

Group W

Group W Map

Building 4015

Includes Building 4707, Substation

Building 4373

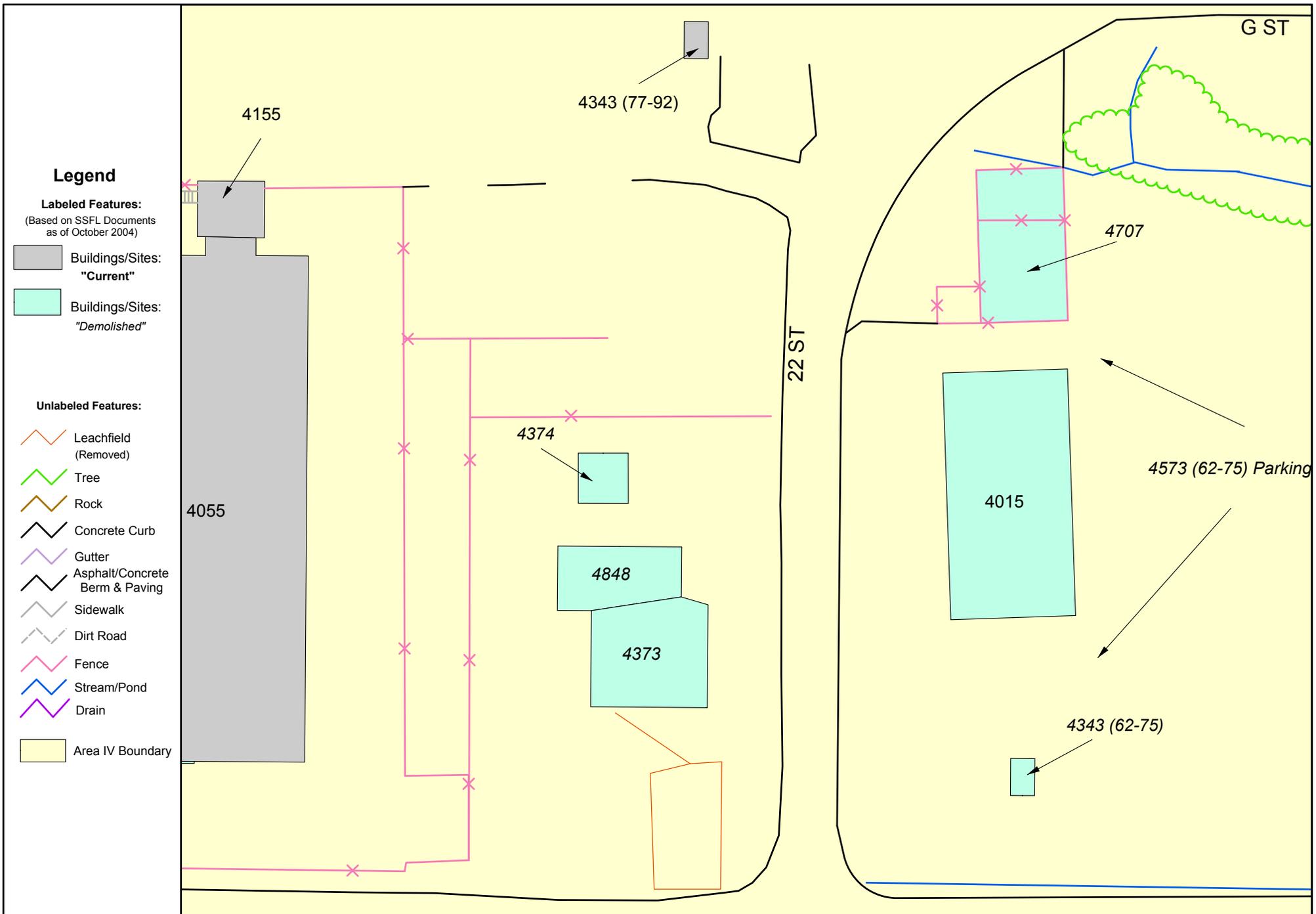
Includes Site 4848, Pad at Building 4373

Building 4374

Site 4573

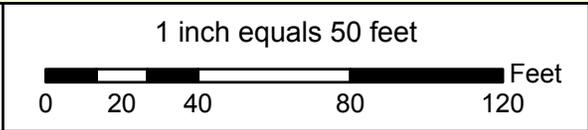
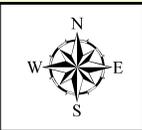
Includes Building 4343, Time Clock

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DRAWN BY: **Sapere**
CONSULTING INC

DATE: May 2005



Site Summary Group W
AREA IV
Santa Susana Field Laboratory, CA

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Site Summary – Building 4015

Site Identification:

Building 4015
Construction Staging Storage
Includes Building 4707, Substation

Operational Use/History:

- Constructed in 1974.
- Building 4015, which was constructed in the same place as Parking Lot 4573, was used to store construction materials.
- Building 4015 was demolished in 2004.

Site Description:

- Building 4015 is a warehouse with 13-foot ceilings, a steel frame, and sheet metal siding and roof. It is located east of Building 4373.¹
- Serviced by Substation 4707, which was demolished in August 2003.²

Relevant Site Information:

- There are no Use Authorizations and no Incident Reports associated with Building 4015.³

Radiological Surveys:

- Radiological surveys specific to Building 4015 have not been conducted.

Status:

- Building 4015 was demolished in 2004.

References:

- 1- DOE Document, N-083E-A02-DV001, Rev. A, "Site Development and Facility Utilization Planning: FY 1984-FY 1989," April 1984.
- 2- Personnel Interview, Dan Trippeda, September 12, 2003.
- 3- Review of Radiation Safety Records Management System, 2003.
- 4- Historical Site Photographs from Boeing Database.
- 5- SSFL Area IV, ETEC Industrial Planning Maps, 1962-1992.

Photograph – Building 4015



Site Summary – Building 4373

Site Identification:

Building 4373

Systems for Nuclear Auxiliary Power (SNAP) Critical Facility

Includes Site 4848, Pad at Building 4373

Operational Use/History:

- Constructed in 1956.¹
- Building 4373 was designed as a solid propellant mixing and casting facility; however, there is no evidence that it was ever used for this purpose.¹
- Ownership transferred from Rocketdyne to Atomics International Division in 1957.¹
- One test cell was modified for critical assembly research supporting the SNAP program by adding two feet of additional concrete shielding to two walls and installing a high-efficiency particulate air (HEPA) filter bank.¹
- In 1962 the SNAP critical tests concluded, and the facility was modified again to include a NaK test loop to support the SNAP Experimental Reactor. The other test loop programs carried out here were RuK test loops, boiling mercury test loops and boiling potassium loops.¹
- The facility has since been used intermittently for storage of non-radiological materials.¹
- Demolished in 1999.

Site Description:

- Building 4373 contained five test bays (three concrete and two steel framed) enclosing 3,030 square feet. The concrete test bays had 12-inch thick walls and the two steel-framed bays have transite, plywood and sheet metal siding and roofing.¹ The building was initially connected to a leach field system until it was closed and abandoned once the site-wide sewage treatment system was installed and operational in the early 1960s.²
- Serviced by 4848, Pad at Building 4373.

Relevant Site Information:

- Most nuclear or radioactive materials handled at Building 4373 were fully encapsulated. Only fissile material and activation foils produced low levels of radioactivity.¹
- One incident was reported that may have resulted in a release to the environment:

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- On August 22, 1995, a Health Physicist (HP) found three radioactive pre-filters in the ventilation system on the roof of Building 4373. These were thought to have been in continuous use from 1957 to 1962 when airborne Cs-137 levels were elevated due to weapons testing. The filters were removed and the ventilation system was surveyed and released (A0664).

Radiological Surveys:

- Rocketdyne performed a radiological survey in 1988 to determine if any radiological materials had been left behind to such an extent that decontamination or further survey was required. The survey covered Buildings 4373, 4374 and 4375, and included ambient gamma exposure rate measurements, surface smears and soil samples.¹
 - Average ambient gamma exposure rates (not adjusted for background): 10.3 $\mu\text{R/hr}$ for the Building 4373 interior, 9.3 $\mu\text{R/hr}$ for the Building 4374 interior, and 12.6 $\mu\text{R/hr}$ for the surrounding area compared to background measurements between 14.0 and 16.2 $\mu\text{R/hr}$ (Nuclear Regulatory Commission (NRC) limit is 5.0 $\mu\text{R/hr}$ above background).
 - Removable alpha measurements: -0.063 dpm/100cm² average and 2.8 dpm/100cm² maximum (limit is 1000 dpm/100cm²).
 - The removable beta measurements were: -0.47 dpm/100cm² average and 10.1 dpm/100cm² maximum (limit is 1000 dpm/100cm²).
 - The total beta activity measurements found no detectable activity.
 - Survey results found that the areas were acceptably clean by the Department of Energy (DOE) and NRC guidelines and that no further inspection was required.
- During the 1996 Area IV Radiological Characterization Survey, soil samples were taken at three different locations in the vicinity of Building 4373. None of the measurements were distinguishable from background and all the measurements were below the acceptable concentration levels established by Boeing and presented in document N001SRR140131.³
- Boeing performed a radiological survey of the soil surrounding the septic system in 2000.³ All removable and total contamination measurements of the septic tank were non-detect. All soil sampled showed no contamination levels above background. All measurements met limits for unrestricted use.⁴
 - Removable alpha: <20 dpm/100 cm².
 - Removable beta: <100 dpm/100 cm².
 - Total alpha: no detectable activity.
 - Total beta: no detectable activity.
 - Ambient gamma: 8 – 10 $\mu\text{R/hr}$.

Status:

- The California Department of Health Services (DHS) released Building 4373 for unrestricted use in May 1995.⁴

- The facility was demolished in 1999. The septic tank was removed in 2000.

References:

- 1- ETEC Document, GEN-ZR-0012, "Radiological Survey of Buildings T373 and T375," August 8, 1988.
- 2- Boeing Internal Document, no document number, "Radiation Survey Report, Building B373-Septic Tank," December 7, 2000.
- 3- Rocketdyne Report, A4CM-ZR-0011, "Area IV Radiological Characterization Survey Final Report," August 15, 1996.
- 4- DHS/RHB, Letter, "Untitled" from G. Wong (DHS/RHB) to P. Rutherford, May 9, 1995.
- 5- SSFL Area IV, ETEC Industrial Planning Maps, 1962-1992.
- 6- Review of Radiation Safety Records Management System, 2003.

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Site Summary – Building 4374

Site Identification:

Building 4374
Test Loop Enclosure

Operational Use/History:

- Constructed in 1956.
- Building 4374 was built to test non-nuclear liquid metal heat transfer loops and was used as a support facility for Building 4373. It was located within the Building 4373 boundary fence line.¹
- Building 4374 was abandoned with an old mercury test loop in place.
- Demolished in 1996.

Site Description:

- Building 4374 is a steel frame and sheet metal covered Butler-type building measuring 600 square feet located north of Building 4373.¹

Relevant Site Information:

- Building 4374 was designated as non-nuclear.¹
- There are no Use Authorizations and no Incident Reports associated with Building 4374.²

Radiological Surveys:

- Rocketdyne performed a radiological survey in 1988 to determine if any radiological materials had been left behind to such an extent that decontamination or further survey was required. The survey covered Buildings 4373, 4374 and 4375 and included ambient gamma exposure rate measurements, surface smears and soil samples.¹
 - Average ambient gamma exposure rates (not adjusted for background): 10.3 $\mu\text{R/hr}$ for the Building 4373 interior, 9.3 $\mu\text{R/hr}$ for the Building 4374 interior, and 12.6 $\mu\text{R/hr}$ for the surrounding area compared to background measurements between 14.0 and 16.2 $\mu\text{R/hr}$ (NRC limit is 5.0 $\mu\text{R/hr}$ above background).
 - Removable alpha: -0.063 dpm/100cm² average and 2.8 dpm/100cm² maximum (limit is 1000 dpm/100cm²).
 - Removable beta measurements: -0.47 dpm/100cm² average and 10.1 dpm/100cm² maximum (limit is 1000 dpm/100cm²).
 - Detectable beta: no detectable activity.

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- The survey concluded that the areas were acceptably clean by DOE and NRC guidelines and that no further inspection was required.

Status:

- The building was abandoned and housed a mercury test loop prior to demolition.¹
- Demolished in 1996.

References:

- 1- ETEC Document, GEN-ZR-0012, "Radiological Survey of Buildings T373 and T375," August 8, 1988.
- 2- Review of Radiation Safety Records Management System, 2003.
- 3- Historical Site Photographs from Boeing Database.
- 4- SSFL Area IV, ETEC Industrial Planning Maps, 1962-1992.

Photograph – Building 4374



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Site Summary – Site 4573

Site Identification:

Site 4573
Parking Lot
Includes Building 4343, Time Clock

Operational Use/History:

- Constructed in 1956.
- Site 4573 served as a parking lot for personnel working in Buildings 4373 and 4055.
- Removed in 1974. Building 4015 was constructed on the former location of Site 4573.

Site Description:

- Site 4573 was located at the corner of J and G Streets.¹
- Serviced by Time Clock 4343.

Relevant Site Information:

- There are no Use Authorizations and no Incident Reports associated with Site 4573.²

Radiological Surveys:

- Radiological surveys specific to Site 4573 have not been conducted.

Status:

- The parking lot was removed in 1974 and Building 4015 was constructed on the former location of Site 4573.

References:

- 1- SSFL Area IV, ETEC Industrial Planning Maps, 1962-1992.
- 2- Review of Radiation Safety Records Management System, 2003.
- 3- Historical Site Photographs from Boeing Database.

Photograph – Site 4573

