Group H

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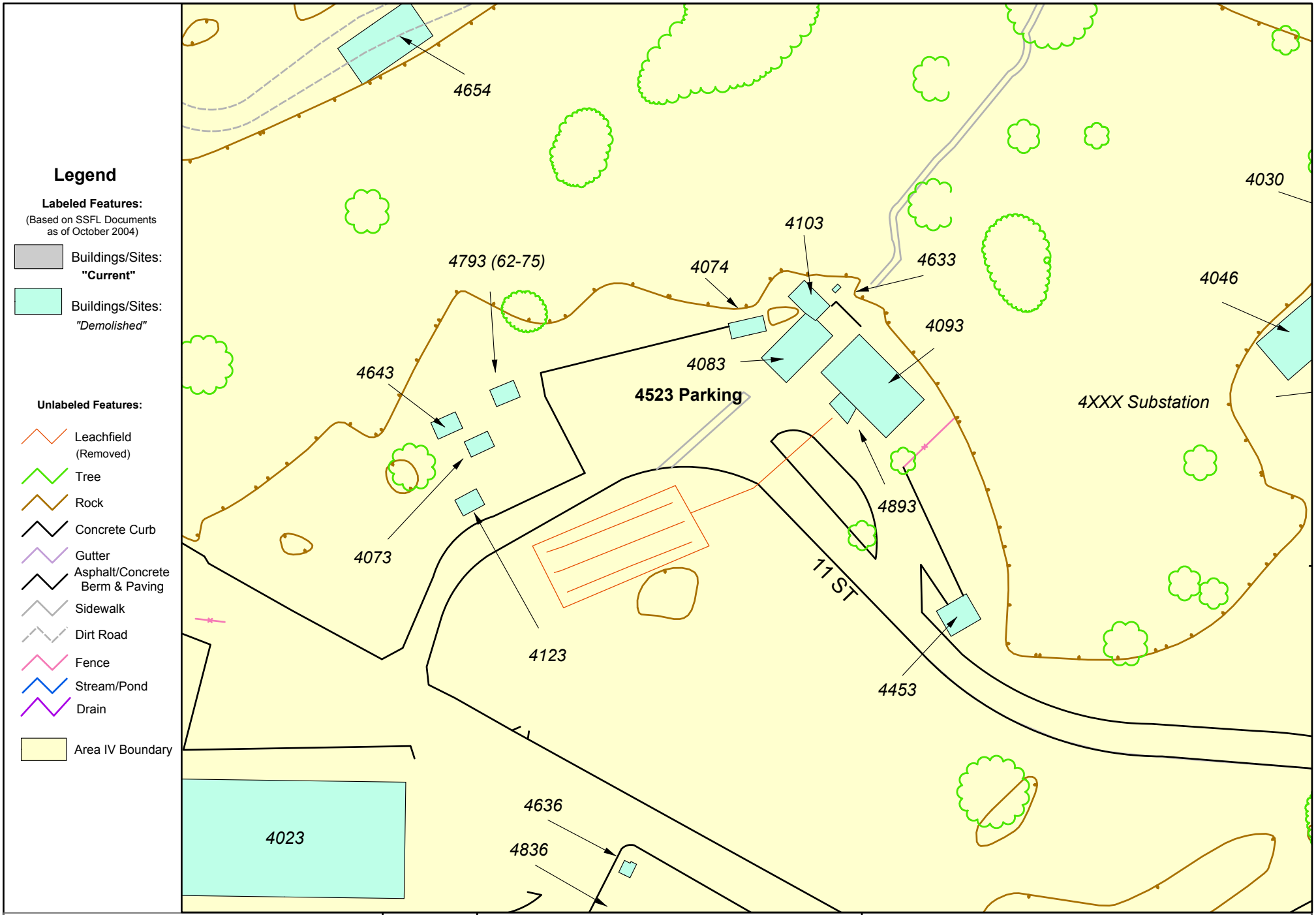
Legend
Labeled Features:
(Based on SSFL Documents as of October 2004)
Buildings/Sites: "Current"
Buildings/Sites: "Demolished"
Unlabeled Features:
Leachfield (Removed)
Tree
Rock
Concrete Curb
Gutter
Asphalt/Concrete Berm & Paving
Sidewalk
Dirt Road
Fence
Stream/Pond
Drain
Area IV Boundary
4654
4030
4103
4793 (62-75)
4074
4633
4046
4093
4643
4083
4523 Parking
4XXX Substation
4893
4073
11 ST
4123
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4023
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DRAWN BY:
Sapere CONSULTING INC
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May 2005
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1 inch equals 75 feet
0 30 60 120 180
Feet
Site Summary Group H
AREA IV
Santa Susana Field Laboratory, CA

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Site Summary – Building 4073

Site Identification:

Building 4073
Reactor Kinetics Test Building
Kinetics Experiment Water Boiler (KEWB)

Operational Use/History:

- Constructed in the early 1950s.
- The KEWB reactor was a small graphite-encased research reactor that used a water solution of uranyl sulfate as fuel.[1]
- The "A" Core (spherical) went critical on July 13, 1956, and was removed in August of 1959.
- The "B" Core (cylindrical) went critical March 1960.
- Operations halted in 1966.
- In 1968 the fuel was drained and decontamination began.
- Demolished in 1975. Activities included the following:
  - Demolition of all non-concrete portions of 4073.
  - Removal of the tank system.
  - Backfilling the remaining floor and walls with asphalt rubble and covering it with six feet of earth.
  - Grading and re-vegetating of the site.
- The site was released for unrestricted use on March 3, 1976, by the Energy Research and Development Administration (ERDA).[2]

Site Description:

- The KEWB reactor building consisted of an underground concrete structure and an above-ground wood and metal changing/workroom. The underground portion of the reactor building measured 15 x 26 feet and was 10 feet tall. The facility included a gaseous and liquid holdup tank system consisting of one 300-gallon tank and two 1,000-gallon tanks, located underground near the structure.[3] The ventilation system for Building 4073 was housed in Building 4643, which was connected to the reactor building.

Relevant Site Information:

- The reactor had a capacity of 50 kWt, but did not normally operate at full power; the majority of reactor operations were conducted at a power level of 1 kWt or less.[1]
- Reactor fuel for the KEWB reactor was U-235 dissolved as uranyl sulfate in solution. The radionuclides of concern are Co-60, Cs-137, Eu-152, Eu-154, Sr-90, U-238 and U-235.[1]

- Two incidents associated occurred in Building 4073 that resulted in employee exposure, and could have resulted in a potential release to the environment:
    - On February 10, 1958, KEWB reactor operators received weekly exposures greater than 300 mrem while performing core maintenance activities. Upon further investigation, it was concluded that the elevated levels were a result of dosimeter error, and that actual exposures were within permissible levels (A0522).
    - From April 1 to June 30, 1961, a research engineer conducting KEWB reactor core experiments received a quarterly exposure to gamma and neutron radiation at levels greater than 3 rem. These core experiments were required for successful termination of the KEWB Program and resulted in high radiation levels in the reactor room, and consequently caused the employee's exposure. The employee was aware of his high cumulative exposure in early May; however, due to the importance of the tests and lack of other qualified operators, he continued to conduct "unreflected" core experiments without prior approval to exceed the 3 rem quarterly limit (A0504).

Radiological Surveys:

- In July 1975, Rocketdyne performed a surface scan of the KEWB site to confirm that no radiological contamination remained.[4]
    - The survey found no levels of beta-gamma surface contamination above the measured background (0.15 – 0.25 mrad/hr).
    - Survey results were below acceptable limits.
- In 1976, Rocketdyne performed a final radiological survey during decontamination and demolition (D&D) of the facility and published results in the final D&D report.[3]
    - Survey results found that all remaining surfaces were decontaminated to levels as low as reasonably achievable; in all cases below the levels for future unrestricted use (removable contamination of 20 dpm/100cm$^2\alpha$ or 100 dpm/100cm$^2\beta$).
    - Survey results were below the acceptable limits.
- In May 1983, Argonne National Laboratories performed a post-remediation radiological survey.[5]
    - The survey performed a surface scan to determine ambient gamma exposure rate and low-level radiation level. Also, soil samples were taken and analyzed for gamma radiation and uranium.
    - The survey found no measurements above background. Background is relatively high (40 μR/hr and 8,000 cts/min) due to shine from nearby Building 4021 and Building 4022.
    - The survey concluded that the site could be released for unrestricted use.
- In August 1988, Rocketdyne performed a surface scan measuring ambient gamma exposure rate to ensure no contamination existed as a result of radioactive materials movement.[6]

- Mean exposure rate: 17.4 ± 0.96 μR/hr (–0.2 ± 0.96 μR/hr when corrected for background).
- Background: 17.0 μR/hr.
- Acceptable limit: 5.0 μR/hr above background.
- Survey results were below the acceptable limits.

Status:

- Building 4073 was demolished in 1975.[5]
- The Energy Research and Development Administration released the facility and surrounding area for unrestricted use in 1976.[2]

References:

1- Rocketdyne Report, N001ER000017, "Nuclear Operations at Rockwell's Santa Susana Field Laboratory – A Factual Perspective," September 1991.
2- Letter from Stanley Stamp (ERDA) to W. F. Heine, "Decontamination and Disposition of ERDA Facilities," March 3, 1976.
3- Rockwell International Report, AI-ERDA-13159, "KEWB Facilities Decontamination and Disposition Final Report," February 25, 1976.
4- Letter from R.K. Owen (Rockwell International) to R.J. Tuttle, "Radiation Survey – T073 (KEWB) Site," July 17, 1975.
5- Argonne National Laboratory Report, no document number, "Surplus Facilities Management Program, Interim Post Remedial Action Survey Report for Kinetic Experiment Water Boiler (KEWB) Facility, Santa Susana Field Laboratory, Rockwell International, Canoga Park, California," May 1983.
6- ETEC Document, GEN-ZR-0009, "Radiological Survey of the T513 Parking Lot; Old R/A Laundry Area; Plot 333; and Areas Between the SRE to RMDF, and KEWB to RMDF," August 26, 1988.
7- Historical Site Photographs from Boeing Database.
8- SSFL Area IV, ETEC Industrial Planning Maps, 1962-1992.

Photograph – Building 4073

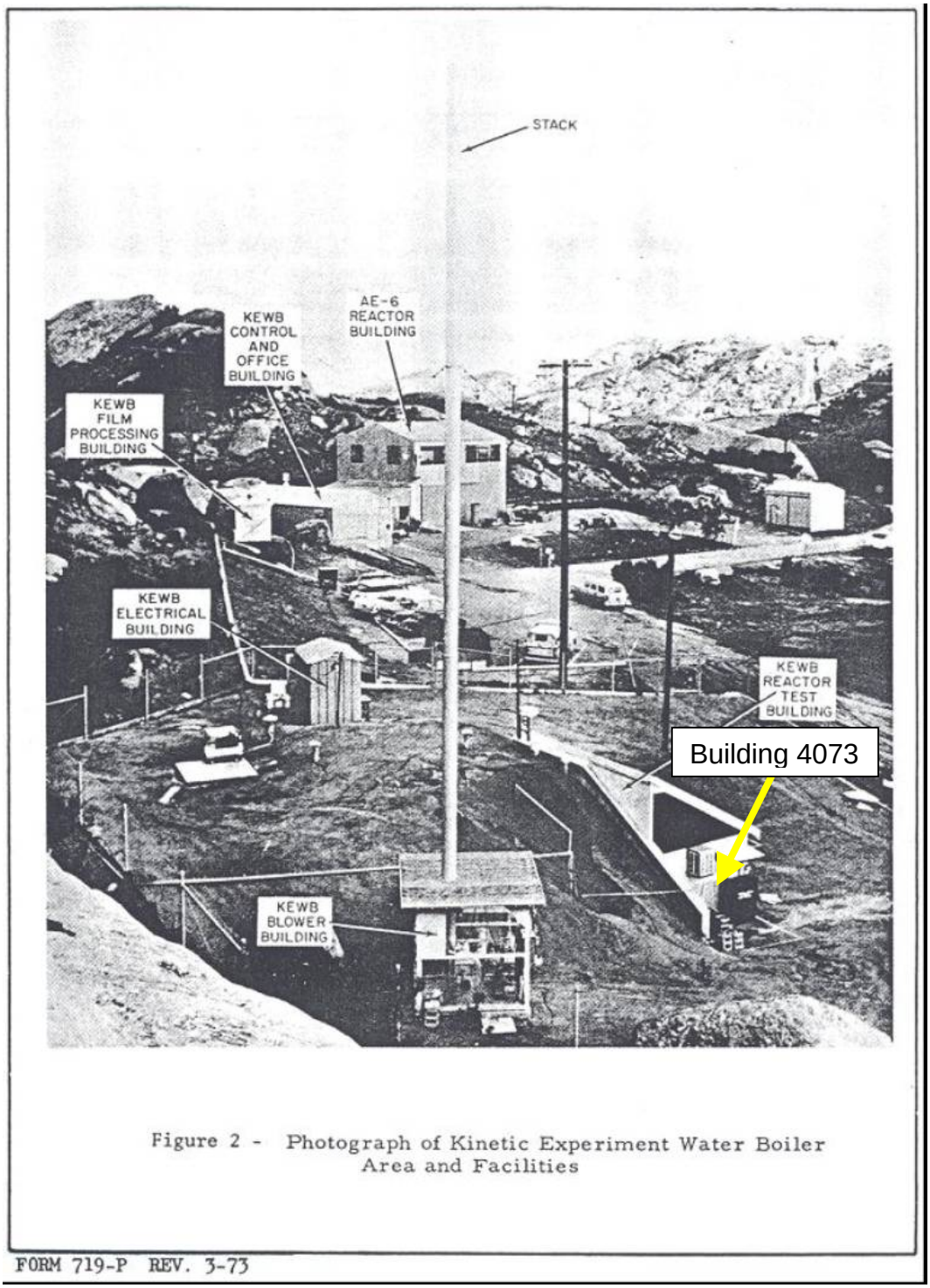

Figure 2 - Photograph of Kinetic Experiment Water Boiler Area and Facilities

FORM 719-P REV. 3-73

Site Summary – Building 4074

Site Identification:

Building 4074
Storage Building
KEWB Film Processing Building

Operational Use/History:

- Constructed in 1958.
- Building 4074 was constructed to serve as a storage and film processing building where personnel processed photographic oscillograph paper for KEWB.
- Ownership transferred from AEC to Rockwell in 1972.[1]
- The Nuclear Regulatory Commission (NRC) licensed the facility on January 5, 1972 (R-118 Docket No. 50-375). [1]
- Demolished in 1980. The foundation and any remaining concrete were left in place.
- Released for unrestricted use and NRC license terminated March 19, 1987.[2]

Site Description:

- Building 4074 was a storage building consisting of a steel frame covered in sheet metal located near Parking Lot 4523.[3]

Relevant Site Information:

- There are no Use Authorizations and no Incident Reports associated with Building 4074.[4]

Radiological Surveys:

- In 1985, Rocketdyne conducted a final radiological survey, releasing the final report in March 1986. (The survey included Buildings 4073, 4074, 4083, 4084, 4093, 4453 and 4453). [1]
    - Soil samples showed no evidence of radioactivity due to facility operations.
    - Maximum average alpha: 17.2 dpm/100cm^2 (limit is 5,000 dpm/100cm^2).
    - Maximum average beta: 1,987 dpm/100cm^2 (limit is 5,000 dpm/100cm^2).
    - The maximum ambient exposure rate was originally found to be 23.1 μR/hr (limit is 18.9 μR/hr). The ambient exposure rates over the limit were attributed to the nearby Radioactive Materials Disposal Facility (RMDF) and do not represent residual contamination.
    - The survey found that measured radiation levels were below acceptable limits, making the site acceptable for unrestricted use.

- NRC conducted a decommissioning inspection in 1987. Results of the inspection determined the maximum exposure rate to be below the limit of 5 μR/hr above background, meeting the criteria for unrestricted use.[5]

Status:

- NRC released the site for unrestricted use in 1987.[2]
- Building 4074 was demolished in 1995.

References:

1- Rocketdyne Report N001SSR140087, "Radiation Survey for Release for Unrestricted Use – L-85 Reactor Facility," March 6, 1986.
2- Letter from F.J. Miraglia (NRC) to M.E. Remley, "Order Terminating Facility License R-118, for the Rockwell International L-85 Nuclear Examination Reactor," April 8, 1987.
3- Atomics International Document, AI-70-73, "Safety Analysis Report for L-85 Nuclear Examination Reactor," November 25, 1970.
4- Review of Radiation Safety Records Management System, 2003.
5- Letter from Frank Wenslawski (NRC Region V) to Herbert Berkow, "Closeout Inspection for Rockwell International L-85 Reactor, Docket No. 50-375," March 19, 1987.
6- SSFL Area IV, ETEC Industrial Planning Maps, 1962-1992.
7- Historical Site Photographs from Boeing Database.

Photograph – Building 4074

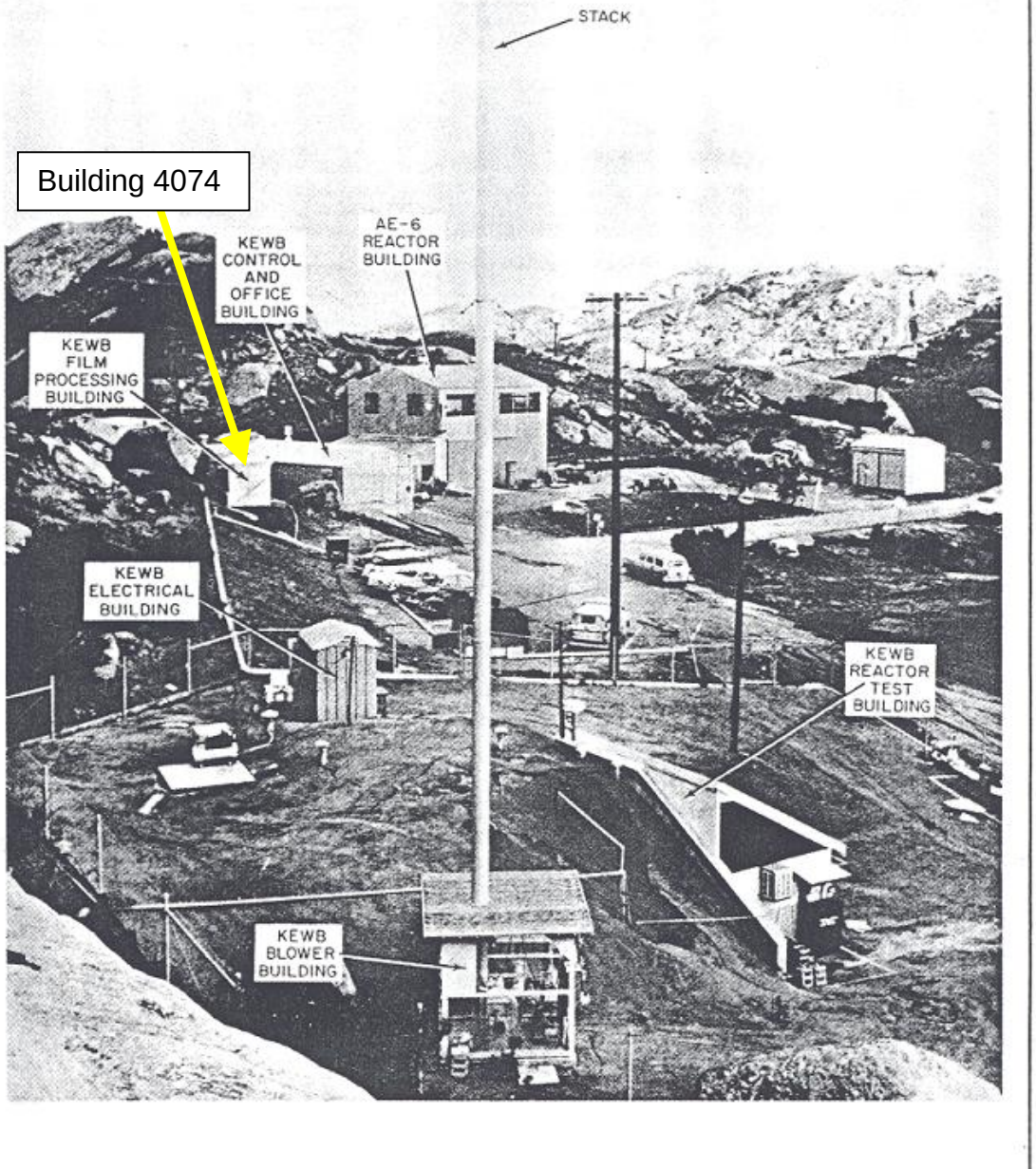

Figure 2 - Photograph of Kinetic Experiment Water Boiler Area and Facilities

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Site Summary – Building 4083

Site Identification:

Building 4083
Reactor Kinetics Control Building
Office and Laboratory Building
Includes Building 4103, Reactor Kinetics Lab and Storage

Operational Use/History:

- Constructed in 1958.
- Building 4083 was constructed to serve as the control building for the KEWB reactor.
- Ownership transferred from the Atomic Energy Commission (AEC) to Rockwell in 1972.[1]
- NRC Licensed the facility January 5, 1972 (R-118 Docket No. 50-375). [1]
- In the early 1970s, Building 4083 was modified to include the Reactor Kinetics Lab and Storage (Building 4103), changing the footprint of Building 4083.
- Demolished in 1980. The foundation and any remaining concrete were left in place.
- Building 4083 was released for unrestricted use by NRC and the NRC license was terminated March 19, 1987.[2]

Site Description:

- Building 4083 consisted of a wood frame covered in sheet metal.[3]

Relevant Site Information:

- There are no Use Authorizations and no Incident Reports that may have resulted in a release to the environment associated with Building 4083 or Building 4103.[4]

Radiological Surveys:

- In 1985, Rocketdyne conducted a final radiological survey, releasing the final report in March 1986. (The survey included buildings 4073, 4074, 4083, 4084, 4093, 4453 and 4453). [1]
    - Soil samples showed no evidence of radioactivity due to facility operations.
    - Maximum average alpha: 17.2 dpm/100cm^2 (limit is 5,000 dpm/100cm^2).
    - Maximum average beta: 1,987 dpm/100cm^2 (limit is 5,000 dpm/100cm^2).

  - The maximum ambient exposure rate was originally found to be 23.1 μR/hr (limit is 18.9 μR/hr). The ambient exposure rates over limit were attributed to the nearby RMDF and do not represent residual contamination.
  - The survey found that measured radiation levels are below acceptable limits, making the site acceptable for unrestricted use.
- NRC conducted a decommissioning inspection in 1987. Results of the inspection determined the maximum exposure rate to be below the limit of 5 μR/hr above background meeting the criteria for unrestricted use.[5]

Status:

- NRC released the site for unrestricted use in 1987.[2]
- Building 4083 was demolished in 1995.

References:

1- Rocketdyne Report, N001SSR140087, "Radiation Survey for Release for Unrestricted Use – L-85 Reactor Facility," March 6, 1986.
2- Letter from F.J. Miraglia (NRC) to M.E. Remley, "Order Terminating Facility License R-118, for the Rockwell International L-85 Nuclear Examination Reactor," April 8, 1987.
3- Atomics International Document, AI-70-73, "Safety Analysis Report for L-85 Nuclear Examination Reactor," November 25, 1970.
4- Review of Radiation Safety Records Management System, 2003.
5- Letter from Frank Wenslawski (NRC Region V) to Herbert Berkow, "Closeout Inspection for Rockwell International L-85 Reactor, Docket No. 50-375," March 19, 1987.
6- SSFL Area IV, ETEC Industrial Planning Maps, 1962-1992.
7- Historical Site Photographs from Boeing Database.

Photograph 1 – Building 4083 and 4103

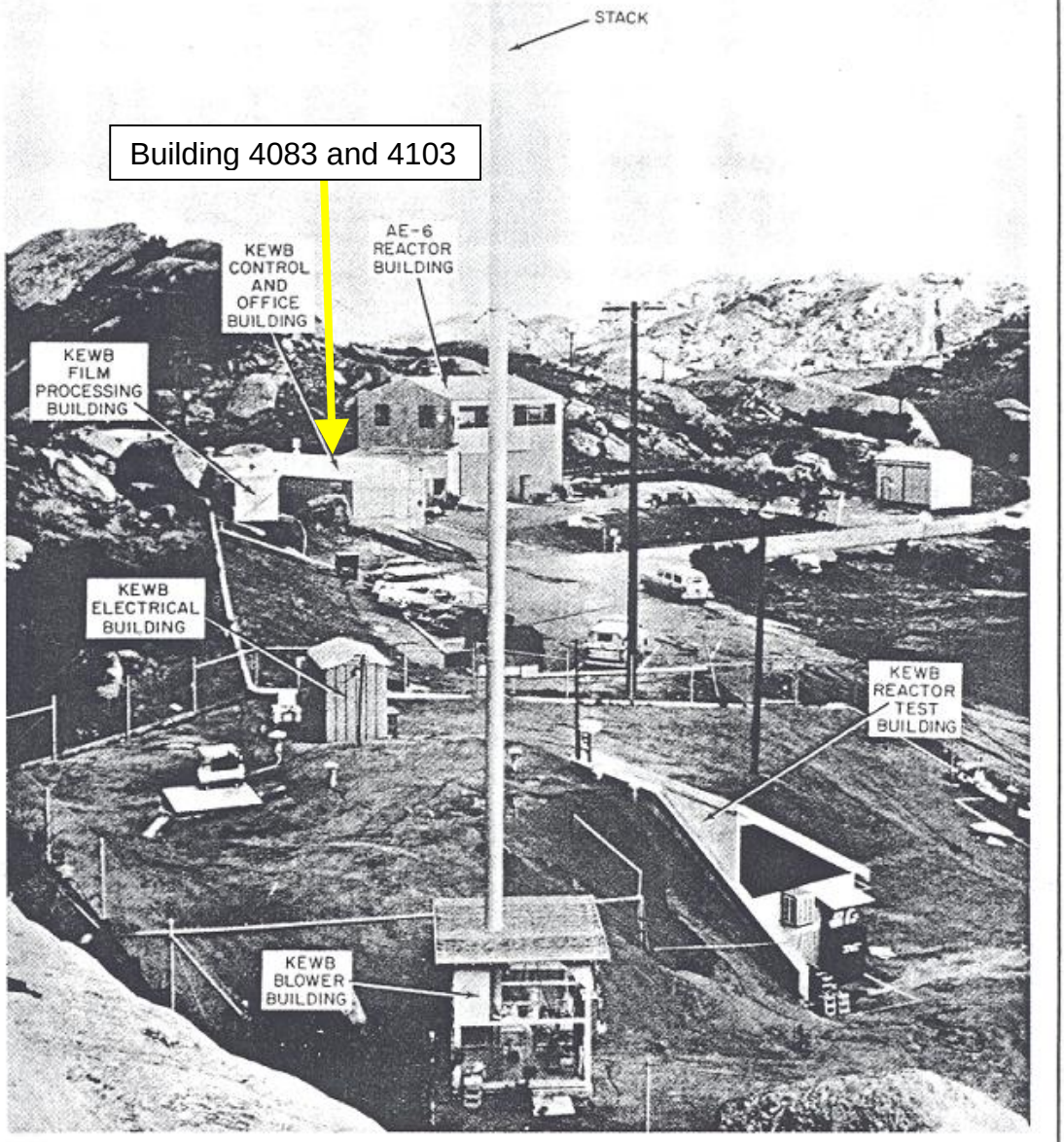

Figure 2 - Photograph of Kinetic Experiment Water Boiler Area and Facilities

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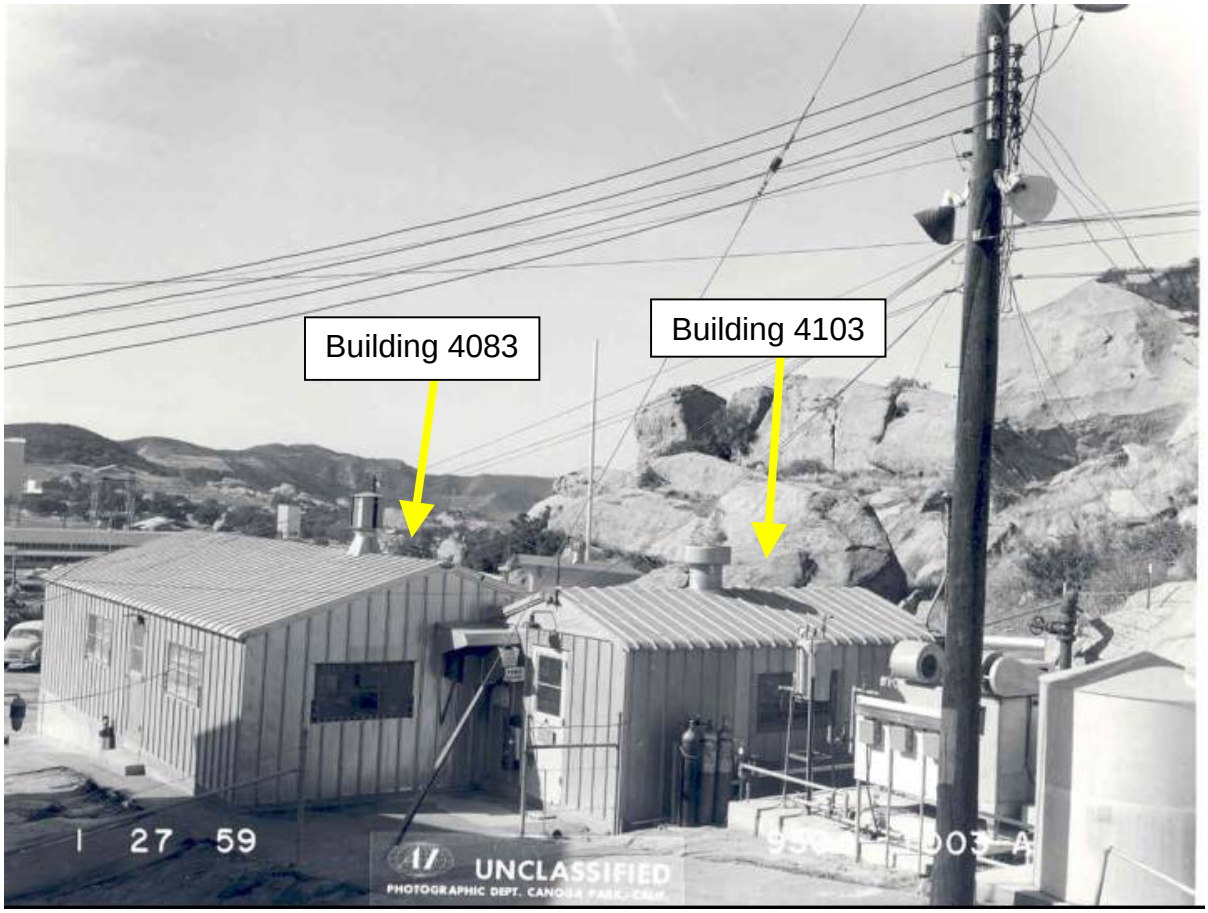
Photograph 2 – Building 4083 and 4103



Site Summary – Building 4093

Site Identification:

Building 4093
Neutron Radiography Building
AE-6 Reactor
Reactor L-85
Includes Site 4893, Pad (AE-6)

Operational Use/History:

- Constructed in 1958.
- Building 4093 was constructed to house the AE-6 Reactor.
- The AE-6 Reactor was originally called the Water Boiler Neutron Source (WBNS) reactor. Built in 1952 in Downey, CA, the WBNS had a maximum power of 0.5 Wt. The WBNS was modified to produce a maximum power of 3 kWt and moved to Santa Susana Field Laboratory (SSFL), where it was referred to as the AE-6 Reactor.
- Ownership was transferred from AEC to Rockwell in 1972, and the reactor was renamed L-85.
- The NRC licensed the facility in 1972 (R-118 Docket No. 50-375) and it operated until February 29, 1980.[1]
- Demolition began in 1982 with removal of uranyl sulfate. The rest of the building, excluding the foundation, was demolished in 1995.
- The sanitary leachfield for Building 4093 was removed in 1999.
- The site was released for unrestricted use by NRC and the NRC license was terminated March 19, 1987.[2]

Site Description:

- Building 4093 was constructed of steel beam frames, wood frames, sheet metal and concrete. It contained a 12 x 31-foot control room and a 31 x 38-foot high bay. The reactor had various forms of concrete structures for shielding (e.g., logs, blocks and walls).[3] The building was connected to a sanitary leach field, which was removed in 1999.
- Serviced by Pad 4893.

Relevant Site Information:

- Reactor fuel for the L-85/AE-6 reactor consisted of U-235 (93.11% enrichment), dissolved as uranyl sulfate in 12.5*l* of 0.35 molar H_2SO_4 solution.[3] The radionuclides of concern are Co-60, Cs-137, Eu-152, Eu-154, Sr-90, U-238 and U-235.

- There have been three incidents associated with Building 4093 that may have resulted in a release to the environment:
    - On March 25, 1959, fission gas was released into the air, contaminating part of the high bay and employees. Contamination levels were measured from 7.5 mR/hr to 13 mR/hr (A0275).
    - On July 30, 1982, rinse water contaminated with 5 ml of U-235 was spilled during the fuel draining operation, contaminating an employee and an area of the high bay floor. The area was partially decontaminated at the time and fully decontaminated during facility decommissioning (A0106).
    - On May 24, 1995, a radioactive high efficiency particulate air (HEPA) filter was found in a pile of debris. The filter was taken to RMHF, where it was packaged for disposal as low-level radioactive waste (A0661).

Radiological Surveys:

- In 1985, Rocketdyne conducted a final radiological survey, releasing the final report in March 1986. (The survey included buildings 4073, 4074, 4083, 4084, 4093, 4453 and 4453). [1]
    - Soil samples showed no evidence of radioactivity due to facility operations.
    - Maximum average alpha: 63.0 dpm/100cm^2 (limit is 5,000 dpm/100cm^2).
    - Maximum average beta: 3102 dpm/100cm^2 (limit is 5,000 dpm/100cm^2).
    - The maximum ambient exposure rate was originally found to be 21.3 μR/hr (limit is 18.9 μR/hr). The concrete was removed from areas measuring over the limit and the re-survey showed them all to be under the limit, with the highest measurement at 18.2 μR/hr.
    - Survey results were below the acceptable limits.
- Oak Ridge Associated Universities conducted a confirmatory survey in 1986; the final report was released in December 1986. (The survey included Buildings 4073, 4084, 4093 and 4453.)[4]
    - The survey concluded that the L-85 reactor building (4093) had been remediated to the existing NRC criteria with the exception of exposure rate criteria. Restoration of the remediated area would reduce the exposure rate to the levels established by the Dismantling Order.
- NRC conducted a decommissioning inspection in 1987. The results of the inspection determined the maximum exposure rate to be below the limit of 5 μR/hr above background, meeting the criteria for unrestricted use.[5]
- In 1999, confirmatory samples collected after the removal of the septic tank found no detectable activity (limit was 20 dpm/100cm^2 for alpha and 100 dpm/100 cm^2 for beta). [6]

Status:

- NRC released site for unrestricted use March 19, 1987.[2]
- The facility was demolished leaving only the foundation in 1995.

References:

1- Rocketdyne Report, N001SSR140087, "Radiation Survey for Release for Unrestricted Use – L-85 Reactor Facility," March 6, 1986.
2- Letter from F.J. Miraglia (NRC) to M.E. Remley, "Order Terminating Facility License R-118, for the Rockwell International L-85 Nuclear Examination Reactor," April 8, 1987.
3- Atomics International Document, AI-70-73, "Safety Analysis Report for L-85 Nuclear Examination Reactor," November 25, 1970.
4- Oak Ridge Associated Universities, no document number, "Confirmatory Radiological Survey of the L-85 Reactor Facility, Rocketdyne Division, Rockwell International Corporation, Santa Susana, California," December 1986.
5- Letter from Frank Wenslawski (NRC Region V) to Herbert Berkow, "Closeout Inspection for Rockwell International L-85 Reactor, Docket No. 50-375," March 19, 1987.
6- Boeing Radiation Survey Reports, L-85 Facility Septic Tank Area, July and September 1999.
7- Historical Site Photographs from Boeing Database.
8- SSFL Area IV, ETEC Industrial Planning Maps, 1962-1992.

Photograph 1 – Building 4093

Photograph 2 – Building 4093

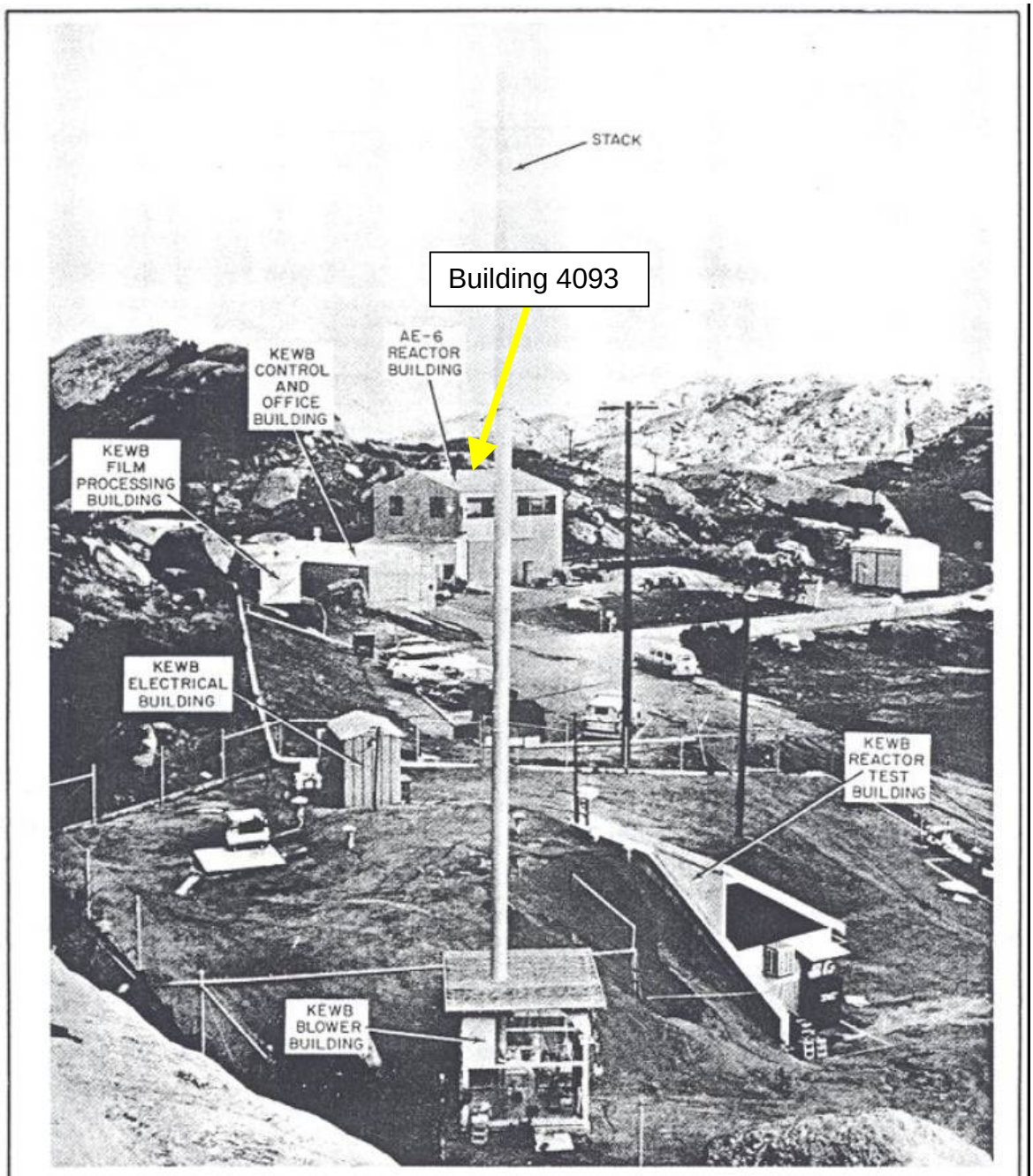


Figure 2 - Photograph of Kinetic Experiment Water Boiler Area and Facilities

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Site Summary – Building 4123

Site Identification:

Building 4123
KEWB Waste Storage Building

Operational Use/History:

- Constructed in the early 1950s.
- Building 4123 was used for the temporary storage of radiological waste material.
- Demolished in 1975.
- On March 3, 1976, the ERDA released the land on which Building 4123 had been located for unrestricted use.[1]

Site Description:

- Building 4123 was a small above-ground concrete block structure with two steel-lined concrete wells (6 feet deep and 2 feet wide) in the floor.

Relevant Site Information:

- There are no Use Authorizations and no Incident Reports associated with Building 4123.[2]

Radiological Surveys:

- In 1975, Rocketdyne performed a final radiological survey during D&D of the facility, publishing the results in the final D&D report in 1976.[1]
    - The survey found that all remaining surfaces were decontaminated to levels as low as reasonably achievable, and in all cases below the levels for future unrestricted use (removable contamination of 20 dpm/100cm$^2\alpha$ or 100dpm/100cm$^2\beta$).
    - The survey concluded that the site was free of radioactivity except for normal background.
- In July 1975, Rocketdyne performed a surface scan of the KEWB site to validate that no radiological contamination remained.[3]
    - The survey found no levels of beta-gamma surface contamination above the measured background (0.15 – 0.25 mrad/hr).
- In May 1983, Argonne National Laboratories performed a post remediation radiological survey to verify that the site was free of radioactivity except for normal background.[4]
    - The survey performed a surface scan to determine the ambient gamma exposure rate and low-level radiation level. Also soil samples were collected and analyzed for gamma radiation and uranium.

  - The survey found no measurements above background. Background is relatively high (40 μR/hr and 8,000 cts/min) due to the shine from nearby Buildings 4021 and 4022.
  - The survey concluded that the site could be released for unrestricted use.
- In August 1988, Rocketdyne performed a surface scan of the terrains measuring the ambient gamma exposure rate to ensure no contamination exists as a result of radioactive materials movement.[5]
  - Mean ambient gamma: 17.4 ± 0.96 μR/hr.
  - Background: 17.0 μR/hr.
  - Acceptable limit: 5.0 μR/hr above background.
  - Survey results were below the acceptable limits.

Status:

- Building 4123 was demolished in 1975.
- The Energy Research and Development Administration released the land on which Building 4123 had been located and the surrounding area for unrestricted use in 1976.[6]

References:

1- Rockwell International Report, AI-ERDA-13159, "KEWB Facilities Decontamination and Disposition Final Report," February 25, 1976.
2- Review of Radiation Safety Records Management System, 2003.
3- Letter from R.K. Owen (Rockwell International) to R.J. Tuttle, "Radiation Survey – T073 (KEWB) Site," July 17, 1975.
4- Argonne National Laboratory Report, no document number, "Surplus Facilities Management Program, Interim Post Remedial Action Survey Report for Kinetic Experiment Water Boiler (KEWB) Facility, Santa Susana Field Laboratory, Rockwell International, Canoga Park, California," May 1983.
5- ETEC Document, GEN-ZR-0009, "Radiological Survey of the T513 Parking Lot; Old R/A Laundry Area; Plot 333; and Areas Between the SRE to RMDF, and KEWB to RMDF," August 26, 1988.
6- Letter from Stanley Stamp (ERDA) to W. F. Heine, "Decontamination and Disposition of ERDA Facilities," March 3, 1976.
7- SSFL Area IV, ETEC Industrial Planning Maps, 1962-1992.

Site Summary – Building 4453

Site Identification:

Building 4453
AE-6 Fuel Handling Building

Operational Use/History:

- Constructed in 1958.
- Fuel for the L-85 reactor in the form of uranyl sulfate was handled in Building 4453.
- Ownership of Building 4453 was transferred from AEC to Rockwell in 1972.
- The NRC licensed the facility on January 5, 1972 (R-118 Docket No. 50-375).[1]
- Demolished in 1980. The foundation and concrete remain.
- Building 4453 was released for unrestricted use by NRC and the NRC license terminated March 19, 1987.[2]

Site Description:

- Building 4453 consisted of a steel frame covered in sheet metal.[3]

Relevant Site Information:

- Fuel for the L-85 reactor in the form of uranyl sulfate was handled in Building 4453. Accordingly, the contaminant of concern is uranium.[1]
- There are no Use Authorizations associated with Building 4453.[4]
- No incidents in which contamination may have been released the environment occurred in Building 4453.[4]

Radiological Surveys:

- In 1985, Rocketdyne conducted a final radiological survey, releasing the final report in March 1986. (The survey included Buildings 4073, 4074, 4083, 4084, 4093, 4453 and 4453). [1]
    - Soil samples showed no evidence of radioactivity due to facility operations.
    - Maximum average alpha: 17.2 dpm/100cm^2 (limit is 5,000 dpm/100cm^2).
    - Maximum average beta: 1987 dpm/100cm^2 (limit is 5,000 dpm/100cm^2).
    - The maximum ambient exposure rate was originally found to be 23.1 μR/hr (limit is 18.9 μR/hr). The ambient exposure rates over the limit were attributed to the nearby RMDF and do not represent residual contamination.
    - Survey results were below the acceptable limits.
- NRC conducted a decommissioning inspection in 1987. Results of the inspection determined the maximum exposure rate to be below the limit of 5 μR/hr above background meeting the criteria for unrestricted use.[5]

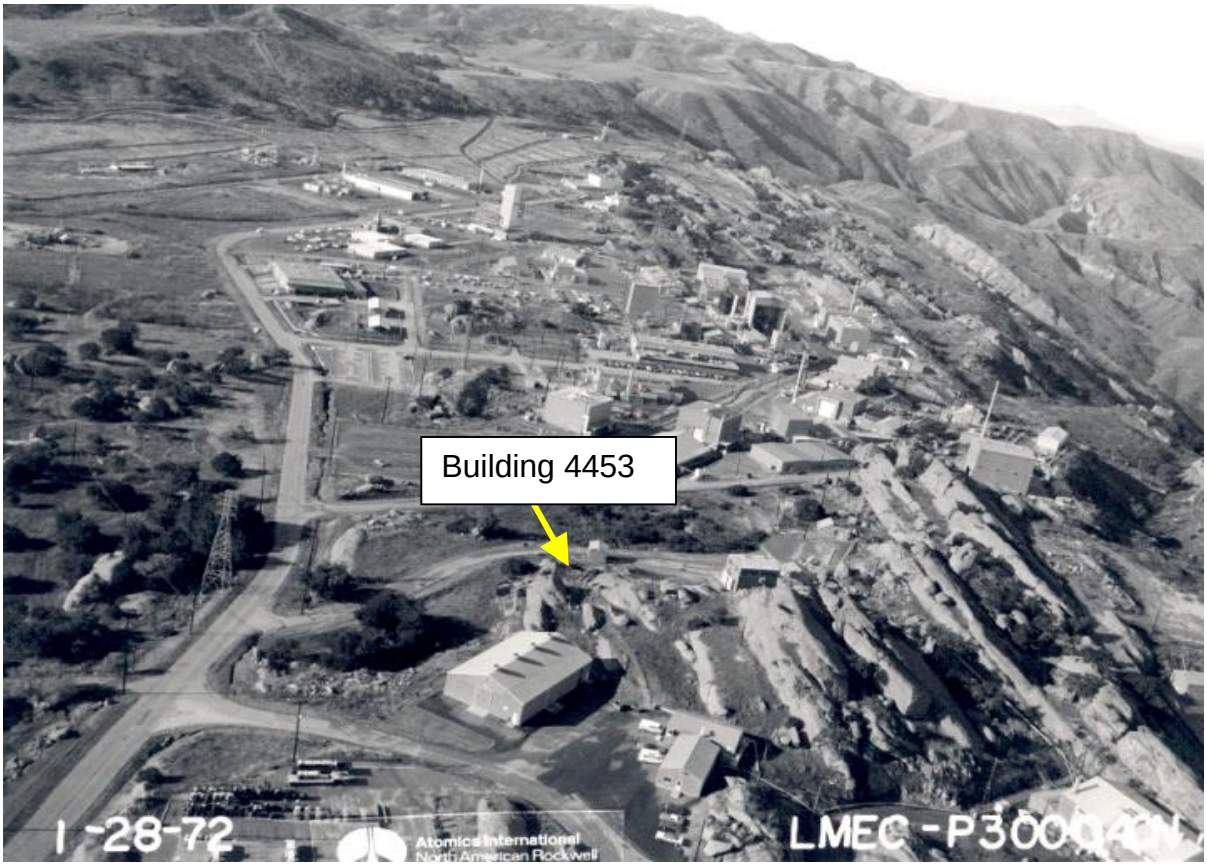
Status:

- NRC released Building 4453 for unrestricted in 1987.[2]
- Building 4453 was demolished in 1995.

References:

1- Rocketdyne Report N001SSR140087, "Radiation Survey for Release for Unrestricted Use – L-85 Reactor Facility," March 6, 1986.
2- Letter from F.J. Miraglia (NRC) to M.E. Remley, "Order Terminating Facility License R-118, for the Rockwell International L-85 Nuclear Examination Reactor," April 8, 1987.
3- Atomics International Document, AI-70-73, "Safety Analysis Report for L-85 Nuclear Examination Reactor," November 25, 1970.
4- Review of Radiation Safety Records Management System, 2003.
5- Letter from Frank Wenslawski (NRC Region V) to Herbert Berkow, "Closeout Inspection for Rockwell International L-85 Reactor, Docket No. 50-375," March 19, 1987.
6- SSFL Area IV, ETEC Industrial Planning Maps, 1962-1992.
7- Historical Site Photographs from Boeing Database.

Photograph – Building 4453



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Site Summary – Parking Lot 4523

Site Identification:

Site 4523
Parking Lot

Operational Use/History:

- Constructed in the 1950s. [1,2]
- Site 4523 was a parking lot used by personnel working in L-85, KEWB and the adjacent facilities.
- Site 4523 was demolished.[1,2]

Site Description:

- Site 4523 was located between the L-85 and KEWB facilities.

Relevant Site Information:

- There are no Use Authorizations and no Incident Reports associated with Site 4523.[3]

Radiological Surveys:

- Radiological surveys specific to Site 4523 have not been conducted.

Status:

- Site 4523 has been demolished, and the area is now covered with vegetation.

References:

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

Photograph – Site 4523

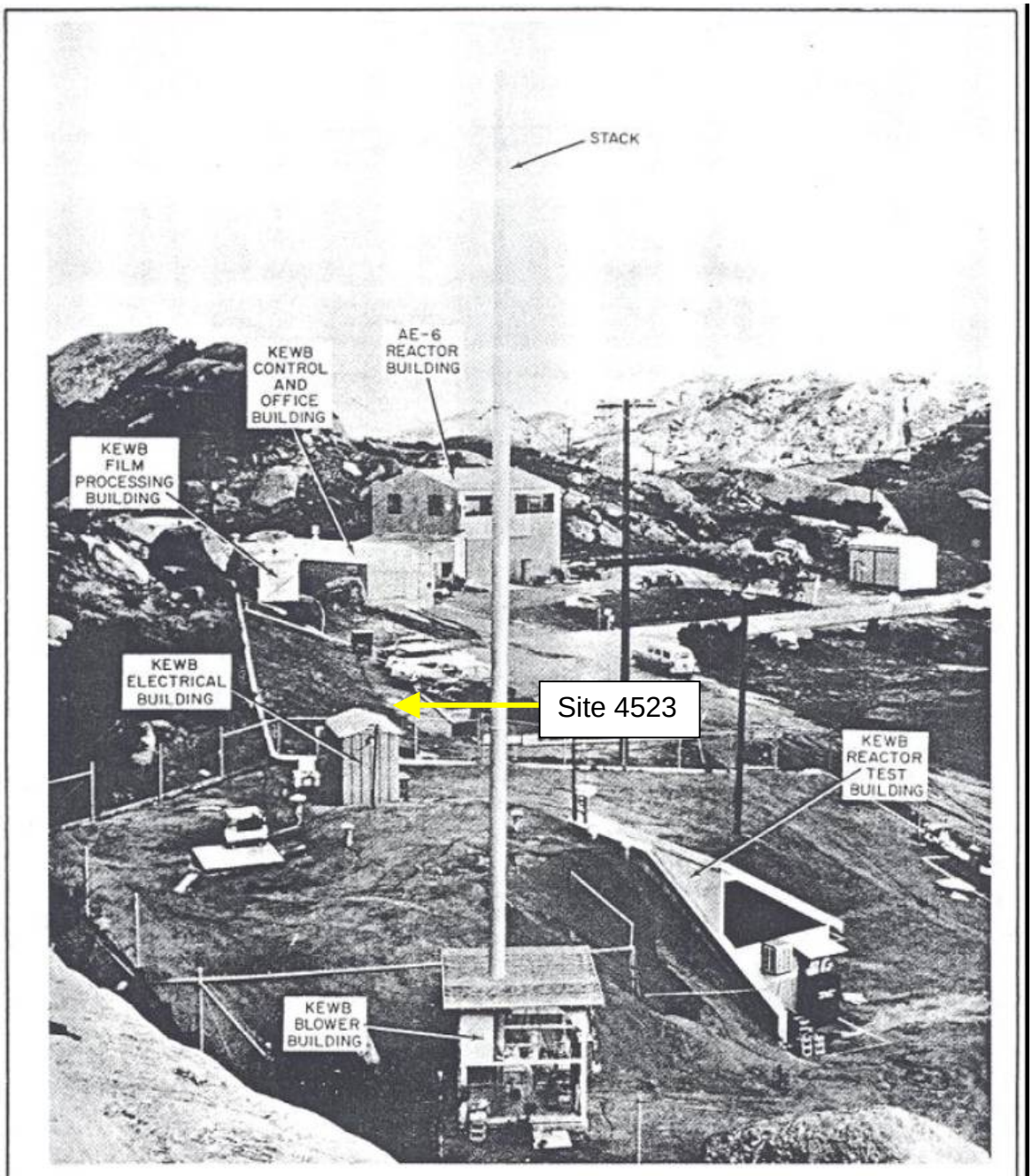

Figure 2 - Photograph of Kinetic Experiment Water Boiler Area and Facilities

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Site Summary – Site 4633

Site Identification:

Site 4633
Reactor Cooling Water Pad

Operational Use/History:

- Constructed prior to 1962.[1]
- There is no record of activities associated with Site 4633.
- Demolished in the late 1980s.

Site Description:

- Site 4633 was located northeast of Parking Lot 4523.

Relevant Site Information:

- Regulated radiological materials were not handled in Site 4633.
- There are no Use Authorizations and no Incident Reports associated with Site 4633.[2]

Radiological Surveys:

- Radiological surveys specific to Site 4633 have not been conducted.

Status:

- Site 4633 was demolished.

References:

1- SSFL Area IV, ETEC Industrial Planning Maps, 1962-1992.
2- Review of Radiation Safety Records Management System, 2003.

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Site Summary – Building 4643

Site Identification:

Building 4643
KEWB Exhaust Building

Operational Use/History:

- Constructed in early the 1950s.
- Building 4643 was an exhaust building that provided ventilation for the KEWB reactor building.
- Demolished in 1975.
- The land on which Building 4643 was located was released for unrestricted use on March 3, 1976, by the ERDA.[1]

Site Description:

- Building 4643 was a small mechanical building with a 60-foot exhaust stack. It was located near Parking Lot 4523.

Relevant Site Information:

- There are no Use Authorizations and no Incident Reports associated with Site 4643.[2]

Radiological Surveys:

- In July 1975, Rocketdyne performed surface scans of the KEWB site to validate that no radiological contamination remained.[3]
    - The survey found no levels of beta-gamma surface contamination above the measured background (0.15 – 0.25 mrad/hr).
    - The survey concluded that there was no radiation above background levels observed away from the site.
- In 1976, Rocketdyne performed a final radiological survey during D&D of the facility; the results were published in the final D&D report.[4]
    - The survey found that all remaining surfaces were decontaminated to levels as low as reasonably achievable; in all cases below the levels for future unrestricted use (removable contamination of 20 dpm/100cm$^2\alpha$ or 100 dpm/100cm$^2\beta$).
    - The survey concluded that the site was free of radioactivity except for normal background.
- In May 1983, Argonne National Laboratories performed a post remediation radiological survey to verify that the site was free of radioactivity except for normal background.[5]

  - The survey performed a surface scan to determine the ambient gamma exposure rate and low-level radiation level. Soil samples were collected and analyzed for gamma radiation and uranium.
  - The survey found no measurements above background. Background is relatively high (40 μR/h and 8,000 cts/min) due to the shine from nearby Buildings 4021 and 4022.
  - The survey concluded that the site could be released for unrestricted use.
- On August 1988, Rocketdyne performed a surface scan of the terrain measuring ambient gamma exposure rates to ensure that no contamination existed as a result of radioactive materials movement.[6]
  - Mean ambient gamma: 17.4 ± 0.96 μR/hr.
  - Background: 17.0 μR/hr.
  - Acceptable limit: 5.0 μR/hr above background.
  - The survey results found no contamination above background levels.

Status:

- Building 4643 was demolished in 1975.
- The Energy Research and Development Administration released the land on which Building 4643 was located and the surrounding area for unrestricted use in 1976.[1]

References:

1- Letter from Stanley Stamp (ERDA) to W. F. Heine, "Decontamination and Disposition of ERDA Facilities," March 3, 1976.
2- Review of Radiation Safety Records Management System, 2003.
3- Letter from R.K. Owen (Rockwell International) to R.J. Tuttle, "Radiation Survey – T073 (KEWB) Site," July 17, 1975.
4- Rockwell International Report, AI-ERDA-13159, "KEWB Facilities Decontamination and Disposition Final Report," February 25, 1976.
5- Argonne National Laboratory, no document number, "Surplus Facilities Management Program, Interim Post Remedial Action Survey Report for Kinetic Experiment Water Boiler (KEWB) Facility, Santa Susana Field Laboratory, Rockwell International, Canoga Park, California," May 1983.
6- ETEC Document, GEN-ZR-0009, "Radiological Survey of the T513 Parking Lot; Old R/A Laundry Area; Plot 333; and Areas Between the SRE to RMDF, and KEWB to RMDF," August 26, 1988.
7- SSFL Area IV, ETEC Industrial Planning Maps, 1962-1992.
8- Historical Site Photographs from Boeing Database.

Photograph – Building 4643

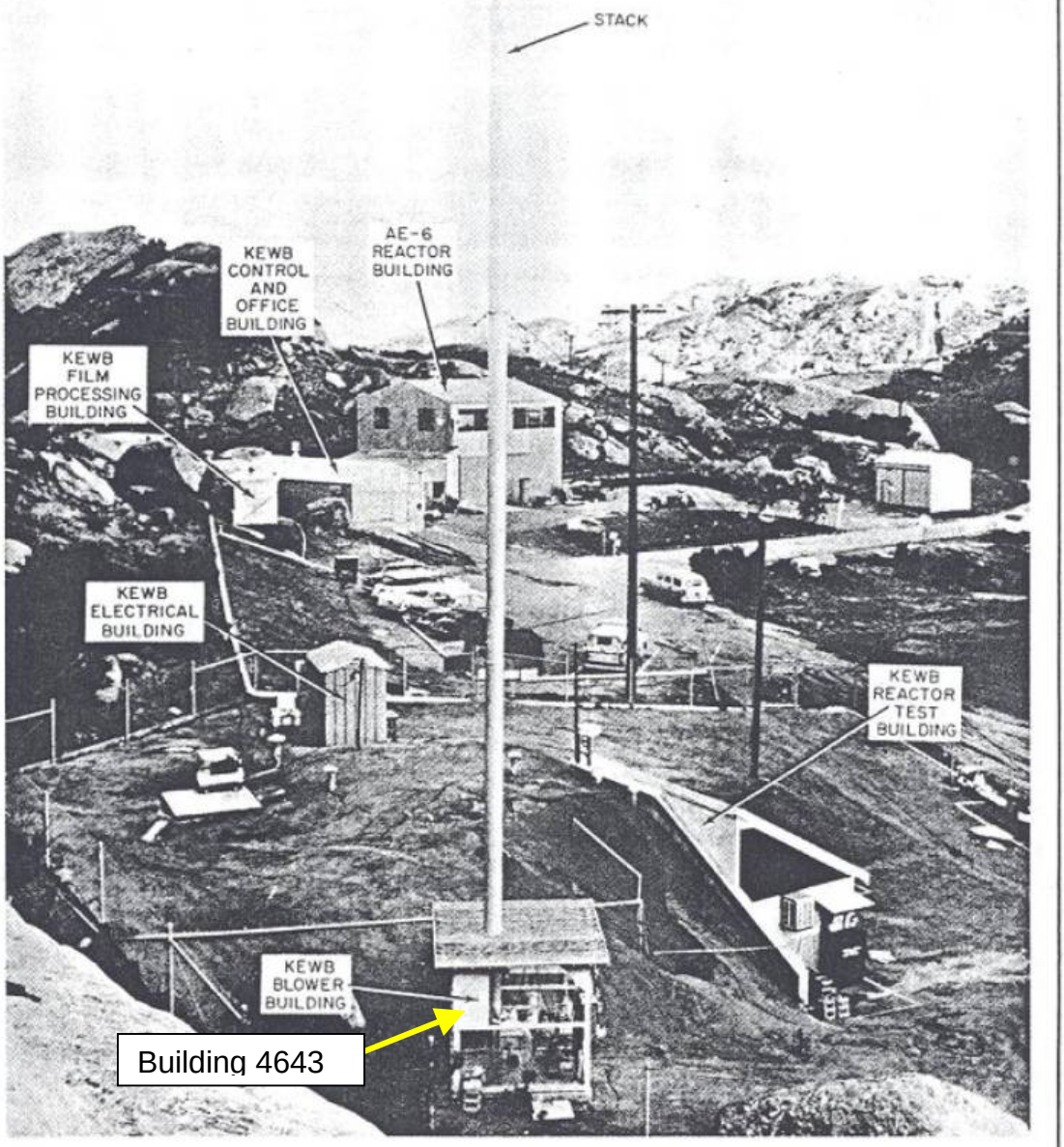

Figure 2 - Photograph of Kinetic Experiment Water Boiler Area and Facilities

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Site Summary – Building 4793

Site Identification:

Building 4793
KEWB Electrical Building

Operational Use/History:

- Constructed in the early 1950s.
- Building 4793 housed the heating and air conditioning systems for the KEWB reactor building.
- Demolished in 1975.
- The land on which Building 4793 was located was released for unrestricted use March 3, 1976, by the ERDA.[1]

Site Description:

- Building 4793 was a small above-ground mechanical building located east of the KEWB reactor building.

Relevant Site Information:

- There are no Use Authorizations and no Incident Reports associated with Building 4793.[2]

Radiological Surveys:

- In 1975, Rocketdyne performed a final radiological survey during D&D of the facility; the results were published in the final D&D report in 1976.[3]
    - The survey found that all remaining surfaces were decontaminated to levels as low as reasonably achievable; in all cases below the levels for future unrestricted use (removable contamination of 20 dpm/100cm$^2\alpha$ or 100 dpm/100cm$^2\beta$).
    - The survey concluded that the site was free of radioactivity except for normal background.
- In July 1975, Rocketdyne performed surface scans of the KEWB to confirm that no radiological contamination remained.[4]
    - The survey found no levels of beta-gamma surface contamination above the measured background (0.15 – 0.25 mrad/hr).
    - The survey concluded that there was no radiation above background levels.
- In May 1983, Argonne National Laboratories performed a post remediation radiological survey to verify that the site was free of radioactivity except for normal background.[5]

  - The survey performed a surface scan to determine the ambient gamma exposure rate and low-level radiation levels. Soil samples were collected and analyzed for gamma radiation and uranium.
  - The survey found no measurements above background. Background is relatively high (40 μR/hr and 8,000 cts/min) due to the shine from nearby Buildings 4021 and 4022.
  - The survey concluded that the site could be released for unrestricted use.
- In August 1988, Rocketdyne performed surface scans measuring ambient gamma exposure rates to ensure that no contamination existed as a result of radioactive materials movement.[6]
  - Mean ambient gamma: 17.4 ± 0.96 μR/hr.
  - Background: 17.0 μR/hr.
  - Acceptable limit: 5.0 μR/hr above background.
  - The survey found no contamination above background levels.

Status:

- Building 4793 was demolished in 1975.
- The Energy Research and Development Administration released the land on which Building 4793 was located and the surrounding area for unrestricted use in 1976.[1]

References:

1- Letter from Stanley Stamp (ERDA) to W. F. Heine, "Decontamination and Disposition of ERDA Facilities," March 3, 1976.
2- Review of Radiation Safety Records Management System, 2003.
3- Rockwell International Report, AI-ERDA-13159, "KEWB Facilities Decontamination and Disposition Final Report," February 25, 1976.
4- Letter from R.K. Owen (Rockwell International) to R.J. Tuttle, "Radiation Survey – T073 (KEWB) Site," July 17, 1975.
5- Argonne National Laboratory, no document number, "Surplus Facilities Management Program, Interim Post Remedial Action Survey Report for Kinetic Experiment Water Boiler (KEWB) Facility, Santa Susana Field Laboratory, Rockwell International, Canoga Park, California," May 1983.
6- ETEC Document, GEN-ZR-0009, "Radiological Survey of the T513 Parking Lot; Old R/A Laundry Area; Plot 333; and Areas Between the SRE to RMDF, and KEWB to RMDF," August 26, 1988.
7- Historical Site Photographs from Boeing Database.
8- SSFL Area IV, ETEC Industrial Planning Maps, 1962-1992.

Photograph – Building 4793

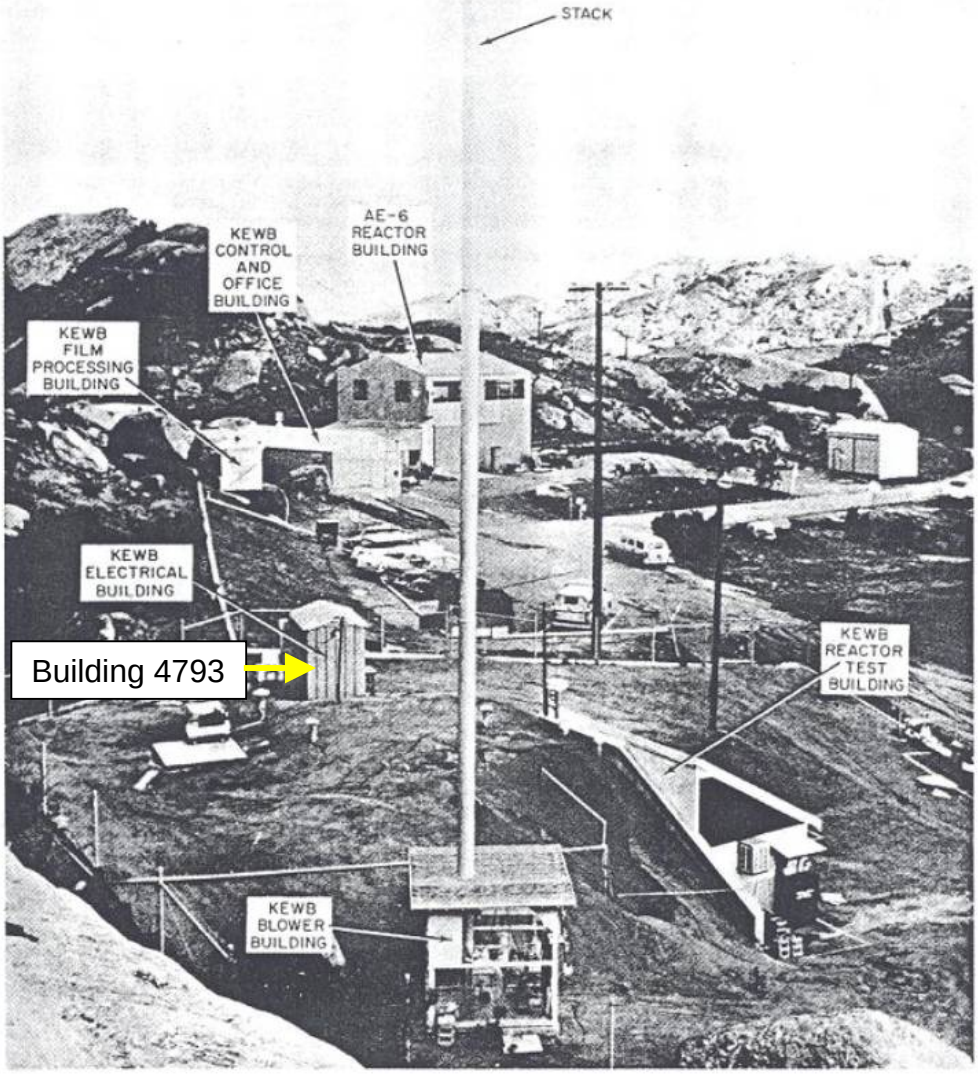

Figure 2 - Photograph of Kinetic Experiment Water Boiler Area and Facilities

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