

Nevada Test Site, Environmental  
Protection Agency Farm  
(Public Health Service Laboratory,  
Experimental Farm)  
Area 15, Yucca Flat, 10-2 Road near Circle Road  
Mercury Vicinity  
Nye County  
Nevada

HABS No. NV-28

HABS  
NEV  
12-MERC.V,  
3-

## PHOTOGRAPHS

## WRITTEN HISTORICAL AND DESCRIPTIVE DATA

Historic American Buildings Survey  
National Park Service  
Department of the Interior  
San Francisco, California

HABS  
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12-MERC.V,  
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## HISTORIC AMERICAN BUILDINGS SURVEY

### NEVADA TEST SITE, ENVIRONMENTAL PROTECTION AGENCY FARM

HABS No. NV-28

**Location:** North end of Yucca Flat in Area 15 of the Nevada Test Site (NTS), approximately 38 miles (61 kilometers) north of Mercury, Nye County, Nevada. Road access is available via the Mercury Highway north to the Circle Road (a.k.a. Groom Lake Road) then north to the 10-2 Road. Take 10-2 Road north approximately 1.6 miles (2.6 kilometers) to the EPA Farm.

USGS Oak Spring Quadrangle (7.5'), Universal Transverse Mercator Coordinates: 11. 4118250. 585100

**Present Owner:** Department of Energy, Nevada Operations Office  
P.O. Box 98518  
Las Vegas, NV 89139-8518

**Present Use:** Vacant

**Significance:** The Environmental Protection Agency (EPA) Farm has been determined eligible to the National Register of Historic Places because of its association with historical and scientific events of exceptional importance. Variously known as the EPA Farm, U.S. Public Health Service (USPHS) Farm, NTS Farm Complex, and the experimental farm, it was an experimental facility designed to study the effects of radioactive fallout on animal tissue and especially on the fodder-cow-milk food chain. As one of the programs that developed out of the Limited Test Ban Treaty of 1963, the EPA Farm is part of the legacy of radiation-related health concerns generated by the Cold War. The facility was decommissioned effective December 31, 1981 (although use of one of the buildings [15-06] continued as an abattoir for semi-annual beef sacrifice and quarterly deer collection, as well as storage of samples and equipment into the mid-1990s).

NEVADA TEST SITE, ENVIRONMENTAL PROTECTION AGENCY FARM  
HABS No. NV-28 (Page 2)

PART I. HISTORICAL INFORMATION

A. Physical History

1. Date of construction: Design and construction of the EPA Farm began in the spring of 1964 (Daley and Smith 1969:1). Thirty acres (12 hectares) were cleared near Well 15d for the project. This area was selected because of its water supply, and also because of its location downwind from weapons tests and reactor releases (USPHS n.d.). The power and water systems were installed which involved extending the existing power lines, digging a million-gallon (3,785,300 liter) reservoir, and laying irrigation lines. That fall, scientists planted 16 acres (6.5 hectares) of forage crops, mostly alfalfa. During the spring of 1966, the main laboratory/dairy building (Building 15-06) was completed. Subsequently, at least 11 structures were added (which still stand today) including a small greenhouse (aka glasshouse), a double storage shed, two silos (for grain storage), two quonset huts, four shelters (three single and one double) and a guyed, skeletal steel weather tower. The dates that these were added is unknown but some documentation indicates all were in place by the time Building 15-06 was modified to include a slaughter facility. That wing was added in 1973. In addition, temporary structures included a horse trailer beneath the double roof shelter and a small mobile-home structure that served as the Rad-Safe trailer. Other features include a rad-waste sump, rad-waste tank, and holding pens. A hay shed was located west of Building 15-06 but only the poles remain today. Figures 1 and 2 provide location information. Figure 3 provides a site layout.
2. Architect/Designer: The plans for the EPA Farm were originally designed by Edward B. Hendricks Associates with Sierra Construction Company as the general contractor. The name "Kennedy" appears on multiple engineering records as the designer. Holmes and Narver, Inc. apparently replaced Hendricks sometime in the 1970s for updates to the facilities.
3. Original and subsequent owners: The property was originally part of the U.S. Air Force's Las Vegas-Tonopah Bombing and Gunnery Range. On December 21, 1951, the Nevada Proving Ground was established when the Atomic Energy Commission (AEC) entered into a lease agreement with the Air Force to use a 600+ square-mile (1554+ square-kilometer) portion of the gunnery range for nuclear testing. Public Land Order 805 made this arrangement permanent on February 19, 1952. Since that time the land has been administered by the AEC and its successor agencies. By the time the EPA Farm was constructed in 1964, the Nevada Proving Ground had been renamed the NTS. The AEC continued to administer the land until 1974

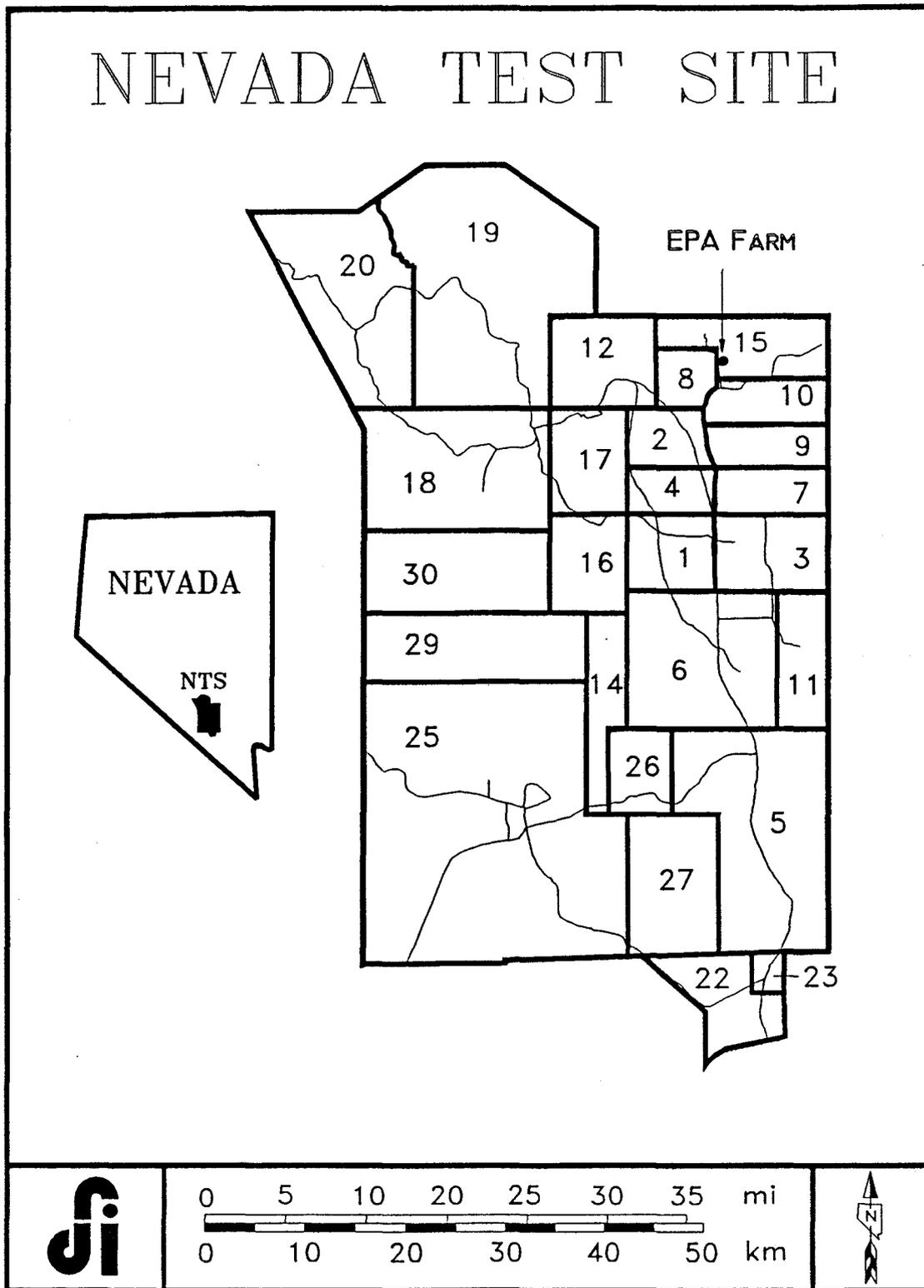


Figure 1. Location of the EPA Farm on Yucca Flat.

NEVADA TEST SITE, ENVIRONMENTAL PROTECTION AGENCY FARM  
HABS No. NV-28 (Page 4)

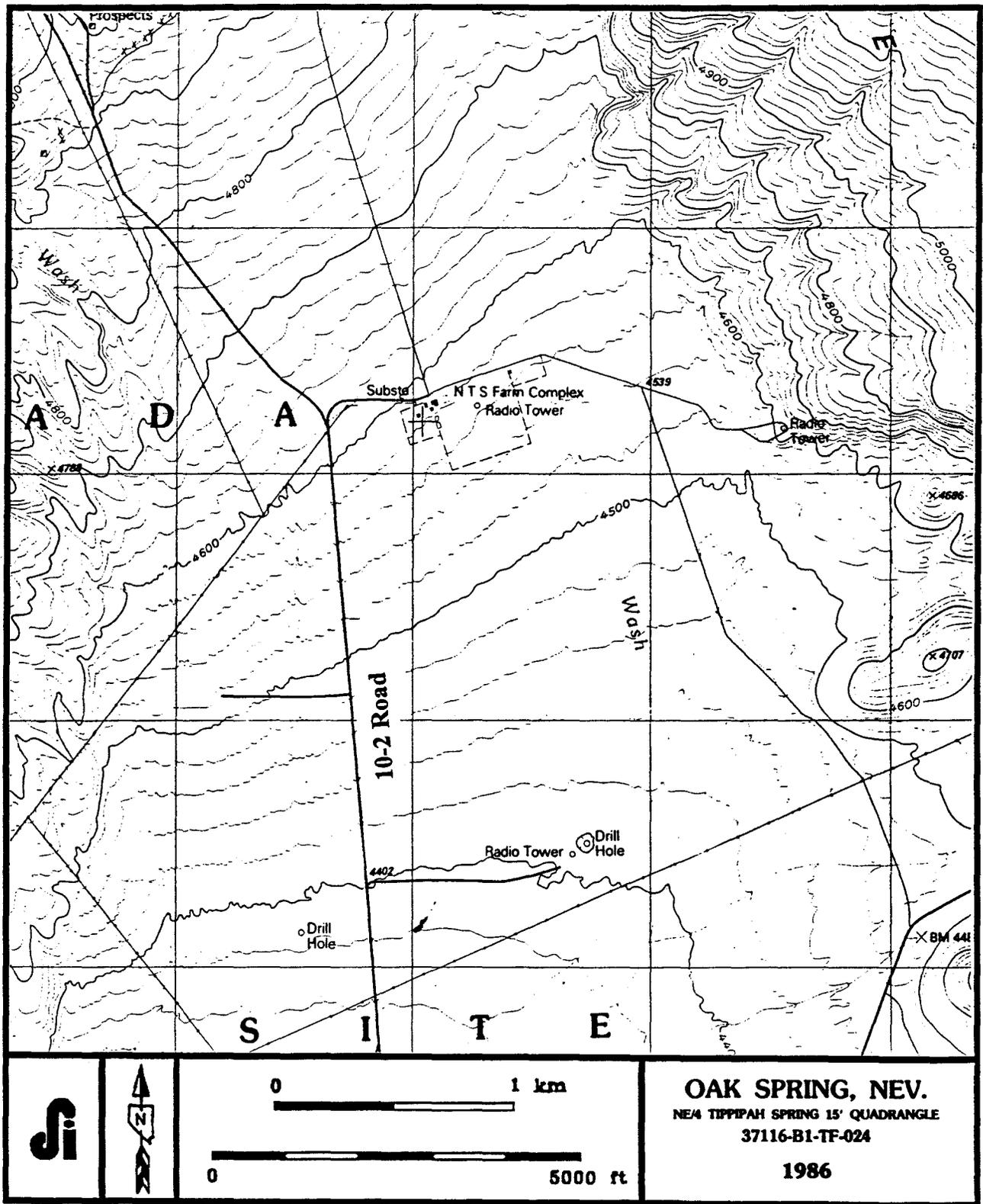


Figure 2. Location of the EPA Farm on Yucca Flat.

NEVADA TEST SITE, ENVIRONMENTAL PROTECTION AGENCY FARM  
HABS No. NV-28 (Page 5)

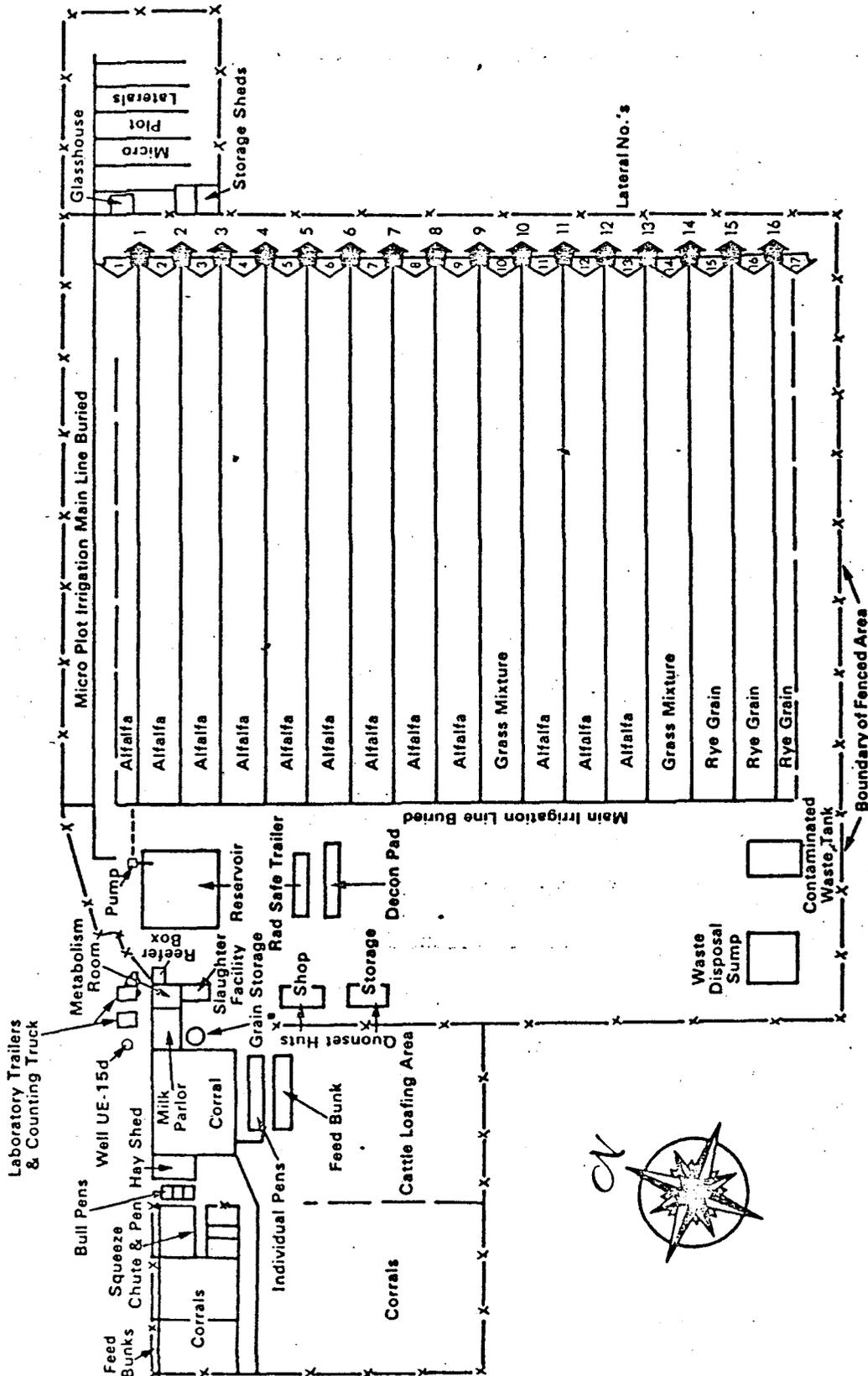


Figure 3. Layout of the EPA Farm on the Nevada Test Site.

NEVADA TEST SITE, ENVIRONMENTAL PROTECTION AGENCY FARM  
HABS No. NV-28 (Page 6)

when its name was changed to the Energy Research and Development Administration (ERDA). With the passage of the Department of Energy Organization Act in August 1977, ERDA was renamed the Department of Energy (DOE). DOE's Nevada Operations Office (DOE/NV) continues to administer the property today.

4. Builder, contractor, suppliers: Reynolds Electric and Engineering Co., Inc. was involved in the initial work of supplying the site with electricity, creating the million-gallon reservoir and laying out the irrigation lines. Sierra Construction was responsible for the erection of at least some, if not all, of the buildings. Atlas Steel Company was responsible for providing the supplies. Holmes and Narver, Inc. served as the principle contractor for the addition of the slaughter facility to Building 15-06.
5. Original plans and construction: Site 26NY8441, the EPA Farm, is a roughly "T-shaped" area of 30 acres, spreading down an alluvial fan of gravelly, sandy loam, bounded at the north, east and west by 7,000-foot (2,134-meter) peaks. The average elevation of the site is 4,580 feet (1,395 meters) and the average land slope is 2-4 percent to the southeast (Daley and Smith 1969:1). The northwest portion of the site contains the main structures--milking, laboratory and slaughter facility, shop, storage and silos-- as well as corrals, pens, shelters and other features for handling and containing cattle. A 1,000,000 gallon reservoir is centered along the northern border of the site, while the crop areas are to the east. These consisted of 16 acres of forage crops and 5 acres (2 hectares) of micro plots. A small parking lot is adjacent to the laboratory.

Infrastructure for the EPA Farm consists of a power substation, an irrigation system and a liquid waste system. The power lines accessing the site, as is typical at the NTS, run on above-ground "T"-configured wooden poles. These terminate at a guyed double pole, set on a concrete pad and surrounded by a chain link fence. The pole assembly consists of two poles approximately 40 feet (12 meters) high and 10 feet (3 meters) apart. Five horizontals with mounted insulators span the poles. Below, within the fenced compound, is an assortment of grey-painted steel transformer boxes. The substation was wired to accommodate a 100-kw generator in case of main line failure (Lloyd 1980).

The irrigation system consists of the 5,400-foot-deep (1,646-meter-deep) Well UE-15d, a 1,000,000-gallon reservoir, and a sprinkler system. The well is located to the north of the main building. Water was pumped at 200 gallons (757 liters) per minute, then stored in the now-dry 1,000,000 gallon reservoir, located east of the main building. The reservoir is approximately

NEVADA TEST SITE, ENVIRONMENTAL PROTECTION AGENCY FARM  
HABS No. NV-28 (Page 7)

30 feet (9 meters) deep and 125 feet (38 meters) square, lined with concrete, and currently cordoned off as a contaminated area. Pumping equipment, consisting of valves and piping, is at the north end of the reservoir.

The sprinkler lines extend from the reservoir pump east to the growing areas. Initially, the water lines consisted of 960 linear feet (293 linear meters) of 5-inch (12.7-centimeters) aluminum main line, 12,800 linear feet (3,901 linear meters) of 3-inch (7.6-centimeters) aluminum lateral line, and 256 sprinkler heads. This equipment serviced the main 16-acre forage-growing area. The main line runs from the storage pond to the northwest corner of the plot, and then south to the southwest corner. Sixteen lateral lines extend east. The system extends to the microplot area at the northeast corner of the EPA Farm.

Elements of the liquid waste system include the sump pit and storage tank at the southeast corner of the irrigation area. The 30,000-gallon (113,559-liter) collection tank is cylindrical, horizontally mounted, approximately 10 feet (3 meters) in diameter and 20 feet (6 meters) long. The tank sits in a pit, and is mounted with a cautionary sign reading "Equipment or Material Internally Radioactively Contaminated." The sump pond, west of the tank, is a smaller version of the reservoir pond, approximately 30 feet (9 meters) square.

The former crop areas are distinguished by the presence of irrigation lines. As elsewhere in the area, native desert plants, including creosote bush, hopsage and Mormon tea, now cover the plots.

The corral areas were to the west of the fields, and many features and equipment items remain in this area. These are primarily elements to feed, contain and shelter cattle, and include feed bins, holding pens and a constraint for containing cattle during branding and other operations.

There have always been various types of trailers and other vehicles at the EPA Farm. These items are temporary and changed frequently. At the time of this fieldwork, a horse trailer is beneath the double roof shelter. Also, a small mobile-home structure (Rad-Safe trailer) stands on wooden skids just east of the quonsets.

6. Alterations and additions: Over the years, some modifications have occurred to the structures. In 1973, the slaughter facility was added to Building 15-06. The exact dates of alterations to other structures are unknown.

NEVADA TEST SITE, ENVIRONMENTAL PROTECTION AGENCY FARM  
HABS No. NV-28 (Page 8)

B. Historical Context

The NTS was designated for atomic testing in December, 1950. One hundred atmospheric tests were detonated there by August 5, 1963, when the Limited Test Ban Treaty prohibiting atmospheric nuclear tests was signed. In the early 1960s, the impending test ban and a testing moratorium shifted the focus of scientists away from pure weapons testing and to related nuclear experiments. Like the Project Ichiban experiments of approximately the same period, the experimental program at the EPA Farm was designed to study the effects of radioactive fallout on animal tissue.<sup>1</sup>

In 1963, the USPHS's Environmental Monitoring Systems Laboratory in Las Vegas was approached to conduct research in the transport of radioactive materials in the environment. The transport of radioiodine through the soil-forage-cow-milk chain was a major concern, and this would become the focus for the EPA Farm (until 1970, the Public Health Service, or PHS Farm) throughout its early years. The behavior of radioiodine in the food chain was of great concern because of the presence of small dairy operations downwind from the test site; there was a growing concern about the radiation exposure of children drinking the milk from these dairies.

Dairy operations initially began in Area 6, near Well 3. A dairy barn was set up in a metal building, and five or six milk cows brought in. Design and construction at the Area 15 site began in the spring of 1964 (Daley and Smith 1969:1). Thirty acres were cleared near Well 15d for the project. The power and water systems were installed involving an extension of the existing power lines, digging the million-gallon reservoir, and laying irrigation lines. That fall, scientists planted 16 acres of forage crops, mostly alfalfa. During the spring of 1966, the main laboratory/dairy building was completed, and about 25 Holsteins were brought in, including those that were already at Area 6.<sup>2</sup>

The PHS Laboratory also took over the maintenance and monitoring of a free-range cattle herd that the AEC (now DOE/NV) had been maintaining since 1957. That year, a free-range herd of Hereford beef cattle with the AEC brand began roaming the NTS as part of an animal investigation program designed to provide information to livestock breeders in the vicinity.

In addition to the main laboratory building, other structures included a semi-enclosed hay-barn, to the west of the main building; two quonset huts used as a storage building and a shop; two silos; a metal weather tower and a greenhouse. Other features included corrals, roof shelters and a changing assortment of

NEVADA TEST SITE, ENVIRONMENTAL PROTECTION AGENCY FARM  
HABS No. NV-28 (Page 9)

temporary trailer structures. In 1973, a wing was added to the main structure to accommodate slaughter facilities.

In 1970, the radioiodine program was completed. At this time, the agency also changed names from the PHS to the EPA. Other experiments included actinide studies, in which actinides<sup>3</sup> were administered to lactating animals, to laying hens and to alfalfa plants. In addition, the EPA Farm continued to monitor the herd of free-range Hereford beef cattle for traces of radionuclides released into the environment from previous and ongoing testing activities.

In 1979, the EPA ceased operations of the fulltime dairy, bringing in cows only for specific experiments. Because of increasing facility and maintenance costs, and decreasing use of the facility, DOE/NV decided to decommission the EPA Farm effective December 31, 1981 (IT Corporation 1993:2-1).

The EPA Farm helped scientists better understand the complex behavior of radioactive materials in the environment. Because of its isolation, the EPA Farm provided an environment permitting experiments that would probably not have been possible anywhere else. In its 18 years of existence, over 100 formal scientific reports were generated from research conducted at the EPA Farm. The findings provide a scientific basis for predicting and planning protective actions in the case of nuclear accidents or other emergencies (Black and Smith n.d.:16).

## PART II. ARCHITECTURAL INFORMATION

### A. General Statement

1. Architectural character: The principal purpose of the EPA Farm was to conduct research on the fodder-cow-milk food chain and thus contributed to the overall architectural design. The main laboratory building, Building 15-06, served as the center of activities. Outlying structures such as the quonset huts, shelters, and others provided a variety of support functions. See descriptions below.
2. Condition of fabric: Building 15-06, the quonsets and the Rad-Safe trailer are sheathed with insulated metal siding. The silos and storage shed are sheathed with metal siding. The greenhouse is an aluminum-framed glass structure. Some damage was noted to the greenhouse but all other structures are in good condition.

### B. Description of Exterior

1. Overall dimensions:
  - a. Building 15-06 is actually two separate buildings joined together. Both sections appear to be manufactured metal buildings clad with ribbed steel siding with a baked-on finish. Some interior rooms were inaccessible due to safety concerns over potential radioactive contamination, but these can be described from photographs and drawings. The larger, older east-west portion of the L-shaped building has a shallow gable with sliding doors. The western end served as a milking parlor and contains a milker's work pit, milking stalls, and a milk room. Laboratory facilities (now contaminated) storage, and toilet and shower facilities are also located in this older portion of the building. The north-south wing is taller and has an overhead rolling metal door on the south end and protruding hoists. This 1973 addition consists of an abattoir and a "hot" slaughter room, presumably for the slaughter of contaminated animals. These two spaces have suspended acoustical ceilings, fluorescent lighting, concrete floors, and gypsum board walls. Building 15-06 stands at the center of the EPA Farm's northern boundary. A concrete apron extends to the south and west, and a silo is centered on the southern portion of the apron. Remnants of holding areas, in poor condition, stand to the west of the structure; a parking area lies to the north, and the dry reservoir lies to the east.
  - b. A small rectangular greenhouse on a concrete slab is located east of the reservoir. The building's footprint is approximately 9 x 11 feet 3 inches (2.7 x 3.4 meters). The gable roof is 8 feet (2.4 meters) high at its peak. The structure has a concrete slab floor and aluminum-framed glass walls and ceiling. The door at the north gable end contains jalousie windows for ventilation, and two window air conditioning units protrude from the north elevation at either side of the door. A wood-slatted platform that is 3 feet (1 meter) wide and 2 feet 10 inches (0.9 meters) high runs along the perimeter of three sides. Fluorescent lights hang above these platforms. The greenhouse is part of a small complex of structures at the northeast corner of the EPA Farm. A horizontally-mounted metal tank is immediately northwest of the greenhouse and shares its concrete slab. A metal storage shed stands approximately 20 feet (6 meters) south of the greenhouse.
  - c. The storage shed is actually two separate but contiguous structures sharing a common concrete slab. Each structure is approximately square in plan, and together the structures appear to form a single rectangular structure with a shallow gabled roof. The gable ends face north and south. There are full-height double doors on the east elevations. The structures are framed with steel "L" and "C"

channels with bolted connections and rod-and-turnbuckle lateral bracing at the roof. All wall and roof cladding is painted corrugated steel. The storage shed is part of a small complex of structures at the northeast corner of the EPA Farm. The greenhouse is approximately 20 feet (6 meters) to the north.

- d. The two silos are similar in form, material type and size, with minor variations in detail. Both are cylindrical, approximately 14 feet (4.3 meters) in diameter, 7 feet 9 inches (2.4 meters) tall at the eaves and approximately 12 feet (3.7 meters) tall at the top of the faceted, peaked roof. Both have a vent projecting from the roof peak. Both are clad with unpainted galvanized steel. Both have the word "SIOUX" printed near the top in large black letters. The silo within the inside corner formed by the L-shaped dairy barn/slaughterhouse rests on a concrete pad that serves as the floor. The galvanized steel siding is vertically ribbed and laid up in horizontally applied panels with bolted connections. The door is also of vertically corrugated galvanized steel. The silo near the quonset huts rests on skids rather than a concrete slab. The galvanized siding is horizontally ribbed and laid in horizontally applied panels. The door is a diamond patterned steel plate, and a rusted diamond patterned steel plate serves as the floor.
- e. The two quonset huts are located between the crop area of the EPA Farm and the corrals, directly south of Building 15-06. These structures were built circa 1950 and moved, possibly from Camp Desert Rock, circa 1968. These classic quonset huts are semi-cylindrical in form, measure 20 feet (6 meters) wide by 48 feet (14.6 meters) long, and are clad with corrugated galvanized metal. They have short ends on the north and south, and plywood doors at the north ends. Both are currently windowless, but there are patched areas on the sides that may have been window openings. The interiors are unfinished corrugated metal with painted plywood floors over concrete foundations.
- f. There are three single and one double shelter units, all of which are located in the former corral area. Each unit is a 25-foot (7.6-meter) square module constructed in 1965; the modules consist of a corrugated metal roof on metal beams supported on a central, cylindrical square pole. The structural members for the double unit are open-web truss joists, and those for the single units are solid-steel I beams.
- g. The guyed, skeletal steel weather tower was constructed in 1965 and is approximately 50 feet (15.2 meters) tall. It is triangular in plan, and is set on a concrete pad. The tower tapers to a narrow profile

NEVADA TEST SITE, ENVIRONMENTAL PROTECTION AGENCY FARM  
HABS No. NV-28 (Page 12)

and has a pole extending above the top of the frame; it stands at the east edge of the main crop area, south of the greenhouse.

2. Foundations: Building 15-06, the quonsets, storage shed and greenhouse have poured-concrete foundations. The silos and Rad-Safe trailer are not connected to foundations. The shelters are supported by a central pole embedded in poured-concrete foundations. The metal weather tower is bolted to a poured-concrete foundation.
3. Walls: Building 15-06 has gypsum wall boards on interior wall surfaces except in the slaughter addition where the hot slaughter area is separated from the rest of the facility by walls created by using 4-inch, 16-gage steel studs @ 24-inches o.c., with 5/8-inch moisture resistant gypsum board, and 24-gage stainless steel sheathing. The quonset huts, storage shed, greenhouse, and silos have unfinished walls. The interior of the Rad-Safe trailer was not examined.
4. Structural system, framing: See above.
5. Porches, stoops, balconies, bulkheads: Building 15-06 has one poured-concrete stoop on the north elevation.
6. Chimneys: None.
7. Openings:
  - a. Doorways and doors: Most of the outside doorways on Building 15-06 accommodate sliding metal doors. These provide access to the hot slaughter area, the cold slaughter area, the metabolism area and the milking area. Three 36-inch (91.4-centimeters) wide swing-type doors located on the north elevation provide access from the outside into the milk room, utility room and data analysis room. Another swing-type door provides access from the outside into the cold slaughter area. Eleven internal doors are all swing-type. The quonsets have swing-type plywood doors. The storage shed has a sliding door. The greenhouse has a 36-in wide swing-type door with jalousie windows for ventilation. The silos have diamond-patterned steel plates for doors.
  - b. Windows and shutters: The only window to Building 15-06 is located in an entry door located on the north elevation of the structure. The quonsets had window openings but the windows were removed and the openings sealed. The greenhouse has jalousie windows in the entry door.

NEVADA TEST SITE, ENVIRONMENTAL PROTECTION AGENCY FARM  
HABS No. NV-28 (Page 13)

8. Roof:
  - a. Shape, covering: Building 15-06 has a slight gable (although the slaughter addition is flat). The quonsets are typically round. The storage shed and green house have gables. The silos are cone-shaped. The Rad-Safe trailer and the shelters are flat.
  - b. Cornice, eaves: The storage shed has slight eaves. None of the others have eaves.
  - c. Dormers, cupolas, towers: None.

C. Descriptions of Interior

1. Floor plans:
  - a. Basements: None.
  - b. First floor: Building 15-06 is divided into 10 rooms and one corridor by skeletal wood frame walls sheathed in gypsum wall board. The walls separating the hot slaughter area are more elaborate (see above description). The quonsets, storage shed, greenhouse and silos have no divisions. It is unknown whether or not the interior of the Rad-Safe trailer is divided.
  - c. Second floor: None.
2. Stairways: None.
3. Flooring: None.
4. Wall and ceiling finish: Acoustic ceiling tiles are suspended in Building 15-06. The walls are painted white. The interior of the Rad-Safe trailer was not examined. None of the other structures have wall nor ceiling finish.
5. Openings: Eleven interior doorways are located in Building 15-06. The interior of the Rad-Safe trailer was not examined but its size suggests that there are no interior openings. None of the other structures have interior openings.
6. Decorative features and trim: None.
7. Hardware: Building 15-06 contains a variety of hardware related to laboratory functions. The milk room has a cattle pen created from galvanized-steel pipes embedded in the poured-cement foundation. The cold slaughter area has a Lodestar-brand hoist. Stainless-steel sinks are located in several rooms.
8. Mechanical equipment:

NEVADA TEST SITE, ENVIRONMENTAL PROTECTION AGENCY FARM  
HABS No. NV-28 (Page 14)

- a. Heating, air conditioning, ventilation: Building 15-06 is fully air conditioned. The quonsets and the Rad-Safe trailer have evaporative coolers. The greenhouse has two wall-unit air conditioners. None of the other structures have mechanical ventilation.
- b. Lighting: Fluorescent fixtures hang from the ceiling in Building 15-06, the quonsets and the greenhouse. The storage shed does not appear to have ever had any lighting. The silos and most of the shelters have no lighting. However, the shelter nearest Building 15-06 has shaded, high-wattage bulb lamps at each corner. The shades are enamel-coated metal and positioned to provide light to the ground surrounding the shelter. The lighting in the Rad-Safe trailer is unknown. The weather tower may have a light on top.
- c. Plumbing: Building 15-06 is fully plumbed for the lavatory as well as the research laboratories (e.g., milking area). The greenhouse is most likely plumbed for at least one faucet. The quonsets, silos, storage shed and shelters have no plumbing.

D. Site

1. General setting and orientation: The EPA Farm is located along the 10-02 Road approximately 1.6 miles (2.6 km) north of its intersection with Circle Road (a.k.a. Groom Lake Road) in Area 15 of the NTS. This area is in the northernmost reaches of Yucca Flat, a large oval-shaped bolson located in the eastern half of the NTS. Sediments in this area are mostly alluvial, as tributary streams erode the surrounding mountains and deposit sediments in Yucca Flat. The average elevation is 4,580 feet (1,395 meters). The terrain slopes to the south.
2. Historic landscape design: None.
3. Outbuildings: None.

PART III. SOURCES OF INFORMATION

A. Original Architectural Drawings

Reynolds Electrical and Engineering Co., Inc., 1964, U.S. Public Health Service Farm, Sprinkler System, Plan and Section. Microfiche on file, drawing No. RE-871, Engineering Records Library, Mercury, NV.

NEVADA TEST SITE, ENVIRONMENTAL PROTECTION AGENCY FARM  
HABS No. NV-28 (Page 15)

HH Robertson Co., 1965, U.S.P.H.S. Field Research Complex. Microfiche on file, drawings D.O. 09-125 & 126, Engineering Records Library, Mercury, NV.

Edward B. Hendricks Associates, 1965a, U.S.P.H.S. Field Research Complex, Corrals. Microfiche on file, drawing No. NV-35-08-01.3 (sheet A-8 of 10), Engineering Records Library, Mercury, NV.

Edward B. Hendricks Associates, 1965b, U.S.P.H.S. Field Research Complex, Laboratory exterior elevations. Microfiche on file, drawing No. NV-35-08-01.1 (sheet A-3 of 10), Engineering Records Library, Mercury, NV.

Edward B. Hendricks Associates, 1965c, U.S.P.H.S. Field Research Complex, Laboratory Floor Plan. Microfiche on file, drawing No. NV-35-08-01.1 (sheet A-2 of 10), Engineering Records Library, Mercury, NV.

Edward B. Hendricks Associates, 1965d, U.S.P.H.S. Field Research Complex, Plot Plan. Microfiche on file, drawing No. NV-35-08-01.2 (sheet C-1 of 1), Engineering Records Library, Mercury, NV.

Holmes and Narver, Inc., 1971, EPA Farm Slaughter Facility Mods., Floor Plan & Sections. Microfiche on file, drawing No. JS-015-06-S1 (sheet 1 of 10), Engineering Records Library, Mercury, NV.

- B. Early Views: The EPA Farm was extensively photographed while it was in use. The following list provides selected views. Proof books, photographs and negatives are available at the U.S. EPA National Exposure Research Laboratory, Environmental Sciences Division located on the University of Nevada, Las Vegas (UNLV) campus (P.O. Box 93478, Las Vegas, Nevada 89193-3478; phone number = 702-798-2602).

Number	Content
152-4-24-69-BIO	"KEEP OUT" sign indicating security concerns and restrictive access to facility
304-9-21-66-BIO	Building 15-06 (before addition of slaughter area) and corral area with hay barn intact
290-9-21-66-BIO	another view of above
151-4-24-69-BIO-A	Interior of Building 15-06 featuring cow entering into milking area from sliding door on west elevation
234C-8-13-70-BIO	Cow in cow-holder device with man at side
172C-4-24-69-BIO	Cows eating at food trough
171C-4-24-69-BIO	Cows eating at food trough (different direction)
289-9-21-66-BIO	Cows beneath the double roof shelter

NEVADA TEST SITE, ENVIRONMENTAL PROTECTION AGENCY FARM  
HABS No. NV-28 (Page 16)

290C-7-21-70-BIO Cows milling around the EPA Farm  
170C-4-24-69-BIO Crops in field

C. Interview: An interview was conducted with a knowledgeable informant that was directly associated with the EPA Farm. He is Mr. Ken Brown.

1. Mr. Ken Brown was interviewed in person on October 7, 1973 in Las Vegas. His association with the EPA Farm comes from his employment as a scientist with the USPHS (now the EPA). He indicated that the main purpose of the EPA Farm was to study the fodder-cow-milk food chain because of the concerns that radioactive-contaminated milk was ingested by children downwind from the NTS.

D. Bibliography: The complete extent of published materials concerning this site is difficult to assess. Archived materials are known to be located at the Coordination and Information Center (CIC) Library in Las Vegas, the Remote Sensing Laboratory at DOE/NV's facility on Nellis Air Force Base, the EPA offices on the UNLV campus and the Engineering Records Library at the NTS. The following list is based on those publications that were useful during historical and archaeological research at the site.

Beck, Colleen M., Nancy Goldenberg, William Gray Johnson and Clayton Sellers  
1996 *Nevada Test Site Historic Building Survey*. Desert Research Institute, Quaternary Sciences Center, Technical Report No. 87 (prepared jointly with Carey and Company for the DOE/NV), Las Vegas, Available through the Office of Scientific and Technical Information, Oak Ridge.

This is a technical report describing Cold War-related historic resources on the NTS. The EPA Farm is listed as one of the facilities considered to meet the Secretary of Interior's standards for exceptionally important historic properties.

Black, Stuart, and Donald D. Smith

n.d. *Nevada Test Site Experimental Farm: Summary Report 1963 - 1981*. U.S. Environmental Protection Agency, Environmental Monitoring Systems Laboratory, Las Vegas. Document on file at the Coordination and Information Center Library, document number NV0034713, Las Vegas.

This is a technical report from the agency responsible for the EPA Farm to the DOE under Interagency Agreement Number DE-A108-76DP00539. The purpose of this report is to summarize the findings of the studies conducted at the EPA Farm, list in chronological order all the major experiments and list all published

NEVADA TEST SITE, ENVIRONMENTAL PROTECTION AGENCY FARM  
HABS No. NV-28 (Page 17)

reports from the EPA Farm studies (as well as the overall animal investigation program).

Daley, E.M. and D.D. Smith

1969 *Agronomic Aspects of the Experimental Dairy Farm: January 1966 - December 1968*. Southwestern Radiological Health Laboratory, U.S. Public Health Service, Las Vegas. Document on file at the Coordination and Information Center Library, document number NV0014749, Las Vegas.

This is a technical report from the agency responsible for the creation and maintenance of the EPA Farm to the AEC (under a Memorandum of Understanding - No. SF 54 373). The focus is on summaries of the agronomic aspect by year for the years mentioned in the title. Agronomic aspects refers to information on crops planted, their yield and problems (e.g., infestation of aphids).

Goldenberg, N.G., W.G. Johnson and A.R. McLane

1993 A Class III Cultural Resources Reconnaissance of a Proposed Soil Treatability Pilot Plant Site at the EPA Farm, Area 15, Nevada Test Site, Nye County, Nevada. Desert Research Institute, Quaternary Sciences Center, Short Report No. SR090893-1, Las Vegas.

This is a technical report that provides a historic evaluation of the EPA Farm. Much of the data in this report has been used for this HABS documentation.

IT Corporation

1993 *NTS Environmental Restoration Division Decontamination and Decommissioning Program: Facility Background Information Document*. IT Corporation, Las Vegas.

This is a technical report for the DOE that describes some of the probable contamination problems at the EPA Farm.

Jackson, David

1982 The Nevada Test Site. In *Nevada Towns & Tales, Vol II, South*, edited by Stanley W. Paher, pp. 397-403, Nevada Publications, Las Vegas.

This article provides a snapshot view of the NTS's role in business and industry within Southern Nevada. A single paragraph describes the role of the EPA Farm.

Lloyd, Steve R.

1980 *A Photographic Essay of the Experimental Farm Facility at the NTS*. Lloyd Enterprises, Las Vegas. Document on file at the Coordination and Information Center Library, document number NV0013713, Las Vegas.

NEVADA TEST SITE, ENVIRONMENTAL PROTECTION AGENCY FARM  
HABS No. NV-28 (Page 18)

Technical report prepared for the EPA and the DOE to document the EPA Farm's structures and materials. It includes interior and exterior photographs of Building 15-06, the quonset huts and corral area.

U.S. Public Health Service

n.d. *Proposal for Experimental Farm at NTS*. Document on file at the Coordination and Information Center Library, document number NV0161586, Las Vegas.

This is Attachment I to an unidentified report that provides background, objectives a "plan of attack," cost estimate (at \$193,800) and a location and layout map.

- E. Likely Sources Not Yet Investigated: The journal *Health Physics* is known to have published articles from research conducted at the EPA Farm. A thorough search of back issues would likely yield useful information on the nature and types of experiments conducted at the EPA Farm.
- F. Supplemental Material: See Attachment A for early views and engineering records.

#### PART IV. PROJECT INFORMATION

This is a mitigative recording project required by a Memorandum of Agreement (MOA) promulgated by the DOE/NV and agreed to by the Nevada State Historic Preservation Office (NSHPO) and the Advisory Council on Historic Preservation. The MOA recognizes that decontamination and decommissioning activities at the EPA Farm will result in an adverse effect to the property. Stipulations of the MOA are 1) DOE/NV ensures that a draft HABS documentation, as recommended by the Western Regional Office of the National Park Service (NPS), will be prepared 2) the draft HABS documentation, as stipulated by the NPS, will be completed and submitted to the NPS within six months of the date of the last signatory of the MOA (9-2-97) and 3) a copy of the HABS documentation, as approved by the NPS, will be sent to the NSHPO in Carson City and the Nevada State Museum and Historical Society in Las Vegas.

Authors: William Gray Johnson and Nancy G. Goldenberg  
Desert Research Institute Carey and Company, Inc.  
P.O. Box 71440 123 Townsend Street #400  
Las Vegas, NV 89170-1440 San Francisco, CA 94107

Date: April 3, 1998

NEVADA TEST SITE, ENVIRONMENTAL PROTECTION AGENCY FARM  
HABS No. NV-28 (Page 19)

**NOTES:**

- <sup>1</sup> Project Ichiban used an unshielded nuclear reactor to irradiate structures at various distances from the source of radiation. While the major impetus was to study the shielding capability of various building materials, tissue simulations and live organisms were also studied (Jackson 1982).
- <sup>2</sup> Although the early proposal for the EPA Farm called for moving and expanding the dairy building at Area 6, Ken Giles, who was involved with the EPA Farm at the time, believes that the original dairy building still stands near well 3.
- <sup>3</sup> Actinides are any element in a series of increasing atomic numbers beginning with actinium (89) or thorium (90) and ending with an element of atomic number 103.

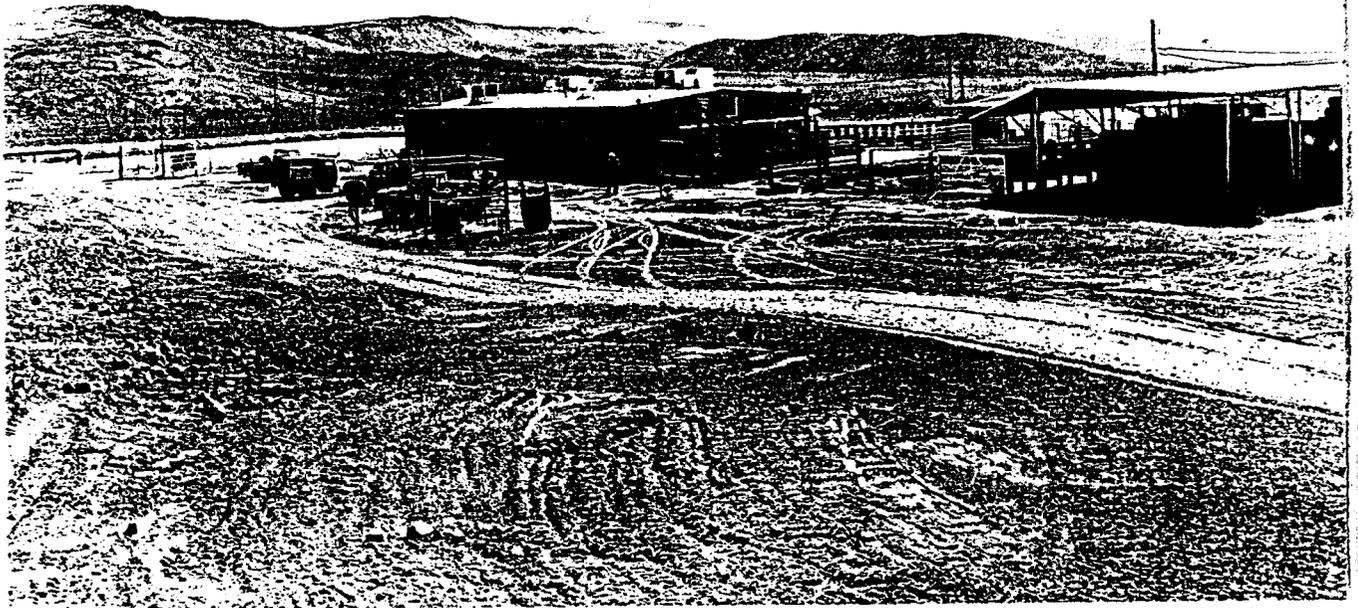
**ATTACHMENT A**  
**EARLY VIEWS AND ENGINEERING RECORDS**



Historic Views  
EPA Farm, Nevada Test Site, Nye County, Nevada

Keep Out Sign, View: Unknown  
1969

Picture No. 1  
EPA Photographic Archives  
No. 152-4-24-69-BIO



Historic Views  
EPA Farm,  
Nevada Test Site,  
Nye County, Nevada

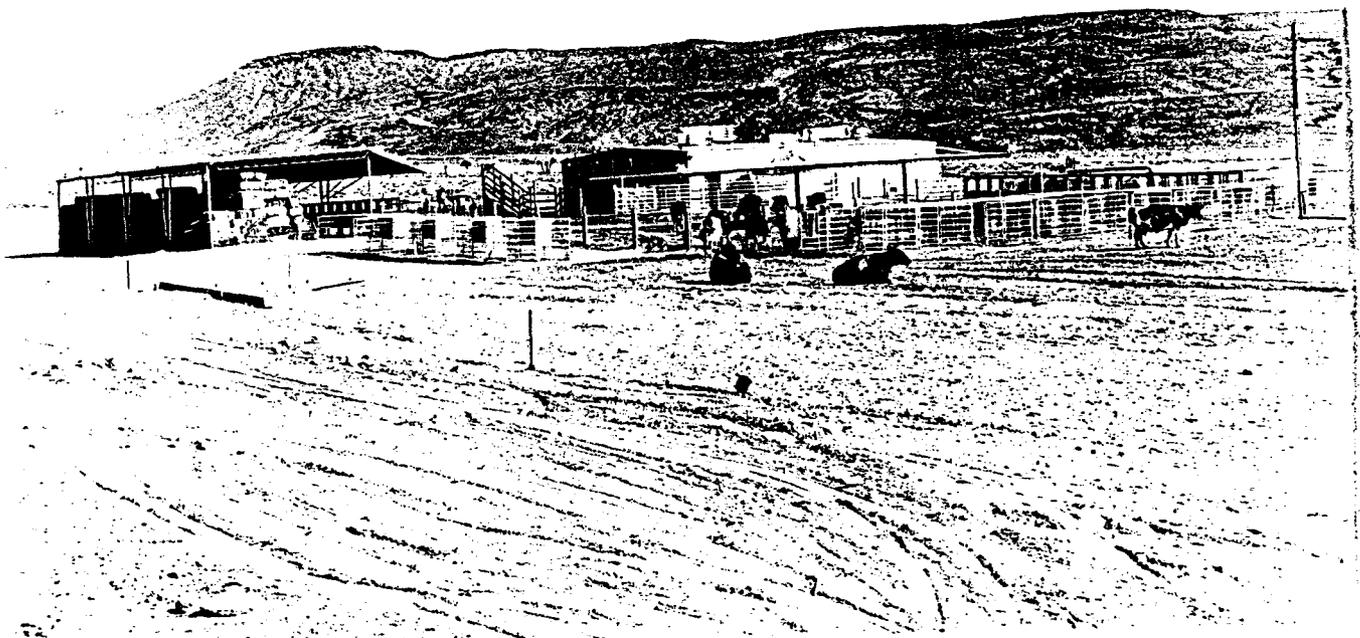
Overview of Building 15-06

View: East-Southeast

1966

Picture No. 2  
EPA Photograph Archives  
No. 304-9-21-66-BIO

NEVADA TEST SITE, ENVIRONMENTAL PROTECTION AGENCY FARM  
HABS No. NV-28 (Page 23)



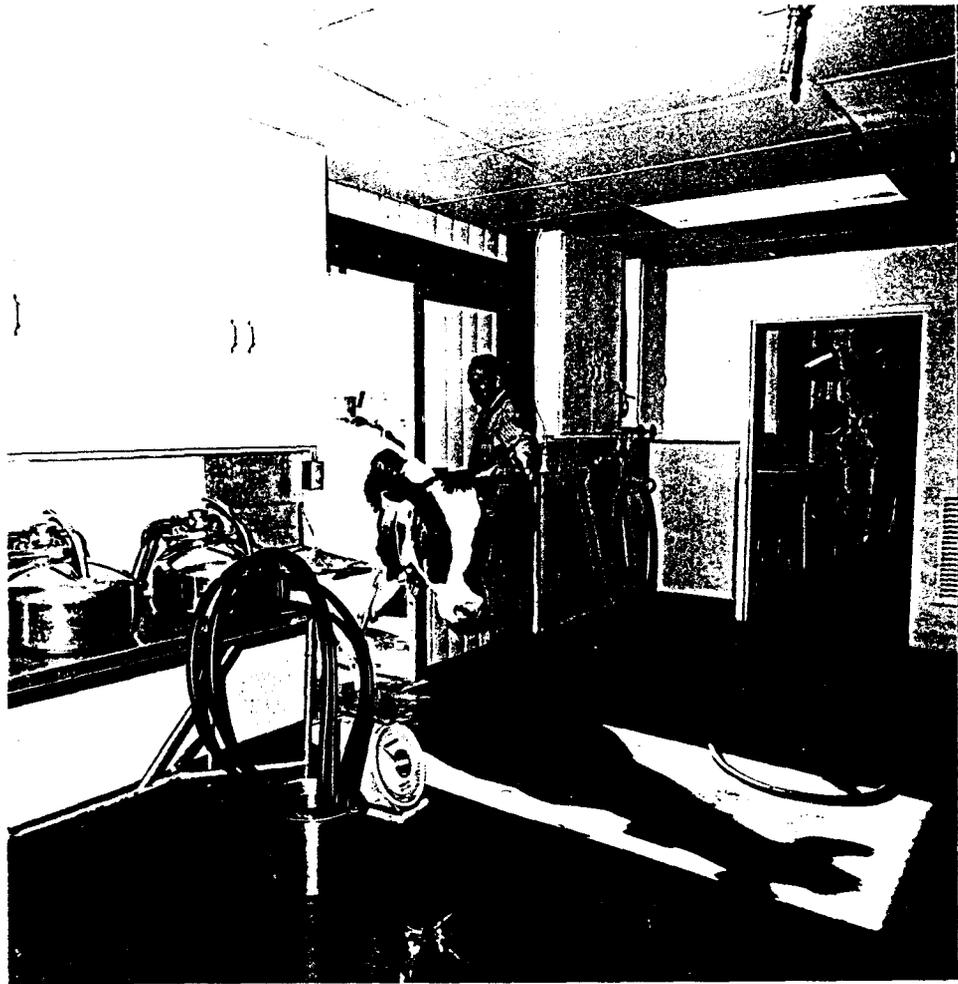
Historic Views  
EPA Farm,  
Nevada Test Site,  
Nye County, Nevada

Overview of Building 15-06

View: Northeast

1966

Picture No. 3  
EPA Photographic Archives  
No. 290-9-21-66-BIO



Historic Views  
EPA Farm, Nevada Test Site, Nye County, Nevada

Interior of Building 15-06, View: North-Northwest  
1969

Picture No. 4  
EPA Photographic Archives  
No. 151-4-24-69-BIO-A



Historic Views  
EPA Farm,  
Nevada Test Site,  
Nye County, Nevada

Cow in cow holder

View: Unknown

1970

Picture No. 5  
EPA Photographic Archives  
No. 234C-8-13-70-BIO



Historic Views  
EPA Farm,  
Nevada Test Site,  
Nye County, Nevada

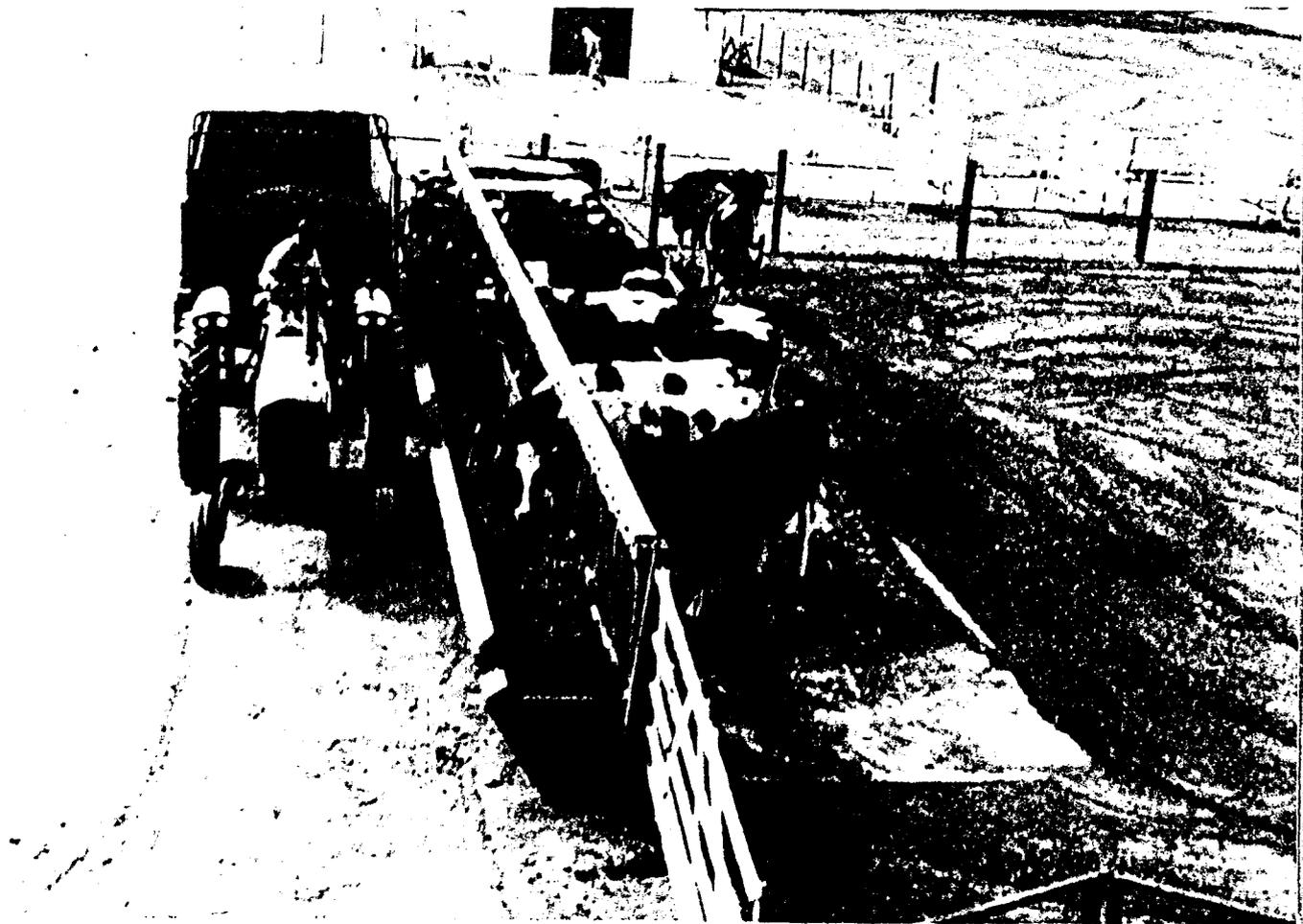
Cows eating at food trough

View: North

1969

Picture No. 6  
EPA Photographic Archives  
No. 172C-4-24-69-BIO

NEVADA TEST SITE, ENVIRONMENTAL PROTECTION AGENCY FARM  
HABS No. NV-28 (Page 27)



Historic Views  
EPA Farm,  
Nevada Test Site,  
Nye County, Nevada

Cows eating at food trough

View: South

1969

Picture No. 7  
EPA Photographic Archives  
No. 171C-4-24-69-BIO

NEVADA TEST SITE, ENVIRONMENTAL PROTECTION AGENCY FARM  
HABS No. NV-28 (Page 28)



Historic Views  
EPA Farm,  
Nevada Test Site,  
Nye County, Nevada

Cows under double shelter

View: Southwest

1966

Picture No. 8  
EPA Photographic Archives  
No. 289-9-21-66-BIO



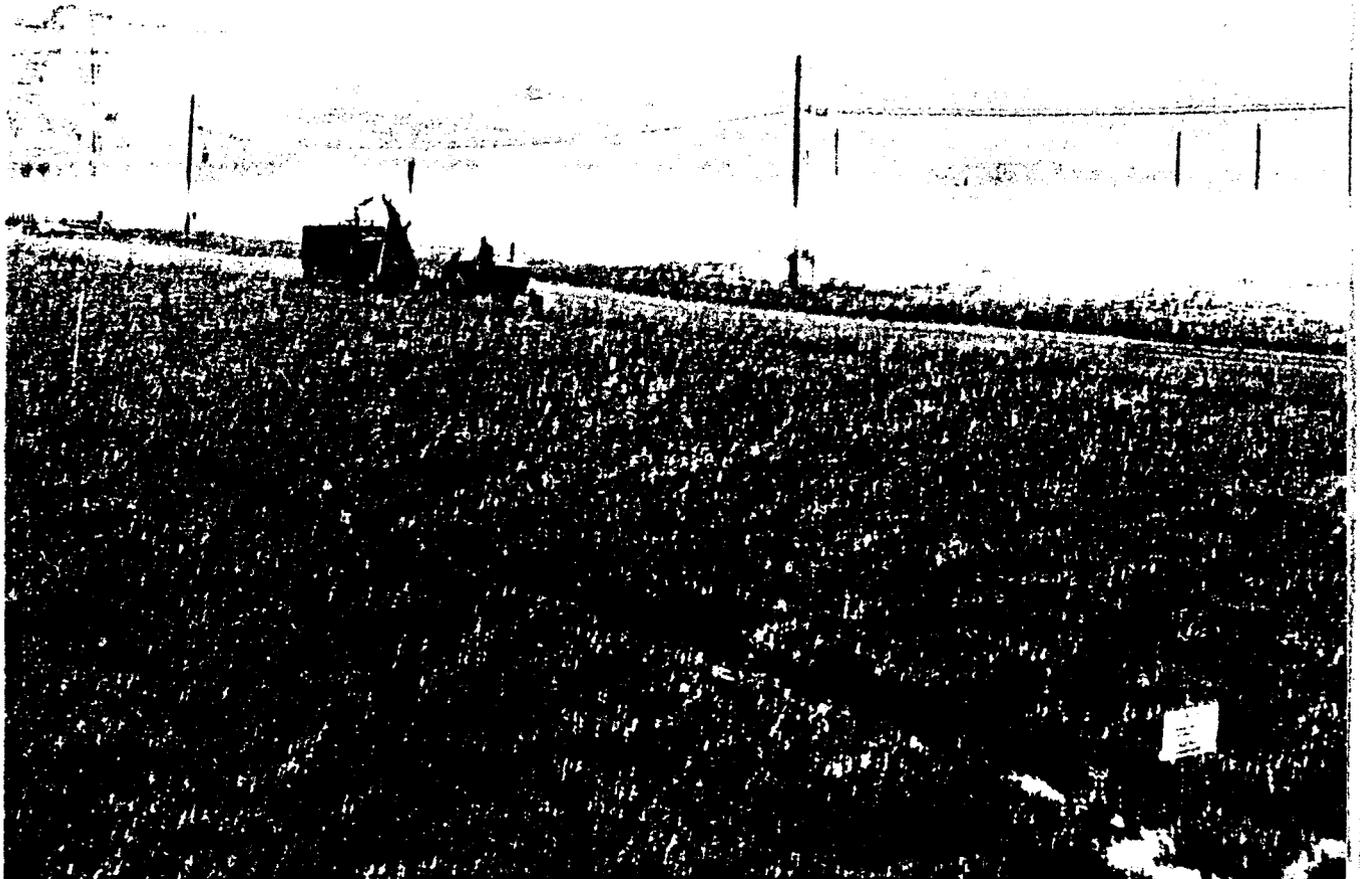
Historic Views  
EPA Farm,  
Nevada Test Site,  
Nye County, Nevada

Cows milling around the EPA Farm

View: North-northeast

1970

Picture No. 9  
EPA Photographic Archives  
No. 290C-7-21-70-BIO



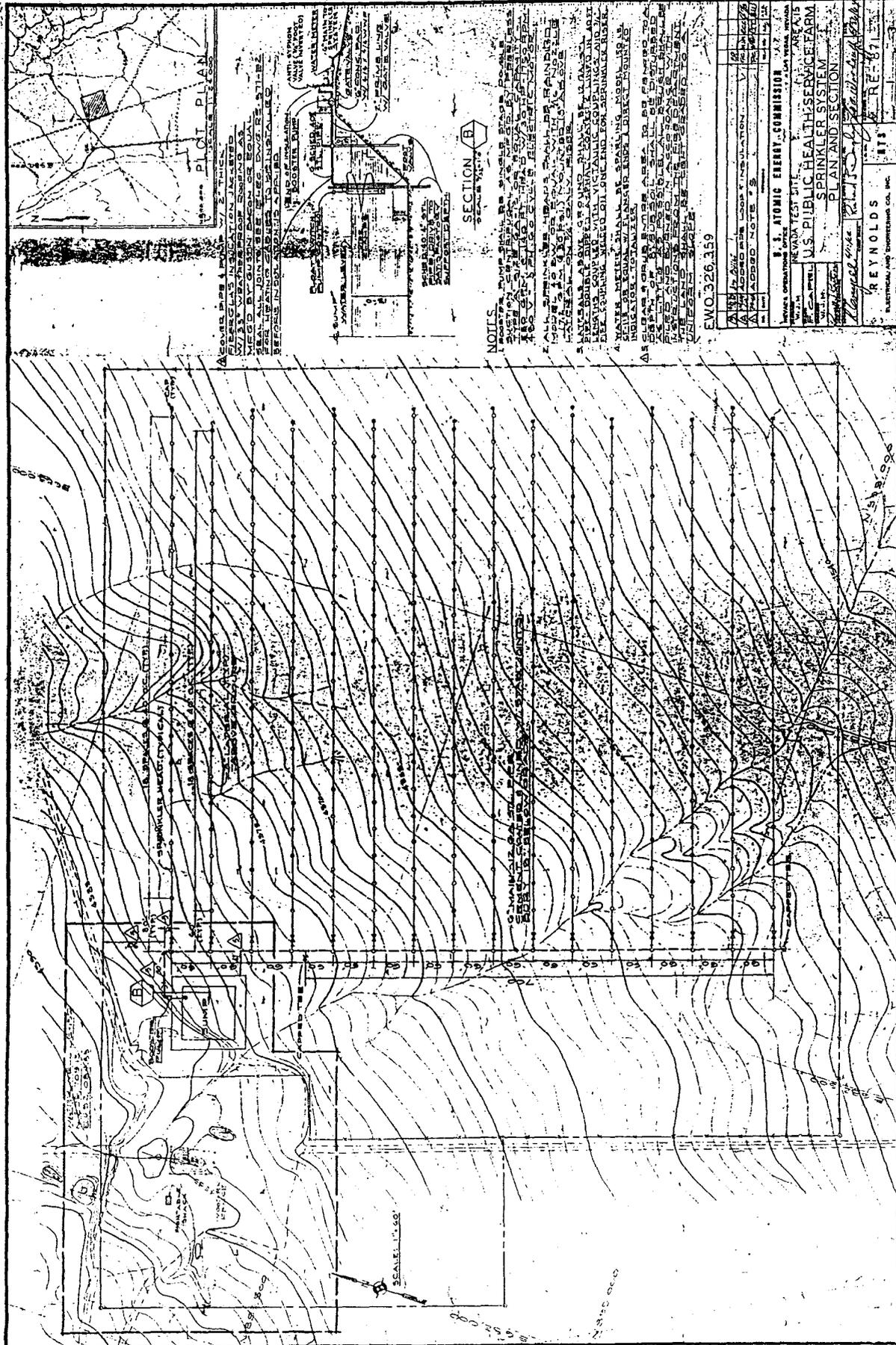
Historic Views  
EPA Farm,  
Nevada Test Site,  
Nye County, Nevada

Crops in field

1969

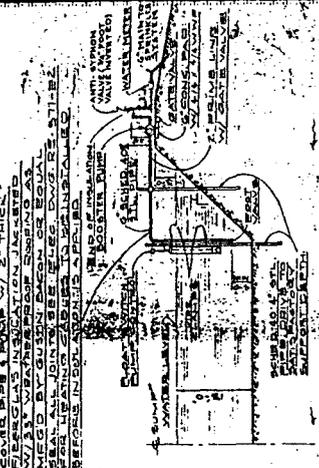
Picture No. 10  
EPA Photographic Archives  
No. 170C-4-24-69-BIO

NEVADA TEST SITE, ENVIRONMENTAL PROTECTION AGENCY FARM  
HABS No. NV-28 (Page 31)



**PLOT PLAN**

AS SHOWN ON THE PREVIOUS DRAWING, THE IRRIGATION SYSTEM WAS DESIGNED TO BE INSTALLED IN THE SPRING OF 1964. THE SYSTEM WAS DESIGNED TO BE INSTALLED IN THE SPRING OF 1964. THE SYSTEM WAS DESIGNED TO BE INSTALLED IN THE SPRING OF 1964.



**NOTES:**

1. THE IRRIGATION SYSTEM WAS DESIGNED TO BE INSTALLED IN THE SPRING OF 1964. THE SYSTEM WAS DESIGNED TO BE INSTALLED IN THE SPRING OF 1964.
2. THE IRRIGATION SYSTEM WAS DESIGNED TO BE INSTALLED IN THE SPRING OF 1964. THE SYSTEM WAS DESIGNED TO BE INSTALLED IN THE SPRING OF 1964.
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EW0.326.459

PROJECT NO.	1000
DATE	10/1/64
SCALE	1" = 10'
DESIGNED BY	REYNOLDS
CHECKED BY	REYNOLDS
APPROVED BY	REYNOLDS

U.S. PUBLIC HEALTH SERVICE FARM  
SPRINKLER SYSTEM  
PLAN AND SECTION

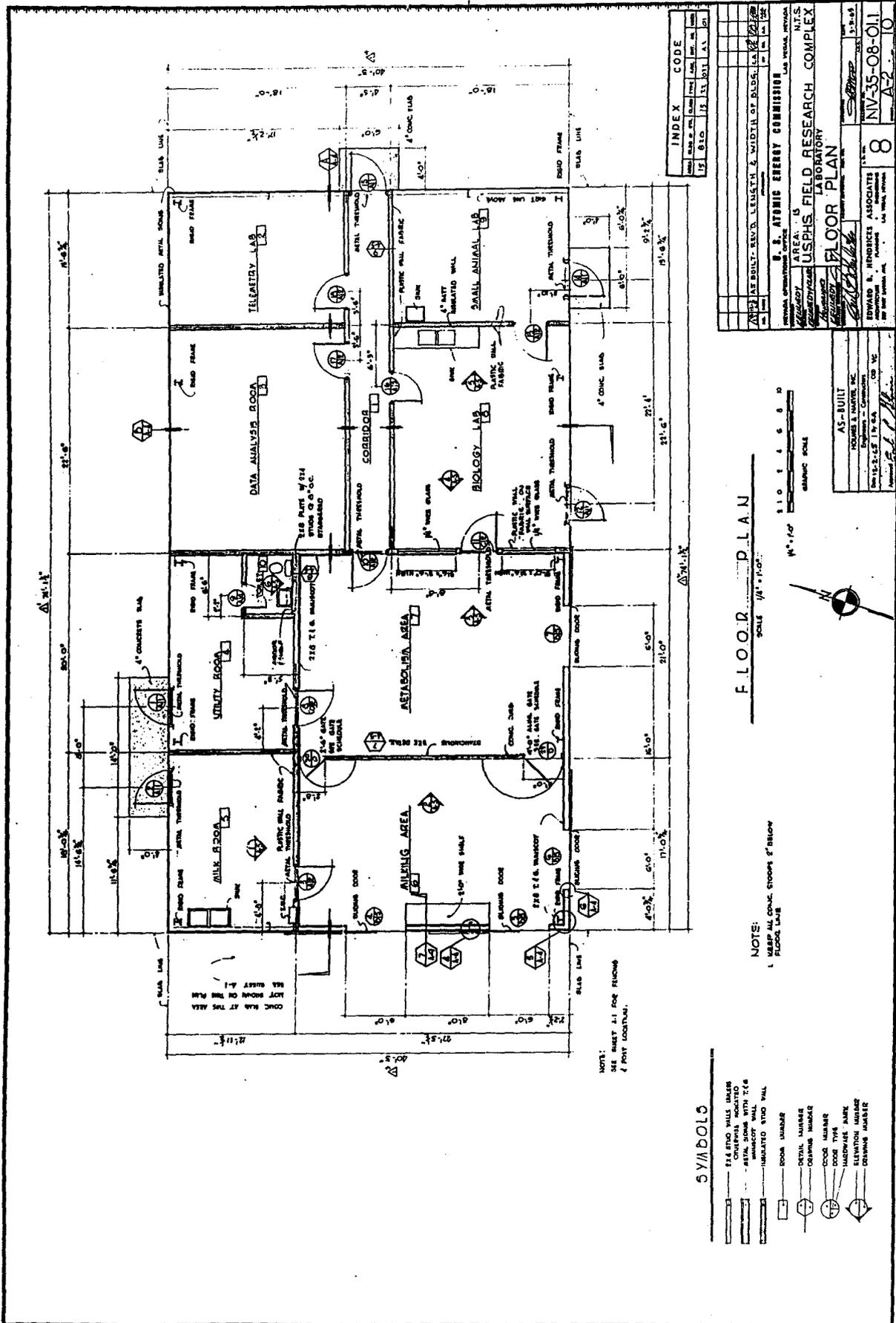
REYNOLDS  
ELECTRICAL AND ENGINEERING CO., INC.

Plot plan of EPA Farm featuring irrigation system.

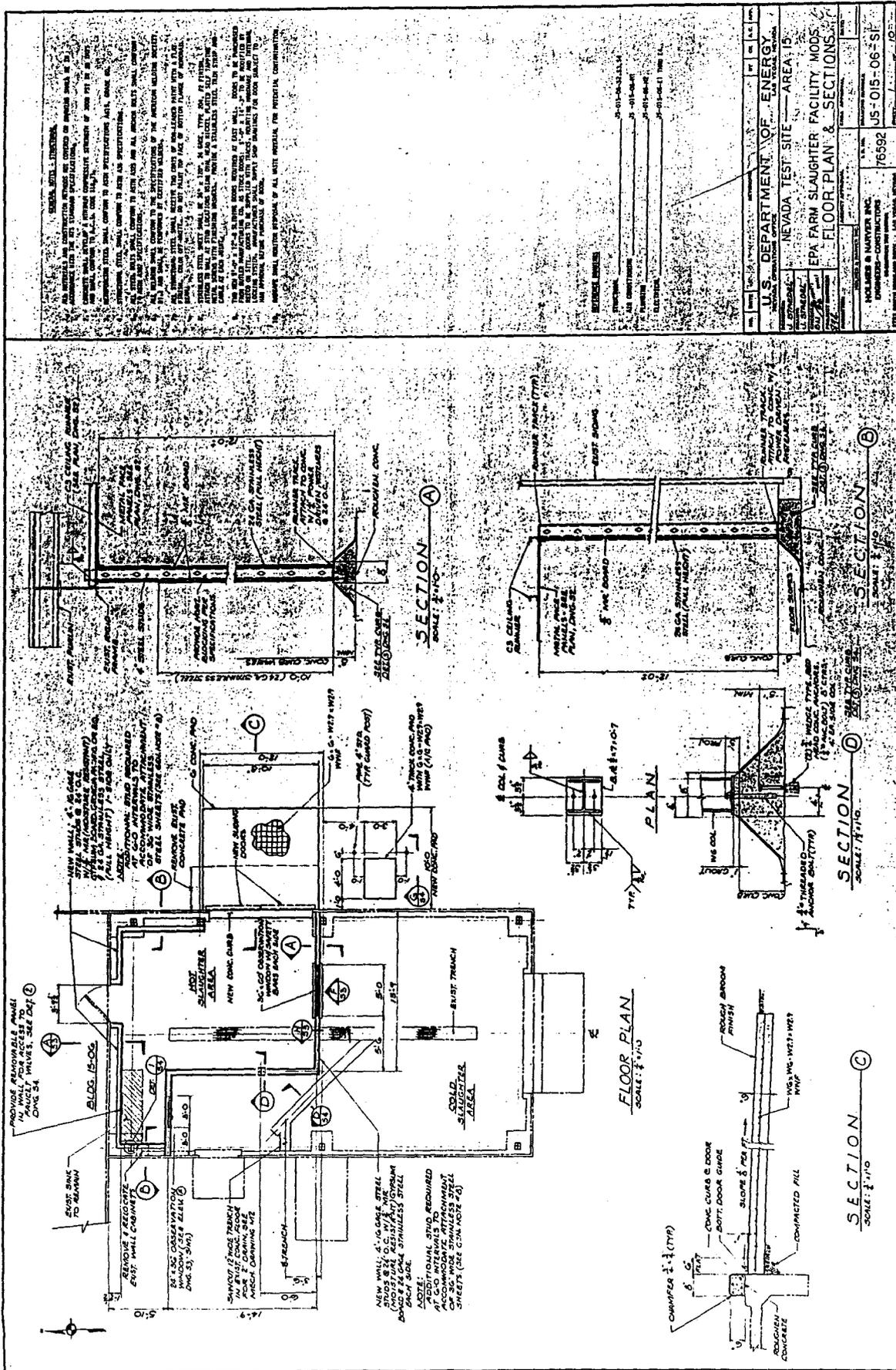




NEVADA TEST SITE, ENVIRONMENTAL PROTECTION AGENCY FARM  
HABS No. NV-28 (Page 34)



Floor plan of Building 15-06 (prior to slaughter addition).



Floor plan of Building 15-06 slaughter addition.