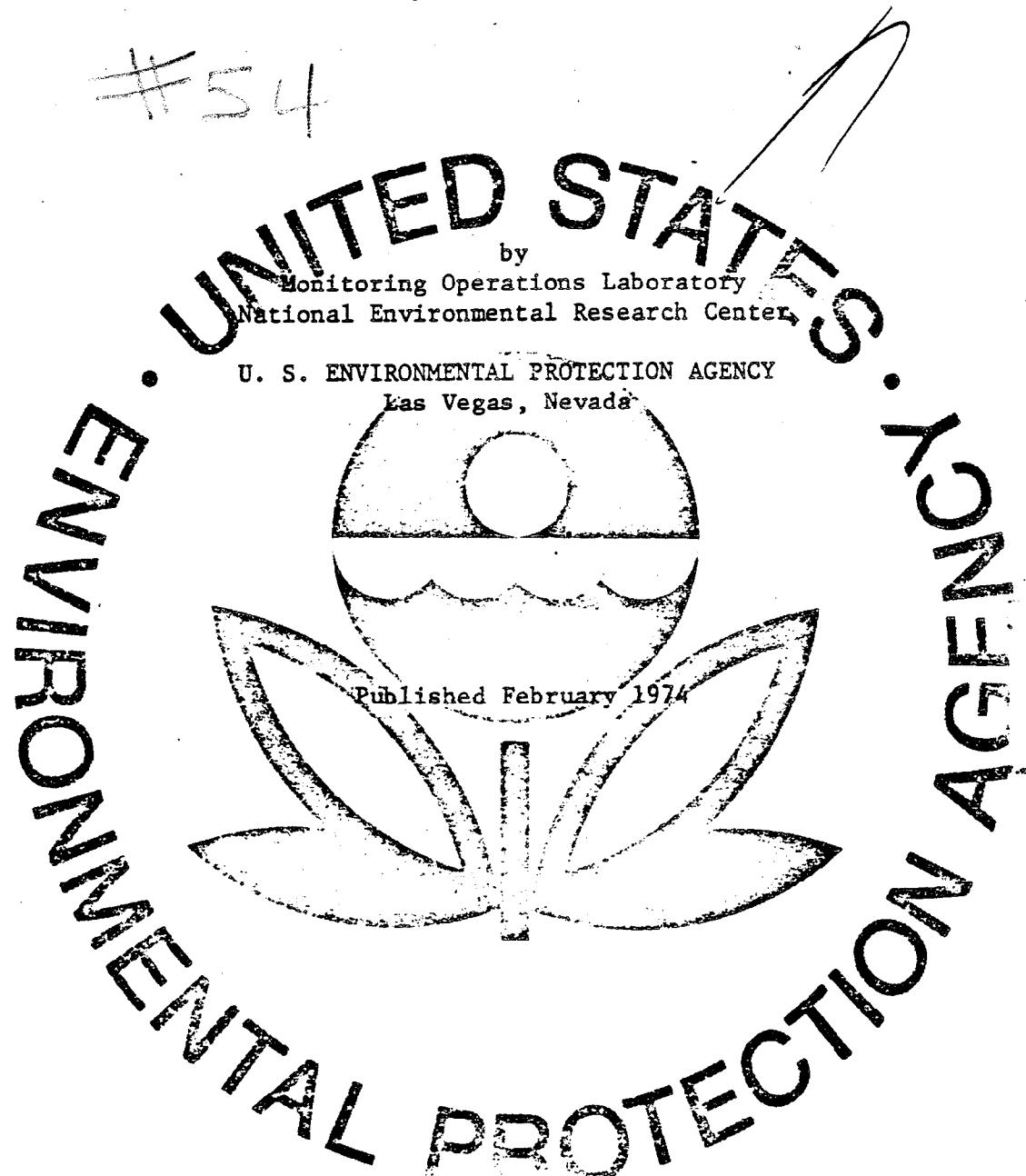


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OFF-SITE SURVEILLANCE ACTIVITIES OF THE
NATIONAL ENVIRONMENTAL RESEARCH CENTER
from July through December 1970

#54



This work performed under a Memorandum of
Understanding No. AT(26-1)-539
for the
U. S. ATOMIC ENERGY COMMISSION

NERC-LV-539-17

OFF-SITE SURVEILLANCE ACTIVITIES OF THE
NATIONAL ENVIRONMENTAL RESEARCH CENTER
from July through December 1970

by
Monitoring Operations Laboratory
National Environmental Research Center

U. S. ENVIRONMENTAL PROTECTION AGENCY
Las Vegas, Nevada

Published February 1974

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ABSTRACT

During the period July through December 1970, six announced underground nuclear tests were conducted at the Nevada Test Site (NTS) by the Atomic Energy Commission. During this same period, four production test experimental flarings of natural gas were conducted at the Rulison experimental gas well in western Colorado. One test at the NTS, Baneberry, conducted on December 18, released radioactivity into the off-site environment. At the Rulison site, ^{3}H and ^{85}Kr above background levels were detected off-site. From the results of environmental monitoring and sampling conducted by the National Environmental Research Center, Las Vegas (NERC-LV) for these nuclear events, the calculated radiation exposures to off-site populations did not exceed the Radiation Protection Standards of the AEC Manual, Chapter 0524.

The maximum level of ^{3}H in air samples collected off-site by a ground level air sampling station for Project Rulison was 290 pCi/m³ air, which is less than 0.5% of the Concentration Guide in the AEC Manual 0524 for a suitable population sample in an uncontrolled area. No ^{3}H levels above background were found off-site in milk, water, food crop, cow feed, human urine, and animal tissue samples collected following the flarings.

The highest estimated infinity external gamma exposure at an inhabited location following Baneberry was 16 mR at Blue Jay Highway Maintenance Station, 66 miles northeast of Tonopah, Nevada, on Highway 6. The maximum estimated thyroid dose from the ingestion of milk following Baneberry was 130 mrem to a two-year-old child, residing in Beatty, Nevada, who was drinking milk produced at the McCurdy Ranch near Springdale, Nevada. The highest estimated dose to a hypothetical 2-gram infant thyroid was 260 mrem from milk produced at the McCurdy Ranch. Eight sheep-herders working between Eureka and Duckwater, Nevada, were using Baneberry contaminated melted snow for domestic purposes. The estimated thyroid dose to the herders from consuming melted snow was 0.5 rem \pm a factor of 3, i.e., 0.17 to 1.5 rem. The maximum estimated inhalation dose to a hypothetical infant thyroid from radioiodines in air was 100 mrem at the Stone Cabin Ranch near Highway 6, between Tonopah and Warm Springs, Nevada.

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INTRODUCTION

In accordance with a Memorandum of Understanding between the U. S. Atomic Energy Commission(AEC) and Environmental Protection Agency, the National Environmental Research Center, Las Vegas(NERC-LV)^{*} conducted a program of radiological monitoring and environmental sampling in the off-site area surrounding the Nevada Test Site(NTS) and the Project Rulison test well.

During the period July through December 1970, six announced underground nuclear tests were sponsored by the U. S. Atomic Energy Commission at the NTS and natural gas production test flaring operations were conducted at the Project Rulison site. The results of surveillance performed for Baneberry and Project Rulison are summarized in this report.

For the NTS, the off-site area is defined as that area beyond the boundary of the NTS and adjacent restricted areas such as the Nellis Air Force Range, Tonopah Test Range, and the Nuclear Rocket Development Station. For simplicity, these combined areas will be referred to in this report as the test range complex. At Project Rulison near Grand Junction, Colorado, the off-site area extended from a 600-foot radius from the experimental natural gas well.

*During the period of this report, the NERC-LV was called the Southwestern Radiological Health Laboratory and the Western Environmental Research Laboratory.

OPERATIONAL PROCEDURES

Monitoring

Before each event at the test range complex, mobile monitoring teams were sent to the off-site areas most likely to be affected by a release of radioactive material. When a release occurred, the teams conducted a monitoring program directed from the NTS Control Point via two-way radio communications. Environmental sampling and monitoring continued until levels of radioactivity returned to background levels.

Each monitor carried two Eberline E-500B GM survey meters, one Rank Nucleonics NE-148 scintillation instrument, and one Victoreen Radector, Model No. AGB-50B-SR, ionization chamber instrument for monitoring radiation levels. The E-500B has a range of 0 to 200 milliroentgens per hour (mR/h) for gamma or beta-gamma detection in four ranges with an external halogen-quenched Geiger-Mueller (GM) tube, and a 0 to 2000 mR/h range for gamma detection from an internal Anton 302 GM tube. The NE-148, which has a 1- by 1-1/2-inch sodium iodide crystal detector, is used primarily to indicate the presence of low levels of gamma radiation and has a range of 0 to 3 mR/h in three ranges. The Radector has a range of 0.05 to 50,000 mR/h over two logarithmic ranges, using an inert gas ionization chamber as the detector. These instruments were routinely calibrated to \pm 20% with a standardized ^{137}Cs source. Each monitor was also equipped with portable battery-operated strip chart recorders, battery-operated air samplers, and equipment for collecting milk, water, and vegetation samples. Extra thermoluminescent dosimeters were carried to issue to residents in the downwind trajectory in the event of a release of radioactivity.

For Project Rulison, monitors also carried portable battery-operated samplers equipped with molecular sieve sampling heads and battery-powered compressors for tritium and noble gas sampling. The monitors were positioned according to aerial plume-tracking information which was radioed directly from the aircraft.

Exposure Rate Recorders

Eberline RM-11 gamma exposure rate recorders were used to document cloud passage at fixed locations (Figure 1). These recorders have a GM tube detector with a 0.01 to 100 mR/h range and are calibrated to \pm 20% with a ^{137}Cs source. The gamma exposure rate is recorded on a 30-hour strip chart.

Aerial Cloud Tracking

For each event at the test range complex, an Air Force U-3B aircraft with two NERC-LV monitors carrying portable instruments similar to those used by ground monitors was used to track any radioactive effluents. A NERC-LV T-34 aircraft was also used for tracking for Baneberry. Two NERC-LV cloud sampling and tracking aircraft were also used to obtain in-cloud samples to assess total cloud volume, to provide long-range tracking, and to assist in positioning ground monitors.

For Project Rulison gas flaring operations, aerial plume-tracking and sampling were performed with a twin-engine Turbo-Beech aircraft. Since radioactivity concentrations in the plume from the gas-flaring stack were so low that gamma and beta detectors could not be used, plume-tracking was accomplished with a condensation nuclei monitoring instrument. This instrument, which measured the airborne concentration of condensation nuclei resulting from the burning of the natural gas, was mounted in the aircraft cabin immediately behind an air baffle at the discharge end of an air sampling probe mounted in the nose of the aircraft. The instrument output was fed to a strip chart recorder in the co-pilot's instrument panel, providing the crew chief with continuous information on plume trajectory, size and dispersion. This information was radioed to a ground control center so that ground monitoring personnel could be positioned to collect samples in the plume ground track.

Atmospheric moisture and noble gas samples in the plume were collected from the aircraft sampling probes with a "grab" sampler. Grab samples were obtained by gathering air from the sampling probe in a one-cubic-meter

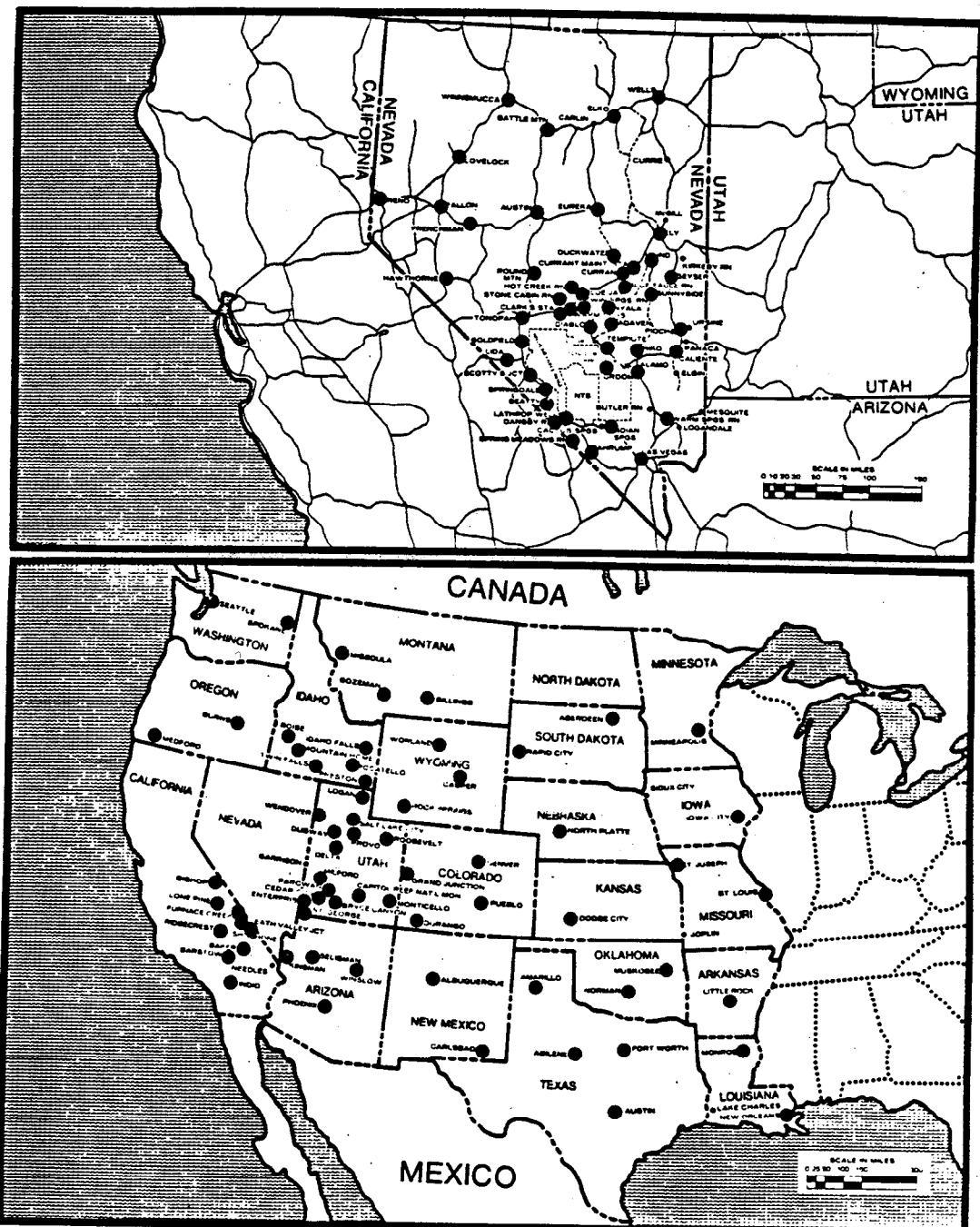


Figure 1. Air Surveillance Network Stations

plastic bag over a 30-second period. The collected air was then pumped through a canister containing 1000 grams of Linde type 13X molecular sieve for water vapor and CO₂ collection, and then into a compressed air bottle. Cryogenic sampling was used to freeze out H₂O, CO₂, and noble gases. The molecular sieve material and air bottles were then returned to the NERC-LV for ³H and noble gas analysis.

Air Sampling

During this six-month period, the routine NERC-LV Air Surveillance Network consisted of 102 off-site stations operating in every state west of the Mississippi River except Montana and North Dakota (Figure 1). In addition, 10 standby stations were available to be activated by telephone. The air sampler used in the Air Surveillance Network is a Gelman Tempest, consisting of a Gast Model 1550 vacuum pump driven by an electric motor. The sampler has an approximate flow rate of 10 cfm and uses a four-inch-diameter glass fiber filter. Activated charcoal cartridges were placed behind the filter at 22 off-site stations near the test range complex and could be added to the other stations when necessary to collect gaseous fission products. The total volume of air sampled was calculated from the average flow rate and the total sampling time. These samplers operate 24 hours a day. During this period, eight additional standby stations were established in Nevada. These stations were set up to be operated by NERC-LV personnel if a release of radioactivity occurred.

Continuous collection of atmospheric particulate and moisture samples during Project Rulison flarings was accomplished at seven fixed monitoring stations at populated locations in the vicinity of the test well. Metal storage sheds were set up to house the samplers. Air was drawn through a particulate filter located outside the shed and then through a canister containing 700 grams of molecular sieve for water collection. The samplers were operated for 48-hour periods at an average flow rate of three lpm.

Additionally, portable battery-powered air samplers were used to collect atmospheric moisture samples at ground level. Based on aerial tracking information, monitoring personnel were positioned in the downwind plume trajectories. The monitors carried portable two-way radios to receive instructions concerning sampling times and position changes. The portable sampler consisted of an automobile-type vacuum cleaner powered by a 12-volt battery. Air flow was measured by a dry gas meter. Air was first passed through a four-inch-diameter glass fiber filter to remove particulates, and then passed through a 300-gram molecular sieve canister to remove the moisture. A battery-powered compressor was also used to collect air samples for ^3H and noble gas analysis. Carbon-14 analysis was performed on the CO_2 obtained from molecular sieve samples.

Milk and Water Sampling

Routine sampling of milk from commercial dairies, producer dairies and family cows around the test range complex continued through the six-month period (Figure 2). About 30 sources were routinely sampled, most on a monthly basis. A total of 190 samples was collected from these locations. In the event of cloud passage over a specific area, intensified sampling within the area was conducted to document changes in activity. All milk sampling results are listed in Appendix A.

A standby network which could be activated by telephone and consisting of 185 milk processing plants located in the 11 western states was maintained. Each plant was supplied with containers and mailing cartons to send daily samples for one week to the NERC-LV for analysis. Periodically, sections of the network were activated to test the response and reliability of the system. During this reporting period, 300 samples were collected from the network.

Domestic and non-domestic water supplies around the test range complex were sampled on a routine basis (Figures 3 and 4). Water sampling was increased when a release occurred. During this period, 569 water samples were collected from about 90 sources.

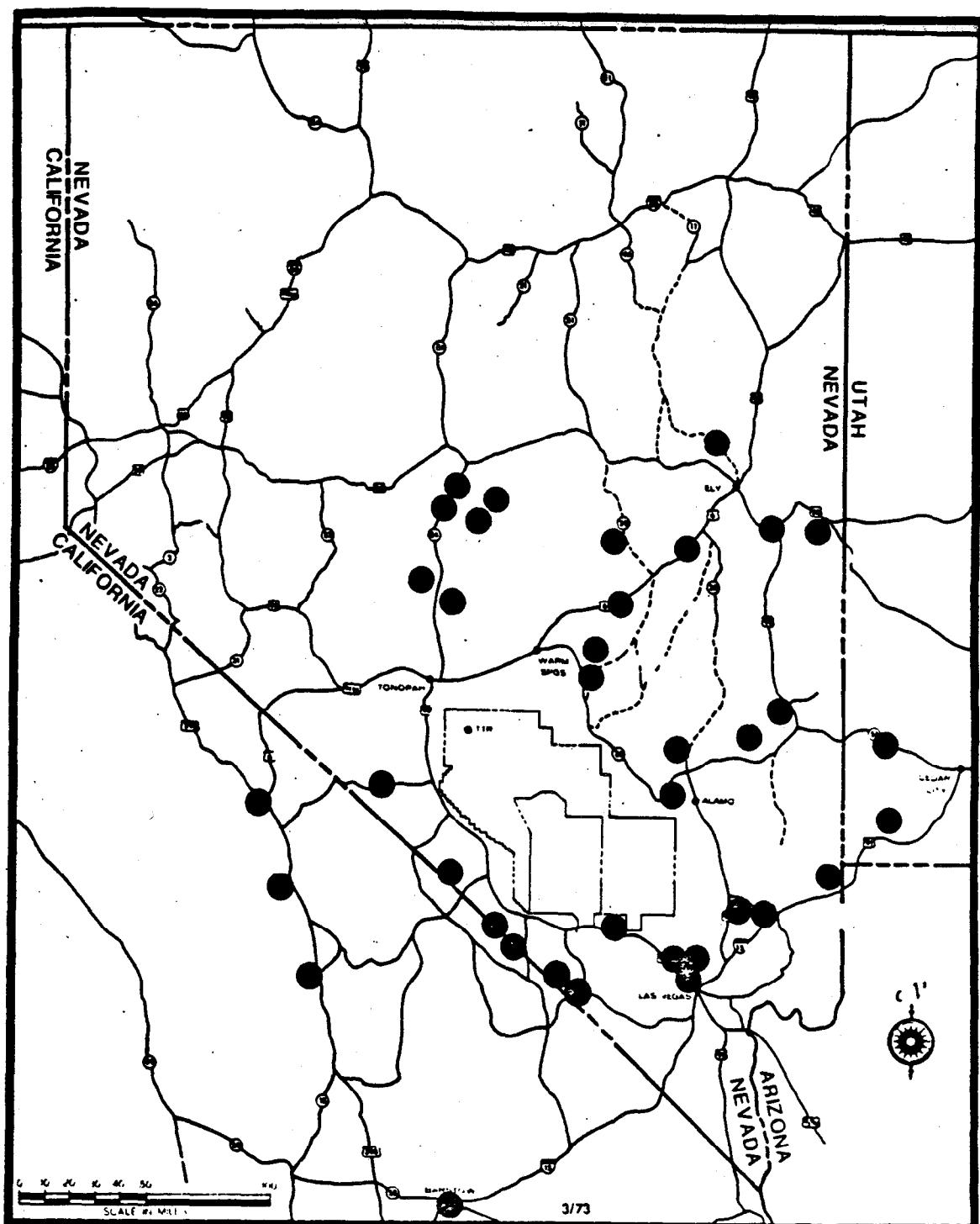


Figure 2. Routine Milk Sampling Stations

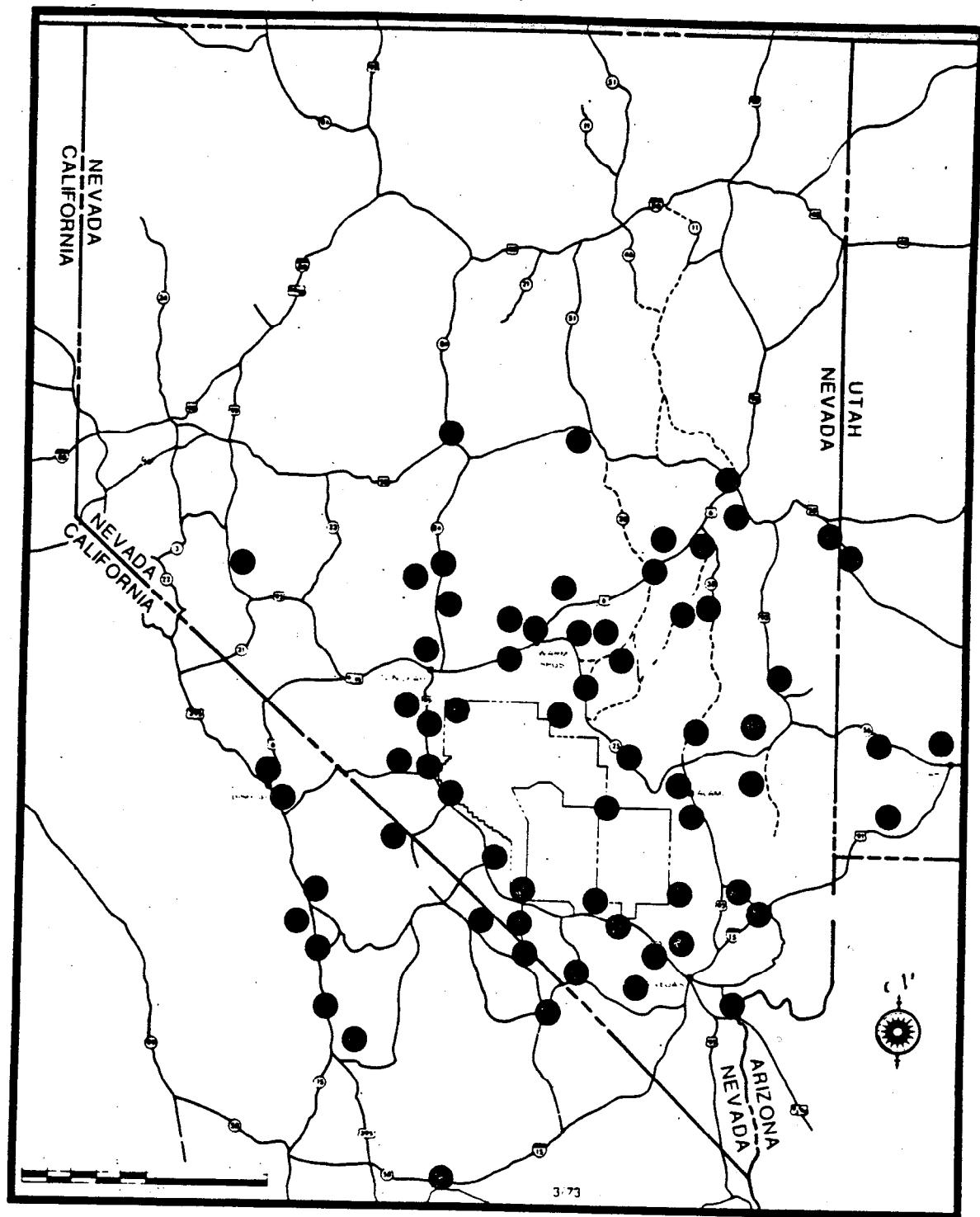


Figure 3. Routine Water Sampling Stations

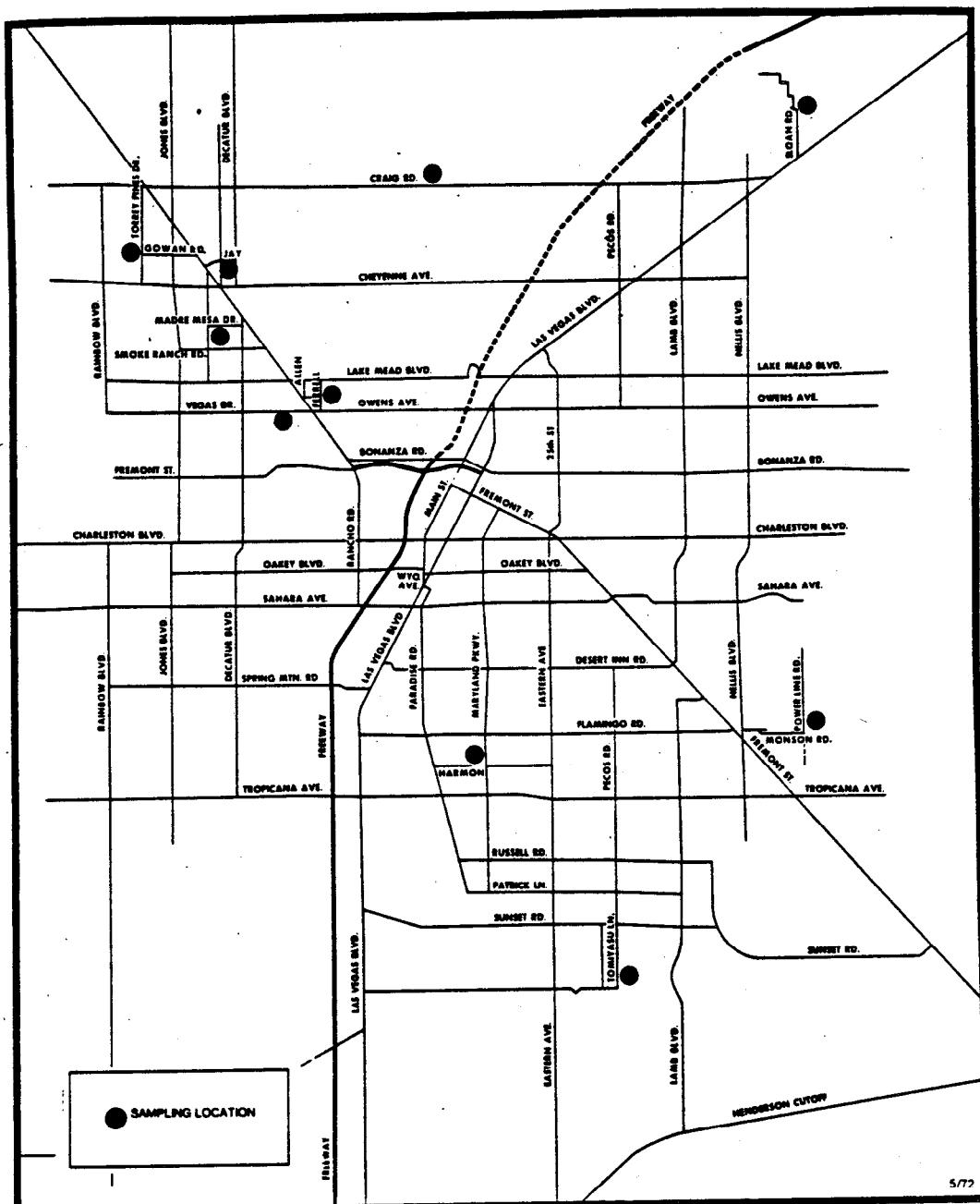


Figure 4. Las Vegas Valley Routine Water Sampling Stations

A total of 62 milk and 251 water samples was collected from special sampling locations in the Rulison vicinity. Daily water samples were collected from Battlement Creek, which runs within several hundred feet of the test well, while all other water sampling stations were sampled on a monthly schedule. The sampling stations included both domestic and surface water supplies. Milk samples from family cows and Grade-A dairies were also collected on a monthly basis for tritium analysis.

Precipitation collectors were provided at seven fixed sampling stations, and portable precipitation collectors were set up by field personnel at other locations as conditions dictated. Snow samples were collected during the winter flaring operations.

Vegetation Sampling

Normally, vegetation samples around the test range complex were collected only in the event of a release of radioactive material and analyzed for gross gamma radioactivity to delineate the fallout pattern. At most locations where milk samples were collected, samples of cow feed were collected and analyzed for specific radionuclides. For Project Rulison, 95 natural vegetation samples were collected within a 20-mile radius of the site. All samples were analyzed for ^{3}H .

Special Sampling for Project Rulison

Periodic samples of animal tissue from both wildlife and domestic animals were collected through the assistance of local slaughter houses and the Colorado Fish, Game and Parks Department. Several blood samples were also collected from domestic livestock for ^{3}H analysis when tissue was not available from a particular area of interest or at a particular time of interest (for example: livestock near the mouth of Battlement Creek Valley immediately following a flaring operation). One hundred thirteen urine samples were collected from 20 residents in the area and analyzed for ^{3}H .

Food Crop Sampling for Project Rulison

Samples of food crops were collected prior to the release of any gas to document background levels of ^{3}H in these crops. These backgrounds ranged from 420 pCi/l to 3100 pCi/l of water with an average of 1300 pCi/l. Following flaring, 24 samples of food crops, seven samples of garden crops and 15 samples of orchard crops were collected and analyzed. There were no ^{3}H concentrations above background levels. Detailed data are reported elsewhere. (2)

Soil Sampling for Project Rulison

Soil samples were collected prior to any release of gas to document background levels of ^{3}H . For surface soil samples these background levels ranged from less than 400 pCi/l to 1400 pCi/l of water with an average above the Minimum Detectable Amount (MDA) of 1000 pCi/l of water. For soil samples collected from a depth of six inches, the background ranged from less than 400 pCi/l to 1100 pCi/l of water with an average above the MDA of 740 pCi/l of water. A total of 102 soil samples was collected during this six-months period. Detailed data are reported elsewhere. (2)

Dosimetry

Ninety-four dosimetry stations (Figure 5) located around the test range complex were equipped with three EG&G Model TL-12 thermoluminescent dosimeters (TLD's) each, and about 60 off-site residents wore one TLD each. These TLD's were exchanged monthly. The TLD's have a uniform energy response from 50 keV to 1.25 MeV with a low energy cutoff at 50 keV. According to past TLD data, a reading at 5 mR above the previous month's background constitutes a detectable exposure. For the period of July to October 26, 24 TLD stations were located around the Project Rulison site. During this period, early snows made some stations inaccessible and the number of stations was reduced to 17. Due to low exposure rates, the network was further reduced to four close-in stations on December 1.

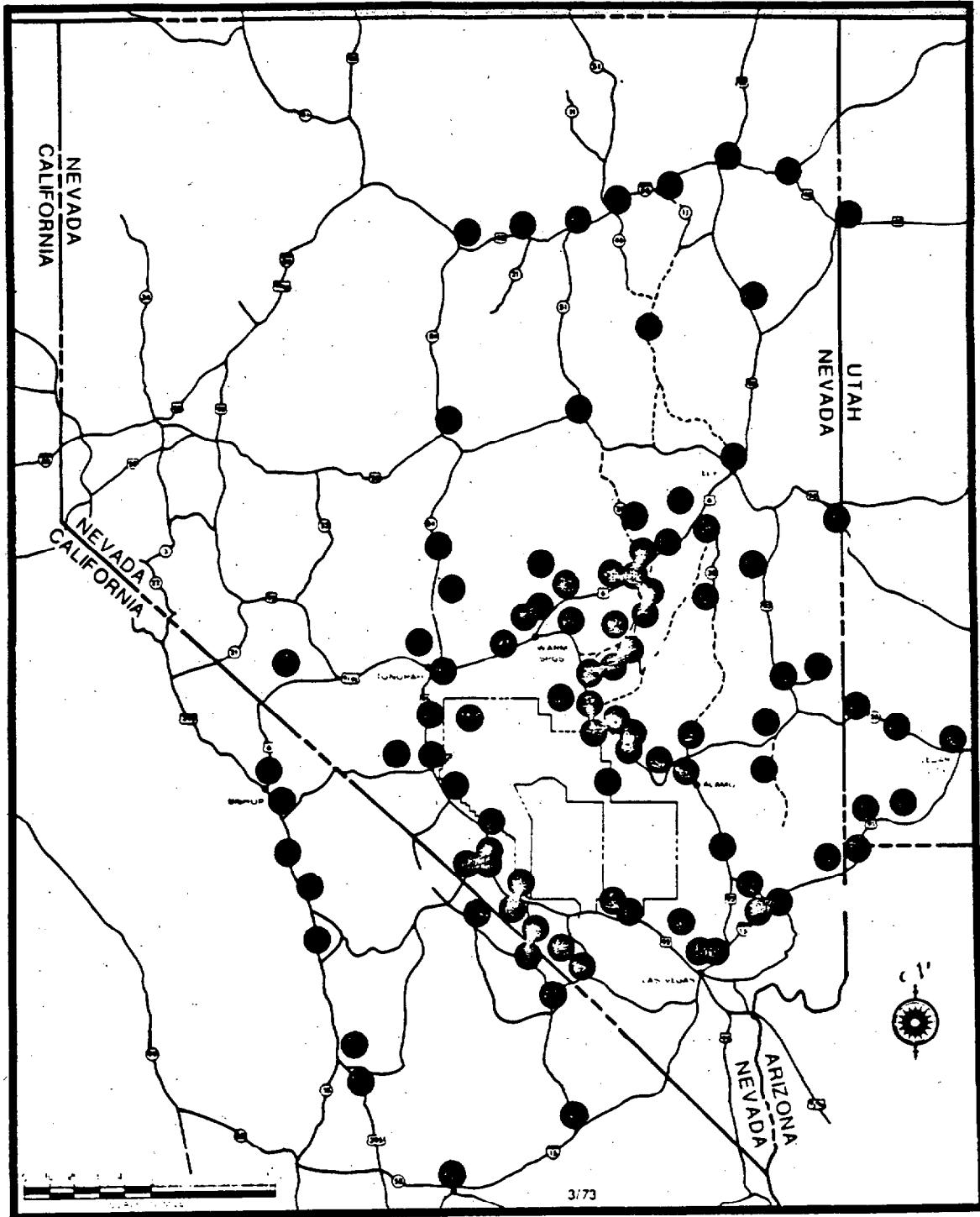


Figure 5. Routine Dosimetry Stations

Community Relations

Frequent contacts with the off-site population by NERC-LV field personnel and presentations for schools and civic groups provided the opportunity to explain the surveillance role of the EPA and the AEC testing programs. A number of off-site residents took part in the environmental sampling program. All routine air sampling stations except the one at Las Vegas were operated by local citizens.

Medical and Veterinary Services

A NERC-LV medical officer was available in the event complaints of a medical nature arose as a result of the nuclear testing program. He also provided liaison with local physicians. Veterinary officers of the NERC-LV Radiological Research Program provided a complete veterinary response capability. These officers, familiar with the livestock and dairy industries, wildlife, prevalent diseases, and poisonous plants in the area around NTS, maintained liaison with state and federal regulatory officials, local practitioners, county agents, fish and wildlife officials, and other agricultural leaders. The program has two specially-equipped trucks capable of supporting field diagnoses and post mortems.

ANALYTICAL PROCEDURES

Analytical procedures are described in NVO 28.⁽¹⁾

RESULTS

A summary of monitoring results obtained for those operations resulting in a release of radioactivity to the off-site areas is presented here. Detailed data are reported separately.^(2,3) Routine surveillance network reports are available from the NERC-LV.

PROJECT RULISON

The Project Rulison flaring operations during this six-month period were conducted on the dates summarized in Table 1.

Table 1. Summary of Project Rulison Flaring Operations.

Flaring Period	Start Date	End Date	Volume Gas Flared MMSCF†
Preliminary Flow Tests*	8-01-70	8-22-70	1
Calibrated Tests**	10-04-70	10-07-70	12
High-Rate	10-27-70	11-03-70	109
Intermediate Rate	12-01-70	12-20-70	100

* Nine short runs up to 8 hours duration.

** Three short runs up to 14 hours duration.

† MMSCF = million standard cubic feet.

Table 2 shows the total number of samples collected during this report period. Tritium and ^{85}Kr were the primary radionuclides released by the flaring operations. All environmental samples, except for the particulate air filters and charcoal cartridges, were analyzed for ^3H . The natural gas samples, cryogenic samples, and compressed air samples were also analyzed for ^{85}Kr .

Table 2. Project Rulison Off-Site Environmental Sampling

Sample Type	Totals
Air (particulate filters)	1059
Air (charcoal cartridges)	360
Atmospheric Moisture (molecular sieve)	212
Natural Gas	14
Cryogenic (ground)	2
Compressed Air (ground)	8
Compressed Air (aerial)	21
Atmospheric Moisture (freeze-out)	30
Water	251
Precipitation	119
Milk	62
Natural Vegetation	95
Soil	102
Food Crops	95
Cow Feed	55
Urine (residents)	113
Urine (EPA monitors)	94
Animal Tissue and Blood	17

Tritium levels above normal background that were related to Project Rulison were detected in all types of off-site samples except water, milk, urine, animal tissue, food crops and cow feed. Particulate filters and charcoal cartridges were not analyzed for ^{3}H . The highest concentrations of tritium in off-site atmospheric moisture samples are shown in Table 3.

Table 3. Five Highest ^{3}H Concentrations in Atmospheric Moisture Samples; Rulison (Molecular Sieve Collectors)*

Location - Azimuth and Distance from the Test Well	Date	Time	pCi/l ^{3}H H_2O	pCi/m ³ Air ^{3}H
Spec. Sta. A-IX (52°, 0.8 mi)	10/5/70	0840-1040	59,000	290
Spec. Sta. A-X (65°, 0.6 mi)	10/5/70	0835-1035	51,000	240
Spec. Sta. A-VII (15°, 0.8 mi)	10/5/70	1452-1553	43,000	220
Spec. Sta. A-X (65°, 0.6 mi)	10/5/70	1450-1550	34,000	180
Spec. Sta. A-IX (52°, 0.8 mi)	10/5/70	1455-1555	27,000	150

*Tritium concentrations in atmospheric moisture samples from the Rulison area had a background range from 500 pCi/l H_2O to 2600 pCi/l H_2O . The average was 1000 pCi/l H_2O .

The Concentration Guides (AEC Manual, Chapter 0524) for continuous exposure of the general population to ^{3}H is 67,000 pCi/m³ air.

Krypton-85 was detected in natural gas samples and in compressed air samples. The five highest concentrations of ^{85}Kr detected off-site in compressed air samples on the ground are listed in Table 4. Background levels of ^{85}Kr in the Rulison area ranged from less than 5 pCi/m³ to 14 pCi/m³ of air with an average of 12 pCi/m³.

Table 4. Five Highest ^{85}Kr Results for Compressed Air Samples.*

Location - Azimuth and Distance from the Test Well	Sampling Period Date-Time On	Date-Time Off	^{85}Kr Concentration pCi/m ³ air
Old Control Point Pad (325°, 2.4 mi)	10/28/70-0645	10/28/70-0710	47
Special Station D-1 (286°, 4.6 mi)	12/06/70-0851	12/06/70-0916	27
Special Station D-11 (328°, 4.2 mi)	12/03/70-1955	12/03/70-2025	20
Special Station D-29 (76°, 16.5 mi)	10/27/70-1720	10/27/70-1750	14
3 miles of Rifle Airport (65°, 13.0 mi)	12/07/70-1535	12/07/70-1600	12

* The Concentration Guide (AEC Manual, Chapter 0524) for the continuous exposure of the general population to ^{85}Kr is 1×10^5 pCi/m³ air.

BANEERRY, DECEMBER 18, 1970

The Baneberry Event was an underground nuclear weapons test conducted at the NTS on December 18, 1970. Shortly after the detonation, fission products escaped into the atmosphere and were carried over the off-site area. A radiological monitoring program conducted by the NERC-LV detected radioactivity in environmental media in a widespread area of the western United States.

External Gamma Exposures

All off-site external gamma exposure rate measurements at inhabited locations were less than one mR/h. The highest measured exposure rate at an unpopulated location was 1.2 mR/h about one mile east of Queen City Summit on Highway 25.

Based on a $t^{-1.2}$ extrapolation of rate-meter data, an estimate of 36 mR as the highest estimated infinity exposure at a populated location (Clark Station) was reported in a final report.⁽³⁾ An algorithm was later developed, based on a generalized decay scheme of ground-deposited Baneberry activity. This algorithm provided extrapolation factors which indicated that 13 mR was a more appropriate estimate. From this algorithm for all measurements, the highest estimated infinite external gamma exposure at an inhabited location was determined to be 16 mR at Blue Jay Highway Maintenance Station, 66 miles northeast of Tonopah, Nevada, on Highway 6. Figures 6, 7, and 8 show the monitoring results from D Day to D+10.

Environmental Sampling

Figures 9 and 10 show the locations where environmental samples were collected and whether radioiodines were detected. The six water samples containing radioiodine were from open supplies not used for human consumption. The total number of each type of environmental sample collected is listed in Table 5.

Table 5. Baneberry Environmental Samples

Type	Number	Type	Number
Milk	496	Precipitation	118
Water	92	Natural Vegetation	72
Air (particulate filters)	225	Cow Feed	118
Air (charcoal cartridges)	243		

Air Sampling Results

Table 6 shows the five highest air sampling results ranked on the basis of maximum estimated thyroid dose to a hypothetical infant receptor with a two-gram thyroid. The method used for calculating the thyroid doses from the inhalation of radioiodine is discussed in Appendix B.

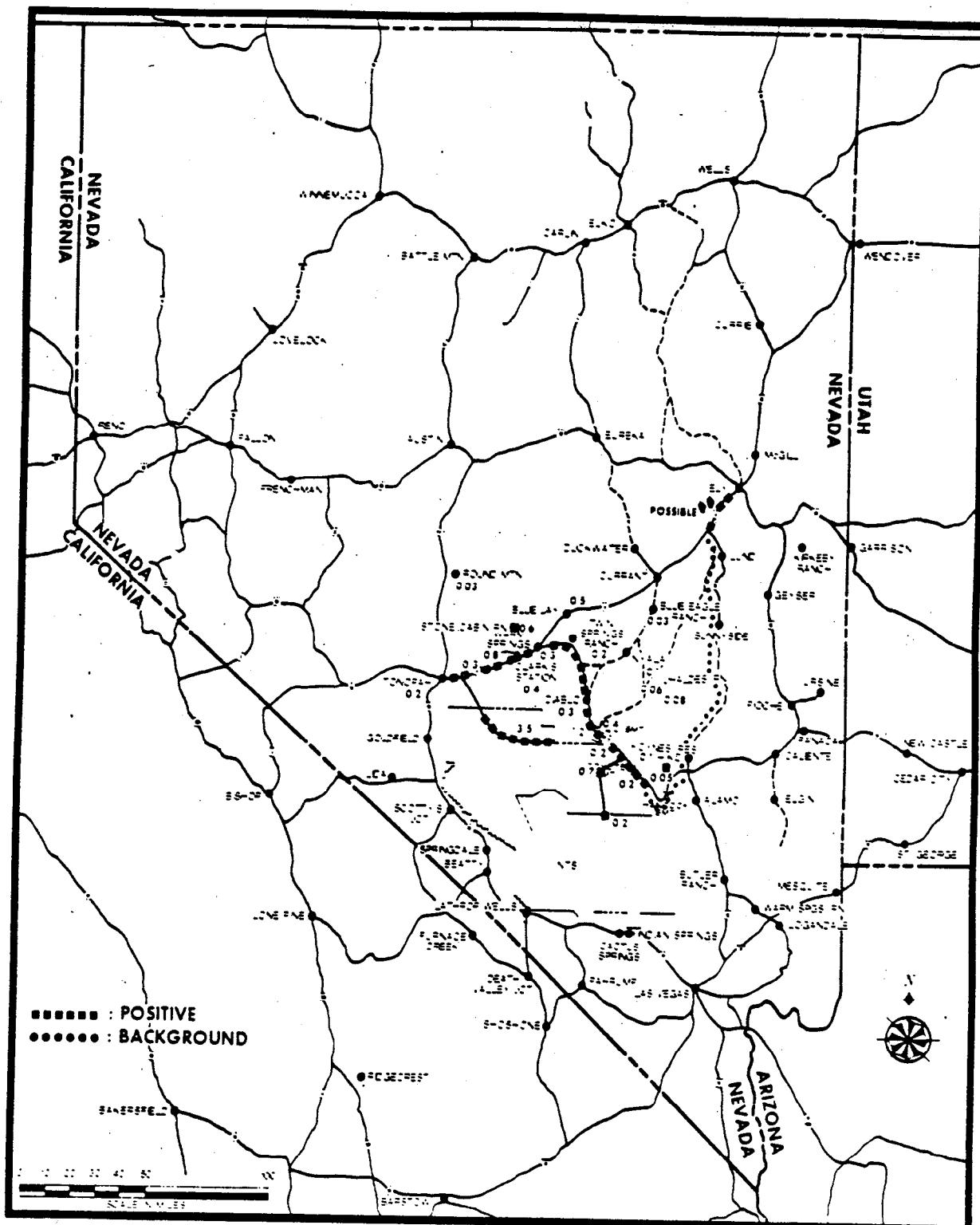


Figure 6. Area Monitored and Highest Exposure Rates (mR/h) - Nevada, Baneberry D-Day (12/18/70)

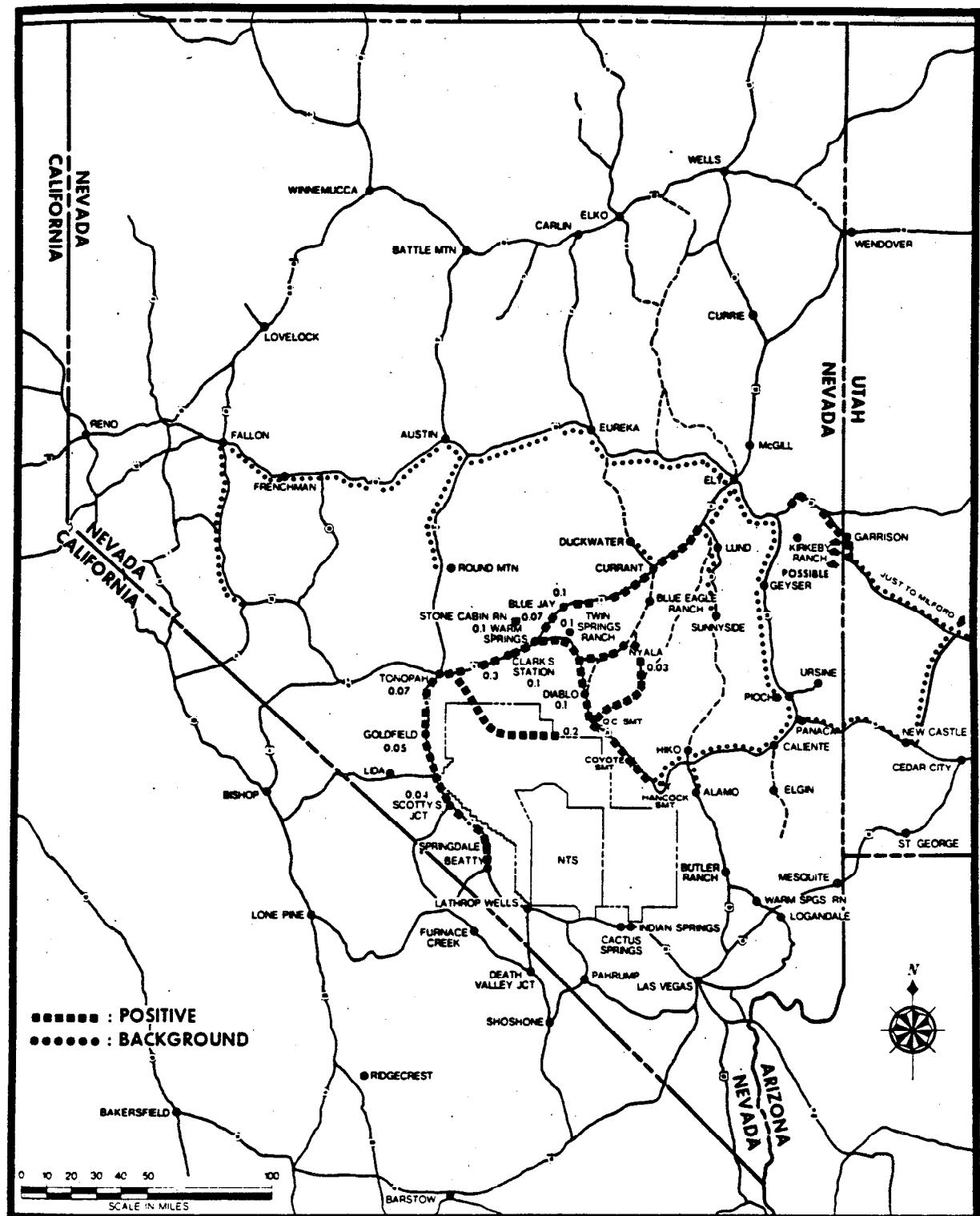


Figure 7. Area Monitored and Highest Exposure Rates (mR/h) -
Nevada, Baneberry D+1 (12/19/70)

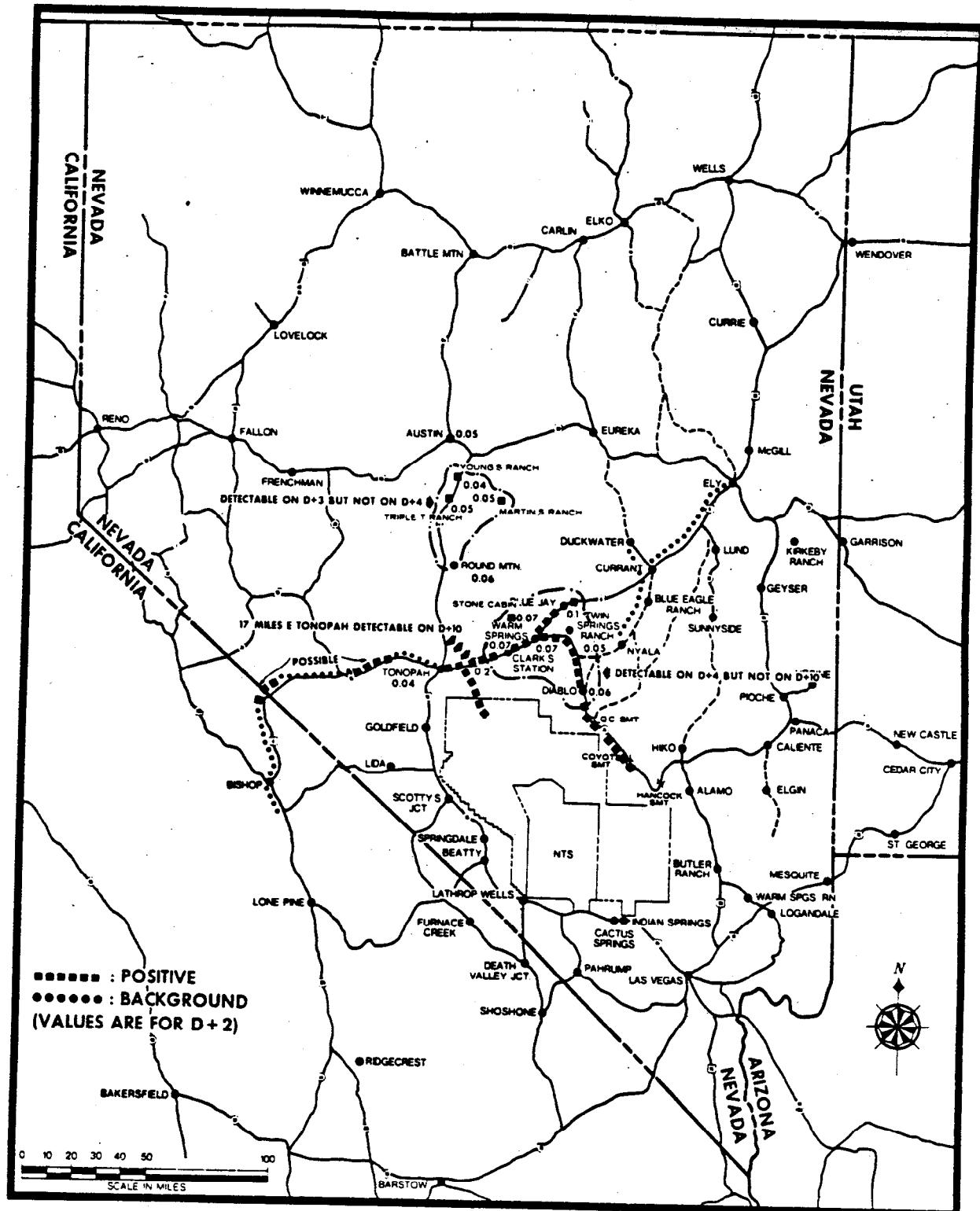


Figure 8. Area Monitored and Highest Exposure Rates (mR/h) - Nevada, Baneberry D+(2-10) (12/20/70)

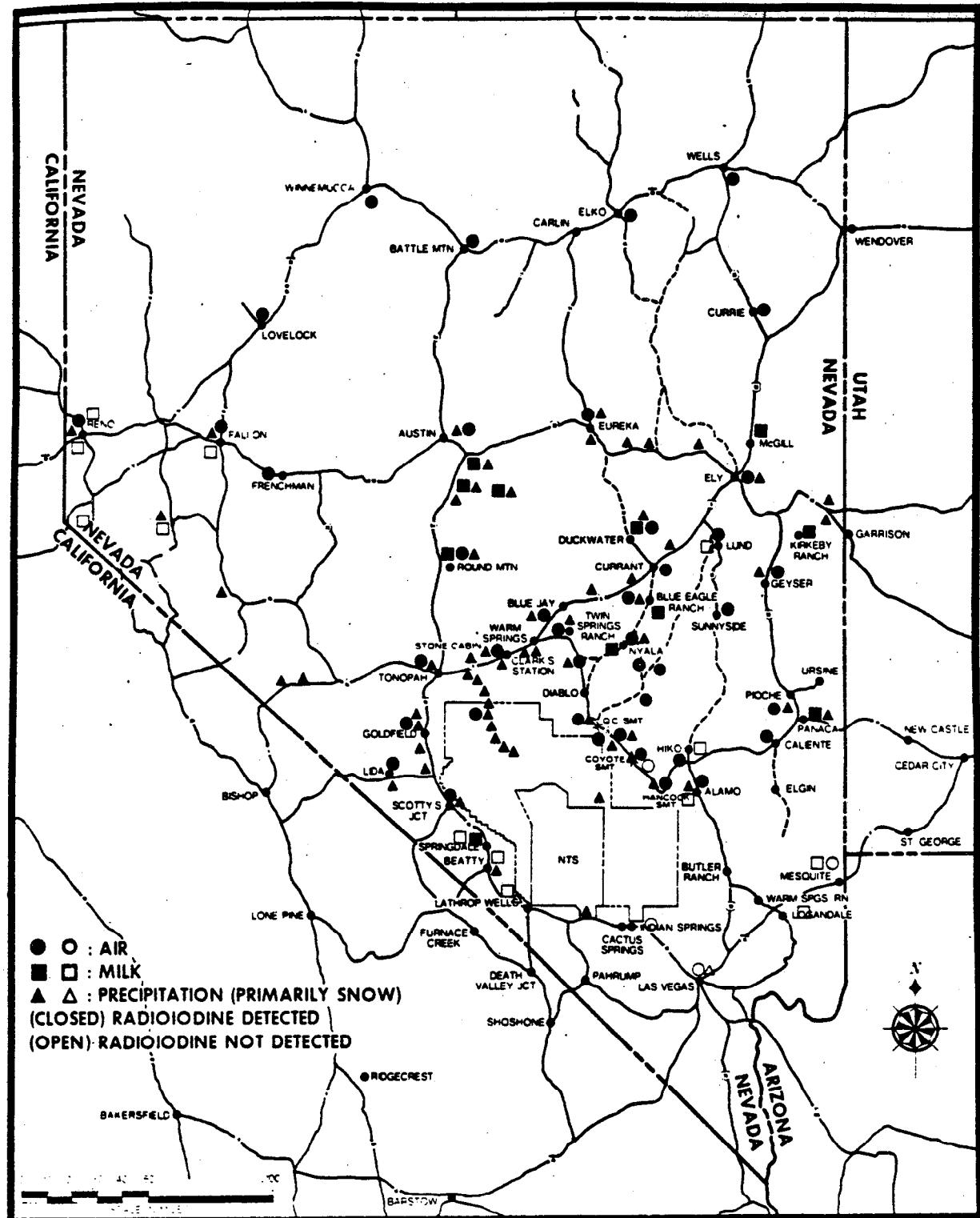


Figure 9. Environmental Sampling Locations - Nevada, Baneberry

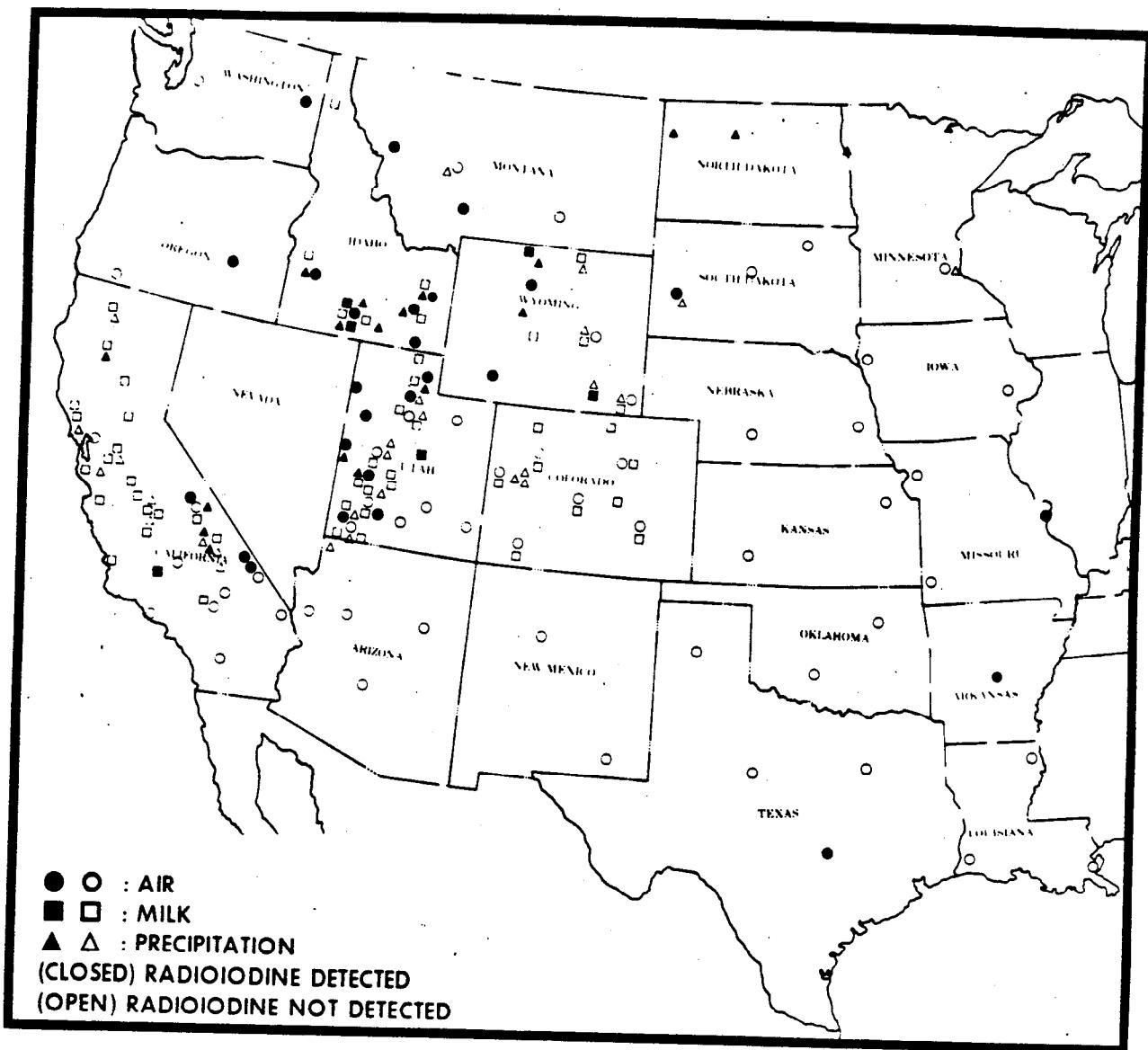


Figure 10. Environmental Sampling Locations Outside Nevada,
Baneberry

Table 6. Five Highest Estimated Hypothetical Infant Thyroid Doses from Inhalation of Radioiodine; Baneberry.

Location - Nevada	Sampling Period Date/Time On Off	Time-Integrated Radioactivity Concentrations† (μCi·sec/m³)				Estimated‡ Infant Thyroid Dose Equival- ent (mrem)
		¹³¹ I	¹³² I	¹³³ I	¹³⁶ I	
Stone Cabin Ranch** Az 337° Dist. 75 mi	18/0800 30/0800	21	71	280*	150*	100
Austin Az 342° Dist. 168 mi	18/1100 23/1000	12*	31	150*	50	53
Round Mountain Az 334° Dist. 119 mi	18/1146 26/1140	7.4	18	85*	27*	31
Blue Jay Maint.Sta. Az 356° Dist. 85 mi	18/0740 28/0730	7.1	21	56	22*	23
Tonopah Az 315° Dist. 88 mi	18/1130 26/1400	4.5*	8.2*	48*	35	19

† - Extrapolated to end of collection periods.

‡ - Calculation method shown in Appendix B.

* - Estimated concentrations as described in Appendix B.

** - An electrical power failure between 0700 and 1200 on December 19 resulted in no sample collected for that period.

Milk Sampling Results

Table 7 shows the five highest milk sampling results ranked on the basis of the maximum estimated thyroid dose to a hypothetical infant receptor with a two-gram thyroid. A two-year-old child, living in Beatty, Nevada, actually consuming milk from the McCurdy ranch was estimated to have received a dose of 130 mrem. The higher doses at the McCurdy ranch were the result of the cows grazing on pasture, whereas cows at other locations were eating hay. For the other ranches, the quantity of milk consumed by the youngest child drinking milk at each location was assumed to be 1 liter/day. The thyroid weights assumed for the seven- and nine-year-old children were seven grams and nine grams, respectively. A 20-gram thyroid weight was used for the adults. The thyroid dose equivalents received by the individuals were estimated from these assumptions, the concentrations of radioiodine in the milk, and the dose conversion factors in Appendix B.

Table 7. Five Highest Estimated Hypothetical Infant Thyroid Doses from Milk Sampling Results; Baneberry.*

Location	Peak Concentration of ^{131}I pCi/l (date)	Estimated Infant Thyroid Dose Equivalent (mrem)	Dose Equivalent to Youngest Individual Actually Drinking Milk (age) (mrem)
McCurdy Ranch Springdale, Nevada Az 245°, Dist. 41 mi.	810 (12/26/70)	260	2 130
Martin Ranch Eureka, Nevada Az 3°, Dist. 162 mi.	240 (12/22/70)	40	>20 4
Young's Ranch Austin, Nevada Az 341°, Dist. 168 mi.	140 (12/21/70)	30	9 7
Berg Ranch Round Mountain, Nevada Az 334°, Dist. 119 mi.	70 (12/21/70)	20	7 5
Halstead Ranch Duckwater, Nevada Az 11°, Dist. 121 mi.	90 (12/20/70)	10	>20 1

* Thyroid doses based on total milk samples collected; not on peak ^{131}I concentration.

Precipitation Sampling Results

Table 8 shows the five highest precipitation samples ranked by their concentrations of ^{131}I . Normally precipitation would not be of importance in terms of dose estimates. However, eight sheepherders working in an area between Duckwater and Eureka, Nevada, were using melted snow for domestic purposes. Although no samples of the snow-water being used by the herders were collected, inference from samples collected around the area supports an estimated thyroid dose of $0.5 \text{ rem} \pm$ a factor of 3. The large error in the estimate is due to a number of uncertainties such as the geographical distribution of fallout, snow collection techniques, the dilution by new snowfall, the actual water content of snow, and whether the radioactivity was deposited on the surface by fallout or snowout. Dose calculation methods are explained in Appendix B.

Table 8. Five Highest Precipitation Samples (snow) Ranked by ^{131}I Concentrations; Baneberry.

Location Azimuth Distance	Date Collected	Radionuclide ^{131}I	Concentrations (pCi/l) *	
		^{132}Te	^{133}I	^{135}I
Blue Jay Maintenance Station 355° 88 mi.	12/19/70	3.2×10^5	1.9×10^6	2.2×10^6 ND
15 mi. S Jct. Hwy 6 and TTR Road 324° 72 mi.	12/19/70	2.2×10^5	1.5×10^6	1.9×10^6 ND
30 mi. SW of Currant, Nev. on Hwy 6 4° 96 mi.	12/20/70	2.1×10^5	9.9×10^5	7.8×10^5 ND
Queen City Summit Hwy 25 8.5° 44 mi.	12/19/70	2.0×10^5	9.9×10^5	5.4×10^5 4.2×10^5
10 mi. S Jct. Hwy 6 and TTR Road 323° 76 mi.	12/20/70	1.9×10^5	9.2×10^5	9.2×10^5 ND

* - Other radionuclides were detected but were not germane to thyroid dose calculations.

ND - Not Detected.

SUMMARY

Tritium released by the July through December 1970 flaring operations at Project Rulison was detected in all types of environmental samples collected on the ground in off-site areas except for milk, water, food crops, cow feed, urine, and animal tissue. The highest concentration of ^{85}Kr in air was less than 0.05% of the Concentration Guide, and the highest ^3H concentration in air samples was less than 0.5% of the Concentration Guide for air in the AEC Manual, Chapter 0524. ⁽⁴⁾

The only NTS event that released radioactivity into the off-site environment during this reporting period was Baneberry, on December 18, 1970. Figure 11 summarizes the combined estimates of hypothetical infant thyroid doses which were calculated from measured concentrations of airborne radioiodine, concentrations of radioiodine in milk, and external gamma radiation exposures. As shown by Figure 11, the combined thyroid doses were below 0.5 rem, the Radiation Protection Standard of AEC Manual, Chapter 0524 for thyroid doses to a representative population sample.

The highest estimated thyroid dose for Baneberry was for the sheepherders who were working between Eureka and Duckwater, Nevada, and using snow for cooking and drinking. Although no snow being used by the herders was collected, inference from samples collected around the area supports a thyroid dose estimate of $0.5 \text{ rem} \pm \text{ a factor of } 3$, which is within the radiation protection standard ⁽⁴⁾ of 1.5 rem to the thyroid of an individual within the general population.

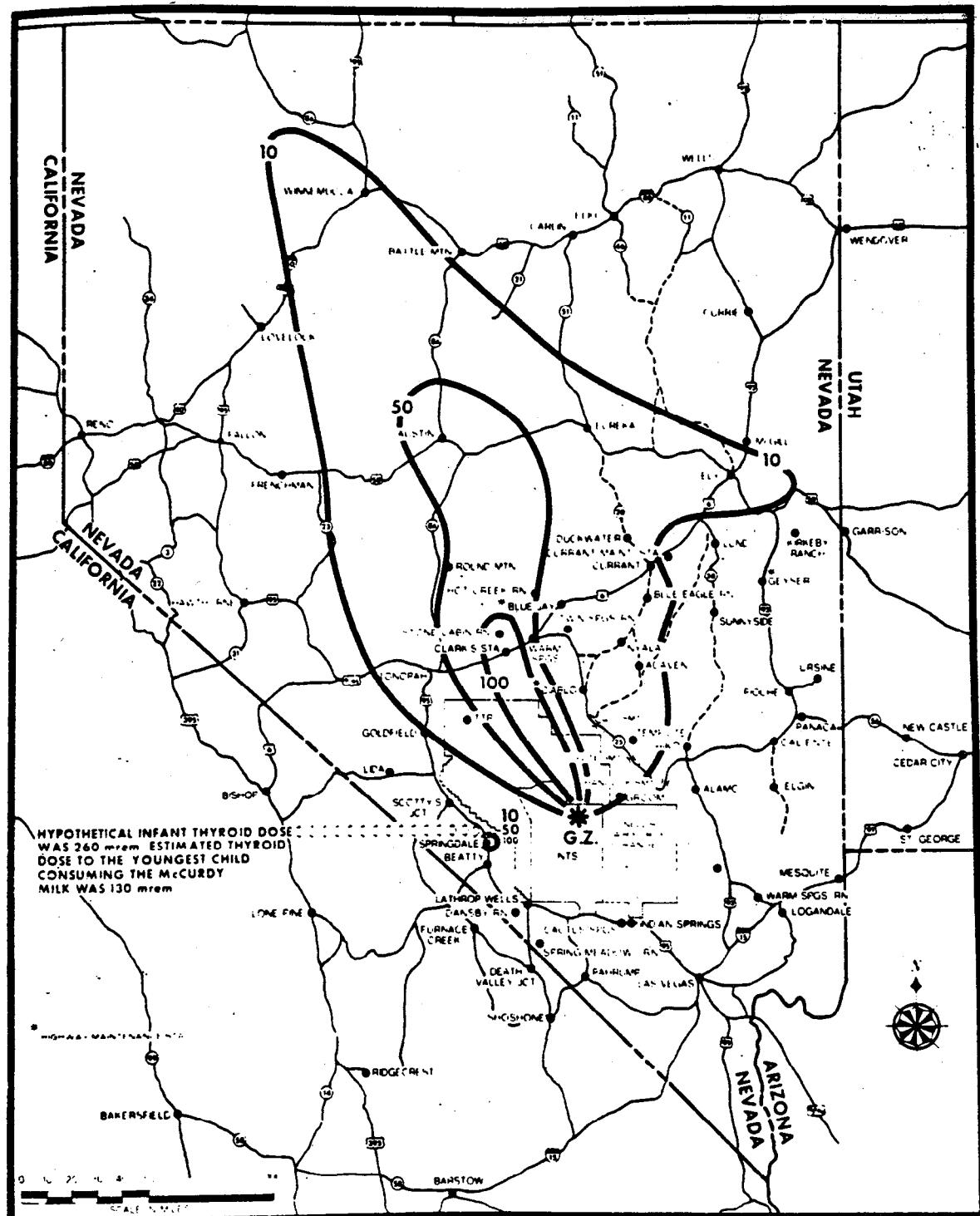


Figure 11. Distribution of Total Estimated Infant Thyroid Dose (mrem) in Nevada Postulated for Hypothetical Receptors Exposed to Measured Radiation Levels and Concentrations in Air and Milk

REFERENCES

1. "Safety Involving Detonation of Nuclear Devices," NVO-28, Chapter 11, United States Atomic Energy Commission, Nevada Operations Office, Las Vegas, Nevada, May 1966--revised 1968.
2. Payne, Donald W. and Frank Grossman, "Off-Site Radiological Safety Program for Project Rulison Re-entry Portion of Phase III," NERC-LV-539-14 published November 1972, and the Flaring Portion of Phase III, Project Rulison, by George Boysen, NERC-LV-539-15, to be published.
3. "Final Report of Off-Site Surveillance for the Baneberry Event, December 18, 1970," SWRHL-107r, Western Environmental Research Laboratory, Environmental Protection Agency, Las Vegas, Nevada, February 1972.
4. "Standards for Radiation Protection." AEC Manual, Chapter 0524. U. S. Atomic Energy Commission, Washington, D. C., November 8, 1968.
5. "Basic Radiation Protection Criteria," Recommendations of National Council on Radiation Protection and Measurements, NCRP Report No. 39. 4201 Connecticut Ave., NW, Washington, D.C. January 15, 1971. p. 83.
6. "Recommendations of the International Commission on Radiological Protection - Report of Committee II on Permissible Dose for Internal Radiation." ICRP-2, Pergamon Press, New York, London, Paris, Los Angeles, 1959.
7. "Protection of the Public in the Event of Radiation Accidents," Proceedings of a seminar sponsored by FAO/UN, IAEA, and World Health Organization on November 18, 1963, at Geneva, Switzerland, 1965, p. 210.

8. "Background Material for the Development of Radiation Protection Standards," Staff Report No. 5 of the Federal Radiation Council. Superintendent of Documents, U. S. Government Printing Office, Washington, D. C., July 1964. pp. 14-16.
9. "Climatological Data," National Oceanic and Atmospheric Administration Monthly Summarized Station and Divisional Data, Nevada, Volume 85, No. 12, December 1970.

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**Appendix A - Results of Milk Sampling
During this Six-Month Period**

Note--Results are given in exponential notation--the number following an -E- is the exponent of ten by which the preceding number should be multiplied. -LT- indicates less than, -NA- indicates no analysis, and -ND- indicates not detected. Two-sigma values are given in parentheses when available.

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ARIZONA	REPORTED	05/04/73	131I PCI/L	133I PCI/L	137CS PCI/L	89SR PCI/L	90SR PCI/L	K GM/L
KINGMAN ARIZ CANYON FARMS 90480 12	DATE- 10 20 70	0600	LT(10)	ND	LT(10)	NA	NA	1.6E00
SIZE- 3.50 L								
-ANALYSIS---RESULT---2SIGMA---UNITS---								
NO CHEM								
KINGMAN ARIZ CANYON FARMS 93065 12	DATE- 11 12 70	0600	LT(10)	ND	LT(10)	NA	NA	1.4E00
SIZE- 3.50 L								
-ANALYSIS---RESULT---2SIGMA---UNITS---								
NO CHEM								

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ARKANSAS	REPORTED	05/04/73	131I PCI/L	133I PCI/L	137CS PCI/L	89SR PCI/L	90SR PCI/L	K GM/L
LITTLE ROCK ARK - BORDENS 90481 12	DATE- 10 20 70	1800	LT(10)	ND	LT(10)	NA	NA	1.5E00
SIZE- 3.50 L								
-ANALYSIS---RESULT---2SIGMA---UNITS---								
NO								
CHEM								
LITTLE ROCK ARK - BORDENS 93068 12	DATE- 11 12 70	0600	LT(10)	ND	1.0E01	NA	NA	1.3E00
SIZE- 3.50 L								
-ANALYSIS---RESULT---2SIGMA---UNITS---								
NO								
CHEM								

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STATE	REPORTED	131I PCI/L	133I PCI/L	137CS PCI/L	89SR PCI/L	90SR PCI/L	K GM/L
CALIFORNIA	05/04/73						
AUBURN CALIF - LONE STAR DAIRY 95523 12 SB DATE- 12 19 70 0600 SIZE- .400 L		LT2E02	LT2E02	LT2E02	LT5E00	0.3E01	ND
AUBURN CALIF - LONE STAR DAIRY 95987 12 SB DATE- 12 24 70 0600 SIZE- 3.50 L		LT2E01	ND	LT2E01	NA	NA	1.0E00
AUBURN CALIF - LONE STAR DAIRY 95968 12 SB DATE- 12 26 70 0600 SIZE- 3.50 L		LT2E01	ND	LT2E01	NA	NA	1.1E00
BAKERSFIELD CALIF CARNATION CO 95695 12 SB DATE- 12 21 70 1800 SIZE- 3.50 L		LT2E01	LT2E01	LT2E01	NA	NA	1.3E00
BAKERSFIELD CALIF CARNATION CO 95698 12 SB DATE- 12 22 70 0600 SIZE- 3.50 L		LT2E01	LT2E01	LT2E01	NA	NA	1.0E00
BAKERSFIELD CALIF CARNATION CO 95707 12 SB DATE- 12 23 70 0600 SIZE- 3.50 L		LT2E01	LT2E01	LT2E01	NA	NA	1.3E00
BAKERSFIELD CALIF CARNATION CO 95857 12 SB DATE- 12 24 70 0600 SIZE- 3.50 L		LT2E01	LT2E01	LT2E01	NA	NA	1.4E00
BAKERSFIELD CALIF CARNATION CO 95845 12 SB DATE- 12 25 70 0600 SIZE- 3.50 L		LT2E01	LT2E01	LT2E01	LT5E00	LT2E00	1.4E00
-ANALYSIS---RESULT---2SIGMA---UNITS---							
3H LT4E02							
BAKERSFIELD CALIF CARNATION CO 96025 12 SB DATE- 12 26 70 0600 SIZE- 3.50 L		LT2E01	ND	LT2E01	NA	NA	1.0E00

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CALIFORNIA	REPORTED	05/04/73	131I PCI/L	133I PCI/L	137CS PCI/L	89SR PCI/L	90SR PCI/L	K GM/L
BAKERSFIELD CALIF CARNATION CO 96016 12 SB DATE- 12 27 70 0600 SIZE- 3.50 L			LT2E01	ND	LT2E01	NA	NA	1.2E00
BAKERSFIELD CALIF CARNATION CO 96154 12 SB DATE- 12 30 70 0600 SIZE- 3.50 L			LT2E01	ND	LT2E01	NA	NA	1.1E00
BAKERSFIELD CALIF CARNATION CO 96242 12 SB DATE- 12 31 70 0600 SIZE- 3.50 L			LT2E01	ND	LT2E01	NA	NA	1.4E00
BISHOP CALIF - SIERRA FARMS 87218 11 8290 DATE- 07 15 70 0600 SIZE- 3.50 L			LT(10)	ND	LT(10)	LT(5)	LT(2)	1.6E00
BISHOP CALIF - SIERRA FARMS 88183 11 8290 DATE- 08 11 70 0600 SIZE- 3.10 L			LT(10)	ND	LT(10)	LT(5)	2	1.3E00
BISHOP CALIF - SIERRA FARMS 89125 11 8290 DATE- 09 10 70 0600 SIZE- 3.50 L			LT(10)	ND	1.0E01	LT5E00	0.2E01	1.3E00
BISHOP CALIF - SIERRA FARMS 89915 11 8290 DATE- 10 07 70 0600 SIZE- 3.50 L			LT(10)	ND	1.0E01	LT5E00	0.3E01	1.4E00
BISHOP CALIF - SIERRA FARMS 93056 11 8290 DATE- 11 11 70 1800 SIZE- 3.50 L			LT(10)	ND	LT(10)	NA	NA	1.5E00
-ANALYSIS---RESULT---2SIGMA---UNITS---								
NO CHEM								

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CALIFORNIA	REPORTED	05/04/73	131I PCI/L	133I PCI/L	137CS PCI/L	89SR PCI/L	90SR PCI/L	K GM/L	
BISHOP CALIF - SIERRA FARMS 93623 11 8290	DATE- 12 08 70	0600	SIZE- 3.50 L	LT1E01	ND	LT1E01	LT5E00	LT2E00	1.3E00
CHICO CALIF - QUALITY DAIRY 95526 12 SB	DATE- 12 21 70	0600	SIZE- 3.50 L	LT2E01	LT2E01	LT2E01	LT5E00	0.3E01	1.5E00
CHICO CALIF - QUALITY DAIRY 96151 12 SB	DATE- 12 30 70	0600	SIZE- 3.50 L	LT2E01	ND	LT2E01	NA	NA	1.1E00
FRESNO CALIF - HARPAIN'S DAIRY 95525 12 SB	DATE- 12 20 70	1800	SIZE- 3.10 L	LT2E01	LT2E01	LT2E01	LT5E00	LT2E00	1.5E00
FRESNO CALIF - HARPAIN'S DAIRY 95522 12 SB	DATE- 12 21 70	0600	SIZE- 3.50 L	LT2E01	LT2E01	LT2E01	NA	NA	1.2E00
FRESNO CALIF - HARPAIN'S DAIRY 95805 12 SB	DATE- 12 23 70	0600	SIZE- 3.50 L	LT2E01	LT2E01	LT2E01	NA	NA	1.0E00
FRESNO CALIF - HARPAIN'S DAIRY 95794 12 SB	DATE- 12 24 70	0600	SIZE- 3.50 L	LT2E01	LT2E01	LT2E01	NA	NA	1.2E00
FRESNO CALIF - HARPAIN'S DAIRY 96138 12 SB	DATE- 12 29 70	0600	SIZE- 3.50 L	LT2E01	ND	LT2E01	NA	NA	1.2E00
FRESNO CALIF - HARPAIN'S DAIRY 96155 12 SB	DATE- 12 30 70	0600	SIZE- 3.50 L	LT2E01	ND	LT2E01	NA	NA	1.2E00

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CALIFORNIA	REPORTED 05/04/73	131I PCI/L	133I PCI/L	137CS PCI/L	89SR PCI/L	90SR PCI/L	K GM/L
FRESNO CALIF - HARPAIN'S DAIRY 96162 12 SB DATE- 12 31 70 0600 SIZE- 2.60 L		LT2E01	ND	LT2E01	NA	NA	1.3E00
FRESNO CALIF - ST COLLEGE CREAMERY 95321 12 SB DATE- 12 21 70 0600 SIZE- 3.50 L		LT1E01	LT1E01	LT1E01	LT5E00	0.2E01	1.2E00
FRESNO CALIF - ST COLLEGE CREAMERY 95521 12 SB DATE- 12 22 70 0600 SIZE- 2.85 L		LT2E01	LT2E01	LT2E01	NA	NA	1.0E01
FRESNO CALIF - ST COLLEGE CREAMERY 95697 12 SB DATE- 12 23 70 0600 SIZE- 3.50 L		LT2E01	LT2E01	LT2E01	NA	NA	1.1E00
FRESNO CALIF - ST COLLEGE CREAMERY 95785 12 SB DATE- 12 24 70 0600 SIZE- 3.50 L		LT2E01	LT2E01	LT2E01	NA	NA	1.4E00
FRESNO CALIF - ST COLLEGE CREAMERY 95959 12 SB DATE- 12 25 70 0600 SIZE- 3.50 L		LT2E01	ND	LT2E01	NA	NA	1.3E00
FRESNO CALIF - ST COLLEGE CREAMERY 95986 12 SB DATE- 12 26 70 0600 SIZE- 3.50 L		LT2E01	ND	LT2E01	NA	NA	1.1E00
FRESNO CALIF - ST COLLEGE CREAMERY 95964 12 SB DATE- 12 27 70 0600 SIZE- 3.50 L		LT2E01	ND	LT2E01	NA	NA	1.0E00
HANFORD CALIF - SUPERIOR DAIRY PROD 95536 12 SB DATE- 12 20 70 1800 SIZE- 3.50 L		LT2E01	LT2E01	LT2E01	LT5E00	LT2E00	1.2E00

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STATE	REPORTED	TEST	TEST	TEST	TEST	TEST	K GM/L
CALIFORNIA	05/04/73	131I PCI/L	133I PCI/L	137CS PCI/L	89SR PCI/L	90SR PCI/L	
HANFORD CALIF - SUPERIOR DAIRY PROD 95806 12 SB SIZE- 3.50 L	DATE- 12 23 70 0600	LT2E01	LT2E01	LT2E01	NA	NA	1.3E00
HANFORD CALIF - SUPERIOR DAIRY PROD 96033 12 SB SIZE- 3.50 L	DATE- 12 27 70 1000	LT2E01	ND	LT2E01	NA	NA	1.2E00
HINKLEY CALIF - BILL NELSON DAIRY 87214 12 6990 SIZE- 3.50 L	DATE- 07 14 70 0600	LT(10)	ND	LT(10)	LT(5)	LT(2)	1.6E00
HINKLEY CALIF - BILL NELSON DAIRY 88184 12 6990 SIZE- 3.50 L	DATE- 08 11 70 0600	LT(10)	ND	LT(10)	LT(5)	LT(2)	1.5E00
HINKLEY CALIF - BILL NELSON DAIRY 89126 12 6390 SIZE- 3.50 L	DATE- 09 08 70 1800	LT(10)	ND	LT(10)	LT5E00	LT2E00	1.6E00
HINKLEY CALIF - BILL NELSON DAIRY 89916 12 6390 SIZE- 3.50 L	DATE- 10 06 70 0600	LT(10)	ND	LT(10)	LT5E00	LT2E00	1.6E00
HINKLEY CALIF - BILL NELSON DAIRY 93055 12 6390 SIZE- 3.50 L	DATE- 11 09 70 0600	LT(10)	ND	LT(10)	NA	NA	1.4E00
-ANALYSIS---RESULT----2SIGMA---UNITS---							
NO CHEM							
HINKLEY CALIF - BILL NELSON DAIRY 93625 12 6390 SIZE- 3.50 L	DATE- 12 06 70 1800	LT1E01	ND	LT1E01	LT5E00	LT2E00	1.5E00

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CALIFORNIA	REPORTED 05/04/73	131I PCI/L	133I PCI/L	137CS PCI/L	89SR PCI/L	90SR PCI/L	K GM/L
HINKLEY CALIF - BILL NELSON DAIRY 95672 12 6992 DATE- 12 23 70 1800 SIZE- 3.50 L		LT2E01	LT2E01	LT2E01	NA	NA	1.0E00
HINKLEY CALIF - BILL NELSON DAIRY 95749 12 6992 DATE- 12 24 70 0600 SIZE- 3.50 L		LT2E01	LT2E01	LT2E01	NA	NA	1.0E00
INDEPENDENCE CALIF - SMITH RANCH 87217 13 8990 DATE- 07 15 70 0600 SIZE- 3.50 L		LT(10)	ND	LT(10)	NA	NA	1.3E00
-ANALYSIS---RESULT----2SIGMA---UNITS---							
NO							
CHEM							
INDEPENDENCE CALIF - SMITH RANCH 88186 13 8290 DATE- 08 11 70 0600 SIZE- 3.50 L		LT(10)	ND	LT(10)	LT(5)	2	1.3E00
INDEPENDENCE CALIF - SMITH RANCH 89124 13 8290 DATE- 09 09 70 0600 SIZE- 3.50 L		LT(10)	ND	LT(10)	LT5E00	LT2E00	1.4E00
INDEPENDENCE CALIF - SMITH RANCH 89914 13 8290 DATE- 10 07 70 0600 SIZE- 3.50 L		LT(10)	ND	LT(10)	LT5E00	0.2E01	1.3E00
INDEPENDENCE CALIF - SMITH RANCH 93624 13 8290 DATE- 12 07 70 1800 SIZE- 3.50 L		LT1E01	ND	LT1E01	LT5E00	0.2E01	1.6E00
INDEPENDENCE CALIF - SMITH RANCH 95676 13 6992 DATE- 12 23 70 1800 SIZE- 3.50 L		LT2E01	LT2E01	LT2E01	NA	NA	1.2E00

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CALIFORNIA	REPORTED	05/04/73	131I PCI/L	133I PCI/L	137CS PCI/L	89SR PCI/L	90SR PCI/L	K GM/L	
INDEPENDENCE CALIF - SMITH RANCH 95673 13 6992	DATE- 12 24 70	0600	SIZE- 3.50 L	LT2E01	LT2E01	LT2E01	NA	NA	1.3E00
MADERA CALIF - MADERA QUALITY DAIRY 95647 12 SB	DATE- 12 21 70	0600	SIZE- 2.80 L	LT2E01	LT2E01	LT2E01	LT5E00	0.7E01	1.6E00
MADERA CALIF - MADERA QUALITY DAIRY 95706 12 SB	DATE- 12 22 70	0600	SIZE- 3.50 L	LT2E01	LT2E01	LT2E01	NA	NA	1.3E00
MADERA CALIF - MADERA QUALITY DAIRY 95802 12 SB	DATE- 12 23 70	0600	SIZE- 3.50 L	LT2E01	LT2E01	LT2E01	NA	NA	1.7E00
MADERA CALIF - MADERA QUALITY DAIRY 96017 12 SB	DATE- 12 24 70	0600	SIZE- 3.50 L	LT2E01	ND	LT2E01	NA	NA	1.0E00
MADERA CALIF - MADERA QUALITY DAIRY 96083 12 SB	DATE- 12 25 70	0600	SIZE- 3.50 L	LT2E01	ND	LT2E01	NA	NA	1.0E00
MADERA CALIF - MADERA QUALITY DAIRY 96081 12 SB	DATE- 12 25 70	1800	SIZE- 3.50 L	LT2E01	ND	LT2E01	NA	NA	1.0E00
MADERA CALIF - MADERA QUALITY DAIRY 96024 12 SB	DATE- 12 27 70	0600	SIZE- 3.50 L	LT2E01	ND	LT2E01	NA	NA	1.1E00
MERCED CALIF - SUNSHINE DAIRY FARMS 95538 12 SB	DATE- 12 20 70	1800	SIZE- 3.50 L	LT2E01	LT2E01	LT2E01	LT5E00	0.2E01	1.0E00

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CALIFORNIA	REPORTED	05/04/73	131I PCI/L	133I PCI/L	137CS PCI/L	89SR PCI/L	90SR PCI/L	K GM/L
MERCED CALIF - SUNSHINE DAIRY FARMS 95653 12 SB SIZE- 3.50 L	DATE- 12 22 70	0600	LT2E01	LT2E01	LT2E01	NA	NA	1.0E00
MERCED CALIF - SUNSHINE DAIRY FARMS 95680 12 SB SIZE- 3.50 L	DATE- 12 23 70	0600	LT2E01	LT2E01	LT2E01	NA	NA	1.3E00
MERCED CALIF - SUNSHINE DAIRY FARMS 96066 12 SB SIZE- 3.50 L	DATE- 12 25 70	0600	LT2E01	ND	LT2E01	NA	NA	1.0E00
MERCED CALIF - SUNSHINE DAIRY FARMS 96091 12 SB SIZE- 3.50 L	DATE- 12 26 70	0600	LT2E01	ND	LT2E01	NA	NA	1.1E00
MERCED CALIF - SUNSHINE DAIRY FARMS 96015 12 SB SIZE- 3.50 L	DATE- 12 27 70	1800	LT2E01	ND	LT2E01	NA	NA	1.5E00
MERCED CALIF - SUNSHINE DAIRY FARMS 96074 12 SB SIZE- 3.50 L	DATE- 12 28 70	0600	LT2E01	ND	LT2E01	NA	NA	1.2E00
OLANCHA CALIF - HUNTER RANCH 95748 13 6992 SIZE- 3.50 L	DATE- 12 24 70	0600	LT2E01	LT2E01	LT2E01	NA	NA	1.0E00
REDDING CALIF - MCCOLL'S DAIRY PROD 95528 12 SB SIZE- 3.50 L	DATE- 12 20 70	1800	LT2E01	LT2E01	LT2E01	LT5E00	LT2E00	1.1E00
REDDING CALIF - MCCOLL'S DAIRY PROD 95644 12 SB SIZE- 3.50 L	DATE- 12 21 70	1800	LT2E01	LT2E01	LT2E01	NA	NA	1.0E01

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CALIFORNIA	REPORTED	05/04/73	131I PCI/L	133I PCI/L	137CS PCI/L	89SR PCI/L	90SR PCI/L	K GM/L
REDDING CALIF - MCCOLL'S DAIRY PROD 95854 12 SB SIZE- 3.50 L		DATE- 12 23 70 1800	LT2E01	LT2E01	LT2E01	NA	NA	1.5E00
REDDING CALIF - MCCOLL'S DAIRY PROD 96127 12 SB SIZE- 3.50 L		DATE- 12 24 70 1800	LT2E01	ND	LT2E01	NA	NA	1.2E00
REDDING CALIF - MCCOLL'S DAIRY PROD 96143 12 SB SIZE- 3.50 L		DATE- 12 27 70 1800	LT2E01	ND	LT2E01	NA	NA	1.5E00
SALINAS CALIF - BLUE RIBBON DAIRY 95534 12 SB SIZE- 3.50 L		DATE- 12 21 70 0600	LT2E01	LT2E01	LT2E01	LT5E00	0.2E01	1.0E01
SALINAS CALIF - BLUE RIBBON DAIRY 95727 12 SB SIZE- 3.20 L		DATE- 12 23 70 0600	LT2E01	LT2E01	LT2E01	LT5E00	0.2E01	1.3E00
SALINAS CALIF - BLUE RIBBON DAIRY 95810 12 SB SIZE- 3.50 L		DATE- 12 23 70 0600	LT2E01	LT2E01	LT2E01	NA	NA	1.0E00
SALINAS CALIF - BLUE RIBBON DAIRY 96126 12 SB SIZE- 3.50 L		DATE- 12 29 70 0600	LT2E01	ND	LT2E01	NA	NA	1.0E00
SALINAS CALIF - BLUE RIBBON DAIRY 96111 12 SB SIZE- 3.50 L		DATE- 12 29 70 1000	LT2E01	ND	LT2E01	NA	NA	1.5E00
SAN LUIS OBISPO CALIF - FOREMOST DAIRY 95537 12 SB SIZE- 3.50 L		DATE- 12 21 70 1800	LT2E01	LT2E01	LT2E01	LT5E00	0.4E01	1.2E00

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CALIFORNIA	REPORTED	05/04/73	131I PCI/L	133I PCI/L	137CS PCI/L	89SR PCI/L	90SR PCI/L	K GM/L
SAN LUIS OBISPO CALIF - FOREMOST DAIRY 95654 12 SB DATE- 12 22 70 0600 SIZE- 3.50 L			LT2E01	LT2E01	LT2E01	NA	NA	1.5E0
SAN LUIS OBISPO CALIF - FOREMOST DAIRY 95679 12 SB DATE- 12 23 70 0600 SIZE- 3.50 L			LT2E01	LT2E01	LT2E01	NA	NA	1.2E0
SAN LUIS OBISPO CALIF - FOREMOST DAIRY 95860 12 SB DATE- 12 24 70 0600 SIZE- 3.50 L			LT2E01	LT2E01	LT2E01	NA	NA	1.0E0
SAN LUIS OBISPO CALIF - FOREMOST DAIRY 96069 12 SB DATE- 12 25 70 0600 SIZE- 3.50 L			LT2E01	ND	LT2E01	NA	NA	1.0E0
SAN LUIS OBISPO CALIF - FOREMOST DAIRY 96035 12 SB DATE- 12 26 70 0600 SIZE- 3.50 L			LT2E01	ND	LT2E01	NA	NA	1.1E0
SAN LUIS OBISPO CALIF - FOREMOST DAIRY 96022 12 SB DATE- 12 27 70 0600 SIZE- 3.50 L			LT2E01	ND	LT2E01	NA	NA	1.4E0
SANTA CLARA CALIF - EDELWEISS DAIRIES 95961 12 SB DATE- 12 22 70 0600 SIZE- 3.50 L			LT2E01	ND	LT2E01	LT5E00	LT2E00	1.3E0
SANTA CLARA CALIF - EDELWEISS DAIRIES 96380 12 SB DATE- 12 23 70 0600 SIZE- .400 L			LT1E02	ND	LT1E02	NA	NA	ND
SANTA CLARA CALIF - EDELWEISS DAIRIES 95979 12 SB DATE- 12 24 70 0600 SIZE- .400 L			LT1E02	ND	LT1E02	NA	NA	ND

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CALIFORNIA	REPORTED	05/04/73	131I PCI/L	133I PCI/L	137CS PCI/L	89SR PCI/L	90SR PCI/L	K GM/L
SANTA CLARA CALIF - EDELWEISS DAIRIES 96145 12 SB SIZE- 3.50 L	DATE- 12 24 70	0600	LT2E01	ND	LT2E01	NA	NA	1.2E00
SANTA CLARA CALIF - EDELWEISS DAIRIES 96382 12 SB SIZE- 2.30 L	DATE- 12 26 70	0600	LT2E01	ND	LT2E01	NA	NA	1.4E00
SANTA CLARA CALIF - EDELWEISS DAIRIES 96381 12 SB SIZE- 3.50 L	DATE- 12 28 70	0600	LT2E01	ND	LT2E01	NA	NA	1.4E00
SANTA ROSA CALIF - ARLINGTON FARMS 95723 12 SB SIZE- 3.50 L	DATE- 12 21 70	0600	LT2E01	LT2E01	LT2E01	LT5E00	0.3E01	1.3E00
SANTA ROSA CALIF - ARLINGTON FARMS 95722 12 SB SIZE- 3.50 L	DATE- 12 22 70	0600	LT2E01	LT2E01	LT2E01	NA	NA	1.3E00
SANTA ROSA CALIF - ARLINGTON FARMS 96137 12 SB SIZE- 3.50 L	DATE- 12 23 70	1800	LT2E01	ND	LT2E01	NA	NA	1.0E00
SANTA ROSA CALIF - ARLINGTON FARMS 96133 12 SB SIZE- 3.50 L	DATE- 12 25 70	0600	LT2E01	ND	LT2E01	NA	NA	1.0E00
SANTA ROSA CALIF - ARLINGTON FARMS 96129 12 SB SIZE- 3.50 L	DATE- 12 26 70	0600	LT2E01	ND	LT2E01	NA	NA	1.4E00
SANTA ROSA CALIF - ARLINGTON FARMS 96142 12 SB SIZE- 3.50 L	DATE- 12 27 70	0600	LT2E01	ND	LT2E01	NA	NA	1.2E00

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CALIFORNIA	REPORTED	05/04/73	131I PCI/L	133I PCI/L	137CS PCI/L	89SR PCI/L	90SR PCI/L	K GM/L	
SANTA ROSA CALIF - BURBANK DAIRY 95319 12 SB	DATE- 12 20 70	0600	SIZE- 3.00 L	LT2E01	LT2E01	LT2E01	LT5E00	0.6E01	1.2E00
SANTA ROSA CALIF - BURBANK DAIRY 95318 12 SB	DATE- 12 21 70	0600	SIZE- 3.50 L	LT2E01	LT2E01	LT2E01	NA	NA	1.0E00
SANTA ROSA CALIF - BURBANK DAIRY 95651 12 SB	DATE- 12 22 70	0600	SIZE- 2.50 L	LT2E01	LT2E01	LT2E01	NA	NA	1.3E00
SANTA ROSA CALIF - BURBANK DAIRY 95657 12 SB	DATE- 12 23 70	0600	SIZE- 3.50 L	LT2E01	LT2E01	LT2E01	NA	NA	1.1E00
SANTA ROSA CALIF - BURBANK DAIRY 96132 12 SB	DATE- 12 28 70	0600	SIZE- 2.30 L	LT3E01	ND	LT3E01	LT5E00	LT2E00	1.5E00
-ANALYSIS---RESULT----2SIGMA---UNITS---									
3H	8.8E02								
SANTA ROSA CALIF - BURBANK DAIRY 96139 12 SB	DATE- 12 29 70	0600	SIZE- 3.20 L	LT2E01	ND	LT2E01	NA	NA	1.6E00
SANTA ROSA CALIF - BURBANK DAIRY 96160 12 SB	DATE- 12 30 70	0600	SIZE- 3.50 L	LT2E01	ND	LT2E01	NA	NA	1.5E00
SANTA ROSA CALIF - BURBANK DAIRY 96279 12 SB	DATE- 12 31 70	0600	SIZE- 3.00 L	LT2E01	ND	LT2E01	NA	NA	1.0E00
STOCKTON CALIF - LUCKY MILK + ICE CRM 96152 12 SB	DATE- 12 29 70	0400	SIZE- 3.50 L	LT2E01	ND	LT2E01	LT5E00	LT2E00	1.4E00

96152 12 SB DATE- 12 29 70 0400
SIZE- 3.50 L

LT2E01 ND LT2E01 LT5E00 LT2E00 1.4E00

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CALIFORNIA	REPORTED	05/04/73	131I PCI/L	133I PCI/L	137CS PCI/L	89SR PCI/L	90SR PCI/L	K GM/L
TRACY CALIF - DEUEL VOC INST 90478 11	DATE- 10 20 70 0600 SIZE- 3.50 L		LT(10)	ND	LT(10)	NA	NA	1.5E00
-ANALYSIS---RESULT----2SIGMA---UNITS---								
NO CHEM								
TRACY CALIF - DEUEL VOC INST 93193 11	DATE- 11 16 70 0600 SIZE- 3.50 L		LT(10)	ND	LT(10)	NA	NA	1.5E00
-ANALYSIS---RESULT----2SIGMA---UNITS---								
NO CHEM								
TRACY CALIF - DEUEL VOC INST 95527 12 SB	DATE- 12 21 70 0600 SIZE- 3.50 L		LT2E01	LT2E01	LT2E01	LT5E00	0.3E01	1.1E00
TRACY CALIF - DEUEL VOC INST 95712 12 SB	DATE- 12 22 70 0600 SIZE- 3.50 L		LT2E01	LT2E01	LT2E01	NA	NA	1.2E00
TRACY CALIF - DEUEL VOC INST 95681 12 SB	DATE- 12 23 70 0600 SIZE- 3.50 L		LT2E01	LT2E01	LT2E01	NA	NA	1.4E00
TRACY CALIF - DEUEL VOC INST 95808 12 SB	DATE- 12 24 70 0600 SIZE- 3.50 L		LT2E01	LT2E01	LT2E01	NA	NA	1.3E00
TRACY CALIF - DEUEL VOC INST 96084 12 SB	DATE- 12 25 70 0600 SIZE- 3.50 L		LT2E01	ND	LT2E01	NA	NA	1.0E00
TRACY CALIF - DEUEL VOC INST 96090 12 SB	DATE- 12 25 70 0600 SIZE- 3.50 L		LT2E01	ND	LT2E01	NA	NA	1.1E00

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CALIFORNIA	REPORTED	05/04/73	131I PCI/L	133I PCI/L	137CS PCI/L	89SR PCI/L	90SR PCI/L	K GM/L
TRACY CALIF - DEUEL VOC INST 96094 12 SB	DATE- 12 27 70	1800 SIZE- 3.50 L	LT2E01	ND	LT2E01	NA	NA	1.1E00
WEED CALIF - MEDO-BEL CREAMERY 95809 12 SB	DATE- 12 21 70	0600 SIZE- 3.50 L	LT2E01	LT2E01	LT2E01	LT5E00	0.4E01	1.1E00
WEED CALIF - MEDO-BEL CREAMERY 95811 12 SB	DATE- 12 23 70	0600 SIZE- 3.50 L	LT2E01	LT2E01	LT2E01	NA	NA	1.3E00
WEED CALIF - MEDO-BEL CREAMERY 96112 12 SB	DATE- 12 27 70	0600 SIZE- 3.50 L	LT2E01	ND	LT2E01	NA	NA	1.2E00
WEED CALIF - MEDO-BEL CREAMERY 96153 12 SB	DATE- 12 30 70	1800 SIZE- 3.50 L	LT2E01	ND	LT2E01	NA	NA	1.2E00

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OLORADO	REPORTED	05/04/73	131I PCI/L	133I PCI/L	137CS PCI/L	89SR PCI/L	90SR PCI/L	K GM/L
OLLBRAN COLO - C W YOUNG DAIRY 87705 12 7942	SIZE- 3.50 L	DATE- 08 02 70 0600	LT(10)	ND	LT(10)	NA	NA	1.4E00
ANALYSIS---RESULT---2SIGMA---UNITS---								
3H	1.3E03							
OLLBRAN COLO - C W YOUNG DAIRY 89431 12 7242	SIZE- 3.50 L	DATE- 09 21 70 0600	LT(10)	ND	LT(10)	NA	NA	1.1E00
ANALYSIS---RESULT---2SIGMA---UNITS---								
3H	1.7E03							
OLLBRAN COLO - C W YOUNG DAIRY 90059 12 6992	SIZE- 3.50 L	DATE- 10 08 70 0600	LT(10)	ND	LT(10)	NA	NA	1.5E00
ANALYSIS---RESULT---2SIGMA---UNITS---								
3H	7.6E02							
OLLBRAN COLO - C W YOUNG DAIRY 90884 12 6992	SIZE- .005 L	DATE- 11 04 70 0600	ND	ND	ND	NA	NA	ND
ANALYSIS---RESULT---2SIGMA---UNITS---								
NO								
GAMMA								
SCAN								
3H	8.5E02							
OLLBRAN COLO - C W YOUNG DAIRY 95328 12 6292	SIZE- .005 L	DATE- 12 21 70 0800	ND	ND	ND	NA	NA	ND
ANALYSIS---RESULT---2SIGMA---UNITS---								
NO								
GAMMA								
SCAN								
3H	6.6E02							

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COLORADO	REPORTED	05/04/73	131I PCI/L	133I PCI/L	137CS PCI/L	89SR PCI/L	90SR PCI/L	K GM/L
COLLBRAN COLO - WILLIAM C EARLEY RANCH 87698 13 2202 DATE- 08 03 70 0600 SIZE- 3.50 L			LT(10)	ND	LT(10)	NA	NA	1.2E00
-ANALYSIS---RESULT----2SIGMA---UNITS---								
3H		6.9E02						
COLLBRAN COLO - WILLIAM C EARLEY RANCH 89430 13 7942 DATE- 09 22 70 0600 SIZE- 3.50 L			LT(10)	ND	LT(10)	NA	NA	1.1E00
-ANALYSIS---RESULT----2SIGMA---UNITS---								
3H		7.7E02						
COLLBRAN COLO - WILLIAM C EARLEY RANCH 90051 13 6992 DATE- 10 08 70 0600 SIZE- 3.50 L			LT(10)	ND	LT(10)	NA	NA	1.1E00
-ANALYSIS---RESULT----2SIGMA---UNITS---								
3H		6.9E02						
COLLBRAN COLO - ARTHUR LINN RANCH 87700 13 7242 DATE- 08 03 70 0600 SIZE- 3.50 L			LT(10)	ND	LT(10)	NA	NA	1.6E00
-ANALYSIS---RESULT----2SIGMA---UNITS---								
3H		2.4E03						
COLLBRAN COLO - ARTHUR LINN RANCH 89359 13 7242 DATE- 09 20 70 0600 SIZE- 3.50 L			LT(10)	ND	LT(10)	NA	NA	1.4E00
-ANALYSIS---RESULT----2SIGMA---UNITS---								
3H		6.7E02						
COLLBRAN COLO - ARTHUR LINN RANCH 90056 13 6292 DATE- 10 08 70 1130 SIZE- .400 L			LT(100)	ND	LT(100)	NA	NA	ND
-ANALYSIS---RESULT----2SIGMA---UNITS---								
3H		1.4E03						

H 1.4E03

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STATE	REPORTED	05/04/73	131I PCI/L	133I PCI/L	137CS PCI/L	89SR PCI/L	90SR PCI/L	K GM/L
COLORADO			ND	ND	ND	NA	NA	ND
OLLBRAN COLO - ARTHUR LINN RANCH 90886 13 6292 DATE- 11 05 70 0600 SIZE- .005 L								
ANALYSIS---RESULT----2SIGMA---UNITS---								
NO GAMMA SCAN 3H		1.0E03						
OLLBRAN COLO - ARTHUR LINN RANCH 95327 13 6292 DATE- 12 21 70 0600 SIZE- .005 L			ND	ND	ND	NA	NA	ND
ANALYSIS---RESULT----2SIGMA---UNITS---								
NO GAMMA SCAN 3H		8.4E02						
COLORADO SPGS COLO - SINTON DAIRY CO 95787 12 SB DATE- 12 21 70 1800 SIZE- 3.50 L			LT2E01	LT2E01	LT2E01	LT5E00	0.3E01	1.5E00
COLORADO SPGS COLO - SINTON DAIRY CO 96135 12 SB DATE- 12 23 70 0600 SIZE- 3.50 L			LT2E01	ND	LT2E01	NA	NA	1.2E00
COLORADO SPGS COLO - SINTON DAIRY CO 96119 12 SB DATE- 12 24 70 0800 SIZE- 3.50 L			LT2E01	ND	LT2E01	NA	NA	1.2E00
COLORADO SPGS COLO - SINTON DAIRY CO 96144 12 SB DATE- 12 25 70 0600 SIZE- 3.50 L			LT2E01	ND	LT2E01	NA	NA	1.2E00
COLORADO SPGS COLO - SINTON DAIRY CO 96110 12 SB DATE- 12 26 70 0600 SIZE- 3.50 L			LT2E01	ND	LT2E01	NA	NA	1.4E00

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COLORADO	REPORTED	05/04/73	131I PCI/L	133I PCI/L	137CS PCI/L	89SR PCI/L	90SR PCI/L	K GM/L
COLORADO SPGS COLO - SINTON DAIRY CO 96118 12 SB DATE- 12 27 70 0600 SIZE- 3.50 L			LT2E01	ND	LT2E01	NA	NA	1.0E00
COLORADO SPGS COLO - SINTON DAIRY CO 96130 12 SB DATE- 12 28 70 0600 SIZE- 3.50 L			LT2E01	ND	LT2E01	NA	NA	1.1E00
CRAIG COLO - YAMPA VALLEY DAIRY 95791 12 SB DATE- 12 19 70 0600 SIZE- 3.50 L			LT2E01	LT2E01	LT2E01	LT5E00	0.5E01	1.3E00
DEBEQUE COLO - C L RICKSTREW RANCH 87692 13 6192 DATE- 08 02 70 0600 SIZE- .400 L -ANALYSIS---RESULT----2SIGMA---UNITS--- 3H 9.7E02			LT(100)	ND	LT(100)	NA	NA	ND
DEBEQUE COLO - C L RICKSTREW RANCH 89358 13 6192 DATE- 09 16 70 1800 SIZE- 3.50 L -ANALYSIS---RESULT----2SIGMA---UNITS--- 3H 7.8E02			LT(10)	ND	LT(10)	NA	NA	1.1E00
DEBEQUE COLO - C L RICKSTREW RANCH 90060 13 7242 DATE- 10 10 70 0600 SIZE- .400 L -ANALYSIS---RESULT----2SIGMA---UNITS--- 3H 1.3E03			LT(100)	ND	LT(100)	NA	NA	ND
DURANGO COLO - CLOVER RICH DAIRY 95529 12 SB DATE- 12 20 70 1800 SIZE- .400 L			LT2E02	LT2E02	LT2E02	LT5E00	0.6E01	1.9E00
DURANGO COLO - CLOVER RICH DAIRY 96037 12 SB DATE- 12 26 70 0600 SIZE- 3.50 L			LT2E01	ND	LT2E01	NA	NA	1.7E00

96037 12 SB
SIZE- 3.50 L

DA.E- 12 26 70 0600

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OLORADO	REPORTED	05/04/73	131I PCI/L	133I PCI/L	137CS PCI/L	89SR PCI/L	90SR PCI/L	K GM/L
T COLLINS COLO - POUDRE VALLEY DAIRY 95804 12 SB SIZE- 3.50 L	DATE- 12 21 70 0600	LT2E01	LT2E01	LT2E01	NA	NA	NA	1.0E00
T COLLINS COLO - POUDRE VALLEY DAIRY 95789 12 SB SIZE- 3.50 L	DATE- 12 22 70 0600	LT2E01	LT2E01	LT2E01	LT5E00	0.4E01	1.3E00	
T COLLINS COLO - POUDRE VALLEY DAIRY 95978 12 SB SIZE- 3.50 L	DATE- 12 22 70 0600	LT2E01	ND	LT2E01	NA	NA	NA	1.4E00
T COLLINS COLO - POUDRE VALLEY DAIRY 96036 12 SB SIZE- 3.50 L	DATE- 12 23 70 0600	LT2E01	ND	LT2E01	NA	NA	NA	1.2E00
T COLLINS COLO - POUDRE VALLEY DAIRY 96038 12 SB SIZE- 3.50 L	DATE- 12 25 70 0600	LT2E01	ND	LT2E01	NA	NA	NA	1.2E00
FT COLLINS COLO - POUDRE VALLEY DAIRY 96021 12 SB SIZE- 3.50 L	DATE- 12 26 70 0600	LT2E01	ND	LT2E01	NA	NA	NA	1.2E00
FT COLLINS COLO - POUDRE VALLEY DAIRY 96064 12 SB SIZE- 3.50 L	DATE- 12 27 70 0600	LT2E01	ND	LT2E01	NA	NA	NA	1.0E00
GLENWOOD SPGS COLO - GLENWOOD CREAMERY 95532 12 SB SIZE- 3.50 L	DATE- 12 21 70 0600	LT2E01	LT2E01	LT2E01	LT5E00	0.4E01	1.0E00	
GLENWOOD SPGS COLO - GLENWOOD CREAMERY 95788 12 SB SIZE- 3.50 L	DATE- 12 22 70 0600	LT2E01	LT2E01	LT2E01	NA	NA	NA	1.4E01

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COLORADO	REPORTED	05/04/73	131I PCI/L	133I PCI/L	137CS PCI/L	89SR PCI/L	90SR PCI/L	K GM/L
GLENWOOD SPGS COLO - GLENWOOD CREAMERY 95962 12 SB DATE- 12 23 70 0600 SIZE- 3.50 L			LT2E01	ND	LT2E01	NA	NA	1.4E00
GLENWOOD SPGS COLO - GLENWOOD CREAMERY 95992 12 SB DATE- 12 26 70 0600 SIZE- 3.50 L			LT2E01	ND	LT2E01	NA	NA	1.0E00
GLENWOOD SPGS COLO - GLENWOOD CREAMERY 95983 12 SB DATE- 12 27 70 0600 SIZE- 3.50 L			LT2E01	ND	LT2E01	NA	NA	1.0E00
GLENWOOD SPGS COLO- ROCK-N-PINES DAIRY 87703 12 6992 DATE- 08 03 70 0600 SIZE- 3.50 L -ANALYSIS---RESULT----2SIGMA---UNITS--- 3H 1.3E03		LT(10)	ND		1.0E01	NA	NA	1.4E00
GLENWOOD SPGS COLO- ROCK-N-PINES DAIRY 89362 12 6992 DATE- 09 18 70 0600 SIZE- 3.50 L -ANALYSIS---RESULT----2SIGMA---UNITS--- 3H 1.0E03		LT(10)	ND		LT(10)	NA	NA	1.4E00
GLENWOOD SPGS COLO- ROCK-N-PINES DAIRY 90063 12 6992 DATE- 10 09 70 0600 SIZE- 3.50 L -ANALYSIS---RESULT----2SIGMA---UNITS--- 3H 7.6E02		LT(10)	ND		LT(10)	NA	NA	1.5E00
GRAND JCT COLO - CLYMER'S DAIRY 90482 12 DATE- 10 20 70 0600 SIZE- 3.50 L -ANALYSIS---RESULT----2SIGMA---UNITS--- NO CHEM		LT(10)	ND		LT(10)	NA	NA	1.5E00

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COLORADO	REPORTED	05/04/73	131I PCI/L	133I PCI/L	137CS PCI/L	89SR PCI/L	90SR PCI/L	K GM/L
GRAND JCT COLO - CLYMER'S DAIRY 93110 12 SB	DATE- 11 12 70	0600	LT(10)	ND	LT(10)	NA	NA	1.3E00
SIZE- 3.50 L								
-ANALYSIS---RESULT----2SIGMA---UNITS---								
NO								
CHEM								
GRAND JCT COLO - CLYMER'S DAIRY 95639 12 SB	DATE- 12 23 70	0600	LT2E01	LT2E01	ND	LT5E00	0.6E01	1.0E00
SIZE- 3.50 L								
GRAND JCT COLO - CLYMER'S DAIRY 95790 12 SB	DATE- 12 24 70	0600	LT2E01	LT2E01	LT2E01	NA	NA	1.1E00
SIZE- 3.50 L								
GRAND JCT COLO - CLYMER'S DAIRY 95868 12 SB	DATE- 12 25 70	0600	LT2E01	ND	LT2E01	NA	NA	1.2E00
SIZE- 3.50 L								
GRAND JCT COLO - CLYMER'S DAIRY 95864 12 SB	DATE- 12 26 70	0600	LT2E01	ND	LT2E01	NA	NA	1.2E00
SIZE- 3.50 L								
GRAND VALLEY COLO - A L MCLANE RANCH 87693 13 6292	DATE- 08 03 70	0600	LT(10)	ND	LT(10)	NA	NA	1.5E00
SIZE- 3.50 L								
-ANALYSIS---RESULT----2SIGMA---UNITS---								
3H	9.2E02							
GRAND VALLEY COLO - A L MCLANE RANCH 89229 13 8292	DATE- 09 16 70	1800	LT(10)	ND	LT(10)	NA	NA	1.5E00
SIZE- 3.50 L								
-ANALYSIS---RESULT----2SIGMA---UNITS---								
3H	1.1E03							

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COLORADO	REPORTED	131I PCI/L	133I PCI/L	137CS PCI/L	89SR PCI/L	90SR PCI/L	K GM/L
GRAND VALLEY COLO - A L MCLANE RANCH 90053 13 4232 DATE- 10 09 70 0600 SIZE- 3.50 L	05/04/73	LT(10)	ND	LT(10)	NA	NA	1.5E00
-ANALYSIS---RESULT----2SIGMA---UNITS---							
3H	7.6E02						
GRAND VALLEY COLO - A L MCLANE RANCH 90896 13 1232 DATE- 11 05 70 0600 SIZE- .005 L		ND	ND	ND	NA	NA	ND
-ANALYSIS---RESULT----2SIGMA---UNITS---							
NO GAMMA SCAN 3H	7.5E02						
GRAND VALLEY COLO - A L MCLANE RANCH 95364 13 6262 DATE- 12 21 70 0600 SIZE- .005 L		ND	ND	ND	NA	NA	ND
-ANALYSIS---RESULT----2SIGMA---UNITS---							
NO GAMMA SCAN 3H	1.0E03						
GRAND VALLEY COLO - EDWARD FORSHEE RES 89515 13 6292 DATE- 09 25 70 0600 SIZE- 2.70 L		LT(10)	ND	LT(10)	NA	NA	1.4E00
-ANALYSIS---RESULT----2SIGMA---UNITS---							
3H	LT4E02						
GRAND VALLEY COLO - EDWARD FORSHEE RES 90050 13 6292 DATE- 10 09 70 0600 SIZE- 2.70 L		LT(10)	ND	LT(10)	NA	NA	1.4E00
-ANALYSIS---RESULT----2SIGMA---UNITS---							
3H	LT4E02						

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COLORADO	REPORTED	05/04/73	131I PCI/L	133I PCI/L	137CS PCI/L	89SR PCI/L	90SR PCI/L	K GM/L
GRAND VALLEY COLO - EDWARD FORSHEE RES. 95365 13 1232 DATE- 12 21 70 0600 SIZE- .005 L			ND	ND	ND	NA	NA	ND
-ANALYSIS---RESULT----2SIGMA---UNITS---								
NO								
GAMMA								
SCAN								
3H		4.8E02						
MESA COLO - RUPERT WASSON RANCH 87697 13 2202 DATE- 08 03 70 0600 SIZE- 3.50 L			LT(10)	ND	1.0E01	NA	NA	1.4E00
-ANALYSIS---RESULT----2SIGMA---UNITS---								
3H		6.9E02						
MESA COLO - RUPERT WASSON RANCH 89432 12 7942 DATE- 09 23 70 0600 SIZE- 3.50 L			LT(10)	ND	LT(10)	NA	NA	1.2E00
-ANALYSIS---RESULT----2SIGMA---UNITS---								
3H		6.9E02						
MESA COLO - RUPERT WASSON RANCH 90064 13 6992 DATE- 10 08 70 0600 SIZE- .400 L			LT(100)	ND	LT(100)	NA	NA	ND
-ANALYSIS---RESULT----2SIGMA---UNITS---								
3H		8.5E02						
MOLINA COLO - GLEN TAYLOR DAIRY 87702 12 6992 DATE- 08 02 70 1800 SIZE- 3.50 L			LT(10)	ND	LT(10)	NA	NA	1.3E00
-ANALYSIS---RESULT----2SIGMA---UNITS---								
3H		1.1E03						

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COLORADO	REPORTED	05/04/73	131I PCI/L	133I PCI/L	137CS PCI/L	89SR PCI/L	90SR PCI/L	K GM/L
MOLINA COLO - GLEN TAYLOR DAIRY 89434 12 6992	DATE- 09 21 70	0600	LT(10)	ND	LT(10)	NA	NA	1.2E00
SIZE- 3.50 L								
-ANALYSIS---RESULT----2SIGMA---UNITS---								
3H	5.1E02							
MOLINA COLO - GLEN TAYLOR DAIRY 90062 12 6992	DATE- 10 08 70	0600	LT(10)	ND	LT(10)	NA	NA	1.4E00
SIZE- 3.50 L								
-ANALYSIS---RESULT----2SIGMA---UNITS---								
3H	7.9E02							
RIFLE COLO - ALEX C URQUHART DAIRY 87694 12 6992	DATE- 08 03 70	0600	LT(10)	ND	1.0E01	NA	NA	1.6E00
SIZE- 3.50 L								
-ANALYSIS---RESULT----2SIGMA---UNITS---								
3H	1.2E03							
RIFLE COLO - ALEX C URQUHART DAIRY 89230 12 7992	DATE- 09 16 70	1800	LT(10)	ND	LT(10)	NA	NA	1.4E00
SIZE- 3.50 L								
-ANALYSIS---RESULT----2SIGMA---UNITS---								
3H	1.2E03							
RIFLE COLO - ALEX C URQUHART DAIRY 90058 12 6992	DATE- 10 09 70	1800	LT(10)	ND	1.0E01	NA	NA	1.7E00
SIZE- 3.50 L								
-ANALYSIS---RESULT----2SIGMA---UNITS---								
3H	1.6E03							

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COLORADO	REPORTED	05/04/73	131I PCI/L	133I PCI/L	137CS PCI/L	89SR PCI/L	90SR PCI/L	K GM/L
RIFLE COLO - ALEX C URQUHART DAIRY 90885 12 6992 DATE- 11 05 70 0600 SIZE- .005 L			ND	ND	ND	NA	NA	ND
-ANALYSIS---RESULT----2SIGMA---UNITS---								
NO								
GAMMA								
SCAN								
3H	1.3E03							
RIFLE COLO - ALEX C URQUHART DAIRY 95326 12 9992 DATE- 12 20 70 1800 SIZE- .005 L			ND	ND	ND	NA	NA	ND
-ANALYSIS---RESULT----2SIGMA---UNITS---								
NO								
GAMMA								
SCAN								
3H	1.3E03							
ROCKY FORD COLO - ROCKY FORD COOP 95678 12 SB DATE- 12 21 70 1800 SIZE- 3.50 L		LT2E01	LT2E01	ND	LT5E00	0.3E01	1.3E01	
ROCKY FORD COLO - ROCKY FORD COOP 95801 12 SB DATE- 12 22 70 1800 SIZE- 3.50 L		LT2E01	LT2E01	LT2E01	NA	NA	1.1E01	
ROCKY FORD COLO - ROCKY FORD COOP 95858 12 SB DATE- 12 23 70 1800 SIZE- 2.88 L		LT2E01	LT2E01	LT2E01	NA	NA	1.6E01	
ROCKY FORD COLO - ROCKY FORD COOP 95870 12 SB DATE- 12 25 70 0600 SIZE- 3.20 L		LT2E01	ND	LT2E01	NA	NA	1.0E01	
ROCKY FORD COLO - ROCKY FORD COOP 95867 12 SB DATE- 12 26 70 0600 SIZE- 3.50 L		LT2E01	ND	LT2E01	NA	NA	1.2E01	

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COLORADO	REPORTED	131I PCI/L	133I PCI/L	137CS PCI/L	89SR PCI/L	90SR PCI/L	K GM/L
ROCKY FORD COLO - ROCKY FORD COOP 96030 12 SB DATE- 12 27 70 0600 SIZE- 3.50 L	05/04/73	LT2E01	ND	LT2E01	NA	NA	1.1E00
ROCKY FORD COLO - ROCKY FORD COOP 96032 12 SB DATE- 12 28 70 0600 SIZE- 3.50 L		LT2E01	ND	LT2E01	NA	NA	1.0E00
MULISON COLO - DONALD BURTARD RANCH 87695 13 4212 DATE- 08 03 70 0600 SIZE- 2.90 L		LT(10)	ND	LT(10)	NA	NA	1.5E00
ANALYSIS---RESULT----2SIGMA---UNITS---							
3H	7.3E02						
MULISON COLO - DONALD BURTARD RANCH 89361 13 4222 DATE- 09 17 70 0600 SIZE- 3.50 L		LT(10)	ND	LT(10)	NA	NA	1.2E00
ANALYSIS---RESULT----2SIGMA---UNITS---							
3H	8.9E02						
MULISON COLO - DONALD BURTARD RANCH 90061 13 8292 DATE- 10 09 70 0600 SIZE- 3.50 L		LT(10)	ND	2.0E01	NA	NA	1.4E00
ANALYSIS---RESULT----2SIGMA---UNITS---							
3H	1.1E03						
MULISON COLO - DONALD BURTARD RANCH 90897 13 1232 DATE- 11 05 70 0600 SIZE- .005 L		ND	ND	ND	NA	NA	ND
ANALYSIS---RESULT----2SIGMA---UNITS---							
NO							
GAMMA							
SCAN							
3H	5.5E02						

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COLORADO	REPORTED	05/04/73	131I PCI/L	133I PCI/L	137CS PCI/L	89SR PCI/L	90SR PCI/L	K GM/L
RULISON COLO - DONALD BURTARD RANCH 95363 13 6262	DATE- 12 21 70	0600	ND	ND	ND	NA	NA	ND
SIZE- .005 L								
-ANALYSIS---RESULT---2SIGMA---UNITS---								
NO								
GAMMA								
SCAN								
3H	6.8E02							
RULISON COLO - FELIX S SEFCOVIC RANCH 87696 13 4232	DATE- 08 03 70	0600	LT(10)	ND	LT(10)	NA	NA	1.3E0
SIZE- 3.50 L								
-ANALYSIS---RESULT---2SIGMA---UNITS---								
3H	9.2E02							
RULISON COLO - FELIX S SEFCOVIC RANCH 89363 13 4232	DATE- 09 17 70	0600	LT(100)	ND	LT(100)	NA	NA	ND
SIZE- .400 L								
-ANALYSIS---RESULT---2SIGMA---UNITS---								
3H	6.3E02							
RULISON COLO - FELIX S SEFCOVIC RANCH 90052 13 7242	DATE- 10 10 70	0600	LT(100)	ND	LT(100)	NA	NA	ND
SIZE- .400 L								
-ANALYSIS---RESULT---2SIGMA---UNITS---								
3H	8.4E02							
RULISON COLO - FELIX S SEFCOVIC RANCH 90898 13 6992	DATE- 11 05 70	0600	ND	ND	ND	NA	NA	ND
SIZE- .005 L								
-ANALYSIS---RESULT---2SIGMA---UNITS---								
NO								
GAMMA								
SCAN								
3H	8.7E02							

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COLORADO	REPORTED	05/04/73	131I PCI/L	133I PCI/L	137CS PCI/L	89SR PCI/L	90SR PCI/L	K GM/LI
RULISON COLO - FELIX S SEFCOVIC RANCH 95366 13 6992	DATE- 12 21 70	0600	ND	ND	ND	NA	NA	ND
SIZE- .005 L								
-ANALYSIS---RESULT----2SIGMA---UNITS---								
NO								
GAMMA								
SCAN								
3H		9.6E02						
RULISON COLO - BILLIE LEE SMITH RANCH 87701 13 4332	DATE- 08 02 70	0600	LT(10)	ND	LT(10)	NA	NA	0.5E00
SIZE- 2.80 L								
-ANALYSIS---RESULT----2SIGMA---UNITS---								
3H		9.1E02						
SALIDA COLO - MONARCH DAIRY 95991 12 SB	DATE- 12 23 70	1800	LT2E01	ND	LT2E01	NA	NA	1.5E00
SIZE- 3.50 L								
SALIDA COLO - MONARCH DAIRY 95869 12 SB	DATE- 12 26 70	0600	LT2E01	ND	LT2E01	LT5E00	0.2E01	1.2E00
SIZE- 3.50 L								
SILT COLO - EARL RALEY RANCH 90895 13 1932	DATE- 11 05 70	0600	ND	ND	ND	NA	NA	ND
SIZE- .005 L								
-ANALYSIS---RESULT----2SIGMA---UNITS---								
NO								
GAMMA								
SCAN								
3H		1.2E03						

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COLORADO	REPORTED	05/04/73	131I PCI/L	133I PCI/L	137CS PCI/L	89SR PCI/L	90SR PCI/L	K GM/L
SILT COLO - EARL RALEY RANCH 95325 13 1232 DATE- 12 21 70 0600 SIZE- .005 L			ND	ND	ND	NA	NA	ND
-ANALYSIS---RESULT----2SIGMA---UNITS---								
NO								
GAMMA								
SCAN								
3H		1.2E03						
SILT COLO - RUFUS RALEY RANCH 87704 13 2702 DATE- 08 01 70 0600 SIZE- 3.50 L			LT(10)	ND	LT(10)	NA	NA	1.8E00
-ANALYSIS---RESULT----2SIGMA---UNITS---								
3H		1.2E03						
SILT COLO - RUFUS RALEY RANCH 89433 13 4232 DATE- 09 23 70 0600 SIZE- 3.50 L			LT(10)	ND	LT(10)	NA	NA	1.5E00
-ANALYSIS---RESULT----2SIGMA---UNITS---								
3H		7.5E02						
SILT COLO - RUFUS RALEY RANCH 90057 13 6232 DATE- 10 09 70 0600 SIZE- 3.50 L			LT(10)	ND	1.0E01	NA	NA	1.4E00
-ANALYSIS---RESULT----2SIGMA---UNITS---								
3H		1.1E03						
SILT COLO - JAMES A FULLER RANCH 87699 13 7292 DATE- 08 02 70 0600 SIZE- 3.50 L			LT(10)	ND	LT(10)	NA	NA	1.5E00
-ANALYSIS---RESULT----2SIGMA---UNITS---								
3H		1.2E03						

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COLORADO	REPORTED: 05/04/73	131I PCI/L	133I PCI/L	137CS PCI/L	89SR PCI/L	90SR PCI/L	K GM/L
SILT COLO - JAMES A FULLER RANCH 89360 13 7292 DATE- 09 19 70 0600 SIZE- 3.50 L		LT(10)	ND	LT(10)	NA	NA	1.2E00
-ANALYSIS---RESULT----2SIGMA---UNITS---							
3H	1.0E03						
SILT COLO - JAMES A FULLER RANCH 90055 13 7242 DATE- 10 09 70 0600 SIZE- 3.50 L		LT(10)	ND	LT(10)	NA	NA	1.0E00
-ANALYSIS---RESULT----2SIGMA---UNITS---							
3H	1.2E03						
SILT COLO - JAMES A FULLER RANCH 90883 13 1922 DATE- 11 05 70 0600 SIZE- .005 L		ND	ND	ND	NA	NA	ND
-ANALYSIS---RESULT----2SIGMA---UNITS---							
NO							
GAMMA							
SCAN							
3H	9.3E02						
SILT COLO - JAMES A FULLER RANCH 95329 13 6292 DATE- 12 21 70 0600 SIZE- .005 L		ND	ND	ND	NA	NA	ND
-ANALYSIS---RESULT----2SIGMA---UNITS---							
NO							
GAMMA							
SCAN							
3H	1.2E03						
SILT COLO - D D HAYWOOD RANCH 87706 13 6392 DATE- 08 01 70 1800 SIZE- 3.50 L		LT(10)	ND	2.0E01	NA	NA	1.6E00
-ANALYSIS---RESULT----2SIGMA---UNITS---							
3H	5.7E02						

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COLORADO	REPORTED	05/04/73	131I PCI/L	133I PCI/L	137CS PCI/L	89SR PCI/L	90SR PCI/L	K GM/L
SILT COLO - D D HAYWOOD RANCH 89514 13 7942 DATE- 09 26 70 0600 SIZE- 3.30 L			LT(10)	ND	LT(10)	NA	NA	1.5E00
-ANALYSIS---RESULT---2SIGMA---UNITS---								
3H		LT4E02						
SILT COLO - D D HAYWOOD RANCH 90054 13 1232 DATE- 10 10 70 0600 SIZE- 3.50 L			LT(10)	ND	1.0E01	NA	NA	1.5E00
-ANALYSIS---RESULT---2SIGMA---UNITS---								
3H		LT4E02						

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IDAH0	REPORTED	05/04/73	131I PCI/L	133I PCI/L	137CS PCI/L	89SR PCI/L	90SR PCI/L	K GM/L
BOISE IDA - IDAHO CREAMERIES 88843 12 SB SIZE- 3.50 L		DATE- 08 31 70 0600	LT(10)	ND	LT(10)	LT(5)	4	1.5E00
BOISE IDA - IDAHO CREAMERIES 95317 12 SB SIZE- 3.50 L		DATE- 12 20 70 1800	LT2E01	LT2E01	LT2E01	LT5E00	0.3E01	1.3E00
BOISE IDA - IDAHO CREAMERIES 95792 12 SB SIZE- 3.50 L		DATE- 12 21 70 1800	LT2E01	LT2E01	LT2E01	NA	NA	1.5E00
BOISE IDA - IDAHO CREAMERIES 95982 12 SB SIZE- 3.50 L		DATE- 12 22 70 1800	LT2E01	ND	LT2E01	NA	NA	1.4E00
BOISE IDA - IDAHO CREAMERIES 95646 12 SB SIZE- 2.90 L		DATE- 12 23 70 0600	LT2E01	LT2E01	LT2E01	LT5E00	0.3E01	1.0E00
BOISE IDA - IDAHO CREAMERIES 95990 12 SB SIZE- 2.90 L		DATE- 12 23 70 1800	LT2E01	ND	LT2E01	NA	NA	1.3E00
BOISE IDA - IDAHO CREAMERIES 95984 12 SB SIZE- 2.70 L		DATE- 12 24 70 1800	LT2E01	ND	LT2E01	NA	NA	1.5E00
BOISE IDA - IDAHO CREAMERIES 95969 12 SB SIZE- 3.50 L		DATE- 12 25 70 1800	LT2E01	ND	LT2E01	NA	NA	1.1E00
BOISE IDA - IDAHO CREAMERIES 95975 12 SB SIZE- 2.50 L		DATE- 12 26 70 1800	LT3E01	ND	LT3E01	NA	NA	1.5E00

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IDAH0	REPORTED	131I PCI/L	133I PCI/L	137CS PCI/L	89SR PCI/L	90SR PCI/L	K GM/L
BOISE IDA - IDAHO CREAMERIES 96164 11 SB DATE- 12 28 70 0600 SIZE- 3.50 L	05/04/73	LT2E01	ND	LT2E01	NA	NA	1.0E00
BUHL IDA - SMITHS DAIRY PRODUCTS 88897 12 DATE- 08 31 70 1800 SIZE- 3.30 L		LT(10)	ND	2.0E01	LT(5)	6	1.4E00
BUHL IDA - SMITHS DAIRY PRODUCTS 95724 12 SB DATE- 12 20 70 1800 SIZE- 3.50 L		LT2E01	LT2E01	LT2E01	LT5E00	0.6E01	1.5E00
BUHL IDA - SMITHS DAIRY PRODUCTS 95786 12 SB DATE- 12 22 70 1800 SIZE- 3.50 L		LT2E01	LT2E01	LT2E01	NA	NA	1.3E00
BUHL IDA - SMITHS DAIRY PRODUCTS 96092 12 SB DATE- 12 24 70 0600 SIZE- 3.50 L		LT2E01	ND	LT2E01	NA	NA	1.2E00
BUHL IDA - SMITHS DAIRY PRODUCTS 96014 12 SB DATE- 12 25 70 1800 SIZE- 3.50 L		LT2E01	ND	LT2E01	NA	NA	1.0E00
BURLEY IDA STOKER'S JERSEY FARM 88920 12 DATE- 08 31 70 0600 SIZE- 3.50 L		LT(10)	ND	2.0E01	LT(5)	4	1.5E00
BURLEY IDA STOKER'S JERSEY FARM 95535 12 SB DATE- 12 21 70 1800 SIZE- 3.50 L		LT2E01	LT2E01	LT2E01	LT5E00	0.5E01	1.2E00
BURLEY IDA STOKER'S JERSEY FARM 95701 12 SB DATE- 12 22 70 0600 SIZE- 3.50 L		LT2E01	LT2E01	LT2E01	NA	NA	1.1E00

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DAHO	REPORTED	05/04/73	131I PCI/L	133I PCI/L	137CS PCI/L	89SR PCI/L	90SR PCI/L	K GM/L
JRLEY IDA STOKER'S JERSEY FARM 95848 12 SB SIZE- .400 L	DATE- 12 23 70	0600	LT2E02	LT2E02	LT2E02	NA	NA	1.9E00
JRLEY IDA STOKER'S JERSEY FARM 95844 12 SB SIZE- 3.50 L	DATE- 12 24 70	0600	LT2E01	LT2E01	LT2E01	NA	NA	1.3E00
JRLEY IDA STOKER'S JERSEY FARM 96089 12 SB SIZE- 3.50 L	DATE- 12 25 70	0900	LT2E01	ND	LT2E01	NA	NA	1.0E00
JRLEY IDA STOKER'S JERSEY FARM 96067 12 SB SIZE- 3.50 L	DATE- 12 26 70	0430	LT2E01	ND	LT2E01	NA	NA	1.3E00
JRLEY IDA STOKER'S JERSEY FARM 96026 12 SB SIZE- 3.50 L	DATE- 12 27 70	0600	LT2E01	ND	LT2E01	NA	NA	1.4E00
JRLEY IDA STOKER'S JERSEY FARM 96039 12 SB SIZE- 3.50 L	DATE- 12 28 70	0600	LT2E01	ND	LT2E01	NA	NA	1.3E00
COEUR D'ALENE IDA - COEUR D'ALENE CRMY 88966 12 SIZE- 3.50 L	DATE- 09 03 70	0600	LT(10)	ND	2.0E01	LT(5)	8	1.3E00
COEUR D'ALENE IDA - COEUR D'ALENE CRMY 95807 12 SB SIZE- 3.50 L	DATE- 12 19 70	1800	LT2E01	LT2E01	LT2E01	NA	NA	1.4E00
COEUR D'ALENE IDA - COEUR D'ALENE CRMY 95799 12 SB SIZE- 3.50 L	DATE- 12 21 70	1800	LT2E01	LT2E01	LT2E01	LT5E00	0.8E01	1.3E00

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IDAHO	REPORTED	05/04/73	131I PCI/L	133I PCI/L	137CS PCI/L	89SR PCI/L	90SR PCI/L	K GM/L
IDAHO FALLS IDA - WALLACE DAIRY 93192 12 SB SIZE- 2.90 L	DATE- 11 18 70	0600	LT(10)	ND	LT(10)	NA	NA	1.6E00
-ANALYSIS---RESULT----2SIGMA---UNITS---								
NO CHEM								
IDAHO FALLS IDA - WALLACE DAIRY 95714 12 SB SIZE- 3.50 L	DATE- 12 19 70	0600	LT2E01	LT2E01	LT2E01	NA	NA	1.2E00
IDAHO FALLS IDA - WALLACE DAIRY 95655 12 SB SIZE- 3.50 L	DATE- 12 20 70	0600	LT2E01	LT2E01	LT2E01	LT5E00	0.6E01	1.3E00
IDAHO FALLS IDA - WALLACE DAIRY 96013 12 SB SIZE- 3.50 L	DATE- 12 25 70	0600	LT2E01	ND	LT2E01	NA	NA	1.2E00
IDAHO FALLS IDA - WALLACE DAIRY 96028 12 SB SIZE- 3.50 L	DATE- 12 27 70	0600	LT2E01	ND	LT2E01	NA	NA	1.3E00
JEROME IDA - IDA GEM DAIRYMEN 88967 12 SB SIZE- 3.50 L	DATE- 09 02 70	1800	LT(10)	ND	LT(10)	LT(5)	4	1.5E00
JEROME IDA - IDA GEM DAIRYMEN 95524 12 SB SIZE- 3.50 L	DATE- 12 20 70	0600	LT2E01	LT2E01	LT2E01	LT5E00	0.6E01	1.1E00
JEROME IDA - IDA GEM DAIRYMEN 95709 12 SB SIZE- 3.50 L	DATE- 12 21 70	0600	LT2E01	LT2E01	LT2E01	NA	NA	1.4E00

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IDAH0	REPORTED	05/04/73	131I PCI/L	133I PCI/L	137CS PCI/L	89SR PCI/L	90SR PCI/L	K GM/L
JEROME IDA - IDA GEM DAIRYMEN 95980 12 SB SIZE- 3.50 L			LT2E01	ND	LT2E01	NA	NA	1.4E00
JEROME IDA - IDA GEM DAIRYMEN 95861 12 SB SIZE- 3.50 L			LT2E01	LT2E01	LT2E01	NA	NA	1.4E00
JEROME IDA - IDA GEM DAIRYMEN 95866 12 SB SIZE- 3.50 L		3.0E01	ND	LT2E01	LT5E00	0.5E01		1.3E00
-ANALYSIS---RESULT----2SIGMA---UNITS---								
3H	LT4E02							
JEROME IDA - IDA GEM DAIRYMEN 95874 12 SB SIZE- 3.50 L		4.0E01	ND	LT2E01	LT5E00	0.2E01		1.1E00
-ANALYSIS---RESULT----2SIGMA---UNITS---								
3H	LT4E02							
JEROME IDA - IDA GEM DAIRYMEN 96150 12 SB SIZE- 3.50 L		LT2E01	ND	LT2E01	NA	NA		1.3E00
JEROME IDA - IDA GEM DAIRYMEN 96161 12 SB SIZE- 3.50 L		LT2E01	ND	LT2E01	NA	NA		1.4E00
JEROME IDA - IDA GEM DAIRYMEN 96236 12 SB SIZE- 3.50 L		LT2E01	ND	LT2E01	NA	NA		1.2E00
POCATELLO IDA - WARDS DAIRY 88902 12 SIZE- 3.50 L		LT(10)	ND	LT(10)	LT(5)	6		1.5E00

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IDAHo	REPORTED	05/04/73	131I PCI/L	133I PCI/L	137CS PCI/L	89SR PCI/L	90SR PCI/L	K GM/L
POCATELLO IDA - WARDS DAIRY 89155 12	DATE- 09 12 70	1800	LT(10)	ND	LT(10)	NA	NA	1.6E00
SIZE- 3.50 L								
-ANALYSIS---RESULT----2SIGMA---UNITS---								
NO								
CHEM								
POCATELLO IDA - WARDS DAIRY 95856 12 SB	DATE- 12 23 70	0600	LT2E01	LT2E01	LT2E01	LT5E00	0.4E01	1.0E00
SIZE- 3.50 L								
POCATELLO IDA - WARDS DAIRY 95865 12 SB	DATE- 12 23 70	0600	LT2E01	ND	LT2E01	NA	NA	1.2E00
SIZE- 3.50 L								
POCATELLO IDA - WARDS DAIRY 96163 12 SB	DATE- 12 30 70	0600	LT2E01	ND	LT2E01	NA	NA	1.3E00
SIZE- 3.50 L								
POCATELLO IDA - WARDS DAIRY 96165 12 SB	DATE- 12 30 70	0800	LT2E01	ND	LT2E01	NA	NA	1.3E00
SIZE- 3.50 L								

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DWA	REPORTED	05/04/73	131I PCI/L	133I PCI/L	137CS PCI/L	89SR PCI/L	90SR PCI/L	K GM/L
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JBUQUE IOWA - OAKLAND DAIRY
90559 12 DATE- 10 22 70 1800

LT(10)	ND	LT(10)	NA	NA	1.4E00
--------	----	--------	----	----	--------

SIZE- 3.50 L

ANALYSIS---RESULT---2SIGMA---UNITS---

NO
CHEM

JBUQUE IOWA - OAKLAND DAIRY
93069 12 DATE- 11 11 70 1800

LT(10)	ND	LT(10)	NA	NA	1.3E00
--------	----	--------	----	----	--------

SIZE- 3.50 L

ANALYSIS---RESULT---2SIGMA---UNITS---

NO
CHEM

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LOUISIANA	REPORTED	05/04/73	131I PCI/L	133I PCI/L	137CS PCI/L	89SR PCI/L	90SR PCI/L	K GM/L
NEW ORLEANS LA - BORDEN'S INC 90513 12	DATE- 10 20 70	1800	LT(10)	ND	1.0E01	NA	NA	1.4E00
SIZE- 3.50 L								
-ANALYSIS---RESULT---2SIGMA---UNITS---								
NO								
CHEM								
NEW ORLEANS LA - BORDEN'S INC 93070 12	DATE- 11 12 70	0600	LT(10)	ND	LT(10)	NA	NA	1.5E00
SIZE- 3.50 L								
-ANALYSIS---RESULT---2SIGMA---UNITS---								
NO								
CHEM								

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INNESOTA	REPORTED	05/04/73	131I PCI/L	133I PCI/L	137CS PCI/L	89SR PCI/L	90SR PCI/L	K GM/L
EMIDJI MINN - BEMIDJI CO-OP CRMY ASSN 90682 12	DATE- 10 21 70	1800	LT(10)	ND	LT(10)	NA	NA	1.4E00
SIZE- 3.50 L								
ANALYSIS---RESULT---2SIGMA---UNITS---								
NO								
CHEM								
EMIDJI MINN - BEMIDJI CO-OP CRMY ASSN 93113 12	DATE- 11 12 70	0600	LT(10)	ND	3.0E01	NA	NA	1.5E00
SIZE- 2.90 L								
ANALYSIS---RESULT---2SIGMA---UNITS---								
NO								
CHEM								

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MISSOURI	REPORTED	05/04/73	131I PCI/L	133I PCI/L	137CS PCI/L	89SR PCI/L	90SR PCI/L	K GM/L
ST CHARLES MO - ST CHARLES DAIRY 90514 12	DATE- 10 20 70	1800	LT(10)	ND	LT(10)	NA	NA	1.5E00
SIZE- 3.50 L								
-ANALYSIS---RESULT---2SIGMA---UNITS---								
NO								
CHEM								
ST CHARLES MO - ST CHARLES DAIRY 93067 12	DATE- 11 12 70	0600	LT(10)	ND	LT(10)	NA	NA	1.5E00
SIZE- 3.50 L								
-ANALYSIS---RESULT---2SIGMA---UNITS---								
NO								
CHEM								

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MONTANA	REPORTED	05/04/73	131I PCI/L	133I PCI/L	137CS PCI/L	89SR PCI/L	90SR PCI/L	K GM/L
HAVRE MONT - VITA-RICH DAIRY 90603 12 DATE- 10 25 70 1800 SIZE- 3.50 L			LT(10)	ND	LT(10)	NA	NA	1.6E00
-ANALYSIS---RESULT----2SIGMA---UNITS---								
NO								
CHEM								
KALISPELL MONT - EQUITY SUPPLY CO 90600 12 DATE- 10 26 70 0600 SIZE- .400 L			LT(100)	ND	LT(100)	NA	NA	ND
-ANALYSIS---RESULT----2SIGMA---UNITS---								
NO								
CHEM								
MILES CITY MONT - SANITARY DAIRY 90633 12 DATE- 10 26 70 0600 SIZE- 3.50 L			LT(10)	ND	LT(10)	NA	NA	1.5E00
-ANALYSIS---RESULT----2SIGMA---UNITS---								
NO								
CHEM								
MISSOULA MONT - MEADOW GOLD DAIRY 90558 12 DATE- 10 20 70 0600 SIZE- 3.50 L			LT(10)	ND	2.0E01	NA	NA	1.4E00
-ANALYSIS---RESULT----2SIGMA---UNITS---								
NO								
CHEM								
MISSOULA MONT - MEADOW GOLD DAIRY 90606 12 DATE- 10 25 70 0600 SIZE- 3.50 L			LT(10)	ND	1.0E01	NA	NA	1.5E00
-ANALYSIS---RESULT----2SIGMA---UNITS---								
NO								
CHEM								

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IONTANA	REPORTED	05/04/73	131I PCI/L	133I PCI/L	137CS PCI/L	89SR PCI/L	90SR PCI/L	K GM/L
MISSOULA MONT - MEADOW GOLD DAIRY 93114 12	DATE-	11 12 70 0600	LT(10)	ND	LT(10)	NA	NA	1.3E00
SIZE- 3.50 L								
ANALYSIS---RESULT---2SIGMA---UNITS---								
NO								
CHEM								

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NEVADA	REPORTED	05/04/73	131I PCI/L	133I PCI/L	137CS PCI/L	89SR PCI/L	90SR PCI/L	K GM/L
ALAMO NEV - SEIP DAIRY 87295 12 9990 DATE- 07 15 70 1800 SIZE- 3.50 L -ANALYSIS---RESULT----2SIGMA---UNITS--- NO CHEM			LT(10)	ND	LT(10)	NA	NA	1.5E00
ALAMO NEV - SEIP DAIRY 88758 12 9990 DATE- 08 26 70 0600 SIZE- 3.50 L			LT(10)	ND	2.0E01	LT(5)	LT(2)	1.5E00
ALAMO NEV - SEIP DAIRY 89106 12 9990 DATE- 09 11 70 0600 SIZE- 3.50 L			LT(10)	ND	LT(10)	LT5E00	0.2E01	1.4E00
ALAMO NEV - SEIP DAIRY 89570 12 9990 DATE- 09 29 70 0600 SIZE- 3.50 L			LT(10)	ND	2.0E01	LT5E00	0.3E01	1.5E00
ALAMO NEV - WILLIAMS DAIRY 93030 12 6990 DATE- 11 10 70 0600 SIZE- 3.50 L			LT(10)	ND	LT(10)	LT5E00	0.4E01	1.4E00
ALAMO NEV - WILLIAMS DAIRY 93577 12 6990 DATE- 12 07 70 0600 SIZE- 3.50 L			LT1E01	ND	LT1E01	LT5E00	LT2E00	1.4E00
ALAMO NEV - WILLIAMS DAIRY 93837 12 6992 DATE- 12 19 70 1025 SIZE- 3.50 L			LT2E01	LT2E01	LT2E01	NA	NA	1.5E00
ALAMO NEV - WILLIAMS DAIRY 95049 12 6992 DATE- 12 20 70 0930 SIZE- 3.50 L			LT2E01	LT2E01	LT2E01	NA	NA	1.1E00

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EVADA	REPORTED	05/04/73	131I PCI/L	133I PCI/L	137CS PCI/L	89SR PCI/L	90SR PCI/L	K GM/L
AMO NEV - WILLIAMS DAIRY 95251 12 6992 DATE- 12 21 70 0600 SIZE- 3.50 L			LT2E01	LT2E01	LT2E01	NA	NA	1.0E00
AMO NEV - WILLIAMS DAIRY 95408 12 6992 DATE- 12 21 70 0800 SIZE- 3.50 L			LT2E01	LT2E01	LT2E01	NA	NA	1.4E00
JSTIN NEV - YOUNG'S RANCH 95183 13 1932 DATE- 12 19 70 1800 SIZE- 3.50 L ANALYSIS---RESULT----2SIGMA---UNITS--- 3H 1.3E03		9.0E01	1.5E03	LT2E01	LT5E00	0.2E01	1.4E00	
JSTIN NEV - YOUNG'S RANCH 95412 13 1932 DATE- 12 21 70 1230 SIZE- 3.50 L ANALYSIS---RESULT----2SIGMA---UNITS--- 3H 1.4E03		1.4E02	3.9E02	LT2E01	NA	NA	NA	1.3E00
JSTIN NEV - YOUNG'S RANCH 95411 13 1932 DATE- 12 22 70 0600 SIZE- 3.50 L ANALYSIS---RESULT----2SIGMA---UNITS--- 3H 6.9E02		1.0E02	2.0E02	LT2E01	LT5E00	0.5E01	1.3E00	
JSTIN NEV - YOUNG'S RANCH 95629 13 1932 DATE- 12 23 70 0600 SIZE- 3.50 L		6.0E01	5.0E01	LT2E01	NA	NA	NA	1.7E00
JSTIN NEV - YOUNG'S RANCH 95735 13 1932 DATE- 12 24 70 0600 SIZE- 3.50 L ANALYSIS---RESULT----2SIGMA---UNITS--- 3H 6.9E02		6.0E01	LT2E01	LT2E01	LT5E00	0.5E01	1.5E00	

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NEVADA	REPORTED	05/04/73	131I PCI/L	133I PCI/L	137CS PCI/L	89SR PCI/L	90SR PCI/L	K GM/L
AUSTIN NEV - YOUNG'S RANCH 95901 13 1932 DATE- 12 25 70 0600 SIZE- 3.50 L -ANALYSIS---RESULT---2SIGMA---UNITS--- 3H 8.9E02		4.0E01	ND		LT2E01	LT5E00	0.5E01	1.6E00
AUSTIN NEV - YOUNG'S RANCH 95908 13 1932 DATE- 12 26 70 0600 SIZE- 3.50 L -ANALYSIS---RESULT---2SIGMA---UNITS--- 3H 1.2E03		3.0E01	ND		LT2E01	LT5E00	0.5E01	1.0E00
AUSTIN NEV - YOUNG'S RANCH 95907 13 1932 DATE- 12 27 70 0600 SIZE- 3.50 L		LT2E01	ND		LT2E01	NA	NA	1.0E00
AUSTIN NEV - YOUNG'S RANCH 96054 13 1932 DATE- 12 28 70 0600 SIZE- 3.50 L		3.0E01	ND		LT2E01	NA	NA	1.5E00
AUSTIN NEV - YOUNG'S RANCH 96051 13 1932 DATE- 12 29 70 0600 SIZE- 3.50 L		3.0E01	ND		LT2E01	NA	NA	1.1E00
AUSTIN NEV - TRIPLE T RANCH 86740 13 1330 DATE- 07 08 70 0600 SIZE- 3.50 L -ANALYSIS---RESULT---2SIGMA---UNITS--- 3H 1.2E03		LT(10)	ND		3.0E01	7	6	1.4E00
AUSTIN NEV - TRIPLE T RANCH 88957 13 1330 DATE- 09 01 70 0600 SIZE- 3.50 L -ANALYSIS---RESULT---2SIGMA---UNITS--- 3H 1.3E03		LT(10)	ND		3.0E01	LT5E00	0.5E01	1.3E00

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NEVADA	REPORTED	05/04/73	131I PCI/L	133I PCI/L	137CS PCI/L	89SR PCI/L	90SR PCI/L	K GM/L
AUSTIN NEV - TRIPLE T RANCH 89280 13 1330	DATE- 09 15 70	0600	LT(10)	ND	3.0E01	LT5E00	0.7E01	1.1E00
SIZE- 3.50 L								
ANALYSIS---RESULT---2SIGMA---UNITS---								
3H		1.1E03						
AUSTIN NEV - TRIPLE T RANCH 89554 13 1330	DATE- 09 30 70	0600	LT(10)	ND	2.0E01	0.5E01	0.3E01	1.4E00
SIZE- 3.50 L								
ANALYSIS---RESULT---2SIGMA---UNITS---								
3H		7.6E02						
AUSTIN NEV - TRIPLE T RANCH 93627 13 1330	DATE- 12 08 70	0600	LT1E01	ND	4.0E01	LT5E00	0.4E01	1.6E00
SIZE- 3.50 L								
ANALYSIS---RESULT---2SIGMA---UNITS---								
3H		9.9E02						
AUSTIN NEV - TRIPLE T RANCH 93971 13 6292	DATE- 12 19 70	0600	LT2E01	LT2E01	LT2E01	NA	NA	1.3E00
SIZE- 3.50 L								
AUSTIN NEV - TRIPLE T RANCH 95184 13 1222	DATE- 12 19 70	1800	2.6E01	2.8E02	LT2E01	LT5E00	0.3E01	1.6E00
SIZE- 3.50 L								
ANALYSIS---RESULT---2SIGMA---UNITS---								
3H		5.6E02						
AUSTIN NEV - TRIPLE T RANCH 95439 13 1222	DATE- 12 21 70	1200	LT2E01	LT2E01	4.0E01	NA	NA	1.4E00
SIZE- 3.50 L								
AUSTIN NEV - TRIPLE T RANCH 95410 13 1222	DATE- 12 22 70	0905	LT2E01	LT2E01	2.0E01	NA	NA	1.2E00
SIZE- 3.50 L								

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NEVADA	REPORTED	05/04/73	131I PCI/L	133I PCI/L	137CS PCI/L	89SR PCI/L	90SR PCI/L	K GM/L
AUSTIN NEV - TRIPLE T RANCH 95622 13 1222 DATE- 12 23 70 0600 SIZE- 3.50 L			LT2E01	LT2E01	LT2E01	NA	NA	1.4E00
AUSTIN NEV - TRIPLE T RANCH 95733 13 1222 DATE- 12 24 70 0600 SIZE- 3.50 L			LT2E01	LT2E01	LT2E01	NA	NA	1.5E00
AUSTIN NEV - TRIPLE T RANCH 95902 13 1232 DATE- 12 25 70 0600 SIZE- 3.50 L			LT2E01	ND	4.0E01	NA	NA	1.4E00
AUSTIN NEV - TRIPLE T RANCH 95900 13 1232 DATE- 12 26 70 0600 SIZE- 3.50 L			LT2E01	ND	LT2E01	NA	NA	1.0E00
AUSTIN NEV - TRIPLE T RANCH 95911 13 1232 DATE- 12 27 70 0600 SIZE- 3.50 L -ANALYSIS---RESULT----2SIGMA---UNITS--- 3H 6.6E02			5.0E01	ND	LT2E01	LT5E00	0.3E01	1.2E00
AUSTIN NEV - TRIPLE T RANCH 96055 13 1222 DATE- 12 28 70 0600 SIZE- 3.50 L			LT2E01	ND	LT2E01	NA	NA	1.6E00
AUSTIN NEV - TRIPLE T RANCH 96056 13 1222 DATE- 12 29 70 0600 SIZE- 3.50 L			LT2E01	ND	3.0E01	NA	NA	1.5E00
BATTLE MT NEV - T LAZY S RANCH 88952 13 6990 DATE- 09 03 70 0600 SIZE- 3.00 L			LT(10)	ND	LT(10)	LT5E00	0.4E01	1.4E00
BATTLE MT NEV - T LAZY S RANCH 89993 13 6990 DATE- 10 01 70 0600 SIZE- 3.50 L			LT(10)	ND	LT(10)	LT5E00	0.3E01	1.4E00

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NEVADA	REPORTED	05/04/73	131I PCI/L	133I PCI/L	137CS PCI/L	89SR PCI/L	90SR PCI/L	K GM/L
ATTLE MT NEV - T LAZY S RANCH 93695 13 6990 SIZE- 3.50 L		DATE- 12 09 70 0600	LT1E01	ND	LT1E01	LT5E00	0.2E01	1.4E00
EATTY NEV - KIBBE RANCH 96170 13 SIZE- 3.50 L		DATE- 12 31 70 0615	LT2E01	ND	LT2E01	NA	NA	1.1E00
ELMONT NEV - PINE CREEK RANCH 86738 13 8990 SIZE- 3.50 L		DATE- 07 07 70 1800	LT(10)	ND	4.0E01	12	10	1.3E00
ELMONT NEV - PINE CREEK RANCH 88771 13 1330 SIZE- 3.50 L		DATE- 08 25 70 0600	LT(10)	ND	4.0E01	8	10	1.3E00
ELMONT NEV - PINE CREEK RANCH 89282 13 1330 SIZE- 3.50 L		DATE- 09 14 70 0600	LT(10)	ND	3.0E01	1.2E01	1.2E01	1.2E00
ELMONT NEV - PINE CREEK RANCH 89552 13 1330 SIZE- 3.10 L		DATE- 09 30 70 0600	LT(10)	ND	2.0E01	0.9E01	1.0E01	1.0E00
EOWAWE NEV - FRIESEN RANCH 87301 13 6990 SIZE- 3.50 L		DATE- 07 14 70 1800	LT(10)	ND	4.0E01	NA	NA	1.7E00
ANALYSIS---RESULT---2SIGMA---UNITS---								
NO CHEM								
EOWAWE NEV - FRIESEN RANCH 88530 13 6990 SIZE- 3.50 L		DATE- 08 13 70 0600	LT(10)	ND	4.0E01	7	4	1.3E00

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NEVADA	REPORTED	05/04/73	131I PCI/L	133I PCI/L	137CS PCI/L	89SR PCI/L	90SR PCI/L	K GM/L
BEOWAWE NEV - FRIESEN RANCH 88954 13 6990 DATE- 09 02 70 1800 SIZE- 2.70 L			LT(10)	ND	5.0E01	LT5E00	0.3E01	1.7E00
BEOWAWE NEV - FRIESEN RANCH 93696 13 6990 DATE- 12 09 70 0600 SIZE- 3.50 L			LT1E01	ND	3.0E01	LT5E00	0.1E02	1.7E00
CALIENTE NEV - YOUNG RANCH 87302 13 6990 DATE- 07 16 70 1800 SIZE- 3.50 L			LT(10)	ND	1.0E01	NA	NA	1.2E00
-ANALYSIS---RESULT----2SIGMA---UNITS---								
NO								
CHEM								
CALIENTE NEV - YOUNG RANCH 88755 13 6990 DATE- 08 19 70 1800 SIZE- 3.50 L			LT(10)	ND	LT(10)	NA	NA	1.3E00
-ANALYSIS---RESULT----2SIGMA---UNITS---								
NO								
CHEM								
CALIENTE NEV - YOUNG RANCH 89109 13 8990 DATE- 09 08 70 1800 SIZE- 3.50 L			LT(10)	ND	LT(10)	LT5E00	LT2E00	1.4E00
CALIENTE NEV - YOUNG RANCH 89574 13 8990 DATE- 09 30 70 0600 SIZE- 3.50 L			LT(10)	ND	LT(10)	LT5E00	LT2E00	1.3E00
CALIENTE NEV - YOUNG RANCH 93033 13 2900 DATE- 11 10 70 0600 SIZE- 3.50 L			LT(10)	ND	LT(10)	LT5E00	0.3E01	1.3E00
CALIENTE NEV - YOUNG RANCH 93575 13 7940 DATE- 12 08 70 0600 SIZE- 3.50 L			LT1E01	ND	LT1E01	LT5E00	LT2E00	1.5E00

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EVADA	REPORTED	05/04/73	131I PCI/L	133I PCI/L	137CS PCI/L	89SR PCI/L	90SR PCI/L	K GM/L
URRANT NEV - BLUE EAGLE RANCH 86811 13 8990 SIZE- 3.50 L	DATE- 07 06 70	0600	LT(10)	ND	2.0E01	LT(5)	4	1.4E00
URRANT NEV - BLUE EAGLE RANCH 88521 13 8790 SIZE- 3.50 L	DATE- 08 17 70	1800	LT(10)	ND	1.0E01	LT(5)	4	1.9E00
URRANT NEV - BLUE EAGLE RANCH 89299 13 8990 SIZE- 2.80 L	DATE- 09 16 70	0600	LT(10)	ND	2.0E01	LT5E00	LT2E00	1.8E00
URRANT NEV - BLUE EAGLE RANCH 89990 13 8990 SIZE- 2.50 L	DATE- 10 06 70	1800	LT(10)	ND	5.0E01	LT5E00	0.4E01	1.7E00
URRANT NEV - BLUE EAGLE RANCH 93223 13 8990 SIZE- 3.50 L	DATE- 11 17 70	0600	LT(10)	ND	2.0E01	LT5E00	0.2E01	1.9E00
URRANT NEV - BLUE EAGLE RANCH 93653 13 8990 SIZE- 3.50 L	DATE- 12 09 70	1800	LT1E01	ND	LT1E01	LT5E00	0.4E01	1.4E00
URRANT NEV - BLUE EAGLE RANCH 93892 13 1932 SIZE- 3.50 L	DATE- 12 18 70	1800	LT2E01	LT2E01	LT2E01	NA	NA	1.1E00
URRANT NEV - BLUE EAGLE RANCH 95174 13 6992 SIZE- 3.50 L	DATE- 12 20 70	0600	2.6E01	1.9E02	LT2E01	LT5E00	0.4E01	1.9E00
ANALYSIS---RESULT---2SIGMA---UNITS---								
3H			LT4E02					

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NEVADA	REPORTED	05/04/73	131I PCI/L	133I PCI/L	137CS PCI/L	89SR PCI/L	90SR PCI/L	K GM/L
CURRENT NEV - BLUE EAGLE RANCH 95413 13 6992 DATE- 12 21 70 1115 SIZE- 3.50 L -ANALYSIS---RESULT---2SIGMA---UNITS--- 3H 5.6E02	LT2E01	6.0E01	LT2E01	LT5E00	0.3E01	1.0E00		
CURRENT NEV - BLUE EAGLE RANCH 95394 13 6992 DATE- 12 22 70 1030 SIZE- 3.50 L -ANALYSIS---RESULT---2SIGMA---UNITS--- 3H LT4E02	2.0E01	3.0E01	LT2E01	LT5E00	0.3E01	1.4E00		
CURRENT NEV - BLUE EAGLE RANCH 95618 13 6992 DATE- 12 22 70 1800 SIZE- 3.50 L	LT2E01	LT2E01	LT2E01	NA	NA	NA	NA	1.6E00
CURRENT NEV - BLUE EAGLE RANCH 95757 13 6992 DATE- 12 23 70 1800 SIZE- 3.50 L	LT2E01	LT2E01	LT2E01	NA	NA	NA	NA	1.3E00
CURRENT NEV - BLUE EAGLE RANCH 95927 13 6992 DATE- 12 27 70 1800 SIZE- 3.50 L -ANALYSIS---RESULT---2SIGMA---UNITS--- 3H LT4E02	2.0E01	ND	LT2E01	LT5E00	0.2E01	1.3E00		
CURRIE NEV - BILL LEAR RANCH 93697 13 1210 DATE- 12 07 70 1800 SIZE- 3.50 L -ANALYSIS---RESULT---2SIGMA---UNITS--- 3H LT4E02	LT1E01	ND	3.0E01	LT5E00	0.7E01	1.7E00		
CURRIE NEV - KITT LEAR RANCH 88955 13 1210 DATE- 09 01 70 0600 SIZE- .400 L -ANALYSIS---RESULT---2SIGMA---UNITS--- 3H 5.1E02	LT(100)	ND	LT(100)	LT5E00	0.5E01	ND		

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VADA	REPORTED	131I PCI/L	133I PCI/L	137CS PCI/L	89SR PCI/L	90SR PCI/L	K GM/L
ETH NEV - LOTSPEICH RANCH 87294 13 8290	DATE- 07 14 70 0600 SIZE- 2.80 L	LT(10)	ND	2.0E01	10	8	1.3E00
ETH NEV - LOTSPEICH RANCH 88528 13 6990	DATE- 08 12 70 1800 SIZE- 3.00 L	LT(10)	ND	LT(10)	8	2	1.2E00
ETH NEV - LOTSPEICH RANCH 93694 13 6990	DATE- 12 10 70 0600 SIZE- 3.50 L	LT1E01	ND	2.0E01	LT5E00	0.1E02	1.6E00
CKWATER NEV - HALSTEAD RANCH 86812 13 6290	DATE- 07 07 70 0600 SIZE- 3.50 L	LT(10)	ND	2.0E01	9	4	1.6E00
CKWATER NEV - HALSTEAD RANCH 88522 13 8290	DATE- 08 18 70 0600 SIZE- 2.90 L	LT(10)	ND	2.0E01	LT(5)	5	1.6E00
CKWATER NEV - HALSTEAD RANCH 89086 13 8290	DATE- 09 08 70 1800 SIZE- 3.50 L	LT(10)	ND	2.0E01	LT5E00	0.4E01	1.5E00
CKWATER NEV - HALSTEAD RANCH 89987 13 8290	DATE- 10 08 70 0600 SIZE- 3.50 L	LT(10)	ND	1.0E01	LT5E00	0.3E01	1.6E00
CKWATER NEV - HALSTEAD RANCH 93224 13 8290	DATE- 11 18 70 0600 SIZE- 3.50 L	LT(10)	ND	LT(10)	LT5E00	0.2E01	1.6E00
CKWATER NEV - HALSTEAD RANCH 93651 13 8290	DATE- 12 09 70 0600 SIZE- 3.50 L	LT1E01	ND	1.0E01	LT5E00	0.5E01	1.8E00

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NEVADA	REPORTED	05/04/73	13II PCI/L	133I PCI/L	137CS PCI/L	89SR PCI/L	90SR PCI/L	K GM/L
DUCKWATER NEV - HALSTEAD RANCH 95018 13 6292 DATE- 12 19 70 0930 SIZE- 3.50 L			LT2E01	1.0E02	LT2E01	LT5E00	0.4E01	1.5E00
-ANALYSIS---RESULT---2SIGMA---UNITS--- 3H LT4E02								
DUCKWATER NEV - HALSTEAD RANCH 95181 13 6792 DATE- 12 20 70 0600 SIZE- 3.50 L		9.0E01		5.0E02	LT2E01	LT5E00	0.4E01	1.6E00
-ANALYSIS---RESULT---2SIGMA---UNITS--- 3H LT4E02								
DUCKWATER NEV - HALSTEAD RANCH 95414 13 6792 DATE- 12 21 70 1230 SIZE- 3.50 L		7.0E01		1.9E02	LT2E01	LT5E00	0.3E01	1.3E00
-ANALYSIS---RESULT---2SIGMA---UNITS--- 3H LT4E02								
DUCKWATER NEV - HALSTEAD RANCH 95409 13 6792 DATE- 12 22 70 1130 SIZE- 3.50 L		5.5E01		5.6E01	LT2E01	LT5E00	0.3E01	1.1E00
-ANALYSIS---RESULT---2SIGMA---UNITS--- 3H LT4E02								
DUCKWATER NEV - HALSTEAD RANCH 95620 13 6792 DATE- 12 23 70 0600 SIZE- 3.50 L		7.0E01		3.0E01	LT2E01	LT5E00	0.4E01	1.2E00
-ANALYSIS---RESULT---2SIGMA---UNITS--- 3H LT4E02								
DUCKWATER NEV - HALSTEAD RANCH 95754 13 6292 DATE- 12 24 70 0600 SIZE- 3.50 L		LT2E01		LT2E01	LT2E01	NA	NA	1.3E00
DUCKWATER NEV - HALSTEAD RANCH 95923 13 6292 DATE- 12 25 70 0600 SIZE- 3.00 L		LT2E01	ND		LT2E01	NA	NA	1.3E00

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EVADA	REPORTED	05/04/73	131I PCI/L	133I PCI/L	137CS PCI/L	89SR PCI/L	90SR PCI/L	K GM/L
UCKWATER NEV - HALSTEAD RANCH 95924 13 6292	DATE- 12 26 70	0600	2.5E01	ND	LT2E01	LT5E00	.3E01	1.7E00
SIZE- 2.80 L								
ANALYSIS---RESULT---2SIGMA---UNITS---								
3H		LT4E02						
UCKWATER NEV - HALSTEAD RANCH 95925 13 6292	DATE- 12 27 70	0600	LT2E01	ND	LT2E01	NA	NA	1.7E00
SIZE- 2.70 L								
UCKWATER NEV - HALSTEAD RANCH 95926 13 6292	DATE- 12 28 70	0600	LT3E01	ND	LT3E01	NA	NA	1.0E00
SIZE- 2.50 L								
LKO NEV - ANCHOR S RANCH 87300 13 6990	DATE- 07 14 70	1800	LT(10)	ND	LT(10)	8	5	1.6E00
SIZE- 3.20 L								
ANALYSIS---RESULT---2SIGMA---UNITS---								
3H		9.9E02						
LKO NEV - ANCHOR S RANCH 88529 13 6990	DATE- 08 12 70	1800	LT(10)	ND	1.0E01	LT(5)	LT(2)	1.6E00
SIZE- 3.50 L								
ANALYSIS---RESULT---2SIGMA---UNITS---								
3H		9.9E02						
LKO NEV - ANCHOR S RANCH 88956 13 6990	DATE- 09 03 70	0600	LT(100)	ND	LT(100)	LT5E00	0.4E01	ND
SIZE- .400 L								
ANALYSIS---RESULT---2SIGMA---UNITS---								
3H		1.3E03						
LKO NEV - ANCHOR S RANCH 93092 13 6990	DATE- 11 12 70	0600	LT(10)	ND	LT(10)	LT5E00	0.4E01	1.4E00
SIZE- 2.50 L								
ANALYSIS---RESULT---2SIGMA---UNITS---								
3H		7.9E02						

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NEVADA	REPORTED	05/04/73	131I PCI/L	133I PCI/L	137CS PCI/L	89SR PCI/L	90SR PCI/L	K GM/L
ELKO NEV - ANCHOR S RANCH 93698 13 6990 DATE- 12 09 70 0600 SIZE- 3.50 L -ANALYSIS---RESULT---2SIGMA---UNITS--- 3H 1.4E03			LT1E01	ND	LT1E01	NA	NA	1.2E00
EUREKA NEV - MARTIN RANCH 86739 13 4730 DATE- 07 07 70 1800 SIZE- 3.50 L			LT(10)	ND	4.0E01	10	8	1.7E00
EUREKA NEV - MARTIN RANCH 88772 13 1230 DATE- 08 26 70 0600 SIZE- .400 L			LT(100)	ND	LT(100)	LT(5)	8	ND
EUREKA NEV - MARTIN RANCH 89281 13 1230 DATE- 09 14 70 0600 SIZE- 3.20 L			LT(10)	ND	3.0E01	LT5E00	0.8E01	1.8E00
EUREKA NEV - MARTIN RANCH 89551 13 1230 DATE- 09 30 70 0600 SIZE- 3.50 L			LT(10)	ND	3.4E01	0.5E01	0.8E01	1.7E00
EUREKA NEV - MARTIN RANCH 93072 13 1230 DATE- 11 10 70 0600 SIZE- 3.50 L			LT(10)	ND	1.0E01	LT5E00	0.8E01	1.5E00
EUREKA NEV - MARTIN RANCH 93626 13 1230 DATE- 12 08 70 0600 SIZE- 3.50 L			LT1E01	ND	3.0E01	LT5E00	0.7E01	1.7E00
EUREKA NEV - MARTIN RANCH 95180 13 1932 DATE- 12 19 70 1800 SIZE- 3.10 L			LT2E01	LT2E01	LT2E01	NA	NA	1.5E00

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NEVADA	REPORTED	05/04/73	131I PCI/L	133I PCI/L	137CS PCI/L	89SR PCI/L	90SR PCI/L	K GM/L
UREKA NEV - MARTIN RANCH 95415 13 1932	DATE- 12 21 70	1500	2.1E02	7.0E02	LT2E01	LT5E00	0.5E01	1.0E00
SIZE- 3.50 L								
ANALYSIS---RESULT---2SIGMA---UNITS---								
3H		7.3E02						
UREKA NEV - MARTIN RANCH 95623 13 1932	DATE- 12 22 70	0600	2.4E02	4.0E02	LT2E01	LT5E00	LT2E00	1.5E00
SIZE- 3.50 L								
ANALYSIS---RESULT---2SIGMA---UNITS---								
3H		5.4E02						
UREKA NEV - MARTIN RANCH 95621 13 1932	DATE- 12 23 70	0600	1.0E02	8.0E01	LT2E01	LT5E00	0.2E01	1.5E00
SIZE- 3.50 L								
ANALYSIS---RESULT---2SIGMA---UNITS---								
3H		5.8E02						
UREKA NEV - MARTIN RANCH 95732 13 1932	DATE- 12 24 70	0600	7.0E01	LT2E01	LT2E01	LT5E00	0.5E01	1.2E00
SIZE- 3.50 L								
ANALYSIS---RESULT---2SIGMA---UNITS---								
3H		4.5E02						
UREKA NEV - MARTIN RANCH 95899 13 1932	DATE- 12 25 70	0600	1.1E02	ND	4.0E01	LT5E00	0.4E01	1.4E00
SIZE- 3.50 L								
ANALYSIS---RESULT---2SIGMA---UNITS---								
3H		7.2E02						
UREKA NEV - MARTIN RANCH 95909 13 1932	DATE- 12 26 70	0600	4.0E01	ND	LT2E01	LT5E00	0.5E01	1.1E00
SIZE- 3.50 L								
ANALYSIS---RESULT---2SIGMA---UNITS---								
3H		4.0E02						

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NEVADA	REPORTED	131I PCI/L	133I PCI/L	137CS PCI/L	89SR PCI/L	90SR PCI/L	K GM/L
EUREKA NEV - MARTIN RANCH 95910 13 1932 DATE- 12 27 70 0600 SIZE- 3.50 L -ANALYSIS---RESULT----2SIGMA---UNITS--- 3H 1.5E03	05/04/73	3.0E01	ND	LT2E01	LT5E00	0.5E01	1.4E00
EUREKA NEV - MARTIN RANCH 96053 13 1932 DATE- 12 28 70 0600 SIZE- 3.50 L -ANALYSIS---RESULT----2SIGMA---UNITS--- 3H 1.0E03		5.0E01	ND	LT2E01	LT5E00	0.7E01	1.5E00
EUREKA NEV - MARTIN RANCH 96052 13 1932 DATE- 12 29 70 0600 SIZE- 3.50 L -ANALYSIS---RESULT----2SIGMA---UNITS--- 3H LT4E02		5.0E01	ND	LT2E01	NA	NA	1.7E00
FALLON NEV - CREAMLAND DAIRY 95323 12 SB DATE- 12 21 70 0600 SIZE- 3.50 L		LT2E01	LT2E01	LT2E01	LT5E00	0.2E01	1.1E00
FALLON NEV - CREAMLAND DAIRY 95726 12 SB DATE- 12 22 70 0600 SIZE- 3.50 L		LT2E01	LT2E01	LT2E01	NA	NA	1.0E00
FALLON NEV - CREAMLAND DAIRY 95682 12 SB DATE- 12 23 70 0600 SIZE- 3.50 L		LT2E01	LT2E01	LT2E01	NA	NA	1.0E00
FALLON NEV - CREAMLAND DAIRY 95855 12 SB DATE- 12 23 70 0600 SIZE- .400 L		LT2E02	LT2E02	LT2E02	NA	NA	1.5E00
FALLON NEV - CREAMLAND DAIRY 95842 12 SB DATE- 12 24 70 0600 SIZE- .400 L		LT2E02	LT2E02	LT2E02	NA	NA	ND

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NEVADA	REPORTED	05/04/73	131I PCI/L	133I PCI/L	137CS PCI/L	89SR PCI/L	90SR PCI/L	K GM/L
FALLON NEV - CREAMLAND DAIRY 95958 12 SB DATE- 12 26 70 0600 SIZE- 3.00 L			LT2E01	ND	LT2E01	NA	NA	1.3E00
FALLON NEV - CREAMLAND DAIRY 96146 12 SB DATE- 12 29 70 SIZE- .400 L			LT2E02	ND	LT2E02	NA	NA	1.1E00
FALLON NEV - CREAMLAND DAIRY 96122 12 SB DATE- 12 30 70 0600 SIZE- 3.50 L			LT2E01	ND	LT2E01	NA	NA	1.0E00
FALLON NEV - CREAMLAND DAIRY 96283 12 SB DATE- 12 31 70 0600 SIZE- 2.50 L			LT2E01	ND	LT2E01	NA	NA	1.2E00
GENOA NEV - MEADOW GOLD DAIRY 95322 12 SB DATE- 12 20 70 1800 SIZE- 3.50 L			LT2E01	LT2E01	LT2E01	LT5E00	0.3E01	1.5E00
GENOA NEV - MEADOW GOLD DAIRY 95843 12 SB DATE- 12 22 70 0600 SIZE- 3.50 L			LT2E01	LT2E01	LT2E01	NA	NA	1.4E00
GENOA NEV - MEADOW GOLD DAIRY 95966 12 SB DATE- 12 22 70 0600 SIZE- 3.50 L			LT2E01	ND	LT2E01	NA	NA	1.2E00
GENOA NEV - MEADOW GOLD DAIRY 95974 12 SB DATE- 12 23 70 1800 SIZE- 3.50 L			LT2E01	ND	LT2E01	NA	NA	1.4E00
GENOA NEV - MEADOW GOLD DAIRY 96136 12 SB DATE- 12 25 70 1800 SIZE- 3.50 L			LT2E01	ND	LT2E01	NA	NA	1.2E00

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NEVADA	REPORTED 05/04/73	131I PCI/L	133I PCI/L	137CS PCI/L	89SR PCI/L	90SR PCI/L	K GM/L
GENOA NEV - MEADOW GOLD DAIRY 96128 12 SB DATE- 12 27 70 1800 SIZE- 3.50 L	LT2E01	ND	LT2E01	NA	NA	NA	1.4E00
HIKO NEV - SCHOFIELD DAIRY 87296 12 9990 DATE- 07 15 70 1800 SIZE- 3.50 L -ANALYSIS---RESULT---2SIGMA---UNITS--- 3H LT4E02	LT(10)	ND	LT(10)	NA	NA	NA	1.6E00
HIKO NEV - SCHOFIELD DAIRY 88756 12 9990 DATE- 08 26 70 0600 SIZE- 3.50 L -ANALYSIS---RESULT---2SIGMA---UNITS--- 3H LT4E02	LT(10)	ND	LT(10)	LT(5)	2		1.5E00
HIKO NEV - SCHOFIELD DAIRY 89107 12 9990 DATE- 09 11 70 0600 SIZE- 3.50 L -ANALYSIS---RESULT---2SIGMA---UNITS--- 3H LT4E02	LT(10)	ND	LT(10)	LT5E00	LT2E00		1.5E00
HIKO NEV - SCHOFIELD DAIRY 89572 12 9990 DATE- 09 29 70 0600 SIZE- 3.50 L -ANALYSIS---RESULT---2SIGMA---UNITS--- 3H LT4E02	LT(10)	ND	1.0E01	LT5E00	0.3E01		1.6E00
HIKO NEV - SCHOFIELD DAIRY 93032 12 6990 DATE- 11 10 70 0600 SIZE- 3.50 L -ANALYSIS---RESULT---2SIGMA---UNITS--- 3H LT4E02	LT(10)	ND	LT(10)	LT5E00	LT2E00		1.4E00

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VADA	REPORTED	131I PCI/L	133I PCI/L	137CS PCI/L	89SR PCI/L	90SR PCI/L	K GM/L
KO NEV - SCHOFIELD DAIRY 93582 12 6990	DATE- 12 07 70 0600	LT1E01	ND	LT1E01	LT5E00	0.2E01	1.3E00
SIZE- 3.50 L							
ANALYSIS---RESULT---2SIGMA---UNITS---							
3H	LT4E02						
KO NEV - SCHOFIELD DAIRY 93838 12 6992	DATE- 12 19 70 1135	LT2E01	LT2E01	LT2E01	NA	NA	1.2E00
SIZE- 3.50 L							
KO NEV - SCHOFIELD DAIRY 95048 12 6992	DATE- 12 20 70 1010	LT2E01	LT2E01	LT2E01	NA	NA	1.2E00
SIZE- 3.50 L							
KO NEV - SCHOFIELD DAIRY 95237 12 6992	DATE- 12 21 70 0600	LT2E01	LT2E01	LT2E01	NA	NA	1.5E00
SIZE- 3.50 L							
KO NEV - SCHOFIELD DAIRY 95396 12 6992	DATE- 12 22 70 0855	LT2E01	LT2E01	LT2E01	NA	NA	1.5E00
SIZE- 3.50 L							
AS VEGAS NEV - LDS DAIRY FARMS 87354 12 6990	DATE- 07 21 70 0600	LT(10)	ND	LT(10)	LT(5)	LT(2)	1.5E00
SIZE- 3.00 L							
ANALYSIS---RESULT---2SIGMA---UNITS---							
3H	LT4E02						
AS VEGAS NEV - LDS DAIRY FARMS 88732 12 9990	DATE- 08 27 70 0600	LT(10)	ND	LT(10)	LT(5)	LT(2)	1.4E00
SIZE- 3.50 L							
ANALYSIS---RESULT---2SIGMA---UNITS---							
3H	LT4E02						

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NEVADA	REPORTED 05/04/73	131I PCI/L	133I PCI/L	137CS PCI/L	89SR PCI/L	90SR PCI/L	K GM/L
LAS VEGAS NEV - LDS DAIRY FARMS 89164 12 9990 DATE- 09 15 70 0600 SIZE- 3.50 L -ANALYSIS---RESULT---2SIGMA---UNITS--- 3H LT4E02		LT(10)	ND	LT(10)	LT5E00	LT2E00	1.3E00
LAS VEGAS NEV - LDS DAIRY FARMS 90438 12 6990 DATE- 10 20 70 0600 SIZE- 3.10 L -ANALYSIS---RESULT---2SIGMA---UNITS--- 3H LT4E02		LT(10)	ND	LT(10)	LT5E00	LT2E00	1.6E00
LAS VEGAS NEV - LDS DAIRY FARMS 93156 12 9990 DATE- 11 17 70 0600 SIZE- 3.50 L -ANALYSIS---RESULT---2SIGMA---UNITS--- 3H LT4E02		LT(10)	ND	LT(10)	LT5E00	LT2E00	1.3E00
LAS VEGAS NEV - LDS DAIRY FARMS 93383 12 9990 DATE- 12 02 70 0600 SIZE- 3.50 L -ANALYSIS---RESULT---2SIGMA---UNITS--- 3H 4.6E02		LT1E01	ND	LT1E01	LT5E00	0.2E01	1.5E00
LAS VEGAS NEV - ANDERSON DAIRY 87353 11 0000 DATE- 07 21 70 0600 SIZE- 3.50 L		LT(10)	ND	LT(10)	LT(5)	2	1.5E00
LAS VEGAS NEV - ANDERSON DAIRY 88733 11 0000 DATE- 08 27 70 0600 SIZE- 3.50 L		LT(10)	ND	1.0E01	LT(5)	2	1.5E00
LAS VEGAS NEV - ANDERSON DAIRY 89165 11 0000 DATE- 09 15 70 0600 SIZE- 3.50 L		LT(10)	ND	LT(10)	LT5E00	0.2E01	1.3E00

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NEVADA	REPORTED 05/04/73	131I PCI/L	133I PCI/L	137CS PCI/L	89SR PCI/L	90SR PCI/L	K GM/L
LAS VEGAS NEV - ARDEN DAIRY 93385 11 0000 DATE- 12 02 70 0600 SIZE- 3.50 L		LT1E01	ND	LT1E01	LT5E00	LT2E00	1.5E00
LATHROP WELLS NEV - W D ELLIS RANCH 90283 13 6990 DATE- 10 15 70 0600 SIZE- 3.50 L		LT(10)	ND	LT(10)	LT5E00	0.4E01	1.2E00
LATHROP WELLS NEV - MELVIN BARRY RANC 88930 13 6390 DATE- 09 02 70 1800 SIZE- 3.50 L		LT(10)	ND	LT(10)	LT5E00	0.2E01	1.4E00
LATHROP WELLS NEV - EASTMAN RANCH 93029 13 8990 DATE- 11 05 70 0600 SIZE- 3.50 L		LT(10)	ND	LT(10)	LT5E00	LT2E00	1.4E00
LATHROP WELLS NEV - EASTMAN RANCH 93409 13 8990 DATE- 12 02 70 1800 SIZE- 3.50 L		LT1E01	ND	LT1E01	LT5E00	LT2E00	1.6E00
LATHROP WELLS NEV - EASTMAN RANCH 95590 13 6992 DATE- 12 23 70 0600 SIZE- 3.50 L		LT2E01	LT2E01	LT2E01	NA	NA	1.0E00
LATHROP WELLS NEV - EASTMAN RANCH 95686 13 8992 DATE- 12 24 70 0930 SIZE- 3.50 L		LT2E01	LT2E01	LT2E01	NA	NA	1.4E00
LIDA NEV - LIDA LIVESTOCK COMPANY 86737 13 1730 DATE- 07 05 70 1800 SIZE- .400 L		LT(100)	ND	LT(100)	LT(5)	4	ND
LIDA NEV - LIDA LIVESTOCK COMPANY 88773 13 1730 DATE- 08 24 70 1800 SIZE- 3.50 L		LT(10)	ND	LT(10)	LT(5)	3	1.3E00

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EVADA	REPORTED	05/04/73	131I PCI/L	133I PCI/L	137CS PCI/L	89SR PCI/L	90SR PCI/L	K GM/L
ID A NEV - LIDA LIVESTOCK COMPANY 89284 13 1730 DATE- 09 13 70 0600 SIZE- 3.50 L			LT(10)	ND	LT(10)	LT5E00	0.3E01	1.3E00
ID A NEV - LIDA LIVESTOCK COMPANY 89553 13 1730 DATE- 09 28 70 1800 SIZE- 3.50 L			LT(10)	ND	LT(10)	0.5E01	0.2E01	1.2E00
OGANDALE NEV - VEGAS VALLEY DAIRY 86863 12 0000 DATE- 07 06 70 0600 SIZE- 3.50 L			LT(10)	ND	2.0E01	LT(5)	2	1.5E00
OGANDALE NEV - VEGAS VALLEY DAIRY 88103 12 0000 DATE- 08 11 70 0600 SIZE- 3.50 L			LT(10)	ND	LT(10)	LT(5)	2	1.4E00
OGANDALE NEV - VEGAS VALLEY DAIRY 88870 12 0000 DATE- 09 02 70 0600 SIZE- 3.50 L			LT(10)	ND	LT(10)	LT5E00	0.2E01	1.7E00
OGANDALE NEV - VEGAS VALLEY DAIRY 89975 12 0000 DATE- 10 05 70 0600 SIZE- 3.50 L			LT(10)	ND	LT(10)	LT5E00	LT2E00	1.6E00
OGANDALE NEV - VEGAS VALLEY DAIRY 93049 12 0000 DATE- 11 09 70 0600 SIZE- 3.50 L			LT(10)	ND	LT(10)	LT5E00	0.3E01	1.5E00
OGANDALE NEV - VEGAS VALLEY DAIRY 93578 12 0000 DATE- 12 07 70 0600 SIZE- 3.50 L			LT1E01	ND	LT1E01	LT5E00	0.2E01	1.5E00
OGANDALE NEV - VEGAS VALLEY DAIRY 93909 11 0002 DATE- 12 19 70 0600 SIZE- 3.50 L			LT2E01	LT2E01	LT2E01	NA	NA	1.2E00

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NEVADA	REPORTED	05/04/73	131I PCI/L	133I PCI/L	137CS PCI/L	89SR PCI/L	90SR PCI/L	K GM/L
LOGANDALE NEV - VEGAS VALLEY DAIRY 95314 12 0002 DATE- 12 20 70 0600 SIZE- 3.50 L			LT2E01	LT2E01	LT2E01	NA	NA	1.2E00
LUND NEV - MCKENZIE DAIRY 86814 12 6990 DATE- 07 09 70 0600 SIZE- 3.50 L -ANALYSIS---RESULT----2SIGMA---UNITS--- 3H 4.1E02		LT(10)	ND	3.0E01	5	4		1.4E00
LUND NEV - MCKENZIE DAIRY 88524 12 6990 DATE- 08 19 70 0600 SIZE- 3.50 L -ANALYSIS---RESULT----2SIGMA---UNITS--- 3H 4.4E02		LT(10)	ND	3.0E01	LT(5)	5		1.4E00
LUND NEV - MCKENZIE DAIRY 89083 12 6990 DATE- 09 10 70 0600 SIZE- 3.50 L -ANALYSIS---RESULT----2SIGMA---UNITS--- 3H LT4E02		LT(10)	ND	2.0E01	LT5E00	0.2E01		1.4E00
LUND NEV - MCKENZIE DAIRY 89989 12 6990 DATE- 10 08 70 0600 SIZE- 3.50 L -ANALYSIS---RESULT----2SIGMA---UNITS--- 3H LT4E02		LT(10)	ND	LT(10)	LT5E00	0.4E01		1.5E00
LUND NEV - MCKENZIE DAIRY 93220 12 6990 DATE- 11 19 70 0600 SIZE- 3.50 L -ANALYSIS---RESULT----2SIGMA---UNITS--- 3H LT4E02		LT(10)	ND	LT(10)	LT5E00	0.3E01		1.5E00

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EVADA	REPORTED	05/04/73	131I PCI/L	133I PCI/L	137CS PCI/L	89SR PCI/L	90SR PCI/L	K GM/L
UND NEV - MCKENZIE DAIRY 93652 12 6990 DATE- 12 09 70 0600 SIZE- 3.50 L ANALYSIS---RESULT---2SIGMA---UNITS--- 3H LT4E02			LT1E01	ND	2.0E01	LT5E00	0.3E01	1.5E00
UND NEV - MCKENZIE DAIRY 93894 12 6992 DATE- 12 19 70 0600 SIZE- 3.50 L			LT2E01	LT2E01	LT2E01	NA	NA	1.1E00
UND NEV - MCKENZIE DAIRY 95239 12 6942 DATE- 12 20 70 0600 SIZE- 3.50 L			LT2E01	LT2E01	LT2E01	NA	NA	1.3E00
UND NEV - MCKENZIE DAIRY 95233 12 6942 DATE- 12 21 70 0600 SIZE- 3.50 L			LT2E01	LT2E01	LT2E01	NA	NA	1.2E00
UND NEV - MCKENZIE DAIRY 95485 12 6942 DATE- 12 22 70 0600 SIZE- 3.50 L			LT2E01	LT2E01	LT2E01	NA	NA	1.3E00
CGILL NEV - LARSEN RANCH 86815 13 6990 DATE- 07 07 70 1800 SIZE- 3.50 L			LT(10)	ND	LT(10)	LT(5)	2	1.4E00
CGILL NEV - LARSEN RANCH 88525 13 6990 DATE- 08 16 70 1800 SIZE- 3.50 L			LT(10)	ND	2.0E01	LT(5)	3	1.4E00
CGILL NEV - LARSEN RANCH 89298 13 6990 DATE- 09 16 70 1800 SIZE- 3.50 L			LT(10)	ND	LT(10)	LT5E00	0.2E01	1.5E00
CGILL NEV - LARSEN RANCH 89991 13 6990 DATE- 10 04 70 1800 SIZE- 3.50 L			LT(10)	ND	LT(10)	LT5E00	0.2E01	1.4E00

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NEVADA	REPORTED	05/04/73	131I PCI/L	133I PCI/L	137CS PCI/L	89SR PCI/L	90SR PCI/L	K GM/L
MCGILL NEV - LARSEN RANCH 93649 13 6990 DATE- 12 08 70 0600 SIZE- 3.50 L			LT1E01	ND	LT1E01	NA	NA	1.2E00
MCGILL NEV - LARSEN RANCH 95487 13 1922 DATE- 12 21 70 1800 SIZE- 3.50 L		3.0E01	3.0E01	LT2E01	LT5E00	0.3E01	1.2E00	
-ANALYSIS---RESULT---2SIGMA---UNITS---								
3H		LT4E02						
MCGILL NEV - LARSEN RANCH 95486 13 1922 DATE- 12 22 70 0600 SIZE- 3.50 L		3.0E01	3.0E01	LT2E01	LT5E00	0.3E01	1.4E00	
-ANALYSIS---RESULT---2SIGMA---UNITS---								
3H		LT4E02						
MCGILL NEV - LARSEN RANCH 95627 13 6992 DATE- 12 23 70 0600 SIZE- 3.50 L		2.0E01	LT2E01	LT2E01	LT5E00	0.2E01	1.2E00	
-ANALYSIS---RESULT---2SIGMA---UNITS---								
3H		LT4E02						
MESQUITE NEV - HUGHES BROS DAIRY 86865 12 9380 DATE- 07 05 70 1800 SIZE- 3.20 L		LT(10)	ND	LT(10)	LT(5)	LT(2)	1.5E00	
-ANALYSIS---RESULT---2SIGMA---UNITS---								
3H		LT4E02						
MESQUITE NEV - HUGHES BROS DAIRY 88104 12 9380 DATE- 08 11 70 0600 SIZE- 3.50 L		LT(10)	ND	LT(10)	LT(5)	2	1.5E00	
-ANALYSIS---RESULT---2SIGMA---UNITS---								
3H		LT4E02						

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NEVADA	REPORTED	05/04/73	131I PCI/L	133I PCI/L	137CS PCI/L	89SR PCI/L	90SR PCI/L	K GM/L
IYALA NEV - SHARP'S RANCH 89249 13 6990	DATE- 09 17 70	0600	LT(100)	ND	LT(100)	LT5E00	0.5E01	ND
SIZE- .400 L								
ANALYSIS---RESULT---2SIGMA---UNITS---								
3H	LT4E02							
IYALA NEV - SHARP'S RANCH 89939 13 6990	DATE- 10 07 70	0600	LT(100)	ND	LT(100)	0.5E01	0.2E01	ND
SIZE- .400 L								
ANALYSIS---RESULT---2SIGMA---UNITS---								
3H	LT4E02							
IYALA NEV - SHARP'S RANCH 90858 13 6990	DATE- 11 05 70	0600	LT(10)	ND	1.0E01	LT5E00	0.4E01	1.0E00
SIZE- 3.50 L								
ANALYSIS---RESULT---2SIGMA---UNITS---								
3H	1.2E03							
IYALA NEV - SHARP'S RANCH 93530 13 6990	DATE- 12 02 70	0600	LT1E01	ND	2.0E01	LT5E00	0.4E01	1.4E00
SIZE- 3.50 L								
ANALYSIS---RESULT---2SIGMA---UNITS---								
3H	LT4E02							
IYALA NEV - SHARP'S RANCH 93893 13 6992	DATE- 12 19 70	0600	LT2E01	2.1E02	LT2E01	LT5E00	0.5E01	1.4E00
SIZE- 3.50 L								
ANALYSIS---RESULT---2SIGMA---UNITS---								
3H	LT4E02							
IYALA NEV - SHARP'S RANCH 95173 13 6992	DATE- 12 20 70	0600	3.0E01	2.3E02	LT2E01	LT5E00	0.3E01	1.6E00
SIZE- 3.50 L								
ANALYSIS---RESULT---2SIGMA---UNITS---								
3H	LT4E02							

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NEVADA	REPORTED	05/04/73	131I PCI/L	133I PCI/L	137CS PCI/L	89SR PCI/L	90SR PCI/L	K GM/L
NYALA NEV - SHARP'S RANCH 95418 13 6992 DATE- 12 21 70 1020 SIZE- 3.50 L -ANALYSIS---RESULT---2SIGMA---UNITS--- 3H LT4E02			3.1E01	8.9E01	LT2E01	LT5E00	0.4E01	1.1E00
NYALA NEV - SHARP'S RANCH 95417 13 6992 DATE- 12 22 70 0945 SIZE- 3.50 L -ANALYSIS---RESULT---2SIGMA---UNITS--- 3H LT4E02			LT2E01	2.0E01	LT2E01	LT5E00	0.4E01	1.2E00
NYALA NEV - SHARP'S RANCH 95626 13 6992 DATE- 12 23 70 0600 SIZE- 3.50 L -ANALYSIS---RESULT---2SIGMA---UNITS--- 3H LT4E02			2.0E01	2.0E01	LT2E01	LT5E00	0.3E01	1.4E00
NYALA NEV - SHARP'S RANCH 95756 13 6992 DATE- 12 24 70 0600 SIZE- 3.50 L			LT2E01	LT2E01	LT2E01	NA	NA	1.1E00
NYALA NEV - SHARP'S RANCH 95922 13 6992 DATE- 12 28 70 0600 SIZE- 3.50 L			LT2E01	ND	LT2E01	NA	NA	1.5E00
PAHRUMP NEV - OWENS RANCH 87216 13 8490 DATE- 07 17 70 0600 SIZE- 3.50 L			LT(10)	ND	LT(10)	LT(5)	LT(2)	1.6E00
PAHRUMP NEV - OWENS RANCH 88107 13 8490 DATE- 08 12 70 1800 SIZE- 3.50 L			LT(10)	ND	LT(10)	LT(5)	LT(2)	1.6E00
PAHRUMP NEV - OWENS RANCH 88929 13 8490 DATE- 09 04 70 0600 SIZE- 3.50 L			LT(10)	ND	LT(10)	LT5E00	LT2E00	1.6E00

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NEVADA	REPORTED	05/04/73	131I PCI/L	133I PCI/L	137CS PCI/L	89SR PCI/L	90SR PCI/L	K GM/L
Pahrump Nev - OWENS RANCH 90282 13 8490 SIZE- 3.50 L	DATE- 10 15 70	0600	LT(10)	ND	LT(10)	LT5E00	LT2E00	1.4E00
Pahrump Nev - OWENS RANCH 93027 13 8490 SIZE- 3.50 L	DATE- 11 06 70	0600	LT(10)	ND	LT(10)	LT5E00	LT2E00	1.7E00
Pahrump Nev - OWENS RANCH 93408 13 8490 SIZE- 3.50 L	DATE- 12 02 70	1800	LT1E01	ND	LT1E01	NA	NA	1.4E00
ANALYSIS---RESULT---2SIGMA---UNITS---								
NO CHEM								
Panaca Nev - KENNETH LEE RANCH 87299 13 2900 SIZE- 3.50 L	DATE- 07 16 70	1800	LT(10)	ND	2.0E01	7	4	1.3E00
Panaca Nev - KENNETH LEE RANCH 89105 13 7940 SIZE- 3.50 L	DATE- 09 09 70	0600	LT(10)	ND	LT(10)	LT5E00	0.4E01	1.2E00
Panaca Nev - KENNETH LEE RANCH 89571 13 7940 SIZE- 3.50 L	DATE- 09 30 70	0600	LT(10)	ND	LT(10)	LT5E00	0.3E01	1.1E00
Panaca Nev - KENNETH LEE RANCH 93034 13 6990 SIZE- 2.80 L	DATE- 11 11 70	1800	LT(10)	ND	LT(10)	LT5E00	0.3E01	1.5E00
Panaca Nev - KENNETH LEE RANCH 93576 13 6990 SIZE- 3.50 L	DATE- 12 08 70	1800	LT1E01	ND	1.0E01	LT5E00	0.2E01	1.4E00

NEVADA	REPORTED	05/04/73	131I PCI/L	133I PCI/L	137CS PCI/L	89SR PCI/L	90SR PCI/L	K GM/L
PANACA NEV - KENNETH LEE RANCH 95044 13 6992 DATE- 12 20 70 0600 SIZE- 3.50 L -ANALYSIS---RESULT----2SIGMA---UNITS--- 3H LT4E02			LT2E01	4.0E01	LT2E01	LT5E00	0.5E01	1.0E00
PANACA NEV - KENNETH LEE RANCH 95242 13 6992 DATE- 12 21 70 0600 SIZE- 3.50 L -ANALYSIS---RESULT----2SIGMA---UNITS--- 3H LT4E02		4.0E01		1.3E02	LT2E01	LT5E00	0.4E01	1.3E00
PANACA NEV - KENNETH LEE RANCH 95393 13 6992 DATE- 12 22 70 1035 SIZE- 3.50 L		LT2E01		LT2E01	LT2E01	NA	NA	1.0E01
RENO NEV - ANDERSON DAIRY 95692 12 SB DATE- 12 21 70 0600 SIZE- 3.50 L		LT2E01		LT2E01	LT2E01	LT5E00	0.5E01	1.2E00
RENO NEV - ANDERSON DAIRY 95693 12 SB DATE- 12 22 70 0600 SIZE- 3.50 L		LT2E01		LT2E01	LT2E01	NA	NA	1.4E00
RENO NEV - ANDERSON DAIRY 95891 12 SB DATE- 12 22 70 1800 SIZE- 3.50 L		LT2E01	ND	LT2E01	LT2E01	NA	NA	1.0E00
RENO NEV - ANDERSON DAIRY 95847 12 SB DATE- 12 23 70 0600 SIZE- 3.50 L		LT2E01		LT2E01	LT2E01	NA	NA	1.2E00
RENO NEV - MODEL DAIRY 95892 12 SB DATE- 12 20 70 1800 SIZE- 3.50 L		LT2E01	ND	LT2E01	LT2E01	NA	NA	1.0E00

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EVADA	REPORTED	05/04/73	131I PCI/L	133I PCI/L	137CS PCI/L	89SR PCI/L	90SR PCI/L	K GM/L
ENO NEV - MODEL DAIRY 95890 12 SB SIZE- 3.50 L	DATE- 12 21 70	1800	LT2E01	ND	LT2E01	NA	NA	1.0E00
ENO NEV - MODEL DAIRY 95893 12 SB SIZE- 3.50 L	DATE- 12 22 70	0600	LT2E01	ND	LT2E01	NA	NA	1.1E00
ENO NEV - MODEL DAIRY 95694 12 SB SIZE- 3.50 L	DATE- 12 23 70	0600	LT2E01	LT2E01	LT2E01	LT5E00	0.3E01	1.4E00
ENO NEV - MODEL DAIRY 95873 12 SB SIZE- 3.50 L	DATE- 12 24 70	0600	LT2E01	ND	LT2E01	NA	NA	1.0E00
ENO NEV - MODEL DAIRY 95965 12 SB SIZE- 3.50 L	DATE- 12 24 70	0600	LT2E01	ND	LT2E01	NA	NA	1.0E01
ENO NEV - MODEL DAIRY 95963 12 SB SIZE- 3.50 L	DATE- 12 25 70	1800	LT2E01	ND	LT2E01	NA	NA	1.2E00
ENO NEV - MODEL DAIRY 95976 12 SB SIZE- 3.50 L	DATE- 12 25 70	1800	LT2E01	ND	LT2E01	NA	NA	1.3E00
ENO NEV - MODEL DAIRY 95972 12 SB SIZE- 3.50 L	DATE- 12 26 70	0600	LT2E01	ND	LT2E01	NA	NA	1.4E00
ENO NEV - MODEL DAIRY 95960 12 SB SIZE- 3.50 L	DATE- 12 27 70	0600	LT2E01	ND	LT2E01	NA	NA	1.0E00

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NEVADA	REPORTED	05/04/73	131I PCI/L	133I PCI/L	137CS PCI/L	89SR PCI/L	90SR PCI/L	K GM/L
ROUND MT NEV - KARL BERG RANCH 96050 13 1922	DATE- 12 29 70	0600	3.0E01	ND	LT2E01	NA	NA	1.4E00
SIZE- 3.50 L								
-ANALYSIS---RESULT---2SIGMA---UNITS---								
3H		4.7E02						
SHOSHONE NEV - KIRKEBY RANCH 86816 13 6990	DATE- 07 08 70	0600	LT(10)	ND	2.0E01	6	3	1.6E00
SIZE- 3.50 L								
SHOSHONE NEV - KIRKEBY RANCH 88526 13 8290	DATE- 08 16 70	1800	LT(10)	ND	2.0E01	5	6	1.5E00
SIZE- 3.50 L								
SHOSHONE NEV - KIRKEBY RANCH 89084 13 6990	DATE- 09 08 70	0600	LT(10)	ND	2.0E01	LT5E00	0.7E01	1.4E00
SIZE- 3.50 L								
SHOSHONE NEV - KIRKEBY RANCH 89988 13 8990	DATE- 10 08 70	1800	LT(10)	ND	LT(10)	LT5E00	0.7E01	1.6E00
SIZE- 3.50 L								
SHOSHONE NEV - KIRKEBY RANCH 93222 13 6990	DATE- 11 17 70	0600	LT(10)	ND	1.0E01	LT5E00	0.4E01	1.5E00
SIZE- 3.50 L								
SHOSHONE NEV - KIRKEBY RANCH 93650 13 8990	DATE- 12 07 70	1800	LT1E01	ND	3.0E01	LT5E00	0.6E01	1.6E00
SIZE- 3.50 L								
SHOSHONE NEV - KIRKEBY RANCH 95017 13 6992	DATE- 12 19 70	1530	LT2E01	LT2E01	LT2E01	NA	NA	1.3E00
SIZE- 3.50 L								

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NEVADA	REPORTED	05/04/73	131I PCI/L	133I PCI/L	137CS PCI/L	89SR PCI/L	90SR PCI/L	K GM/L	
HOSHONE NEV - KIRKEBY RANCH 95250 13 1922	SIZE- 3.50 L	DATE- 12 20 70	0600	2.0E01	1.6E02	LT2E01	LT5E00	0.5E01	1.2E00
ANALYSIS---RESULT---2SIGMA---UNITS---									
3H	1.4E03								
HOSHONE NEV - KIRKEBY RANCH 95234 13 1922	SIZE- 3.50 L	DATE- 12 21 70	0600	4.0E01	8.8E01	LT2E01	LT5E00	0.6E01	1.3E00
ANALYSIS---RESULT---2SIGMA---UNITS---									
3H	1.1E03								
HOSHONE NEV - KIRKEBY RANCH 95450 13 1922	SIZE- 3.50 L	DATE- 12 22 70	1240	3.0E01	4.0E01	3.0E01	LT5E00	0.6E01	1.3E00
ANALYSIS---RESULT---2SIGMA---UNITS---									
3H	1.4E03								
HOSHONE NEV - KIRKEBY RANCH 95624 13 2922	SIZE- 3.50 L	DATE- 12 23 70	0600	LT2E01	LT2E01	LT2E01	NA	NA	1.4E00
PRINGDALE NEV - MCCURDY RANCH 87215 13 6190	SIZE- 3.50 L	DATE- 07 15 70	0600	LT(10)	ND	LT(10)	LT(5)	LT(2)	1.4E00
PRINGDALE NEV - MCCURDY RANCH 88185 13 6190	SIZE- 3.50 L	DATE- 08 12 70	0600	LT(10)	ND	LT(10)	LT(5)	2	1.3E00
PRINGDALE NEV - MCCURDY RANCH 88931 13 6190	SIZE- 3.50 L	DATE- 09 03 70	0600	LT(10)	ND	LT(10)	LT5E00	LT2E00	1.4E00
PRINGDALE NEV - MCCURDY RANCH 90281 13 6190	SIZE- 3.50 L	DATE- 10 13 70	1800	LT(10)	ND	LT(10)	LT5E00	0.3E01	1.4E00

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NEVADA	REPORTED	05/04/73	131I PCI/L	133I PCI/L	137CS PCI/L	89SR PCI/L	90SR PCI/L	K GM/L
SPRINGDALE NEV - MCCURDY RANCH 93028 13 6190	DATE- 11 05 70	0600 SIZE- 3.50 L	LT(10)	ND	LT(10)	LT5E00	LT2E00	1.1E00
SPRINGDALE NEV - MCCURDY RANCH 93410 13 6190	DATE- 12 02 70	1800 SIZE- 3.50 L	LT1E01	ND	LT1E01	NA	NA	1.2E00
-ANALYSIS---RESULT----2SIGMA---UNITS---								
NO CHEM								
SPRINGDALE NEV - MCCURDY RANCH 95148 13 6192	DATE- 12 20 70	1800 SIZE- 3.50 L	3.4E02	1.8E03	LT2E01	NA	NA	1.4E00
-ANALYSIS---RESULT----2SIGMA---UNITS---								
3H		1.2E03						
SPRINGDALE NEV - MCCURDY RANCH 95182 13 6792	DATE- 12 21 70	0600 SIZE- .400 L	6.0E02	1.6E03	LT2E01	NA	NA	1.0E00
-ANALYSIS---RESULT----2SIGMA---UNITS---								
3H		LT4E02						
SPRINGDALE NEV - MCCURDY RANCH 95407 13 6792	DATE- 12 22 70	0600 SIZE- 3.50 L	5.2E02	6.9E02	4.0E01	NA	NA	1.0E00
-ANALYSIS---RESULT----2SIGMA---UNITS---								
3H		LT4E02						
SPRINGDALE NEV - MCCURDY RANCH 95589 13 6292	DATE- 12 23 70	0600 SIZE- 3.50 L	6.6E02	4.3E02	LT2E01	NA	NA	1.2E00
-ANALYSIS---RESULT----2SIGMA---UNITS---								
3H		LT4E02						

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NEVADA	REPORTED	05/04/73	131I PCI/L	133I PCI/L	137CS PCI/L	89SR PCI/L	90SR PCI/L	K GM/L
SPRINGDALE NEV - MCCURDY RANCH 95687 13 6292	DATE- 12 24 70	0700	6.5E02	1.4E02	LT2E01	LT5E00	LT2E00	1.3E00
SIZE- 3.50 L								
ANALYSIS---RESULT---2SIGMA---UNITS---								
3H		5.1E02						
SPRINGDALE NEV - MCCURDY RANCH 95905 13 6292	DATE- 12 25 70	0700	7.1E02	ND	LT2E01	LT5E00	LT2E00	1.1E00
SIZE- 3.50 L								
ANALYSIS---RESULT---2SIGMA---UNITS---								
3H		LT4E02						
SPRINGDALE NEV - MCCURDY RANCH 95897 13 6292	DATE- 12 26 70	0700	8.1E02	LT2E01	LT2E01	LT5E00	0.2E01	1.2E00
SIZE- 3.50 L								
ANALYSIS---RESULT---2SIGMA---UNITS---								
3H		LT4E02						
SPRINGDALE NEV - MCCURDY RANCH 95896 13 6292	DATE- 12 27 70	0700	8.1E02	ND	LT2E01	NA	NA	1.5E00
SIZE- 3.50 L								
ANALYSIS---RESULT---2SIGMA---UNITS---								
3H		LT4E02						
SPRINGDALE NEV - MCCURDY RANCH 95906 13 6292	DATE- 12 28 70	0700	7.3E02	ND	6.0E01	NA	NA	1.0E00
SIZE- 3.50 L								
ANALYSIS---RESULT---2SIGMA---UNITS---								
3H		LT4E02						
SPRINGDALE NEV - MCCURDY RANCH 96057 13 6292	DATE- 12 29 70	0730	6.9E02	ND	LT2E01	LT5E00	0.2E01	1.0E00
SIZE- 3.50 L								
ANALYSIS---RESULT---2SIGMA---UNITS---								
3H		6.3E02						

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NEVADA	REPORTED	05/04/73	131I PCI/L	133I PCI/L	137CS PCI/L	89SR PCI/L	90SR PCI/L	K GM/L
SPRINGDALE NEV - MCCURDY RANCH 96058 13 6292	DATE- 12 30 70	0730	6.7E02	ND	LT2E01	LT5E00	0.2E01	1.0E00
SIZE- 3.50 L								
-ANALYSIS---RESULT---2SIGMA---UNITS---								
3H	6.9E02							
SPRINGDALE NEV - MCCURDY RANCH 96104 11	DATE- 12 30 70	1230	7.8E02	ND	LT2E01	LT5E00	LT2E00	1.0E00
SIZE- 3.50 L								
-ANALYSIS---RESULT---2SIGMA---UNITS---								
3H	LT4E02							
SPRINGDALE NEV - MCCURDY RANCH 96123 13	DATE- 12 31 70	0730	6.7E02	ND	LT2E01	LT5E00	LT2E00	1.1E00
SIZE- 3.50 L								
-ANALYSIS---RESULT---2SIGMA---UNITS---								
3H	LT4E02							
SPRINGDALE NEV - SEIDENTOPF RANCH 96168 13	DATE- 12 31 70	0600	LT2E01	ND	LT2E01	NA	NA	1.7E00
SIZE- .400 L								
WELLS NEV - WILLOW CREEK RANCH 87298 13 6990	DATE- 07 13 70	1800	LT(10)	ND	LT(10)	10	6	1.6E00
SIZE- 3.00 L								
WELLS NEV - WILLOW CREEK RANCH 88527 13 1930	DATE- 08 11 70	1800	LT(10)	ND	3.0E01	LT(5)	6	1.5E00
SIZE- 3.50 L								
WELLS NEV - WILLOW CREEK RANCH 88953 13 1930	DATE- 09 01 70	1800	LT(100)	ND	LT(100)	LT5E00	0.6E01	ND
SIZE- .400 L								
WELLS NEV - WILLOW CREEK RANCH 89992 13 6990	DATE- 09 29 70	1800	LT(10)	ND	LT(10)	LT5E00	0.5E01	1.5E00
SIZE- 3.50 L								

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NEVADA	REPORTED	05/04/73	131I PCI/L	133I PCI/L	137CS PCI/L	89SR PCI/L	90SR PCI/L	K GM/L
IELLS NEV - WILLOW CREEK RANCH 93091 13 1930	DATE- 11 10 70	0600	LT(10)	ND	LT(10)	LT5E00	0.5E01	1.5E00
SIZE- 3.50 L								
IELLS NEV - WILLOW CREEK RANCH 93699 13 1930	DATE- 12 08 70	0600	LT1E01	ND	LT1E01	LT5E00	0.3E01	1.5E00
SIZE- 3.50 L								
ERINGTON NEV - VALLEY DAIRY 95705 12 SB	DATE- 12 21 70	0600	LT2E01	LT2E01	LT2E01	LT5E00	0.2E01	1.4E00
SIZE- 3.50 L								
ERINGTON NEV - VALLEY DAIRY 95852 12 SB	DATE- 12 22 70	1800	LT2E01	LT2E01	LT2E01	NA	NA	1.0E00
SIZE- 3.50 L								
ERINGTON NEV - VALLEY DAIRY 96149 12 SB	DATE- 12 28 70	0600	LT2E01	ND	LT2E01	NA	NA	1.2E00
SIZE- 3.50 L								

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OREGON	REPORTED 05/04/73	131I PCI/L	133I PCI/L	137CS PCI/L	89SR PCI/L	90SR PCI/L	K GM/L
COOS BAY ORE - BROOKMEAD DAIRY 90477 12	DATE- 10 19 70 0600 SIZE- 3.50 L	LT(10)	ND	LT(10)	NA	NA	1.4E00
-ANALYSIS---RESULT---2SIGMA---UNITS---							
NO							
CHEM							
COOS BAY ORE - BROOKMEAD DAIRY 93260 12	DATE- 11 17 70 0600 SIZE- 3.50 L	LT(10)	ND	1.0E01	NA	NA	1.4E00
-ANALYSIS---RESULT---2SIGMA---UNITS---							
NO							
CHEM							

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TAH	REPORTED	05/04/73	131I PCI/L	133I PCI/L	137CS PCI/L	89SR PCI/L	90SR PCI/L	K GM/L
EDAR CITY UTAH - WESTERN GOLD DAIRY 96075 12 SB SIZE- 3.50 L	DATE- 12 20 70	0600	LT2E01	ND	LT2E01	NA	NA	1.1E00
EDAR CITY UTAH - WESTERN GOLD DAIRY 96076 12 SB SIZE- 3.50 L	DATE- 12 21 70	0600	LT2E01	ND	LT2E01	NA	NA	1.0E00
EDAR CITY UTAH - WESTERN GOLD DAIRY 96086 12 SB SIZE- 3.50 L	DATE- 12 22 70	0600	LT2E01	ND	LT2E01	NA	NA	1.2E00
EDAR CITY UTAH - WESTERN GOLD DAIRY 96088 12 SB SIZE- 3.50 L	DATE- 12 23 70	0600	LT2E01	ND	LT2E01	NA	NA	1.1E00
EDAR CITY UTAH - WESTERN GOLD DAIRY 96087 12 SB SIZE- 3.50 L	DATE- 12 24 70	0600	LT2E01	ND	LT2E01	NA	NA	1.2E00
EDAR CITY UTAH - WESTERN GOLD DAIRY 96077 12 SB SIZE- 3.50 L	DATE- 12 25 70	0600	LT2E01	ND	LT2E01	NA	NA	1.2E00
EDAR CITY UTAH - WESTERN GOLD DAIRY 96078 12 SB SIZE- 3.50 L	DATE- 12 26 70	0600	LT2E01	ND	LT2E01	NA	NA	1.0E00
ELTA UTAH - JEFFERY DAIRY 95071 12 6992 SIZE- 3.50 L	DATE- 12 19 70	1800	LT2E01	LT2E01	LT2E01	NA	NA	1.3E00
ELTA UTAH - JEFFERY DAIRY 95072 12 6992 SIZE- 3.50 L	DATE- 12 20 70	0600	LT2E01	LT2E01	LT2E01	NA	NA	1.3E00

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UTAH	REPORTED	131I PCI/L	133I PCI/L	137CS PCI/L	89SR PCI/L	90SR PCI/L	K GM/L
DELTA UTAH - JEFFERY DAIRY 95278 12 6992 DATE- 12 21 70 1018 SIZE- 3.50 L	05/04/73	LT2E01	LT2E01	LT2E01	NA	NA	1.4E00
DELTA UTAH - JEFFERY DAIRY 95420 12 6992 DATE- 12 22 70 0810 SIZE- 3.50 L		LT2E01	LT2E01	LT2E01	NA	NA	1.5E00
FILLMORE UTAH - SAM WADE 95073 14 6992 DATE- 12 19 70 1800 SIZE- 3.50 L		LT2E01	LT2E01	LT2E01	NA	NA	1.4E00
FILLMORE UTAH - SAM WADE 95277 14 6992 DATE- 12 20 70 1800 SIZE- 3.50 L		LT2E01	LT2E01	LT2E01	NA	NA	1.5E00
FILLMORE UTAH - SAM WADE 95268 14 6992 DATE- 12 21 70 0600 SIZE- 3.50 L		LT2E01	LT2E01	LT2E01	NA	NA	1.5E00
FILLMORE UTAH - SAM WADE 95419 14 6992 DATE- 12 22 70 0920 SIZE- 3.50 L		LT2E01	LT2E01	LT2E01	NA	NA	1.0E00
GARRISON UTAH - GONDERS RANCH 86813 13 8990 DATE- 07 07 70 0600 SIZE- 3.50 L		LT(10)	ND	2.0E01	LT(5)	3	1.6E00
GARRISON UTAH - GONDERS RANCH 88523 13 6910 DATE- 08 16 70 1800 SIZE- 3.50 L		LT(10)	ND	2.0E01	5	5	1.6E00
GARRISON UTAH - GONDERS RANCH 89085 13 8990 DATE- 09 07 70 0600 SIZE- 3.50 L		LT(10)	ND	1.0E01	LT5E00	0.6E01	1.5E00

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STATE	REPORTED	DATE	131I PCI/L	133I PCI/L	137CS PCI/L	89SR PCI/L	90SR PCI/L	K GM/L
GARRISON UTAH - GONDERS RANCH 89986 13 1990 SIZE- 3.50 L	05/04/73	DATE- 10 06 70 0600	LT(10)	ND	LT(10)	LT5E00	0.3E01	1.4E00
GARRISON UTAH - GONDERS RANCH 93221 13 1910 SIZE- 3.50 L		DATE- 11 17 70 0600	LT(10)	ND	LT(10)	LT5E00	0.2E01	1.2E00
GILFORD UT - BILL POWELL DAIRY 95276 14 6992 SIZE- 3.50 L		DATE- 12 19 70 1800	LT2E01	LT2E01	LT2E01	NA	NA	1.4E00
GILFORD UT - BILL POWELL DAIRY 95275 14 6992 SIZE- 3.50 L		DATE- 12 20 70 1800	LT2E01	LT2E01	LT2E01	NA	NA	1.2E00
GILFORD UT - BILL POWELL DAIRY 95272 14 6992 SIZE- 3.50 L		DATE- 12 21 70 0600	LT2E01	LT2E01	LT2E01	NA	NA	1.2E00
GILFORD UT - BILL POWELL DAIRY 95421 14 6992 SIZE- 3.50 L		DATE- 12 22 70 1110	LT2E01	LT2E01	LT2E01	NA	NA	1.0E00
MINERSVILLE UTAH - MINERSVILLE DAIRY 95725 12 SB SIZE- 3.50 L		DATE- 12 21 70 0600	LT2E01	LT2E01	LT2E01	LT5E00	0.2E01	1.4E00
MINERSVILLE UTAH - MINERSVILLE DAIRY 95973 12 SB SIZE- 3.50 L		DATE- 12 22 70 0600	LT2E01	ND	LT2E01	NA	NA	1.0E00
MINERSVILLE UTAH - MINERSVILLE DAIRY 95985 12 SB SIZE- 3.50 L		DATE- 12 23 70 0600	LT2E01	ND	LT2E01	NA	NA	1.3E00

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UTAH	REPORTED 95872 12 SB SIZE- 3.50 L	131I PCI/L	133I PCI/L	137CS PCI/L	89SR PCI/L	90SR PCI/L	K GM/L
MINERSVILLE UTAH - MINERSVILLE DAIRY 95971 12 SB SIZE- 3.50 L	DATE- 12 24 70 0600	LT2E01	ND	LT2E01	NA	NA	1.1E00
MINERSVILLE UTAH - MINERSVILLE DAIRY 95971 12 SB SIZE- 3.50 L	DATE- 12 26 70 0600	LT2E01	ND	LT2E01	NA	NA	1.1E00
MINERSVILLE UTAH - MINERSVILLE DAIRY 96080 12 SB SIZE- 3.50 L	DATE- 12 27 70 0600	LT2E01	ND	LT2E01	NA	NA	1.0E00
MINERSVILLE UTAH - MINERSVILLE DAIRY 96034 12 SB SIZE- 3.50 L	DATE- 12 28 70 0600	LT2E01	ND	LT2E01	NA	NA	1.1E00
MT PLEASANT UTAH - BROOKLAWN CREAMERY 95797 12 SB SIZE- 3.50 L	DATE- 12 23 70 0600	LT2E01	LT2E01	LT2E01	LT5E00	0.6E01	1.5E00
MT PLEASANT UTAH - BROOKLAWN CREAMERY 95853 12 SB SIZE- 3.50 L	DATE- 12 24 70 0600	LT2E01	LT2E01	LT2E01	LT5E00	0.4E01	1.6E00
-ANALYSIS---RESULT----2SIGMA---UNITS---							
3H	9.1E02						
MT PLEASANT UTAH - BROOKLAWN CREAMERY 95957 12 SB SIZE- 3.50 L	DATE- 12 25 70 0600	LT2E01	ND	LT2E01	NA	NA	1.1E00
MT PLEASANT UTAH - BROOKLAWN CREAMERY 96134 12 SB SIZE- 3.50 L	DATE- 12 28 70 0600	LT2E01	ND	LT2E01	NA	NA	1.0E00
MT PLEASANT UTAH - BROOKLAWN CREAMERY 96148 12 SB SIZE- 3.50 L	DATE- 12 29 70 0600	LT2E01	ND	LT2E01	NA	NA	1.0E00

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UTAH	REPORTED	05/04/73	131I PCI/L	133I PCI/L	137CS PCI/L	89SR PCI/L	90SR PCI/L	K GM/L	
NEWCASTLE UTAH - NEWCASTLE DAIRY 95315 12 1732	DATE- 12 21 70	0600	SIZE- 3.50 L	LT2E01	LT2E01	LT2E01	NA	NA	1.6E00
OGDEN UTAH - MAPLE LEAF DAIRY 90857 12	DATE- 10 19 70	0600	SIZE- 3.50 L	LT(10)	ND	1.0E01	NA	NA	1.5E00
-ANALYSIS---RESULT----2SIGMA---UNITS---									
NO	CHEM								
OGDEN UTAH - MAPLE LEAF DAIRY 93064 12	DATE- 11 11 70	1800	SIZE- 3.50 L	LT(10)	ND	LT(10)	NA	NA	1.5E00
-ANALYSIS---RESULT----2SIGMA---UNITS---									
NO	CHEM								
OGDEN UTAH - MAPLE LEAF DAIRY 95713 12 SB	DATE- 12 21 70	0600	SIZE- 3.50 L	LT2E01	LT2E01	LT2E01	NA	NA	1.1E00
OGDEN UTAH - MAPLE LEAF DAIRY 95700 12 SB	DATE- 12 22 70	0600	SIZE- 3.50 L	LT2E01	LT2E01	LT2E01	LT5E00	0.6E01	1.0E00
OGDEN UTAH - MAPLE LEAF DAIRY 95850 12 SB	DATE- 12 23 70	0600	SIZE- 3.50 L	LT2E01	LT2E01	LT2E01	NA	NA	1.0E00
OGDEN UTAH - MAPLE LEAF DAIRY 95871 12 SB	DATE- 12 24 70	0600	SIZE- 3.50 L	LT2E01	ND	LT2E01	NA	NA	1.2E00
OGDEN UTAH - MAPLE LEAF DAIRY 96131 12 SB	DATE- 12 25 70	0600	SIZE- 3.50 L	LT2E01	ND	3.0E01	NA	NA	1.2E00

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FAH	REPORTED	05/04/73	131I PCI/L	133I PCI/L	137CS PCI/L	89SR PCI/L	90SR PCI/L	K GM/L
SDEN UTAH - MAPLE LEAF DAIRY 96108 12 SB SIZE- 3.50 L	DATE- 12 27 70	0600	LT2E01	ND	LT2E01	NA	NA	1.0E00
ICHLFIELD UTAH - IDEAL DAIRY 95320 12 SB SIZE- 3.50 L	DATE- 12 20 70	0600	LT1E01	LT1E01	LT1E01	LT5E00	0.5E01	1.4E00
ICHLFIELD UTAH - IDEAL DAIRY 95862 12 SB SIZE- 3.50 L	DATE- 12 21 70	1800	LT2E01	LT2E01	LT2E01	NA	NA	1.3E00
ICHLFIELD UTAH - IDEAL DAIRY 95798 12 SB SIZE- 3.50 L	DATE- 12 23 70	1800	LT2E01	LT2E01	LT2E01	NA	NA	1.4E00
ICHLFIELD UTAH - IDEAL DAIRY 95989 12 SB SIZE- 3.50 L	DATE- 12 25 70	1800	LT2E01	ND	LT2E01	NA	NA	1.4E00
ICHLFIELD UTAH - IDEAL DAIRY 96068 12 SB SIZE- 3.50 L	DATE- 12 27 70	0600	LT2E01	ND	LT2E01	NA	NA	1.2E00
GEORGE UTAH - R COX DAIRY 86864 12 6490 SIZE- 3.50 L	DATE- 07 06 70	0600	LT(10)	ND	LT(10)	LT(5)	2	1.5E00
GEORGE UTAH - R COX DAIRY 88105 12 6490 SIZE- 3.50 L	DATE- 08 12 70	0600	LT(10)	ND	LT(10)	LT(5)	LT(2)	1.5E00
GEORGE UTAH - R COX DAIRY 88869 12 6490 SIZE- 3.50 L	DATE- 09 01 70	0600	LT(10)	ND	LT(10)	LT5E00	0.2E01	1.5E00

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UTAH	REPORTED	05/04/73	131I PCI/L	133I PCI/L	137CS PCI/L	89SR PCI/L	90SR PCI/L	K GM/L
ST GEORGE UTAH - R COX DAIRY 89974 12 6490	DATE- 10 06 70	0600	LT(10)	ND	LT(10)	LT5E00	0.2E01	1.5E00
SIZE- 3.50 L								
ST GEORGE UTAH - R COX DAIRY 93048 12 6490	DATE- 11 09 70	1800	LT(10)	ND	LT(10)	LT5E00	0.3E01	1.2E00
SIZE- 3.50 L								
ST GEORGE UTAH - R COX DAIRY 93580 12 6490	DATE- 12 08 70	0600	LT1E01	ND	LT1E01	LT5E00	0.2E01	1.5E00
SIZE- 3.50 L								
ST GEORGE UTAH - R COX DAIRY 93972 12 6492	DATE- 12 19 70	1800	LT2E01	LT2E01	LT2E01	NA	NA	1.2E00
SIZE- 3.50 L								
ST GEORGE UTAH - R COX DAIRY 95312 12 6492	DATE- 12 20 70	1800	LT2E01	LT2E01	LT2E01	NA	NA	1.4E00
SIZE- 3.50 L								
ST GEORGE UTAH - ST GEORGE ICE CO 95710 12 SB	DATE- 12 20 70	1800	LT2E01	LT2E01	LT2E01	LT5E00	0.3E01	1.4E00
SIZE- 3.50 L								
ST GEORGE UTAH - ST GEORGE ICE CO 96085 12 SB	DATE- 12 24 70	0600	LT2E01	ND	LT2E01	NA	NA	1.2E00
SIZE- 3.50 L								
ST GEORGE UTAH - ST GEORGE ICE CO 96023 12 SB	DATE- 12 26 70	1800	LT2E01	ND	LT2E01	LT5E00	0.2E01	1.4E00
SIZE- 3.50 L								
ST GEORGE UTAH - ST GEORGE ICE CO 96012 12 SB	DATE- 12 27 70	0600	LT2E01	ND	LT2E01	NA	NA	1.3E00
SIZE- 3.50 L								

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JTAH	REPORTED	05/04/73	131I PCI/L	133I PCI/L	137CS PCI/L	89SR PCI/L	90SR PCI/L	K GM/L
ST GEORGE UTAH - ST GEORGE ICE CO 96156 12 SB SIZE- 3.50 L		DATE- 12 30 70 0630	LT2E01	ND	LT2E01	NA	NA	1.2E00
SMITHFIELD UTAH - CACHE VALLEY DAIRY 95645 12 SB SIZE- 3.50 L		DATE- 12 19 70 1800	LT2E01	LT2E01	LT2E01	NA	NA	1.4E00
SMITHFIELD UTAH - CACHE VALLEY DAIRY 95643 12 SB SIZE- 3.50 L		DATE- 12 20 70 1800	LT2E01	LT2E01	LT2E01	LT5E00	0.6E01	1.0E00
SMITHFIELD UTAH - CACHE VALLEY DAIRY 95970 12 SB SIZE- 3.50 L		DATE- 12 21 70 1800	LT2E01	ND	LT2E01	NA	NA	1.2E00
SMITHFIELD UTAH - CACHE VALLEY DAIRY 96070 12 SB SIZE- 3.50 L		DATE- 12 22 70 1800	LT2E01	ND	LT2E01	NA	NA	1.2E00
SMITHFIELD UTAH - CACHE VALLEY DAIRY 96031 12 SB SIZE- 3.50 L		DATE- 12 23 70 1800	LT2E01	ND	LT2E01	NA	NA	1.3E00
SMITHFIELD UTAH - CACHE VALLEY DAIRY 96027 12 SB SIZE- 3.50 L		DATE- 12 24 70 1800	LT2E01	ND	LT2E01	NA	NA	1.0E00
SMITHFIELD UTAH - CACHE VALLEY DAIRY 95977 12 SB SIZE- 3.50 L		DATE- 12 25 70 1800	LT2E01	ND	LT2E01	NA	NA	1.0E00
SMITHFIELD UTAH - CACHE VALLEY DAIRY 95988 12 SB SIZE- 3.50 L		DATE- 12 26 70 1800	LT2E01	ND	LT2E01	NA	NA	1.4E00

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UTAH	REPORTED 111	131I PCI/L	133I PCI/L	137CS PCI/L	89SR PCI/L	90SR PCI/L	K GM/L
SPANISH FORK UTAH - TOWN PRIDE DAIRY 95652 12 SB SIZE- 3.50 L	DATE- 12 20 70 0600	LT2E01	LT2E01	LT2E01	LT5E00	0.5E01	1.0E00
SPANISH FORK UTAH - TOWN PRIDE DAIRY 95711 12 SB SIZE- 2.90 L	DATE- 12 22 70 0600	LT2E01	LT2E01	LT2E01	NA	NA	1.0E01
SPANISH FORK UTAH - TOWN PRIDE DAIRY 96117 12 SB SIZE- 2.50 L	DATE- 12 23 70 0600	LT2E01	ND	LT2E01	NA	NA	1.1E00
SPANISH FORK UTAH - TOWN PRIDE DAIRY 96113 12 SB SIZE- 3.50 L	DATE- 12 26 70 0600	LT2E01	ND	LT2E01	NA	NA	1.1E00
SPANISH FORK UTAH - TOWN PRIDE DAIRY 96121 12 SB SIZE- .400 L	DATE- 12 28 70 0600	LT2E01	ND	LT2E01	NA	NA	1.0E00
SPANISH FORK UTAH - TOWN PRIDE DAIRY 96159 12 SB SIZE- 2.90 L	DATE- 12 30 70 0600	LT2E01	ND	LT2E01	NA	NA	1.5E00
SPANISH FORK UTAH - TOWN PRIDE DAIRY 96285 12 SB SIZE- 3.00 L	DATE- 12 31 70 0600	LT2E01	ND	LT2E01	NA	NA	1.4E00

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ASHINGTON	REPORTED	05/04/73.	131I PCI/L	133I PCI/L	137CS PCI/L	89SR PCI/L	90SR PCI/L	K GM/L	
ELLVUE WASH - SAFEWAY MILK DEPT 88898 12	DATE- 09 01 70	0600	SIZE- 3.30 L	LT(10)	ND	LT(10)	LT(5)	5	1.4E00
HEHALIS WASH - CONSOLIDATED DAIRY 88853 12	DATE- 08 30 70	0600	SIZE- 3.20 L	LT(10)	ND	2.0E01	LT(5)	6	1.6E00
OLLEGE PLACE WASH - COLLEGE DAIRY 88968 12	DATE- 09 03 70	0600	SIZE- 3.50 L	LT(10)	ND	LT(10)	LT(5)	2	1.4E00
ONGVIEW WASH - STANDARD DAIRY 88919 12	DATE- 09 03 70	0600	SIZE- 3.50 L	LT(10)	ND	1.0E01	LT(5)	6	1.3E00
OSSES LAKE WASH - ARDEN FARMS CO 88852 12	DATE- 08 30 70	1800	SIZE- 3.50 L	LT(10)	ND	LT(10)	LT(5)	2	1.5E00
MAK WASH - MEADOWMOOR DAIRY 88969 12	DATE- 08 30 70	1800	SIZE- 3.50 L	LT(10)	ND	LT(10)	LT5E00	0.3E01	1.6E00
ORT ANGELES WASH - ANGELES COOP CRMY 88879 12	DATE- 08 30 70	1800	SIZE- 3.50 L	LT(10)	ND	LT(10)	LT(5)	4	1.4E00
ORT ANGELES WASH - ANGELES COOP CRMY 90483 12	DATE- 10 19 70	1800	SIZE- 3.15 L	LT(10)	ND	LT(10)	NA	NA	1.5E00

ANALYSIS---RESULT---2SIGMA---UNITS---

NO
CHEM

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WASHINGTON	REPORTED	05/04/73	131I PCI/L	133I PCI/L	137CS PCI/L	89SR PCI/L	90SR PCI/L	K GM/L
PORT ANGELES WASH - ANGELES COOP CRMY 90557 12	DATE- 10 22 70	1800 SIZE- 3.50 L	LT(10)	ND	LT(10)	NA	NA	1.3E00
-ANALYSIS---RESULT----2SIGMA---UNITS---								
NO CHEM								
PORT ANGELES WASH - ANGELES COOP CRMY 93111 12	DATE- 11 13 70	0600 SIZE- 3.50 L	LT(10)	ND	LT(10)	NA	NA	1.5E00
-ANALYSIS---RESULT----2SIGMA---UNITS---								
NO CHEM								
PORT ANGELES WASH - ANGELES COOP CRMY 93234 12	DATE- 11 18 70	0600 SIZE- 3.50 L	LT(10)	ND	LT(10)	NA	NA	1.4E00
-ANALYSIS---RESULT----2SIGMA---UNITS---								
NO CHEM								
SEATTLE WASH ARDEN FARMS 88899 12	DATE- 09 01 70	0600 SIZE- 3.50 L	LT(10)	ND	LT(10)	LT(5)	5	1.5E00
SEATTLE WASH - DARIGOLD 88901 12	DATE- 09 01 70	0600 SIZE- 3.50 L	LT(10)	ND	2.0E01	LT(5)	8	1.4E00
SEATTLE WASH - FOREMOST DAIRY 88900 12	DATE- 09 01 70	0600 SIZE- 3.50 L	LT(10)	ND	LT(10)	LT(5)	8	1.4E00
SPOKANE WASH - CARNATION CO (N IDAHO) 89029 12	DATE- 09 01 70	1800 SIZE- 3.50 L	LT(10)	ND	2.0E01	LT(5)	7	1.2E00

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WASHINGTON	REPORTED	05/04/73	131I PCI/L	133I PCI/L	137CS PCI/L	89SR PCI/L	90SR PCI/L	K GM/L
POKANE WASH - CARNATION CO (PEND CO) 89030 12 DATE- 09 01 70 1800 SIZE- 3.50 L			LT(10)	ND	LT(10)	LT(5)	12	1.4E00
POKANE WASH - DARIGOLD (N SPOKANE CO) 89031 12 DATE- 09 01 70 0600 SIZE- 3.50 L			LT(10)	ND	LT(10)	LT(5)	7	1.5E00
POKANE WASH - DARIGOLD (STEVENS) 89032 12 DATE- 09 01 70 0600 SIZE- 3.50 L			LT(10)	ND	LT(10)	LT(5)	5	1.5E00
YACIMA WASH - FLETT DAIRY 88880 12 DATE- 09 01 70 0600 SIZE- 3.50 L			LT(10)	ND	1.0E01	LT(5)	5	1.4E00
YACIMA WASH - YAKIMA CITY CREAMERY 88972 12 DATE- 09 04 70 1800 SIZE- 3.50 L			LT(10)	ND	LT(10)	LT(5)	3	1.5E00

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WYOMING	REPORTED	05/04/73	131I PCI/L	133I PCI/L	137CS PCI/L	89SR PCI/L	905R PCI/L	K GM/L	
CASPER WYO - MEADOW GOLD DAIRIES 90701 12 SB	DATE- 10 26 70	0600	SIZE- 3.50 L	LT(10)	ND	LT(10)	NA	NA	1.4E00
-ANALYSIS---RESULT----2SIGMA---UNITS---									
NO CHEM									
CASPER WYO - MEADOW GOLD DAIRIES 95812 12 SB	DATE- 12 23 70	1800	SIZE- 3.50 L	LT2E01	LT2E01	LT2E01	LT5E00	0.5E01	1.3E00
CASPER WYO - MEADOW GOLD DAIRIES 96120 11 SB	DATE- 12 27 70	0600	SIZE- 3.50 L	LT2E01	ND	LT2E01	NA	NA	1.0E00
CHEYENNE WYO - DAIRY GOLD FOODS 90680 12 SB	DATE- 10 26 70	1800	SIZE- 3.50 L	LT(10)	ND	1.0E01	NA	NA	1.5E00
-ANALYSIS---RESULT----2SIGMA---UNITS---									
NO CHEM									
CHEYENNE WYO - DAIRY GOLD FOODS 95696 12 SB	DATE- 12 20 70	1800	SIZE- 3.50 L	LT2E01	LT2E01	LT2E01	NA	NA	1.4E00
CHEYENNE WYO - DAIRY GOLD FOODS 95658 12 SB	DATE- 12 21 70	0600	SIZE- 3.50 L	LT2E01	LT2E01	LT2E01	LT5E00	0.4E01	1.0E00
CHEYENNE WYO - DAIRY GOLD FOODS 95851 12 SB	DATE- 12 21 70	1800	SIZE- 3.50 L	LT2E01	LT2E01	LT2E01	NA	NA	1.2E00
CHEYENNE WYO - DAIRY GOLD FOODS 95846 12 SB	DATE- 12 22 70	1800	SIZE- 3.50 L	LT2E01	LT2E01	LT2E01	NA	NA	1.4E00

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YOMING	REPORTED	05/04/73	131I PCI/L	133I PCI/L	137CS PCI/L	89SR PCI/L	90SR PCI/L	K GM/L
HEYENNE WYO - DAIRY GOLD FOODS 95849 12 SB SIZE- 3.50 L		DATE- 12 23 70 1800	LT2E01	LT2E01	LT2E01	NA	NA	1.3E00
HEYENNE WYO - DAIRY GOLD FOODS 96140 12 SB SIZE- 3.50 L		DATE- 12 24 70 1800	LT2E01	ND	LT2E01	NA	NA	1.1E00
HEYENNE WYO - DAIRY GOLD FOODS 96115 11 SB SIZE- 3.50 L		DATE- 12 28 70 0830	LT2E01	ND	LT2E01	NA	NA	1.5E00
DWELL WYO - CREAM OF THE VALLEY DAIRY 90560 12 SIZE- 3.50 L		DATE- 10 19 70 1800	LT(10)	ND	1.0E01	NA	NA	1.5E00
ANALYSIS---RESULT----2SIGMA---UNITS---								
NO								
CHEM								
DWELL WYO - CREAM OF THE VALLEY DAIRY 90702 12 SIZE- 3.50 L		DATE- 10 27 70 0600	LT(10)	ND	1.0E01	NA	NA	1.5E00
ANALYSIS---RESULT----2SIGMA---UNITS---								
NO								
CHEM								
DWELL WYO - CREAM OF THE VALLEY DAIRY 93112 12 SIZE- 2.80 L		DATE- 11 12 70 0600	LT(10)	ND	1.0E01	NA	NA	1.6E00
ANALYSIS---RESULT----2SIGMA---UNITS---								
NO								
CHEM								
DWELL WYO - CREAM OF THE VALLEY DAIRY 95704 12 SB SIZE- 3.50 L		DATE- 12 20 70 1800	LT2E01	LT2E01	LT2E01	LT5E00	0.6E01	1.4E00

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WYOMING	REPORTED	05/04/73	131I PCI/L	133I PCI/L	137CS PCI/L	89SR PCI/L	90SR PCI/L	K GM/L
POWELL WYO - CREAM OF THE VALLEY DAIRY 95640 12 SB SIZE- 3.50 L		DATE- 12 21 70 0600	LT2E01	LT2E01	LT2E01	NA	NA	1.2E00
POWELL WYO - CREAM OF THE VALLEY DAIRY 95656 12 SB SIZE- 3.50 L		DATE- 12 22 70 0600	LT2E01	LT2E01	LT2E01	NA	NA	1.2E00
POWELL WYO - CREAM OF THE VALLEY DAIRY 95793 12 SB SIZE- 3.50 L		DATE- 12 23 70 0600	LT2E01	LT2E01	LT2E01	NA	NA	1.5E00
POWELL WYO - CREAM OF THE VALLEY DAIRY 95859 12 SB SIZE- 3.50 L		DATE- 12 24 70 0600	4.0E01	LT2E01	LT2E01	LT5E00	0.4E01	1.2E00
-ANALYSIS---RESULT----2SIGMA---UNITS---								
3H		8.9E02						
POWELL WYO - CREAM OF THE VALLEY DAIRY 96093 12 SB SIZE- 3.50 L		DATE- 12 26 70 0600	LT2E01	ND	LT2E01	NA	NA	1.5E00
POWELL WYO - CREAM OF THE VALLEY DAIRY 96114 11 SB SIZE- 3.50 L		DATE- 12 27 70 0600	LT2E01	ND	LT2E01	NA	NA	1.4E00
POWELL WYO - CREAM OF THE VALLEY DAIRY 96147 12 SB SIZE- 3.50 L		DATE- 12 27 70 0600	LT2E01	ND	LT2E01	NA	NA	1.5E00
POWELL WYO - CREAM OF THE VALLEY DAIRY 96109 12 SB SIZE- 3.50 L		DATE- 12 27 70 1800	LT2E01	ND	3.0E01	NA	NA	1.2E00
POWELL WYO - CREAM OF THE VALLEY DAIRY 96158 12 SB SIZE- 3.50 L		DATE- 12 30 70 0830	LT2E01	ND	LT2E01	NA	NA	1.4E00

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WYOMING	REPORTED	131I PCI/L	133I PCI/L	137CS PCI/L	89SR PCI/L	90SR PCI/L	K GM/L
POWELL WYO - CREAM OF THE VALLEY DAIRY 96243 12 SB	DATE- 12 31 70 0600 SIZE- 3.50 L	LT2E01	ND	LT2E01	NA	NA	1.3E00
RIVERTON WYO - MORNING STAR DAIRY 90634 12	DATE- 10 25 70 0600 SIZE- 3.50 L	LT(10)	ND	LT(10)	NA	NA	1.5E00
ANALYSIS---RESULT----2SIGMA---UNITS---							
NO CHEM							
RIVERTON WYO - MORNING STAR DAIRY 95699 12 SB	DATE- 12 21 70 0600 SIZE- 3.50 L	LT2E01	LT2E01	LT2E01	NA	NA	1.4E00
RIVERTON WYO - MORNING STAR DAIRY 95708 12 SB	DATE- 12 22 70 1800 SIZE- 2.60 L	LT2E01	LT2E01	LT2E01	NA	NA	1.5E00
RIVERTON WYO - MORNING STAR DAIRY 96082 12 SB	DATE- 12 23 70 1800 SIZE- 3.50 L	LT2E01	ND	LT2E01	LT5E00	0.6E01	1.3E00
ANALYSIS---RESULT----2SIGMA---UNITS---							
3H	LT4E02						
RIVERTON WYO - MORNING STAR DAIRY 96079 12 SB	DATE- 12 24 70 1800 SIZE- 3.50 L	LT2E01	ND	LT2E01	NA	NA	1.5E00
RIVERTON WYO - MORNING STAR DAIRY 96020 12 SB	DATE- 12 27 70 0600 SIZE- 3.50 L	LT2E01	ND	LT2E01	NA	NA	1.2E00
RIVERTON WYO - MORNING STAR DAIRY 96065 12 SB	DATE- 12 28 70 0600 SIZE- 3.50 L	LT2E01	ND	LT2E01	NA	NA	1.3E00

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WYOMING	REPORTED	05/04/73	131I PCI/L	133I PCI/L	137CS PCI/L	89SR PCI/L	90SR PCI/L	K GM/L
SHERIDAN WYO - JERSEY CREAMERY 90602 12	DATE- 10 26 70	0600 SIZE- 3.50 L	LT(10)	ND	LT(10)	NA	NA	1.4E00
-ANALYSIS---RESULT----2SIGMA---UNITS---								
NO CHEM								
SHERIDAN WYO - JERSEY CREAMERY 90604 12	DATE- 10 26 70	0600 SIZE- 3.50 L	LT(10)	ND	LT(10)	NA	NA	1.6E00
-ANALYSIS---RESULT----2SIGMA---UNITS---								
NO CHEM								
SHERIDAN WYO - JERSEY CREAMERY 90605 12	DATE- 10 26 70	0600 SIZE- 3.50 L	LT(10)	ND	1.0E01	NA	NA	1.4E00
-ANALYSIS---RESULT----2SIGMA---UNITS---								
NO CHEM								
SHERIDAN WYO - JERSEY CREAMERY 95531 12 SB	DATE- 12 21 70	0600 SIZE- 3.50 L	LT2E01	LT2E01	LT2E01	LT5E00	0.5E01	1.0E00
SHERIDAN WYO - JERSEY CREAMERY 95721 12 SB	DATE- 12 22 70	0600 SIZE- 3.50 L	LT2E01	LT2E01	LT2E01	NA	NA	1.2E00
SHERIDAN WYO - JERSEY CREAMERY 95800 12 SB	DATE- 12 23 70	0600 SIZE- 3.50 L	LT2E01	LT2E01	LT2E01	NA	NA	1.5E00
SHERIDAN WYO - JERSEY CREAMERY 95803 12 SB	DATE- 12 24 70	0600 SIZE- 3.50 L	LT2E01	LT2E01	LT2E01	NA	NA	1.7E00

PENDIX A

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OMING	REPORTED	05/04/73	131I PCI/L	133I PCI/L	137CS PCI/L	89SR PCI/L	90SR PCI/L	K GM/L
ERIDAN WYO - JERSEY CREAMERY 96141 12 SB	DATE- 12 28 70	0600	LT2E01	ND	3.0E01	NA	NA	1.5E00
SIZE- 3.50 L								
ERIDAN WYO - JERSEY CREAMERY 96116 12 SB	DATE- 12 29 70	0600	LT2E01	ND	LT2E01	NA	NA	1.2E00
SIZE- 3.50 L								

APPENDIX B

Calculation of Thyroid Dose Equivalent

The radiation dose rate to the thyroid gland resulting from the inhalation or ingestion of radioiodine was determined by the equation

- $d(D.E.)D/dt = KEA \exp(-\lambda_{eff}t)$ where
 $d(D.E.)/dt$ = dose equivalent rate, rem per day
K = dimensional constant including quality factor of 1,
 $51.2 \text{ (rem}\cdot\text{g}) / (\text{MeV}\cdot\mu\text{Ci}\cdot\text{day})$ (1)
E = effective energy of beta and gamma radiation, MeV per
 disintegration
A = concentration of radioiodine in thyroid, $\mu\text{Ci/g}$
 λ_{eff} = effective decay constant, 1/day
t = time after deposition in thyroid, days

This assumes that the radioiodine was uniformly distributed throughout the thyroid. The total dose equivalent was estimated by integrating the above equation from time zero to infinity assuming D.E. = 0 at time zero.

$$\begin{aligned} D.E. &= KEA \int_0^{\infty} \exp(-\lambda_{eff}t) dt \\ D.E. &= (-1/\lambda_{eff}) KEA \exp(-\lambda_{eff}t) \Big|_0^{\infty} \\ D.E. &= 0 + KEA/\lambda_{eff} \end{aligned}$$

Since E and λ_{eff} are different for each isotope of radioiodine, the total thyroid dose from the ith to the nth isotope was summed in accordance with

$$D.E. = \sum_i^n KE_i A / (\lambda_{eff})_i$$

Dose from Inhalation of Radioiodines

Parameter A, the concentration of radioiodine in the thyroid, was determined for an adult by the equation

$A = \frac{xBf}{m}$, where

m

x = time-integrated concentration of radioactivity, $\mu\text{Ci}\cdot\text{sec}/\text{m}^3$.

B = breathing rate of standard man averaged over 24 hours,
 $2.32 \times 10^{-4} \text{ m}^3/\text{sec}$ (2).

f = fraction of inhaled radioiodine reaching the thyroid, 0.23 (2).

m = thyroid weight of standard man, 20 g (2).

$$A = \frac{(2.32 \times 10^{-4} \text{ m}^3/\text{sec}) (0.23)x}{20 \text{ g}}$$

With this expression substituted for A and $0.693/(T_{\text{eff}}$, effective half-life) substituted for λ_{eff} the dose to an adult's thyroid from a particular radioisotope of iodine becomes

$$D.E. = \left(1.97 \times 10^{-4} \frac{\text{rem}\cdot\text{m}^3}{\text{MeV}\cdot\mu\text{Ci}\cdot\text{day}\cdot\text{sec}}\right) E T_{\text{eff}} x$$

The following table lists the values of E, T_{eff} , and the product of $1.97 \times 10^{-4} E T_{\text{eff}}$ for ^{131}I , ^{132}I , ^{133}I , and ^{135}I .

Table A-1. Adult Dose Factors for Time-Integrated Concentrations of Radioiodines in Air.

Radionuclide	f	Effective Absorbed Energy (MeV)	Effective Half-life (days)	Dose Factor for Adult $\frac{\text{mrem}\cdot\text{m}^3}{\mu\text{Ci}\cdot\text{sec}}$
^{131}I	0.23	0.23	7.6	0.35
^{132}I	0.23	0.65	0.097	0.002*
^{132}I from ^{132}Te	0.034#	0.65	2.6#	0.0494
^{133}I	0.23	0.54	0.87	0.093
^{135}I	0.23	0.52	0.28	0.029

* Computation of factor includes factor of 1/10 due to the decay of the ^{132}I in the blood stream prior to uptake in the thyroid.

Parameters derived elsewhere (3).

For the dose to a child's thyroid the adult thyroid dose computed from the above factors was multiplied by a factor of 2.5 to account for differences in thyroid weight, in breathing rates between an adult and a child, and in effective absorbed energies for an adult and a child. Those values marked with an

asterisk in Table A-1 are estimates instead of actual measurements. Due to the rapid decay of the radioiodines and to delays in transporting and analyzing large numbers of samples, many of the radioiodines were not detected in some of the air samples at time of counting. The quantities of the undetected radioiodines were estimated from measured ratios of isotopic activities on air samples which contained more than one radioisotope of iodine. The measured ratios ($^{133}\text{I}/^{131}\text{I}$ and $^{135}\text{I}/^{133}\text{I}$), determined from the air sampling results, were correlated with the respective time periods between sample collection and time of fission.

Since the particulate filters (PF's) and charcoal cartridges (CC's) were often counted at different times, radioiodine found on one filter medium was not always detected on the other medium used on the same air sampler. The quantities of the radioiodines of a PF or CC under these circumstances were estimated from the measured ratios of activities (PF/CC) for the isotopes ^{131}I and ^{133}I ; not enough data were available for ^{135}I . The measured ratios were correlated with the appropriate time periods between sample collection and time of fission.

The equations for these correlations, shown below, were derived from least-squares regression analyses of data from air samples grouped within three sectors from the test location. Correlation coefficients (r) are determined for each equation for the purpose of describing the slope and scatter of the data from which the equations were derived. The samples were grouped by these sectors:

2° - 80°

$$\begin{array}{ll} \log_{10} \frac{^{133}\text{I}}{^{131}\text{I}} = 1.235 - 0.009836\Delta t & r = -0.78 \\ \log_{10} (\text{PF/CC})^{133} = 1.232 - 0.01527\Delta t & r = -0.62 \\ \log_{10} (\text{PF/CC})^{131} = 1.794 - 0.0235\Delta t & r = -0.79 \end{array}$$

220° - 333°

$$\begin{array}{ll} \log_{10} \frac{^{133}\text{I}}{^{131}\text{I}} = 1.484 - 0.01587\Delta t & r = -0.84 \\ \log_{10} (\text{PF/CC})^{131} = 0.5093 - 0.00914\Delta t & r = -0.55 \\ \log_{10} (\text{PF/CC})^{133} = 0.03150 - 0.006255\Delta t & r = -0.34 \end{array}$$

334° - 1°

$$\begin{array}{ll} \log_{10} \frac{^{133}\text{I}}{^{131}\text{I}} = 1.3999 - 0.01166\Delta t & r = -0.89 \\ \log_{10} (\text{PF/CC})^{133} = 0.3258 - 0.009980\Delta t & r = -0.72 \\ \log_{10} (\text{PF/CC})^{131} = 0.7660 - 0.01537\Delta t & r = -0.89 \end{array}$$

0° - 360°

$$\log_{10} \frac{^{135}\text{I}}{^{133}\text{I}} = 0.5169 - 0.0328\Delta t \quad r = 0.78$$

$^{133}\text{I}/^{131}\text{I}$, $^{135}\text{I}/^{133}\text{I}$ = ratio of isotopic activities on PF and CC combined
 $(\text{PF/CC})_{131}$, $(\text{PF/CC})_{133}$ = ratio of ^{131}I (or ^{133}I) activity on PF to ^{131}I
(or ^{133}I) activity on CC

because fractionation of the released radioactivity appeared to have occurred from wind shear and variations in effective release height during the period of the release. Insufficient ^{135}I data were available for establishing the ratio $^{135}\text{I}/^{133}\text{I}$ for each sector, so the data for ^{135}I in all sectors were used.

Dose from Ingestion of Milk Containing Radioiodine

For ingestion, parameter A for a one-year-old infant was defined as

$$A = \frac{CVf}{m} \text{ where}$$

C = the time-integrated concentration of radioiodine in milk,
pCi·day/l, from time zero to infinity assuming that the
effective half-lives of ^{131}I and ^{133}I in milk are 5 days
and 21 hours, respectively.

V = the rate by which milk is consumed by a child one-year-old
or less, 1 liter/day (5).

f = fraction of ingested radioiodine reaching the thyroid, 0.3 (2).

m = thyroid weight (gm)

With the values for V and f substituted,

$$A = \frac{(1 \text{ liter/day})(0.3)C}{m} \text{ or}$$

$$A = \frac{0.3 \text{ liter}}{\text{day}} \frac{C}{m}$$

The dose equation $D = KEA/g_{\text{eff}}$ becomes applicable to milk ingestion with the above expression for A substituted as follows,

$$D.E. = \left(1.5 \times 10^{-2} \frac{\text{mrem} \cdot \text{g} \cdot \text{l}}{\text{MeV} \cdot \text{pCi} \cdot \text{day}^2}\right) \frac{E}{\lambda_{\text{eff}}} \frac{C}{m}$$

With $\lambda_{\text{eff}} = 0.693/T_{\text{eff}}$

$$D.E. = \left(2.2 \times 10^{-2} \frac{\text{mrem} \cdot \text{g} \cdot \text{l}}{\text{MeV} \cdot \text{pCi} \cdot \text{day}^2}\right) \frac{E T_{\text{eff}} C}{m}$$

The following tables list the values for E, T_{eff} , and the product of $(2.2 \times 10^{-2}) E T_{eff}$ for ^{131}I and ^{133}I . The differences in the effective energies for the adult and infant listed in these tables are due to the different thyroid sizes of an adult and child.

Table A-2. Child Dose Factors for Time-Integrated Concentrations of Radioiodines in Milk.

Isotope	Effective Energy (MeV)	Effective Half-Life (days)	Dose Factor for One-year-old Child <u>mrem.g.1</u> pCi.day
^{131}I	0.2	7.6	0.034
^{133}I	0.50	0.87	0.0096

Table A-3. Adult Dose Factors for Time-Integrated Concentrations of Radioiodines in Milk.

Isotope	Effective Energy (MeV)	Effective Half-Life (days)	Dose Factor for One-year-old Child <u>mrem.g.1</u> pCi.day
^{131}I	0.23	7.6	0.039
^{133}I	0.54	0.87	0.010

One adult and two children, ages 13 and 15, at the McCurdy Ranch were known users of the milk produced at the location. The youngest child drinking milk from the McCurdy cows was a two-year-old living in Beatty, about ten miles south of Springdale. The child's parents were contacted and the actual amount of milk consumed by the child was determined to be 1 liter per day.

From the concentrations of radioiodine in the milk, the rate of consumption, the above child-dose-conversion factors, and an assumed thyroid weight of 3 grams, the thyroid dose equivalent received by the child was estimated.

For the other ranches, the actual quantity of milk consumed by the youngest child drinking milk at each location was not determined; therefore, a consumption rate of 1 liter/day was assumed. The thyroid weights assumed for the 7- and 9-year-old children were 7 grams and 9 grams, respectively. A 20-gram thyroid weight was used for the adults. The thyroid dose equivalents received by the individuals were estimated from these assumptions, the concentrations of radioiodine in the milk, and the above dose conversion factors for an adult.

Dose from Ingestion of Snow Containing Radioiodine

In February, 1971, EPA personnel discovered that sheepherders in central Nevada were using melted snow for drinking and cooking. According to interviews with sheepherders and ranchers, the following facts were established:

1. Two sheepherders were located in an area about 10-15 miles north of Duckwater from December 18 through March. Five other sheepherders located north of Highway 50 between Pancake and Little Antelope Summits (between Ely and Eureka) on December 18 moved their sheep southward toward Duckwater and joined the herd north of Duckwater. On February 1, the five herders traveled in a southwesterly direction into Smokey Valley, about fifteen miles southwest of Duckwater, and remained there until early March when they moved northward. The owner of both herds spent considerable time with the herders, bringing the total number of persons ingesting melted snow to eight.
2. Sheepherders ingested about 3 to 4 quarts of melted snow per day.
3. Prior to December 18, there was about one foot of snowfall in the area where the sheepherders were tending their sheep. On December 18 and 19, there were only light snow flurries resulting in no appreciable accumulation of snow.

Since no samples were taken of the snow actually used by the sheepherders, the analytical results of samples collected at Pancake Summit (twenty-four miles east of Eureka on Highway 50), Little Antelope Summit (forty-four miles west of Ely on Highway 50), and Duckwater were used to calculate the thyroid doses which the herders may have received. The thyroid doses were calculated from the radioiodine concentrations integrated to infinity ($\text{pCi}\cdot\text{day}/\text{l}$), the previously discussed dose conversion factors for milk ingestion, and the following assumptions:

1. The radioiodine concentrations in the snow decreased only by radiological decay.
2. Consumption of the melted snow was 3 liters per day per sheepherder.

3. The infinity dose estimates would be reduced by a factor of two
 - (a) due to the differences in the sample collection depth (2-3 inches) and depth to which the herders collected the snow (6-12 inches) and
 - (b) due to the radioiodines deposited on the snow being diluted by snowfall on December 21 (5).

From consideration of these assumptions and the locations of the sheepherders, the estimate of the dose for the herders was 0.5 rem plus or minus a factor of three. The fraction of the estimated dose which would be received for various periods of ingestion is:

<u>Period of Ingestion (days)</u>	1	2	5	7	14	21
<u>Percent of Infinity Dose</u>	20	30	50	60	80	90

The wide range in the dose estimate is a result of the following uncertainties:

1. The actual geographical distribution of the radioiodine on the snow at the locations of the sheepherders.
2. The distribution of the radioiodine with snow depth; although it would appear to be a thin layer on the surface.
3. The actual period during which snow was ingested prior to new snowfall and melting.

The sample collected at Blue Jay Highway Maintenance Station which had the highest concentrations of radioiodines was not used in the dose estimates for two reasons. First, the herders were located between Duckwater and Highway 50 for a period during which they would have received over 90% of the total dose, and secondly, evidence was available that the high concentrations of radioiodine in the snow at Blue Jay Highway Maintenance Station was a result of snow-out during the passage of the Baneberry effluent. According to statements by the sheepherders and ranchers and local climatological records (5), heavy snowfall did not occur in the area of the sheepherders except before and after cloud passage (December 18-19). The records did show snowfall at Blue Jay Highway Maintenance Station on December 18 and 19.

In addition, estimates of the deposition velocity of ^{131}I at locations surrounding the area of the sheepherders (Eureka, Currant, Duckwater and Round Mountain) were about 2 cm/sec, which is representative of dry deposition. The deposition velocity at Blue Jay Highway Maintenance Station was estimated as 50 cm/sec, indicating that snow-out probably occurred. All deposition velocity calculations were based upon the concentration of ^{131}I in snow samples, ^{131}I in air samples collected at or near the snow sampling locations, and a snow to water volume ratio of 10:1.

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