American Jewish University

On November 4, 2015 local Los Angeles news station KNBC contacted Mr. Joel Cehn, an independent environmental consultant for AJU, regarding statements he made in a 1997 report (attached) about the question of potential contamination having migrated from the Santa Susanna Field Laboratory onto the Brandeis-Bardin campus.

Specifically, KNBC posed questions pertaining to statements made by Cehn regarding contamination found on a remote portion of the 2700 acre Brandeis-Bardin Campus. As a result of testing done back in 1997 and a subsequent law suit, this parcel was transferred to Rocketdyne (now Boeing) in 1998 and is no longer a part of the Brandeis Bardin campus.

When questioned about this report in 2015, Cehn told KNBC:

> "With regard to your email, my concerns about possible future migration from the 1990s have proven to be unfounded, as demonstrated by hundreds of tests conducted over the past 18 years. This testing has confirmed that there has been no migration of contamination onto the current Brandeis property. Any migration would be contained on the 100 acres transferred to Rocketdyne (now Boeing) in 1998.
>
> "My 1997 statement was based on the evidence we had at that time. It appears to me you are trying to create a construct and conclusion that are not accurate. At the time, I stated that portions of the 100-acre site -- not used for camp operations and ultimately sold to Rocketdyne -- were contaminated. Given that the contamination had migrated from SSFL to parts of that 100-acre site, we were concerned that the migration might continue to other areas of Brandeis. That didn't happen; any migration has remained on that 100-acre site.
>
> Between EPA, DTSC, my work and Boeing's work, which it appears you've reviewed, there have been thousands of tests. And the analyses I provided to AJU were based on those results. And there continues to be testing, as you know. My conclusion, shared by EPA and DTSC based on an enormous, nearly two decade testing regimen, is that Brandeis-Bardin provides a safe and protected environment for its campers, staff and visitors."

OPINIONS RELATED TO

ENVIRONMENTAL CONTAMINATION

AT BRANDEIS-BARDIN INSTITUTE

BRANDEIS, CALIFORNIA

by

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1036 Hubert Road
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510-268-1571

February 1997

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Opinions Related to Environmental Contamination

at Brandeis-Bardin Institute

A. STATEMENT OF OPINIONS

1. The Brandeis-Bardin Institute (Brandeis) property is contaminated, at both the surface and subsurface, with radiological and chemical contaminants. Radiological contaminants include tritium, strontium-90 and cesium-137. Chemical contaminants include trichloroethylene (TCE), polychlorinated biphenyls (PCBs), dichloroethylene (DCE), vinyl chloride, petroleum hydrocarbons, toluene, and polychlorinated dibenzo-p-dioxins/dibenzofurans (dioxins.)

2. The levels of contamination are highest at the southern end of the property, and increase in the direction of the southern property line with Rocketdyne. All of the contaminants are also found on the Rocketdyne property and, thus, originate on that property.

3. Contaminated ground water is moving toward the center of the Brandeis property (from south to north). This groundwater is contaminated with TCE, DCE, vinyl chloride and tritium.

4. Surface water, when present, also moves toward the center of the Brandeis property. Some of this water is contaminated with tritium, strontium-90 and dioxins.

5. Soil on the Brandeis property is contaminated with tritium, strontium-90, cesium-137, PCB, dioxins, toluene and petroleum hydrocarbons. During rainwater runoff events, this

soil is carried from the area of the southern property line, to central and northern areas of the Brandeis property.

6. Vegetation on the Brandeis property is contaminated with tritium, due to the plants' uptake of contaminated groundwater via their root systems.

B. DATA CONSIDERED

Studies of the Brandeis property began in 1991 and have continued to the present. These include ongoing studies of vegetation, surface soils, surface water and groundwater for radiological and chemical contaminants. Several of these studies have been conducted jointly with Rocketdyne. These include two "multi-media" studies (1992 and 1994) and a PCB/dioxin study at the FSDF (sodium burn pit, 1995.) Also considered are the groundwater monitoring data generated by Rocketdyne's consultant, Groundwater Resources, Inc.

Selected study results are presented on the attached Figures 1 through 6. These figures are updated periodically as additional data are generated.

C. QUALIFICATIONS

The author is a board-certified physicist with over 20 years experience in the field of health and safety--environmental studies, as well as workplace safety, employee training and public outreach. He has provided expert testimony in legal proceedings, and before various nuclear energy licensing boards. Testimony areas included potential for radiation injury, verification of dose, background radiation, and radiological

monitoring of the environment.

Education: M.S. Nuclear Engineering, North Carolina State University, 1971; B.S. Physics, Worcester Polytechnic Institute, 1969; Radiation Monitoring, Harvard University, 1979 (short course)

Professional Affiliations: Certified by The American Board of Health Physics, September 1978 - recertified 1982, 1989, 1994; National Research Council, Wash. DC. Member of National Academy of Sciences Committee on Decommissioning of Uranium Enrichment Facilities (1994-96).

Selected Publications:

1. *Low-Level Radiation Survey at Boston and Plymouth, Massachusetts*, with Ecological Analysts, Inc., June 1977.
2. *A Study of Radioactive Airborne Effluents from Particle Accelerators*, U.S. EPA Technical Note ORP/TAD 79-12, August 1979.
3. "A Statistical Data Base of Occupational Exposures to Ionizing Radiation in the United States for 1975," in *Occupational Radiation Exposure in Nuclear Fuel Cycle Facilities,* IAEA-SM-242/26 (1980) with S. C. Cohen and H. M. Polhemus.
4. "Radioactive Airborne Effluents from the Radiopharmaceutical Industry," presented at the Health Physics Society Annual Meeting, Philadelphia, Pennsylvania, July 10, 1979.
5. "Implications of a Reduction in Occupational Exposure Limits," with E. LeSurf and C.J. Wood, *Nuclear Plant Journal*, pp. 40-42, March-April, 1989.
6. "Review of Reported Cancer Clusters Near Nuclear Facilities," with L.A. Sagan, Health Physics Society *Newsletter*, September 1987.
7. "Reported Cancer Clusters and Nuclear Facilities: What Connection?" IAEA

Bulletin, Vol. 33, No. 2, 1991.

8. "Environmental Survey of a Summer Camp, Neighboring a Nuclear Research Laboratory," in *Environmental Health Physics*, R.L. Kathren, et.al. Editors, Research Enterprises, Richland, WA. 1993.

9. *Affordable Cleanup? Opportunities for Cost Reduction in the Decontamination and Decommissioning of the Nation's Uranium Enrichment Facilities,* National Research Council, Washington DC., 1996.

C. EXPERIENCE

The following project summaries describe some of the author's experience with environmental studies. Legal consulting experience is discussed in Section D.

1. Review of environmental data from Navy bases slated for closure; assessed contamination levels; consulted on remediation and risk assessment. Prepared work plans for shipyard radiological surveys.

2. Radiological surveys of buildings and grounds at the University of California, Berkeley. Surveys included surface and subsurface soil sampling and groundwater sampling. Characterization of leakage from a sewer line was of particular interest.

3. Radiological and meteorological monitoring in the environs of Pilgrim Nuclear Power Station (Massachusetts, 1974-77.) Evaluated the environmental, radiological impacts of the operation of the nuclear power station. Investigated the causes of unusual environmental data, and conducted special studies.

4. Radiological survey of a golf course on an Air Force base (in California) to locate buried radioactive waste. Also took groundwater samples from the base, to analyze for radioactivity and assess measured levels.

5. Radiological survey of buildings and property in Culver City, CA. Prepared documentation for unrestricted use (no radioactive contamination found.)

6. Remediation of contaminated soil at Sacramento Army Depot, to ensure that radium contamination was properly handled. Reviewed innovative soil stabilization technique, and recommended radiological surveys that were incorporated into remediation.

D. LEGAL EXPERIENCE

The author recently (Fall, 1995) consulted on a personal injury case, involving exposure to nuclear radiation. (Salvati vs. Amersham, et.al., Superior Court [Ventura County] Case no. CIV 150457) and prepared testimony for the defense. The case was settled before going to trial.

Regarding fees, my hourly rate for legal consulting is $125. My rate for presenting court testimony is $200 per hour.

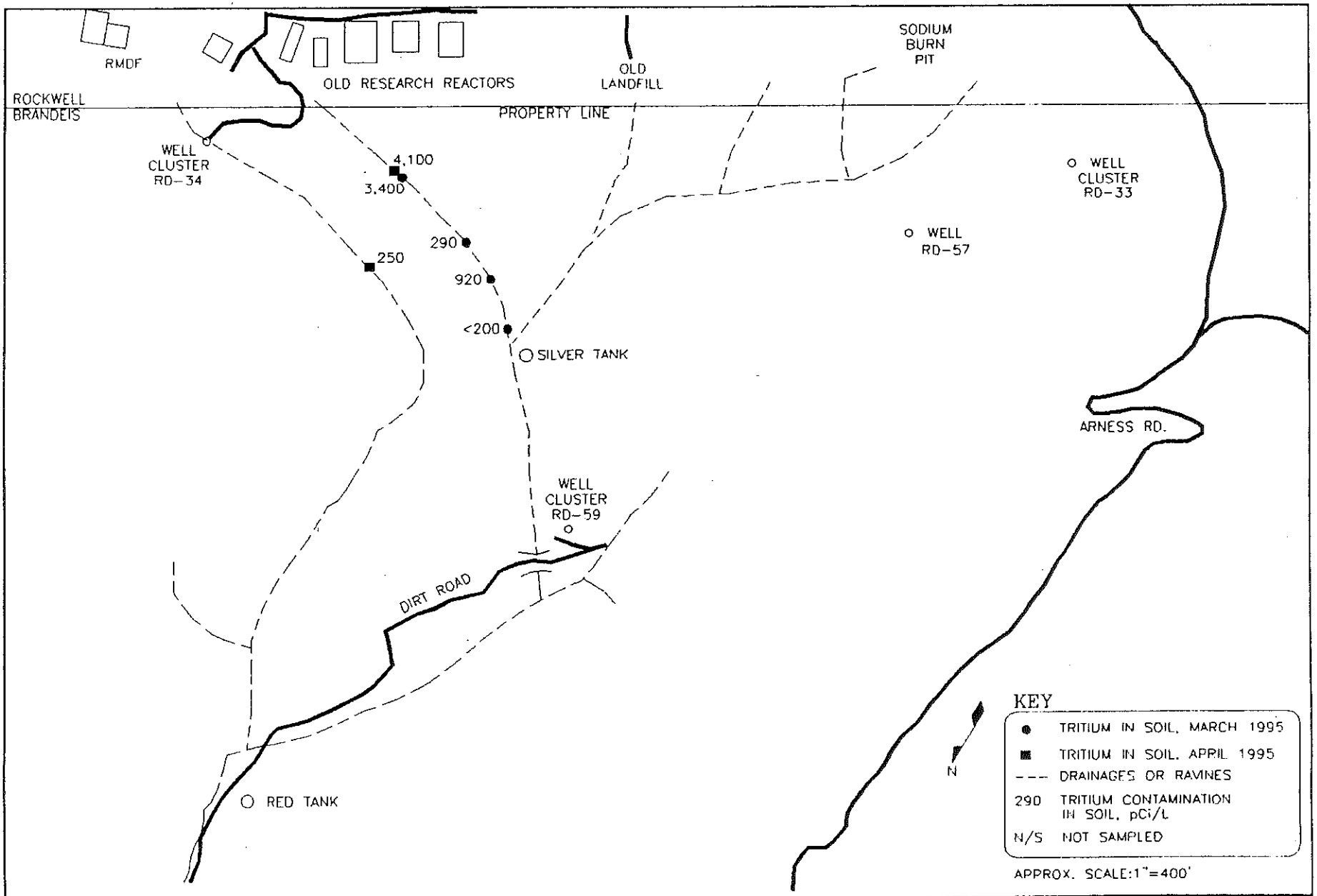

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FIG. 1

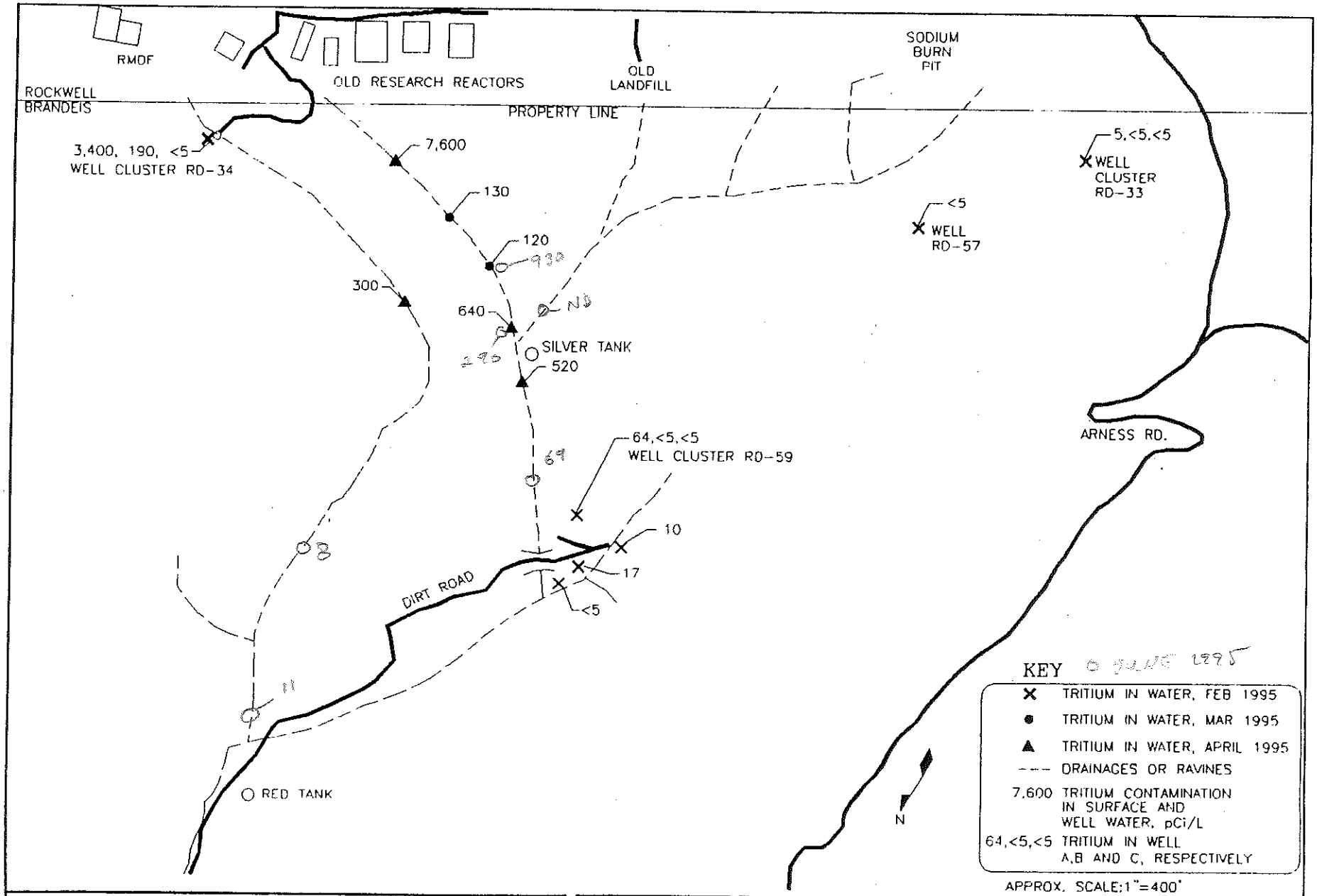

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FIG. 2

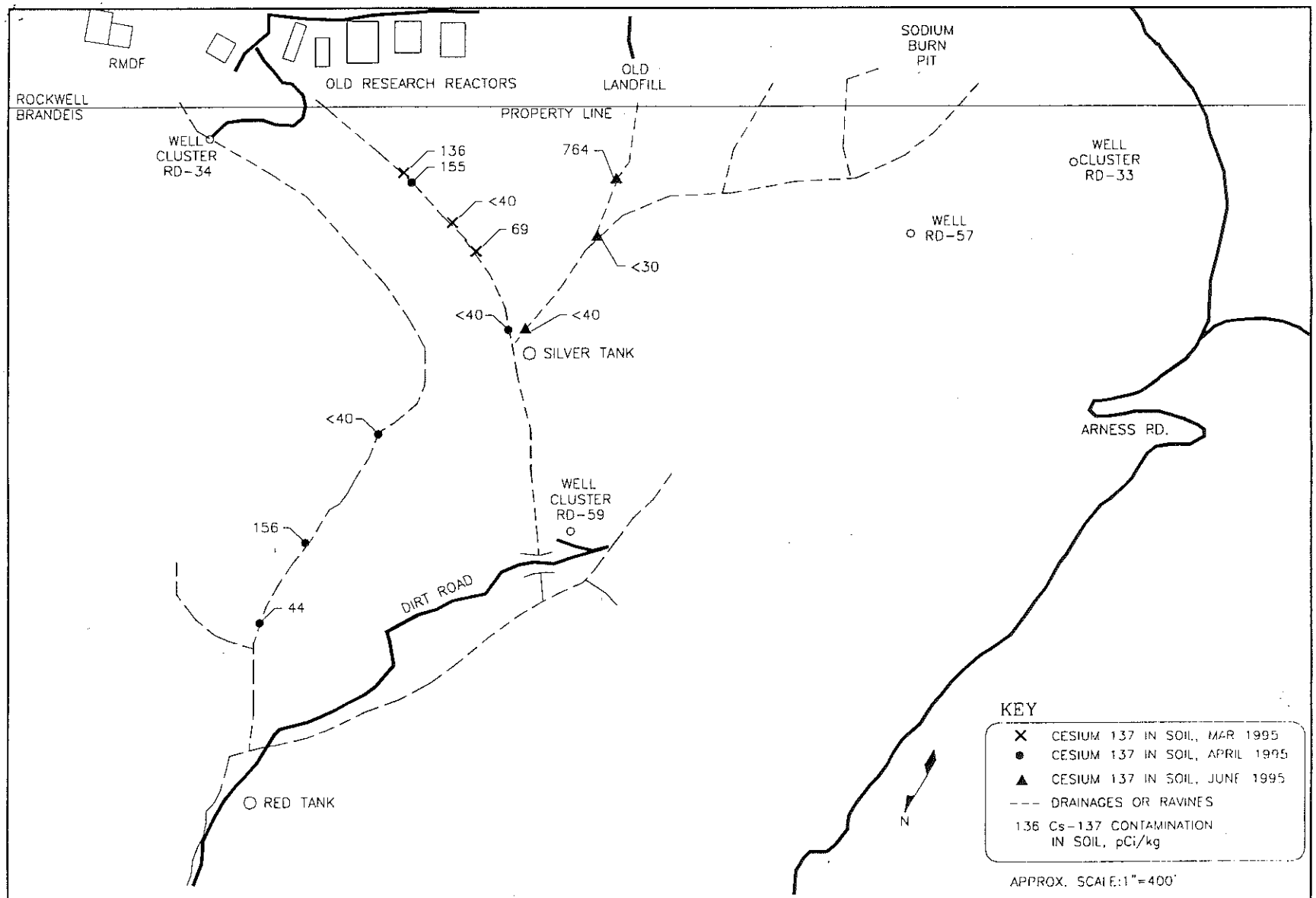

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FIG. 3

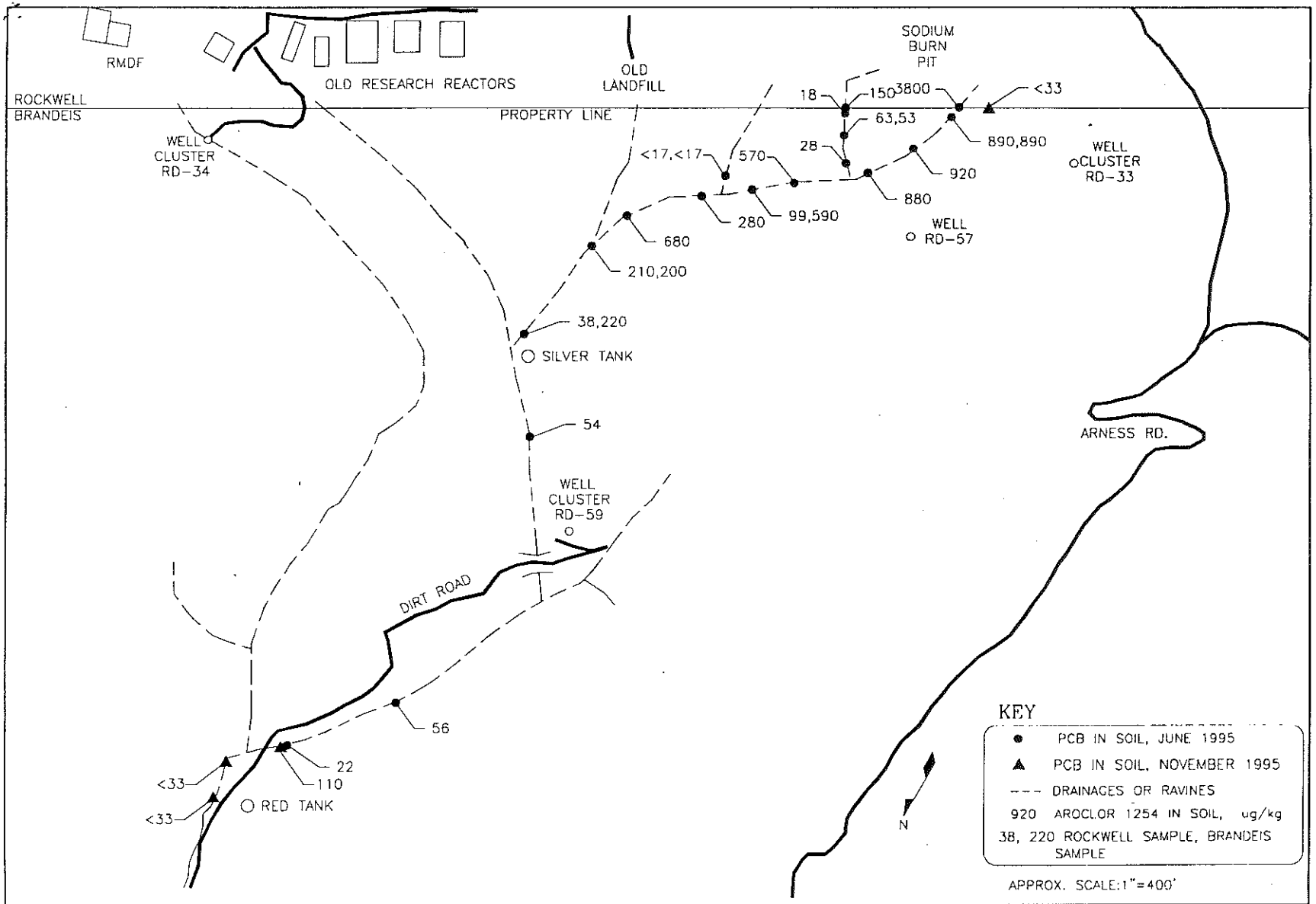

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FIG. 4

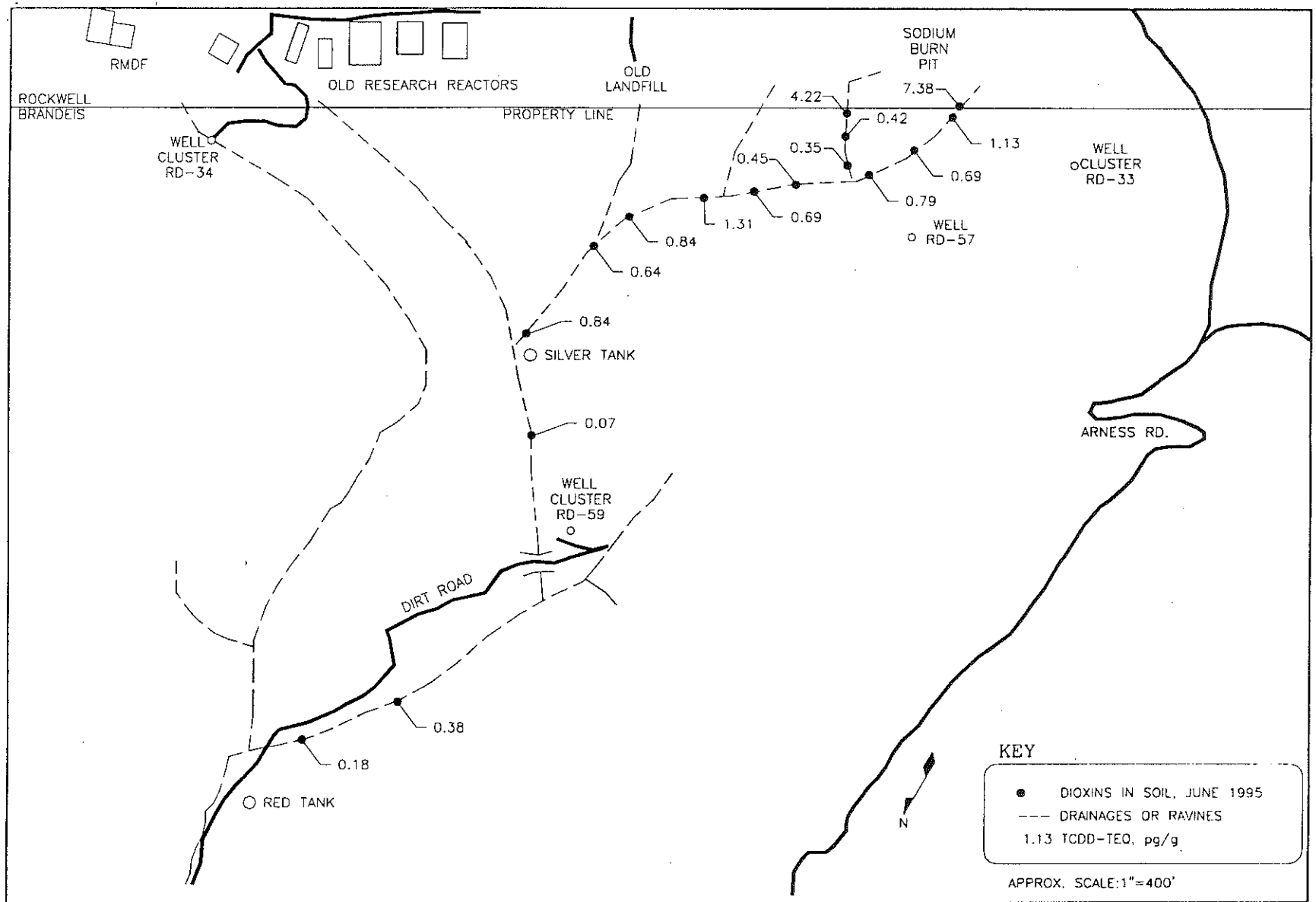

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FIG. 5

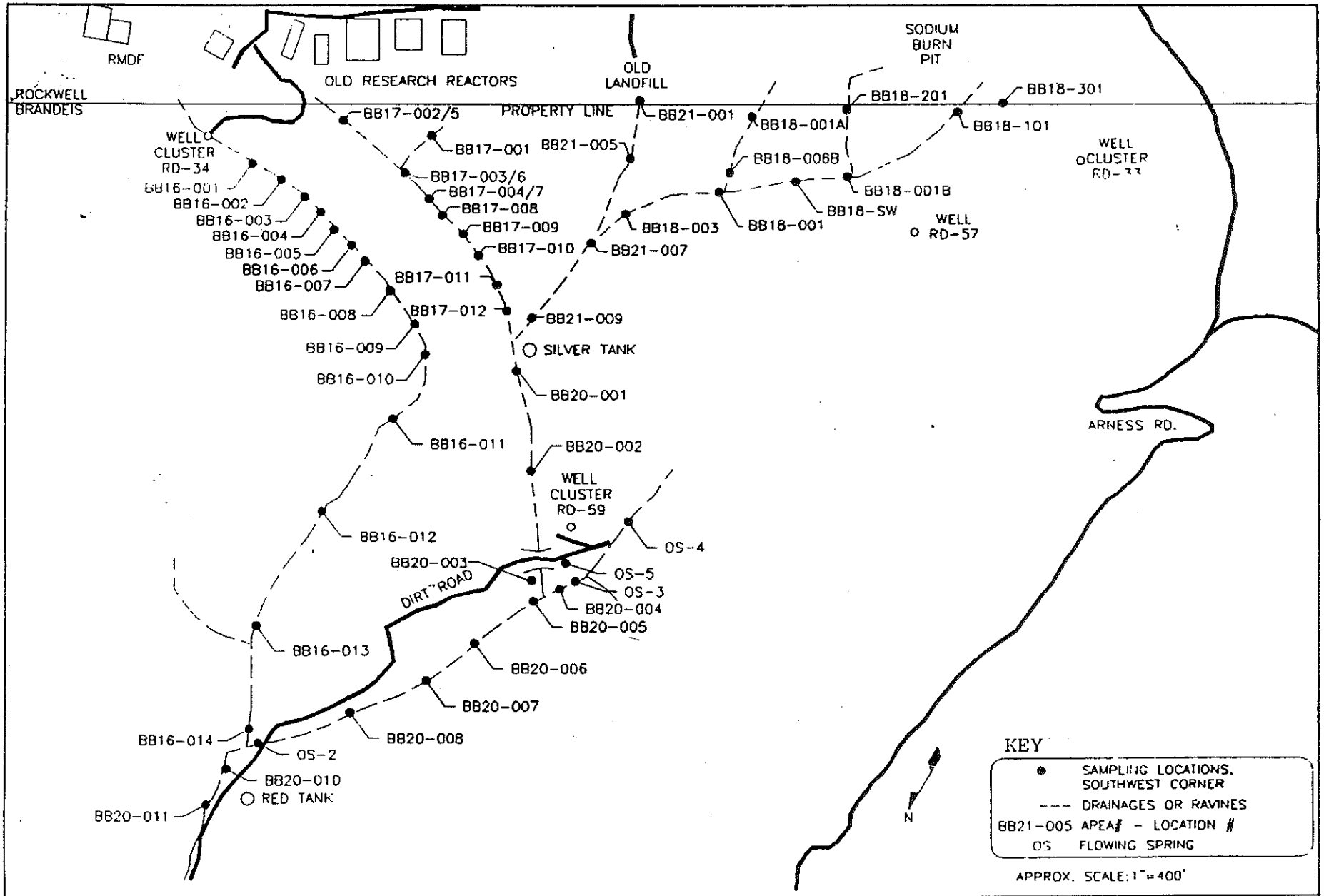

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FIG. 6