	20	50	0	0	0	80
42WWH1#31	40103	Waste Water	405	5	10	20	50	0	0	0	0
42WWH1#32	40103	Waste Water	406	5	10	20	50	0	0	0	0
42WWH1#33	40103	Waste Water	407	20	10	20	50	0	0	0	80
42WWH1#34	40103	Waste Water	408	5	10	20	50	0	0	0	0
SAMPLE	DATE	SOURCE	ISOLATE	AMX	CEP	CHL	ERY	GEN	MOX	OFL	TET
42WWH1#35	40103	Waste Water	409	5	10	20	50	0	0	0	60
42WWH1#4	40103	Waste Water	372	5	0	20	20	0	0	0	0
42WWH1#5	40103	Waste Water	373	5	10	20	50	0	0	0	0
42WWH1#6	40103	Waste Water	374	5	10	0	50	0	0	0	80



42WWH1#7	40103	Waste Water	417	20	10	80	50	0	0	0	80
42WWH1#8	40103	Waste Water	418	20	10	80	50	0	0	0	80
42WWH1#9	40103	Waste Water	419	5	25	40	50	0	0	0	60
42WWW1#1	40103	Waste Water	526	5	10	0	50	0	0	0	0
42WWW1#10	40103	Waste Water	577	5	10	20	50	0	0	0	0
42WWW1#17	40103	Waste Water	578	5	10	0	50	0	0	0	0
42WWW1#18	40103	Waste Water	579	5	10	20	50	0	0	0	0
42WWW1#19	40103	Waste Water	586	10	25	80	50	0	0	0	40
42WWW1#2	40103	Waste Water	527	20	10	20	50	0	0	0	0
42WWW1#20	40103	Waste Water	587	10	10	0	100	0	0	0	0
42WWW1#27	40103	Waste Water	588	5	10	20	50	0	0	0	0
42WWW1#28	40103	Waste Water	589	5	25	20	100	0	0	0	0
42WWW1#29	40103	Waste Water	590	5	10	80	50	0	0	0	80
42WWW1#3	40103	Waste Water	528	10	10	20	100	0	0	0	0
42WWW1#30	40103	Waste Water	591	5	10	20	50	0	0	0	0
42WWW1#4	40103	Waste Water	529	5	10	80	50	0	0	0	0
42WWW1#5	40103	Waste Water	530	10	10	20	50	0	0	0	0
42WWW1#6	40103	Waste Water	531	20	10	20	50	0	0	0	0
42WWW1#7	40103	Waste Water	574	5	25	20	100	0	0	0	0
42WWW1#8	40103	Waste Water	575	15	25	20	100	0	0	0	0
42WWW1#9	40103	Waste Water	576	5	10	20	50	0	0	0	0

## Appendix D. ARA Data for the Northern Glaciated Plains

Sample	Collection Date	Source	Isolate Number	Antibiotics in ug/L							
				AMX	CEP	CHL	ERY	GEN	MOX	OFL	TET
46BCBB1#1	40103	beefcow	476	10	10	80	50	0	0	0	0
46BCBB1#2	40103	beefcow	504	5	10	20	50	0	0	0	0
46BCBB1#3	40103	beefcow	633	5	25	20	50	0	0	0	0
46BCBB1#4	40103	beefcow	460	5	25	20	50	0	0	0	0
46BCBB1#5	40103	beefcow	470	10	25	40	50	0	0	0	80
46BCBF2#1	40103	beefcow	505	5	25	20	50	0	0	0	0
46BCBF2#2	40103	beefcow	506	5	25	20	50	0	0	0	0
46BCBF2#3	40103	beefcow	507	5	25	20	50	0	0	0	80
46BCBG1#1	100703	Beefcow	1713	5	10	40	50	0	0	0	0
46BCBG1#2	100703	Beefcow	1714	10	25	40	50	0	0	0	0
46BCBG1#3	100703	Beefcow	1715	5	10	40	50	0	0	0	0
46BCBG1#4	100703	Beefcow	1716	5	25	40	50	0	0	0	0
46BCBG1#5	100703	Beefcow	1717	10	25	40	50	0	0	0	0
46BCBG2#1	100703	Beefcow	1688	0	10	80	50	0	0	0	80
46BCBG2#2	100703	Beefcow	1689	0	0	20	20	0	0	0	0
46BCBG2#3	100703	Beefcow	1690	0	10	80	50	0	0	0	80
46BCBG2#4	100703	Beefcow	1691	5	10	0	50	0	0	0	0
46BCBG2#5	100703	Beefcow	1692	0	10	0	20	0	0	0	0
46BCBHD1#1	80503	Beefcow	1319	5	10	0	100	0	0	0	0
46BCBHD1#2	80503	Beefcow	1320	5	25	80	50	0	0	0	80
46BCBHD1#3	80503	Beefcow	1321	5	10	0	50	0	0	0	0
46BCBHD1#4	80503	Beefcow	1322	5	10	0	100	0	0	0	0
46BCBHD1#5	80503	Beefcow	1323	5	10	0	100	0	0	0	0
46BCBK1#1	60303	beefcow	846	5	10	0	50	0	0	0	0
46BCBK1#2	60303	beefcow	847	5	10	0	50	0	0	0	0
46BCBK1#3	60303	beefcow	848	0	10	0	20	0	0	0	0
46BCBK1#4	60303	beefcow	849	0	10	0	20	0	0	0	0
46BCBK1#5	60303	beefcow	850	0	10	0	20	0	0	0	0
46BCBK2#1	60303	beefcow	851	5	10	0	50	0	0	0	0
46BCBK2#2	60303	beefcow	852	5	10	0	50	0	0	0	0
46BCBK2#3	60303	beefcow	853	5	10	80	20	0	0	0	80
46BCBK2#4	60303	beefcow	854	5	10	80	100	0	0	0	80
46BCBK2#5	60303	beefcow	855	5	10	0	50	0	0	0	0
46BCBK3#1	100703	Beefcow	1725	5	10	0	50	0	0	0	0
46BCBK3#2	100703	Beefcow	1726	5	10	0	50	0	0	0	0
46BCBK3#3	100703	Beefcow	1727	5	10	0	50	0	0	0	0
46BCBK3#4	100703	Beefcow	1728	5	10	0	50	0	0	0	0
46BCBK3#5	100703	Beefcow	1729	5	10	0	50	0	0	0	0
46BCBK4#1	100703	Beefcow	1673	5	10	40	50	0	0	0	0
46BCBK4#2	100703	Beefcow	1674	5	25	40	50	0	0	0	0
46BCBK4#3	100703	Beefcow	1675	5	10	40	50	0	0	0	0
46BCBK4#4	100703	Beefcow	1676	5	10	40	50	0	0	0	0
46BCBK4#5	100703	Beefcow	1677	5	10	40	50	0	0	0	0
46BCBM#4	21403	beefcow	236	5	10	40	20	0	0	0	20
46BCBM1	91802	beefcow	27	0	0	20	20	0	0	0	0
46BCBM2	91802	beefcow	29	0	0	20	20	0	0	0	0
46BCBM3	91802	beefcow	46	0	0	20	20	0	5	0	0
46BCBM5	91802	beefcow	24	0	0	80	50	0	0	0	80
46BCBMI1#1	100703	Beefcow	1745	0	0	60	50	0	0	0	80
46BCBMI1#2	100703	Beefcow	1746	0	0	60	50	0	0	0	80
46BCBMI1#3	100703	Beefcow	1747	5	10	0	50	0	0	0	0
46BCBMI1#4	100703	Beefcow	1748	0	0	60	50	0	0	0	80

46CBMI1#5	100703	Beefcow	1749	0	10	80	20	0	0	0	80
46CBMI2#1	100703	Beefcow	1730	5	10	0	50	0	0	0	0
46CBMI2#2	100703	Beefcow	1731	5	10	0	50	0	0	0	0
46CBMI2#3	100703	Beefcow	1732	5	10	80	20	0	0	0	80
46CBMI2#4	100703	Beefcow	1733	0	10	0	20	0	0	0	0
46CBMI2#5	100703	Beefcow	1734	0	10	0	20	0	0	0	0
46CBMI3#1	100703	Beefcow	1703	5	10	80	50	0	0	0	80
46CBMI3#2	100703	Beefcow	1704	0	0	80	50	0	0	0	80
46CBMI3#3	100703	Beefcow	1705	5	10	80	50	0	0	0	40
46CBMI3#4	100703	Beefcow	1706	0	0	80	20	0	0	0	80
46CBMI3#5	100703	Beefcow	1707	0	10	80	20	0	0	0	80
46CBMN#1	21403	beefcow	244	5	10	60	50	0	0	0	20
46CBMN2	91802	beefcow	23	0	0	20	20	0	0	0	0
46CBMN3	91802	beefcow	35	0	0	20	20	0	0	0	0
46CBMN4	91802	beefcow	31	5	0	20	20	0	0	0	40
46CBMN5	91802	beefcow	25	5	0	80	20	0	5	0	80
46BCBS1#1	40103	beefcow	618	20	10	80	50	40	0	0	80
46BCBS1#2	21403	beefcow	196	5	10	40	100	0	0	0	0
46BCBS2#1	21403	beefcow	160	5	10	40	50	0	0	0	0
46BCBS2#2	13003	beefcow	137	0	10	0	100	0	0	0	0
46BCBS2#3	40103	beefcow	520	5	25	20	100	0	0	0	0
46BCBS2#4	13003	beefcow	138	0	10	0	100	0	0	0	0
46BCBS2#5	13003	beefcow	139	0	10	0	100	0	0	0	0
46CCB1#1	60303	Cat	888	5	10	20	50	0	0	0	0
46CCB1#2	60303	Cat	889	5	10	20	50	0	0	0	0
46CCB1#3	60303	Cat	890	5	10	20	50	0	0	0	0
46CCB1#4	60303	Cat	891	5	25	0	50	0	0	0	0
46CCB1#5	60303	Cat	892	5	10	0	50	0	0	0	0
46CCBE1#2	42203	Cat	701	0	0	0	20	0	0	0	0
46CCBE1#3	42203	Cat	702	0	10	0	50	0	0	0	0
46CCBE1#4	42203	Cat	703	0	10	0	50	0	0	0	0
46CCBE1#5	42203	Cat	704	0	10	0	20	0	0	0	0
46CCBE2#1	42203	Cat	693	5	10	0	20	0	0	0	0
46CCBE2#2	42203	Cat	694	5	10	0	20	0	0	0	0
46CCBE2#3	42203	Cat	695	5	10	0	20	0	0	0	0
46CCBE2#4	42203	Cat	696	5	10	0	20	0	0	0	0
46CCBE2#5	42203	Cat	697	5	10	0	20	0	0	0	0
46CCBE4#1	120203	cat	1963	5	10	0	50	0	5	0	0
46CCBE4#2	120203	cat	1964	5	10	20	50	0	5	0	0
46CCBE4#3	120203	cat	1965	5	10	0	20	0	0	0	0
46CCBE4#4	120203	cat	1966	5	10	0	20	0	0	0	0
46CCBE4#5	120203	cat	1967	5	10	0	20	0	0	0	0
46CCBE5#4	11304	cat	2928	5	25	20	20	0	0	0	0
46CCBE5#5	11304	cat	2929	20	25	0	20	0	0	0	0
46CCBR1#1	42203	Cat	637	5	10	0	100	0	0	0	0
46CCBR1#2	42203	Cat	638	5	10	0	100	0	0	0	0
46CCBR1#3	42203	Cat	639	5	10	0	50	0	0	0	0
46CCBR1#4	42203	Cat	640	5	10	0	50	0	0	0	0
46CCBR1#5	42203	Cat	641	5	10	0	50	0	0	0	0
46CCBR10#1	11304	cat	2892	20	25	0	20	0	0	0	0
46CCBR10#2	11304	cat	2893	20	25	0	20	0	0	0	0
46CCBR10#3	11304	cat	2894	5	25	0	20	0	0	0	0
46CCBR10#4	11304	cat	2895	5	25	0	20	0	0	0	0
46CCBR10#5	11304	cat	2896	20	10	0	20	0	0	0	0
46CCBR2#1	42203	Cat	673	10	25	0	50	0	0	0	0
46CCBR2#2	42203	Cat	674	20	25	0	50	0	0	0	0
46CCBR2#3	42203	Cat	675	20	25	0	50	0	0	0	0

46CCBR2#4	42203	Cat	676	20	100	80	50	0	0	0	80
46CCBR2#5	42203	Cat	677	20	100	80	50	0	0	0	80
46CCBR3#1	42203	Cat	642	20	25	0	50	0	0	0	0
46CCBR3#2	42203	Cat	643	20	25	0	50	0	0	0	0
46CCBR3#3	42203	Cat	644	20	25	0	50	0	0	0	0
46CCBR3#4	42203	Cat	654	20	25	0	50	0	0	0	0
46CCBR3#5	42203	Cat	655	20	25	0	50	0	0	0	0
46CCBR5#1	11304	cat	2897	5	10	0	20	0	0	0	0
46CCBR5#2	11304	cat	2898	5	10	0	20	0	0	0	0
46CCBR5#3	11304	cat	2903	5	0	0	20	0	0	0	0
46CCBR5#4	11304	cat	2904	20	10	0	20	0	0	0	0
46CCBR5#5	11304	cat	2905	5	0	0	20	0	0	0	0
46CCBR6#1	120203	cat	1974	5	25	0	50	0	0	0	0
46CCBR6#2	120203	cat	1973	5	10	0	50	0	5	0	0
46CCBR6#3	120203	cat	1972	10	25	0	50	0	0	0	0
46CCBR6#4	120203	cat	1971	5	10	0	50	0	0	0	0
46CCBR6#5	120203	cat	1970	5	10	0	50	0	5	0	0
46CCBR7#1	120203	cat	1975	5	10	0	20	0	10	0	0
46CCBR7#2	120203	cat	1976	20	10	60	50	0	10	0	80
46CCBR7#3	120203	cat	1977	5	0	0	50	0	5	0	0
46CCBR7#4	120203	cat	1978	20	10	0	50	0	0	0	0
46CCBR7#5	120203	cat	1979	5	0	0	20	0	0	0	0
46CCBR9#2	11304	cat	3088	5	0	20	20	0	0	0	0
46CCBR9#4	11304	cat	3089	5	0	20	20	0	0	0	0
46CCBR9#5	11304	cat	3090	5	0	20	20	0	0	0	0
46CCC1#1	60303	Cat	863	20	100	0	20	0	0	0	0
46CCC1#2	60303	Cat	862	0	10	0	20	0	0	0	0
46CCC1#3	60303	Cat	861	5	10	0	50	0	0	0	0
46CCC1#4	60303	Cat	860	5	10	0	20	0	0	0	0
46CCC1#5	60303	Cat	859	0	10	0	20	0	0	0	0
46CCC2#1	60303	Cat	876	5	10	0	20	0	0	0	0
46CCC2#2	60303	Cat	877	5	10	0	20	0	0	0	0
46CCC2#3	60303	Cat	878	5	10	0	50	0	0	0	0
46CCC2#4	60303	Cat	879	5	25	20	50	0	0	0	0
46CCC2#5	60303	Cat	880	5	10	0	20	0	0	0	0
46CCC3#1	60303	Cat	871	20	25	0	50	0	0	0	0
46CCC3#2	60303	Cat	872	20	25	0	50	0	0	0	0
46CCC3#3	60303	Cat	873	20	50	0	50	0	0	0	0
46CCC3#4	60303	Cat	874	20	25	0	50	0	0	0	0
46CCC3#5	60303	Cat	875	20	25	0	50	0	0	0	0
46CCM1#1	51303	Cat	753	5	10	0	50	0	0	0	0
46CCM1#1	80503	Cat	1341	0	10	0	20	0	0	0	0
46CCM1#2	80503	Cat	1342	0	10	0	20	0	0	0	0
46CCM1#3	80503	Cat	1343	0	10	0	0	0	0	0	0
46CCM1#4	80503	Cat	1344	0	10	0	20	0	0	0	0
46CCM1#5	80503	Cat	1345	5	10	0	50	0	0	0	0
46CCM2#1	51303	Cat	754	10	10	0	50	0	0	0	0
46CCM2#1	71503	Cat	1178	20	10	0	20	40	0	0	0
46CCM2#2	71503	Cat	1177	10	10	0	50	0	0	0	0
46CCM2#3	71503	Cat	1176	20	10	0	20	40	0	0	0
46CCM2#4	71503	Cat	1171	20	10	0	50	40	0	0	0
46CCM2#5	71503	Cat	1170	20	10	0	50	40	0	0	0
46CCM3#1	71503	Cat	1169	10	10	0	20	0	0	0	0
46CCM3#2	71503	Cat	1168	0	10	0	20	0	0	0	0
46CCM3#3	71503	Cat	1167	5	10	0	20	0	0	0	0
46CCM3#4	71503	Cat	1166	10	10	0	20	0	0	0	0
46CCM3#5	71503	Cat	1165	0	10	0	20	0	0	0	0

46CCM4#1	71503	Cat	1141	0	10	0	20	0	0	0	0
46CCM4#2	71503	Cat	1140	0	0	0	20	0	0	0	0
46CCM4#3	71503	Cat	1135	0	10	0	20	0	0	0	0
46CCM4#4	71503	Cat	1134	0	10	0	50	0	0	0	0
46CCM4#5	71503	Cat	1133	5	10	0	50	0	0	0	0
46ChCB1	91802	Chicken	38	0	0	80	20	0	0	0	80
46ChCB2	91802	Chicken	37	5	0	80	20	0	0	0	80
46ChCB3	91802	Chicken	34	5	0	80	20	0	0	0	80
46ChCB4	91802	Chicken	33	5	0	80	20	0	0	0	80
46ChCB5	91802	Chicken	32	5	0	80	20	0	0	0	80
46ChChJ2#1	60303	Chicken	869	5	10	0	20	0	0	0	0
46ChChJ2#2	60303	Chicken	870	0	0	0	20	0	0	0	0
46ChFC1	91802	Chicken	44	5	0	80	50	0	0	0	80
46ChFC2	91802	Chicken	43	5	0	80	50	0	0	0	80
46ChFC3	91802	Chicken	42	0	0	80	20	0	0	0	80
46ChFC4	91802	Chicken	40	5	0	80	50	0	0	0	80
46ChFC5	91802	Chicken	39	5	0	80	50	0	0	0	80
46DCDB1#1	40103	dairycow	636	10	25	20	50	0	0	0	0
46DCDB1#2	40103	dairycow	457	5	25	20	50	0	0	0	0
46DCDB1#3	51303	dairycow	778	0	10	0	50	0	0	0	0
46DCDG1#1	100703	dairycow	1683	0	10	80	50	0	0	0	80
46DCDG1#2	100703	dairycow	1684	0	10	80	50	0	0	0	80
46DCDG1#3	100703	dairycow	1685	0	10	80	50	0	0	0	80
46DCDG1#4	100703	dairycow	1686	5	10	40	50	0	0	0	0
46DCDG1#5	100703	dairycow	1687	0	10	80	50	0	0	0	80
46DCDG2#1	100703	dairycow	1678	5	25	40	50	0	0	0	0
46DCDG2#2	100703	dairycow	1679	5	25	40	20	0	0	0	0
46DCDG2#3	100703	dairycow	1680	5	25	40	20	0	0	0	0
46DCDG2#4	100703	dairycow	1681	10	25	20	50	0	0	0	0
46DCDG2#5	100703	dairycow	1682	10	25	20	50	0	0	0	0
46DCDK1#1	100703	dairycow	1668	5	10	0	50	0	0	0	0
46DCDK1#2	100703	dairycow	1669	5	10	40	20	0	0	0	0
46DCDK1#3	100703	dairycow	1670	5	10	80	50	0	0	0	80
46DCDK1#4	100703	dairycow	1671	10	25	0	50	0	0	0	0
46DCDK1#5	100703	dairycow	1672	5	10	80	50	0	0	0	80
46DCDS1#1	42203	dairycow	684	5	10	0	50	0	0	0	0
46DCDS1#1	42203	dairycow	718	5	10	20	50	0	0	0	0
46DCDS1#2	42203	dairycow	719	5	10	20	50	0	0	0	0
46DCDS1#3	42203	dairycow	720	5	10	20	50	0	0	0	0
46DCDS1#4	42203	dairycow	721	5	10	80	50	0	0	0	80
46DCDS1#5	42203	dairycow	722	5	10	20	50	0	0	0	0
46DCDS1#5	51303	dairycow	775	5	10	20	50	0	0	0	0
46DCDS2#2	51303	dairycow	776	5	10	0	50	0	0	0	0
46DCDS2#3	51303	dairycow	783	5	10	0	20	0	0	0	0
46DCDS2#4	51303	dairycow	784	5	10	0	50	0	0	0	0
46DDB1#1	60303	Dog	895	5	10	20	20	0	0	0	0
46DDB1#2	60303	Dog	896	5	10	20	20	0	0	0	0
46DDB1#3	60303	Dog	897	5	10	20	20	0	0	0	0
46DDB1#4	60303	Dog	898	5	10	20	50	0	0	0	0
46DDB1#5	60303	Dog	899	20	10	80	50	0	0	0	80
46DDB2#1	60303	Dog	900	5	25	20	20	0	0	0	0
46DDB2#2	60303	Dog	901	5	25	20	50	0	0	0	0
46DDB2#3	60303	Dog	902	5	25	20	20	0	0	0	0
46DDB2#4	60303	Dog	903	5	10	80	20	0	0	0	80
46DDB2#5	60303	Dog	904	5	10	20	50	0	0	0	0
46DDBE1#1	42203	Dog	649	5	25	0	50	0	0	0	0
46DDBE1#2	42203	Dog	650	5	25	0	50	0	0	0	0

46DDBE1#3	42203	Dog	651	0	10	0	50	0	0	0	0
46DDBE1#4	42203	Dog	652	0	10	0	50	0	0	0	0
46DDBE1#5	42203	Dog	653	0	10	0	50	0	0	0	0
46DDBE2#1	42203	Dog	685	20	10	0	20	0	0	0	0
46DDBE2#2	42203	Dog	686	20	10	0	20	0	0	0	0
46DDBE2#3	42203	Dog	687	20	10	0	20	0	0	0	0
46DDBE2#4	42203	Dog	688	20	10	0	20	0	0	0	0
46DDBE2#5	42203	Dog	689	20	10	0	20	0	0	0	0
46DDBE3#1	42203	Dog	645	0	10	0	50	0	0	0	0
46DDBE3#2	42203	Dog	646	0	10	0	50	0	0	0	0
46DDBE3#3	42203	Dog	647	0	10	0	50	0	0	0	0
46DDBE3#4	42203	Dog	648	5	10	0	50	0	0	0	0
46DDBE3#5	42203	Dog	657	5	0	0	20	0	0	0	0
46DDBE4#1	42203	Dog	669	0	10	0	50	0	0	0	0
46DDBE4#2	42203	Dog	670	5	10	0	20	0	0	0	0
46DDBE4#3	42203	Dog	671	20	10	0	50	0	0	0	0
46DDBE4#4	42203	Dog	672	0	10	0	50	0	0	0	0
46DDBE4#5	42203	Dog	681	0	10	0	20	0	0	0	0
46DDBR1#1	40103	Dog	411	5	10	20	50	0	0	0	0
46DDBR1#2	40103	Dog	412	5	10	60	20	0	0	0	0
46DDBR1#3	40103	Dog	413	5	0	60	50	0	0	0	0
46DDBR1#4	40103	Dog	414	20	100	80	20	0	0	0	80
46DDBR1#5	40103	Dog	415	20	100	80	50	0	0	0	80
46DDBR2#1	40103	Dog	387	5	10	20	50	0	0	0	0
46DDBR2#2	40103	Dog	388	5	10	20	50	0	0	0	80
46DDBR2#3	40103	Dog	389	5	10	40	20	0	0	0	20
46DDBR2#4	40103	Dog	390	15	10	60	20	0	0	0	40
46DDBR2#5	40103	Dog	391	5	10	40	20	0	0	0	80
46DDBR3#1	40103	Dog	399	5	10	20	50	0	0	0	0
46DDBR3#2	40103	Dog	400	5	10	40	50	0	0	0	0
46DDBR3#3	40103	Dog	401	5	10	60	50	0	0	0	0
46DDBR3#4	40103	Dog	402	5	10	40	50	0	0	0	0
46DDBR3#5	40103	Dog	403	5	25	60	50	0	0	0	80
46DDC1#1	60303	Dog	883	5	10	0	50	0	0	0	0
46DDC1#2	60303	Dog	884	10	25	20	50	0	0	0	0
46DDC1#3	60303	Dog	885	5	10	0	50	0	0	0	0
46DDC1#4	60303	Dog	886	10	10	20	50	0	0	0	0
46DDC1#5	60303	Dog	887	10	10	20	50	0	0	0	0
46DDC2#1	60303	Dog	868	5	0	0	50	0	0	0	0
46DDC2#2	60303	Dog	867	5	0	0	50	0	0	0	0
46DDC2#3	60303	Dog	866	5	0	0	50	0	0	0	0
46DDC2#4	60303	Dog	865	5	0	0	20	0	0	0	0
46DDC2#5	60303	Dog	864	0	0	0	20	0	0	0	0
46DDC3#1	60303	Dog	829	0	10	0	50	0	0	0	0
46DDM1#1	42203	Dog	723	0	25	0	20	0	0	0	0
46DDM1#2	42203	Dog	728	0	10	0	20	0	0	0	0
46DDM1#3	42203	Dog	729	0	10	0	50	0	0	0	0
46DDM1#4	42203	Dog	730	0	10	0	20	0	0	0	0
46DDM1#5	42203	Dog	731	0	10	0	20	0	0	0	0
46DDM2#1	42203	Dog	705	5	10	0	50	0	0	0	0
46DDM2#2	42203	Dog	700	5	25	20	50	0	0	0	0
46DDM2#3	42203	Dog	698	5	10	20	50	0	0	0	0
46DDM2#4	42203	Dog	699	5	25	20	50	0	0	0	0
46DDM2#5	42203	Dog	679	5	10	20	50	0	0	0	0
46DDM3#2	42203	Dog	707	5	10	0	50	0	0	0	0
46DDM3#3	42203	Dog	706	5	10	0	50	0	0	0	0
46DDM3#4	42203	Dog	690	5	10	20	50	0	0	0	0

46DDM3#5	42203	Dog	680	5	10	20	50	0	0	0	0
46DDM4#1	71503	Dog	1139	0	10	0	50	0	0	0	0
46DDM4#2	71503	Dog	1138	0	10	0	50	0	0	0	0
46DDM4#3	71503	Dog	1137	10	10	0	50	0	0	0	0
46DDM4#4	71503	Dog	1136	0	10	0	50	0	0	0	0
46DDM4#5	71503	Dog	1199	0	10	0	50	0	0	0	0
46DDM5#1	71503	Dog	1155	0	10	0	50	0	0	0	0
46DDM5#2	71503	Dog	1154	0	10	0	50	0	0	0	0
46DDM5#3	71503	Dog	1153	0	10	0	50	0	0	0	0
46DDM5#4	71503	Dog	1152	5	10	0	50	0	0	0	0
46DDM5#5	71503	Dog	1147	0	10	0	50	0	0	0	0
46DDM6#1	71503	Dog	1198	0	10	0	100	0	0	0	0
46DDM6#2	71503	Dog	1197	20	10	80	20	0	0	0	80
46DDM6#3	71503	Dog	1196	20	10	80	50	0	0	0	80
46DDM6#4	71503	Dog	1195	20	25	80	20	0	0	0	80
46DDM6#5	71503	Dog	1194	20	10	80	50	0	0	0	80
46DDM7#1	71503	Dog	1132	0	10	80	50	20	0	0	80
46DDM7#2	71503	Dog	1131	0	10	80	50	0	0	0	80
46DDM7#3	71503	Dog	1130	0	10	80	50	0	0	0	80
46DDM7#4	71503	Dog	1129	0	10	80	50	0	0	0	80
46DDM7#5	71503	Dog	1128	0	10	80	50	0	0	0	80
46DDM8#1	71503	Dog	1193	20	25	80	50	0	0	0	80
46DDM8#2	71503	Dog	1192	0	10	80	50	0	0	0	80
46DDM8#3	71503	Dog	1191	0	10	0	50	0	0	0	0
46DDM8#4	71503	Dog	1190	0	10	0	50	0	0	0	0
46DDM8#5	71503	Dog	1189	0	10	80	50	0	0	0	80
46DDM9#1	71503	Dog	1188	10	25	80	50	0	0	0	80
46DDM9#2	71503	Dog	1187	5	10	20	50	0	0	0	0
46DDM9#3	71503	Dog	1186	10	25	20	20	0	0	0	0
46DDM9#4	71503	Dog	1185	5	10	80	50	0	0	0	80
46DDM9#5	71503	Dog	1184	5	10	20	50	0	0	0	0
46DDMB#1	42203	Dog	658	5	25	20	50	0	0	0	0
46PPB1#1	13003	Pig	152	5	10	0	100	0	0	0	0
46PPB1#1	40103	Pig	623	20	10	80	50	20	0	0	80
46PPB1#2	40103	Pig	622	5	10	40	50	0	0	0	0
46PPB1#5	13003	Pig	153	5	10	0	100	0	0	0	0
46PPB2#2	40103	Pig	634	5	25	40	50	0	0	0	20
46PPBE1#1	60303	Pig	935	5	10	80	50	0	0	0	80
46PPBE1#2	60303	Pig	936	5	0	80	50	0	0	0	80
46PPBE1#3	60303	Pig	937	20	10	80	50	0	0	0	80
46PPBE1#4	60303	Pig	938	0	0	80	50	0	0	0	80
46PPBE1#5	60303	Pig	939	5	10	80	50	0	0	0	80
46PPBE2#1	60303	Pig	918	5	10	80	50	0	0	0	80
46PPBE2#2	60303	Pig	920	5	0	80	50	0	0	0	80
46PPBE2#3	60303	Pig	921	20	10	80	50	0	0	0	80
46PPBE2#4	60303	Pig	922	5	10	80	50	0	0	0	80
46PPBE2#5	60303	Pig	923	20	25	80	50	0	0	0	80
46PPD#1	21403	Pig	224	20	10	80	50	0	0	0	80
46PPD2	91802	Pig	18	0	0	0	50	0	0	0	0
46PPD2#1	91603	Pig	1625	0	10	0	50	0	0	0	0
46PPD2#2	91603	Pig	1626	0	0	0	50	0	0	0	0
46PPD2#3	91603	Pig	1627	0	0	0	50	0	0	0	0
46PPD2#4	91603	Pig	1628	5	10	80	50	0	0	0	80
46PPD2#5	91603	Pig	1629	5	10	60	50	0	0	0	80
46PPD3	91802	Pig	17	0	0	0	20	0	0	0	0
46PPD4	91802	Pig	26	5	10	60	50	0	0	0	60
46PPE1#1	40103	Pig	392	20	25	80	50	0	0	0	80

46PPE1#2	40103	Pig	427	20	10	80	50	0	0	0	80
46PPE1#3	40103	Pig	428	20	10	80	50	0	0	0	80
46PPE1#4	40103	Pig	435	20	10	80	50	0	0	0	80
46PPE1#5	40103	Pig	436	20	10	80	50	0	0	0	80
46PPF1#1	40103	Pig	474	20	10	80	50	0	0	0	80
46PPF1#2	13003	Pig	135	0	0	80	50	0	0	0	80
46PPF1#3	40103	Pig	515	5	10	80	50	0	0	0	80
46PPF1#4	40103	Pig	473	20	25	80	50	0	0	0	80
46PPF1#5	40103	Pig	510	10	25	80	50	0	0	0	80
46PPF2#2	40103	Pig	487	10	25	80	50	0	0	0	80
46PPF2#3	13003	Pig	136	10	10	80	100	0	0	0	80
46PPF2#4	40103	Pig	486	10	25	80	50	0	0	0	80
46PPF2#5	40103	Pig	620	20	25	80	50	60	0	0	80
46PPH1#1	91603	Pig	1540	5	10	60	50	0	0	0	80
46PPH1#2	91603	Pig	1541	20	10	0	20	0	0	0	0
46PPH1#3	91603	Pig	1542	0	10	60	20	0	0	0	80
46PPH1#4	91603	Pig	1543	0	10	60	20	0	0	0	80
46PPH1#5	91603	Pig	1544	0	10	60	20	0	0	0	80
46PPH2#1	91603	Pig	1545	20	25	80	50	0	0	0	80
46PPH2#2	91603	Pig	1546	20	10	60	20	0	0	0	80
46PPH2#3	91603	Pig	1547	20	25	80	50	0	0	0	80
46PPH2#4	91603	Pig	1548	20	10	60	50	0	0	0	80
46PPH2#5	91603	Pig	1549	20	10	80	50	0	0	0	80
46PPHA1#1	62403	Pig	960	20	10	80	50	0	0	0	80
46PPHA1#2	62403	Pig	961	5	10	20	50	0	0	0	0
46PPHA1#3	62403	Pig	962	5	10	20	50	0	0	0	0
46PPHA1#4	62403	Pig	963	10	25	80	50	60	0	0	80
46PPHA1#5	62403	Pig	964	20	25	80	50	0	0	0	80
46PPHA2#1	71503	Pig	1209	0	10	20	50	0	0	0	0
46PPHA2#2	71503	Pig	1210	0	10	80	50	0	0	0	80
46PPHA2#3	71503	Pig	1211	20	10	80	50	0	0	0	80
46PPHA2#4	71503	Pig	1220	0	0	80	50	0	0	0	80
46PPHA2#5	71503	Pig	1221	0	10	80	50	0	0	0	80
46PPHU1#2	71503	Pig	1222	0	0	80	50	20	0	0	80
46PPHU1#3	71503	Pig	1231	5	10	80	50	0	0	0	80
46PPHU1#4	71503	Pig	1232	0	10	80	50	0	0	0	80
46PPHU1#5	71503	Pig	1233	0	10	80	50	0	0	0	80
46PPHU2#1	71503	Pig	1267	0	0	80	50	0	0	0	80
46PPHU2#2	71503	Pig	1268	0	0	80	50	0	0	0	80
46PPHU2#3	71503	Pig	1269	0	10	80	50	0	0	0	80
46PPHU2#4	71503	Pig	1270	5	10	80	50	0	0	0	80
46PPHU2#5	71503	Pig	1208	0	0	80	50	0	0	0	80
46PPK1#1	60303	Pig	841	0	0	80	50	0	0	0	80
46PPK1#2	60303	Pig	842	0	0	80	50	0	0	0	80
46PPK1#3	60303	Pig	843	0	0	80	50	0	0	0	80
46PPK1#4	60303	Pig	844	0	0	80	50	0	0	0	80
46PPK1#5	60303	Pig	845	0	10	80	50	0	0	0	80
46PPK2#1	60303	Pig	831	20	25	80	50	0	0	0	80
46PPK2#2	60303	Pig	832	20	10	80	50	0	0	0	80
46PPK2#3	60303	Pig	833	0	10	80	50	0	0	0	80
46PPK2#4	60303	Pig	834	20	10	80	50	0	0	0	80
46PPK2#5	60303	Pig	929	5	0	80	50	0	0	0	80
46PPM#3	13003	Pig	154	0	10	80	100	0	0	0	80
46PPM1	91802	Pig	30	20	0	80	20	0	0	0	80
46PPM1#5	40103	Pig	472	5	10	80	50	0	0	0	0
46PPM2	91802	Pig	36	20	0	80	50	0	10	0	80
46PPM4	91802	Pig	41	5	0	80	20	0	0	0	80



46PPMC1#1	40103	Pig	568	5	10	80	50	0	0	0	80
46PPMC1#2	40103	Pig	569	5	10	80	50	0	0	0	80
46PPMC1#3	40103	Pig	570	5	10	80	50	0	0	0	80
46PPMC1#4	40103	Pig	571	5	10	80	50	0	0	0	80
46PPMC1#5	40103	Pig	572	10	10	80	50	0	0	0	80
46PPMO1#1	91603	Pig	1620	20	10	0	50	0	0	0	0
46PPMO1#2	91603	Pig	1621	0	0	0	50	0	0	0	0
46PPMO1#3	91603	Pig	1622	5	10	60	20	0	0	0	80
46PPMO1#4	91603	Pig	1623	20	10	0	50	0	0	0	0
46PPMO1#5	91603	Pig	1624	15	25	0	50	0	0	0	0
46PPMO3#1	91603	Pig	1538	5	10	60	20	0	0	0	80
46PPMO3#2	91603	Pig	1539	5	10	60	20	0	0	0	80
46PPO5	91802	Pig	45	20	0	80	50	0	0	0	80
46PPS1#1	21403	Pig	229	5	10	80	20	0	0	0	80
46PPS1#2	21403	Pig	170	5	10	80	50	0	0	0	80
46PPS1#3	40103	Pig	518	20	25	80	50	0	0	0	80
46PPS1#4	40103	Pig	459	5	25	80	50	0	0	0	80
46PPS1#5	40103	Pig	455	5	25	80	50	0	0	0	80
46PPS2#1	40103	Pig	484	5	10	80	50	0	0	0	80
46PPS2#2	40103	Pig	480	5	10	80	20	0	0	0	80
46PPS2#4	40103	Pig	481	5	25	80	50	0	0	0	80
46PPS2#5	40103	Pig	493	10	25	40	100	0	0	0	0
46ShSC1	91802	Sheep	22	0	0	20	20	0	0	0	20
46ShSC3	91802	Sheep	21	0	0	20	50	0	0	0	20
46ShSC4	91802	Sheep	20	0	0	20	20	0	0	0	20
46ShSH4	91802	Sheep	28	0	0	80	20	0	0	0	80
46ShSH5	91802	Sheep	19	5	0	80	20	0	0	0	80
46SSB1#1	21403	Sheep	194	5	10	80	50	0	0	0	20
46SSB1#2	21403	Sheep	181	5	25	80	100	0	0	0	80
46SSB1#3	40103	Sheep	492	5	25	40	50	0	0	0	0
46SSB1#4	40103	Sheep	513	5	10	80	50	0	0	0	40
46SSB1#5	21403	Sheep	168	0	10	20	50	0	0	0	0
46SSB2#1	40103	Sheep	477	5	25	80	50	0	0	0	80
46SSB2#2	40103	Sheep	502	10	25	80	50	0	0	0	80
46SSB2#3	40103	Sheep	503	5	10	80	20	0	0	0	80
46SSB2#4	40103	Sheep	514	5	25	80	50	0	0	0	80
46SSB2#4	51303	Sheep	777	0	0	80	50	0	0	0	80
46SSBE1#1	102803	Sheep	1778	5	10	0	50	0	0	0	0
46SSBE1#2	102803	Sheep	1779	5	10	80	50	0	0	0	80
46SSBE1#3	102803	Sheep	1790	10	25	80	50	0	0	0	80
46SSBE1#4	102803	Sheep	1791	20	10	80	50	0	0	0	80
46SSBE1#5	102803	Sheep	1802	5	10	80	50	0	0	0	80
46SSBE2#1	102803	Sheep	1828	5	10	0	50	0	0	0	0
46SSBE2#2	102803	Sheep	1829	5	10	20	20	0	0	0	0
46SSBE2#3	102803	Sheep	1830	10	25	80	50	0	0	0	80
46SSBE2#4	102803	Sheep	1831	15	25	80	50	0	0	0	80
46SSBE2#5	102803	Sheep	1832	5	10	80	20	0	0	0	80
46SSBE3#1	102803	Sheep	1757	5	10	0	50	0	0	0	0
46SSBE3#2	102803	Sheep	1758	5	10	0	50	0	0	0	0
46SSBE3#3	102803	Sheep	1759	5	10	0	50	0	0	0	0
46SSBE3#4	102803	Sheep	1760	5	10	80	50	0	0	0	80
46SSBE3#5	102803	Sheep	1761	5	10	0	50	0	0	0	0
46SSC#2	21403	Sheep	235	5	10	60	20	0	0	0	20
46SSC#5	21403	Sheep	213	5	10	40	50	0	0	0	20
46SSD1#1	11304	Sheep	2255	5	10	20	50	0	0	0	0
46SSD1#2	11304	Sheep	2256	10	10	0	20	0	0	0	0
46SSD1#3	11304	Sheep	2257	5	10	0	50	0	0	0	0

46SSD1#4	11304	Sheep	2258	5	10	0	20	0	0	0	0
46SSD1#5	11304	Sheep	2267	5	10	20	50	0	0	0	0
46SSF1#1	40103	Sheep	471	10	25	40	50	0	0	0	0
46SSF2#1	51303	Sheep	781	10	10	20	50	0	0	0	0
46SSF2#2	51303	Sheep	786	0	10	80	50	0	0	0	80
46SSG1#1	100703	Sheep	1708	5	10	20	50	0	0	0	0
46SSG1#2	100703	Sheep	1709	5	10	20	50	0	0	0	0
46SSG1#3	100703	Sheep	1710	5	10	80	50	0	0	0	80
46SSG1#4	100703	Sheep	1711	5	10	20	50	0	0	0	0
46SSG1#5	100703	Sheep	1712	5	10	0	50	0	0	0	0
46SSG2#1	100703	Sheep	1735	5	25	80	50	0	0	0	80
46SSG2#2	100703	Sheep	1736	0	10	80	20	0	0	0	80
46SSG2#3	100703	Sheep	1737	20	10	80	50	0	0	0	80
46SSG2#4	100703	Sheep	1738	20	25	80	50	0	0	0	80
46SSG2#5	100703	Sheep	1739	5	10	80	50	0	0	0	80
46SSG3#1	100703	Sheep	1693	5	10	80	50	0	0	0	80
46SSG3#2	100703	Sheep	1694	5	25	80	50	0	0	0	80
46SSG3#3	100703	Sheep	1695	5	10	80	50	0	0	0	80
46SSG3#4	100703	Sheep	1696	5	10	80	50	0	0	0	80
46SSG3#5	100703	Sheep	1697	0	10	80	50	0	0	0	60
46SSH#1	21403	Sheep	221	5	10	80	100	0	0	0	80
46SSH#3	21403	Sheep	220	5	10	40	20	0	0	0	0
46SSK1#1	100703	Sheep	1740	5	10	0	20	0	0	0	0
46SSK1#2	100703	Sheep	1741	0	10	0	50	0	0	0	0
46SSK1#3	100703	Sheep	1742	0	10	80	50	0	0	0	80
46SSK1#4	100703	Sheep	1743	5	10	60	50	0	0	0	80
46SSK1#5	100703	Sheep	1744	5	25	0	50	0	0	0	0
46SSK2#1	100703	Sheep	1698	5	10	80	50	0	0	0	80
46SSK2#2	100703	Sheep	1699	0	0	0	50	0	0	0	0
46SSK2#3	100703	Sheep	1700	0	0	0	50	0	0	0	0
46SSK2#4	100703	Sheep	1701	0	0	0	50	0	0	0	0
46SSK2#5	100703	Sheep	1702	0	0	0	50	0	0	0	0
46SSK3#1	100703	Sheep	1653	0	10	80	50	0	0	0	80
46SSK3#2	100703	Sheep	1654	0	10	80	50	0	0	0	80
46SSK3#3	100703	Sheep	1655	0	0	80	50	0	0	0	80
46SSK3#4	100703	Sheep	1656	0	10	80	50	0	0	0	80
46SSK3#5	100703	Sheep	1657	0	10	80	50	0	0	0	80
46SSK4#1	102803	Sheep	1809	0	10	0	20	0	0	0	0
46SSK4#2	102803	Sheep	1810	10	10	60	50	0	0	0	20
46SSK4#3	102803	Sheep	1811	0	0	0	50	0	0	0	0
46SSK4#5	102803	Sheep	1812	0	0	0	50	0	0	0	0
46SSMI1#1	100703	Sheep	1718	10	10	80	50	0	0	0	80
46SSMI1#2	100703	Sheep	1719	20	10	80	50	0	0	0	80
46SSMI1#3	100703	Sheep	1720	10	10	40	50	0	0	0	0
46SSMI1#4	100703	Sheep	1721	20	10	80	50	0	0	0	80
46SSMI1#5	100703	Sheep	1722	20	10	80	50	0	0	0	80
46SSMI2#1	100703	Sheep	1658	5	10	80	50	0	0	0	80
46SSMI2#2	100703	Sheep	1659	5	10	80	50	0	0	0	80
46SSMI2#3	100703	Sheep	1660	5	10	0	50	0	0	0	0
46SSMI2#4	100703	Sheep	1661	5	10	80	50	0	0	0	80
46SSMI2#5	100703	Sheep	1662	5	10	80	50	0	0	0	80
46SSMI4#1	100703	Sheep	1663	5	10	80	50	0	0	0	80
46SSMI4#2	100703	Sheep	1664	0	10	80	20	0	0	0	80
46SSMI4#3	100703	Sheep	1665	5	10	80	50	0	0	0	80
46SSMI4#4	100703	Sheep	1666	5	10	80	50	0	0	0	80
46SSMI4#5	100703	Sheep	1667	5	10	80	20	0	0	0	80
46SSS1#1	40103	Sheep	495	5	25	20	50	0	0	0	0

46SSS1#2	40103	Sheep	494	5	25	40	50	0	0	0	0
46SSS1#3	40103	Sheep	521	10	25	40	50	0	0	0	0
46SSS1#4	40103	Sheep	458	20	25	80	50	0	0	0	80
46SSS1#5	40103	Sheep	469	5	10	40	50	0	0	0	0
46SSS2#1	21403	Sheep	218	5	10	20	20	0	0	0	0
46SSS2#2	40103	Sheep	488	20	25	80	50	0	0	0	80
46SSS2#3	13003	Sheep	150	20	10	60	50	0	0	0	80
46SSS2#4	40103	Sheep	519	5	10	20	50	0	0	0	0
46SSS2#5	40103	Sheep	624	20	10	80	50	0	0	0	80
46TTB1#1	91603	Turkey	1635	20	100	20	20	0	0	0	80
46TTB1#2	91603	Turkey	1636	5	10	60	50	0	0	0	80
46TTB1#3	91603	Turkey	1637	5	10	40	20	0	0	0	80
46TTB1#4	91603	Turkey	1638	0	10	80	20	0	0	0	80
46TTBE1#1	60303	Turkey	856	0	0	80	50	0	0	0	80
46TTBE1#2	60303	Turkey	857	20	25	80	50	80	0	0	80
46TTBE1#3	60303	Turkey	858	0	0	80	50	0	0	0	80
46TTBE1#4	60303	Turkey	795	20	25	40	50	80	0	0	80
46TTBE1#5	60303	Turkey	796	5	10	80	50	0	0	0	80
46TTBE2#1	60303	Turkey	797	5	10	80	20	0	0	0	80
46TTBE2#2	60303	Turkey	798	20	100	80	50	0	0	0	80
46TTBE2#3	60303	Turkey	807	5	10	80	20	0	0	0	80
46TTBE2#4	60303	Turkey	808	5	10	80	20	0	0	0	80
46TTBE2#5	60303	Turkey	809	5	10	80	20	0	0	0	80
46TTC1#1	42203	Turkey	659	5	10	80	20	0	0	0	80
46TTC1#2	42203	Turkey	683	5	10	80	20	0	0	0	80
46TTC1#3	51303	Turkey	774	5	10	80	20	0	0	0	80
46TTC1#4	42203	Turkey	682	20	25	80	50	0	0	0	80
46TTC1#5	51303	Turkey	782	5	10	80	50	0	0	0	80
46TTC2#1	51303	Turkey	756	20	10	80	50	60	0	0	80
46TTC2#2	51303	Turkey	757	5	10	80	20	0	0	0	80
46TTC2#3	51303	Turkey	758	5	10	80	20	0	0	0	80
46TTC2#4	51303	Turkey	759	5	10	80	20	0	0	0	80
46TTC2#5	51303	Turkey	779	20	25	80	50	0	0	0	80
46TTHA1#1	62403	Turkey	965	20	25	80	50	40	0	0	80
46TTHA1#2	62403	Turkey	966	20	25	80	50	40	0	0	80
46TTHA1#3	62403	Turkey	967	5	10	80	20	0	0	0	80
46TTHA1#4	62403	Turkey	968	20	25	80	50	0	0	0	80
46TTHA1#5	62403	Turkey	969	5	10	80	20	20	0	0	80
46TTHA2#1	62403	Turkey	955	20	25	80	50	0	0	0	80
46TTHA2#2	62403	Turkey	956	20	25	20	50	0	0	0	0
46TTHA2#3	62403	Turkey	957	10	25	80	20	0	0	0	80
46TTHA2#4	62403	Turkey	958	20	25	40	50	0	0	0	80
46TTHA2#5	62403	Turkey	959	20	25	40	50	0	0	0	0
46TTHU1#1	62403	Turkey	945	0	0	80	50	0	0	0	80
46TTHU1#2	62403	Turkey	946	0	0	80	50	0	0	0	80
46TTHU1#3	62403	Turkey	947	5	0	80	50	0	0	0	80
46TTHU1#4	62403	Turkey	948	20	10	80	50	0	0	0	80
46TTHU1#5	62403	Turkey	949	0	0	80	50	0	0	0	80
46TTHU2#1	71503	Turkey	1257	0	10	80	50	0	0	0	80
46TTHU2#2	71503	Turkey	1258	0	10	60	20	40	0	0	80
46TTHU2#3	71503	Turkey	1259	20	10	80	20	0	0	0	80
46TTHU2#4	71503	Turkey	1260	0	0	60	0	0	0	0	80
46TTHU2#5	71503	Turkey	1261	20	0	80	20	0	0	0	80
46TTK1#1	60303	Turkey	810	20	25	80	50	20	0	0	80
46TTK1#2	60303	Turkey	819	20	25	80	50	20	0	0	80
46TTK1#3	60303	Turkey	820	20	25	80	50	20	0	0	80
46TTK1#4	60303	Turkey	821	20	25	80	50	20	0	0	80

46TTK1#5	60303	Turkey	822	20	25	80	50	20	0	0	80
46TTK2#1	60303	Turkey	930	20	100	80	100	80	5	0	80
46TTK2#2	60303	Turkey	931	20	25	80	50	0	0	0	80
46TTK2#3	60303	Turkey	932	20	50	80	100	60	5	0	80
46TTK2#4	60303	Turkey	933	20	100	80	50	60	5	0	80
46TTK2#5	60303	Turkey	934	20	100	80	100	80	5	0	80
46TTMC1#1	40103	Turkey	404	0	10	80	50	0	0	0	80
46TTMC1#2	40103	Turkey	437	5	10	80	20	0	0	0	80
46TTMC1#3	40103	Turkey	438	20	10	80	50	40	0	0	80
46TTMC1#4	40103	Turkey	439	5	10	80	20	20	0	0	80
46TTMC1#5	40103	Turkey	440	5	25	80	50	80	0	0	80
46TTMC2#1	40103	Turkey	410	5	10	80	50	0	0	0	80
46TTMC2#2	40103	Turkey	441	5	25	80	50	40	0	0	80
46TTMC2#3	40103	Turkey	442	20	25	80	50	40	0	0	80
46TTMC2#4	40103	Turkey	443	20	10	80	50	40	0	0	80
46TTMC2#5	40103	Turkey	444	20	10	80	50	40	0	0	80
46TTMO1#1	91603	Turkey	1630	5	10	40	50	0	0	0	80
46TTMO1#2	91603	Turkey	1631	5	10	40	50	80	0	0	80
46TTMO1#3	91603	Turkey	1632	10	10	80	20	0	0	0	80
46TTMO1#4	91603	Turkey	1633	10	10	60	50	0	0	0	80
46TTMO1#5	91603	Turkey	1634	10	10	80	20	0	0	0	80
46TTS1#1	51303	Turkey	764	20	25	80	20	0	0	0	80
46TTS1#2	51303	Turkey	765	20	25	80	50	40	0	0	80
46TTS1#3	51303	Turkey	780	20	100	80	50	0	0	0	80
46TTS1#4	51303	Turkey	773	20	100	80	50	0	5	0	80
46TTS1#5	51303	Turkey	766	5	10	80	50	20	0	0	80
46TTS2#1	51303	Turkey	768	20	50	80	50	0	0	0	80
46TTS2#2	51303	Turkey	769	20	25	80	50	0	0	0	80
46TTS2#3	51303	Turkey	770	5	10	80	20	0	0	0	80
46TTS2#4	51303	Turkey	771	10	10	80	20	0	0	0	80
46TTS2#5	51303	Turkey	767	5	10	80	20	0	0	0	80
46TTS2#5	51303	Turkey	772	10	10	80	20	0	0	0	80
46WWB1#1	60303	Waste Water	812	0	10	0	50	0	0	0	0
46WWB1#10	60303	Waste Water	825	5	10	0	50	0	0	0	0
46WWB1#11	60303	Waste Water	826	5	25	0	20	0	0	0	0
46WWB1#12	60303	Waste Water	827	0	10	0	20	0	0	0	0
46WWB1#13	60303	Waste Water	828	0	10	0	50	0	0	0	0
46WWB1#2	60303	Waste Water	813	20	10	80	50	0	0	0	80
46WWB1#3	60303	Waste Water	814	5	25	0	50	0	0	0	0
46WWB1#4	60303	Waste Water	815	5	10	0	50	0	0	0	0
46WWB1#5	60303	Waste Water	816	0	0	0	20	0	0	0	0
46WWB1#6	60303	Waste Water	817	0	0	0	100	0	0	0	0
46WWB1#7	60303	Waste Water	818	0	0	0	20	0	0	0	0
46WWB1#8	60303	Waste Water	823	5	10	0	50	0	0	0	0
46WWB1#9	60303	Waste Water	824	0	0	0	50	0	0	0	0
46WWBE1#1	40103	Waste Water	532	5	25	0	50	0	0	0	0
46WWBE1#10	40103	Waste Water	583	5	10	80	50	0	0	0	80
46WWBE1#11	40103	Waste Water	544	5	10	20	20	0	0	0	0
46WWBE1#12	40103	Waste Water	545	5	10	20	50	0	0	0	0
46WWBE1#13	40103	Waste Water	546	10	10	20	50	0	0	0	0
46WWBE1#14	40103	Waste Water	547	0	10	20	50	0	0	0	0
46WWBE1#15	40103	Waste Water	548	5	10	0	50	0	0	0	0
46WWBE1#2	40103	Waste Water	533	0	10	20	50	0	0	0	0
46WWBE1#3	40103	Waste Water	534	20	10	0	100	0	0	0	0
46WWBE1#4	40103	Waste Water	535	5	10	0	50	0	0	0	0
46WWBE1#5	40103	Waste Water	536	5	10	0	50	0	0	0	0
46WWBE1#6	40103	Waste Water	537	5	10	0	50	0	0	0	0

46WWBE1#7	40103	Waste Water	580	5	10	20	100	0	0	0	0
46WWBE1#8	40103	Waste Water	581	5	10	0	50	0	0	0	0
46WWBE1#9	40103	Waste Water	582	5	10	20	50	0	0	0	0
46WWBR1#1	40103	Waste Water	549	5	10	0	50	0	0	0	0
46WWBR1#10	40103	Waste Water	560	5	10	20	20	0	0	0	0
46WWBR1#11	40103	Waste Water	561	5	10	0	20	0	0	0	20
46WWBR1#12	40103	Waste Water	594	5	25	20	20	0	0	0	80
46WWBR1#13	40103	Waste Water	595	5	0	20	50	0	0	0	80
46WWBR1#14	40103	Waste Water	596	0	0	20	100	0	0	0	0
46WWBR1#15	40103	Waste Water	597	20	10	20	50	0	0	0	0
46WWBR1#2	40103	Waste Water	584	5	10	20	50	0	0	0	0
46WWBR1#3	40103	Waste Water	585	15	10	0	50	0	0	0	0
46WWBR1#4	40103	Waste Water	592	5	10	20	100	0	0	0	80
46WWBR1#5	40103	Waste Water	593	5	10	20	50	0	0	0	80
46WWBR1#6	40103	Waste Water	556	5	0	20	50	0	0	0	0
46WWBR1#7	40103	Waste Water	557	5	10	20	50	0	0	0	0
46WWBR1#8	40103	Waste Water	558	5	0	20	50	0	0	0	0
46WWBR1#9	40103	Waste Water	559	5	10	20	50	0	0	0	0
46WWC1#1	60303	Waste Water	787	5	10	0	50	0	0	0	0
46WWC1#10	60303	Waste Water	800	0	10	0	50	0	0	0	0
46WWC1#11	60303	Waste Water	801	10	10	20	50	0	0	0	0
46WWC1#12	60303	Waste Water	802	5	25	20	50	0	0	0	0
46WWC1#13	60303	Waste Water	803	5	10	0	50	0	0	0	0
46WWC1#14	60303	Waste Water	804	5	25	0	50	0	0	0	0
46WWC1#15	60303	Waste Water	805	20	10	0	50	0	0	0	0
46WWC1#16	60303	Waste Water	806	20	0	0	50	0	0	0	0
46WWC1#17	60303	Waste Water	811	5	10	0	50	0	0	0	0
46WWC1#2	60303	Waste Water	788	5	10	0	50	0	0	0	0
46WWC1#3	60303	Waste Water	789	0	0	0	20	0	0	0	0
46WWC1#4	60303	Waste Water	790	0	10	0	50	0	0	0	0
46WWC1#5	60303	Waste Water	791	5	10	0	50	0	0	0	0
46WWC1#6	60303	Waste Water	792	10	25	0	50	0	0	0	0
46WWC1#7	60303	Waste Water	793	5	0	0	50	0	0	0	0
46WWC1#8	60303	Waste Water	794	5	25	0	50	0	0	0	0
46WWC1#9	60303	Waste Water	799	5	10	0	50	0	0	0	0
46WWD1#1	80503	Waste Water	1400	0	10	80	50	0	0	0	80
46WWD1#10	80503	Waste Water	1401	0	10	0	20	0	0	0	0
46WWD1#11	80503	Waste Water	1409	20	10	0	20	0	0	0	0
46WWD1#12	80503	Waste Water	1363	0	10	0	20	0	0	0	0
46WWD1#13	80503	Waste Water	1386	5	10	0	50	0	0	0	0
46WWD1#14	80503	Waste Water	1348	0	10	0	50	0	0	0	0
46WWD1#15	80503	Waste Water	1360	5	10	0	50	0	0	0	0
46WWD1#2	80503	Waste Water	1408	5	10	0	50	0	0	0	0
46WWD1#3	80503	Waste Water	1362	0	10	0	50	0	0	0	0
46WWD1#4	80503	Waste Water	1364	0	0	0	50	0	0	0	0
46WWD1#5	80503	Waste Water	1347	5	10	0	50	0	0	0	0
46WWD1#6	80503	Waste Water	1359	5	25	0	50	0	0	0	0
46WWD1#7	80503	Waste Water	1371	20	10	0	50	80	0	0	0
46WWD1#8	80503	Waste Water	1383	5	10	0	50	0	0	0	0
46WWD1#9	80503	Waste Water	1393	0	10	0	50	0	0	0	0
46WWM1#1	42203	Waste Water	708	0	10	0	50	0	0	0	0
46WWM1#10	42203	Waste Water	727	5	10	20	50	0	0	0	0
46WWM1#11	42203	Waste Water	714	5	10	0	50	0	0	0	0
46WWM1#12	42203	Waste Water	715	5	10	0	20	0	0	0	0
46WWM1#13	42203	Waste Water	716	5	10	80	50	0	0	0	80
46WWM1#14	42203	Waste Water	717	0	0	80	50	0	0	0	80
46WWM1#2	42203	Waste Water	709	5	10	20	100	0	0	0	0

46WWM1#3	42203	Waste Water	710	20	10	80	50	0	0	0	80
46WWM1#4	42203	Waste Water	711	5	10	20	100	0	0	0	0
46WWM1#5	42203	Waste Water	712	5	10	0	20	0	0	0	0
46WWM1#6	42203	Waste Water	713	5	10	0	50	0	0	0	0
46WWM1#7	42203	Waste Water	724	0	0	0	20	0	0	0	0
46WWM1#8	42203	Waste Water	725	0	10	20	20	0	0	0	0
46WWM1#9	42203	Waste Water	726	0	0	80	50	0	0	0	80
46WWY1#1	51303	Waste Water	732	5	0	0	50	0	0	0	0
46WWY1#10	51303	Waste Water	741	5	0	0	20	0	0	0	0
46WWY1#11	51303	Waste Water	742	20	100	0	20	0	0	0	0
46WWY1#12	51303	Waste Water	743	5	10	0	20	0	0	0	0
46WWY1#13	51303	Waste Water	744	20	25	0	20	0	0	0	0
46WWY1#2	51303	Waste Water	733	5	10	0	50	0	0	0	0
46WWY1#3	51303	Waste Water	734	5	0	0	50	0	0	0	0
46WWY1#4	51303	Waste Water	735	5	10	0	50	0	0	0	0
46WWY1#5	51303	Waste Water	736	5	10	0	50	0	0	0	0
46WWY1#6	51303	Waste Water	737	0	0	0	20	0	0	0	0
46WWY1#7	51303	Waste Water	738	20	100	0	20	0	5	20	0
46WWY1#8	51303	Waste Water	739	5	10	0	100	0	0	0	0
46WWY1#9	51303	Waste Water	740	5	0	0	20	0	0	0	0

## Appendix E. ARA Data for Unknowns from All Ecoregions

Sample	Collection Date	Source	Isolate Number	Antibiotics in ug/L							
				AMX	CEP	CHL	ERY	GEN	MOX	OFL	TET
17UBC/H#1	11304	KNOWN	2991	10	10	0	50	0	0	0	0
17UBC/H#10	11304	KNOWN	3002	5	10	0	20	0	0	0	0
17UBC/H#11	11304	KNOWN	3001	10	10	0	50	0	0	0	0
17UBC/H#12	11304	KNOWN	3000	10	10	0	20	0	0	0	0
17UBC/H#13	11304	KNOWN	2999	5	10	0	20	0	0	0	0
17UBC/H#14	11304	KNOWN	3014	5	10	0	50	0	0	0	0
17UBC/H#15	11304	KNOWN	3013	10	10	0	20	0	0	0	0
17UBC/H#16	11304	KNOWN	3012	5	10	0	20	0	0	0	0
17UBC/H#17	11304	KNOWN	3011	10	10	0	20	0	0	0	0
17UBC/H#18	11304	KNOWN	3010	5	10	0	20	0	0	0	0
17UBC/H#19	11304	KNOWN	3009	5	10	0	20	0	0	0	0
17UBC/H#2	11304	KNOWN	2990	10	10	0	20	0	0	0	0
17UBC/H#20	11304	KNOWN	3008	5	10	0	20	0	0	0	0
17UBC/H#21	11304	KNOWN	2381	10	10	20	50	0	0	0	0
17UBC/H#22	11304	KNOWN	2382	10	10	0	20	0	0	0	0
17UBC/H#23	11304	KNOWN	2383	10	10	0	50	0	0	0	0
17UBC/H#24	11304	KNOWN	2384	5	10	0	20	0	0	0	0
17UBC/H#25	11304	KNOWN	2389	10	10	0	50	0	0	0	0
17UBC/H#3	11304	KNOWN	2989	10	10	0	20	0	0	0	0
17UBC/H#4	11304	KNOWN	2988	10	10	0	50	0	0	0	0
17UBC/H#5	11304	KNOWN	2987	5	10	0	20	0	0	0	0
17UBC/H#6	11304	KNOWN	3006	10	10	0	20	0	0	0	0
17UBC/H#7	11304	KNOWN	3005	10	10	0	50	0	0	0	0
17UBC/H#8	11304	KNOWN	3004	10	10	0	20	0	0	0	0
17UBC/H#9	11304	KNOWN	3003	10	10	0	20	0	0	0	0
17UPCT1#1	42203	UNKNOWN		0	10	80	20	0	0	0	80
17UPCT1#2	42203	UNKNOWN		0	10	80	20	0	0	0	80
17UPCT1#3	42203	UNKNOWN		0	0	80	20	0	0	0	60
17UPCT1#4	42203	UNKNOWN		5	10	0	50	0	0	0	0
17UPCT1#5	42203	UNKNOWN		5	10	0	50	0	0	0	0
17UPCT1#6	42203	UNKNOWN		5	10	80	50	0	0	0	80
17UPCT1#7	42203	UNKNOWN		0	10	80	50	0	0	0	80
17UPCT1#8	42203	UNKNOWN		5	10	20	50	0	0	0	0
17UPCT1#9	42203	UNKNOWN		5	10	80	50	0	0	0	80
17UPCT1#10	42203	UNKNOWN		5	10	0	50	0	0	0	0
17UPCT1#11	42203	UNKNOWN		5	10	80	50	0	0	0	80
17UPCT1#12	42203	UNKNOWN		5	10	0	50	0	0	0	0
17UPCT1#13	42203	UNKNOWN		5	10	40	50	0	0	0	0
17UPCT1#14	42203	UNKNOWN		5	10	80	50	0	0	0	80
17UPCT1#15	42203	UNKNOWN		5	10	80	50	0	0	0	80
17USCT1A#6	42203	UNKNOWN		5	10	40	50	0	0	0	0
42UBC#1	11304	KNOWN	2739	10	50	0	20	0	0	0	0
42UBC#10	11304	KNOWN	2752	10	50	0	20	0	0	0	0
42UBC#11	11304	KNOWN	2753	10	50	0	20	0	0	0	0
42UBC#12	11304	KNOWN	2754	10	50	0	20	0	0	0	0
42UBC#13	11304	KNOWN	2755	10	50	0	20	0	0	0	0
42UBC#14	11304	KNOWN	2760	10	50	0	20	0	0	0	0
42UBC#15	11304	KNOWN	2761	10	50	0	20	0	0	0	0
42UBC#16	11304	KNOWN	2762	10	50	0	20	0	0	0	0
42UBC#17	11304	KNOWN	2763	10	50	0	20	0	0	0	0
42UBC#18	11304	KNOWN	2764	10	50	0	20	0	0	0	0
42UBC#19	11304	KNOWN	2765	10	50	0	20	0	0	0	0

42UBC#2	11304	KNOWN	2740	10	25	0	20	0	0	0	0
42UBC#20	11304	KNOWN	2766	10	50	0	20	0	0	0	0
42UBC#21	11304	KNOWN	2767	10	50	0	20	0	0	0	0
42UBC#22	11304	KNOWN	2696	10	25	0	20	0	0	0	0
42UBC#23	11304	KNOWN	2697	10	50	0	20	0	0	0	0
42UBC#24	11304	KNOWN	2698	5	10	0	50	0	0	0	0
42UBC#25	11304	KNOWN	2699	10	25	0	20	0	0	0	0
42UBC#3	11304	KNOWN	2741	10	50	0	20	0	0	0	0
42UBC#4	11304	KNOWN	2742	0	0	0	20	0	0	0	0
42UBC#5	11304	KNOWN	2743	10	100	0	20	0	5	0	0
42UBC#6	11304	KNOWN	2748	10	100	0	20	0	5	0	0
42UBC#7	11304	KNOWN	2749	10	50	0	20	0	0	0	0
42UBC#8	11304	KNOWN	2750	10	50	0	20	0	0	0	0
42UBC#9	11304	KNOWN	2751	10	50	0	20	0	0	0	0
42UCHAT#1	11304	UNKNOWN	2520	0	0	0	20	0	0	0	0
42UCHAT#10	11304	UNKNOWN	2533	0	10	0	20	0	0	0	0
42UCHAT#11	11304	UNKNOWN	2496	0	0	0	20	0	0	0	0
42UCHAT#12	11304	UNKNOWN	2497	0	0	0	20	0	0	0	0
42UCHAT#13	11304	UNKNOWN	2498	0	0	0	20	0	0	0	0
42UCHAT#14	11304	UNKNOWN	2499	5	25	20	20	0	0	0	20
42UCHAT#15	11304	UNKNOWN	2500	5	10	0	20	0	0	0	0
42UCHAT#16	11304	UNKNOWN	2501	0	25	0	20	0	0	0	0
42UCHAT#17	11304	UNKNOWN	2502	0	0	0	20	0	0	0	0
42UCHAT#18	11304	UNKNOWN	2503	0	0	0	0	0	0	0	0
42UCHAT#19	11304	UNKNOWN	2508	5	10	0	20	0	0	0	0
42UCHAT#2	11304	UNKNOWN	2521	0	0	0	20	0	0	0	0
42UCHAT#20	11304	UNKNOWN	2509	0	0	0	20	0	0	0	0
42UCHAT#21	11304	UNKNOWN	2510	10	10	0	20	0	0	0	0
42UCHAT#22	11304	UNKNOWN	2511	10	10	0	50	0	0	0	0
42UCHAT#23	11304	UNKNOWN	2512	0	0	0	20	0	0	0	0
42UCHAT#24	11304	UNKNOWN	2513	5	10	80	20	0	0	0	80
42UCHAT#25	11304	UNKNOWN	2514	5	25	0	20	0	0	0	0
42UCHAT#3	11304	UNKNOWN	2522	0	10	0	50	0	0	0	0
42UCHAT#4	11304	UNKNOWN	2523	5	10	80	20	0	0	0	80
42UCHAT#5	11304	UNKNOWN	2524	0	10	0	20	0	0	0	0
42UCHAT#6	11304	UNKNOWN	2525	5	10	0	20	0	0	0	0
42UCHAT#7	11304	UNKNOWN	2526	5	10	0	20	0	0	0	0
42UCHAT#8	11304	UNKNOWN	2527	0	0	0	20	0	0	0	0
42UCHAT#9	11304	UNKNOWN	2532	0	0	0	20	0	0	0	0
43UBC#1	11304	KNOWN	2390	5	10	0	20	0	0	0	0
43UBC#10	11304	KNOWN	2402	5	25	20	20	0	0	0	0
43UBC#11	11304	KNOWN	2403	10	25	20	50	0	0	0	0
43UBC#12	11304	KNOWN	2404	5	25	0	20	0	0	0	0
43UBC#13	11304	KNOWN	2405	10	25	20	50	0	0	0	0
43UBC#14	11304	KNOWN	2406	10	25	0	20	0	0	0	0
43UBC#15	11304	KNOWN	2407	5	25	20	20	0	0	0	0
43UBC#16	11304	KNOWN	2412	5	10	0	20	0	0	0	0
43UBC#17	11304	KNOWN	2413	5	10	0	20	0	0	0	0
43UBC#18	11304	KNOWN	2414	5	25	0	20	0	0	0	0
43UBC#19	11304	KNOWN	2415	5	25	0	20	0	0	0	0
43UBC#2	11304	KNOWN	2391	5	25	20	20	0	0	0	0
43UBC#20	11304	KNOWN	2416	10	25	0	50	0	0	0	0
43UBC#21	11304	KNOWN	2417	10	25	0	50	0	0	0	0
43UBC#22	11304	KNOWN	2418	5	10	20	20	0	0	0	0
43UBC#23	11304	KNOWN	2419	15	25	80	20	0	0	0	20
43UBC#24	11304	KNOWN	2424	5	10	0	20	0	0	0	0
43UBC#25	11304	KNOWN	2425	5	10	20	50	0	0	0	0



43UBC#3	11304	KNOWN	2392	5	25	20	20	0	0	0	0
43UBC#4	11304	KNOWN	2393	5	10	20	20	0	0	0	0
43UBC#5	11304	KNOWN	2394	5	10	0	0	0	0	0	0
43UBC#6	11304	KNOWN	2395	5	25	0	20	0	0	0	0
43UBC#7	11304	KNOWN	2396	10	10	0	20	0	0	0	0
43UBC#8	11304	KNOWN	2400	5	10	0	20	0	0	0	0
43UBC#9	11304	KNOWN	2401	10	25	20	50	0	0	0	0
43UCOTT#1	11304	UNKNOWN	2426	5	10	0	20	0	0	0	0
43UCOTT#10	11304	UNKNOWN	2364	5	10	0	20	0	0	0	0
43UCOTT#11	11304	UNKNOWN	2966	5	10	0	20	0	0	0	0
43UCOTT#12	11304	UNKNOWN	2965	5	10	0	20	0	0	0	0
43UCOTT#13	11304	UNKNOWN	2964	0	10	0	20	0	0	0	0
43UCOTT#14	11304	UNKNOWN	2963	5	10	0	20	0	0	0	0
43UCOTT#15	11304	UNKNOWN	2982	5	10	0	20	0	0	0	0
43UCOTT#16	11304	UNKNOWN	2981	5	10	0	20	0	0	0	0
43UCOTT#17	11304	UNKNOWN	2980	5	10	0	20	0	0	0	0
43UCOTT#18	11304	UNKNOWN	2979	5	10	0	20	0	0	0	0
43UCOTT#19	11304	UNKNOWN	2978	5	10	0	20	0	0	0	0
43UCOTT#2	11304	UNKNOWN	2427	5	10	0	50	0	0	0	0
43UCOTT#20	11304	UNKNOWN	2977	5	10	0	20	0	0	0	0
43UCOTT#21	11304	UNKNOWN	2976	5	10	0	20	0	0	0	0
43UCOTT#22	11304	UNKNOWN	2975	5	10	0	20	0	0	0	0
43UCOTT#23	11304	UNKNOWN	2994	5	0	0	20	0	0	0	0
43UCOTT#24	11304	UNKNOWN	2993	5	10	0	20	0	0	0	0
43UCOTT#25	11304	UNKNOWN	2992	5	10	0	20	0	0	0	0
43UCOTT#3	11304	UNKNOWN	2428	5	10	20	20	0	0	0	0
43UCOTT#4	11304	UNKNOWN	2429	5	10	0	20	0	0	0	0
43UCOTT#5	11304	UNKNOWN	2430	5	10	0	20	0	0	0	0
43UCOTT#6	11304	UNKNOWN	2431	5	10	20	20	0	0	0	0
43UCOTT#7	11304	UNKNOWN	2361	5	25	0	20	0	0	0	0
43UCOTT#8	11304	UNKNOWN	2362	5	10	0	50	0	0	0	0
43UCOTT#9	11304	UNKNOWN	2363	5	10	20	20	0	0	0	0
46UBC#1	11304	KNOWN	2946	5	10	0	20	0	0	0	0
46UBC#10	11304	KNOWN	2957	5	10	0	20	0	0	0	0
46UBC#11	11304	KNOWN	2956	5	10	0	50	0	0	0	0
46UBC#12	11304	KNOWN	2955	5	10	0	20	0	0	0	0
46UBC#13	11304	KNOWN	2954	0	0	0	20	0	0	0	0
46UBC#14	11304	KNOWN	2953	0	10	0	20	0	0	0	0
46UBC#15	11304	KNOWN	2952	5	10	0	50	0	0	0	0
46UBC#16	11304	KNOWN	2951	5	10	0	50	0	0	0	0
46UBC#17	11304	KNOWN	2970	5	0	0	50	0	0	0	0
46UBC#18	11304	KNOWN	2969	5	10	0	50	0	0	0	0
46UBC#19	11304	KNOWN	2968	5	0	0	20	0	0	0	0
46UBC#2	11304	KNOWN	2945	5	10	0	20	0	0	0	0
46UBC#20	11304	KNOWN	2967	5	10	0	20	0	0	0	0
46UBC#21	11304	KNOWN	2730	0	10	0	20	0	0	0	0
46UBC#22	11304	KNOWN	2731	0	10	0	20	0	0	0	0
46UBC#23	11304	KNOWN	2736	0	10	0	50	0	0	0	0
46UBC#24	11304	KNOWN	2737	5	10	0	20	0	0	0	0
46UBC#25	11304	KNOWN	2738	5	25	0	50	0	5	0	0
46UBC#3	11304	KNOWN	2944	5	10	0	50	0	0	0	0
46UBC#4	11304	KNOWN	2943	5	10	0	20	0	0	0	0
46UBC#5	11304	KNOWN	2942	5	10	0	50	0	0	0	0
46UBC#6	11304	KNOWN	2941	5	25	0	20	0	0	0	0
46UBC#7	11304	KNOWN	2940	5	10	0	50	0	0	0	0
46UBC#8	11304	KNOWN	2939	5	25	0	50	0	0	0	0
46UBC#9	11304	KNOWN	2958	5	10	0	20	0	0	0	0

46UDEER#1	11304	UNKNOWN	2693	10	25	0	20	0	0	0	0
46UDEER#10	11304	UNKNOWN	2706	5	10	0	20	0	0	0	0
46UDEER#11	11304	UNKNOWN	2707	5	0	20	20	0	0	0	0
46UDEER#12	11304	UNKNOWN	2712	5	10	0	50	0	0	0	0
46UDEER#13	11304	UNKNOWN	2713	5	10	20	50	0	0	0	20
46UDEER#14	11304	UNKNOWN	2714	5	10	0	20	0	0	0	0
46UDEER#15	11304	UNKNOWN	2715	5	10	0	20	0	0	0	0
46UDEER#16	11304	UNKNOWN	2716	10	10	0	50	0	0	0	0
46UDEER#17	11304	UNKNOWN	2717	5	10	0	50	0	0	0	0
46UDEER#18	11304	UNKNOWN	2718	5	10	0	50	0	0	0	0
46UDEER#19	11304	UNKNOWN	2719	5	10	0	20	0	0	0	0
46UDEER#2	11304	UNKNOWN	2694	5	25	0	50	0	0	0	0
46UDEER#20	11304	UNKNOWN	2724	5	10	0	20	0	0	0	0
46UDEER#21	11304	UNKNOWN	2725	5	10	20	50	0	0	0	0
46UDEER#22	11304	UNKNOWN	2726	0	10	0	20	0	0	0	0
46UDEER#23	11304	UNKNOWN	2727	5	10	20	20	0	0	0	0
46UDEER#24	11304	UNKNOWN	2728	5	10	0	50	0	0	0	0
46UDEER#25	11304	UNKNOWN	2729	5	10	80	20	0	0	0	80
46UDEER#3	11304	UNKNOWN	2695	5	10	0	50	0	0	0	0
46UDEER#4	11304	UNKNOWN	2700	5	10	0	20	0	0	0	0
46UDEER#5	11304	UNKNOWN	2701	0	10	20	0	0	0	0	0
46UDEER#6	11304	UNKNOWN	2702	5	10	0	20	0	0	0	0
46UDEER#7	11304	UNKNOWN	2703	5	10	0	50	0	0	0	0
46UDEER#8	11304	UNKNOWN	2704	5	10	0	20	0	0	0	0
46UDEER#9	11304	UNKNOWN	2705	5	10	0	50	0	0	0	0

## APPENDIX F. QA/QC ARA Analysis

ISOLATE	DATE	SOURCE	AMX	CEP	CHL	ERY	GEN	MOX	OFL	TET
	mmddyy		ug/ml	ug/ml	ug/ml	ug/ml	ug/ml	ug/ml	ug/ml	ug/ml
17BCBC1#2	51303	Beefcow	5	10	0	50	0	0	0	0
17BCBCQ1#2	51303	Beefcow	10	10	20	50	0	0	0	0
17BCBC10#4	11304	Beefcow	5	10	0	20	0	0	0	0
17BCBCQ10#4	11304	Beefcow	5	10	0	20	0	0	0	0
17BCBC11#4	11304	Beefcow	0	0	0	20	0	0	0	0
17BCBCQ11#4	11304	Beefcow	0	0	0	20	0	0	0	0
17BCBC3#3	40103	Beefcow	10	25	80	50	0	0	0	80
17BCBCQ3#3	40103	Beefcow	10	25	60	50	0	0	0	80
17BCBC6#3	11304	Beefcow	20	10	80	50	0	0	0	80
17BCBCQ6#3	11304	Beefcow	20	10	80	50	0	0	0	80
17BCBFR1#4	21403	Beefcow	5	0	60	50	0	0	0	20
17BCBFRQ1#4	40103	Beefcow	5	10	20	50	0	0	0	0
17BCBL2#5	120203	Beefcow	5	0	80	50	0	5	0	80
17BCBLQ2#5	120203	Beefcow	5	0	80	50	0	0	0	80
17BCBL4#1	120203	Beefcow	5	10	0	50	0	0	0	0
17BCBLQ4#1	120203	Beefcow	5	10	0	50	0	5	0	0
17CCL10#3	11304	Cat	5	10	0	20	0	0	0	0
17CCLQ10#3	11304	Cat	5	10	0	20	0	0	0	0
17CCL11#5	11304	Cat	20	10	0	20	0	0	0	0
17CCLQ11#5	11304	Cat	20	10	0	20	0	0	0	0
17CCL18#1	11304	Cat	5	10	0	20	0	0	0	0
17CCLQ18#1	11304	Cat	5	10	0	20	0	0	0	0
17CCL6#1	11304	Cat	5	10	20	20	0	0	0	0
17CCLQ6#1	11304	Cat	5	10	20	20	0	0	0	0
17CCL7#3	11304	Cat	5	10	0	20	0	0	0	0
17CCLQ7#3	11304	Cat	5	10	0	20	0	0	0	0
17CCC2#3	71503	Cat	0	10	0	20	0	0	0	0
17CCCQ2#3	80503	Cat	0	10	0	50	0	0	0	0
17DCDL2#2	40103	Dairycow	5	10	40	100	0	0	0	20
17DCDLQ2#2	40103	Dairycow	5	10	20	100	0	0	0	0

17DCDC5#3	11304	Dairycow	5	10	80	20	0	0	0	80
17DCDCQ5#3	11304	Dairycow	5	10	80	20	0	0	0	80
17DDC1#4	71503	Dog	0	10	0	50	0	0	0	0
17DDCQ1#4	80503	Dog	0	0	0	50	0	0	0	0
17DDC2#5	71503	Dog	5	10	0	50	0	0	0	0
17DDCQ2#5	71503	Dog	10	10	0	50	0	0	0	0
17DDC4#3	71503	Dog	5	10	0	50	0	0	0	0
17DDCQ4#3	80503	Dog	10	25	0	100	0	0	0	0
17DDL11#5	11304	Dog	10	10	0	20	0	0	0	0
17DDLQ11#5	11304	Dog	10	10	0	20	0	0	0	0
17DDL12#4	11304	Dog	5	25	0	20	0	0	0	0
17DDLQ12#4	11304	Dog	5	25	0	20	0	0	0	0
17HHC2#5	11304	Horse	0	0	20	20	0	0	0	0
17HHCQ2#5	11304	Horse	0	0	20	20	0	0	0	0
17HHC4#3	11304	Horse	5	25	80	50	0	0	0	80
17HHCQ4#3	11304	Horse	5	25	80	50	0	0	0	0
17HHC6#2	11304	Horse	5	10	0	50	0	0	0	0
17HHCQ6#2	11304	Horse	5	10	0	50	0	0	0	0
17HHC7#1	11304	Horse	5	10	80	20	0	0	0	80
17HHCQ7#1	11304	Horse	5	10	80	20	0	0	0	80
17HHL2#1	11304	Horse	5	10	0	20	0	0	0	0
17HHLQ2#1	11304	Horse	5	10	0	20	0	0	0	0
17HHL4#2	11304	Horse	5	10	0	20	0	0	0	0
17HHLQ4#2	11304	Horse	5	10	0	20	0	0	0	0
17HHL5#5	11304	Horse	20	10	80	20	0	0	0	80
17HHLQ5#5	11304	Horse	20	10	80	20	0	0	0	80
17HHPW1#5	11304	Horse	5	10	0	50	0	0	0	0
17HHPWQ1#5	11304	Horse	5	10	0	50	0	0	0	0
17HHPW2#4	11304	Horse	5	0	0	20	0	0	0	0
17HHPWQ2#4	11304	Horse	5	0	0	20	0	0	0	0
17PPC1#1	13003	Pig	0	10	0	50	0	0	0	0
17PPCQ1#1	82603	Pig	5	10	0	50	0	0	0	0
17PPC5#2	11304	Pig	0	0	80	0	0	0	0	80
17PPCQ5#2	11304	Pig	0	0	80	0	0	0	0	80

17PPC8#1	11304	Pig	5	25	80	20	0	0	0	80
17PPCQ8#1	11304	Pig	5	25	80	20	0	0	0	80
17PPL10#3	11304	Pig	5	10	20	20	0	0	0	0
17PPLQ10#3	11304	Pig	5	10	20	20	0	0	0	0
17PPL5#3	120203	Pig	10	0	0	50	0	5	0	0
17PPLQ5#3	120203	Pig	5	0	0	50	0	0	0	0
17PPL6#1	120203	Pig	5	10	80	50	0	0	0	80
17PPLQ6#1	120203	Pig	5	0	80	50	0	0	0	80
17PPL9#1	120203	Pig	5	10	0	50	0	0	0	0
17PPLQ9#1	11304	Pig	0	10	80	0	0	0	0	80
17PPPW3#2	11304	Pig	5	10	0	20	0	0	0	0
17PPPWQ3#2	11304	Pig	5	10	0	20	0	0	0	0
17SSC1#5	21403	Sheep	5	10	0	20	0	0	0	0
17SSCQ1#5	82603	Sheep	0	10	0	20	0	0	0	0
17SSC2#1	21403	Sheep	5	10	20	20	0	0	0	0
17SSCQ2#1	82603	Sheep	5	10	20	20	0	0	0	0
17SSC4#4	11304	Sheep	10	25	20	20	0	0	0	0
17SSCQ4#4	11304	Sheep	10	25	20	20	0	0	0	0
17SSC6#1	11304	Sheep	5	10	20	50	0	0	0	0
17SSCQ6#1	11304	Sheep	5	0	20	50	0	0	0	0
17SSC7#1	11304	Sheep	20	10	80	50	20	0	0	80
17SSCQ7#1	11304	Sheep	20	10	80	50	20	0	0	80
17SSC8#4	11304	Sheep	5	0	80	20	0	0	0	80
17SSCQ8#4	11304	Sheep	5	0	80	20	0	0	0	80
17SSC9#4	11304	Sheep	5	10	40	50	0	0	0	0
17SSCQ9#4	11304	Sheep	5	10	40	50	0	0	0	0
17SSL4#1	120203	Sheep	0	0	80	50	0	0	0	80
17SSLQ4#1	120203	Sheep	5	10	80	50	0	5	0	80
17SSL4#4	120203	Sheep	0	0	80	50	0	0	0	80
17SSLQ4#4	120203	Sheep	0	0	80	50	0	5	0	80
17UBC/H#15	11304	SUSPECT	10	10	0	20	0	0	0	0
17UBC/HQ#15	11304	SUSPECT	10	10	0	20	0	0	0	0
17UBC/H#18	11304	SUSPECT	5	10	0	20	0	0	0	0

17UBC/HQ#18	11304	SUSPECT	5	10	0	20	0	0	0	0
17UBC/H#23	11304	SUSPECT	10	10	0	50	0	0	0	0
17UBC/HQ#23	11304	SUSPECT	10	10	0	50	0	0	0	0
17UBC/H#4	11304	SUSPECT	10	10	0	50	0	0	0	0
17UBC/HQ#4	11304	SUSPECT	10	10	0	50	0	0	0	0
17WWFR1#1	71503	Human	5	0	20	20	0	0	0	0
17WWFRQ1#1	80503	Human	5	0	20	20	0	0	0	0
17WWFR1#19	62403	Human	0	10	80	50	40	0	0	80
17WWFRQ1#19	62403	Human	5	10	80	50	60	0	0	80
17WWFR1#24	71503	Human	0	0	0	20	0	0	0	0
17WWFRQ1#24	80503	Human	0	0	0	50	0	0	0	0
17WWFR1#40	62403	Human	20	25	20	50	0	0	0	0
17WWFRQ1#40	62403	Human	20	25	20	20	0	0	0	0
17WWL1#15	120203	Human	5	10	0	50	0	0	0	0
17WWLQ1#15	120203	Human	10	10	0	50	0	0	0	0
17WWL1#2	120203	Human	5	10	0	50	0	0	0	0
17WWLQ1#2	120203	Human	5	10	0	20	0	0	0	0
17WWL1#28	120203	Human	20	10	80	50	0	0	0	80
17WWLQ1#28	120203	Human	20	10	80	50	0	0	0	80
17WWL1#42	120203	Human	5	10	0	50	0	5	0	0
17WWLQ1#42	120203	Human	5	10	0	50	0	5	0	0
17WWL1#49	120203	Human	5	10	0	50	0	0	0	0
17WWLQ1#49	120203	Human	5	0	0	50	0	0	0	0
42BCBB2#5	102803	Beefcow	10	25	80	20	0	0	0	80
42BCBBQ2#5	102803	Beefcow	10	25	80	20	0	0	0	80
42BCBCM1#5	31303	Beefcow	5	10	40	20	0	0	0	20
42BCBCM1#5	40103	Beefcow	5	25	60	50	0	0	0	20
42BCBMC1#3	120203	Beefcow	5	10	20	100	0	0	0	0
42BCBMC1#3	120203	Beefcow	5	10	0	50	0	0	0	0
42CCH10#4	11304	Cat	20	25	0	20	0	0	0	0
42CCHQ10#4	11304	Cat	20	25	0	20	0	0	0	0
42CCH16#5	11304	Cat	10	10	20	20	0	0	0	0
42CCHQ16#5	11304	Cat	10	10	20	20	0	0	0	0

42CCH17#3	11304	Cat	10	25	80	50	0	0	0	40
42CCHQ17#3	11304	Cat	10	25	80	50	0	0	0	40
42CCH18#4	11304	Cat	5	10	0	20	0	0	0	0
42CCHQ18#4	11304	Cat	5	10	0	20	0	0	0	0
42CCH20#2	11304	Cat	0	10	0	20	0	0	0	0
42CCHQ20#2	11304	Cat	0	10	0	20	0	0	0	0
42CCH7#1	11304	Cat	5	10	0	20	0	0	0	0
42CCHQ7#1	11304	Cat	5	10	0	20	0	0	0	0
42CCH9#3	11304	Cat	5	10	0	20	0	0	0	0
42CCHQ9#3	11304	Cat	5	10	0	20	0	0	0	0
42ChChJ1#1	60303	Chicken	5	10	0	20	0	0	0	0
42ChChJQ1#1	62403	Chicken	5	25	20	50	0	0	0	0
42DCDB1#1	31303	Dairycow	10	10	20	50	0	0	0	0
42DCDBQ1#1	40103	Dairycow	10	25	40	50	0	0	0	0
42DCDB2#4	31303	Dairycow	5	10	0	50	0	0	0	0
42DCDBQ2#4	40103	Dairycow	5	25	20	50	0	0	0	0
42DCDG3#1	120203	Dairycow	5	10	80	50	0	0	0	80
42DCDGQ3#1	120203	Dairycow	5	10	80	50	0	0	0	80
42DCDW1#3	102803	Dairycow	5	25	0	50	0	0	0	0
42DCDWQ1#3	102803	Dairycow	5	25	0	50	0	0	0	0
42DCDW2#2	11304	Dairycow	5	10	0	20	0	0	0	0
42DCDWQ2#2	11304	Dairycow	5	10	0	20	0	0	0	0
42DDH10#5	11304	Dog	5	10	20	20	0	0	0	0
42DDHQ10#5	11304	Dog	5	10	20	20	0	0	0	0
42DDH15#1	11304	Dog	20	25	0	20	0	0	0	0
42DDHQ15#1	11304	Dog	20	25	0	20	0	0	0	0
42DDH15#5	11304	Dog	20	10	0	20	0	0	0	0
42DDHQ15#5	11304	Dog	20	10	0	20	0	0	0	0
42DDH18#1	11304	Dog	5	10	20	20	0	0	0	0
42DDHQ18#1	11304	Dog	5	10	20	20	0	0	0	0
42DDH21#4	11304	Dog	5	10	20	20	0	0	0	0
42DDHQ21#4	11304	Dog	5	10	20	20	0	0	0	0
42DDH9#3	120203	Dog	15	10	0	50	0	0	0	0
42DDHQ9#3	120203	Dog	10	10	0	50	0	0	0	0

42PPA1#1	31303	Pig	0	10	80	50	0	0	0	80
42PPAQ1#1	40103	Pig	5	10	80	50	0	0	0	80
42PPB2#5	62403	Pig	5	10	80	50	60	0	0	80
42PPBQ2#5	62403	Pig	5	10	80	50	40	0	0	80
42PPCM2#1	31303	Pig	20	10	80	200	0	0	0	80
42PPCMQ2#1	40103	Pig	20	10	80	200	0	0	0	80
42PPCM2#2	31303	Pig	20	25	80	50	0	0	0	80
42PPCMQ2#2	40103	Pig	20	25	80	100	0	0	0	80
42PPJ3#4	11304	Pig	20	10	80	20	0	0	0	80
42PPJQ3#4	11304	Pig	20	10	80	20	0	0	0	80
42PPMC1#2	11304	Pig	0	0	0	20	0	0	0	0
42PPMCQ1#2	11304	Pig	0	0	0	20	0	0	0	0
42PPMC1#4	11304	Pig	0	0	0	20	0	0	0	0
42PPMCQ1#4	40103	Pig	20	25	80	100	0	0	0	80
42PPP1#5	120203	Pig	0	0	80	20	0	0	0	80
42PPPQ1#5	120203	Pig	0	0	80	20	0	0	0	80
42PPS1#3	120203	Pig	20	0	80	50	0	0	0	80
42PPSQ1#3	120203	Pig	20	10	80	50	0	0	0	80
42SSB1#2	30304	Sheep	20	25	80	50	0	0	0	80
42SSBQ1#2	120203	Sheep	20	10	80	50	0	5	0	80
42SSB2#1	120203	Sheep	5	10	80	50	0	0	0	80
42SSBQ2#1	120203	Sheep	5	10	80	50	0	0	0	80
42SSCM1#4	120203	Sheep	5	10	40	50	0	5	0	80
42SSCMQ1#4	120203	Sheep	5	10	40	50	0	0	0	80
42SSH1#1	120203	Sheep	20	10	60	50	0	0	0	80
42SSHQ1#1	120203	Sheep	20	10	60	50	0	0	0	80
42SSH2#1	120203	Sheep	20	100	80	50	0	0	0	80
42SSHQ2#1	120203	Sheep	20	100	80	50	0	20	0	80
42SSHY2#5	120203	Sheep	5	10	20	50	0	0	0	20
42SSHYQ2#5	120203	Sheep	5	10	20	50	0	0	0	20
42SSHY3#4	120203	Sheep	5	0	0	20	0	0	0	0
42SSHYQ3#4	120203	Sheep	5	10	0	20	0	0	0	0
42SSMC1#1	120203	Sheep	0	0	80	50	0	0	0	80



42SSMCQ1#1	120203	Sheep	0	10	80	50	0	0	0	80
42TTB2#2	71503	Turkey	0	0	80	50	0	0	0	80
42TTBQ2#2	80503	Turkey	0	10	80	50	0	0	0	80
42TTCM2#5	31303	Turkey	20	10	60	20	0	0	0	80
42TTCMQ2#5	40103	Turkey	20	10	80	50	0	0	0	80
42TTE2#4	40103	Turkey	5	10	80	50	40	0	0	80
42TTEQ2#4	40103	Turkey	0	10	80	50	20	0	0	80
42TTE4#3	40103	Turkey	5	10	80	50	0	0	0	80
42TTEQ4#3	40103	Turkey	5	10	80	50	0	0	0	80
42TTJ1#3	60303	Turkey	0	10	80	50	0	0	0	80
42TTJQ1#3	62403	Turkey	0	10	80	50	0	0	0	80
42UBC#1	11304	SUSPECT	10	50	0	20	0	0	0	0
42UBCQ#1	11304	SUSPECT	10	50	0	20	0	0	0	0
42UBC#15	11304	SUSPECT	10	50	0	20	0	0	0	0
42UBCQ#15	11304	SUSPECT	10	50	0	20	0	0	0	0
42UBC#20	11304	SUSPECT	10	50	0	20	0	0	0	0
42UBCQ#20	11304	SUSPECT	10	50	0	20	0	0	0	0
42UBC#8	11304	SUSPECT	10	50	0	20	0	0	0	0
42UBCQ#8	11304	SUSPECT	10	50	0	20	0	0	0	0
42UCHAT#1	11304	UNKNOWN	0	0	0	20	0	0	0	0
42UCHATQ#1	11304	UNKNOWN	0	0	0	20	0	0	0	0
42UCHAT#16	11304	UNKNOWN	0	25	0	20	0	0	0	0
42UCHATQ#16	11304	UNKNOWN	0	25	0	20	0	0	0	0
42WWH1#16	40103	Human	5	10	20	50	0	0	0	0
42WWHQ1#16	40103	Human	5	10	20	50	0	0	0	0
42WWH1#24	40103	Human	20	10	20	50	0	0	0	0
42WWHQ1#24	40103	Human	20	25	20	50	0	0	0	40
42WWH1#26	40103	Human	5	10	20	50	0	0	0	0
42WWH1#26	40103	Human	5	10	20	50	0	0	0	0
42WWH1#4	40103	Human	5	0	20	20	0	0	0	0
42WWHQ1#4	40103	Human	5	0	20	20	0	0	0	0
42WWW1#15	40103	Human	10	25	20	100	0	0	0	0
42WWWQ1#15	40103	Human	5	25	40	50	20	0	0	80

42WWW1#30	40103	Human	5	10	20	50	0	0	0	0
42WWWQ1#30	40103	Human	5	25	40	100	0	0	0	0
42WWW1#3	40103	Human	10	10	20	100	0	0	0	0
42WWWQ1#3	40103	Human	10	25	40	100	0	0	0	0
43BCBH2#5	21403	Beefcow	5	10	20	100	0	0	0	0
43BCBHQ2#5	82603	Beefcow	5	25	0	100	0	0	0	0
43BCBJA1#2	13003	Beefcow	5	25	0	50	0	0	0	0
43BCBJAQ1#2	82603	Beefcow	5	10	0	50	0	0	0	0
43BCBL1#5	120203	Beefcow	0	0	80	20	0	0	0	80
43BCBLQ1#5	120203	Beefcow	5	10	80	20	0	0	0	80
43BCBL2#3	120203	Beefcow	5	10	0	50	0	0	0	0
43BCBLQ2#3	120203	Beefcow	5	0	0	50	0	0	0	0
43BCBM1#4	13003	Beefcow	5	25	0	50	0	0	0	0
43BCBMQ1#4	82603	Beefcow	5	10	0	50	0	0	0	0
43BCBM2#1	21403	Beefcow	5	10	80	50	0	0	0	80
43BCBMQ2#1	82603	Beefcow	5	10	0	50	0	0	0	0
43BCBPE1#2	40103	Beefcow	15	10	80	50	0	0	0	80
43BCBPEQ1#2	40103	Beefcow	15	10	80	50	0	0	0	80
43BCBP1#3	13003	Beefcow	10	10	0	100	0	0	0	0
43BCBPQ1#3	82603	Beefcow	5	10	0	50	0	0	0	0
43CCPE12#1	11304	Cat	5	10	0	20	0	0	0	0
43CCPEQ12#1	11304	Cat	5	10	0	20	0	0	0	0
43CCPE14#1	11304	Cat	5	10	0	20	0	0	0	0
43CCPEQ14#1	11304	Cat	5	10	0	20	0	0	0	0
43CCPE15#3	11304	Cat	5	10	0	20	0	0	0	0
43CCPEQ15#3	11304	Cat	5	10	0	20	0	0	0	0
43CCPE16#3	11304	Cat	5	10	0	20	0	0	0	0
43CCPEQ16#3	11304	Cat	5	10	0	20	0	0	0	0
43CCPE19#5	11304	Cat	5	10	20	50	0	0	0	0
43CCPEQ19#5	11304	Cat	5	10	20	50	0	0	0	0
43CCPE2#5	71503	Cat	10	10	0	20	0	0	0	0
43CCPEQ2#5	71503	Cat	10	10	0	20	0	0	0	0
43CCPE3#5	71503	Cat	0	10	0	50	0	0	0	0
43CCPEQ3#5	71503	Cat	0	0	0	20	0	0	0	0

43CCPE9#2	11304	Cat	5	10	0	20	0	0	0	0
43CCPEQ9#2	11304	Cat	5	10	0	20	0	0	0	0
43DCDB3#1	91802	Dairycow	5	10	0	50	0	0	0	0
43DCDBQ3#1	82603	Dairycow	5	10	0	50	0	0	0	0
43DDPE10#2	11304	Dog	0	0	0	20	0	0	0	0
43DDPEQ10#2	11304	Dog	0	0	0	20	0	0	0	0
43DDPE12#1	11304	Dog	5	25	40	50	0	0	0	0
43DDPEQ12#1	11304	Dog	5	25	40	50	0	0	0	0
43DDPE13#2	11304	Dog	5	10	40	50	0	0	0	0
43DDPEQ13#2	11304	Dog	5	10	40	50	0	0	0	0
43DDPE17#5	11304	Dog	20	10	40	20	0	0	0	0
43DDPEQ17#5	11304	Dog	20	10	40	20	0	0	0	0
43DDPE19#2	11304	Dog	5	10	20	50	0	0	0	0
43DDPEQ19#2	11304	Dog	5	10	20	50	0	0	0	0
43DDPE2#1	71503	Dog	0	10	0	100	0	0	0	0
43DDPEQ2#1	71503	Dog	0	10	0	50	0	0	0	0
43DDPE3#4	71503	Dog	0	10	0	50	0	0	0	0
43DDPEQ3#4	80503	Dog	0	10	0	50	0	0	0	0
43DDPE4#1	30304	Dog	20	50	20	20	0	0	0	0
43DDPEQ4#1	71503	Dog	20	25	0	50	0	0	0	0
43DDPE5#5	71503	Dog	5	10	80	100	0	0	0	80
43DDPEQ5#5	71503	Dog	5	10	80	50	0	0	0	80
43HHB3#5	11304	Horse	5	10	0	20	0	0	0	0
43HHBQ3#5	11304	Horse	5	10	0	20	0	0	0	0
43HHB4#3	11304	Horse	20	50	0	20	0	0	0	0
43HHBQ4#3	11304	Horse	20	50	0	20	0	0	0	0
43HHC1#5	91603	Horse	5	10	0	50	0	0	0	0
43HHCQ1#5	91603	Horse	5	25	0	50	0	0	0	0
43HHFR2#5	11304	Horse	5	10	20	50	0	0	0	0
43HHFRQ2#5	11304	Horse	5	10	20	50	0	0	0	0
43HHHA1#5	91603	Horse	5	10	0	50	0	0	0	0
43HHHAQ1#5	91603	Horse	5	10	0	50	0	0	0	0
43HHH1#3	91603	Horse	0	10	0	50	0	0	0	0

43HHHQ1#3	91603	Horse	5	10	0	50	0	0	0	0
43HHM1#2	91603	Horse	5	10	0	50	0	0	0	0
43HHMQ1#2	91603	Horse	5	10	0	50	0	0	0	0
43HHM2#4	91603	Horse	10	25	0	50	0	0	0	0
43HHMQ2#4	91603	Horse	5	10	0	50	0	0	0	0
43HHTD1#4	91603	Horse	10	10	0	20	0	0	0	0
43HHTDQ1#4	91603	Horse	5	10	0	20	0	0	0	0
43HHTD2#3	91603	Horse	10	50	0	50	0	0	0	0
43HHTDQ2#3	91603	Horse	5	25	0	50	0	0	0	0
43HHZ1#5	91603	Horse	5	10	0	20	0	0	0	0
43HHZQ1#5	91603	Horse	5	10	0	20	0	0	0	0
43PPB3#5	120203	Pig	20	10	80	50	0	0	0	80
43PPBQ3#5	120203	Pig	20	0	80	50	0	0	0	80
43PPB4#3	120203	Pig	0	0	80	0	0	0	0	80
43PPBQ4#3	120203	Pig	0	10	80	0	0	5	0	80
43PPB6#2	11304	Pig	5	0	80	0	0	0	0	80
43PPBQ6#2	11304	Pig	5	0	80	0	0	0	0	80
43PPH2#2	11304	Pig	5	10	0	50	0	0	0	0
43PPHQ2#2	11304	Pig	5	10	0	50	0	0	0	0
43PPJ2#1	21403	Pig	5	10	20	50	0	0	0	0
43PPJ2Q#1	62403	Pig	5	10	20	100	0	0	0	0
43PPM1#4	21403	Pig	5	10	20	50	0	0	0	0
43PPMQ1#4	62403	Pig	5	10	20	50	0	0	0	0
43PPM4#2	11304	Pig	5	25	0	20	0	0	0	0
43PPMQ4#2	11304	Pig	5	25	0	20	0	0	0	0
43PPM7#5	11304	Pig	5	10	80	50	0	0	0	80
43PPMQ7#5	11304	Pig	5	10	80	50	0	0	0	80
43PPM8#3	11304	Pig	5	10	20	20	0	0	0	0
43PPMQ8#3	11304	Pig	5	10	20	20	0	0	0	0
43SSB10#1	11304	Sheep	5	10	0	50	0	0	0	0
43SSBQ10#1	11304	Sheep	5	10	0	50	0	0	0	0
43SSB11#1	11304	Sheep	10	25	80	20	0	0	0	80
43SSBQ11#1	11304	Sheep	10	25	80	20	0	0	0	80

43SSB3#5	40103	Sheep	10	10	20	100	0	0	0	0
43SSBQ3#5	120203	Sheep	10	10	20	50	0	5	0	0
43SSB5#1	120203	Sheep	5	10	0	20	0	0	0	0
43SSBQ5#1	120203	Sheep	0	10	0	20	0	5	0	0
43SSFR3#2	11304	Sheep	5	10	20	50	0	0	0	0
43SSFRQ3#2	11304	Sheep	5	10	20	50	0	0	0	0
43SSL4#3	120203	Sheep	5	10	80	50	0	0	0	80
43SSLQ4#3	120203	Sheep	5	10	80	50	0	5	0	80
43SSM2#2	13003	Sheep	5	10	0	50	0	0	0	0
43SSMQ2#2	82603	Sheep	5	25	0	100	0	0	0	0
43SSM3#2	11304	Sheep	10	10	0	50	0	0	0	0
43SSMQ3#2	11304	Sheep	10	10	0	50	0	0	0	0
43SSM5#4	11304	Sheep	5	25	80	20	0	0	0	80
43SSMQ5#4	11304	Sheep	5	25	80	20	0	0	0	80
43SSPE1#2	40103	Sheep	20	25	80	50	20	0	0	80
43SSPEQ1#2	40103	Sheep	10	25	20	50	20	0	0	0
43SST4#2	11304	Sheep	0	10	0	20	0	0	0	0
43SSTQ4#2	11304	Sheep	0	10	0	20	0	0	0	0
43UBC#15	11304	SUSPECT	5	25	20	20	0	0	0	0
43UBCQ#15	11304	SUSPECT	5	25	20	20	0	0	0	0
43UBC#17	11304	SUSPECT	5	10	0	20	0	0	0	0
43UBCQ#17	11304	SUSPECT	5	10	0	20	0	0	0	0
43UCOTT#17	11304	UNKNOWN	5	10	0	20	0	0	0	0
43UCOTTQ#17	11304	UNKNOWN	5	10	0	20	0	0	0	0
43UCOTT#8	11304	UNKNOWN	5	10	0	50	0	0	0	0
43UCOTTQ#8	11304	UNKNOWN	5	10	0	50	0	0	0	0
43WWPE1#20	71503	Human	0	10	0	50	0	0	0	0
43WWPEQ1#20	80503	Human	5	10	0	100	0	0	0	0
43WWPE1#28	62403	Human	5	10	20	50	0	0	0	0
43WWPEQ1#28	62403	Human	5	10	20	50	0	0	0	0
43WWPE1#30	62403	Human	5	10	0	20	0	0	0	0
43WWPEQ1#30	62403	Human	5	10	20	50	0	0	0	0
43WWPE1#50	62403	Human	5	25	0	50	0	0	0	0
43WWPEQ1#50	62403	Human	5	10	20	50	0	0	0	0

43WWPE1#1	71503	Human	0	10	0	20	0	0	0	0
43WWPEQ1#1	80503	Human	5	10	0	50	0	0	0	0
43WWPE2#1	11304	Human	5	10	0	20	0	0	0	0
43WWPEQ2#1	11304	Human	5	10	0	20	0	0	0	0
43WWPE2#12	11304	Human	5	25	0	50	0	0	0	0
43WWPEQ2#12	11304	Human	5	25	0	50	0	0	0	0
43WWPE2#23	11304	Human	5	10	0	20	0	0	0	0
43WWPEQ2#23	11304	Human	5	10	0	20	0	0	0	0
43WWPE2#30	11304	Human	10	10	0	50	0	0	0	0
43WWPEQ2#30	11304	Human	10	10	0	50	0	0	0	0
43WWPE2#32	11304	Human	0	0	0	20	0	0	0	0
43WWPEQ2#32	11304	Human	0	0	0	20	0	0	0	0
43WWPE2#45	11304	Human	5	10	20	50	0	0	0	0
43WWPEQ2#45	11304	Human	5	10	20	50	0	0	0	0
46BCBB1#4	40103	Beefcow	5	25	20	50	0	0	0	0
46BCBBQ1#4	102803	Beefcow	5	25	0	50	0	0	0	0
DOA										
46BCBFQ1#4	62403	Beefcow	5	10	80	50	0	0	0	80
46BCBG2#5	100703	Beefcow	0	10	0	20	0	0	0	0
46BCBGQ2#5	100703	Beefcow	0	10	0	20	0	0	0	0
46BCBK1#1	60303	Beefcow	5	10	0	50	0	0	0	0
46BCBKQ1#1	62403	Beefcow	0	25	20	100	0	0	0	0
46BCBK2#1	60303	Beefcow	5	10	0	50	0	0	0	0
46BCBKQ2#1	62403	Beefcow	5	10	20	50	0	0	0	0
46BCBMI1#3	100703	Beefcow	5	10	0	50	0	0	0	0
46BCBMIQ1#3	100703	Beefcow	0	10	0	50	0	0	0	0
46BCBMI2#3	100703	Beefcow	5	10	80	20	0	0	0	80
46BCBMIQ2#3	100703	Beefcow	5	25	80	50	0	0	0	80
46BCBMI3#4	100703	Beefcow	0	0	80	20	0	0	0	80
46BCBMIQ3#4	100703	Beefcow	0	0	80	20	0	0	0	80
46CCBE2#2	42203	Cat	5	10	0	20	0	0	0	0
46CCBEQ2#2	40103	Cat	5	10	20	50	0	0	0	0
46CCBR1#2	42203	Cat	5	10	0	100	0	0	0	0

46CCBRQ1#2	40103	Cat	5	25	20	50	0	0	0	0
46CCBR10#1	11304	Cat	20	25	0	20	0	0	0	0
46CCBRQ10#1	11304	Cat	20	25	0	20	0	0	0	0
46CCBR2#5	42203	Cat	20	100	80	50	0	0	0	80
46CCBRQ2#5	40103	Cat	20	100	80	50	0	0	0	80
46CCC1#5	60303	Cat	0	10	0	20	0	0	0	0
46CCCQ1#5	60303	Cat	0	25	0	50	0	0	0	0
46CCC2#3	60303	Cat	5	10	0	50	0	0	0	0
46CCCQ2#3	60303	Cat	5	10	20	50	0	0	0	0
46CCM2#1	51303	Cat	10	10	0	50	0	0	0	0
46CCMQ2#1	51303	Cat	10	10	0	50	0	0	0	0
46CCM3#2	71503	Cat	0	10	0	20	0	0	0	0
46CCMQ3#2	71503	Cat	0	10	0	20	0	0	0	0
46ChFC1#3	91802	Chicken	0	0	80	20	0	0	0	80
46ChFCQ1#3	71503	Chicken	0	10	80	50	0	0	0	80
46DCDB1#1	40103	Dairycow	10	25	20	50	0	0	0	0
46DCDBQ1#1	40103	Dairycow	5	10	20	50	0	0	0	0
46DCDG2#4	100703	Dairycow	10	25	20	50	0	0	0	0
46DCDGQ2#4	100703	Dairycow	10	25	20	50	0	0	0	0
46DCDK1#5	100703	Dairycow	5	10	80	50	0	0	0	80
46DCDKQ1#5	100703	Dairycow	5	10	60	50	0	0	0	80
46DCDS1#2	42203	Dairycow	5	10	20	50	0	0	0	0
46DCDQS1#2	51303	Dairycow	5	10	20	50	0	0	0	0
46DDBE2#3	42203	Dog	20	10	0	20	0	0	0	0
46DDBEQ2#3	40103	Dog	20	10	0	20	0	0	0	0
46DDBE4#5	42203	Dog	0	10	0	20	0	0	0	0
46DDBEQ4#5	40103	Dog	5	10	20	50	0	0	0	0
46DDBR1#1	40103	Dog	5	10	20	50	0	0	0	0
46DDBRQ1#1	40103	Dog	10	25	40	50	0	0	0	0
46DDBR1#2	40103	Dog	5	10	60	20	0	0	0	0
46DDBRQ1#2	40103	Dog	10	10	20	50	0	0	0	0
46DDBR2#4	40103	Dog	15	10	60	20	0	0	0	40
46DDBRQ2#4	40103	Dog	15	10	60	20	0	0	0	20

46DDC1#4	60303	Dog	10	10	20	50	0	0	0	0
46DDCQ1#4	60303	Dog	10	25	20	50	0	0	0	0
46DDC2#1	60303	Dog	5	0	0	50	0	0	0	0
46DDCQ2#1	60303	Dog	5	10	0	20	0	0	0	0
46DDM2#1	42203	Dog	5	10	0	50	0	0	0	0
46DDMQ2#1	40103	Dog	5	25	20	50	0	0	0	0
46DDM2#3	42203	Dog	5	10	20	50	0	0	0	0
46DDMQ2#3	51303	Dog	10	10	20	50	0	0	0	0
46DDM5#3	71503	Dog	0	10	0	50	0	0	0	0
46DDMQ5#3	71503	Dog	0	10	0	50	0	0	0	0
46DDM6#3	71503	Dog	20	10	80	50	0	0	0	80
46DDMQ6#3	71503	Dog	20	10	80	50	0	0	0	80
46DDM9#3	71503	Dog	10	25	20	20	0	0	0	0
46DDMQ9#3	71503	Dog	10	25	0	50	0	0	0	0
46PPBE1#2	60303	Pig	5	0	80	50	0	0	0	80
46PPBEQ1#2	62403	Pig	15	10	80	50	0	0	0	80
46PPBE1#5	60303	Pig	5	10	80	50	0	0	0	80
46PPBEQ1#5	62403	Pig	5	10	80	100	0	0	0	80
46PPB1#1	13003	Pig	5	10	0	100	0	0	0	0
46PPBQ1#1	91603	Pig	5	10	0	50	0	0	0	0
46PPD2#3	91603	Pig	0	0	0	50	0	0	0	0
46PPDQ2#3	91603	Pig	5	10	0	50	0	0	0	0
46PPHA1#3	62403	Pig	5	10	20	50	0	0	0	0
46PPHAQ1#3	62403	Pig	5	25	0	50	0	0	0	0
46PPHA2#2	71503	Pig	0	10	80	50	0	0	0	80
46PPHAQ2#2	80503	Pig	0	10	80	50	0	0	0	80
46PPH1#3	91603	Pig	0	10	60	20	0	0	0	80
46PPHQ1#3	91603	Pig	5	10	60	50	0	0	0	80
46PPH2#3	91603	Pig	20	25	80	50	0	0	0	80
46PPHQ2#3	91603	Pig	20	10	80	50	0	0	0	80
46PPS1#4	40103	Pig	5	25	80	50	0	0	0	80
46PPSQ1#4	40103	Pig	5	25	80	50	0	0	0	80
46PPS2#4	40103	Pig	5	25	80	50	0	0	0	80
46PPSQ2#4	40103	Pig	5	25	80	100	0	0	0	80



46PPS2#5	40103	Pig	10	25	40	100	0	0	0	0
46PPSQ2#5	40103	Pig	10	25	60	100	0	0	0	40
46SSBE1#4	102803	Sheep	20	10	80	50	0	0	0	80
46SSBEQ1#4	102803	Sheep	5	25	80	50	0	0	0	80
46SSBE2#2	102803	Sheep	5	10	20	20	0	0	0	0
46SSBEQ2#2	102803	Sheep	5	10	20	20	0	0	0	0
46SSBE3#3	102803	Sheep	5	10	0	50	0	0	0	0
46SSBEQ3#3	102803	Sheep	5	10	0	50	0	0	0	0
46SSC1#5	21403	Sheep	5	10	40	50	0	0	0	20
46SSCQ1#5	102803	Sheep	0	10	80	50	0	0	0	80
46SSD1#1	11304	Sheep	5	10	20	50	0	0	0	0
46SSDQ1#1	11304	Sheep	10	10	0	20	0	0	0	0
46SSG2#4	100703	Sheep	20	25	80	50	0	0	0	80
46SSGQ2#4	100703	Sheep	20	10	80	50	0	0	0	80
46SSG3#4	100703	Sheep	5	10	80	50	0	0	0	80
46SSGQ3#4	100703	Sheep	5	25	60	50	0	0	0	80
46SSK3#2	100703	Sheep	0	10	80	50	0	0	0	80
46SSKQ3#2	100703	Sheep	0	10	80	50	0	0	0	80
46SSS2#2	40103	Sheep	20	25	80	50	0	0	0	80
46SSSQ2#2	40103	Sheep	20	25	80	50	0	0	0	80
46TTBE1#1	60303	Turkey	0	0	80	50	0	0	0	80
46TTBEQ1#1	62403	Turkey	0	10	80	50	0	0	0	80
46TTBE2#3	60303	Turkey	5	10	80	20	0	0	0	80
46TTBEQ2#3	62403	Turkey	5	25	80	50	0	0	0	80
46TTB1#4	91603	Turkey	0	10	80	20	0	0	0	80
46TTBQ1#4	91603	Turkey	0	10	80	50	0	0	0	80
46TTC1#4	42203	Turkey	20	25	80	50	0	0	0	80
46TTCQ1#4	51303	Turkey	20	50	80	50	0	0	0	80
46TTHA2#1	62403	Turkey	20	25	80	50	0	0	0	80
46TTHAQ2#1	62403	Turkey	20	10	80	50	0	0	0	80
46TTHA2#2	62403	Turkey	20	25	20	50	0	0	0	0
46TTHAQ2#2	62403	Turkey	20	50	20	50	0	0	0	0
46TTS1#2	51303	Turkey	20	25	80	50	40	0	0	80

46TTSQ1#2	51303	Turkey	20	25	80	50	60	0	0	80
46TTS2#2	51303	Turkey	20	25	80	50	0	0	0	80
46TTSQ2#2	51303	Turkey	20	25	60	50	0	0	0	80
46UBC#10	11304	SUSPECT	5	10	0	20	0	0	0	0
46UBCQ#10	11304	SUSPECT	5	10	0	20	0	0	0	0
46UBC#13	11304	UNKNOWN	0	0	0	20	0	0	0	0
46UBCQ#13	11304	UNKNOWN	0	0	0	20	0	0	0	0
46WWBE1#12	40103	Human	5	10	20	50	0	0	0	0
46WWBEQ1#12	40103	Human	5	10	20	50	0	0	0	0
46WWBE1#7	40103	Human	5	10	20	100	0	0	0	0
46WWBEQ1#7	40103	Human	5	10	20	100	20	0	0	80
46WWB1#4	60303	Human	5	10	0	50	0	0	0	0
46WWBQ1#4	60303	Human	5	25	0	50	0	0	0	0
46WWB1#9	60303	Human	0	0	0	50	0	0	0	0
46WWBQ1#9	60303	Human	5	10	0	50	0	0	0	0
46WWBR1#10	40103	Human	5	10	20	20	0	0	0	0
46WWBRQ1#10	40103	Human	5	10	40	50	20	0	0	0
46WWC1#7	60303	Human	5	0	0	50	0	0	0	0
46WWCQ1#7	60303	Human	0	0	0	50	0	0	0	0
46WWY1#1	51303	Human	5	0	0	50	0	0	0	0
46WWYQ1#1	51303	Human	10	10	0	50	0	0	0	0
46UDEER#18	11304	UNKNOWN	5	10	0	50	0	0	0	0
46UDEERQ#18	11304	UNKNOWN	5	10	0	50	0	0	0	0
46UDEER#6	11304	UNKNOWN	5	10	0	20	0	0	0	0
46UDEERQ#6	11304	UNKNOWN	5	10	0	20	0	0	0	0
42DCDW2#1	11304	Dairycow	20	25	80	20	0	0	0	80
42DCDWQ2#1	30304	Dairycow	20	25	80	50	0	0	0	80
42PPMC1#5	11304	Pig	5	25	0	50	0	0	0	0
42PPMCQ1#5	30304	Pig	10	25	20	50	0	0	0	0
43BCBL2#2	120203	Beefcow	5	10	80	20	0	0	0	80
43BCBLQ2#2	30304	Beefcow	10	25	80	20	0	0	0	80
43SSM3#4	11304	Sheep	5	10	0	0	0	0	0	0
43SSMQ3#4	30304	Sheep	10	10	20	20	0	0	0	0

46TTB1#2	91603	Turkey	5	10	60	50	0	0	0	80
46TTBQ1#2	30304	Turkey	5	10	80	50	0	0	0	80
43PPH2#5	11304	Pig	5	25	0	50	0	0	0	0
43PPHQ2#5	30304	Pig	5	10	20	50	0	0	0	0
46BCBB1#2	40103	Beefcow	5	10	20	50	0	0	0	0
46BCBBQ1#2	30304	Beefcow	5	10	20	20	0	0	0	0
46SSD1#5	11304	Sheep	5	10	20	50	0	0	0	0
46SSDQ1#5	30304	Sheep	10	10	20	50	0	0	0	0
46TTS1#4	51303	Turkey	20	100	80	50	0	5	0	80
46TTSQ1#4	30304	Turkey	20	100	80	50	0	10	0	80