Environmental Documents

Request 13: Documents given to contractors regarding environmental issues at West Los Angeles

[redacted]

77. Brentwood School Project, Environmental Documents (1981-1983)

BRENTWOOD SCHOOL PROJECT

ENVIRONMENTAL DOCUMENTS

Volume One

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BRENTWOOD SCHOOL PROJECT

ENVIRONMENTAL DOCUMENTS

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CERTIFICATION

As a public disclosure document, the Final Environmental Impact Report (EIR) for the Barrington Recreation Center Addition adequately addresses the significant environmental issues of the proposed project, and complies with the California Environmental Quality Act (CEQA), the State EIR Guidelines, and the City of Los Angeles CEQA Guidelines.

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Planning and Development

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I. SUMMARY OF ENVIRONMENTAL IMPACTS

The Initial Study and Checklist identified a number of environmental parameters that would be affected by the proposed project. Minor (nonsignificant) environmental parameters that were briefly discussed included: earth/soil; air quality; hydrology; plant life; light and glare; land use; utilities; and cultural/archaeological resources.

The EIR for the proposed Barrington Recreation Center Addition "focused" primarily on four major environmental parameters: noise; recreation; traffic circulation and parking; and radiological health and safety.

Noise: The primary source of noise will be from motor vehicles approaching and/or leaving the proposed recreation facility. Using the Federal Highway Administration (FHWA) Highway Traffic Noise Prediction Model, it was calculated that the proposed project would cause a noise level increase of less than one dBA. This is insignificant considering that the human ear is barely able to discern a noise increase of three dBA.

Recreation: The proposed recreation facility will provide an additional twelve acres of outdoor recreational space for the residents of Brentwood and the surrounding communities.

Traffic Circulation and Parking: Detailed traffic analyses of future traffic conditions (with and without project) were performed at the following four intersections:

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- o Barrington Avenue and Sunset Boulevard
- o Barrington Place and Sunset Boulevard
- o Barrington Avenue and Montana Avenue
- o Barrington Avenue and San Vicente Boulevard

Using 1984 as the "future year", the determination of future traffic volumes was based on two important computations. First, the expected traffic from "related projects" (other projects planned or under development, that would add traffic to the surrounding street system) was calculated. Secondly, a 1984 benchmark figure was developed by multiplying the 1982 peak hour traffic by a 1.5 percent per year growth factor. The 1984 peak hour traffic volumes were then derived by summing the results of the two computations.

Using the 1984 peak hour traffic volumes, it was determined that the development of the proposed recreation facility would have significant traffic impacts at the following intersections:

- o Barrington Avenue and Sunset Boulevard
- o Barrington Place and Sunset Boulevard

However, proposed mitigation measures such as a deceleration lane and left turn lane will serve to smooth traffic operations around the proposed recreation facility.

Furthermore, since the construction of the deceleration lane will eliminate some curb-side parking spaces along Barrington Avenue, a 56-stall (possibly more) "neighborhood parking" area will be developed to offset this impact.

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Radiological Health and Safety: During the period that spanned from the early 1950's up till 1968, the Veterans Administration (West Los Angeles) conducted on-site land burials of low-level radioactive biomedical wastes. The former disposal area is located near the southeastern corner of the proposed project site.

Based on the evaluations of radiation health and safety experts, and the results of radiological analyses and surveys, it was determined that the buried biomedical wastes would not pose any undue health risks to the public, and that the proposed recreation facility could be developed without any land use restrictions.

ENVIRONMENTAL IMPACT

SUMMARY

ENVIRONMENTAL ELEMENTS			ENVIRONMENTAL IMPACT: NO EFFECT	NO APPRECIABLE IMPACT	POSITIVE OR BENEFICIAL IMPACT	NEGATIVE OR ADVERSE IMPACT	UNDETERMINED IMPACT	MITIGATION MEASURES AVAILABLE
PHYSICAL/CHEMICAL		Land Use			⊕			
	Environmental Quality & Pollution	Air		⊕				
		Water	⊕					
		Solid Waste	⊕					
		Noise		⊕				
		Odor	⊕					
		Light and Glare	⊕					
		Soil and Geology		⊕				
	Transportation System	Traffic Circulation				⊕		⊕
		Parking			⊕			
		Public Transportation	⊕					
		Hydrology		⊕				
		Meteorology/Climatology	⊕					
BIOLOGICAL		Natural Resource Mgmt.	⊕					
		Wildlife	⊕					
		Plant Life		⊕				
		Endangered Species	⊕					
		Natural Ecosystems	⊕					
SOCIOECONOMIC		Community Infrastructure	⊕					
		Energy Consumption/Conserv.	⊕					
		Public Services		⊕				
		Health and Safety		⊕				
		Demography	⊕					
		Business and Industry	⊕					

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ENVIRONMENTAL IMPACT SUMMARY

ENVIRONMENTAL ELEMENTS		NO EFFECT	NO APPRECIABLE IMPACT	POSITIVE OR BENEFICIAL IMPACT	NEGATIVE OR ADVERSE IMPACT	UNDETERMINED IMPACT	MITIGATION MEASURES AVAILABLE
		ENVIRONMENTAL IMPACT					
AESTHETIC/HUMAN INTEREST	Visual/Scenic Amenities			⊕			
	Open Space			⊕			
	Recreation/Leisure			⊕			
	Historic Structures	⊕					
	Archaeological/ Cultural Resources	⊕					
	Neighborhood Character			⊕			

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II. BACKGROUND

INTRODUCTION

The purpose of the proposed project (Barrington Recreation Center Addition) is to lease for an intial term of three years, approximately twelve acres of federal property from the Veterans Administration (West Los Angeles), and develop it into a community outdoor recreation facility.

The Draft Environmental Impact Report (DEIR) for the Barrington Recreation Center Addition was prepared in accordance with the procedural requirements of the California Environmental Quality Act (CEQA), and the City of Los Angeles CEQA Guidelines.

The DEIR identifies the environmental elements (i.e., air, water) that may be significantly impacted by the project's activities; it describes the nature and scope of the impacts; and, if necessary, proposes mitigation measures to alleviate any significaly adverse impacts to an acceptable level.

As a public disclosure document the EIR will serve to inform concerned citizens, governmental agencies, and public decision-makers of the potentially significant impacts (adverse and beneficial) the proposed project may have on the human and natural environments.

HISTORICAL OVERVIEW

The Veterans Administration (VA) - Wadsworth/Brentwood Medical Center is a general medical and surgical facility located in West Los Angeles. It provides comprehensive health care services to veterans and their dependents. During the process of conducting medical research and/or performing medical diagnostic and therapeutic treatments, radioactive and organic biomedical wastes are generated which ultimately must be disposed.

Starting in the early 1950's and ending in the year 1968, the VA used a small portion (1-2 acres) of their undeveloped property north of the Medical Center for burying biomedical wastes. In 1968, the VA terminated the practice of on-site land burials, pending the sale of some of their undeveloped property (including the burial site). Subsequently, the VA contracted the services of a commerical waste hauler to transport the biomedical wastes to an authorized landfill.

In 1969, the Department of Housing and Urban Development (HUD) formally requested the VA (West Los Angeles) to relinquish a portion of their property for the development of a community housing project. The VA approved the request, declaring fifty (50) acres of land surplus property.

The land disposal proceedings were administered by the General Services Administration (GSA). Because the surplus fifty acres encompassed the one to two acre area where the VA had disposed of radioactive biomedical wastes, the GSA requested the Atomic Energy Commission (AEC) to make a determination whether there should be any "restrictive or limiting conditions" imposed on future uses of the property.

In making an evaluation, the AEC's Division of Materials Licensing reviewed the VA's existing disposal records (1960-1968) and made site inspections. They concluded that the VA had conformed with 10 CFR 20 (specifically Section 20.304), and that the property could be released without the imposition of regulatory or land use restrictions.

However, because HUD failed to follow up on its request, the VA regained control of the property in December 1969.

During the 1970's the VA's undeveloped property was considered for its recreational value. It was during these years that Brentwood, as well as other communities throughout Los Angeles, experienced an increased demand for participation in youth/adult outdoor sports programs.

In Brentwood, the Barrington Park Center Service Association - a recreational advisory group - realized the existing Barrington Recreation Center (5 acres) was too small to accommodate these demands. Therefore, they sought the acquisition of a portion of the VA's property on which to develop additional outdoor recreational facilities.

In August 1979, the Association with strong support and assistance from the offices of Congressman Beilenson (23rd Congressional District) and Councilman Braude (11th City Council District), and from the American Youth Soccer Organization (AYSO), were successful in obtaining a three-year lease agreement from the VA for the use of a twelve acre site.

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After acquiring the lease, Councilman Braude and the Association realized that the Los Angeles Department of Recreation and Parks, with its fiscal and personnel resources, would be better able to develop, administer and maintain the site. Hence, they requested the Department to assume the lease.

On February 21, 1980, based on staff recommendations, the Board of Recreation and Park Commissioners endorsed the concept of acquiring the Association's lease and developing the site for public recreational use. At the request of the City of Los Angeles, through the Department of Recreation and Parks, the VA is presently preparing a new lease agreement.

Public meetings were held on February 26, 1980, and February 24, 1981, at the Barrington Recreation Center (333 S. Barrington Avenue, Brentwood), to present the recreational features of the proposed Barrington Recreation Center Addition, and to identify the environmental values and concerns of the community.

In December 1981, a Notice of Preparation (NOP) was circulated to the interested public and governmental agencies declaring that the City of Los Angeles Department of Recreation and Parks (Lead Agency) was in the process of preparing an Environmental Impact Report (EIR) for the Barrington Recreation Center Additon.

Copies of the Draft EIR (DEIR) were circulated for public review and comment from December 16, 1982 to January 28, 1983. During this period a public hearing was held on the adequacy of the DEIR (January 12, 1983) at Stoner Recreation Center.

III. PROJECT DESCRIPTION

LOCATION

The project site is located just outside the Brentwood community on the northwestern portion of the Veterans Administration - Wadsworth/Brentwood Medical Center. The U.S. Post Office (Barrington Station) lies to the north, and Barrington Avenue (200-300 Block) parallels the western boundary of the site. (See Figures 1 and 2)

B. GOALS AND OBJECTIVES

The objectives of the project are as follows:

1. Provide community residents with an area suitable for youth/adult recreation activities (both active and passive).
2. Integrate and coordinate recreational planning and environmental planning* efforts.
3. Seek and encourage public participation in the environmental review process.
4. Optimize the allocation of recreational resources.
5. Maintain a compatible balance between enviromental values and human/social values.
6. Emphasize a high level of public safety and convenience.
7. Promote and preserve the site's open space and aesthetic features.

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*Environmental planning is defined as the integration of physical and social factors with an emphasis on natural ecosystems, environmental impact analysis, and the design and management of open space to provide for the public health, safety and welfare.

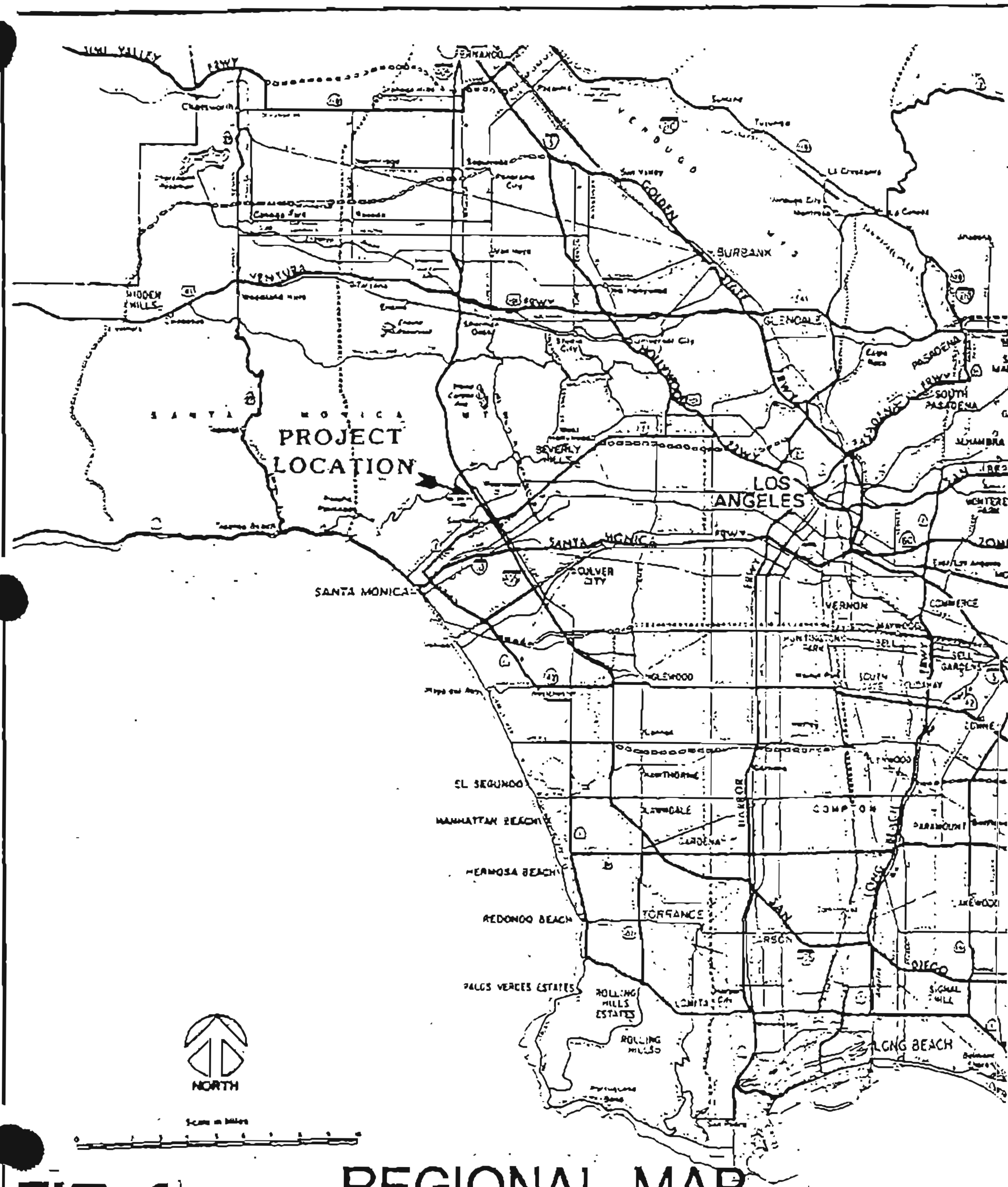

FIG. 1 REGIONAL MAP

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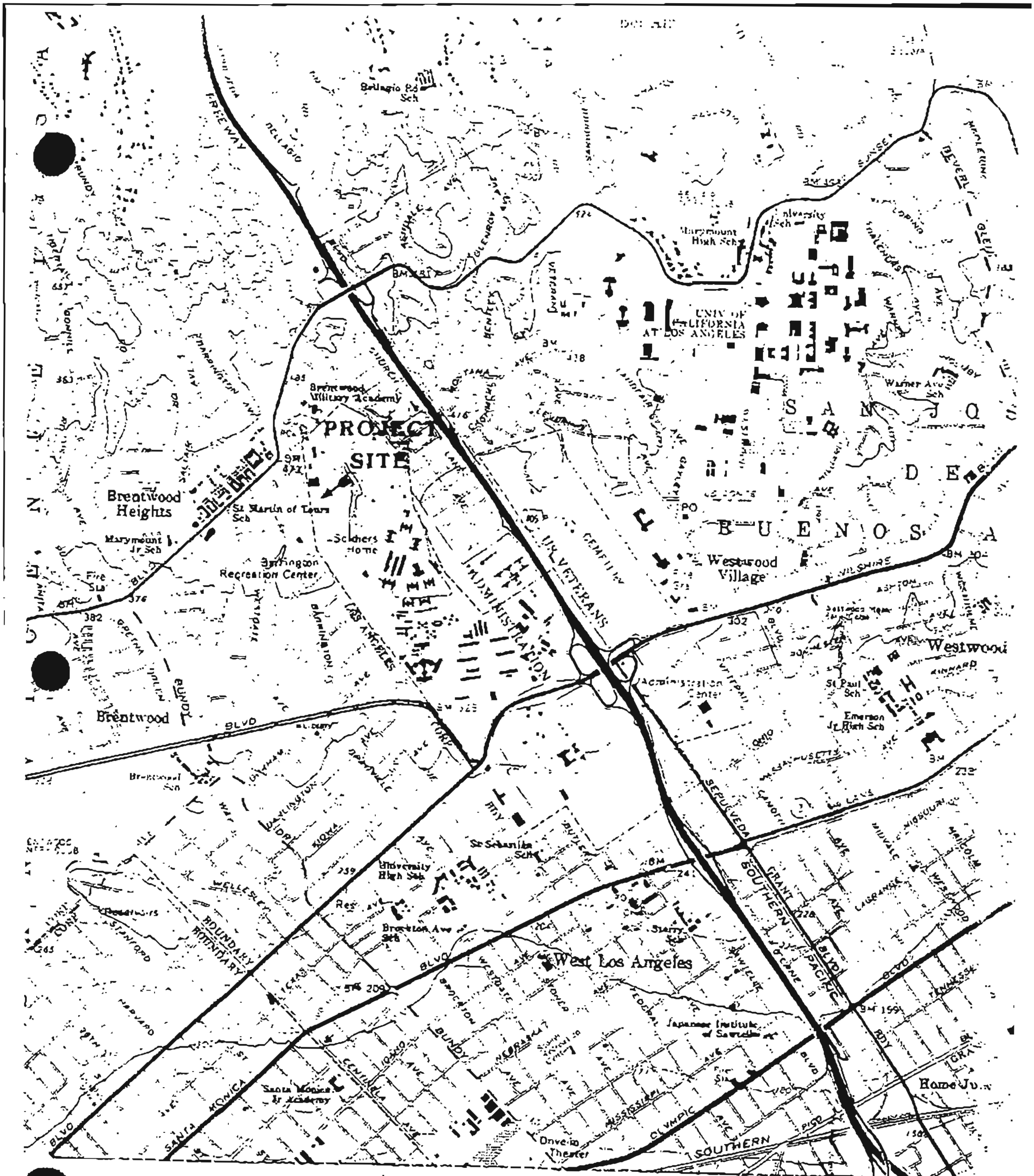

G. 2 LOCAL VICINITY MAP

SOURCE: USGS TOPO MAP

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C. FACILITY FEATURES AND CHARACTERISTICS

The proposed Barrington Recreation Center Addition would include the following recreation and parking facilities:

- o Two multi-purpose playing fields, each developed with a baseball diamond and backstop, to provide a recreation area for team sports activities (i.e., baseball, soccer, football).
- o Jogging trail/par-course.
- o Passive recreation area and landscape amenities. Picnic tables and park benches will be provided in this area.
- o Restroom facilities and drinking fountains.
- o A 90-stall parking facility intended exclusively for participant/spectator use.
- o A 56-stall parking facility intended exclusively for neighborhood use.

The layout of the proposed recreation facility is illustrated on Preliminary Site Plan IIA (Figure 3).

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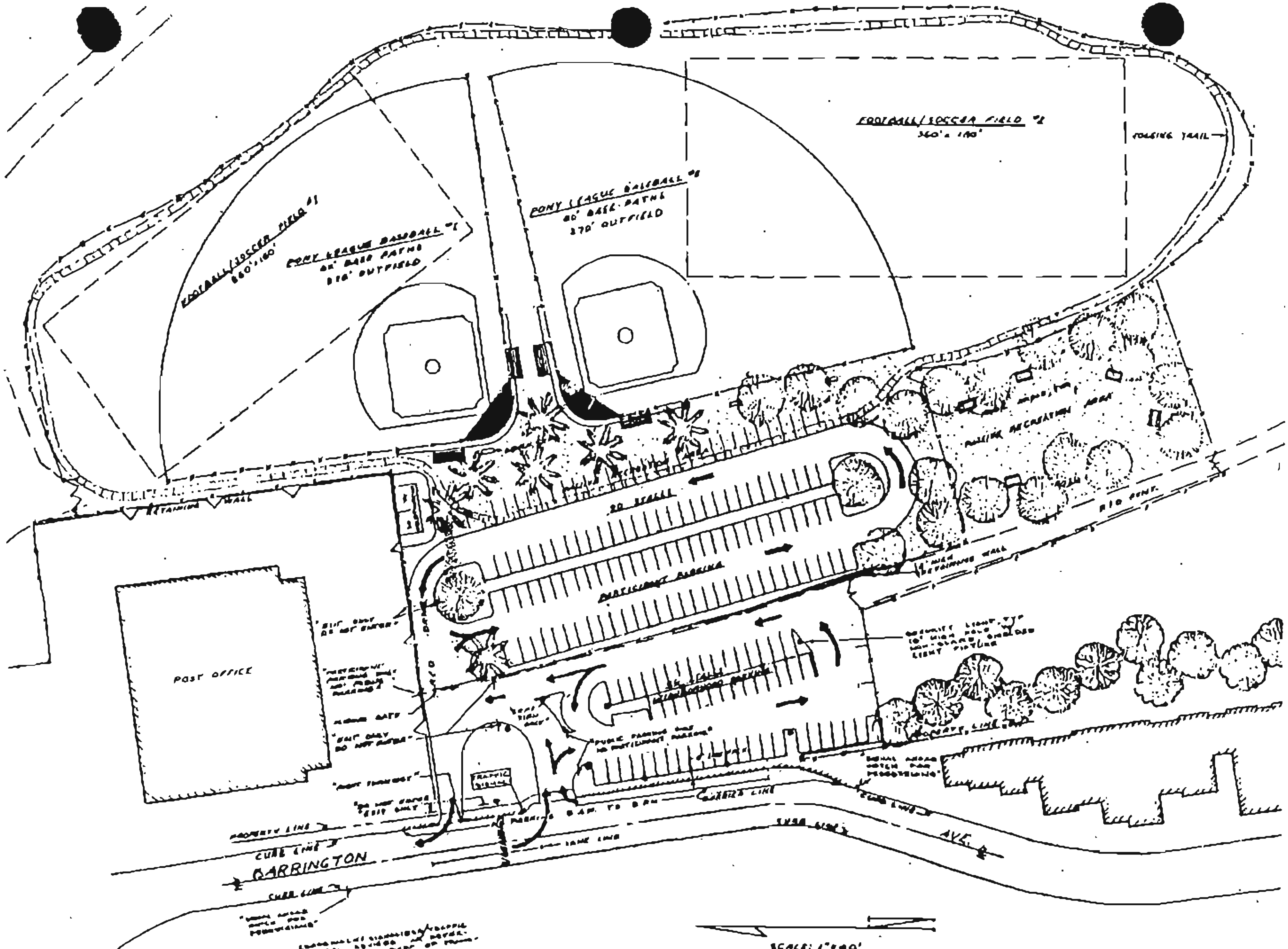

BARRINGTON REC. CTR. - PRELIMINARY SITE PLAN IIA

Figure 3

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IV. BRIEF DESCRIPTION OF THE ENVIRONMENTAL SETTING

The proposed Barrington Recreation Center Addition is located in an unincorporated area of Los Angeles County, between the communities of Brentwood to the west and Westwood to the east. The twelve acre site is federal property currently under the jurisdiction of the Veterans Administration (VA) - Wadsworth/Brentwood Medical Center. A lease agreement prepared by the VA and approved by the Board of Recreation and Park Commissioners, will allow the City of Los Angeles Department of Recreation and Parks to develop, operate and maintain the site for public recreational uses.

The project site is situated on the northwestern fringes of the 158 acre Brentwood Medical Center. Land uses in the immediate vicinity of the site (within 600-800 feet of the project boundaries) include the Brentwood Medical Center to the southeast; undeveloped, open-space VA property to the north and east; the U.S. Post Office to the north; Brentwood Village to the northwest; undeveloped VA property and multiple-family dwellings to the south; and Barrington Avenue, multiple-family dwellings and the Barrington Recreation Center to the west.

The topography of the project site is characterized by a gently sloping terrain. The greatest change in elevation is approximately fifty (50) feet from the northeastern edge of the site (450 feet above sea level) to the southwestern boundary (400 feet above sea level). A ravine borders the eastern perimeter of the site. As a natural water course, the ravine has a stream flowing through it only during the rain season.

The project site has been substantially altered by human activities. Concrete rubble and other demolition debris from the old Wadsworth Hospital were buried on the site and surrounding area. Evidence of these materials can still be seen scattered over the surface of the site and embedded in the sides of the ravine.

The existing flora on the site consist primarily of natural grasses and "weedy" species that have short life cycles. Some scattered shrubs occupy the area, but the most dominating vegetative feature is a stand of mature eucalyptus trees clustered along the western boundary of the site.

The wildlife habitat potential of the project site is very limited because of existing vegetative conditions, urbanization, etc. The predominant wildlife species inhabitating the site are small burrowing mammals (i.e., ground squirrels, gophers); lizards; and various species of birds (i.e., doves, mockingbirds) that use the site for foraging and escape cover. Coyotes from the nearby Santa Monica mountains have been known to roam the area in search of food.

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V. ENVIRONMNETAL ANALYSIS

EARTH/SOIL

The major component of the site preparation phase of the project will involve the use of fill material to modify existing grade characteristics. This action will require the importation of 60-80 thousand cubic yards of dirt, which, on the average, will result in the addition of about five feet of surface soil over the site. Some minor cutting will be necessary on the northeastern portion of the site. Furthermore, development of the multi-purpose playing fields and the parking area will require soil compaction to support intensive-use activities. Since the site has no environmentally sensitive resources or features, these project actions will have insignificant impacts.

AIR QUALITY

Since the project involves the development of an outdoor recreation facility, there will be no stationary sources of air pollution. Implementation of the project will result in two indirect sources of air pollution:

1. The use of automobiles to travel to the recreation site will result in the emission of hydrocarbons and carbon monoxide. However, based on the expected number of vehicular trips attributed to the use of the proposed Barrington Recreation Center Addition, any increase in the concentrations of air pollutants will be insignificant and will not result in the violation of any ambient air quality standards.
2. The site preparation and construction phases of the project (i.e., soil compaction, cutting and filling) will result in the generation of fugitive dust, and the emission of exhaust from the use of heavy-duty vehicles. Because of the short-term nature of the site preparation and construction activities, these pollutants will have little impact on air quality and sensitive receptors in the area.

C. HYDROLOGY

The spreading of fill material, the compaction of soil, and the construction on an asphalt parking area will have a minor impact on surface runoff and site drainage patterns. Surface or groundwater resources will not be affected by the project.

D. PLANT LIFE

Construction of the parking area will require the removal of approximately 18 eucalyptus trees along the western boundary of the project site. Because of the large number of eucalyptus trees existing on the site, this action will have a minor impact on vegetative features. Moreover, landscape amenities will be provided to enhance the aesthetic and scenic character of the proposed recreation site.

E. LIGHT AND GLARE

The project will provide security lighting within the neighborhood parking area. As prohibited in the lease agreement, there will be no installation of any sports field lighting.

F. LAND USE

The project site lies within the planning area covered by the Westwood Community Plan. This plan states that large portions of federal surplus lands should be retained for public open space and recreation, and it proposes the development of a regional park in the general area of the proposed Barrington Recreation Center Addition. The project site, as well as the surrounding land area, has a R-4 zoning (multiple-zoning) which allows for the development of multiple-family dwellings. The project site is currently an undeveloped, open-space area. Its conversion for use as a public recreation facility will conform with the land use policies of the Westwood Community Plan and the existing zoning.

G. UTILITIES

Infrastructure improvements (i.e., electrical power, water and sanitary lines) will be required on the project site to support such features as the security lighting in the neighborhood parking area, drinking fountains, restroom facilities, and the landscape irrigation system. A storm water drainage system will have to be provided to control site drainage.

H. CULTURAL/ARCHAEOLOGICAL RESOURCES

An archaeological resource survey was conducted by Dr. Brian Dillon, Consulting Archeologist, in November 1980. Following an archival search of documents and a thorough field reconnaissance of the project site, Dr. Dillon concluded that the recreational development of the site would not adversely impact any known archaeological resources. However, if during the construction phase of the project cultural or archaeological artificts should be encountered, all work activities will be immediately halted and a professional archaeologist will be contacted to make an assessment of the findings.

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I. NOISE

Existing Conditions

The primary source of environmental noise near the project site is from the northbound/southbound movement of motor vehicles on Barrington Avenue. The City of Los Angeles Department of General Services/Standards conducted noise level measurements from three locations near Barrington Avenue during the morning and evening peak-hour traffic. Based on these measurements, the average energy-equivalent noise level (Leq)[1] was calculated to be /1 dBA[2] (noise level measurements ranged fom 68-74 dBA).

Environmental Impacts

To determine the potential noise impacts of the proposed project, the nomograph method and the manual noise prediction method, both outlined in the Federal Highway Administration (FHWA) Highway Traffic Noise Prediction Model, were used to make a quantitative assesment. The model is based upon calculating the hourly Leq for automobiles, medium trucks, and heavy trucks seperately and then adding these logarithmically to obtain the overall hourly Leq.

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[1]Leq is an average level based on the average energy content of the noise rather than average noise pressure level. It is the constant noise level which would contain the same amount of acoustical energy as a fluctuating level for a given period. Leq values are usually A-weighted.

[2]The dBA notation stands for A-weighted decibel. The A-weighted scale has been designed to weight the various components of noise according to the response of the human ear; that is, the ear does not perceive low frequency or high frequency sound as well as the middle frequencies. Therefore in the dBA scale, noise with predominant middle frequencies is given a much higher loudness value than noises which are predominantly low or high frequency in nature.

The highway noise model required the following data:

- PM peak-hour traffic volumes on Barrington Avenue (northbound and southbound) for "without project" conditions and "with project" conditions. This data was obtained from the traffic analysis report;*
- Vehicle speed (in kilometers per hour);
- Motor vehicle mix. An assumption was made that automobiles constituted 95% of the vehicles travelling on Barrington Avenue; medium trucks[1] 3%; and heavy trucks[2] 2%; and,
- Perpendicular distance (in meters) from the center-line of the near traffic lane to the noise receptor; and from the far traffic lane to the noise receptor.

Three noise-sensitive receptors were chosen in order to make a noise impact prediction. These receptors were represented by the multiple-family dwellings nearest the project site: Sunset Barrington Gardens (R-1); Brentwood Sunset (R-2); and Barrington Townhouse (R-3).

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[1] A medium truck can have two or three axles and must weigh between 10,000 and 24,000 lbs.

[2] A heavy truck is one that has three or more axles and weighs more than 24,000 lbs.

*"Traffic Analysis for the Proposed Development of the Barrington Recreation Center Addition"; Crain and Associates, September 1982.

Predicted noise levels (Leq(h) dBA) at the three noise-sensitive receptors (R-1, R-2, R-3) are shown in Table 1.

TABLE 1

Noise Receptor	Leq(h) dBA Without Project	With Project	Change in Noise Level
R-1	70.5	70.9	0.4
R-2	69.2	69.6	0.4
R-3	71.7	72.1	0.4

Based on the predicted noise levels for "without project" conditions and "with project" conditions, the development of the park site will cause an increase noise level at the three receptors of less than one dBA. This noise increase is insignificant when one considers that the human ear is just barely able to discern a noise increase of three dBA.

Besides traffic-induced noise, the use of trucks and heavy machinery (i.e., grading and compaction equipment) during the site preparation and construction phases of the project will cause an increase in existing noise levels. However, construction-related noise impacts will be short-term (lasting only for the duration of the construction phase). Construction activities will be restricted to certain periods of the day to minimize annoyance to nearby residents.

Noise will also result during the use of the recreation site for sports events, etc. (i.e., vocal noise). However, the terms of the lease agreement restricts the use of the site to the daylight hours only, and prohibits the use of any amplification systems.

Furthermore, after considering the distance from the playing fields to the noise-sensitive receptors (i.e., apartments, condominimums); the attenuating properties of the eucalyptus trees along the western boundary of the site; as well as the attentuating properties of the exterior of the apartment building, the level of vocal noises generated during those periods when the sports fields are being used will be insignificant.

Mitigation Measures

None required.

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J. PUBLIC RECREATION FACILITIES

Existing Conditions

The Barrington Recreation Center serves the recreational needs of the residents of the Brentwood community. This five acre facility has a community building, four tennis courts, a basketball court, a children's play area, and one baseball field. Because of the growing interest in youth/adult outdoor team sports activities, particularly soccer, there has been a strong community demand for the provision of more playing fields. These demands can only be met through the acquisition and development of additional community recreational sites.

The Public Recreation Plan (Section 1)-- a portion of the Service Systems Element of the Los Angeles City General Plan--sets forth a minimum standard of 2 acres of neighborhood/community recreational sites per 1000 persons. With a population of 8,137 (1980 census), the Brentwood community should have a recreation site of approximately 16 acres in size. Therefore, with respect to the local recreation standards, Brentwood is deficient in recreational sites by eleven acres. Both the Public Recreation Plan and the Westwood Community Plan propose the development of a regional park in the general area of the project site.

Figure 4 illustrates the location of other City recreational facilities in the West Los Angeles area. As a supplement to Figure 4, Table 2 identifies the outdoor recreation features of each of these existing facilities.

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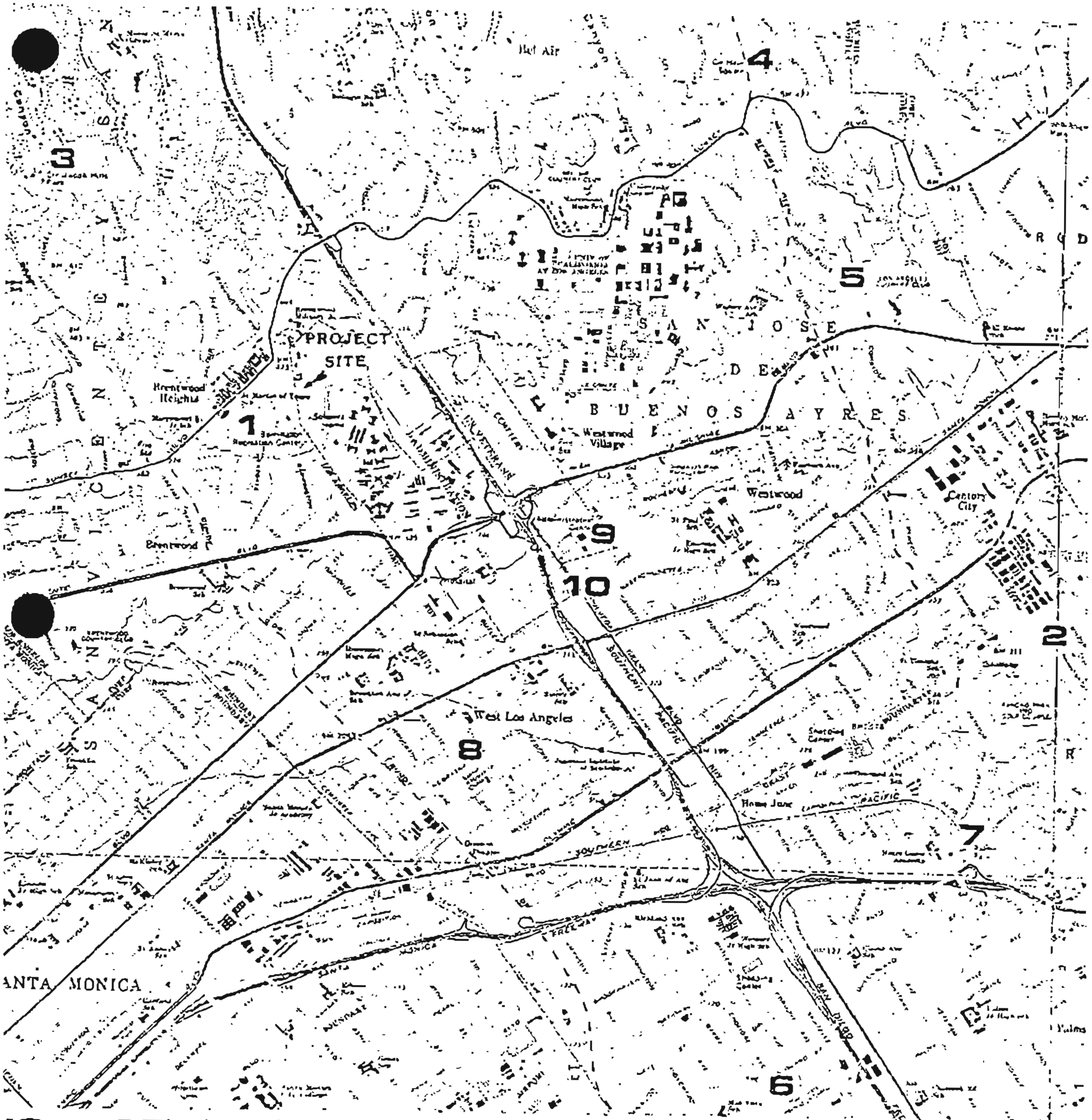

FIG. DEPT. OF RECREATION AND PARKS FACILITIES (WEST L.A. AREA)

SOURCE: USGS TOPO MAP

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TABLE 2

RECREATION AND PARKS FACILITIES INVENTORY

(WEST LA AREA)

	RECREATION AND PARK FACILITY	ACRES	OUTDOOR RECREATION FEATURES						
			PICNIC AREAS	CHILDREN'S PLAY AREA	SWIMMING POOL	TENNIS COURTS	BASKETBALL COURT	MULTIPURPOSE* SPORTS FIELDS	SPECIAL FACILITIES
1	BARRINGTON RECREATION CENTER	5.0		⊕		⊕	⊕	⊕	
2	CHEVIOT HILLS PARK AND RECREATION CENTER	40	⊕	⊕	⊕	⊕	⊕	⊕	archery rang[illegible] casting pond par course
3	CRESTWOOD HILLS PARK	15.6	⊕	⊕				⊕	
4	DE NEVE SQUARE	2.0	LANDSCAPED SMALL PARK						
5	HOLMBY PARK	8.5		⊕					18-hole pitc[illegible] & putt golf course; bowling greens
6	MAR VISTA RECREATION CENTER	10.7	⊕	⊕	⊕	⊕	⊕	⊕	par course
7	PALMS PARK	4.4	⊕	⊕			⊕		
8	STONER RECREATION CENTER	8.7	⊕	⊕	⊕	⊕	⊕	⊕	par course
9	WESTWOOD PARK	26.7	⊕	⊕		⊕	⊕		
10	WESTWOOD PARK ADDITION	7.5						⊕	

* MULTIPURPOSE FIELDS accommodate a range of sports activities (i.e., softball, baseball, soccer, football).

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Environmental Impacts

The proposed Barrington Recreation Center Addition will provide an additional twelve acres of recreational-open space resources for Brentwood and the surrounding communities. It will offer a mix of active and passive outdoor recreational amenities that will accommodate the leisure pursuits of community residents of all ages. These amenities include two multipurpose playing fields, a jogging trail, a par-course, and a small picnic area. The integration of natural landscaping themes with outdoor recreational facilities will enhance the aesthetic and scenic character of the site.

The proposed project will conform with the standards and criteria of the Public Recreation Plan and the Open Space Plan--both elements of the Los Angeles City General Plan--as well as the land use policies of the Westwood Community Plan.

Mitigation Measures

None required.

K. TRAFFIC CIRCULATION AND PARKING

(Note: The following section was condensed from the "Traffic Analysis for the Proposed Development of the Barrington Recreation Center Addition in Brentwood," prepared by Crain & Associates, dated September 8, 1982, revised. Copies of the entire text are available for public review at the following locations:

1. City of Los Angeles
   Department of Recreation & Parks
   200 N. Main Street
   Room 1290, City Hall East

2. Brentwood Library
   11820 San Vicente Blvd.
   Los Angeles, CA

3. West Los Angeles Regional Library
   11360 Santa Monica Blvd.
   Los Angeles, CA

Environmental Setting:

The proposed recreation facility will be located in the community of Brentwood on 12 acres of land to be leased from the Veterans Administration. The project site is situated along the east side of Barrington Avenue, just south of Brentwood Village. This area is served by Sunset Boulevard to the north, San Vicente and Wilshire Boulevards to the south, and the San Diego Freeway (Interstate Route 405) to the east. The terrain in this area is that of the rolling hills along the south face of the Santa Monica Mountains. Brentwood is predominantly a residential area with single-family residences to the north of Sunset Boulevard and many multiple-family residential units to the south of Sunset Boulevard. Residents of Brentwood are served by commercial developments located primarily in Brentwood Village and along San Vicente and Wilshire Boulevards.

Access to the proposed Barrington Recreation Center Addition will be provided by entrance and exit driveways onto Barrington Avenue which is the only public roadway facility abutting the proposed development site. Barrington Avenue in this vicinity has been designated a secondary highway on the Highways and Freeways Element of the General Plan of the City of Los Angeles. At present, Barrington Avenue, north of San Vicente Boulevard, is primarily a two-lane, 40-foot wide roadway which exhibits some wider sections due to set-back requirements when new developments have gone in along Barrington Avenue. The south leg of Barrington Avenue at Montana Avenue, for example, is 53 feet wide. South of San Vicente Boulevard, Barrington Avenue is currently 36 feet wide. Current daily traffic volumes on Barrington Avenue near the project site are approximately 6,000 vehicles per day (VPD). Afternoon peak hour volumes along this segment are approximately 950 vehicles per hour (VPH) northbound and 820 VPH southbound.

Barrington Place connects into Barrington Avenue approximately 500 feet south of Sunset Boulevard and intersects Sunset Boulevard approximately 450 feet east of Barrington Avenue. Barrington Place provides local access to the eastern portion of Brentwood Village and also provides a bypass route for northbound motorists who wish to proceed east on Sunset Boulevard. This roadway is presently being widened to approximately 46 feet on the approach where it "tees" into Sunset Boulevard.

Sunset Boulevard provides for east-west travel in the vicinity of the proposed project. Located to the north of the project site, Sunset

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Boulevard is designated a major (scenic) highway, but is currently developed as a 45-foot wide, four-lane facility in the vicinity of Barrington Place.

Traffic signals control traffic along Barrington Avenue at Sunset Boulevard, at Montana Avenue, and at San Vicente Boulevard. Barrington Place, at Sunset Boulevard, is presently controlled by a STOP sign.

The existing peak hour and 24-hour vehicular traffic count data used in this study were obtained from manual counts performed by Crain & Associates and automatic counts that had been conducted by the Los Angeles Department of Transportation. Some recent hourly count data obtained from the City were used where they indicated higher peak period demands.

The Brentwood Community is served by a number of bus lines operated by both the Southern California Rapid Transit District (SCRTD) and the Santa Monica Municipal Bus Lines. A total of seven bus lines operate within close proximity of the proposed project. These lines offer extensive coverage of the Brentwood, Westwood and West Los Angeles area, as well as the City of Santa Monica. When transfer possibilities are considered, these bus systems provide very good service to many areas within the Los Angeles region.

Detailed traffic analyses of existing traffic condition were performed at the following four study intersections:

- Barrington Avenue and Sunset Boulevard

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- Barrington Place and Sunset Boulevard
- Barrington Avenue and Montana Avenue
- Barrington Avenue and San Vicente Boulevard

The traffic analyses were performed through the use of established traffic engineering techniques. The traffic volume and turning movement data were based primarily on counts conducted by Crain & Associates. Other data pertaining to intersection geometrics, parking and related curb restrictions, and signal operations were obtained through field surveys of the study locations. The roadway capacity calculations were based on procedures outlined in the Highway Capacity Manual. It should be noted that, although the intersection of Barrington Place and Sunset Boulevard is not presently signalized, it was treated as being signalized for purposes of the subsequent analyses. The traffic volume data were then used in conjunction with the intersection capacity values to calculate Intersection Capacity Utilization (ICU) values for determining the Level of Service (LOS) at which the intersections are operating.

The term "Level of Service" is used to describe quality of traffic flow. Levels of Service A to C operated quite well. Level C normally is taken as a design level in urban areas outside a regional core. Level D typically is the level for which a metropolitan area street system is designed. Level E represents volumes at or near the capacity of the highway which will result in possible stoppages of momentary duration and fairly unstable flow. Level F occurs when a facility is overloaded and is characterized by stop-and-go traffic with stoppages of long duration.

The ICU and LOS values representing current traffic operating conditions are summarized in Table 3. As indicated by these values, the intersection of Barrington Avenue and Sunset Boulevard is operating closest to capacity with an ICU value of 0.98 which represents Level of Service E. The intersection of Barrington Place and Sunset Boulevard is also presently operating at Level of Service E during the PM peak traffic period. These critical ICU and LOS values are due primarily to the very high volumes, relative to the available capacity, on Sunet Boulevard.

The two other study intersections are operating at much less critical levels of service. The intersection of Barrington Avenue and San Vicente Boulevard is presently operating at Level of Service C during the PM peak period. A Level of Service A is indicated for the intersection of Barrington Avenue and Montana Avenue during this same time period.

Environmental Impact:

Estimates of a worst case traffic generation for the project, as proposed, were prepared.

If the two fields are being used simultaneously, 164 additional vehicular trips both to and away from Barrington Recreation Center Addition will be generated during the PM peak hour period. This indeed should be considered a worst case because it double counts the vehicular trips of family members of friends who stay at the center to watch the events. Also, there is no accounting for potential ride-sharing or the use of other travel modes, such as bicycles.

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TABLE 3

Existing (1982) Traffic Conditions

PM Peak Hour

Intersection	PM Peak Hour	
	ICU	LOS
Barrington Ave. and Sunset Blvd.	0.98	E
Barrington Pl. and Sunset Blvd.	0.93	E
Barrington Ave. Montana Ave.	0.59	A
Barrrington Ave. San Vicente Blvd.	0.75	C

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Besides the sports fields, people will also take advantage of the jogging course, par course, and the passive recreational area. Traffic from these sources is expected to be minimal.

The determination of the geographic distribution of generated trips was based on socio-economic projections and origin-destination survey data from the appropriate planning agencies.

From these trip interchange data it was determined that 51 percent of the trips will be distributed to the south and 49 percent to the north. For the northerly trips, it is further assumed that 11 percent will be distributed to the west, and 38 percent will have origins/destinations to the east.

The directional distribution percentages discussed above indicate the desired direction of travel. The actual assignment of project traffic to the surrounding street system, on the other hand, must reflect a practical redistribution of the travel demand with consideration for limitations of the street system, such as turn restrictions and roadway capacity.

Access to the proposed project will be provided off of Barrington Avenue. Access will be provided at a single point by means of a double-width driveway. The single access point will allow cars traveling southbound as well as northbound on Barrington Avenue to turn simultaneously into the project parking lot. There is a short storage area immediately after entering the parking lot of the proposed facility which should be sufficient to handle minor surges in incoming traffic.

The project egress will be provided at the northmost point of the proposed project at Barrington Avenue. Egress will be provided for a single lane of traffic, and limited to a right turn operation only. The driveway exit from the proposed project will be constructed in such a manner as to prohibit left turns from the proposed project for southbound travel. The primary reason for this right-turn only operation for exiting vehicles is for safety reasons associated with this segment of Barrington Avenue, which is narrow, with vehicles traveling at relatively high speeds, and there is limited sight distance along the approaches to the project from both directions on Barrington Avenue.

In an effort to improve access and overall sight distance at the access and egress points, a deceleration lane for northbound traffic entering the project will be installed. To allow for the installation of the deceleration lane, 11 curb parking spaces will be eliminated along the east side of the street, as shown on the Site Plan. Parking demand is relatively high in this section of the Brentwood community and any reductions will add to the existing shortages. A barrier lane will be installed on Barrington Avenue delineating the deceleration lane. Development of this deceleration lane will add to the general safety of motorists in the area as well as those entering and leaving the recreation facility.

Circulation on the streets serving the proposed project will be somewhat hampered due to the "around-the-block" patterns required by motorists exiting the proposed project northbound who actually desire to travel south on Barrington Avenue. From the LARTS survey data, it is estimated that approximately 35 to 50 percent of those using the proposed project have a destination that could best be served by southbound travel on Barrington Avenue. There are several ways to accomplish the southbound move within the Brentwood community. First, motorists making the right turn out of the proposed project can travel north on Barrington Avenue and make a series of turns in Brentwood Village so as to return on Barrington Avenue to the south. Another option is to travel northbound on Barrington Avenue, and make a left turn at Sunset Boulevard and again at Westgate Avenue or Bundy Drive to return to the south. It is believed that most of the motorists desiring to travel south on surface streets in the Brentwood area will use one of these routes. It is also possible that they would use the San Diego Freeway as part of their return route. In addition to the extra driving and VMT generated by the motorists, they will add approximately 410 additional vehicle trips daily to these neighborhood streets. While the traffic volumes will not be large enough to cause unnecessary capacity problems they will cause additional noise, incovenience and interference for other motorists and residents in the area.

The proposed project will have two off-street parking lots which are adjacent and use the access driveways off of Barrington Avenue as described previously. The initial parking lot, titled a "Neighborhood Parking" area, consists of 56 parking stalls. All parking in the proposed lot is marked for perpendicular parking. The neighborhood parking lot would be developed to help offset the on-street parking which will be lost when the deceleration lane is installed. The second parking lot, titled the "Participant Parking"

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consists of a 90 stall surface parking lot, also containing perpendicular parking. Circulation into and through parking areas is to be provided by means of the isles between parking areas. Due to the narrow area between the parking isles, all parking isles will be one-way. This may cause some confusion to motorists and congestion within the parking lots could result because of unfamiliar motorists or those violating the one-way signing. One-way signs are to be installed throughout the parking lot.

An alternative design to the parking layout and circulation pattern as shown in the Preliminary Site Plan (Figure 3) has been developed. The alternative design incorporates angle rather than perpendicular parking and will provide approximately 42 additional parking spaces in the same parking lot area. The alternative is shown of Figure 5, along with the layout of the existing project for comparison sake. In addition to providing more parking spaces, the alternative design allows for improved circulation, as well as the return capability from the "participant parking" lot to the "neighborhood parking" lot.

Development of the recreational facility will require transporting of 60,000 - 80,000 cubic yards of dirt to fill the proposed site for grading and leveling purposes. The dirt will arrive via large dump trucks capable of carrying 14 cubic yards per truckload. It is anticipated that dirt haul sites will be located in the western portion of the Los Angeles region, with regional access possible from the San Diego Freeway. The likely truck haul routes will be from the project site northerly on Barrington Avenue--Sunset Boulevard to the San Diego Freeway. Morevoer, there is a possibility that the trucks

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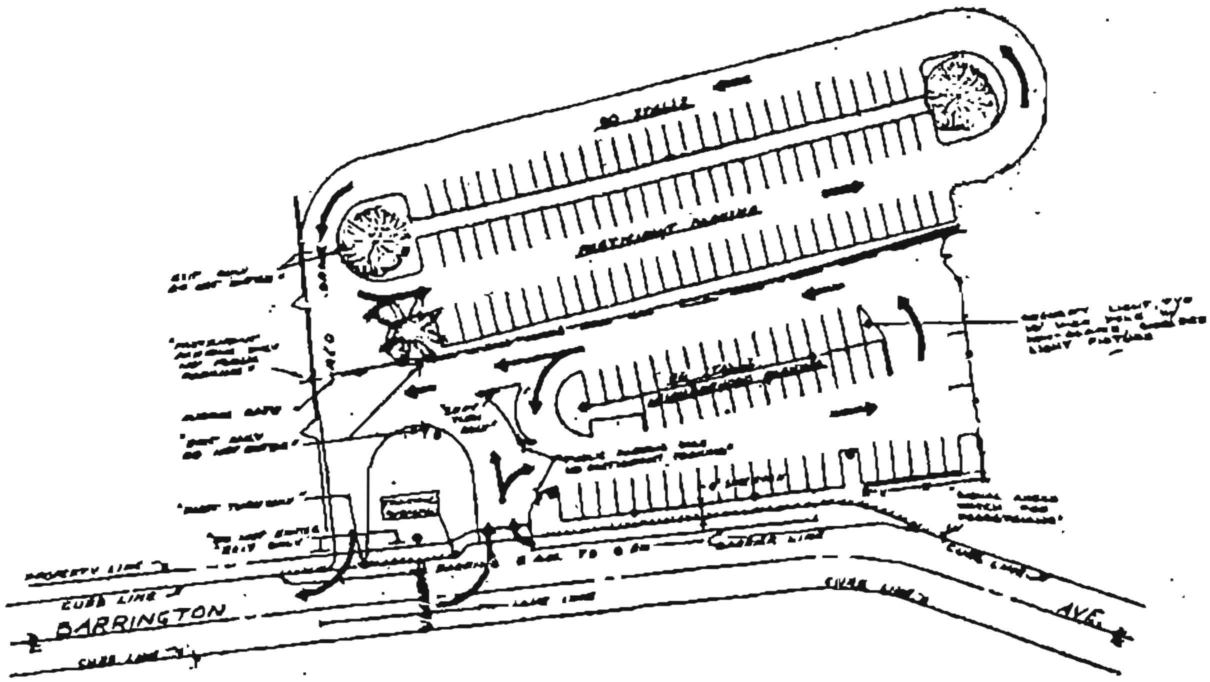
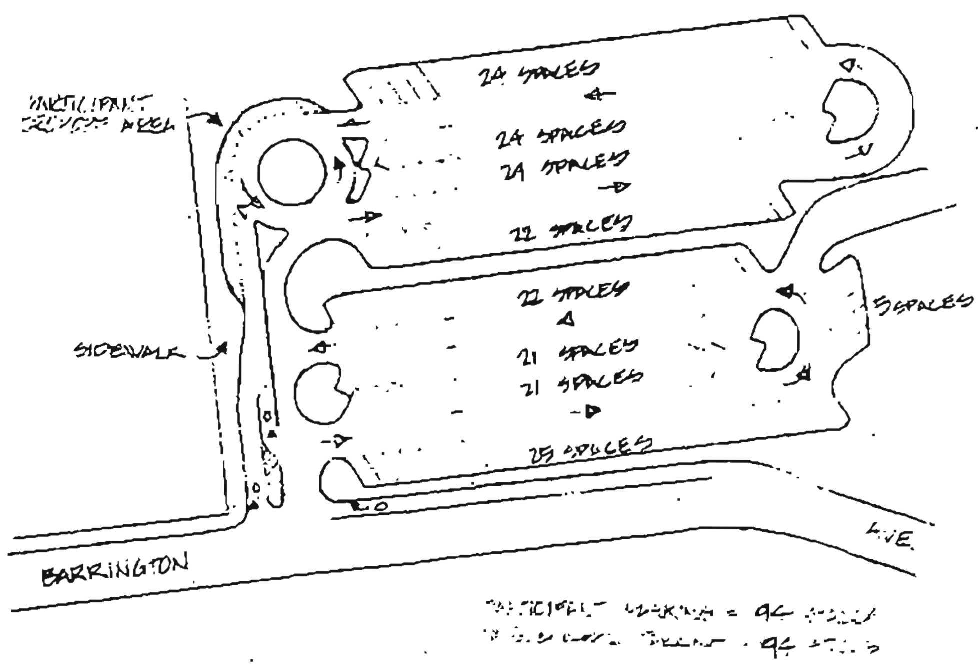
Figure 5
Parking Layout Alternative



(a) Existing Layout



(b) Proposed Layout

will have access to the site via the Wadsworth/Brentwood Medical Center, thereby eliminating the need to use Barrington Ave. It is estimated that approximately 30 trucks will be used, each making 6 trips per day until enough dirt is transported to the site. The recommended hours of operation for dirt removal are 8:30 AM to 3:00 PM. The trucks will have only a minor effect on roadway capacity during the afternoon peak hour at the project site.

Numerous traffic counts conducted by the City of Los Angeles between 1978 and 1982 in the West Los Angeles area, were analyzed. Analysis of the count values showed that there has been a gradual increase in traffic volumes in the area.

Ten new projects in the vicinity of the proposed recreation facility are under development. Others are planned to be constructed in the future. These projects were assumed to represent an unusual amount of new traffic and should be taken into account. A listing of projects being planned or currently being constructed in the study area was obtained from the City of Los Angeles Planning Department and from the Department of Transportation. From a review of this list, it was determined that traffic from the eight projects near the study site could add traffic to the study intersections. These "related projects" are listed and described in Table 4. The location of each project is shown in Figure 6.

Traffic for these "related projects" was calculated and is shown in Table 5. This "related projects" traffic was then added to the 1984 growth-factored traffic to form the null condition.

Table 4

RELATED PROPOSED PROJECTS IN STUDY AREA

Key Map Number	Project	Location
1	8 Residential Condominiums	North side of Mayfield Avenue east of Westgate Avenue
2	22 Residential Condominiums	Southwest corner of Granville Avenue and Dorothy Avenue
3	9 Residential Condominiums	South side of Gorham Avenue west of Westgate Avenue
4	22,000 Square Foot Office Building	South side of San Vicente Boulevard, east of Montana Avenue
5	30 Residential Condominiums	Northeast corner of Montana Avenue and Bundy Drive
6	8,000 Square Foot Office Building	North side of Montana Avenue west of San Vicente Boulevard
7	33 Residential Condominiums	North side of Montana Avenue east of San Vicente Boulevard
8	12 Residential Condominiums	East side of Barrington Avenue north of San Vicente Boulevard
9	Brentwood School	South of Sunset Boulevard west of Layton Drive
10	36 Residential Condominiums	East side of Barrington Avenue north of Montana Avenue.

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Table 5

Related Projects Traffic

	Project	Daily Traffic (trips/day)	Peak Hour Traffic AM IN	Peak Hour Traffic AM OUT	Peak Hour Traffic PM IN	Peak Hour Traffic PM OUT
1.	8 Condos	63	1	3	3	2
2.	22 Condos	174	2	9	9	4
3.	9 Condos	71	1	4	4	2
4.	22,000 sq. ft. Office	271	41	8	6	30
5.	30 Condos	237	2	12	12	6
6.	8,000 sq. ft. Office	98	15	3	2	11
7.	33 Condos	261	3	14	14	6
8.	12 Condos	95	1	5	5	2
9.	Brentwood School	263	20	11	14	31
10.	36 Condos	284	3	15	15	7

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Figure 6
Related Projects Location Map

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A review of available information, regarding the present capital improvement program of the City of Los Angeles, indicates that there are not any significant highway system improvements planned for the study area within the next few years. Department of Transportation staff, however, are now finalizing design plans for some minor widening along Sunset Boulevard (in the existing right-of-way) from east of Barrington Place to Barrington Avenue. This will, then, allow for improvements in traffic channelization along this critical segment of Sunset Bouledvard.

The analysis of future traffic conditions at the recreation facility project area was performed using the same (ICU) procedures as described earlier in this report. For the evaluation of both the "no-project" traffic conditions and the "with-project" conditions, the future roadway system was considered to be essentially the same as it is currently.

The results of the ICU analysis of future traffic conditions at the four study intersections are summarized in Table 6. The project will have the greatest impact (ICU value change of +0.07) at the intersection of Barrington Avenue and Sunset Boulevard. If the dual left-turn lanes are installed at this intersection as described previously, the ICU value "with project", will be reduced to 0.85/LOS D.

Further inspection of the ICU values in the summary table shows that the project will add a significant amount of traffic to two of the four study intersections during the afternoon peak hour.

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Table 6

SUMMARY OF INTERSECTION CAPACITY UTILIZATION
ANALYSIS FOR 1984 TRAFFIC CONDITIONS
WITH AND WITHOUT PROJECT

INTERSECTION	PM PEAK HOURS				
	WITHOUT PROJECT		WITH PROJECT		
	ICU	LOS	ICU	LOS	IMPACT
Barrington Ave. and Sunset Blvd.	1.02	F	1.09	F	(+0.07)*
Barrington Pl. and Sunset Blvd.	0.96	E	1.00	E	(+0.04)*
Barrington Ave. and Montana Ave.	0.61	A	0.64	A	(+0.03)
Barrington Ave. and San Vicente Blvd.	0.77	C	0.79	C	(+0.02)

* significant impact

Development of the proposed facility will create no noticeable traffic circulation, access or safety concerns for the occupants of the condominiums across Barrington Avenue. In fact, development of the proposed project will be a benefit to the adjacent community by adding to the supply of neighborhood parking.

Mitigation Measures:

The City of Los Angeles Department of Transportation has already implemented most of the traffic engineering measures that are available for the improvement of traffic flow in this portion of the Brentwood street system. Street widening at some of the more congested parts would produce the best results; unfortunately, because of lack of highway improvement funds and the high cost of construction, it appears that no major capital improvement projects will be implemented in the area. The one exception is the project proposed by the Department of Transportation for improving traffic flow at Barrington Avenue and Sunset Boulevard. This street improvement project if constructed would not be implemented until after the proposed recreational facility is developed. The project is extremely cost-effective and involves the minor widening of the east approach (on existing right-of-way), installation of dual left-turn lanes for westbound traffic and revision of striping on the northbound approach.

It is recommended that the following improvments be pursued to accomodate traffic generated by the proposed Barrington Recreational Center Addition:

- o Deceleration lane. A deceleration lane should be installed as part of the project on the east side of Barrington Avenue for northbound traffic turning into the proposed recreational facility.

- Additional parking. The deceleration lane will remove some on-street parking adjacent to the proposed project. To offset this loss, the proposed project will contain a neighborhood parking lot containing 56 parking spaces (or more). This lot will be signed for public parking only with no participant parking permitted. For public safety, the neighboring lot should have low level (security) lighting.

- Overflow parking. On those occasions when events at the propose recreational facility dictate a high demand for parking, it may be possible to use the Brentwood Village pay-parking facility for overflow purposes. Brentwood Village maintains this remote, off-street parking lot located north of the post office adjacent to the proposed project.

- Control gates. As currently proposed, a sliding gate will be installed which will control access to the 90 stall participant parking lot. This gate will be closed daily by Recreation and Parks staff, when the proposed project is not in use. This will limit traffic at the site to only those hours when the recreational facility is being utilized.

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- Turn restrictions/traffic signal. Egress from the proposed project will be limited to right turns only and northbound travel on Barrington Avenue. This turn restriction is recommended by the Department of Transportation to limit potential conflicts with southbound Barrington Avenue traffic. An alternate approach to providing adequate and safe access/egress for the proposed project would be the installation of a traffic signal on Barrington Avenue.

- Alternative design. It is recommended that the project incorporate the concept of angle parking and inter-lot circulation as shown in Figure 5. This will improve traffic ciruclation at the proposed facility.

- Left Turn Lane. This will not be a conventional left-turn only lane. Rather, it will be a designated area for southbound vehicles waiting to turn into the proposed facility, thereby allowing through traffic to continue to the right.

It should be recognized that even though the proposed mitigation measures will not alleviate significant traffic impact at nearby signalized intersections, it will help to smooth traffic operations around the project site.

L. RADIOLOGICAL HEALTH AND SAFETY

1. ENVIRONMENTAL RADIOACTIVITY

An understanding of environmental radioactiviy--both natural and man-made sources--provides a useful perspective when discussing the issue of human health and radiation[1] exposure.

a. Natural Background Radiations

Sources of External Exposures.

There are two sources of external ionizing radiation to which human beings are primarily exposed: (1) cosmic radiation; and, (2) gamma-emitting radionuclides[2] in the terrestrial environment (i.e., soil and rocks). Because they have such short penetration distances, alpha and beta particles from sources outside the body do not generally constitute a hazard.

Cosmic Radiation. Cosmic radiation (commonly called cosmic rays), consisting of high-energy protons (mainly hydrogen nuclei), reach earth from the sun and interstellar space. Travelling at a velocity approaching the speed of light, these protons penetrate the upper atmosphere and impact with gaseous oxygen and nitrogen nuclei. The high-speed collision

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[1]The word radiation is used here in a narrow sense. It includes only radiations produced by radioactivity or cosmic rays. It does not apply to other kinds of radiation, such as visible light or ultraviolet radiation, that play no part in the waste problem.

[2]The terms radionuclide and radioisotope are often used interchangeably; however, radionuclide is more general, referring to any radioactive species (or nuclide), whereas radioisotope should be used only when the element is specified (e.g., radioisotopes of uranium).

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of a single cosmic particle with the nucleus of an atom of gas gives rise to a complex chain of disintegrations and energy dissipations, collectively called a cosmic shower. Secondary particles and radiation (i.e., high-energy electrons, nuetrons, mesons, and gamma rays) generated as products of the cosmic shower, make up a substantial part of the background ionizing radiation to which biological life forms are exposed. The intensity of the ionizing radiation is a function of the altitude (the higher the altitude the greater the intensity of cosmic radiation), and to a lesser extent, on the geomagnetic latitude.

Furthermore, a number of natural radionuclides which exist on the surface of the earth and its atmosphere were induced by interaction of cosmic rays with atmospheric nuclei. Among those that constitute an important source of external ionizing radiation, the most noted are tritium (H^3 or H-3), carbon-14 (C-14), and Be-7, while others of lesser importance include Be-10, Na-22, P-32, S-35, and Cl-39* (1).

<u>Terrestrial Radiation</u>. Terrestrial sources of ionizing radiation include naturally occurring radionuclides formed during the primordial geologic processes of the earth, as well as those induced by the interactions of cosmic rays with elements of the earth's crust and gases of the earth's

*Note: The radionuclide associated with each chemical symbol used in this paper is identified in the Radionuclide Identification Table at the back of this section (e.g., Cl-39 is the symbol for chlorine-39).

atmosphere. Of radioactive materials that exist in the crustal rocks and soils, the radioactive families found among the heavy elements, primarily the uranium series, the thorium series, and the actinium series, account for most of the external exposure of humans to terrestrial ionizing radiation. Besides the radioactive series of the heavy elements, there exist a number of singly occurring radionuclides that contribute to natural background radiation (i.e., K-40, Rb-87, I-129, In-115, Sb-123) (1).

Sources of Internal Exposures

Natural and induced radionuclides are elemental constituents of the earth's atmosphere, biosphere, lithosphere, and hydrosphere. Human beings are inextricably linked to these basic global realms because they provide food, fiber, energy, and other material needs for survival. As they interact with the surrounding environment to satisfy their biophysical needs, human beings are exposed to internal sources of ionizing radiation when radionuclides are inhaled and/or ingested, thereby becoming deposited into the skeletal structure, critical organs, and soft tissues of the body.

One of the ways that radionuclides enter the human body is through the food chain. Radionuclides become incorporated into the food chain in two ways: foliar deposition of airborne radionuclides; and, uptake through the root system of plants (1).

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Foliar Deposition. Foliar deposition involves the settling of airborne radionuclides onto the surfaces of plants, grasses, etc., whereby grazing cows and goats pass the radionuclides on through the human consumption of their milk or meat products.

Root Uptake. Because plants have an intrinsic ability to absorb chemical elements from the soil, and because radionuclides are an inherent component of soils and rocks, specific radionuclides are taken up through the root system of plants. Potassium-40 (K-40)-relatively abundant in the soil, and an essential element of plant metabolism, nutrition and photosynthesis-tends to be the major radionuclide taken up by plants. Since K-40 is ultimately passed up the food chain, it represents the predominant radioactive component found in normal foods and human tissues.

Radium-226 (Ra-226), a decay product of the uranium-238 series, is present in all rocks and soils in amounts varying with the type of rock (i.e., igneous, limestone, sandstone). Because it is chemically similar to calcium, radium-226 is absorbed from the soil by plants and is passed up the food chain to man. Also, varying concentrations can be found in natural and public water supplies (1).

Because tritium and carbon-14 are prevalent in the global environment, they constitute a source of internal exposure to radiation. Produced continuously by the interaction of cosmic rays with atmospheric oxygen and nitrogen nuclei, the steady state environmental inventory of tritium and carbon-14 is an estimated 28 million curies and 280 million curies respectively (2).

One of the interesting ways, for example, that carbon-14 enters the food chain is by way of photosynthesis -- the process in which green plants synthesize carbohydrates (i.e., sugar and starches) through the fixation and chemical reduction of carbon dioxide. These carbohydrates always contain a small proportion of radioactive carbon-14. In fact, carbon-14 is present in all carbon-containing compounds in the human body (3).

Atmospheric tritium is carried down as tritiated water by rain or snow to accumulate in the oceans and other terrestrial waters. Through the processes of the hydrologic cycle (i.e., evapotranspiration, precipitation, condensation), tritium is fairly uniformily distributed in the earth's hydrosphere (both surface waters and groundwaters), as well as in plants and animals.

Other sources of internal exposure to ioinizing radiation involves the inhalation of gaseous radioisotopes. Radon-222 (radon) and radon-220 (thoron), both noble

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(inert) gases and descendants of the uranium-238 and thorium-232 radioactive decay series respectively, emanate into the atmosphere from soils and rocks. The rate of diffusion from soils and the atmospheric concentration of these radioactive noble gases at any given time is dependent on many geological and meteorological factors. Furthermore, since the daughter products of radon and thoron carry electric charges, they tend to attach themselves to inert atmospheric dust particles, endowing them with radioactive properties. Inhalation of these dust particles result in the exposure of the lungs to ionizing radiation (1).

b. Man-Made Radiations.

The primary sources of man-made ionizing radiation to which a large proportion of the population is exposed are from medical and dental radiographic examinations; and from global fallout (consisting primarily of the fission-generated radioisotopes, strontium-90 and cesium-137), produced by the atmospheric testing of thermonuclear weapons.

Moreover, a variety of consumer and industrial products yield ionizing radiation, or contain radioactive materials which contribute to the radiation exposure of the general population (i.e., television sets, luminous-dial watches, smoke detectors, building materials, airport luggage x-ray inspection system).

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Table 7 illustrates the various sources of ionizing radiation, both natural and man-made, and the average dose rate (mrems/yr) to which the general population is exposed (4).

2. RADIONUCLIDES

a. Spontaneous Radioactive Decay.

Radioactive nuclides (or radionuclides) can be categorized into three general classes:

- Primary, which have half-life times exceeding 10^8 years. These may be alpha-emitters, beta-emitters, or gamma-emitters.
- Secondary, which are formed in radioactive transformations starting with U-238, U-235, or Th-232.
- Induced, referring to those formed by induced nuclear reactions occurring in nature. All these reactions result in transmutations.

Because of unstable nuclei, some radionuclides undergo transmutation, resulting in the release of radiations. This process of radioactive change (commonly referred to as radioactive decay), results in the spontaneous transformation of mass into energy. The emission of radiations from a radioactive nuclide is a spontaneous process, being unaffected by pressure, temperature, or any other physical properties.

Spontaneous radioactive disintegration begins with a parent isotope, such as U-238, and leads to the formation of another

TABLE 7

Annual Dose Rates from Important Significant Sources of Radiation Exposure in United States

Source	Exposed Group: Description	Exposed Group: No. Exposed	Body Portion Exposed	Average Dose Rate, mrems/yr: Exposed Group	Average Dose Rate, mrems/yr: Prorated over Total Population
Natural background					
Cosmic radiation	Total population	220×10^6	Whole body	28	28
Terrestrial radiation	Total population	220×10^6	Whole body	26	26
Internal Sources	Total population	220×10^6	Gonads	28	28
			Bone marrow	24	24
Medical x rays					
Medical diagnosis	Adult patients	105×10^6/yr	Bone marrow	103	77
Medical personnel	Occupational	195,000	Whole body	300–350[a]	0.3
Dental diagnosis	Adult patients	105×10^6/yr	Bone marrow	3	1.4
Dental personnel	Occupational	171,000	Whole body	50–125[a]	0.05
Radiopharmaceuticals					
Medical diagnosis	Patients	10×10^6 to 12×10^6/yr	Bone marrow	300	13.6
Medical personnel	Occupational	100,000	Whole body	260–350	0.1
Atmospheric weapons tests	Total population	220×10^6	Whole body	4–5	4–5
Nuclear industry					
Commercial nuclear power plants (effluent releases)	Population within 10 mi	$<10 \times 10^6$	Whole body	≪10	≪1
Commercial nuclear power plants (occupational)	Workers	67,000	Whole body	400[b]	0.1
Industrial radiography (occupational)	Workers	11,250	Whole body	320	0.02
Fuel processing and fabrication (occupational)	Workers	11,250	Whole body	160	0.01
Handling byproduct materials (occupational)	Workers	3,500	Whole body	350	0.01
Federal contractors (occupational)	Workers	88,500	Whole body	~250	0.1
Naval nuclear propulsion program (occupational)	Workers	36,000	Whole body	220	0.04
Research activities					
Particle accelerators (occupational)	Workers	10,000	Whole body	Unknown	≪1
X-ray diffraction units (occupational)	Workers	10,000–20,000	Extremities and whole body	Unknown	≪1
Electron microscopes (occupational)	Workers	4,400	Whole body	50–200	0.003
Neutron generators (occupational)	Workers	1,000–2,000	Whole body	Unknown	≪1
Consumer products					
Building materials	Population in brick and masonry buildings	110×10^6	Whole body	7	3–4
Television receivers	Viewing populations	100×10^6	Gonads	0.2–1.5	0.5
Miscellaneous					
Airline travel (cosmic radiation)	Passengers	35×10^6[c]	Whole body	3	0.5
	Crew members and flight attendants	40,000	Whole body	160	0.03
Airline transport of radioactive materials	Passengers	7×10^6[d]	Whole body	~0.3	0.01
	Crew members and flight attendants	40,000	Whole body	~3	<0.001

[a] Based on personnel dosimeter readings; because of relatively low energy of medical x rays, actual whole-body doses are probably less.
[b] Average dose rate to the approximately 40,000 workers who received measurable exposures was 600–800 mrems/yr.
[c] Total number of revenue passengers per year is 210×10^6; however, many of these are repeat airline travelers.
[d] About one in every 30 airline flights includes the transportation of radioactive materials; assuming 210×10^6 passengers per year (total), approximately 7×10^6 would be on flights carrying radioactive materials.

Source: Committee on the Biological Effects of Ionizing Radiation

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unstable isotope, called a daughter product. As one daughter product transmutes to another (in a series that may produce a number of elements in succession) high-energy particles (alpha and beta rays) or electromagnetic waves (gamma-rays) are emitted. Ultimately, after a number of stages of radioactive decay, a stable (i.e., nonradioactive) species is formed as the end product of the particular decay chain.

Radioactive decay can be forecast statistically, and the rate of decay (number of particles emitted per second) of a given sample of radioactive material is referred to as the activity of the sample. The half-life of a radioactive sample is the time required for the activity to reduce to one-half of the initial value.

Each radionuclide has its own characteristic half-life (ranging from less than a millionth of a second to billions of years). For example, iodine-131 (I-131) has a half-life of eight days. After a passage of eight days a millicurie of I-131 will have decayed until only one-half of a millicurie remains. An additional eight days will reduce the radioactivity to one-fourth of a millicurie. Thus, in successive half-life periods, the activity of I-131 and other radioactive samples, diminishes to 1/2, 1/4, 1/8, 1/16, etc., of the initial value.

b. <u>Medical Uses of Radionuclides</u>

Because of their biologically active and easily detectable radiation, radionuclides have been extensively used in

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biomedical research, thereby providing an effective and practical approach to studying the etiology and genesis of human diseases that cannot be achieved with equal facility and effectiveness by any other means.

Radiopharmaceuticals (a radioactive pharmaceutical or chemical) are almost ideal diagnostic tools because they do not alter body physiology and they permit external monitoring with minimal instrumentation. The importance of radiopharmaceuticals in the field of human health has resulted in the development of a new medical discipline: nuclear medicine. Presently, there are three major areas of nuclear medicine: (1) physiological function studies (i.e., using radioactive tracers to study the function of the thyroid and kidneys); (2) radionuclide imaging procedure (i.e., tumor localization; bone and brain scans); and, (3) therapeutic techniques (5).

The most important uses of radionuclides in biomedical research has been as tracers of metabolic processes. They have been used, for example, to measure the amount and the movement in the body of water, electrolytes, fats, proteins, hormones, and other important biological substances (6).

One of the most popular biological instrumentation technique used to trace metabolic processes is known as liquid scintillation counting. In conjunction with liquid scintillation counting, two of the most commonly used radionuclides in biomedical research (and to a lesser extent in medical diagnostic and therapeutic procedures) are tritium and carbon-14 (radiocarbon).

Typically, a fraction of a milliliter of the biological sample[a] containing tracer levels of tritium or carbon-14 is combined with 20 milliliters or less of an organic solvent, primarily toluene,[b] in a small counting vial to make a liquid scintillation medium.[c] The vial is placed in a liquid organic scintillator, and the biological sample is assayed. Other radionuclides assayed by this technique include I-125, P-32, and S-35, but these are not as widely used as tritium and carbon-14 (7).

Table 8 gives a listing of some of the diagnostic and therapeutic applications of radionuclides.

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a The biological samples may be non-aqueous (i.e., steroids, lipids, and non-polar organics). However, aqueous samples are by far the most common type encountered in the research laboratories. These aqueous samples are incorporated into emulsifiable liquid scintillation "cocktails" (LSC).

b At one time, 1,4-dioxane, owing to its complete miscibility with water, was the preferred solvent for aqueous samples. However, certain objectionable features, namely, that it is a carcinogen, thereby presenting potential health hazards to laboratory personnel; and that it is unstable, decomposing spontaneously to form products which act as energy quenchers (i.e., peroxides), ultimately led to its disuse, and spurred the development of emulsifiable cocktails containing water immiscible solvents that are predominantly used today: toluene, xylene, and 1,2,4-trimethylbenzene.

c The liquid scintillation medium has three components: the solvent, the solute, and the biological sample. The "solvent" and "solute" constitute what is known as the liquid scintillation cocktail (LSC).

TABLE 8

Diagnostic and Therapeutic Uses of Radionuclides*

Diagnostic Uses	Therapeutic Uses
- Localization of tumors	- Treatment of thyroid gland diseases
- Study of function of thyroid gland	- Treatment of chronic leukaemia
- Study of kidney	- Direct implanation into tumors
- Study of liver	- Treatment of urinary bladder tumors
- Investigation of circulatory system	- Dermatological treatment
- Study of blood	- Treatment of bronchial cancer
- Study of calcium absorption	- Treatment of tumors of esophagus
- Study of iron metabolism	
- Metabolism of drugs, hormones, proteins, etc., using labelled compounds	

* Not an exclusive list

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c. NUCLEAR REGULATORY COMMISSION (NRC) REGULATIONS

The prime responsibility of the NRC, formerly that of the Atomic Energy Commission (AEC)*, is to ensure the safe development of the atomic energy industry, and to protect the public safety and the environment. The NRC is responsible only for reactor-produced radionuclides and has no cognizance over nonfissionable, natural radionuclides such as radium-226, nor is it responsible for machine-produced radiation (x-rays), or for radionuclides produced in a cyclotron or other particle accelerators.

The NRC rules and regulations mandated under the Atomic Energy Act of 1954 (and its amendments), and the Energy Reorganization Act of 1974, constitute essential features of the regulatory process. Issued as parts of Title 10 (Energy) of the Code of Federal Regulations, these regulations form the framework of standards, criteria, practices, etc., governing the production, distribution, possession, use and disposal of reactor-produced radionuclides.

The most important parts of 10 CFR, insofar as the standards and criteria of reactor-produced radionuclides are concerned, are Part 20 (10 CFR 20) and Part 30 (10 CFR 30).

*The NRC was established by the Energy Reorganization Act of 1974 (became effective on January 19, 1975). The Act abolished the AEC, and transferred to the NRC all the licensing and related regulatory functions assigned to the AEC by the Atomic Energy Act of 1954.

o <u>10 CFR 20 "Standards for Protection Against Radiation"</u>
This is the Commission's basic regulation dealing with radiation protection. It applies to all persons who receive, possess, use and transfer source materials, special nuclear material, or by-product material under a general or specific license from the Commission.

The regulations established radiation dose standards concerning occupational exposure to radiation in restricted and unrestricted areas; establishes precautionary procedures for monitoring personnel and conducting radiation surveys of all incidents and accidents; and provides requirements and restrictions for disposal of radioactive waste materials.

Records must be kept by the licensee of the receipt, transfer and disposal of licensed materials; of all radiation surveys conducted; radiation doses received by employees subject to personnel monitoring; and environmental monitoring and test results. Records must be maintained until the Commission authorizes their disposition.

o <u>10 CFR 30 "Licensing of Byproduct Material"</u>
The NRC is authorized by the Congress to regulate the distribution of all reactor-produced redionuclides. Under this authorization, it was decreed that reactor-produced radionuclides (referred to as by-product material) can be obtained and used only under specific or general NRC licenses, except for certain exempt items, concentrations and quantities.

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A specific license is issued to a named applicant after the Commission has reviewed and approved an application in which the proposed user has stated the types of radionuclides required; the use for which they are intended; maximum quantities to be possessed at any one time; training and experience of the individual users; radiation personnel monitoring procedures to be used (including bioassay); laboratory facilities and equipment; and waste disposal practices. In addition, a description of the radiation protection program is required.

A special license is required if the radioactive material is to be administered to humans. This license is in addition to the license for possessing the material and is issued only to physicians who can satisfy the Commission's requirements regarding experience, access to hospital facilities and monitoring equipment.

Institutions meeting requirements on staffing and facilities may obtain a license of broad scope (Title 10, Part 35). This enables them to authorize specific members of their staff to work with radionuclides without special application to the regulatory agency for each individual user.

3. WADSWORTH/BRENTWOOD MEDICAL CENTER

a. Radiation Safety Program

The Veterans Administration (West Los Angeles) radiation safety program is conducted under the authority of the

Wadsworth Medical Radioisotope Committee and the Brentwood Radioisotope Research Committee- each responsible for the activities within their own facility- and is implemented by the Radiation Safety Officer (RSO). As a member of these Committees, the RSO's duties include: preparing regulations; advising on matters of radiation protection; controlling licensing, acquisition, use and disposal of radionuclides; inspecting work spaces and handling procedures; determining personnel radiation exposures; monitoring environmental radiation levels; and instituting corrective action in the event of accidents or emergencies.

b. <u>On-Site Land Disposal Practices</u>

During a period that spanned from the early 1950's up till 1968, the Veterans Administration (West Los Angeles) conducted on-site land burials of low-level radioactive biomedical wastes. These waste materials were generated as a result of medical research programs and medical diagnostic and therapeutic practices.

The first federal regulations governing the disposal of radionuclides were drafted by the Atomic Energy Commission, and enacted into law on February 28, 1957. Entitled "Standard for the Protection Against Radiation," (10 CFR 20), these regulations allowed licensed users of radioactive materials to conduct land disposal of waste by-products if they complied with the following requirements outlined in Section 20.304:

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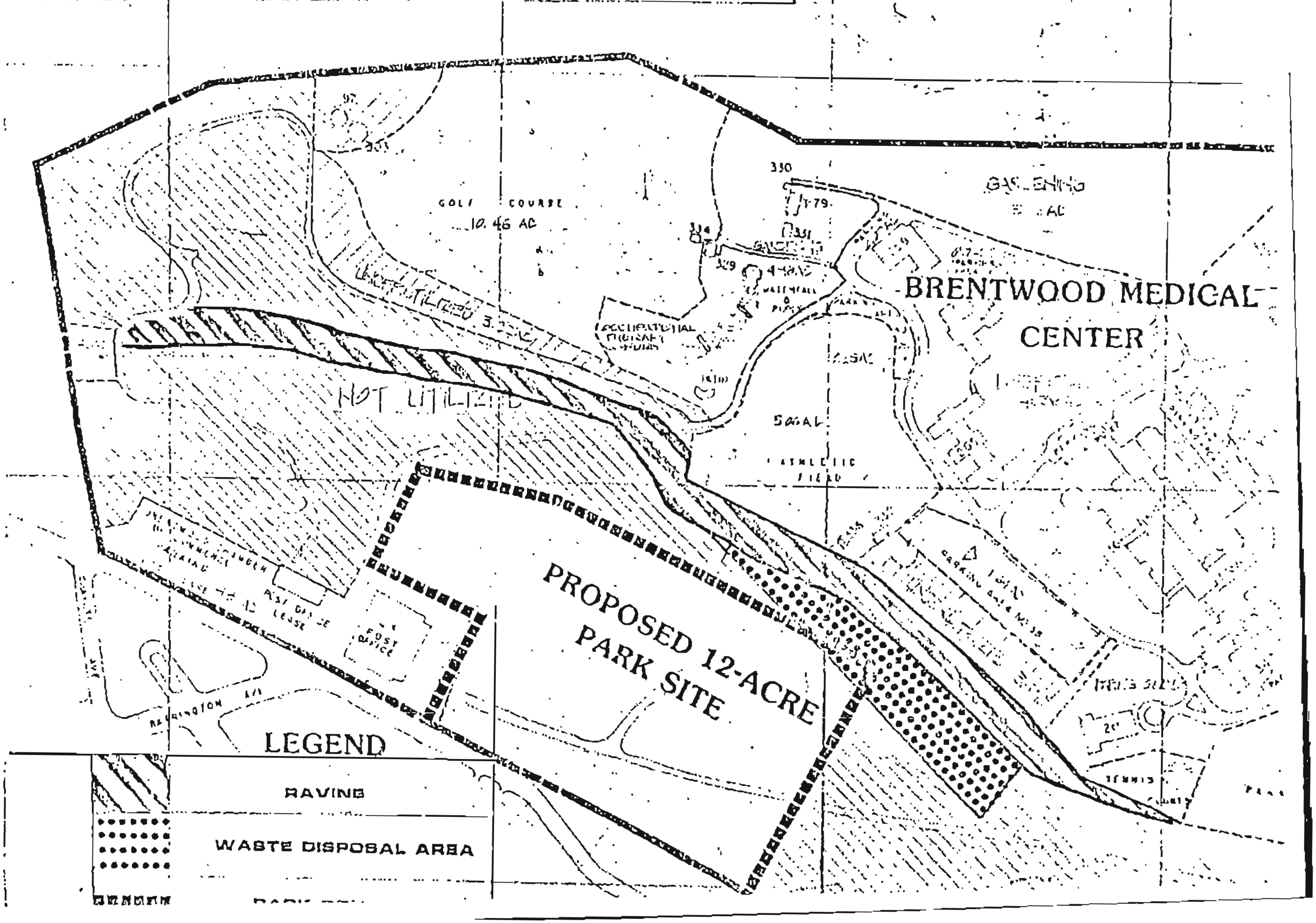
FIGURE 7

LOCATION OF FORMER BIOMEDICAL WASTE DISPOSAL AREA



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- The total quantity of licensed and other radioactive materials buried at any one location and time does not exceed, at the time of burial, 1000 times the amount specified in Appendix B, Column 1 of the Code;
- Burial is at a minimum depth of four feet; and,
- Successive burials are separated by distance of at least six (6) feet and not more than twelve (12) burials are made in any year.

The VA averaged about seven burials per year (for the period 1960-1968), disposing of its biomedical wastes in a designated undeveloped area (covering approximately two acres) on the northwestern portion of the Brentwood Medical Center (Figure 7). The materials were buried in trenches to a depth of six to eight feet and then covered with well compacted earth. As there were no pre-disposal packaging requirements, the wastes were either placed directly into the ground to promote degradation and dispersal, or were placed into some type of waste receptacle such as a polyethylene bag or laboratory safety cannister, prior to burial.

The waste disposal activities were authorized and monitored by the Radiation Safety Officer. Periodic inspections by the AEC/NRC's Division of Compliance (Region V) found the VA in conformance with all regulations set forth in 10 CFR 20.

Since the termination of on-site land disposal in 1968, the VA has contracted the services of a commercial waste hauler to transport the biomedical wastes to an authorized landfill.

c. <u>Nature of Biomedical Wastes</u>

The VA, as practiced by all medical institutions, use radionuclide tracers and radiopharmacueticals in their medical research programs (i.e., biochemical and metabolic studies), and for medical diagnostic and therapeutic applications.

Based on an inventory of existing disposal records covering an eight year period (6/60-10/68), biomedical wastes buried on-site at the VA Wadsworth/Brentwood Medical Center were characterized by solid wastes consisting of contaminated papers and rags, syringes, labware, planchets, small animal excreta and carcasses, liquid scintillation counting vials, and liquid wastes primarily consisting of liquid scintillation "cocktails" (LSC)*.

Liquid scintillation media and small animal carcasses, both containing primarily tracer quantities of tritium and carbon-14, constituted the largest volume (greater than 50%) of the VA's radioactive biomedical wastes.

*An estimated 350-400 gallons of the organic solvent component of the LSC (i.e., toluene, 1,4-dioxane) were disposed of in the burial site (1960 - 1968). Toluene constituted the largest volume of waste solvents.

Table 9 gives an overview of the types and quantities of radionuclides disposed of on-site by the VA during the period 1960-1968, and their corresponding half-lives and primary modes of decay.

4. RADIOLOGICAL HEALTH IMPACTS

a. Radiological Assessments

Since a small area adjacent to the proposed public recreation site was formerly used for biomedical waste disposal, a number of technical specialists, including radiochemists, health physicists, and others intimitely acquainted with radiological health-safety problems were consulted to make a radiological health assessment.

Following is a summarization of appraisals by radiation specialists concerning the degree of risk to the public from biomedical wastes buried near the project site; radiological monitoring and test results (both groundwater and soil samplings); as well as radiation dosimetry calculations.

1. (April-May 1981) The Santa Monica Water Company collected groundwater samples from five wells located near or on the Veterans Administration-Brentwood Medical Center. These samples were submitted to the Sanitary Engineering Division of the Los Angeles Department of Water and Power for analytical testing of the gross alpha activity, gross beta activity, and the activity levels of tritium and carbon-14. The results of the water analysis (Report No.

RADIONUCLIDE[illegible]SPOSED OF BY
VETERANS ADMINISTRATION (W. LOS ANGELES)
(1960 - 1968)

ADIONUCLIDE	1960	1961	1962	1963	1964	1965	1966	1967	1968	TOTAL QUANTIES	HALF-LIFE	MODES OF DECAY 1
	QUANTITIES (MILLICURIES)											
ritium (H-3)	0.020	6.82	298.7	434.8	150.7	36.9	104.4	58.3	80.7	1171.3	12.3 yrs.	B-
arbon-14 (C-14)	0.55	2.3	5.3	3.4	2.3	9.4	11.3	7.2	10.8	52.6	5730 yrs.	B-
odine-131 (I-131)	-0-	0.16	8.63	6.4	25	31.5	15.6	42.5	8.4	138.2	8.05 days	B-
hlorine-36(Cl-36)	-0-	-0-	0.017	.025	-0-	-0-	-0-	-0-	-0-	0.042	$3x10^5$yrs	B-
ercury-203(Hg-203)	-0-	-0-	-0-	-0-	0.35	0.35	-0-	-0-	-0-	0.70	47 days	B-
odium-24 (Na-24)	-0-	-0-	-0-	-0-	1.6	-0-	-0-	-0-	-0-	1.6	14.97 hrs	B-
hromium-51(Cr-51	-0-	0.02	0.182	0.31	0.32	0.32	0.26	-0-	0.125	1.5	27.8 days	EC
odine-125(I-125)	-0-	-0-	-0-	0.43	0.725	0.725	0.02	-0-	11.1	13	60.2 days	EC
hosphorus-32(P-32)	-0-	0.30	-0-	9.0	0.43	0.43	0.26	-0-	-0-	10.4	14.3 days	B-
olybdenum-99(Mo-99)	-0-	-0-	-0-	-0-	-0-	18.4	0.05	-0-	3.0	21.4	66 hours	B-
inc-65(Zn-65)	-0-	-0-	-0-	-0-	-0-	-0-	0.05	-0-	-0-	0.05	245 days	EC,B+
ron-59(Fe-59)	-0-	0.02	0.07	-0-	-0-	-0-	0.013	-0-	1.2	1.3	45 days	B-
odium-22(Na-22)	-0-	-0-	0.064	-0-	0.14	0.14	0.225	-0-	0.03	0.60	2.58 yrs.	EC,B+
ulphur-35(S-35)	0.010	-0-	-0-	-0-	-0-	-0-	-0-	1.2	1.2	2.4	86.7 days.	B-
trontium-85(Sr-85)	-0-	-0-	0.001	-0-	-0-	-0-	-0-	0.05	-0-	0.05	64 days	EC
umped*	-0-	-0-	0.065	1.68	1.68	0.585	0.70	3.5	1.4	10.2	N/A	N/A

May include small quantities of any of the bove-listed radionuclides.

1 Modes of Decay:
B- = Negative beta emission
B+ = Positron emission

a = alpha particle decay
EC = orbital election capture

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1114; Appendix B) indicated that the radioactivity levels were well below the maximum contamination limits set forth in the Safe Drinking Water Act:

	Picocuries/liter (pCi/l)*	
Radiological Parameter	Federal Maximum Contamination Limits (MCL)	Groundwater Testing Results
Gross Alpha activity	15	0.8-6.1
Gross Beta activity	50	2.4-6.8
Tritium (H-3) activity	20,000	180
Carbon-14 (C-14) activity	No limit	120

*A picocurie is a trillionth of a curie

2. (May 1981) A group of three professional health physicists--all members of the Southern California Chapter of the Health Physics Society, and certified by the American Board of Health Physics--performed an independent evaluation of the VA's former biomedical waste disposal site. After considering the types, estimated quantities, and radiological properties of the buried materials, the group concluded that the disposal site would not present any health risk to the public. In addition, they sought feedback from their own peers, consulting with prominent health physicists at the Industrial Safety Division of Oak Ridge National Laboratory (Oak Ridge, Tenn.), who agreed with their health risk assessment.

3. (May 1981) A radiological survey of the VA's former disposal site was performed by three inspectors from the Nuclear Regulatory Commission's (NRC) Office of Inspection and Enforcement (Report No. 81-02; Appendix C). Using two certified meters, one of which was fitted with a gamma scintillation probe, the survey team randomly scanned the proposed twelve acre recreation site to measure ambient radiation levels. The survey results indicated the presence of no ionizing radiation above normal background levels.

4. (July 1981) The NRC's Uranium Fuel Licensing Branch performed extensive calculations to estimate the maximum potential radiation dose an individual could receive from exposure to the buried low-level radioactive materials (Appendix D). The radiation dosimetry calculations considered both external and internal exposure pathways. The internal exposure calculations were based on two projected pathways:

- Ingestion of food grown on the disposal site contaminated by root uptake of buried radionuclides. These calculations were based on the assumption that after the site reclamation phase of the project, all agricultural, beef or dairy products any one individual would consume would be grown or supported on the former disposal area.

- Inhalation of airborne radioactive particulates. These calculations were based on the assumption that during site reclamation the buried materials, mixed with one meter of soil, were brought to the surface. The top one centimenter of contaminated soil then becomes airborne as a result of wind resuspension.

Devising a worst case scenario based on these rather conservative assumptions, the NRC scientists calculated the maximum dosage a person could receive from the buried biomedical wastes to be on the order of 1.5 mrems/yr* to the whole body, or about one-sixtieth of the dose from natural background radiation.

5. (September 1981) After reviewing the disposal records and inspecting the site, staff members of the Hazardous Materials Management Section, California Department of Health Services, concluded that as long as the remaining quantities of biomedical wastes remained buried and undisturbed, there would be no threat to human health.

6. (September 1981) Scientists from UCLA's Office of Research and Occupational Safety reviewed the disposal records and concluded that there would be no health hazards associated with developing the project site for public recreational uses.

7. (April-May 1982) To determine whether the surface of the proposed recreation site was contaminated by radionuclides or organic solvents used in liquid scintillation counting (i.e., toluene and dioxane), Dr. Robert Wood, Chief Radiochemist at UCLA's Laboratory of Biomedical and Environmental Sciences, conducted a radiological survey and analysis of soil and plant samples (Appendix E).

   Two soil samples--one surface and one subsurface (to a depth of six inches)--were collected from each of six locations across the site, making a total of twelve (12) samples (6 sites x 2 samples/site = 12 samples). Furthermore, plant materials were collected from each sampling site (6 samples).

*Normalizing the assumptions to reflect actual conditions (i.e., there will be no site reclamation activities that would cause the excavation of any remaining buried wastes) would alter the dose rate to considerably less than 1 mrem/yr.

As a means for comparison, two control samples (surface and subsurface) were collected from three areas outside the proposed recreation site: Westwood Park; the water tower area northeast of the Wadsworth/Brentwood Medical Center; and from a construction site in the Westwood area.

The results of the radiological analysis indicated no statistical differences in the activity of the recreation site samples and the control samples. Hence, the proposed Barrington Park Addition will pose no greater hazard to human health than Westwood Park. The analysis revealed only the presence of natural radionuclides common in all soils, primarily those associated with the uranium, thorium, and actinum decay series (i.e., trace amounts of radium-226 and thorium-228), as well as the singly occurring radionuclide, potassium-40 (K-40).

Radioactive fallout from the atmospheric testing of nuclear weapons (i.e., strontium-90, cesium-137) is found in soils and plants around the world. However, because of their low level of activity; the need to use special analytical techniques; and the fact they are not part of the VA's biomedical waste stream, no attempt was made to measure them in the soil of the proposed recreation site.

Gas chromatography studies of soil samples indicated no organic solvents in the first six inches of soil, other than natural soil organic products such as humus, cellulose and lignins.

8. (April 1983) A second more extensive soil analysis was conducted in the general area of the VA's former biomedical waste disposal site. Eighty-five (85) soil samples were collected (to a depth of one-half foot to nine feet) and analyzed for tritium, carbon-14 and other medical radionuclides that may be present on the earth's surface. The results indicated the presence of no radiation above natural background levels (Appendix E).

b. Environmental Fate of the Biomedical Wastes

The environmental fate of the buried biomedial wastes is an important consideration when assessing public health impacts. Rather than remaining unaltered in their original state, the wastes have been acted upon by physical, chemical and biological forces which have effectuated a reduction in their quantities; their transformation into innocuous products, etc.

Radionuclides. The length of time a particular radionuclide will persist in the environment is a function of its characteristic half-life. In other words, radionuclides buried years ago will not exist in its original state today, but will have spontaneously decayed to a level of activity dependent upon its half-life.

A good rule of thumb to follow is that it takes a little more than three half-lives for the activity of any quantity of radioactive material to decrease to 10 percent of its initial value. In somewhat less than seven half-lives the activity will be down to 1 percent, and in ten half-lives, it will be only 0.1 percent (3). The decay of a radionuclide's activity over succeeding half-lives is graphically illustrated in Figure 8.

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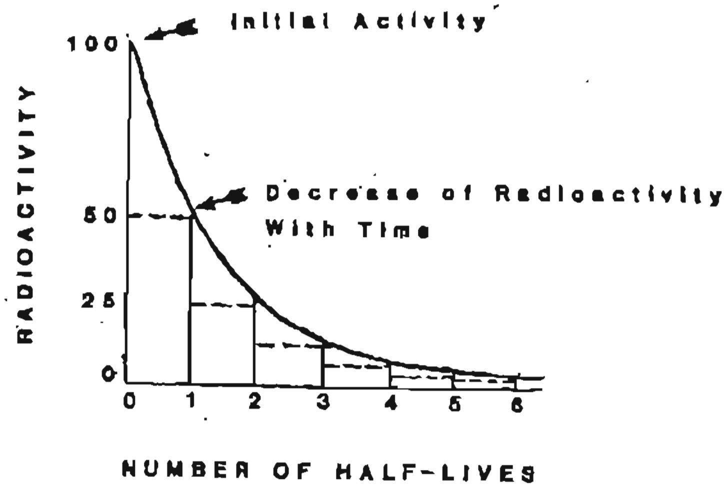
FIGURE 8*



As indicated in Table 7, the majority of the radionuclides used and buried by the VA had half-lives ranging from a few days to a few months, with the exception of tritium, carbon-14, Cl-32, and Na-22. Because it has been at least fourteen (14) years since radionuclides were last buried on the VA property, many of these radionuclides are well beyond their tenth half-life, meaning that they have either completely decayed or exist in very minute quantities.

According to physical laws, radioactive substances decay exponentially as expressed in the following equation:

$$Q = Q_0 e^{-(\ln 2/\lambda)t}$$

where,

Q = existing quantities of radioactive material;

Q_0 = amount of radioactive material present initially;

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λ = half-life; and,

t = amount of time that has elapsed since the radioactive material was buried.

By using this equation it was determined that the only radionuclides that exist in any measurable quantities to warrant an assessment of their potential health impacts are: tritium at 421 millicuries, and carbon-14 at 53 millicuries--both of which occur naturally in the environment. As a means for comparison, 600 millicuries of tritium is approximately the amount contained in 2 or 3 digital wristwatches with tritium nightlights. The 53 millicuries of carbon-14 is equivalent to the amount of natural radioactive material in the top three meters of soil under a field 50 X 100 meters.

As pure beta emitters, tritium and carbon-14 emit very low particle energies of 0.0186 Mev and 0.156 Mev respectively, so that external exposure of humans to their ionizing radiations is not an acute public health concern.

Organic Wastes. Organic wastes buried by the VA--consisting primarily of small animal carcasses and liquid scintillation solvents--have been metabolized by aerobic soil microorganisms for the purpose of capturing energy and carbon for cell synthesis.

During the process of micobial decomposition, soil microorganisms perform an important ecological function in their ability to destroy the toxicity (detoxification) of

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a wide variety of organic compounds, ultimately converting them into carbon dioxide, methane, organic acids and alcohols, and other innocuous end-products.

Toluene and 1,4-dioxane, an aromatic hydrocarbon and a heterocyclic oxygen compound respectively, are both readily metabolized and subsequently detoxified by various members of the soil microflora* (particularly by bacterial groups such as Arthrobacter and Mycobacterium). Toluene, for example, is converted to the intermediate 3-methylcatechol in the metabolic pathway (8).

c. <u>Conclusions/Mitigation Measures</u>

Before concluding, other important factors that have some bearing on the biomedical waste issue are as follows:

<u>Buffer Zone</u>. After the San Fernando earthquake (Feb. 1971) destroyed the VA Hospital in San Fernando, the VA Wadsworth Hospital was inspected and declared seismically unsafe. Subsequently, the old hospital buildings were demolished and a modern, seismically sound hospital complex was built. Tons of concrete debris and reinforcement steel from the demolished buildings, along with many thousand cubic yards of soil were dumped and spread over unused VA property (including the former biomedical waste disposal site). This resulted in the

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* Dr. Dennis Focht, Soil Microbiologist - University of Calif., Riverside, Department of Soil and Environmental Sciences.

placement of an additional 15-20 feet of soil over the former disposal site (6-8 feet in depth), making the effective burial depth of the biomedical wastes 20-30 feet.

Furthermore, the site preparation phase of the project will require 60-80 thousand cubic yards of fill material to modify grade characteristics. This action will place, on the average, another five feet of soil cover over the former disposal site.

Amendment to NRC Regulations. The largest volume of radioactive biomedical wastes disposed of by the VA consisted of small animal carcasses and liquid scintillation media, both primarily containing tracer quantities of tritium and carbon-14. Effective March 11, 1981, the NRC--after careful evaluation of the potential environmental and public health impacts--amended 10 CFR 20, "Standards for Protection Against Radiation", allowing licensees (i.e. hospitals and medical research institutions) to dispose of limited quantities of biomedical wastes containing tracer levels of tritium and carbon-14, without regard to its radioactivity.

Pre-1960 Burials. Disposal records documenting the types and quantities of biomedical wastes buried by the VA-Wadsworth/Brentwood Medical Center during the period 1960-1968 are currently on file at the NRC (Region V). Although the burial of radionuclides occurred sporadically during the 1950's, there are no existing disposal records documenting these pre-1960 burials--disposal records were not legally required until 1957. However, the quantities buried during the 1950's can be safely discounted for two major reasons.

First, during the late 40's and early 50's the radionuclide distribution program at the AEC's Oak Ridge National Laboratory (the sole supplier of radionuclides during the early years of the program) was in its infancy. Therefore, the supply of radionuclides available for medical as well as other uses were limited. Table 10 illustrates the annual number of curies distributed for four radionuclides by the Oak Ridge National Laboratory, from August 2, 1946 to December 31, 1958 (9).

TABLE 10

Radionuclides Distributed by Oak Ridge National Laboratory (1946-1958)

Radio-nuclide	Quantities (curies) 1946	1948	1949	1950	1951	1952	1953	1954	1955	1956	1957	1958	Total 1946-58
C-14	(*)	1	3	4	9	6	6	5	6	9	10	10	69
P-32	28	45	74	93	102	119	147	153	158	165	179	230	1,493
H-3	-	-	151	-	-	60	135	168	587	5848	5280	39769	51,998
I-131	23	55	177	311	468	490	505	557	657	735	891	1074	5,941

* Less than 1 curie

Source: Atomic Energy Commission

When considering that the available supply of radionuclides were distributed to a large number of qualified users: medical institutions; colleges and universities; federal and state laboratories; foundations and institutes; and industrial firms, not only in the United States, but in foreign countries as well, it is evident that the quantities allocated to the VA (West Los Angeles) were rather modest.

Secondly, the VA's use of radionuclides for diagnostic purposes are essentially tracer applications and involve only microcurie amounts of radioactivity. Moreover, the VA's use of radionuclides for medical research and therapeutic applications usually involve low millicurie amounts (10-200 mc) of material per treatment. This translates into the fact that the VA required very limited quantities of radionuclides to satisfy their needs, thereby resulting in the on-site burial of minute quantities of low-level radioactive waste materials (less than 1 curie).

Therefore, the use of existing burial records for the period 1960-1968--a period when radionuclides were available to the VA in far greater quantities*--will provide sufficient information to evaluate the potential public health hazards from buried biomedical wastes.

* Based on the general trend in radionuclide distribution, the total curies distributed increased on an annual basis (for both domestic and foreign markets).

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Conclusions

Based on the scientific community's broad understanding of environmental radioactivity today; the nature of the VA's biomedical wastes; and the environmental fate of these materials, it has been determined that the development of the proposed outdoor recreation facility near the VA's former biomedical waste disposal site will not have any adverse or deleterious impacts on the public health. The following "highlights" form the basis for this finding.

- After conducting scientific assessments and field tests, radiological health and safety experts concluded that the development of the project site for recreational uses would pose no conceivable health risk to the public.

  For example, the 1.5 mrems/yr calculated by the NRC as the maximum exposure one could receive from the buried radionuclides (based on a worst case scenario) is trivial in comparison to the average dose rates (mrems/yr) from natural background radiation and other sources of radiation exposure. Following are excerpts from Table 7.

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Source	Average Dose Rate* (mrems yr)
Natural background	106
Medical exams	
- medical diagnosis	77
- dental diagnosis	1.4
Atmospheric weapons test	4.5
Brick & masonary buildings	3-4

* Prorated over total population

- The burial of a few hundred gallons of organic scintillation solvents (i.e., toluene and 1,4-dioxane) in the soil environment poses no long term health hazards, for these solvents have been rendered innocuous through microbial decomposition and detoxification.

- Because the majority of the medical radionuclides buried had short half-lives, they would not have bioaccumulated or persisted in the environment. Considering that radionuclides decay exponentially, and the fact that it has been at least fourteen years since radionuclides were last buried on-site, any remaining activity would be so low as not to constitute a threat to human health. Furthermore, the remains of any biomedical wastes (i.e., organic wastes containing tracer quantities of tritium and carbon-14; inorganic wastes such as the counting vials) are buried under many feet of soil and demolition debris, so that the likelihood of these materials coming in contact with the public is highly improbable.

Mitigation Measures

None required.

RADIONCULIDE IDENTIFICATION TABLE

Symbol	Radionuclide
Be	beryllium
C-14	carbon-14
Cl	chlorine
Cr	chromium
Cs	cesium
Fe	iron
H-3	tritium
Hg	mercury
I	iodine
In	indium
K	potassium
Mo	molybdenum
Na	sodium
P	phosphorus
Ra	radium
Rb	rubidium
S	sulphur
Sb	antimony
Sr	strontium
Th	thorium
U	uranium
Zn	zinc

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GLOSSARY

Activity - radioactivity per unit mass of a radioactive sample.

Alpha particle - a charged particle emitted from the nucleus of an atom having a mass and charge equal in magnitude to a helium nucleus; i.e., two protons and two nuetrons.

Artifical radioactivity - manmade radioactivity produced by particle bombardment or electromagnetic irradiation, as opposed to natural radioactivity.

Atmosphere - the gaseous envelope surrounding the earth composed of the entire mass of air containing primarily N_2, O_2, H_2O, CO_2 and inert gases.

Background radiation - radiation levels due to cosmic rays and natural radioactive sources.

Beta particle - charged particle emitted from the nucleus on an atom, with a mass and charge equal in magnitude to that of the electron.

Biosphere - the biologic envelope that surrounds the globe containing and able to support life without the help of artificial systems. It penetrates into and is dependent on the atmoshpere, hydrosphere, and lithosphere.

Cosmic rays - high-energy particulate and electromagnetic radiations which originate outside the earth's atmosphere.

Curie - a unit of radioactivity, the amount of any nuclide that undergoes exactly 3.7×10^{10} radioactive disintegrations per second.

- Microcurie: one-millionth of a curie
- Millicurie: one-thousandth of a curie
- Picocurie: one-millionth of a microcurie

Daughter - synonym for decay product

Decay curve - a curve showing the relative amount of radioactive substance remaining after any time interval.

Decay product - a nuclide resulting from the radioactive disintegration of a radionuclide, formed either directly or as a result of successive transformations in a radioactive series. A decay product may be either radioactive or stable.

Electron - an elementary particle charged with negative electricity.

Electron capture - a mode of radioactive decay involving the capture of an orbital electron by its nucleus.

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Electron volt - a unit of energy equivalent to the energy gained by an electron in passing through a potential difference of one volt.

- KeV: thousand or kilo electron volts
- MeV: million or mega electron volts

External radiation - radiation from a source outside the body.

Gamma rays - short wavelength electromagnetic radiation of nuclear origin (range of energy from 10 KeV to 9 MeV) emitted from the nucleus.

Global or radioactive fallout - the material that descends to the earth or water well beyond the site of a surface or subsurface nuclear explosion.

Half-life - the average time required for one-half the atoms in a sample of radioactive element to decay.

Health physics (or radiological health) - that area of environmental health engineering that deals with the protection of the individual and population groups against the harmful effects of ionizing radiation.

Induced radioactivity - radioactivity produced in substance after bombardment with neutrons or other particles. The resulting activity is "natural radioactivity" formed by nuclear reactions occurring in nature and "artifical radioactivity" if the reactions are caused by man.

Internal radiation - radiation from a source within the body (as a result of deposition of radionuclides in body tissues).

Lithosphere - the solid, rocky portion of the earth made up of the crust of normal silicate rocks and the mantle composed of silicate material.

Natural radioactivity - the property of radioactivity exhibited yb more than fifty naturally occurring radionuclides.

Nuclear medicine - the clinical field of study concerned with the diagnostic and therapeutic uses of radionuclides.

Radioactivity - the property of certain nuclides of spontaneously emitting particles or gamma radiation.

Radioactive decay - disintegration of the nucleus of an unstable nuclide by spontaneous emission of charged particles and/or photons.

Radiochemistry - the subdivision of chemistry which deals with the properties and use of radioactive materials in industry, biology and medicine including tracer research and radioactive waste disposal.

Radionuclide - a radioactive nuclide; one that disintegrates with the emission of corpuscular or electromagnetic radiation. The rays most commonly emitted are alpha, beta, or gamma rays.

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Radiology - that branch of medicine which deals with the diagnostic and therapeutic applications of radiant energy including x-rays and radionuclides.

Radiopharmaceutical - a radioactive pharmaceutical or chemical.

Rem - the amount of ionizing radiation required to produce the same biological effects as one roentgen of high-penetration x rays.

Scintillation Counter - an instrument for detecting and measuring radioactivity by means of a photoelectric cell that converts radiation into light flashes.

Transmutation - any process in which a nuclide is transformed into a different nuclide, or more specifically, when transformed into a different element by a nuclear reaction.

Transuranic elements - elements that have atomic numbers greater than 92, starting with neptunium (93) and ending with lawrencium (103).

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VI GROWTH - INDUCING IMPACTS

The development of the proposed outdoor recreation facility will have no impact on the demographic and economic characteristics of the area.

VII CUMULATIVE IMPACTS

None were identified.

VIII ALTERNATIVES

1. NO PROJECT

   This alternative would leave the project site in its existing state, and would not meet the recreational needs of the community.

2. CHANGE IN PROJECT LOCATION

   The scarcity of land suitable for the development of neighborhood/community recreational facilities makes this alternative infeasible. There are just no other potential sites available in the Brentwood community that are noted for their recreational value and/or can match the physical characteristics (i.e. size, topography) of the proposed project site.

   Moreover, if there were some potential sites available, land acquisition and development costs in the West Los Angeles area are very expensive. Thus, the overriding advantage of acquiring the proposed project site is that as federal surplus property it

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can be leased by another governmental agency (i.e. Los Angeles Department of Recreation & Parks) for a nominal cost.

3. CHANGE IN THE INTENSITY/SCALE OF THE PROJECT

This alternative would alter the project's mix of active and passive recreational features. For example, by reducing the number of multipurpose playing fields from two, as proposed, to one, this would allow more area for passive recreational activities such as picnicking. However, in decreasing the number of playing fields from two to one, or even eliminating the playing fields entirely, this alternative would not provide sufficient recreational facilities to accomodate the growing number of community residents who want to participate in youth/adult outdoor sports programs.

APPENDICES

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APPENDIX A

INITIAL STUDY

LIST OF ORGANIZATIONS AND PERSONS CONSULTED

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CITY OF LOS ANGELES
OFFICE OF THE CITY CLERK
ROOM 395, CITY HALL
LOS ANGELES, CALIFORNIA 90012

CALIFORNIA ENVIRONMENTAL QUALITY ACT

INITIAL STUDY AND CHECKLIST

(Article IV — City CEQA Guidelines)

LEAD CITY AGENCY: Department of Recreation and Parks
COUNCIL DISTRICT: 11
DATE: September 29, 19

PROJECT TITLE/NO.: Barrington Recreation Center Addition
CASE NO.:

PREVIOUS ACTIONS CASE NO.:
☐ DOES have significant changes from previous actions.
☐ DOES NOT have significant changes from previous actions.

PROJECT DESCRIPTION:

Leasing of twelve acres of Veterans Administration property for development as a public recreation area.

PROJECT LOCATION:
230 South Barrington Avenue - south of the U. S. Post Office, Brentwood, California

PLANNING DISTRICT: Westwood

STATUS:
☐ PRELIMINARY
☐ PROPOSED
XX ADOPTED 7-25 date 1972

EXISTING ZONING: N/A
MAX. DENSITY ZONING: N/A
PROJECT DENSITY:

PLANNED LAND USE & ZONE: Public and Quasi-Public
MAX. DENSITY PLAN: N/A
☐ DOES CONFORM TO PLAN
☐ DOES NOT CONFORM TO PLAN
☐ NO DISTRICT PLAN

PLAN DENSITY RANGE: N/A
PROJECT DENSITY: N/A

DETERMINATION (to be completed by Lead City Agency)

On the basis of the attached initial study checklist and evaluation:

NEGATIVE DECLARATION — ☐ I find the proposed project COULD NOT have a significant effect on the environment and a NEGATIVE DECLARATION will be prepared.

CONDITIONAL NEGATIVE DECLARATION — ☒ I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because the mitigation measures described on an attached sheet have been added to the project. A CONDITIONAL NEGATIVE DECLARATION WILL BE PREPARED. (See attached condition(s))

ENVIRONMENTAL IMPACT REPORT — ☐ I find the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

A.A. Carmichael — SIGNATURE: Alvey G. Carmichael — 11-4-81 — TITLE: Planning Officer

Form Gen 159 — Page 1

INITIAL STUDY CHECKLIST (To be completed by Lead City Agency)

BACKGROUND

PROPONENT NAME: Department of Recreation and Parks Attn: Joel Breitbart

PHONE: [redacted]

PROPONENT ADDRESS

AGENCY REQUIRING CHECKLIST

DATE SUBMITTED

PROPOSAL NAME (If applicable)

ENVIRONMENTAL IMPACTS

(Explanations of all "yes" and "maybe" answers are required to be attached on separate sheets.)

	YES	MAYBE	NO
1. EARTH. Will the proposal result in:			
a. Unstable earth conditions or in changes in geologic substructures?			X
b. Disruptions, displacements, compaction or overcovering of the soil?	X		
c. Change in topography or ground surface relief features?	X		
d. The destruction, covering or modification of any unique geologic or physical features?			X
e. Any increase in wind or water erosion of soils, either on or off the site?			X
f. Changes in deposition or erosion of beach sands, or changes in siltation, deposition or erosion which may modify the channel of a river or stream or the bed of the ocean or any bay, inlet or lake?			X
g. Exposure of people or property to geologic hazards such as earthquakes, landslides, mudslides, ground failure, or similar hazards?			X
2. AIR. Will the proposal result in:			
a. Air emissions or deterioration of ambient air quality?	X		
b. The creation of objectionable odors?			X
c. Alteration of air movement, moisture or temperature, or any change in climate, either locally or regionally?			X
d. Expose the project residents to severe air pollution conditions?			X
3. WATER. Will the proposal result in:			
a. changes in currents, or the course or direction of water movements, in either marine or fresh waters?			X
b. Changes in absorption rates, drainage patterns, or the rate and amounts of surface water runoff?		X	
c. Alterations to the course or flow of flood waters?			X
d. Change in the amount of surface water in any water body?			X
e. Discharge into surface waters, or in any alteration of surface water quality, including but not limited to temperature, dissolved oxygen or turbidity?			X
f. Alteration of the direction or rate of flow of ground waters?			X
g. Change in the quantity of ground waters, either through direct additions or withdrawals, or through interception of an aquifer by cuts or excavations?			X
h. Reduction in the amount of water otherwise available for public water supplies?			X
i. Exposure of people or property to water related hazards such as flooding or tidal waves?			X
j. Changes in the temperature, flow, or chemical content of surface thermal springs.			X
4. PLANT LIFE. Will the proposal result in:			
a. Change in the diversity of species, or number of any species of plants (including trees, shrubs, grass, crops and aquatic plants)?	X		
b. Reduction of the numbers of any unique, rare or endangered species of plants?			X
c. Introduction of new species of plants into an area, or in a barrier to the normal replenishment of existing species?			X
d. Reduction in acreage of any agricultural crop?			X

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	YES	MAYBE	NO
5. ANIMAL LIFE. Will the proposal result in:			
a. Change in the diversity of species, or numbers of any species of animals (birds, land animals including reptiles, fish and shellfish, benthic organisms or insects)?			
b. Reduction of the numbers of any unique, rare or endangered species of animals?			
c. Introduction of new species of animals into an area, or result in a barrier to the migration or movement of animals?			
d. Deterioration to existing fish or wildlife habitat?			
6. NOISE. Will the proposal result in:			
a. Increases in existing noise levels?	X		
b. Exposure of people to severe noise levels?			
7. LIGHT AND GLARE. Will the proposal			
a. Produce new light or glare from street lights or other sources?	X		
b. Reduce access to sunlight of adjacent properties due to shade and shadow			X
8. LAND USE. Will the proposal result in an alteration of the present or planned land use of an area?	X		
9. NATURAL RESOURCES. Will the proposal result in:			
a. Increase in the rate of use of any natural resources?			X
b. Depletion of any non-renewable natural resource?			X
10. RISK OF UPSET. Will the proposal involve:			
a. A risk of an explosion or the release of hazardous substances (including, but not limited to, oil, pesticides, chemicals or radiation) in the event of an accident or upset conditions?			X
b. Possible interference with an emergency response plan or an emergency evacuation plan.			X
11. POPULATION. Will the proposal result in:			
a. The relocation of any persons because of the effects upon housing, commercial or industrial facilities?			X
b. Change in the distribution, density or growth rate of the human population of an area?			X
12. HOUSING. Will the proposal:			
a. Affect existing housing, or create a demand for additional housing?			X
b. Have an impact on the available rental housing in the community?			X
c. Result in demolition, relocation or remodeling of residential, commercial, or industrial buildings or other facilities?			X
13. Transportation/Circulation. Will the proposal result in:			
a. Generation of additional vehicular movement?	X		
b. Effects on existing parking facilities, or demand for new parking?	X		
c. Impact upon existing transportation systems?	X		
d. Alterations to present patterns of circulation or movement of people and/or goods?			X
e. Alterations to waterborne, rail or air traffic?			X
f. Increase in traffic hazards to motor vehicles, bicyclists or pedestrians?			X
14. PUBLIC SERVICES. Will the proposal have an effect upon, or result in a need for new or altered governmental services in any of the following areas:			
a. Fire protection?			X
b. Police protection?			X
c. Schools?			X
d. Parks or other recreational facilities?			X
e. Maintenance of public facilities, including roads?			X
f. Other governmental services?			X
15. ENERGY. Will the proposal result in:			
a. Use of exceptional amounts of fuel or energy?			X
b. Increase in demand upon existing sources of energy, or require the development of new sources of energy?			X

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	YES	MAYBE	NO
16. UTILITIES. Will the proposal result in a need for new systems, or alterations to the following utilities:			
a. Power or natural gas?			X
b. Communications systems?			X
c. Water?			X
d. Sewer or septic tanks?			X
e. Storm water drainage?			X
f. Solid waste and disposal?			X
17. HUMAN HEALTH. Will the proposal result in:			
a. Creation of any health hazard or potential health hazard (excluding mental health)?			X
b. Exposure of people to potential health hazards?		X	
18. AESTHETICS. Will the proposed project result in:			
a. The obstruction of any scenic vista or view open to the public?			X
b. The creation of an aesthetically offensive site open to public view?			X
c. The destruction of a stand of trees, a rock outcropping or other locally recognized desirable aesthic natural feature?			X
d. Any negative aesthetic effect?			X
19. RECREATION. Will the proposal result in an impact upon the quality or quantity of existing recreational opportunities?	X		
20. CULTURAL RESOURCES:			
a. Will the proposal result in the alteration of or the destruction of a prehistoric or historic archaeological site?			X
b. Will the proposal result in adverse physical or aesthetic effects to a prehistoric or historic building, structure, or object?			X
c. Does the proposal have the potential to cause a physical change which would affect unique ethnic cultural values?			X
d. Will the proposal restrict existing religious or sacred uses within the potential impact area?			X
21. MANDATORY FINDINGS OF SIGNIFICANCE.			
a. Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?			X
b. Does the project have the potential to achieve short-term, to the disadvantage of long-term, environmental goals.			X
c. Does the project have impacts which are individually limited, but cumulatively considerable?*			X
d. Does the project have environmental effects which cause substantial adverse effects on human beings, either directly or indirectly?			X

* "Cumulatively considerable" means that the incremental effects of an individual project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.

DISCUSSION OF ENVIRONMENTAL EVALUATION

(Attach additional sheets if necessary)

See attached sheet entitled "Environmental Evaluation".

David Attaway	Environmentalist	[redacted]	
PREPARED BY	TITLE	TELEPHONE	DATE

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EIR PREPARATION

The Environmental Impact Report (EIR) for the Barrington Recreation Center Addition was prepared by:

David Attaway, Environmental Planning Specialist
City of Los Angeles Department of Recreation and Parks
[redacted].

Consultants:

- Traffic Study
  Crain and Associates

- Archaeological Resource Survey
  Dr. Brian D. Dillon, Consulting Archaeologist

- Radiological Analysis (plant and soil samples)
  Dr. Robert Wood, Chief Radiochemist
  UCLA Laboratory of Biomedical and
  Environmental Sciences

ORGANIZATIONS AND PERSONS CONSULTED

Federal

Nuclear Regulatory Commission
- Herb Book, Chief
  Radiological Safety Branch

Congressman Anthony C. Beilenson,
23rd District
- Kay Ferber Slavkin
- Joan Shaffran-Brandt

Veterans Administration (West LA)
- Mr. L. Wetterau, Radiation
  Safety Officer
- Mr. Tom Keenan, Chief
  of Engineering

Oak Ridge National Laboratory

State of California

Department of Health Services
Hazardous Materials Management Section

Los Angeles County

Department of Regional Planning

Department of Health Services
- Joseph Karbus, Director
  Occupational Health and
  Radiation Management

City of Los Angeles

Department of General Services/Standards

Department of Transportation
City Wide Planning

Department of Water and Power
Sanitary Engineering Division

Public Works Department
Bureau of Engineering

City Planning Department

Councilman Marvin Braude
11th District
- Claire Rogger

Colleges and Universities

University of California, Los Angeles
- Dr. Robert Wood, Chief Radiochemist
  Laboratory of Biomedical and Environmental Science

University of California, Los Angeles
- Dr. Walter Wegst, Director
  -Office of Research and Occupational Safety

University of California, Riverside
- Dr. Dennis Focht, Professor of Soil Microbiology
  Department of Soil and Environmental Sciences

Professional Societies

Health Physics Society (Southern California Chapter)

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APPENDIX B

GROUNDWATER SAMPLING RESULTS

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Medical Center

Sawtelle Boulevards

Los Angeles, CA 90073

Veterans Administration

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1981 JUN 9 AM 9 57

June 4, 1981

Mr. Larry W. Camper
Material Licensing Branch
Division of Fuel Cycle and
Material Safety
U.S. Nuclear Regulatory Commission
Washington, DC 20555

Dear Mr. Camper:

As we discussed, I have enclosed for your use a copy of the Department of Water & Power report of the results of their monitoring of the wells in the vicinity of the Veterans Administration property.

Best regards, sincerely,

W. H. Blahd

W. H. BLAHD, M. D.
Chief, Nuclear Medicine
and Ultrasound Service

Enclosure

COPIES SENT TO OFF OF
INSPECTION AND ENFORCEMENT

In Reply Refer To:

77-106

MEMORANDUM

SANITARY ENGINEERING DIVISION

..O BY R. Kurimoto TO L. McReynolds DATE May 28, 1981

FILE TITLE Radioactivity in Groundwater near Veterans Administration Hospita

Public concern has arisen over possible contamination from some radioactive waste which was buried decades ago at the Veterans Administration Hospital (Wadsworth Hospital) in West Los Angeles. The Radioactivity Laboratory of the Los Angeles Department of Water and Power has been asked to test water samples from the burial site to check for contamination in the local groundwater.

Five groundwater samples were provided by Jack Hogland of the Santa Monica Water Company, 1228 South Bundy Drive, Los Angeles, California 90025; telephone 473-1460. One sample was taken from a well serving the hospital, and the other four were taken from nearby wells.

Laboratory results are shown on the attached report. Maximum contamination limits as set forth by the Safe Drinking Water Act are as follows:

Gross Alpha activity	15 pCi/l
Gross Beta activity	50 "
H^3 activity	20,000 "
C^{14} activity	no limit

The groundwater samples which were tested do not indicate radioactive contamination.

RK:js

cc: Jack Hogland, Santa Monica Water Co.
Skip Wetterau, Wadsworth Hospital, Nuclear Medicine Unit
Joe Karbus, Los Angeles County Health Dept.,
313 No. Figueroa St., Rm. 518, LA 90012

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LOS ANGELES DEPARTMENT OF WATER & POWER
SANITARY ENGINEERING DIVISION
REPORT OF WATER ANALYSIS

Sample No.	Date Taken	Date Rec'd.	Collector	Description
S-1876	4-27-81	4-28-81		Santa Monica Well #3
S-1877	"	"		Arcadia Well #4
S-1878	"	"		Charnock Well #12
S-1879	"	"		" " #15
S-1880	4-23-81	"		Veterans Administration Hospital Well

Sample No.	1876	1877	1878	1879	1880
Gross Alpha	3.4 ± 0.9	0.8 ± 0.6	6.1 ± 0.9	2.0 ± 0.7	1.9 ± 0.
Gross Beta	4.8 ± 1.0	2.4 ± 0.7	6.8 ± 1.0	2.9 ± 0.8	4.9 ± 1.
Radium 226					
Radium 228					
Strontium 89					
Strontium 90					
Hydrogen 3	<180 ± 180	<180 ± 180	<180 ± 180	<180 ± 180	<190 ± 19
Carbon 14	<120 ± 120	<120 ± 120	<120 ± 120	<120 ± 120	<120 ± 12

Radioactivity results are in Picocuries per Litre ± 95% confidence limits

Analysis requested by:

Santa Monica Water Company
1228 So. Bundy Drive
Los Angeles, Calif. 90025
ATTN: Jack Hogland

Telephone [redacted]

R. K. KISHIMOTO

Analyst

Approval

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Wadsworth
Medical Center

Wilshire and
Sawtelle Boulevards
Los Angeles, CA 90073

Veterans
Administration

JUN 25 AM 7 13

June 12, 1981

Mr. Larry W. Camper
Material Licensing Branch
Division of Fuel Cycle and
Material Safety
U.S. Nuclear Regulatory Commission
Washington, DC 20555

Dear Mr. Camper:

Additional documentation of groundwater testing for radionuclide contamination in the vicinity of VA Wadsworth Medical Center is submitted for your information. It appears that there is no radioactive contamination of water in this area.

Very truly yours,

L. W. Wetterau

L. W. WETTERAU
Radiation Safety Officer
Nuclear Medicine Ultrasound Service

Enclosure

cc: Mr. Herb Book
USNRC, Region V
Walnut Creek, CA

COPIES SENT TO OFF. OF
INSPECTION AND ENFORCEMENT

In Reply Refer To:

77-109

FORM 1841
REV. 2-78

MEMORANDUM

1107

SANITARY ENGINEERING DIVISION

MEMO BY R. Kurimoto TO L. McReynolds DATE June 5, 1981

FILE TITLE Radioactivity in Groundwater near Veterans Administration Hospita

In a memo from R. Kurimoto to L. McReynolds dated May 28, 1981, results from the testing of several groundwater sources near the Wadsworth Veterans Administration Hospital were presented. These samples were collected by the City of Santa Monica, Water Division and are labeled Santa Monica Well #3, Arcadia Well #4, Charnock Well #12, Charnock Well #15 and Veterans Administration Hospital Well. In an attempt to put these results into perspective, we will compare those groundwater sources with representative waters of our own system.

Gross Alpha Radioactivity: Samples to be tested for gross Alpha activity are to be collected for four consecutive quarters, and the results are to be averaged. The maximum contamination limit (MCL) for gross Alpha activity has been set at 15 pCi/litre by the Safe Drinking Water Act. However, should the activity exceed 5 pCi/l, further testing for radium isotopes is required.

All five groundwater samples provided by the Santa Monica Water Division were found to be less than 15 pCi/l, although the Charnock Well #12 exceeded 5 pCi/l. This one high result is not immediately significant, as it was only based upon a single grab sample. For comparison purposed, none of the domestic wells in our own system average more than 5 pCi/l and some range down to less than 0.5 pCi/l.

In comparing the Santa Monica Wells with surface water, we have chosen water collected at the Upper Van Norman Inlet as representative of our system. This sample site is comprised entirely of water from the Owens Valley and is transported via aqueduct through a series of open reservoirs until entering the

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San Fernando Valley for delivery to our distribution system. Upper Van Norman Inlet is monitored monthly, and gross Alpha results from the past 12-month period range from 1.1 to 2.9 pCi/l, with an average of 2.3 pCi/l.

Based upon comparison with limits set by the Safe Drinking Water Act and with our own system, the data from the five Santa Monica samples do not indicate Alpha contamination.

Gross Beta Radioactivity: Gross Beta radioactivity is not normally required of groundwater sources, although it is required of surface sources which are served to more than 100,000 persons (30,000 service connections). Nevertheless, we do have considerable gross Beta data available from our well system for comparison purposes with the Santa Monica samples.

The Santa Monica samples range from 2.4 to 6.8 pCi/l, and this is not very different from the historical data of our own well systems which tend to run from 2 to 8 pCi/l. If we select Upper Van Norman Inlet as representative of surface water served to our distribution lines, the past 12 months range of 3.3 to 5.6 pCi/l, with an average of 4.5 pCi/l.

The limit imposed for gross Beta activity by the Safe Drinking Water Act is 50 pCi/l, and we observe that the Santa Monica samples are considerably below this limit. Thus, the Santa Monica samples show no evidence of contamination from Beta radioactivity.

Tritium: Tritium is not tested routinely on samples of our own groundwater, so direct comparisons among the Santa Monica wells and our own groundwater are not possible. It is not known whether any other water utilities have such data either, because current Federal and State environmental regulations do not require such testing. Any tritium testing of groundwater would be conducted on a voluntary basis only, and such data may not be forwarded to authorities even if available.

We have not been concerned with tritium, because there is no reason to suspect high H^3 radioactivity levels in groundwater. The three primary sources of tritium in the environment are 1) nuclear interactions in the atmosphere by the effects of cosmic rays; 2) residue from atmospheric testing of nuclear devices (fallout), although such testing has greatly reduced in recent years; and 3) small amounts of waste discharge from nuclear-powered facilities, both as gaseous and liquid forms. In all of these cases, it is not likely that tritium would contaminate groundwater supplies, unless it were injected intentionally into wells or large amounts of tritiated water were allowed to percolate into the ground.

However, tritium may be expected to affect surface water supplies, and we have been monitoring our major surface sources for approximately one year. The data from Upper Van Norman Inlet does not exceed 1550 pCi/l. For comparison purposes, the MCL prescribed by the Safe Drinking Water Act is 20,000 pCi/l.

In comparing the tritium results from the Santa Monica wells, we observe that these waters were below our detection limit. It is apparent that all waters were found to be considerable below the MCL for tritium. Thus, we observe no evidence of tritium contamination.

Carbon-14: Carbon^{14} is not monitored in our groundwater nor surface waters.

The Safe Drinking Water Act does not specifically identify C^{14} as a contaminant of major concern in water. However, Part 141.16(b) of that Act refers to some data in a 1963 monograph published by the U.S. Department of Commerce pertaining to permissible occupational exposure. Based upon the data from that monograph setting a lifetime dose of 300 microcuries with body fat as the critical organ, and assuming a daily water consumption of

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2 liters per day over a life span of 75 years, we calculate that the C^{14} MCL should be less than 5500 pCi/l.

All of the Santa Monica samples were found to contain less than 120 pCi/l. Therefore, we observe no evidence of unsatisfactory levels of radioactive carbon.

RK:js

cc: Jack Hogland
Skip Wetterau
Joe Karbus
Mel Blevins
Tom Gibson (2)
Rod Kurimoto

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APPENDIX C

NRC RADIOLOGICAL SURVEY

77-114

U. S. [illegible] COMMISSION
OFFICE OF INSPECTION AND ENFORCEMENT

REGION V

Report No. 81-02

License No. 04-00181-04 Priority 3 Category G1

Licensee: Veterans Administration Center
Wilshire and Sawtelle Boulevards
Los Angeles, California

Inspection at: Wadsworth Hospital Waste Burial Sites A, B and C

Inspection Conducted: May 7, 1981

Inspectors:	G. S. Spencer, Director Division of Technical Inspection	5/19/81 Date Signed
	for H. E. Book, Chief Radiological Safety Branch	5/20/81 Date Signed
	R. D. Thomas, Chief Materials Radiation Protection Section	5/19/81 Date Signed
	for L. Camper, NRC Materials Licensing Branch	5/19/81 Date Signed
	B. A. Riedlinger, Radiation Specialist	5/19/81 Date Signed
Approved by:	R. D. Thomas, Chief Materials Radiation Protection Section	5/19/81 Date Signed
Approved by:	for H. E. Book, Chief Radiation Safety Branch	5/20/81 Date Signed

Summary:

Inspection of Waste Burial Sites A, B and C on May 7, 1981 (Report No. 81-02)

Former land burial sites which had been used for disposal of licensed material were surveyed. The locations of the three burial sites A, B and C are shown on Attachment A. An area survey was conducted using instrumentation capable of detecting minute quantities of gamma ray emitting materials.

The inspection of the waste disposal area involved a total of six hours on site by five NRC inspectors.

Results: The radiation levels detected at randomly selected locations within the burial sites indicated only background readings. See paragraph 4. for more details.

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DETAILS

1. Persons Contacted

Mr. Leonard Wetterau, Nuclear Medicine Service Radiation Safety Officer
Mr. Thomas Keenan, Chief Engineer, V. A., L.A.
Ms. Kay Slavkin, Field representative to Congressman Anthony Beilenson
Ms. Joan Shaffran-Brandt, Legislative assistant to Anthony Beilenson
Ms. Claire Rogger, Deputy Councilman to Marvin Braude, 11th District, City of Los Angeles

2. Background

The licensee buried low-level radioactive medical waste from about 1960 until 1968 at three locations which are on hospital controlled property. During this period of time, the burials were authorized by NRC regulations. The waste consisted primarily of short-lived medical radioisotopes, carbon-14, and tritium. The licensee recently contacted the NRC requesting a position or guidance on release of the property for conversion to a public park. The NRC Licensing Branch is presently making an evaluation study pertinent to the release of the burial sites.

3. Instruments Used

An Eberline Model PRM-7 micro-R meter with NRC #006383 was used during this survey. The instrument had a background of 6 micro-R per hour and is due for recalibration on or before March 30, 1982.

A Technical Associates Model PUG-1AB instrument with NRC #004279 was also used during this survey. The PUG-1AB was used with a gamma scintillation probe. The instrument had a background of 1200-1500 counts per minute and is due for recalibration on or before July 15, 1981.

4. Survey Results

A radiological survey was conducted on May 7, 1981 by NRC inspectors in areas A, B and C as shown on Attachment A to this report. Radiation measurements were taken at several locations on a random basis by placing the instruments at ground level and at varying heights up to five feet above the ground.

There were no radiation levels detected which were in excess of the natural radiation background levels particular to the instruments.

Based upon the results of the radiological survey conducted, there was no radioactive material detected.

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5. Licensee Comments

Discussions with Mr. Thomas Keenan, Chief Engineer for the Veterans Administration in Los Angeles, stated that during the demolition of the old hospital, many yards of broken concrete, reinforcement steel and soil from the old hospital site were dumped on top of the burial sites. Mr. Keenan estimated that approximately 10 to 15 feet of the mixed debris and soil were placed on top of Area A, and Areas B and C were also covered with about 20 feet of the same material. Since the original burials were at a depth of 6 to 8 feet, the total depth presently would be approximately 20 to 30 feet due to the fill which has been added.

6. Description of Areas A, B and C

Attachment A indicates the locations of the burial sites in relation to the hospital proper, and the proposed park area. The nearest public access is Barrington Avenue which is located approximately 200 yards to the west of burial sites B and C. The overall area of sites A, B and C is overgrown with foxtail grass which is approximately 24 to 30 inches high. Pictorially, the areas can be seen in picture 1 (Area A), picture 2 (Area B), and picture 3 (Area C) which are included in this report.

It should be noted that only a small portion of the southeast corner of the proposed park area incorporates a portion of burial sites B and C.

7. Conclusions

A. Based upon the results of the radiological survey conducted on May 7, 1981, there were no radioactive materials detected.

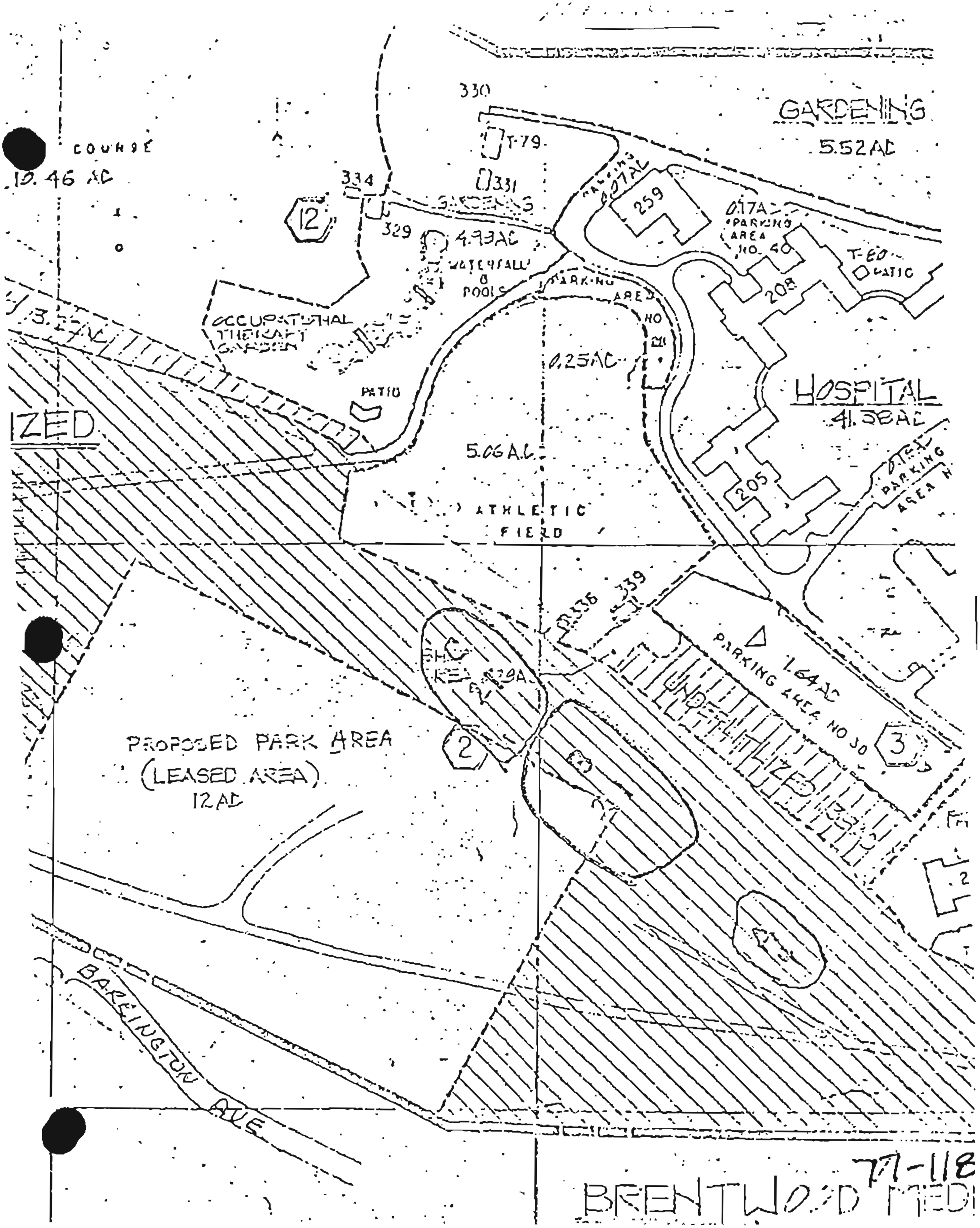
B. Based upon the amount of fill material and dirt which has been added to the burial sites, the original burials are presently at a depth of 20 to 30 feet.

C. Based upon the results of the radiological survey and the evaluation of the sites based upon observations made at the time of the inspection, it is recommended that the overall area be released for unrestricted use.

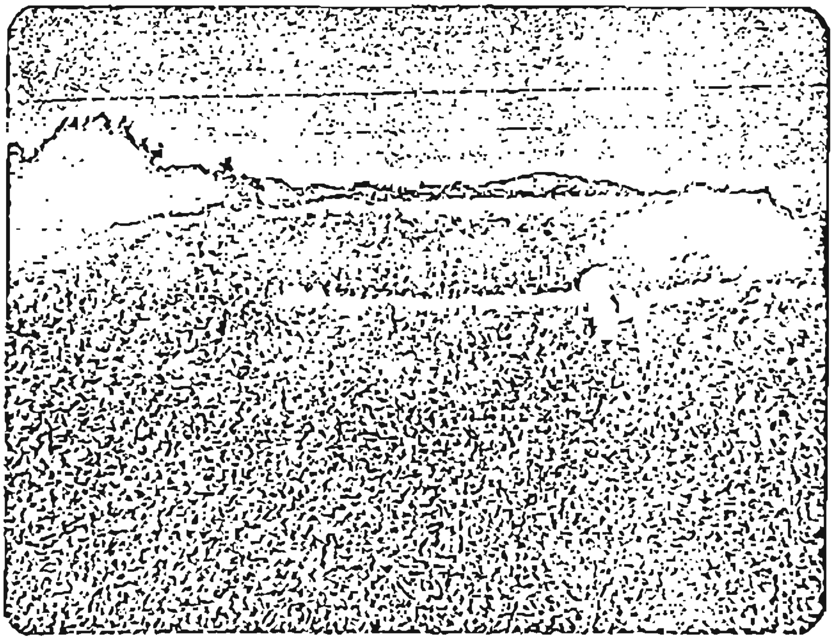
8. Exit Discussion

At the conclusion of the radiological survey, the above conclusions were discussed with those individuals listed in paragraph 1.

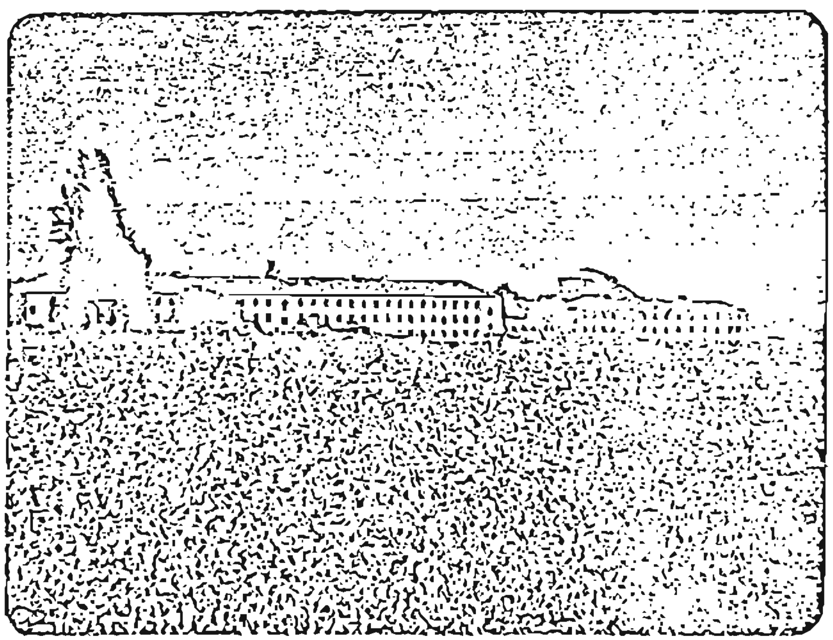
Three members of the "Committee to Bridge the Gap" were present on site during the time of the survey; however, they did not participate in the survey or in the final discussions.



330
GARDENING
5.52AC
COURSE
10.46 AC
334
12
T-79
331
GARDENING
329
4.93AC
WATERFALL & POOLS
259
0.17AC PARKING AREA NO. 40
T-80
PATIO
208
PARKING AREA NO
0.25AC
OCCUPATIONAL THERAPY GARDEN
PATIO
HOSPITAL
41.58AC
IZED
5.06A.C.
ATHLETIC FIELD
205
PARKING AREA
336
339
1.64AC PARKING AREA NO 30
3
2
PROPOSED PARK AREA
(LEASED AREA)
12AC
BARRINGTON AVE
77-118
BRENTWOOD MED



Picture 1
Area A



Picture 2
Area B

Picture 3
Area C

active Fallout. pp. 170-176 IN: Third National Symposium on Radioecology, D. E. Nelson (Ed.). USAEC Report CONF-710501.

Submitted by

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Environmental Sciences

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SOIL SAMPLING STUDY (SECOND SERIES)

77-122

April 1983

Radioassay for Tritium and Carbon-14 at the Waste Disposal Site West Los Angeles Veterans Administration Hospital

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Introduction

Within the past 60 days an intensive soil sampling study was completed to determine the extent of any radiocontamination on or around a waste disposal site located on the grounds of the West Los Angeles Veterans Hospital. The isotopes studied were 12y tritium and 5730y carbon-14. Other isotopes reported to be buried at this site have long since decayed away (i.e., ^{85}S, ^{32}P, ^{35}S). Eighty five surface and subsurface soils were collected over the area of the disposal site (See Fig. 2). Samples were taken from the drainage basin just east of the site and at distances of 200 yards down the basin. Background soil was collected along the fenced area west of the waste site.

The questions asked were: Can any ^{3}H or ^{14}C be detected anywhere on the waste site and, if detected, to what extent such radiocontamination is cycling in the environment?

Materials and Methods

The soils were collected using a manual hand drill. The drill assembly was designed to collect a soil fraction 3 in. in diameter by 5 in. deep. The sample weight of soil collected by the drill was approximately 1,000 grams. The drill contained a shaft that could be extended to enable soil to be collected down to 6 feet. Wooden stakes were used to identify the sampling positions on the waste site. Subsurface samples were taken at depths ranging from 1 foot to 9 feet using an electric drill assembly in conjunction

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with a 9-foot detachable shaft assembly. The drill assembly was a hollow stainless steel cylinder with machined cutting edges.

The collected soil fractions were passed through a less than 500 micro-sieve. The larger fractions were discarded. Equal fractions (50 gm) of the soil were transferred to plastic 40 ml vials. Distilled water was added until a slurry was obtained. The samples were heated in a water bath for 30 minutes. Five milliliters of H_2O was added and the samples were allowed to stand for 48 hours in stoppered bottles.

The aqueous water extracts were collected by centrifugation (20,000 RPM). The samples were diluted to 10 ml. One milliliter fractions were taken for ^3H analysis using standard liquid scintillation techniques.

In a similar way ^{14}C analysis was done by treating soil samples with pentane solvent. The pentane fraction was isolated from the soil by centrifugation, diluted with barren pentane to 10 ml. Radioassay was done using liquid scintillation techniques.

Vacuum distillation was used to directly isolate water from composite soils 69-80. The water was isolated and radioassayed for ^3H as before.

Results and Discussion

Figure 1 shows the observed counts per minute attributed to ^3H and ^{14}C as measured on the LS-230 liquid scintillation counting system. The points in brackets show the range of values obtained in the subsurface samples. The mean ($\bar{x}$) background values and their computed standard deviations (S.D.) are also shown. The observed ^3H and ^{14}C values for the composite soil samples are shown in parenthesis.

Statistical analysis of these data show no significant differences between individual samples, between background and the individual samples, or between subsurface, composite and background samples. The subsurface and samples 69-80 were analyzed by gamma pulse height analysis techniques. Only gamma peaks associated with natural occurring isotopes were observed.

Three major conclusions can be drawn from this indepth study. First, the established waste disposal site is free of any detectable carbon-14, tritium and/or gamma emitting isotopes. Secondly, the ^{3}H and ^{14}C values observed in the subsurface, samples 69-76 and samples collected in the drainage basin suggest that any stored ^{3}H or ^{14}C is remaining strongly fixed, and thirdly, if no radiocontamination can be found in the immediate area of the reported waste disposal site, it seems very unlikely that any such contamination from this waste site will be found on the proposed park site located 30 yards above and to the north of the waste area.

FIGURE 1.

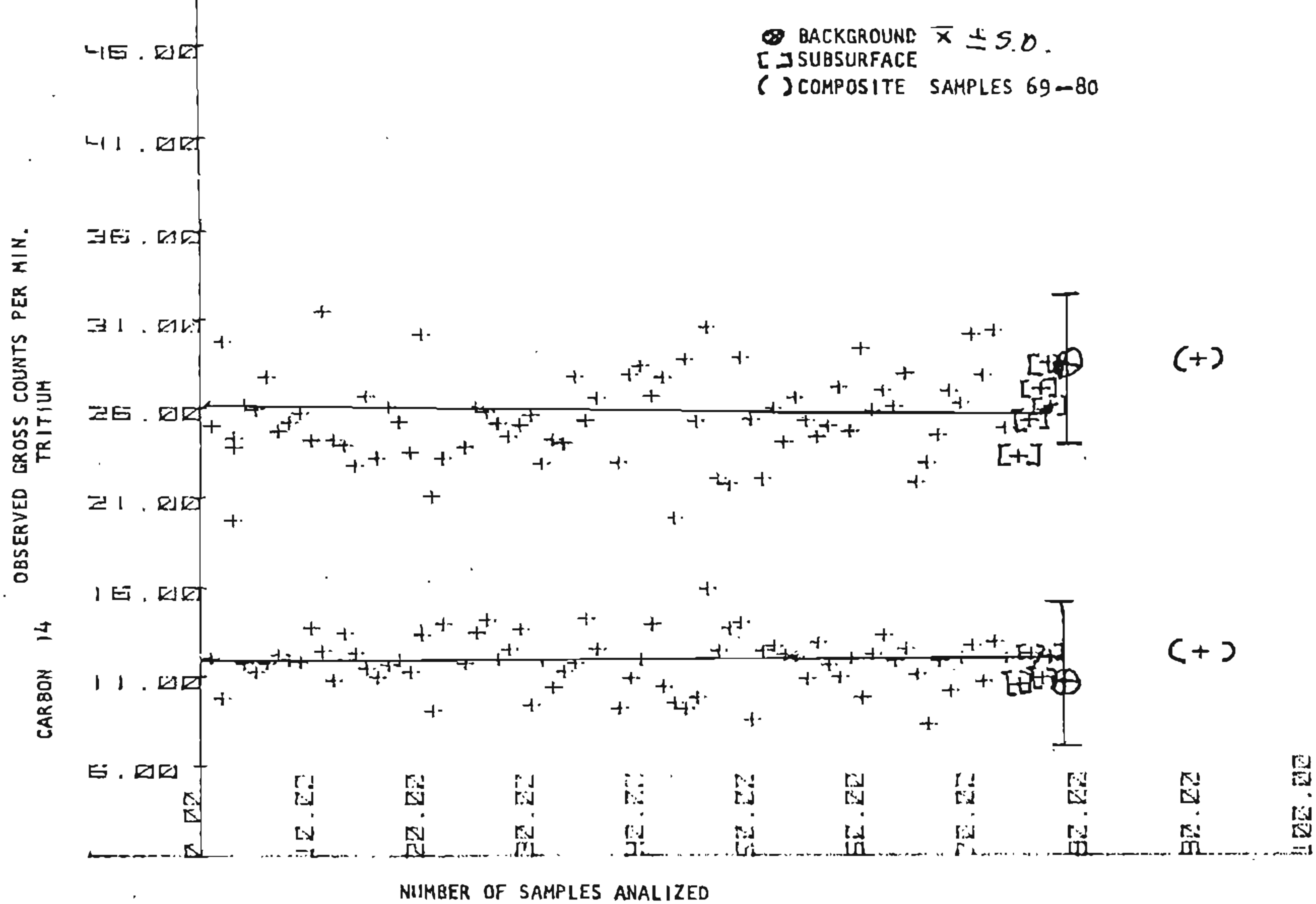

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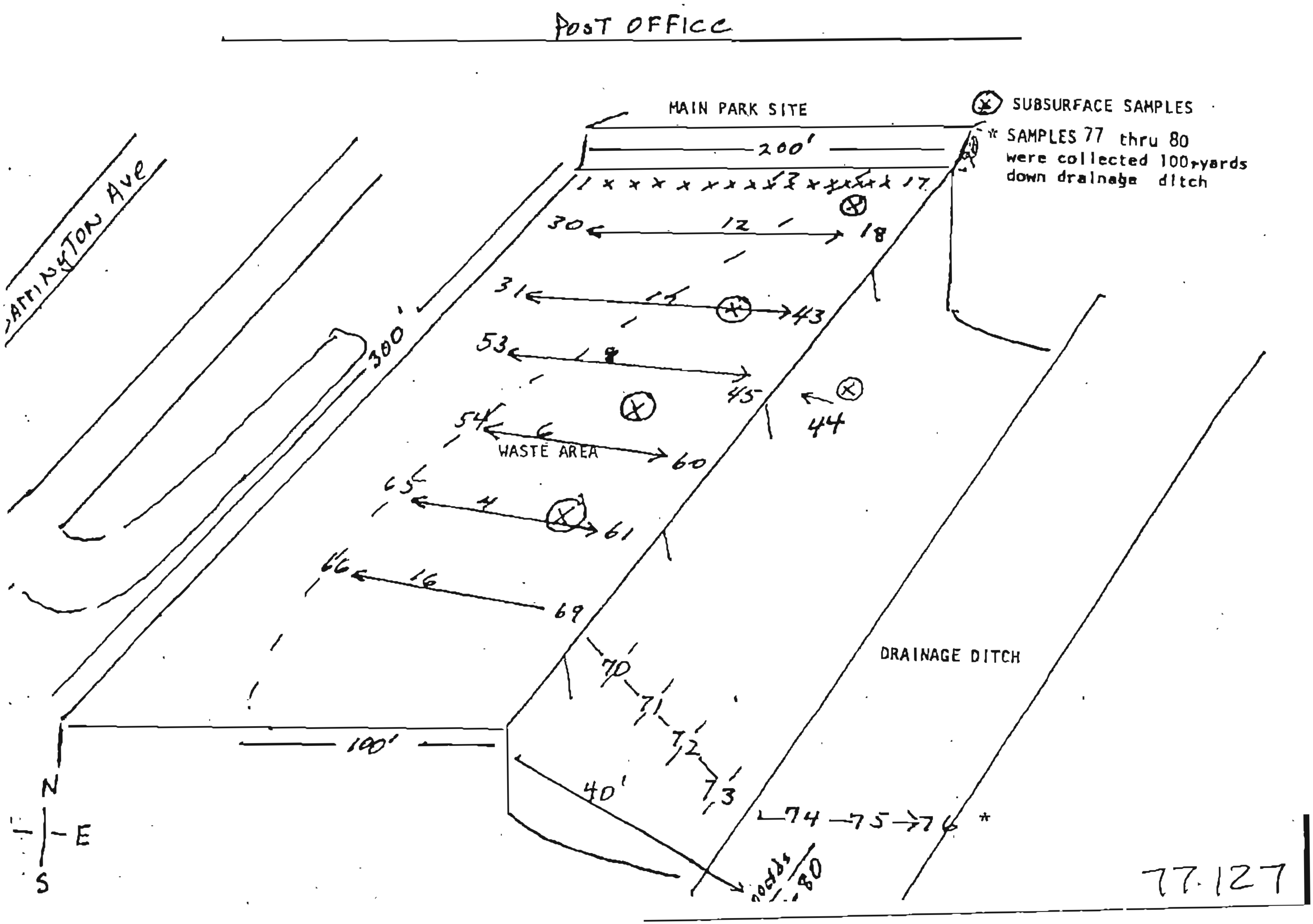
FIGURE 2.



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APPENDIX D

RADIATION DOSIMETRY CALCULATIONS

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UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

JUL 14 1981

MEMORANDUM FOR: Vandy Miller, Chief
Material Licensing Branch

FROM: An-Liang Soong
Uranium Process Licensing Section
Uranium Fuel Licensing Branch

SUBJECT: ESTIMATES OF POTENTIAL RADIATION DOSE OF WASTE BURIAL AREA AT VETERANS ADMINISTRATION HOSPITAL, LOS ANGELES, LICENSE NO. 04-00181-04

An estimate of the potential radiation dose to an individual resulting from the buried radioactive material on the VA's property has been calculated and attached to this memo.

In the dose calculations, both external and internal exposure pathways were considered. The internal exposures were calculated based on two projected pathways:

(1) ingestion of food (beef, milk, and vegetables) that is produced on the burial site

(2) inhalation of airborne radioactive material as a result of wind resuspension.

The results of the dose calculation are provided in the summary on page 4 of the attached report.

Soong
An-Liang Soong
Uranium Process Licensing Section
Uranium Fuel Licensing Branch

Enclosure: Estimates of Potential Radiation Dose

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Estimates of Potential Radiation Dose

This report shows a calculation of potential radiation dose to an individual from two potential intake pathways resulting from the buried radioactive material on the Veterans Administration property at the Veterans Administration Center, Los Angeles, California.

The report contains the dose calculations from both external and internal exposure pathways. The internal exposures were calculated based on two projected pathways: (1) dietary ingestion of food produced on the burial site and (2) inhalation of airborne radioactive material as a result of wind resuspension. In the course of the dose assessment, not all site-specific parameters were available; therefore, a generally conservative approach was used and this may have resulted in a high estimate of dose.

I. Models for Estimating Radiation Dose

A. External Exposure

The basic equation used for estimating the external dose of a radioactive point source emitting gamma radiation is:

$$D\ (R/hr) = \frac{\Gamma \times A \times F}{d^2} \cdot B \qquad (1)$$

where D is dose rate R/hr; Γ is total gamma exposure rate constant of a radionuclide unit in $\frac{R\text{-}m^2}{hr\text{-}Ci}$; A is the activity of the radionuclide in the media, the unit is Ci; F is the shielding factor of the media; B is the buildup factor of the media, and d is the distance between the source and the radioactive source in media.

B. Internal Exposure

The internal dose commitment is calculated according to the following basic equation:

$$D = C \times U \times DCF \qquad (2)$$

where D is the dose commitment to a given organ of an individual in mrem/yr; C is the concentration of a radionuclide in the media of exposure in $\mu c/m^3$; U is the usage factor unit in m^3/yr, and DCF is the dose conversion factor that converts a given concentration of the radionuclide and the intake rate of that radionuclide to the radiation dose. The unit of DCF is rem/μCi.

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II. Radionuclide Source Terms

According to the NRC's records, the radioactive waste materials were buried under 15 feet of dirt in three adjacent locations on hospital controlled property. The locations of the three burial sites, designated as A, B, and C, are shown in figure 1. The essential radioactivity still remaining in each area is summarized in the following table:

Table 1

Essential Radioactivity in the Burial Site, mCi as of 1981

Location	Size (ft^2)	Size (m^2)	Radioactivity mCi H-3	C-14	Cl-36	Na-22
A	200 x 50	929	2.0	2.9	0	0
B	200 x 400	7432	316.0	12.5	0.26	0
C	100 x 400	3712	122.2	37.2	0	0.009
		1.21×10^4	440.2	52.6	0.26	0.009

III. Dose Calculation

A. External Radiation Dosimetry

Since H-3 and C-14 are low energy beta emitters, and Cl-36 emits 0.51 Mev gamma radiation with 0.003% intensity, the only contributor to the external exposure that will be considered here is radionuclide Na-22. The external exposure rate at 1 meter above the surface from the Na-22 as a point source under 15 feet of soil is calculated by using equation (1) with the following parameters:

$r = 1.2^a \frac{R}{hr.Ci}$ at 1 meter from a point source

A = the radioactivity in Ci, 9×10^{-6} Ci

$B^b = 100$ for 15 feet of soil as media

$F^b = <10^{-10}$

$d = 5.57$ meters

$$D(R/hr) = \frac{r \times A \times F \times B}{d^2} = \frac{1.2 \times 9 \times 10^{-6} \times 10^{-10} \times 100}{5.57^2}$$

[a] Radiological Health Handbook, 1970, page 131

[b] Estimates assume that mass absorption coefficient of soil for gamma energy 1.2 Mev is about 0.05 cm^2/g.

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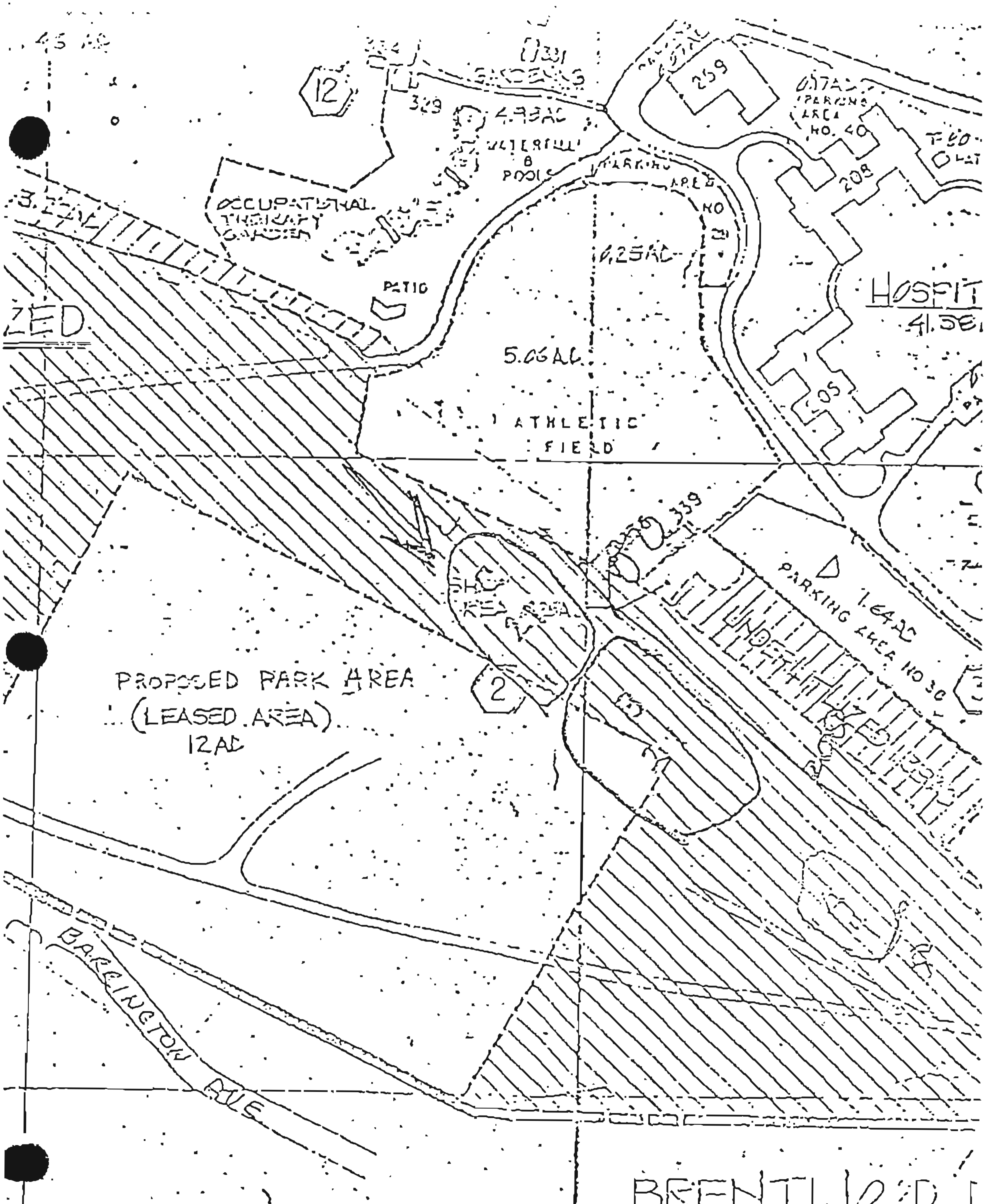

Page 3

Figure 1

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$= 3.48 \times 10^{-15}$ R/hr

$= 3.48 \times 10^{-9}$ μR/hr

$= 3.05 \times 10^{-11}$ R/yr

B. Internal Radiation Dosimetry

1. Inhalation Mode

Radiation dosimetry to an individual in each of the three burial locations is calculated based on the assumption that in each location the buried material, mixed with 1 meter of soil, was brought to the surface during the reclamation project, and the top 1.0 cm layer of the contaminated soil became airborne by the process of resuspension. The calculated dose commitment to an individual from inhaling the contaminated air is expressed in the following table:

Table II

Dose Inhalation

Location	Dose[a] (mrem/yr) due to the radionuclide			
	H-3 (whole body)	C-14 (bone)	Cl-36 (whole body)	Na-22 (whole body)
A	1.3E-7	2.04E-6	0	0
B	2.5E-6	1.2E-6	6.7E-8	0
C	2.3E-6	6.8E-6	0	1.1E-10

2. Ingestion Mode

The radiation dose calculation from the ingestion pathway is based on the conservative assumption that all the food consumed by one individual either grew on or was produced on these sites after a reclamation project. The dose commitment to an individual from ingestion of food (beef, milk, and vegetables) contaminated via resuspension and by root uptake was calculated and expressed in

[a]The dose calculation is provided in Appendix A of this report.

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the following table:

Table III

Dose Commitment Resulting from Ingestion Pathway

	Dose to Critical Organ[a]	
Radionuclides	Bone Marrow Dose (mrem/yr)	Whole Body (mrem/yr)
H-3		7.4×10^{-6}
C-14	1.1×10^{-3}	
Cl-36		1.5
Na-22		3.2×10^{-4}

IV. Summary

1. For the dose due to external radiation exposure, the calculated result indicates a dose level of 3.5×10^{-9} ur/hr at 1 meter above the surface. This exposure is about $1/10^9$ of the dose rate from the background external level which is about 10 ur/hr. Na-22 has a radioactive half-life of 2.6 years. The exposure rate is decreased by a factor of 0.8 each year; therefore, long term health effect is not anticipated.

2. For the dose due to inhalation of contaminated resuspended air, the results indicate that: in location A, the dose to the total body (for H-3) is 1.3×10^{-7} mrem/yr, and the dose to the bone (for C-14) is 2.04×10^{-6} mrem/yr; in location B, the dose to the total body (for H-3 and Cl-36) is 2.6×10^{-6} mrem/yr, and dose to the bone (for C-14) is 1.2×10^{-6} mrem/yr; and in location C, the dose to the total body (for H-3 and Na-22) is 2.3×10^{-6} mrem/yr, and dose to the bone (for C-14) is 6.8×10^{-6} mrem/yr.

3. For the dose due to ingestion pathway, the results indicate the dose to the total body (for H-3, Cl-36 and Na-22) to be 1.5 mrem/yr and dose to the bone marrow (for C-14) to be 1.1×10^{-3} mrem/yr.

4. The calculated maximum individual internal exposure (ingestion and inhalation) is on the order of 1.5 mrem/yr to the whole body, or about 1/60 of the dose from natural background radiation.

[a] The dose calculation is provided in Appendix B of this report.

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Appendix A

Dose Calculation From Inhalation Mode

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The dose is calculated by equation (2) with the following parameters:

1. The calculated contaminated soil concentration and resuspension airborne concentration of radioactivity is expressed in the following table:

Table A-1

Concentration in Soil and Air

Location	Calculated Soil Concentration $\frac{\mu c}{g}$				Calculated resuspended concentration[a] $\mu c/m^3$			
	H-3	C-14	Cl-36	Na-22	H-3	C-14	Cl-36	Na-2
A	8.6E-7[b]	1.2E-6	0	0	1.1E-10[c]	1.6E-10	0	0
B	1.7E-5	6.8E-7	1.4E-8	0	2.1E-9	8.5E-11	1.7E-12	0
C	1.5E-5	4E-6	0	9.7E-10	1.9E-9	5E-10	0	1.2E-

2. Dose conversion factors, DCF, for inhalation mode are obtained from Oak Ridge National Laboratory publication ORNL-4992, "A Methodology for Calculating Radiation Dose from Radioactivity Release to the Environment." They are:

DCF for H-3 (total body as critical organ) is 7.5×10^{-4} rem/μc

for C-14 (bone as critical organ) is 1.7×10^{-3} rem/μc

for Cl-36 (total body as critical organ) is 4.8×10^{-3} rem/μc

for Na-22 (total body as critical organ) is 1.1×10^{-2} rem/μc

[a]The resuspension factor, 5×10^{-9} 1/m, is obtained from NRC publication NUREG-0707, "A Methodology for Calculating Residual Radioactivity Levels Following Decommissioning," page 9.

[b]Read as 8.6×10^{-7}, soil concentration $\frac{\mu c}{g} = \dfrac{\frac{2 \times 10^3\ \mu c}{929\ m^2} \times 10^{-5}\ \frac{m^3}{cm^3}}{2.5\ g/cm^3 \text{ (soil density)}}$

[c]$1.10 \times 10^{-10}\ \frac{\mu c}{m^3} = 8.6 \times 10^{-7}\ \frac{\mu c}{g} \times 2.5\ \frac{g}{cm^3}$ soil density $\times$ 1 cm surface soil

$\times\ 5 \times 10^{-9}$ 1/m (resuspension factor) $\times \frac{10^4\ cm^2}{m^2}$

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3. An individual's breathing rate is 8000 m^3/yr.

Dose due to inhalation mode is calculated by equation (2):

i) for burial site A:

$$D_{H-3} = C \times U \times DCF$$
$$= 1.1 \times 10^{-10}\ \mu c/m^3 \times 8000\ m^3 yr \times 1.5 \times 10^{-4}\ \frac{rem}{\mu c}$$
$$= 1.3 \times 10^{-7}\ mrem/yr\ \text{(whole body)}$$

$$D_{C-14} = 1.5 \times 10^{-10}\ \mu c/m^3 \times 8000\ m^3/yr \times 1.7 \times 10^{-3}\ rem/\mu c$$
$$= 2.04 \times 10^{-6}\ mrem/yr\ \text{(bone)}$$

$$D_{Cl-36} = 0$$

$$D_{Na-22} = 0$$

ii) for burial site B:

$$D_{H-3} = 2.5 \times 10^{-6}\ mrem/yr\ \text{(whole body)}$$

$$D_{C-14} = 1.2 \times 10^{-6}\ mrem/yr\ \text{(bone)}$$

$$D_{Cl-36} = 6.7 \times 10^{-8}\ mrem/yr\ \text{(whole body)}$$

$$D_{Na-22} = 0$$

iii) for burial site C:

$$D_{H-3} = 2.3 \times 10^{-6}\ mrem/yr\ \text{(whole body)}$$
$$D_{C-14} = 6.8 \times 10^{-6}\ mrem/yr\ \text{(bone)}$$
$$D_{Cl-36} = 0$$
$$D_{Na-22} = 1.1 \times 10^{-10}\ mrem/yr\ \text{(whole body)}$$

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Appendix B

Dose Calculation for Ingestion Pathway

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1. For H-3 and C-14

The estimated dose due to ingestion pathway of H-3 and C-14 is calculated based on the assumption that the food and drinking water are in equilibrium with the specific activity of H-3 in the atmosphere, and the specific activity of C-14 in human tissue is equal to the average steady state value in the atmosphere. The methodology of the calculation is presented fully in ORNL-4992, "A Methodology for Calculating Radiation Dose from Radioactivity Release to the Environment." The dose conversion rates for H-3 and C-14 given under the conditions described above are 3.68 x 10^{9} mrem yr^{-1} per Cm^{-3} and 2.2 x 10^{+12} mrem yr^{-1} per Ci m^{-3}, respectively. The maximum airborne concentration of radioactivity for H-3 and C-14 are given in Table B-1. Therefore, the dose due to ingestion of H-3 is:

$$D_{H-3} = 3.68 \times 10^{-9} \frac{mrem}{yr} \times \frac{m^3}{Ci} \times 2 \times 10^{-15} \frac{Ci}{m^3}$$

$$= 7.4 \times 10^{-6} \text{ mrem/yr (whole body)}$$

$$D_{C-14} = 2.2 \times 10^{12} \frac{mrem}{yr} \times \frac{m^3}{Ci} \times 5 \times 10^{-16} \frac{Ci}{m^3}$$

$$= 1.1 \times 10^{-3} \text{ mrem/yr (bone marrow)}$$

2. For Cl-36 and Na-22

a. Ingestion dose from vegetable intake

1. Root uptake

Dose commitment, mrem

= Concentration in soil, µCi/g (see Table B-1)

x B_{iv}, bioaccumulation factor (see Table B-2)

x 1.94 x 10^5 g/yr (vegetable intake per yr)

x dose conversion factor rem/µCi (see Table B-3)

x 10^3 mrem/rem

2. Resuspension

Dose commitment, mrem

= Concentration in soil, µCi/g (see Table B-1)

x 2.5 x 10^4 g of soil/m^2 x 5 x 10^{-9} m^{-1} (resuspension factor)

x 10^{-2} m/sec (deposition factor)

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$\times\ 3.15 \times 10^7$ sec/yr $\times \dfrac{\mu Ci/day}{\mu Ci/m^2\text{-}day}$ (see Table B-3)

$\times$ dose conversion factor, rem/μCi (see Table B-3)

$\times\ 10^3$ mrem/rem

b. Ingestion dose from meat intake

1. Root uptake

Dose, mrem = Conc. in soil, μCi/g (see Table B-1)

$\times\ B_{iv}$, bioaccumulation factor, (see Table B-2) $\times\ F_f\ \dfrac{d}{kg}$ (see Table B-2)

$\times\ 10^4$ g/day (grass eaten) $\times$ 94 kg/year (meat intake)

$\times$ DCF rem/μCi (see Table B-3) $\times\ 10^3$ mrem/rem

2. Resuspension

Dose mrem

= Conc. in soil, μc/g (see Table B-1)

$\times\ 2.5 \times 10^4$ g of soil/m^2 $\times\ 5 \times 10^{-9}$ m^{-1} (resuspension factor)

$\times\ 10^{-2}$ m/sec (deposition factor)

$\times\ 3.15 \times 10^7$ sec/yr $\times \dfrac{\mu Ci/day}{\mu Ci/m^2\text{-}day}$ (see Table B-3)

$\times$ DCF rem/μCi (see Table B-3) $\times\ 10^{-3}$ mrem/rem

c. Ingestion from milk intake

1. Root uptake

Dose, mrem = Conc. in soil, μCi/g (see Table B-1)

$\times$ bioaccumulation factor, B_{iv} (see Table B-2)

$\times\ 10^4$ g/day (grass intake) $\times$ transfer coefficient Fm, day/ℓ (see Table B-2) $\times$ 0.31 ℓ/day of milk

$\times$ 365 day/year $\times$ DCF rem/μc (see Table B-3)

$\times\ 10^3$ mrem/rem

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2. Resuspension

Dose, mrem = Conc. in soil, μCi/g x 2.5 x 10^4 g of soil/m^2

x 5 x 10^{-9} m^{-1} (resuspension factor) x 10^{-2} m/sec (deposition factor)

x 3.15 x 10^7 sec/yr x $\frac{\mu Ci/day}{\mu Ci/m^2\text{-day}}$ (see Table B-3)

x DCF rem/μCi (see Table B-3) x 10^3 mrem/rem

Table B-1

Maximum Concentration in Soil and Air
(data are obtained from Table A-1)

Radionuclide	Conc. in Soil, μCi/g	Conc. in Air, Ci/m^3
Cl-36	1.4E-8	-----
Na-22	9.7E-10	-----
H-3	-------	2E-15
C-14	-------	5E-16

Table B-2

The Veg/Soil Bioaccumulation Factor, B_{iv}, and
Transfer Coefficients, Fm (Milk) F_f (Meats)

Radionuclide	B_{iv},[a] veg/soil	Fm,[a] day/ℓ	F_f[a] day/kg
Cl-36	50	1.7E-2	8E-2
Na-22	5.2E-2	4E-2	3E-2

[a]NRC Reg. Guide 1.109 and Ng, UCRL-50163, Part IV.

77-141

Table B-3

Dose Conversion Factor[a], rem/μCi for Ingestion Mode and Radionuclide Transfer Factor[b]

Radionuclide	DCF* rem/μCi	$\frac{\mu Ci/day}{\mu Ci/day\text{-}m}$
Cl-36	7.9E-3	50
Na-22	1.8E-2	50

[a]ORNL-4992, Table 4-3 pp. 4-90

[b]The transfer factor for Cl-36 and Na-22 were assumed to be 50 for vegetable, meat, or milk intake. This assumption was chosen conservatively with the aid of the intake transfer factor for radionuclide with mass number larger than 27. (Table 2-8, ORNL-4992)

77-142

APPENDIX E

RADIOLOGICAL ANALYSIS
(PLANT & SOIL SAMPLES)

77-143

May 1982

Preliminary Investigation of the Proposed Barrington Park Site for Radionuclide and Organic Solvent Contamination

Introduction

Studies were done to investigate cycling of deeply buried Veteran Hospital wastes adjacent to a site being considered for a city park. The principal waste products studied were radioisotopes (i.e., ^{14}C, ^{32}P or tritium) and organic solvents that may have become incorporated into surface soil and plant materials that might ultimately become hazardous.

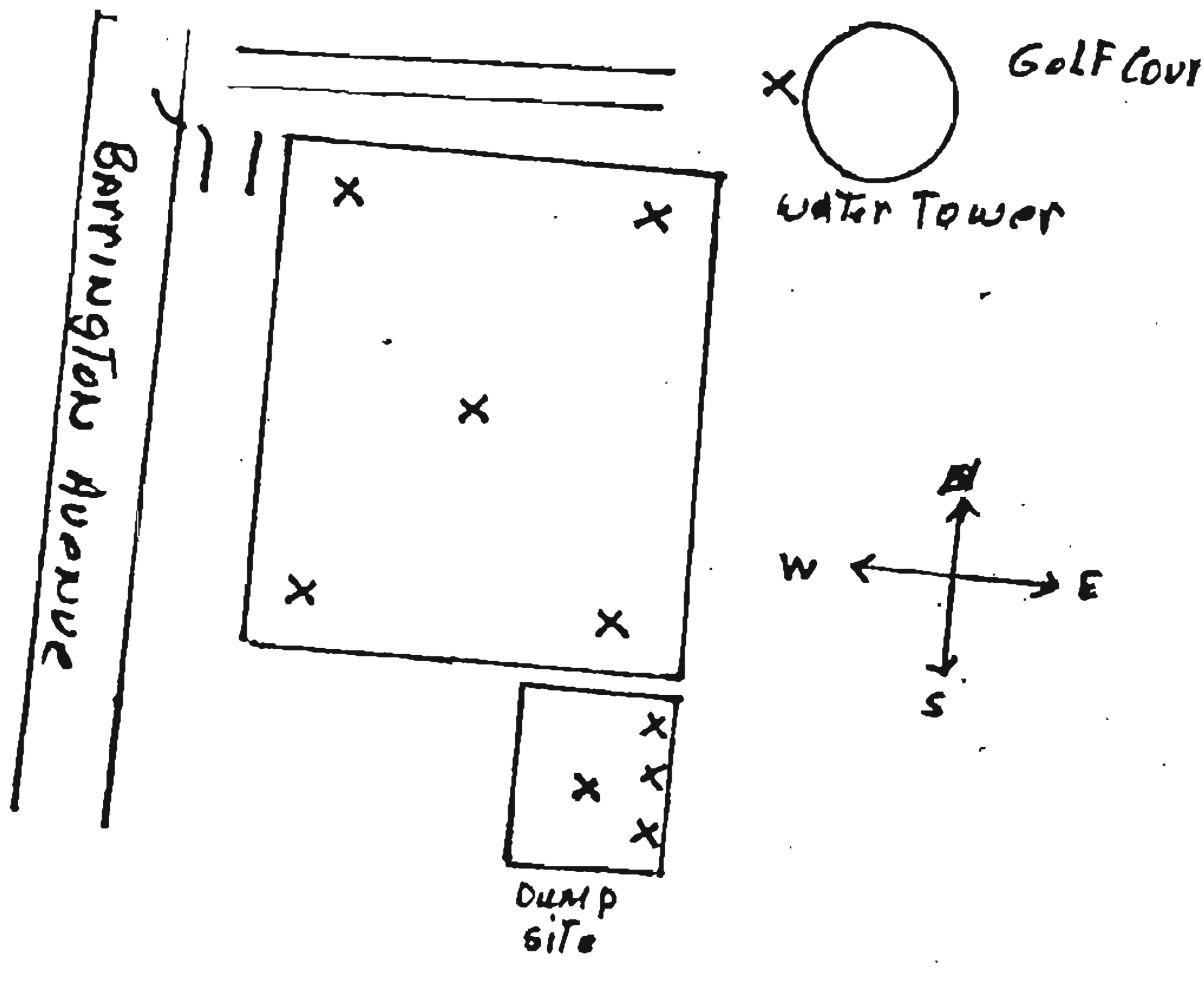
Description of Methods

Samples were collected from six sites of the Barrington Avenue site (Fig. 1). One surface soil (500 grams) and one subsurface sample (500 grams) 6-inches deep were collected and stored in plastic jars (12 samples). In addition, approximately 100 grams of plant (wet weight) were collected at each soil site and placed in paper sacks (6 samples).

Comparison samples (background samples) were collected at Westwood Park area, water tower area northeast of the V.A. Hospital and from 30 feet under the ground at a new building site in Westwood (6 samples). All the soil samples were dried at 60°C for 24 hours. The samples were crushed and the less than 100-micron-size fractions were isolated and used for analysis. Two 100-gram fractions of each soil were used in radioassay measurements. The soil collected for gas chromatography was dried and leached under reflux for 4 hours with n-heptane solvent.

77-144

FIGURE 1



APPROXIMATE LOCATION OF SAMPLING SITES
BARRINGTON AVENUE PARK SITE

77-145

The plants were dried for 48 hours at 60°C and crushed using a Wiley mill. Approximately 100 grams of soil and 50 grams of plant were placed in standard plastic jars for radioassay. The n-heptane leachate was filtered and set aside for gas chromatographic analysis.

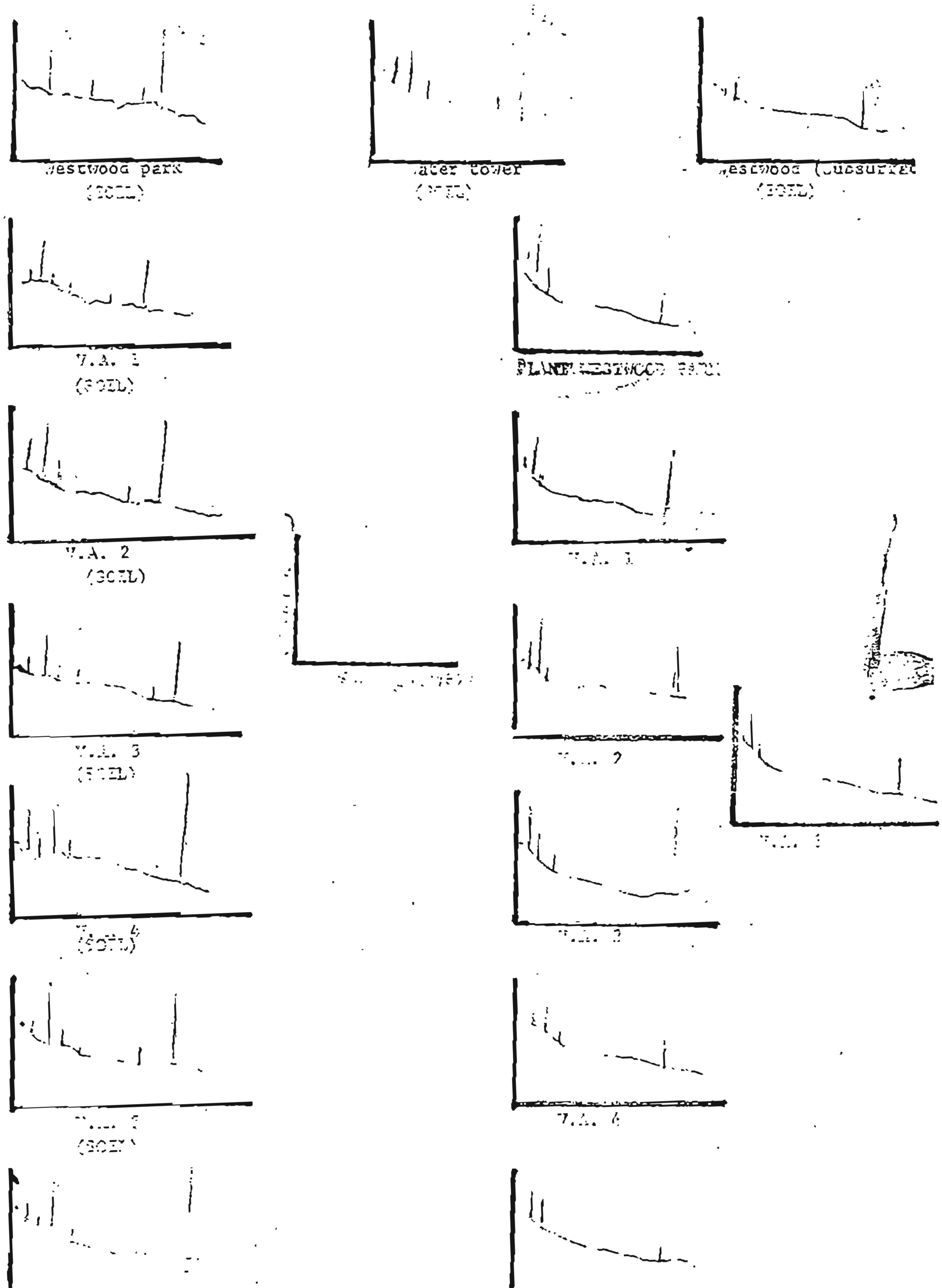
Radioassay was done using a Lithium drifted germanium detector (Ge(Li)) in conjunction with a 4095 channel analyzer coupled with a PDP-11 mini-computer.

The counting system was programmed to identify all isotopes and their approximate energies. The energies are then corrected by comparison to NBA standards and used for specific identification of isotopes. In addition, 25 gram portions of each soil and 5 grams of plant were placed in plastic planchets and total beta and alpha were determined using a Backman wide beta low background gas flow proportional counter. The samples were counted for 50 minutes or until 2000 counts were obtained for beta and 100 counts for alpha.

Results and Discussion

The data in Figure 2 show the relationship of gamma photopeaks observed in the Westwood Park soil and plant to that collected from the Barrington Ave. Park site. The principal isotopes present in soil are naturally occurring ^{40}K, ^{226}Ra and ^{228}Th and ^{40}K in plant. In comparing these data with the Westwood, water tower and Westwood subsurface background soils and plants, no statistical differences in the isotopic concentrations between surface and subsurface soils or plants can be demonstrated.

FIGURE 2



77-147

Table 1 shows the gross beta and alpha counts observed and again there are no statistical differences in the observed count rates of background soils and the soils collected from the V.A. site.

Table 1. Comparison of Beta and Alpha Activity Between Westwood Park and Barrington Ave. Park Soil

Location	Beta* c/m gram soil	Alpha c/m gram soil
Westwood Park Soil	1.96 ± .13	0.054 ± .003
VA 1	1.54 ± .05	0.035 ± .0002
2	1.86 ± 1.2	0.016 ± .0014
3	1.95 ± 1.3	0.043 ± .0054
4	2.13 ± 0.5	0.051 ± .0031
5	2.05 ± .23	0.032 ± .0025
6	1.84 ± 1.4	0.016 ± .0054
Water Tower	2.31 ± 0.6	0.034 ± .0017
Westwood (Subsurface)	1.86 ± 1.3	0.015 ± .0059
Instrument Background	0.95 ± 0.2	0.019 ± .0039

*counts per minute per gram soil ± one standard deviation

Gas chromatography of the n-heptane soil extract showed only the presence of natural soil and plant organic compounds. The presence of liquid scintillation counting fluids or other organic solvents used for counting ^{32}P and ^{14}C could not be demonstrated.

Results indicate the soils contain only radioactive products natural to soil. These isotopes would include all or parts of the uranium, thorium and actinum decay series. There is no indication that artificial isotopes are present in soils or plants even after counting periods of 1000 minutes. Isotope concentrations were somewhat different between soils (surface and subsurface) due to natural redistribution and concentration of isotopes from water leaching, plant biochemical and bacterial utilization and decomposition processes. Radium-226, Thorium-228 and Potassium-40 are present in samples in very trace amounts. All of the peak integrated count rates were less than 5 counts per min. with most less than 1 count per min. The various alpha activity measurements were within the statistical variation of the instrument backgrounds. The beta activity, however, was approximately 3 to 4 times background (Table 1). The increase for beta in part is due to ^{40}K, ^{87}Rb and to a lesser extent ^{138}La and ^{115}In. These isotopes are naturally occurring beta emitting substances in soil.

The plant materials collected at the Barrington Park site, water tower and Westwood sites contained only traces of ^{40}K. No other isotopes could be detected in the short radioassay periods.

The n-heptane leachate from the soil showed that dioxanes and other synthesized organic solvents were not present in the top 6 inches of soil. A portion of the leachate was run in a Beckman LS-230 liquid scintillation counter for ^{14}C, ^{32}P or other low energy beta emitters (i.e., tritium). The sample activities were within the normal statistical fluctuation of instrument background.

It should be noted that Strontium-90 and Cesium-137 produced by nuclear weapons testing by the United States, Russia, France, Great Britain and China are present in all environmental samples (i.e., soil, plant, milk, grain). The determination of these isotopes in trace amounts requires special analytical techniques that were beyond the scope of this study. A number of papers have been published describing the fate of ^{90}Sr and ^{137}Cs isotopes in the environment[1-3].

Conclusions

This very preliminary study indicates the following: 1) Radioactive substances buried at the identified hospital dump site have not become incorporated into the soil-plant cycle. (2) Organic solvents such as benzine, toluene, dioxanes or other solvents commonly used in counting ^{14}C or ^{32}P have apparently remained immobile in the soil. (3) The Barrington site would not pose any greater health hazard from radioactivity or chemical pollution than from the Westwood Park area on Veteran Avenue.

References

1. Baurmash, L. et al. 1958. Distribution and Characterization of Fallout and Airborne Activity from 10 to 60 Miles from Ground Zero (Operation Teapot). USAEC Report WT-1178.
2. Hawthorne, H. A. 1975. ^{137}Cs Cycling in a Utah Dairy Farm. Health Physics 30:447-464.
3. Wood, R. A. and E. Romney. 1971. Persistence of Radionuclides in Soil, Plant and Small Mammals in Areas Contaminated with Radio-

Again, my compliments on your competent survey of the possible factors involved. It is most reassuring to those of us who will be utilizing the field. Thank you for your concern and efforts in our behalf.

Please call on AYSO or me if we can be helpful in expediting the fruition of all our efforts.

Sincerely yours,

Suzanne Eisler

Suzanne Eisler

77-151

APPENDIX F

PUBLIC RESPONSES
TO THE
NOTICE OF PREPARATION

A Notice of Preparation (NOP) was distributed in December 1981 to the interested public, organizations, and government agencies declaring that the City of Los Angeles Department of Recreation and Parks (Lead Agency) was in the process of preparing an Environmental Impact Report (EIR) for the Barrington Recreation Center Addition, and that public comments were being solicited as to the environmental impacts of the proposed project.

Following are written comments received in response to the Notice of Preparation. Environmental concerns identified were helpful in developing the scope and content of the EIR.

COUNTY OF LOS ANGELES • DEPARTMENT OF HEALTH SERVICES

313 NORTH FIGUEROA STREET • LOS ANGELES, CALIFORNIA 90012 • (213) 974-7891

DHS

1

January 29, 1982

David Attaway
Department of Recreation & Parks
Planning, Development and Administration
200 North Main Street, Room 1290
City Hall East
Los Angeles, California 90012

Dear Mr. Attaway:

This office has reviewed the report which you sent to us entitled Notice of Preparation of a Draft Environmental Impact Report on Barrington Recreation Center - Expansion.

The report was reviewed relative to health concerns expressed about certain medical radioisotopes and scintillation solvents buried in the property during the 1960's as described in this report.

Our review was based on the findings and conclusions of numerous studies and investigations performed by a variety of experts representing various agencies identified in the report. It is the conclusion of this office that the future intended use of this property as described will not present any health hazards as a result of the buried medical wastes.

If additional information is needed, please contact me at (213) 974-7891.

Sincerely,

Joseph E. Karbus

Joseph E. Karbus, Director
Occupational Health & Radiation Management

JEK:w

77-154

FORM GEN. 160 (Rev. 3-78)

CITY OF LOS ANGELES

INTER-DEPARTMENTAL CORRESPONDENCE

CWP 82-041
Barrington Ave. S/O
Barrington Pl.

2

Date: January 29, 1982

To: Alonzo A. Carmichael, Planning Officer
Department of Recreation and Parks, 1290 City Hall East

From: Department of Transportation, 1200 City Hall

Subject: NOTICE OF PREPARATION OF DEIR AND INITIAL STUDY
FOR THE BARRINGTON RECREATION CENTER ADDITION

We find (1) that this Initial Study does not provide adequate traffic analysis, and (2) that the determination that this project warrants a Conditional Negative Declaration is inappropriate at this time.

To begin with, the report's rationale that project-generated traffic is but a small percentage of existing on-street traffic is specious. Project impact is determined by the effect of project-generated trips on intersectional capacity during the peak travel hours. To ascertain this, a study of volume-capacity relationships at nearby affected intersections must be done. In this case, those intersections are Barrington Avenue at (1) San Vicente Boulevard, (2) Montana Avenue and (3) Sunset Boulevard. In addition, it is necessary to add (to existing traffic) the projected traffic from nearby related projects (e.g., the expansion of the Brentwood School), as well as the growth of general background traffic.

The report also underestimates user trips by 100%. While it might be true that 120 vehicles enter the parking lot, this actually means 240 trips to and from the lot*. Also overlooked are trips by others that would occupy the "participant" parking (e.g., joggers) and trips to and from the "neighborhood" parking.

Based on the traffic study done for the Brentwood School, it has been determined that the intersection of Barrington Avenue and Sunset Boulevard is already operating at an undesirable level of service. We therefore conclude that, at this intersection alone, traffic added from this project may have a significant effect on the environment with respect to traffic. A quantitative study should be performed to verify or controvert this conclusion and to evaluate conditions at the other intersections.

*Each vehicle makes two trips: one entering the lot and another when it leaves.

77-155

The Initial Study also calls for and depicts a signalized crosswalk across Barrington Avenue. The Department of Transportation has recommended against such a signal and crosswalk in our memo, CWP 80-2168, dated January 5, 1981. No new data indicate that a signal would be warranted. It is misleading to imply that such traffic controls will be installed, especially because a signal and crosswalk at that location would adversely affect the capacity of Barrington Avenue.

Lastly, the parking and access layout shown in the Initial Study is unsatisfactory in that no internal circulation is provided between portions of the lot. If a driver finds the "participant" lot full, he must use Barrington Avenue to recirculate back to the "neighborhood" lot to see if space is available there. This arrangement is in violation of Section 12.21 A5(j) of the City's Planning and Zoning Code. For all of the above reasons, we find that, from a traffic point of view:

1) Any form of Negative Declaration is inappropriate.

2) The project may have a significant effect on the environment with respect to traffic.

3) An objective, more comprehensive traffic study is needed.

4) The access, parking layout, and on-street traffic controls shown in the Initial Study would contribute to adversely affect Barrington Avenue traffic operations and are unsatisfactory.

T. K. PRIME
Transportation Engineer
City-Wide Coordination Section

Thomas Conner
THOMAS K. CONNER
Supervising Transportation Planner II
Transportation Planning Division

WFC:amm

cc: Western District Office

77-156

3

January 14, 1982

r. A. Carmichael:
Dear Sir:

This is to state that I am vehemently opposed to the plan for the multi purpose sports field as outlined in the brochure sent me.

I forsee a dangerous, most congested area which will turn this desirable although traffic ridden area into that of an express freeway, endangering lives and certainly threating the peace of the residents on Barrington Avenue and adjoining streets.

I anticipate people running up my driveway and climbing the fence at the rear of my property to go into the field and no doubt that there will be damage and accidents incurred by the balls flying next to me in the field and breaking my windows and damaging the property.

Should you go aheed with your plan as outlined, it is imperative that the fence be built up several feet higher than at present and some security be placed in front of my property to prevent it being used as a runway by teenagers.

Unless this is done, I will hold the city financially and legally responsible any damage to me personally and to my property.

Mrs. Bertha Ruby, Owner
400 S. Barrington ave
Los Angeles, Ca 90049

Tel: [redacted]

TT-157

January 21, 1982

4

David Attaway
c/o Dept. of Recreation & Parks
Planning, Development & Admin.
200 N. Main St. Rm. 1290
City Hall East
Los Angeles, Ca. 90012

RE: BARRINGTON RECREATION CENTER- EXPANSION

Dear Sir,

Thank you for sending me your notice of preparation of "Barrington Recreation Center-Expansion".

I live at 289 So. Barrington, #106, face the street and am very familiar with the traffic all during the week, especially weekends. Also the accidents (high number) that have occurred in front of my residence as this is a two lane street with curves.

Your proposed entry will dramatically increase the traffic hazards to motor vehicles, bicyclists and pedestrians. Your conclusion in #13 F. Transportation/Circulation has not been properly researched in my estimation, as three driveways are left off the map.

Reasons:

1. Barrington is one of the most heavily travelled streets between Sunset and San Vicente west of the San Diego Freeway;
2. Barrington is a two lane street;
3. Barrington has many sharp curves;
4. Barrington has had an extremely high number of accidents - side swipes, hit parked cars, rear ends, open doors hit - and is a dangerous street at present, being two lanes with curves;
5. I have complained in the past, numerous times, verbally to the police department about speeding traffic and illegal parking on Barrington, especially on weekends.

This letter is written to ask you to re-examine the entrance to the proposed park as it will dramatically increase the traffic hazards on the street, outside my bedroom window. The city might be liable for constructing a hazardous situation. I would welcome a call from your Traffic Department to explain my position at 213-277-6668. Thank you very much.

Cordially,

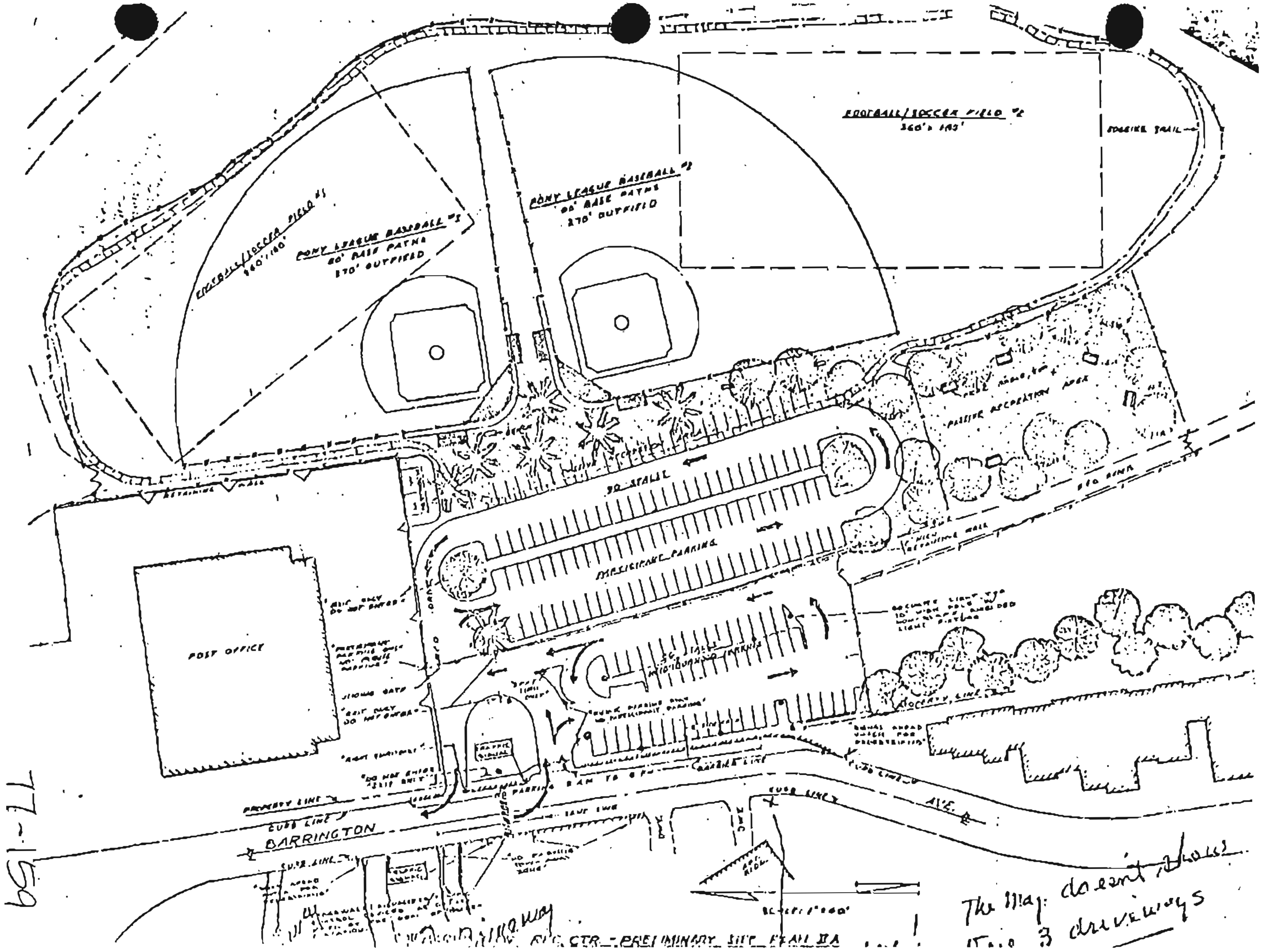
Ted Richards Jr

Ted Richards, Jr.
289 So. Barrington #106
Los Angeles, Ca. 90049

cc: Alonzo A. Carmichael, Planning Officer

TRJ:lmh

77-158



The map doesn't show the 3 driveways

77-159

5

2434 Arbutus Drive
Los Angeles, CA 90049
January 13, 1982

Mr. David Attaway
Dept. of Recreation and Parks
200 N Main Street
Los Angeles, CA 90012

Dear Mr. Attaway:

As a parent who wrote an initial letter suggesting the possibility of using the VA land for public sportfields to Congressman Beilenson, I applaude your extensive EIR and your evaluations. Although the community's need has been dire, all of us in American Youth Soccer Organization (AYSO) felt concern for our children when the Bridge the Gap group brought the disposal wastes to our attention. However, the thorough exploration of five different agencies mollifies our anxieties and reassures us of our children's safety. To think that playing there for an entire year would result in healthy minds and bodies plus be less exposure than a coast to coast flight certainly focuses our perspective.

Another plus is the by-product of much needed pedestrian safety incorporated in the traffic plan. When I lived at 330 S. Barrington (outlined on Preliminary Site Plan 11A), pedestrians were endangered by the fast-flowing traffic as they attempted to cross (west) to the existing park or eastward to the post office. My children weren't safe crossing alone. Many of us attempted to provide a traffic signal. Equally dangerous was the resulting speed the car maintained into the congested Barrington sopping plaza adjacent to this area. The clearing of cars on the east side and traffic signal will be great improvements.

May I share a reservation with you? The necessity of replacing the third proposed, smaller field with "Participant parking" is unfortunate. Few of the 'participants' drive and many, many parents car pool or do not stay. Since we accomodate over 600 youngsters in our divisions which use a small field, the loss is a grievous one. Originally, parking was allocated east of the post office and east of the aprtments. Is there any chance of salvaging the third field?

I have another concern. As grateful as I am to Bridge the Gap for originally raising the issue of safety, I have some reservations elicited by their comments in the Brentwood Post. They sounded determined to stop the park regardless of the EIR results. Are their credentials more reliable than the health physicists or the NRC inspectors? My first letter was written in 1976; I hope another five years will not pass without the public utilizing the much-needed fields and open space.

77-160

6

ARTHUR F. SCHANCHE, M.D.
191 SOUTH ROCKINGHAM AVENUE
LOS ANGELES, CALIFORNIA 90049

15 Jun 82

Mr. David [illegible]
Dept. of Recreation + Parks
200 No. Main St.
Los Angeles Ca. 90012

Dear Mr. [illegible]:

I have received your report concerning the Burlington Recreation Center expansion. I feel that you have performed an admirable service to our community. There is a great need for this recreational facility which will improve the quality of life for our children.

I would hope that the Bridge the Gap group would accept the realities of physics and busy themselves with some other project.

This is a well engineered addition and I would hope it can be completed soon.

Sincerely yours,

Arthur F Schanche MD

77-1101

Office of Construction Washington, D.C. 20420

Veterans Administration

FEB 11 1982

City of Los Angeles
Dept. of Recreation and Parks
Planning, Development and Administration
200 N. Main St., Room 1290
City Hall EAS
Los Angeles, CA 90012

Dear Sir:

Our office of Environmental Planning has received and reviewed the Draft Environmental Impact Report titled Barrington Recreation Center-Expansion, affecting a portion of the VA Medical Center (Brentwood), Los Angeles, CA.

The report adequately sets forth the environmental impacts of the project, and we have no objections to the proposed development. As the lessor, we will arrange for the publication of a Finding of No Significant Impact in the Federal Register.

We appreciate the opportunity to comment on this report and request a copy of the final report when it becomes available.

If you have any questions regarding our comments, please contact me on [redacted].

Very truly yours,

Jon E. Baer

JON E. BAER
Acting Director, Land Management Service

In Reply Refer To:

77-162

AMERICAN YOUTH SOCCER ORGANIZATION
a nonprofit corporation dedicated to youth soccer
everyone plays

8

Ray Meline
Regional Commissioner
18112 Sandy Cape Drive
Malibu, Calif. 90265

February 15, 1982

Mr. David Attaway
Dept. of Recreation and Parks
200 N. Main Street, Room 129
City Hall East
Los Angeles, California 90012

Dear Mr. Attaway:

For some time now we in A.Y.S.O. Region 69 (Pacific Palisades, Malibu, Brentwood and Topanga) have watched the activities instigated to obtain additional recreational facilities and usable soccer fields in our region near the Barrington Recreational Center. Every year for the last 5 years the number of participants in our program has increased by at least 10%. There are now over 1,000 children registered in our region. One of my main concerns as the Regional Commissioner for region 69 is that we may not have enough playing fields to accomodate our increasing enrollment. Currently, children residing in the Brentwood area must travel to Pacific Palisades to participate.

I have thoroughly reviewed the Draft Environmental Impact Report. I was impressed by the extent to which various governmental agencies have inspected, tested and investigated suspected radiation on the potential site. It does not appear from the report that there is the slightest hazard from radiation at this site to our youngsters. Consequently, I urge you to proceed as promptly as the law allows to develop the twelve acres of Veterans Administration property for recreational use.

Sincerely,

Ray Meline

Ray Meline
Regional Commissioner

77-163

GIVEN & SHUWARGER
A PARTNERSHIP INCLUDING A PROFESSIONAL CORPORATION

ROBERT H. GIVEN, C.P.A.
ROBERT SHUWARGER, C.P.A.
PHYLLIS E. FRANK, C.P.A.

3030 WILSHIRE BOULEVARD, SUITE 201
SANTA MONICA, CALIFORNIA 90403

AREA CODE 213
TELEPHONE 828-7547

January 28, 1982

Mr. David Attaway
Department of Recreation and Parks
200 N. Main Street
Los Angeles, California 90012

Dear Mr. Attaway:

As a West Los Angeles resident and parent of two boys who are involved in local athletic programs, I applaude your extensive environmental impact report and your evaluations as respects to using the V.A. land for additional sportsfields.

AYSO (American Youth Soccer Organization) and other organizations are in dire need of the proposed additional sportsfield. These organizations play an integral role in the development of our youth today. Through organizations like AYSO, our children are not only learning to be good sportsmen, but also good citizens and standards for being members of the community.

Since the NRC and other health physicists have declared the proposed facilities safe for our children, then I, as a concerned parent, urge the Department of Recreation and Parks to vigorously pursue the development of the V.A. land for public sportsfields.

I am anxiously looking forward to this becoming a reality.

Kindest regards,

Robert H. Given

Robert H. Given

RHG:jdl

77-164

We the undersigned parents, players, and coach of the Lightning Bolts AYSO soccer team, agree with the enclosed letter of Robert Given concerning the proposed sport fields at Barrington Center.

Suzanne Cisler
Carol Sherman
Geoff
J. Kelly
Barbara M. Sanders
A. J. Sulodowski
John L. Sanders DDS.
Daniel Simon
Gail S. Simon
Isabelle P. Tweedie
Robt Sherman
David W. Schlundt
Elsa Schlundt
Mike Friedlander

Ciaran Kelly
Geoff Given
Rob
Jimmy Tweedie
Mark Schlundt
Tony Sherman
James Tweedie
Eric C Gantz

77-165

AMERICAN YOUTH SOCCER ORGANIZATION
a nonprofit corporation dedicated to youth soccer
everyone plays

10

February 23, 1982

Department of Recreation and Parks
Planning, Development, and Administration
200 North Main Street
City Hall East

Attention: David Attaway

Dear Mr. Attaway,

I have carefully reviewed your Notice of Preparation of a Draft Environmental Report regarding the development of a 12-acre public recreation area on Veterans Administration Property east of Barrington Avenue. Your report is very comprehensive and, in my opinion adequately adresses the concerns expressed at the public hearing held February 24, 1981, which I attended, and subsequent concerns of the Bridge the Gap group of which I am familiar. I believe that your draft clearly demonstrates that the desired play fields can be implemented on this site with no significant environmental impact and with no demonstrable danger to participants from any of the current or planned ambient conditions.

While the West Side may be characterized as "affluent," it is woefully deficient in play fields which are adequate for youth team sports such as soccer which is the fastest growing youth sport in the area. Incidently, in our area we never turn down a child who desires to participate, but is otherwise unable to do so because of lack of money; scholarships are granted every year. There are over 4500 registered youth players in AYSO Area P alone, many of whom will benefit from these fields.

I urge you and your department to proceed as rapidly as possible with the development of this new facility.

Sincerely,

George Wolfberg

SECTION 1 / AREA P

GEORGE WOLFBERG, *Area Director* / 14107 Attila Road / Santa Monica Canyon, CA. 90402 / tl (213) 454-4971

77-166

We, who are residents of Brentwood and past or present members of the PTA at the elementary school, feel a great need for open spaces and sport fields in our area. We are very supportive of the proposed extension to Barrington Center. Since the NRC, the health physicists, and a total of five governmental agencies have declared these facilities safe for our children, then we, as concerned parents, urge the Department of Recreation and Parks to expeditiously pursue the development of the V.A. land for the public use.

Marsha Alexander 2438 Westridge Rd - LA 900[illegible]
Patricia L. Wood 11325 Isleta St LA 90049
[illegible] 2169 MANDEVILLE CYN. 90049
Linda Lee 11949 Darlington ave LA 90[illegible]
[illegible] 100 [illegible] LA 90049
Kathi Colvin 3764 Mountain View LA 9006[illegible]
[illegible] Forsyth 10808 Savona Rd. L.A. 9007[illegible]
Phyllis [illegible] 12915 San Vicente LA. 90049
Barbara [illegible] 335 [illegible] 90049
Beverly Dietz 740 Gretna Green LA 90049
Laurel [illegible] 449 So. Bundy Dr LA 90049
Delores Spiva 740 Gretna Green LA. 90049
Joan Justison 169 Gretna Green LA 90049
Patricia Barrett 850 Westgate L.A. 90049
[illegible] 11840 Gorham Av LA 90049

77-167

Charlene D. Williams 21731 Cañon Dr, Topanga 90290
Barbara R. Kolod 11944 Foxboro Dr, LA 90049
Joyce S. Burans 585 Moreno Ave, LA 90049
Regine Fisher 2280 Mandeville Cyn Rd. LA 90
Felice Anspacher 14825 Greenleaf St Sherman Oaks 914
Janis Ackerman 530 So. Barrington Ave. L.A. 90049
Doris Amelson 13521 Bayliss Rd. L.A. 90049
Carolyn Chandler 13443 Bayliss Rd. LA. 90049
Ellie Burton 3377 Alginet Dr. Encino 91436
Sharon Thorpe 10445 Eastborne Ave. 90024
Caren Sokol 13126 Mariposa Place - LA 90049
Judy Eizod 11734 Chenault St. L.A. 90049
Joan Fox 322 S. Westgate LA 90049
Joan Brammer 11711 Kiowa Ave., L.A. 90049

77-168

11

705 South Westgate Avenue
Los Angeles, CA 90049
February 12, 1982

Mr. David Attaway
Department of Recreation and Parks
200 North Main Street
Room 129
City Hall East
Los Angeles, CA 90012

Dear Mr. Attaway:

In my work, I travel throughout Los Angeles, Orange and Ventura Counties. Never have I seen so few parks and recreational facilities for children than in the Brentwood area of Los Angeles. We need the playing fields for our youngsters as proposed on the Veterans Administration land across from Barrington Park. And we need it now!!!

Please give this your urgent consideration.

Sincerely,

Harvey R. Laderman

HRL:jbl

77-169

FORM GEN. 160 (Rev 3-78)

12

CITY OF LOS ANGELES

INTER-DEPARTMENTAL CORRESPONDENCE

January 20, 1982

To: David Attaway, Department of Recreation and Parks
Room 1290, City Hall East

From: Ross L. Williams, Battalion Chief, Planning Section
Fire Department, Room 1010, City Hall East

Subject: NOTICE OF PREPARATION FOR THE EXPANSION OF
BARRINGTON RECREATION CENTER

The Fire Department has reviewed the subject Notice of Preparation and does not feel that the proposed project will have a negative impact on the Fire Department.

JOHN C. GERARD
Chief Engineer and General Manager

Ross L. Williams

ROSS L. WILLIAMS
Battalion Chief
Planning Section

RLW:LEH:lmg

cc: Councilman Marvin Braude
Fire Marshal
Engineering and Hydrants Unit

77-170

COMMITTEE TO BRIDGE THE GAP
1637 BUTLER AVENUE #203
LOS ANGELES, CALIFORNIA 90025
(213) 478-0829

13

February 16, 1982

Mr. David Attaway
Dept. of Recreation & Parks
Planning, Development, and Administration
200 N. Main St., Room 1290
City Hall East
Los Angeles, CA 90012

Dear Mr. Attaway:

This letter constitutes the comments of the Committee to Bridge the Gap on the initial study prepared by the City of Los Angeles regarding the proposal to build a park on land at the Veterans Administration.

As you know, we have been concerned for some time that the site of the proposed park is also the site of past soil burials of radioactive wastes and certain chemical solvents.

We believe that the initial study prepared by the City fails to answer the following questions which must be satisfactorily answered before the safety of the proposed park can be responsibly determined:

(1) Were there disposals of radioactive wastes prior to 1960? If so, how much, where, and what kinds of materials were buried?
(2) Were there disposals of radioactive wastes during the 1960s or thereafter for which the records currently available are not complete?
(3) Were there disposals of radioactive or other wastes at the VA from generators of such wastes other than the VA?
(4) Were chemical wastes, other than the scintillation liquids previously reported, buried at the site? Were other kinds of wastes (e.g. other medical or research wastes) also buried there? If so, what kinds and how much and where?
(5) Precisely where were wastes buried, and precisely where and how deep was the fill added on top of some of the disposal areas?
(6) What is the cause of the bare patches of ground surrounded by thick vegetation previously noticed in the radwaste site?

We believe the cursory Geiger counter survey by NRC and minimal water sampling by DWP to be totally inadequate to determine contents of the soil or long-term potential hazard. The NRC calculations, based as they are on only VA records, which may be incomplete, rather than actual measurements, likewise are of little value.

We believe that until it is known with some certainty what was buried in the area, further action on the park is unwarranted. At the very least, extensive monitoring and an Environmental Impact Report are necessary. We request that we be kept informed of developments, be given an opportunity to comment on future studies or reports, and be notified prior to hearings, if any, on the proposed park. Until these questions are satisfactorily answered, we think reasonable assurance of no hazard cannot be made.

Sincerely,

Daniel Hirsch
Daniel Hirsch
President

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DON ROTHMAN

615 SOUTH FLOWER STREET · LOS ANGELES, CALIFORNIA 90017 · (213) 626-2311

RESIDENCE
(213) 472-5784

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March 2, 1982

Mr. David Attaway
Department of Recreation
and Parks
Room 1290 (Planning,
Development & Administration)
City Hall East
200 North Main Street
Los Angeles, California 90012

Re: Veterans Administration West Los Angeles/
Barrington Park

Dear Mr. Attaway:

The development of the 12 acres at the Veterans Administration site, across the street from Barrington Park, is the subject of constant inquiry from the many people who use and enjoy the facilities. I would very much like to have a timetable estimate, from you, so that we might be able to respond to the inquiries.

Surprisingly, I keep hearing some rumblings about continued efforts from a "quasi-nuclear scientist" group continuing to urge delays. I am not certain as to the position, or the credentials, of this group. However, I am under the distinct impression that responsible government scientists and local university scientists have dismissed the problem and view the facility as safe. We, therefore, presume that the project will go forward on an expedited basis.

Yours very truly,

Don Rothman

Don Rothman for the Board
of the
Barrington Recreation Center Service Assn.

DR:rml

77-172

LAW OFFICES OF
SULMEYER, KUPETZ, BAUMANN & ROTHMAN
A PROFESSIONAL CORPORATION
615 SOUTH FLOWER STREET · LOS ANGELES, CALIFORNIA 90017 · (213) 626-2311

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December 29, 1981

IRVING SULMEYER
ARNOLD L. KUPETZ
RICHARD G. BAUMANN
DON ROTHMAN
MAX H. RUSH
NATHAN HENRY HARRIS
JOHN P. ELEAZARIAN
ALAN G. TIPPIE
ISRAEL SAPERSTEIN
ELLEN B. MARGOLIS
ELDON L. PESTERFIELD

Mr. David Attaway
Department of Recreation
and Parks
Room 1290 (Planning,
Development & Administration)
City Hall East
200 North Main Street
Los Angeles, California 90012

Re: Barrington Recreation Center - Expansion

Dear Mr. Attaway:

I have received the material regarding the above subject matter from the Department of Recreation and Parks, including the "Notice of Preparation", the "Initial Study and Checklist" and other relevant documentation. I believe this to be the material which will comprise the environmental impact report in connection with the utilization of the Veterans Administration property located directly across the street from Barrington Recreation Center.

I have reviewed the material and I believe it to be accurate. The Barrington Recreation Center Service Association, as you know, is strongly in favor of the utilization of the Veterans Administration site for the purposes outlined in your report. Representative Beilenson and Councilman Braude have led the way toward recreational development and use of a site which has thus far laid barren and unused. The members of the Barrington Recreation Center Service Association are grateful for this help and we believe the vast majority of the citizens in West Los Angeles are in favor of the project.

While I have not yet distributed the material to the Board of the Barrington Recreation Center Service Association, unless you receive additional material from me, disapproving some portion of

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your environmental impact report, you may assume that our Board is endorsing my approval of said report.

Yours very truly,

Don Rothman for the
Barrington Recreation Center Service
Association

DR:rml

cc: The Honorable Anthony C. Beilenson
Mr. John Mills
Mr. Paul Billig
Ronald E. Gordon, Esq.
Stephen A. Bauman, Esq.
Dr. Peter S. Bing
Mr. Arthur Minchaca
Glenn R. Watson, Esq.

BOARD OF RECREATION AND PARKS COMMISSIONERS

1982 JAN 18 AM 10:57

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ANTHONY JAMES MOHR
ATTORNEY AT LAW
9460 WILSHIRE BOULEVARD
SUITE 500
BEVERLY HILLS, CALIFORNIA 90212
(213) 553-5916

December 15, 1981

Board of Recreation and Park Commissioners
200 N. Main Street
Los Angeles, CA 90012

Attention: Alonzo A. Carmichael

Re: Negative Declaration and Initial Study List Explanation Sheet for the Barrington Recreation Center Addition

Dear Mr. Carmichael:

This office represents the Brentwood-Sunset, located at 237-289 S. Barrington Avenue, directly across the street from the proposed addition to the Barrington Recreation Center.

I have reviewed the Negative Declaration and supporting documents. The section entitled "Disposal of Laboratory Waste Solvents and Low Level Medical Radionuclides" naturally concerned my clients and me. Since I am not a scientist, I consulted a person with enough expertise to evaluate properly your report. I would now like to pass on to you the reaction of Dr. Margaret Simons, a senior research immunologist, who obtained her PhD in immunogenetics.

I was pleased that Dr. Simons expressed no concern over the radioactive wastes; however, she is worried about the 358 gallons of toluene and/or dioxane which were buried on the park site. Toluene (which you state constitutes the bulk of the buried material) can cause liver damage, nausea, and headaches. The chemical is volatile and easily evaporates into the air. As you say in your report, Toluene is only "slightly water soluble". Consequently, it is difficult to see how it will be carried downward by percolating water and be dissipated. Dr. Simons disputes that assertion and says that more likely, the chemical will escape upward into the air. If this is the case and the evaporation occurs on the fields, then a person playing soccer for three hours may go home with a bad headache or, depending on the person, with potential liver damage.

The fact that the chemical was buried 13 years ago means little without more data. For example, if the toluene was buried in sealed containers, the containers may not have disintegrated

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until as recently as three years ago. If this is the case, then the substance remains in significant concentration and may be seeping up through the ground.

Dr. Simons recommends that you take air samples directly above the burial sites and analyze these air samples in a gas chromatograph. The sampling should occur when there is no wind and preferably on a warm, sunny day; because toluene is at its most volatile during such conditions.

Please feel free to call me if you have any questions or if you wish to consult with Dr. Simons.

Sincerely,

Anthony J. Mohr

AJM:jc

UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

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FEB 3 1982

Mr. David A. Attaway
Department of Recreation and
Parks
Planning, Development, and
Administration
200 N. Main Street, Room 1290
City Hall East
Los Angeles, California 90012

Dear Mr. Attaway:

This refers to your Notice of Preparation of a Draft Environmental Impact Report for the Barrington Recreation Center - Expansion.

I have reviewed the radiological health summary in your report. The conclusions appear reasonable and balanced.

Sincerely,

Richard E. Cunningham

Richard E. Cunningham, Director
Division of Fuel Cycle and
Material Safety

cc: Ms. Kay Ferber Slavkin

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COUNTY OF LOS ANGELES
DEPARTMENT OF PARKS AND RECREATION

155 West Washington Boulevard – Room 1200 – Los Angeles, California 90015 – (213) 744-4211

December 31, 1981

Mr. David Attaway
City of Los Angeles
Dept. of Recreation and Parks
Planning, Development and Administration
200 N. Main Street, Room 1290
City Hall East
Los Angeles, CA 90012

Dear Mr. Attaway:

NOTICE OF PREPARATION OF DRAFT
ENVIRONMENTAL IMPACT REPORT
BARRINGTON RECREATION CENTER EXPANSION

Thank you for notifying us on the expansion of the Barrington Recreation Center located in the Brentwood community. The Initial Study appears complete and adequately deals with the area of interest and expertise under this Department. The environmental impacts identified in the study will not create adverse impacts on the recreational facilities or services provided by this Department.

This Department supports the proposed project for development. We believe that the project will improve the quantity and quality of recreational facilities provided to the participants and enhance the recreational potential of the Brentwood community.

We have enjoyed the past coordination with your City and would appreciate review of both the Draft and Final Environmental Impact Reports.

If we may be of further assistance on this review, please contact Ms. Lillie Lowery at (213) 744-4351.

Sincerely,

J. F. Schumann

James F. Schumann
Deputy Director, Planning

LL:mq

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LOS ANGELES POLICE DEPARTMENT

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DARYL F. GATES
Chief of Police

TOM BRADLEY
Mayor

P. O. Box 30158
Los Angeles, Calif. 90030
Telephone:
[redacted]
Ref #: 9.1

February 9, 1982

Mr. Alonzo Carmichael
Planning Officer
Department of Recreation and Parks
Room 1290, City Hall East
Los Angeles, CA 90012

Attention: David Attaway

Re: BARRINGTON RECREATION CENTER EXPANSION

Dear Mr. Carmichael:

The proposal for the Barrington Recreation Center Expansion has been reviewed. The project is located in the Police Department's West Los Angeles Area.

The project will have a cumulative effect on police services. Traffic in the area and Burglary/Theft from Motor Vehicle crimes can be expected to increase, and the new park may be attractive to local youth gangs as a meeting area.

A tri-color traffic signal is recommended to control vehicle and pedestrian traffic at the park entrance.

Currently, the Police Department does not have jurisdiction in the new park area. Some accommodation must be reached with the Veterans Administration, such as deeding the property to the City of Los Angeles, if routine Police Department services in the park are desired.

Very truly yours,

DARYL F. GATES
Chief of Police

Quintin Villanueva

QUINTIN L. VILLANUEVA, Captain
Commanding Officer
Planning and Research Division

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COMMENTS ON THE ENVIRONMENTAL REVIEW CONDUCTED BY THE CITY OF LOS ANGELES OF THE PROPOSED PARK TO BE ESTABLISHED AT THE BRENTWOOD VA

by

The Los Angeles Federation of Scientists

Introduction

In December of 1981 the Department of Recreation and Parks of the City of Los Angeles published an "Initial Study" regarding the potential environmental impacts of the proposed establishment of a park on land currently owned by the Veterans Administration in West Los Angeles, land recently disclosed to have been formerly utilized as a disposal site for low-level radioactive wastes and certain chemical wastes. The City solicited comments to its Initial Study. The following report represents the comments of the Los Angeles Federation of Scientists following an intensive review of the available information and an attempt to obtain additional information, in part through extensive use of the Freedom of Information Act.

The Los Angeles Federation of Scientists, in undertaking review of the City's Initial Study, did not attempt to make a determination as to whether the proposed park project should be approved. What LAFS has attempted to do is to independently assess whether the data accumulated to date by the City in its environmental review are scientifically sufficient to meet the City's burden of proof in demonstrating that no significant untoward environmental or public health impact will result should the park be built on the land in question. We conclude that the City has not met its burden to date and that reasonable assurance of safety cannot be provided from the reviews performed by the City and other agencies as of this juncture.

This conclusion does not imply that serious danger would exist if the park project were continued. What it does mean is that enough significant questions remain unanswered that, in the opinion of the Los Angeles Federation of Scientists review panel, it would be imprudent to move forward with the park project in the absence of reliable answers to those questions.

The most pressing unanswered questions deal with precisely what kinds of and in what quantities radioactive and chemical wastes may have been buried in the soil of the proposed parksite. The most worrisome finding, from a public health standpoint, is that radioactive materials were indeed buried at the site from at least the early 1950s on, and that no records apparently exist as to what and how much of these wastes were buried during the fifties. In addition, it appears there now exists significant likelihood that chemical wastes (other than the dioxane and toluene previously reported) may have been disposed of at the site, again without records available disclosing amounts and kinds. Both of these findings made by LAFS during its independent gathering of information are disturbing because review of the site to date by various agencies had all been performed under the assumption than no pre-1960 radwaste burials had taken place and that no chemical wastes other than dioxane or toluene were present.

In light of nearly a decade of radioactive burials for which no records can be found, and the significant possibility of soil disposal of unknown chemical wastes, LAFS concludes that the City cannot affirmatively demonstrate the safety of its proposed project in the absence of reliable data as to the contents of previous disposal operations and/or extensive testing of the current contents of the soil in question. The Initial Study and the extremely sketchy testing reported therein are simply not adequate to support a scientifically sound finding of no potential hazard.

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The fact that significant questions are currently outstanding which, if left unanswered, makes a finding of no hazard impossible does not in any way mean that such a finding cannot be made if those questions are now answered. The Los Angeles Federation of Scientists, however, can merely comment on the Initial Study as now prepared and have determined that that Study currently is insufficient to support a finding that the park can be safely developed.

Information Acquired by LAFS in its Review

In order to attempt to independently assess the conclusions reached in the City's Initial Study, the Los Angeles Federation of Scientists promulgated a number of Freedom of Information Act (FOIA) requests to a number of governmental agencies believed to be likely to possess information relevant to the matter of radioactive waste disposal at the Veterans Administration. In addition, a number of questions were also sent to these agencies for direct answer. To date, only a partial response has been obtained. LAFS respectfully suggests that the City delay further action of the proposed park until the oustanding informational requests have been answered, as material contained therein may resolve some or all of the outstanding questions.

FOIA requests have been made of the VA, NRC, and DOE. In addition, questions have been promulgated to various officials within those agencies as well as the California Department of Health Services and Congressman Anthony Beilenson.

In addition to information acquired to date in response to the above requests, the LAFS panel has reviewed the documents upon which the City's Initial Study is based, including materials acquired by Congressman Beilenson's office in its review and then provided to the City.

Significant Information in the Material Acquired Independently by LAFS

The most significant new information obtained in the LAFS review is the admission by the Veterans Administration that radioactive materials were buried at the site in question at least as early as the early nineteen fifties, and that apparently no records exist as to which isotopes and in what quantities were buried prior to 1960.

The Veterans Administration, in response to interrogatories submitted by LAFS, states, "Burials began in the early 1950's." It also states, "June 24, 1960 is the earliest date for records in our possession evidencing radwaste disposal by burial. Prior to that date no records exist that are in our possession."

The VA also asserts that "Statements of former employees (who are still alive) confirm the fact that all AEC (Atomic Energy Commission) standards were complied with in regards to the disposal of rad waste." However, in another significant new finding, LAFS has been informed in a letter dated January 15, 1982, from Robert L. Fonner, an attorney in the Regulations Division of the Office of the Executive Legal Director of the NRC, that "The first waste disposal regulations became effective February 28, 1957." Thus, if the statement made by the NRC's Fonner is correct, the VA assertion of compliance with all AEC standards is meaningless for the period 1952 to February 1957, as it would appear that during the time period during which radwaste burials took place,

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no regulations were in effect.

In an additional significant finding, the VA now admits that radioactive materials were utilized at the site at least as early as 1948. Records also indicate later possession of "old Thorotrast preparation", a material used in the thirties and forties extensively in the U.S. Both admissions raise questions as to whether radioactive materials were buried even earlier than the 1952 date now given by the VA (it would appear the VA is merely indicating that rad waste burials began <u>at least</u> as early as 1952.)

In a further finding of potential significance, the VA in answer to LAFS questions indicate that the earliest records they have related to chemical waste disposal go back only to 1978. "As to how chemical waste had been disposed of by the VA during the various periods since its inception, it would be pure conjecture on our part."

In response to a LAFS question as to whether any chemical waste were disosed of by soil burial at the VA, the following answer has been provided by the VA: "There could have been. There is no evidence to the effect that there was, and there is no evidence to the effect that there wasn't. The only authoritative /sic/ person on the subject is a Milt Kaufman. Mr. Kaufman has been with the VA for 31 years and to the best of his recollection most of the chemical waste disposal was done by contract service, but that in no way means that the VA at no point in their history did not dispose of small amounts of chemical waste at the Brentwood dump site."

This last revelation by the VA raises very serious questions. If indeed "there could have been" disposal of chemical wastes in the soil of the area being considered for the park project, and if the VA has no records of what was disposed of there because it only keeps such records a brief time ("all records are destroyed after two years"), potential hazards of unknown nature and unknown magnitude and unknown location are possible.

<u>Review of the City Intial Study</u>

The Initial Study contains the following conclusion: "I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because the mitigation measures described on an attached sheet will have been added to the project. A CONDITIONAL NEGATIVE DECLARATION WILL BE PREPARED. (See attached conditions(s))." This statement is signed by A.A. Carmichael, Planning Officer. There is no clear statement attached of conditions; furthermore, the only mitigating measures related to the question of past disposal of hazardous materials at the site is the less-than-specific assertion that "major excavation activities will not occur during the site preparation phase, alleviating any concerns over unearthing buried materials" and that "soil will be imported and spread over the site, thereby increasing the depth of the buffer zone." In light of the uncertainties as to what may have been buried at the site, and where, these measures may not be sufficient. Furthermore, we note that the Initial Study fails to identify with specificity precisely the extent of excavation and earth-movi efforts that will be necessary, as well as the control mechanisms to ensure that <u>major</u> excavation (undefined in the study) will not occur.

In the Initial Study Checklist, certain possible environmental impacts are noted. LAFS believes certain of these require further review than is provided in the Study. For example, the Study indicates there will be disruptions, displacements, compaction or overcovering of the soil, and change in topography or ground surface relief features. Because of the uncertain nature of possibly toxic materials that may be buried in the soil, the effects of such disruptions and compactions on migration of potentially toxic materials, both to soil surface and into water table need to be far more extensively examined. The review of geologic and hydrologic interactions with potential hazardous material migrations is a complex matter that is barely touched on at all in the Study.

The checklist also asserts minimal changes in water, an assertion which the one-time, lone grab samples taken at nearby wells (and monitored for only gross alpha and Beta activity and C-14 and tritium) are insufficient to support. The admitted possibility that changes may occur in absorption rates, drainage patterns, or the rate and amounts of surface water runoff is not fully addressed with regards the possibility of water supplies becoming contaminated through these changes.

The checklist asserts the proposal will not result in a risk of release of hazardous substances, including but not limited to chemicals or radiation in the event of upset conditions or accident. No support is given for that assertion, and judging from the remaining uncertainties about what chemical or radioactive (or possibly bacteriological) agents may have been buried at the site, such an assertion seems unsupportable at present.

The checklist indicates that the proposal <u>may</u> result in exposure of people to potential health hazards. We will address this issue later, but the possible of exposure to health hazards remains an open question, and it is not at all clear that the minimal "mitigative" measures proposed would indeed mitigate possible hazards.

Finally, LAFS finds insufficient data provided in the Initial Study for the City to make the finding it does in the Initial Study Checklist that the proposed project does not have environmental effects which cause substantial adverse effects on human beings, either directly or indirectly. The City's burden to affirmatively demonstrate the correctness of that assertion has not been met by the materials presented and data acquired to date.

In explaining the checklist items, certain additional questions are left unanswered. For example, it is known the scintillation liquids in vials are buried at the site: the effect of soil compaction on these vials with the related possibility of disturbing their contents resulting in release of hazardous materials is inadequately addressed. LAFS notes that the State Health Department's Abandoned Site Project (Hazardous Materials Management Section) has indicated that it is its view that the chemical materials for which records exist (i.e. the toluene and dioxane) "should not be a problem unless they are disturbed." Inadequate assurance is provided that the site preparation phase of the project will not result in those materials being disturbed, and of course, it now appears possible that far more materials than merely toluene and dioxane may have been buried at the site, further complicating matters.

The description of changes in water and soil absorption characteristics only deals with possible disruptions to regional hydrologic continuity, not to possible contamination of local ground water supplies. Again, unanswered questions remain.

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The section of the Initial Study dealing with human health is simply not adequate in addressing these potential impacts. For example, the historical description is not even accurate with regards the time periods involved (i.e. the assertion that radwaste was disposed of from 1960-1968, when it is now known wastes were disposed of at least as early as 1952, and possibly earlier). In addition, the Study merely repeats as fact the VA's assertions of what its records indicate was buried there, whereas significant possibility exists (now confirmed by lack of 50's records) of unrecorded burials.

The historical section fails to deal with the question of what was done prior to the institution of AEC regulations. Furthermore, it inaccurately states that AEC reviewed the situation with regards the chemical materials as well as the radiological; AEC had no jurisdiction over chemical materials. AEC's review was extremely cursory, at best. It merely said that if the VA had obeyed AEC regulations in conducting the burials, there would be no restriction on use for the facility. It reviewed some of the records (now we know burials for a number of years were not included in that review) and concluded, solely on the basis of records, that the regulations were obeyed. This does not constitute scientific assessment of potential hazards.

LAFS notes that the map included as Exhibit 3 in the Initial Study appears to be inaccurate. It purports to identify the supposed three major areas of radwaste dumping by location. A visual inspection of the area indicates that, were the map correct, burials would have taken place in the bed of the large stream that runs through the ravine between the athletic field and the leased area. The VA, in response to LAFS questions, indicates that no burials took place in or near that streambed. Thus, the map is in error, and the burials would appear to have taken place much more contiguously to the leased area. Furthermore, conversations with one of the former VA employees responsible for pre-1960 burials indicates that burials were made "near the fence." There is currently no fence anywhere near the marked burial sites; the nearest fence is near Barrington. Thus significant questions remain as to burial sites. Not to mention the uncertainties posed by the VA's most recent statements in response to LAFS questions about the possibility of chemical burials and the admission of pre-1960 unrecorded radwaste burials.

Furthermore, the VA has a building going back to around 1880. A review of dumping for the 1960s is not adequate in determining potential hazards. LAFS also notes an old rusted sign at a location not marked on the Exhibit 3 map as a dumpsite that could be related to dumping; the VA says it has no knowledge of what that sign said.

The Table 1 in the Initial Study does not provide data for dumping 1952-1962.

The assertions repeated from UCLA's Office of Research and Occupational Safety regarding the likely migration of toluene and dioxane are questionable. While downward migration is possible, so is upward migration, from capillary action and the upward rise of water after rainstorms after the skies clear and the sun warms the soil, causing the water to rise. The toluene and dioxane recorded as buried do not appear entirely trivial, as evidenced by the State Health Department's recommendation against disturbing them, a recommendation difficult to follow in construction of a park.

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The calculations of health risks associated with toluene, dioxane, tritium and carbon-14 seem a useless enterprise as the amounts disposed of appear unknown. Likewise, given the possibility of many other chemical and radioactive contaminants, calculations for these four give no accurate scientific estimate of the possible health risks.

The assertions of the health physicists cited in the Initial Study constitute a 1½ page letter merely indicating they had reviewed the <u>records</u> of burial from 1960-68 and on the basis of those records concluded no significant hazard. As it is now clear that materials other than those recorded were apparently buried at the site, the review of the records has no conclusory value. The health physicists took no independent measurements and conducted no independent data acquisition of which we are aware.

The "radiological survey" by the NRC inspectors is likewise of little probative value. The survey constituted a 45-minute walk-over of a small part of the area in question with hand-held detectors capable of detecting (so the report reads) only gamma radiation. The materials reported buried are primarily beta-emitting material, which could not be identified with such a survey. (The chemicals involved are, of course, completely incapable of detection with radiation devices). The NRC walk-through barely touched the edge of the area where the radwaste is reported as buried, being primarily off to the side of the reported burial area, and no attempt to survey other parts of the proposed park for the unrecorded pre-1960 burials was made. No soil, vegetation, air, or water samples were apparently taken by NRC. The method used by NRC in their quick review--a brief walk over a very small portion of the proposed lease area with hand-held gamma detectors--is scientifically totally inadequate to make any determination as to potential hazards from internal emitters buried at the site or for the possibility of strong gamma emitters buried at other locations, and gives no data whatsoever regarding possible chemical waste burial.

The monitoring of a single sample each from five wells nearby at one single point in time is likewise insufficient to make any determination about possible groundwater contamination, past or future. Groundwater migrates in very complex fashions; contamination might migrate in such a fashion that it doesn't reach a point some distance downstream for many years, or come in waves following heavy storms, or pass by one site at one point so that the health damage is further downstream (or upstream) of where one measures. A single data point in time is insufficient. In addition, the monitoring was not done for <u>any</u> chemical contamination, and only two specific radioactive isotopes.

Most curiously, the alpha activity for one of the wells was above that amount that legally mandates monitoring for specific isotopes; and yet no monitoring for specific radionuclides was done, as required, to determine the cause of the elevated level. The assertion by DWP that the "one high result is not immediately significant, as it was only based upon a single grab sample" is specious. If the high result is not immediately significant for that reason, then the low results are equally not immediately significant, for they were likewise based on a single grab sample. And lack of immediate significance in scientific circles merely means longer-range acquisition of additional data is required to determine the full significance or lack of significance for all the data. Single samples obviously do not provide enough data points for statistically significant conclusions. The cause of the high reading at the one well remains undetermined, and any significance to the other readings is likewise unascertained.

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We note further that the single-shot monitoring produced alpha results above those of the average DWP measurements for its water. While not necessarily significant, given concern that alpha-emitting materials upstream may be slowly migrating into the groundwater feeding those wells, further investigation appears called for.

The description of the Hazardous Materials Management Section position is not fully correct. The letter from Mark White, Manager of the Abandoned Site Project of that section, indicates that it was his understanding that no excavation of the waste materiels would occur, and thus it was unlikely, he thought, that the materials would be disturbed. To translate that to an assertion that things would be OK so long was "the buried materials were [not] disrupted by heavy site excavation" extends the argument a bit further than it appears to have been made. Furthermore, in making the judgment described, Mr. White did not know of the possibility of chemical wastes other than those described in the VA records (toluene and dioxane) having been buried there and was under the assumption that "the park will encompass only a small portion of the old disposal site." In view of the apparent errors in the map and possible burials in other locations in the proposed park, these assumptions must be called into question. Most particularly of interest is Mr. White's statement, following his statement that so long as the materials are not disturbed there shouldn't be a problem, that "if future development results in contact with the waste, the developer should be aware of the possible problems." Thus, the four-paragraph letter from the Hazardous Materials Management Section cannot be considered scientific evidence of the safety of the proposed project.

The calculations performed by the NRC's Uranium Fuel Licensing Branch are of no use whatsoever as we do not know how much of what isotopes were buried at the site. Performing calculations on the few available records when the VA admits to unrecorded burials is an exercize in futility and of no scientific value.

The Initial Study concludes its discussion of possible health risks by saying "the overriding consensus among experts in the fields of nuclear medicine and radiation health and safety is that the V.A.'s property will not require any land-use or public use restrictions." We must contest that assertion: the LAFS panel of experts feels insufficient data exist to responsibly make such a statement. We note that several experts in the field, consulted by Councilman Braude and Congressman Beilenson when the existence of the radwaste site first became known, have indicated repeatedly their belief that not enough data exist to make such an assertion.

Remaining Questions

The study raises far more questions than it answers. As of this date, no one knows what radioactive materials were buried at the site, in what quantities, and in what locations. It remains unknown if chemical wastes were buried at the site and, if so, what chemicals in what quantities.

Likewise, the study does not even address the possibility of bacterial or viral agents possibly present in the soil from disposal of infected laboratory experimental animals or other wastes potentially carrying pathogens.

Without knowing what was buried at the site, analysis of the geologic and hydrologic processes that could result in human exposure cannot be fully

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assessed.

Conclusion

The Initial Study is inadequate in a wide range of areas. These inadequacies make impossible the scientific determination (and, we suspect, the legal determination) that the proposed park will not result in substantial environmental or public health negative impacts. Available data contradict numerous assertions made in the Study. Missing data make its conclusions unsupportable.

The City has the burden of demonstrating that its proposal will not result in substantial negative impacts. The City's intention to issue a Conditional Negative Impact Statement is ill-advised on the face of the data provided to date. A full-scale Environmental Impact Report addressing the unanswered questions in the Initial Study is essential if the City intends to pursue the park proposal further.

The Los Angeles Federation of Scientists, in its review of the available studies and collected data, is unable to make a determination of safety or hazard from the proposed park. There simply are too many unanswered questions for serious scientists to claim enough data exist to make a sound judgment as to the safety of the project.

It is our understanding of environmental law that the party proposing a change that may have impacts upon the environment must bear the burden of proving that no negative impacts of significance will occur should the project move forward. Given the possibility of chemical wastes of unknown nature and quantity buried at the site, and given the VA's admission of unrecorded radwaste burials (at least, burials for which no records now exist), it seems to the Los Angeles Federation of Scientists that no scientific basis exists to meet the City's responsibilities to its citizens in this matter, i.e. its duty to protect them from possible serious health hazards.

Should the City wish to pursue the park project, an Environmental Impact Report that adequately addresses the outstanding questions is essential. In addition, thorough search for records which have not yet been located is necessary, as well as extensive testing of the site. No one knows what is buried at the site. Until extensive, controlled, scholarly tests are made, the necessary assurances cannot be given. The tests to date (single-shot well samples with gross radioactivity scans and no chemicals monitored) and the once-over with a gamma-detecting Geiger counter are grossly inadequate to make any serious determination about chemical, radiological, or bacterial hazards potentially present in the soil of land proposed to be the playsite for children.

Should the City decide to undertake the kind of testing and data acquisition necessary to adequately assess potential environmental impacts of the proposed park, the Los Angeles Federation of Scientists stands prepared to review plans for such monitoring and data acquisition and to review data so acquired.

77-1856

We suggest once again that any City action be delayed until remaining inquiries of responsible agencies made by LAFS under the Freedom of Information Act are answered. Information so provided may resolve some of the remaining unanswered questions.

But until reliable scientific data are available as to what materials were indeed buried at this dumpsite or sites, we believe the City can not meet its burden of demonstrating negative impact from its proposed park.

February 14, 1982

The Los Angeles Federation of Scientists
P.O. Box 67941
Los Angeles, CA 90067

This report was prepared by a taskforce of the Los Angeles Federation of Scientists consisting of two radiation specialists, two geologists with expertise in surficial processes, a medical doctor specializing in toxicology and occupational medicine, a safety engineer, and an environmental policy analyst.

77-188

APPENDIX G

DRAFT ENVIRONMENTAL IMPACT REPORT PUBLIC INPUT AND RESPONSES

DRAFT ENVIRONMENTAL IMPACT REPORT INPUT AND RESPONSES

The Draft Environmental Impact Report (DEIR) for the Barrington Recreation Center Addition was circulated for public review and comment from December 16, 1982 to January 28, 1983. During this period a public hearing was held on the DEIR (January 12, 1983) at Stoner Recreation Center. Eighty-five (85) people were in attendance at the hearing, with nearly half providing oral testimony on the perceived adequacy of the DEIR.

In addition, a total of thirty-five (35) letters were received from individuals, organizations, and government agencies. A list of those who submitted written comments is provided below.

Los Angeles Police Department
City of Los Angeles Environmental Quality Board
City of Los Angeles Dept. of Transportation
City of Los Angeles Bureau of Engineering
UCLA - Office of Research and Occupational Safety
California Dept. of Health Services
Southern California Federation of Scientists
American Youth Soccer Organization
Oak Ridge National Laboratory
Committee to Bridge the Gap
Los Angeles County Dept. of Health Services
Health Physics Society (Southern California Chapter)
U.S. Nuclear Regulatory Commission
Veterans Administration
A. L. Baietti
Michael Milstein
Arthur F. Schanche, M.D.
Helen E. Hull
Steve Aftergood
Myron Wollin
Daniel Hirsch
Rosy and Margie Grier
Suzanne Eisler
Reggie Fisher
Robert J. Taub, M.D.
Marshall E. Barshay, M.D.
Dr. Sheldon C. Plotkin
Shannon Carney
John Mills
Don Rothman
Ronald Rosenfeld
Gary A. Plotkin
Ted Richards

Of those comments received, some merely pointed out typographical errors or suggested editorial changes to correct inaccurate or misleading statements in the DEIR. Most comments, however, dealt with the issue of the Veteran Administration's (West Los Angeles) former biomedical waste disposal site located adjacent to the proposed Barrington Recreation Center Addition.

With respect to written and oral comments, three major issue areas were identified:

0 Biomedical Waste Disposal and Public Health
0 Parking and Traffic Circulation
0 Public Safety

All letters included in this appendix are numbered to keep them separate from one another, and to serve as a reference guide. Through careful review of the letters, relevant environmental concerns were identified (primarily in letters 1-11) which served as the basis for the Department of Recreation and Parks written responses (yellow section at end of report).

To aid in cross-referencing a particular comment with its response(s), an alpha or alpha-numeric code was placed in the left-hand margin of the letter near the comment. The following codes were used: Biomedical Waste and Public Health (BW); Parking and Traffic Circulation (PT); Public Safety (PS); Land Use (LU); and, Not a Significant Environmental Issue (NSEI). As an example, the code BW-2 next to a comment would indicate that its response can be found under the category Biomedical Waste Disposal and Public Health, response number two.

CALIFORNIA

TOM BRADLEY
MAYOR

DEPARTMENT OF
CITY PLANNING
561 CITY HALL
LOS ANGELES, CA 90012

CALVIN S. HAMILTON
DIRECTOR

485-[illegible]

1

January 28, 1983

Mr. David Attaway
Environmental Planning Specialist
Department of Recreation
and Parks
Room 1290, City Hall East
STOP: 625

DRAFT ENVIRONMENTAL IMPACT REPORT--BARRINGTON RECREATION CENTER ADDITION

These comments on the project will be limited to the aspects dealing with the previous use of the project as a burial site for radioactive nuclear medical waste and possibly toxic wastes. A park on this site is very much desired by the community and the project should go forward provided certain questions are answered to assure the public that they may use the park without <u>any</u> question as to their safety and health.

(BW-5)

1. The "known" records begin in 1960. Admittedly, the site was used for the disposal of radioactive material in the 1950's. More investigation of that period is required. It seems possible, with further investigation, such as questioning of the then radioactive safety officer who may still live in Los Angeles, searching of stored records and analyzing the kinds of cases treated at the Veterans Administration, a clearer picture will evolve. In addition, core samples of sufficient depths and quantity should be taken and analyzed. Unless the silent ten year period is satisfactorily dealt with, there seems to be no positive assurances to the public.

77-192

2. The VA says, "There could have been dumping of chemical wastes other than dioxane and toluene." This question is not resolved and core sampling may be required to do so.

3. The term "low-level" is used to describe the radionuclides disposed of at the site. "Low-level" is a term defined by the AEC to describe the radioactive wastes that do not generate enough radiant energy or heat to keep self-boiling. As used in the DEIR, "low-level" implies safe. This is a misleading assumption. The half-life of many radioactive substances is many thousands of years.

4. Several questions arise from Table 9 in page 68. The fact that Tritium and Carbon-14 have long half-lives is not fully explained. A half-life of 12.3 years indicates that Tritium is still radioactive. Also, some of these radionuclides change property in contact with others or in decay. For instance, molybdenum-99 has a half-life of 66 years but it decays into a radioactive daughter, technetium-99 with a half-life of over 200,000 years.

5. Soil samples were only done to a depth of six inches. Consequently, digging, grading or otherwise disturbing the soil at a greater depth are unknown and should be investigated. (BW-7)

LeRoy Berry

LEROY BERRY, President
Environmental Quality Board

LB:slm

77-193

FORM GEN. 160 (Rev. 3-78)

CITY OF LOS ANGELES
INTER-DEPARTMENTAL CORRESPONDENCE

CWP 82-1261
Barrington Ave.
S/O Barrington Pl.

2

Date: January 24, 1983

To: David Attaway, Environmental Specialist, Department of Recreation & Parks

From: T. K. Prime, Transportation Engineer, Department of Transportation TKP TKC

Subject: DEIR FOR BARRINGTON RECREATION CENTER ADDITION

We have reviewed this report and offer the following comments:

All references to the installation of a traffic signal at the addition's access (see pages 2 and 47) should be deleted. Traffic conditions at that location would not be expected to satisfy nationally-accepted criteria. Installation of an unwarranted signal would be expected to increase rear-end accident potential. The report suggests (page 47) that a southbound left-turn pocket be installed at the entrance to the facilities. The report should clearly explain that this would not be a conventional left-turn-only lane but rather just an area where through traffic, by moving to the right, could by-pass southbound vehicles waiting to turn left.

Both of the above comments were transmitted to you previously when we reviewed the initial traffic study. We believe your failure to incorporate these comments into the DEIR contradicts the intent and compromises the value of the environmental review process.

Lastly, the report implies (pages 2 and 47) that the mitigation measures listed would reduce overall traffic impacts of the project. It should be emphasized that those measures would tend to smooth traffic operations adjacent to the project site but would have no mitigating effect whatsoever on the significant impacts caused by project-generated traffic at all the nearby signalized intersections.

WFC:amm

cc: Department of Transportation, Western District

Sam Ross

<u>NOTE:</u> Department of Recreation and Parks Response

All references to the traffic signal were left in the Final EIR since it represents only a proposed measure and not an actual project committment. The other two requested changes were made in the appropriate sections of the document.

3

LOS ANGELES POLICE DEPARTMENT

DARYL F. GATES
Chief of Police

TOM BRADLEY
Mayor

P. O. Box 30158
Los Angeles, Calif. 90030
Telephone: [redacted]
[redacted] ext. [redacted]
Ref #: 6.3

January 19, 1983

Mr. David Attaway
Department of Recreation and Parks
200 No. Main Street
Room 1290, City Hall East
Los Angeles, California 90012

Dear Mr. Attaway:

I appreciate having been given the opportunity to provide imput with respect to the proposed expansion of the Barrington Recreation Center.

Attached is a report prepared by the officer of this Division, James King, who is my primary representative for the area that includes the Barrington Recreation Center. I have reviewed his comments and believe they contain considerable merit. Of particular importance is maximizing the amount of terrain that can be seen from adjacent areas, ensuring the ability of the police to be able to quickly enter the park in vehicles, and a no-nonsence approach by your personnel in supervising that facility.

Be assured of our continued desire to cooperate in your development of a recreational area that will benefit the law abiding citizens and not serve as an unnecessary attraction for criminal activities.

Very truly yours,

DARYL F. GATES
Chief of Police

Keith D. Bushey

KEITH D. BUSHEY, Captain
Commanding Officer
West L.A. Field Services Division

Buckley

January 1, 1983

TO: CAPT BUSHY WLA FSD
FROM: JIM KING SLO 8A14

SUBJECT: SLO REVIEW OF THE BARRINGTON PARK PROPOSED SITE PLAN

CRIME PROBLEMS TO ANTICIPATE

1. GANGS - Westside Latino gangs have shown a tendency toward congregating north of their existing turf to avoid the police and other gangs. Crestwood Hills Park located north of Sunset Blvd in the 1000 Block of Hanley Ave has been the sight of numerous forays by the gangs. At least two major gang fights involving in excess of 100 gang members have been broken up by WLA Police. Gang members of gangs from Santa Monica, Culver City, Pacific Area and WLA Area have been contacted at the park. Barrington Park at 333 S. Barrington Ave has had a lesser problem. Neighbors have reported gang members at the park on several ocasions and once were reportedly seen with hand guns.

   The lack of gang activity at Barrington Park can be directly related to the small size and difficult access to the park.

   The proposed park size and access will present another picture to westside gangs. Gangs will be a problem.

2. POLICE PATROL ACCESS - A major design flaw in existing WLA parks and the proposed Barrington Recreational Center is the lack of service roads to give Police Cars the ability to patrol the entire park grounds. Refer to attached FIGURE 3A.

   The park presents an ideal site to foster serious crime. The site itself is hidden from the street and activity cannot be easily monitored by the radio car or passing citizens. The parking lots are in the foreground of the park site increasing the distance between sporting activities and Barrington Ave. The Jogging trail and passive recreational area are secluded from view withno police car access and will establish a crime enviorment for the opportunist. The criminal will have numerous escape routes from the park. The best escape routes will be north through the Military School and South through the VA grounds.

77-196

The jogging trail will present a more specific problem and that is the rape of female joggers. We can look to the rape problem on the perimeter jogging trail at UCLA campus to see what we're in for at the park. The same envoirment will be duplicated at the proposed park. The east, north and south boundary provides hiding places and escape routes for the rapist.

(PS-1) These problems can be readily mitigated in our favor. The solution lies in providing police access roads throughout the park and providing other entry/exit points for park users both north through the Military School and South through the VA property. Refer to Attached FIGURE 4.

Additional measures will be required to prevent a crime problem at the proposed park. The park closure at 10PM should be strictly enforced. The plan calls for a means securing the park entrance/exit points. This action is essential to keep the park peaceful after 10 PM.

Park supervision by Parks and Recreation staff will be a key to maintaining a peaceful park. This has not been the case in the past. The old Barrington Park for years has been the festering grounds for local burglars and narcotic transactions. The Notorious Jimmy Root Gang operated at the park for years using the park as a gathering place for his youthful partners to meet. The staff could have used adminstrative park suspensions to stop the problem, but didn't do so.

3. (PT-3) PARKING PROBLEMS - The plan for park use parking and neighborhood use parking does not take the business district north on Barrington ave into account. Shoppers will spill into the parking areas reducing the spaces available if not overflowing the lot.

4. TRAFFIC - The traffic problem will clearly increase. Barrington ave is a two lane road serving the businesses and residents of Barrington Ave. The shopping complex north of the proposed park has exceeded saturation with its traffic. The large multi-unit apartment buildings on Barrington Ave have past saturation with the traffic they produce. The park as proposed will create a much worsened traffic problem.

The intersection of Barrington Ave and Sunset Blvd will clearly need a new design to allow two left turn lanes with a turn arrow for N/B to W/B.

Barrington PLACE and Sunset Blvd will also need change. A right turn only barrier with an onramp to E/B Sunset from N/B should be put in place.

77-197

Southbound traffic turning left into the park will present a major problem even with a turn lane due to another left turn lane directly adjacent to the park for traffic going into the exsistant Post Office. The plan did not take the existant Post Office turn problem into account. Their is no offset for the Post Office. The traffid to the park will back up immediately to the post office traffic who will back up into the business district some 100 feet away to the north. Refer to FIGURE 3.

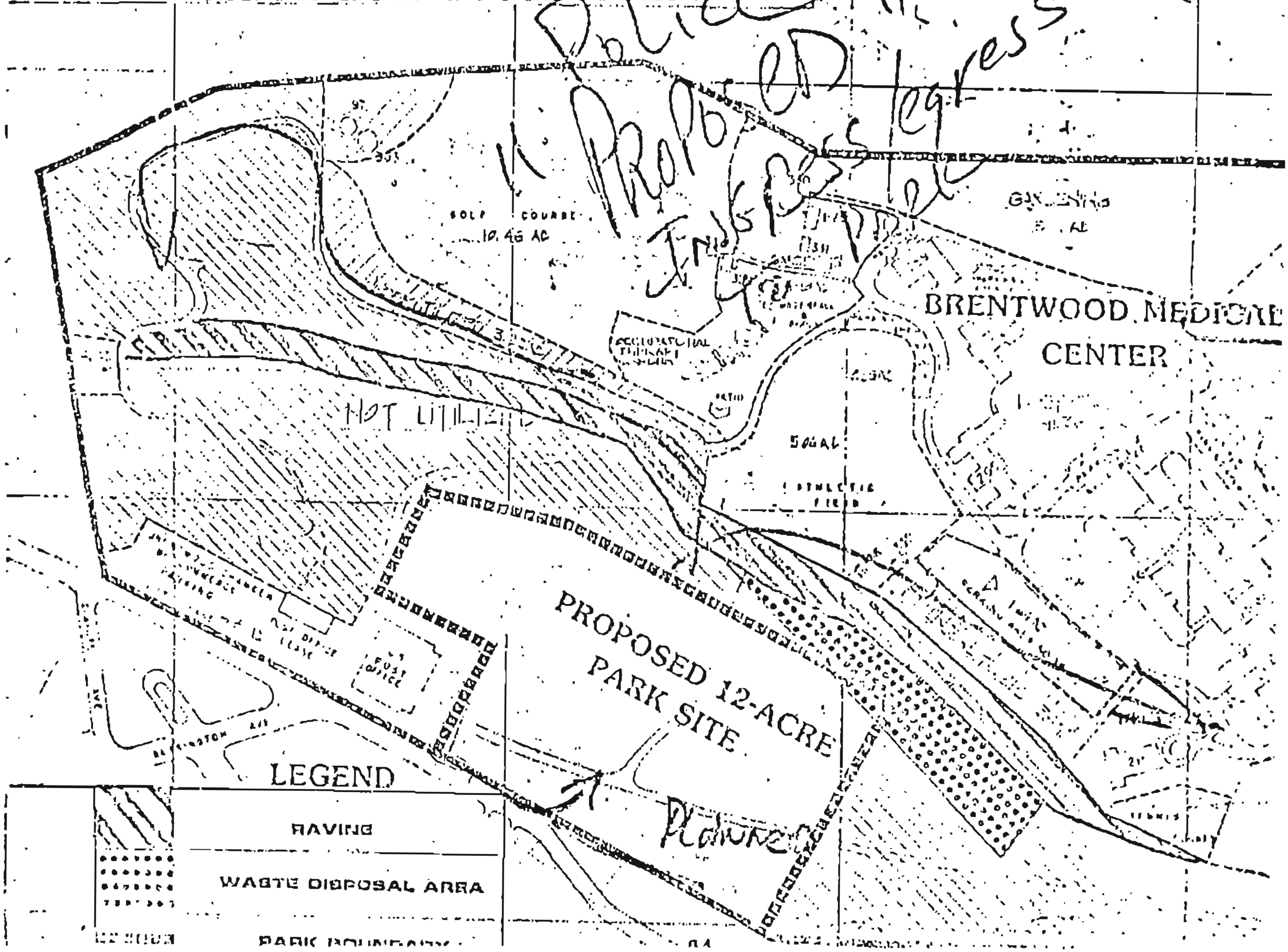
(PS-2) NO PROVISIONS HAVE BEEN MADE FOR PED TRAFFIC CROSSING BARRINGTON AVE TO GET TO THE PARK.

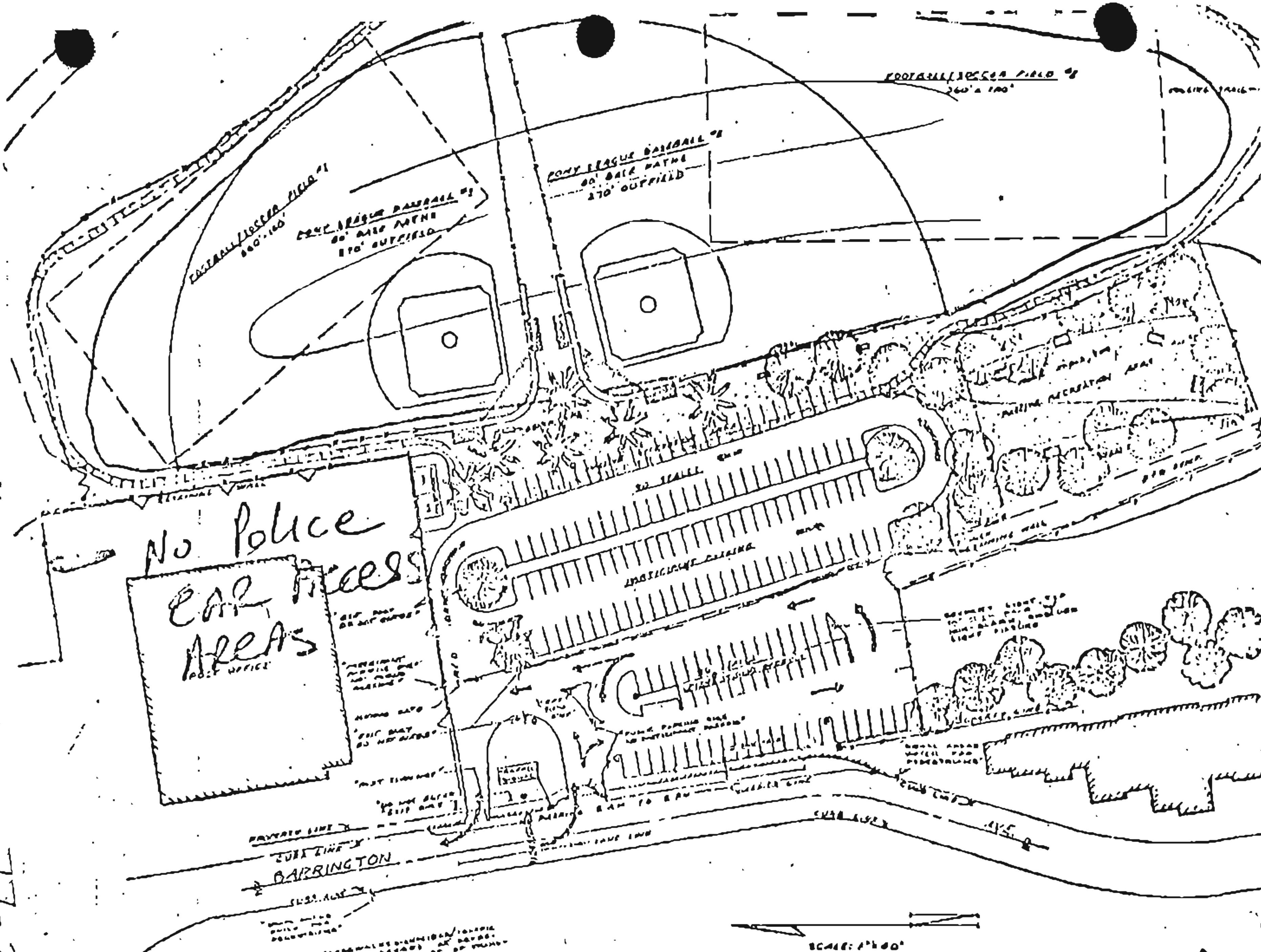
THE PLAN openly calls for a prediction that traffic exiting the park N/B only (guess-ta-mate percentage) will make a U-turn or use some other technique to negociate to S/B traffic. THIS IS CLEARLY A MAJOR FLAW IN THE TRAFFIC FLOW PLAN AND CANNOT BE PART OF OUR PLAN!

(PT-2) The problem is that Barrington Ave is the only planned street used for ingress/egress for the park.
THERE ARE EXISTING ROUTES (PAVED AREAS) TO ALLOW INGRESS/EGRESS NORTH THROUGH THE MILITARY SCHOOL AND SOUTH THROUGH THE VA. This provision change would give three routes in and out of the park. Three such routes would drastically reduce the traffic problem and increase the visibility to those areas of the park that are now isolated from Barrington Ave. This adjustment would decrease the traffic and crime potential and should be carefully considered in addition to the traffic plans in the plan. REFER TO FIGURE 4

77-198

CATION OF FORMER B[illegible]EDICAL WASTE DISPOSAL AREA

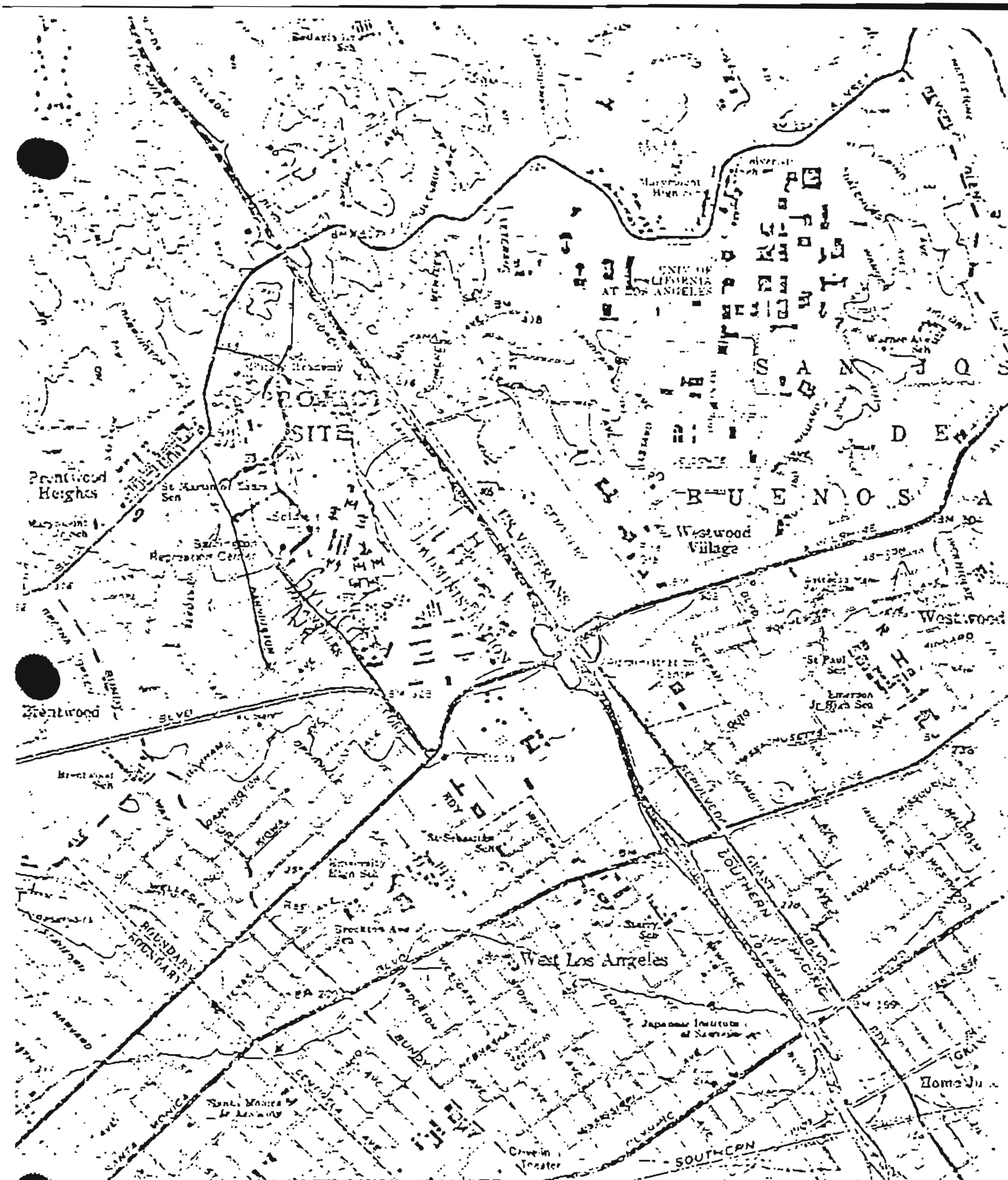




BARRINGTON REC. CTR. - PRELIMINARY SITE PLAN II A

Figure 3A

77-200



LOCAL VICINITY MAP *Figure 4*

SOURCE: USGS TOPO MAP

77-201

4

January 24, 1983

David Attaway
Department of Recreation and Parks
200 No. Main Street
Room 1290, City Hall East
Los Angeles, CA 90012

Dear Mr. Attaway,

Please accept this letter as my comments on the Draft Environmental Impact Report for the proposed Barrington Recreation Center Addition.

Although I do not live near the proposed park site I am a student at the Brentwood School which is located right next to the proposed park site and the former biomedical waste disposal site (we use Sawtelle Field, which is appro imately 150 ft. from the disposal site, for Physical Education). For the past several weeks I have been involved in writing a story about these combined subjects for my school newspaper. In the process of doing this I have had the opportunity to talk with many of the persons involved in this project as well as attending the public hearing at Stoner Recreation Center.

It appears to me that there is an extremely large amount of controversy over the question of the hazard, if any that the disposal site poses to persons who would be using the park. I feel that there is still not enough evidence to adequately state that there is no danger. Although the DEIR is very thorough, it seems to me that there are still some inadequacies, such as: the high level of radioactivity found in the water supply, which was said to be "not significant;" the statement that the study conducted on the soil was a "very preliminary study," and the very short inspection that was conducted by the NRC. I suggest that in order to answer these questions an independent firm be hired to perform thorough studies which would prove that a hazard does or does not exist.

(BW-5)

I enclose a copy of my story in typed form as it will not be printed until January 27.

Sincerely,

Michael Milstein
15550 Briarwood Dr.
Sherman Oaks, CA
91403

77-202

Several weeks ago, Channel 7 aired a story which mentioned that nuclear waste had been disposed of at the West Los Angeles Veterans' Administration near Brentwood. Surprised to hear that this had taken place relatively close to our school, we decided to look into the subject. There are many conflicting arguments about the dumping, but certain items are known to be true.

The Veterans' administration admits to disposing of radioactive wastes between 1952 and 1968. The amounts, types of material, and burial location, though, are unknown for the period 1952 to 1960. The 1960-1968 disposal site, which is not marked, is located parallel to the 400 block of Barrington Avenue, approximately 200 yards inside the V.A. grounds, and across the ravine from Sawtelle Field (see map).

The procedure used for burial was to have a grave digging machine dig a small trench six to eight feet deep. The materials, in plastic bags, were then placed in the trench. Any liquid wastes were then poured into the bottom of the hole. A buldozer then filled the hole with dirt. These procedures were in accordance with Atomic Energy Commision, now the Nuclear Regulatory Commission, regulations of that time.

Many different radioactive isotopes were buried at the site, though the majority consisted of Tritium (Hydrogen-3) and Carbon-14. These two isotopes have half-lives of 12.3 years and 5,730 years, respectively. Approximately 13 other minor isotopes were also buried at the site, only one of which, Chlorine-36 (half-life of 300,000 years), has a long half-life. The half-life of a radioactive material is the amount of time it takes for that material to decay to one half of its original amount.

In addition to radioactive wastes, there were several other

77-203

types of wastes buried. Dioxane and Toluene, two chemicals, are known to be buried at the site. Dioxane, a carcinogen, is the more dangerous of the two. Also buried are the carcasses of animals used in laboratory experiments, and other conventional wastes such as glassware.

There are many conflicting views of the the hazards posed by the disposal area. The controversy over the dump site arose when, in 1981, the city of Los Angeles announced plans to expand the Barrington Recreation Center to include part of the V.A. grounds, including a portion of the disposal site. When The Committee to Bridge the Gap, an environmental group, learned of the city's plan, they informed the city of the disposal site's presence. The two principal public officials who were backing the park project, Congressman Anthony Beilenson and Councilman Marvin Braude, then postponed the project so that an investigation could be carried out. Several organizations performed water, soil, and vegetation tests to determine wether or not the biomedical waste disposal site posed any health threat.

In April of 1981, the Sanitary Engineering Division of the Los Angeles Department of Water and Power conducted tests on groundwater collected by the Santa Monica Water Company from five wells located near the waste disposal area. The results "indicated that the radioactivity levels were well below the maximum contamination limits set forth in the Safe Drinking Water Act." The Southern California Federation of Scientists (SCFS), though, is skeptical of the tests' reliability. One of the wells tested produced results which normally would have called for further testing. The DWP states that "one high result is not immediately significant, as it was only based upon a single grab sample." The SCFS, however, concludes that "if the high

77-204

result is not immediately significant for that reason, then the low results are equally not immediately significant, for they were likewise based on a single grab sample."

In April/May of 1982 Dr. Robert Wood, Chief Radiochemist at UCLA's Laboratory of Biomedical and Environmental Sciences, conducted a radiological survey and analysis of soil and plant samples taken in or near the disposal site. The results of these tests indicated that "the proposed Barrington Park Addition will pose no greater hazard to human health than Westwood Park."

On May 7, 1981 the Nuclear Regulatory Commission conducted a inspection of the waste burial sites. The NRC investigators spent about six hours at the V.A. interviewing V.A. and public officials and surveying the disposal site. The actual physical inspection, which took approximately 45 minutes, consisted of taking radiation measurements, with two insruments, "at several locations on a random basis by placing the instruments at ground level and at varying heights up to five feet above the ground." The conclusion in the NRC's report on the subject reads "based upon the results of the radiological survey conducted on May 7, 1981, there were no radioactive materials detected...(and) it is recommended that the overall area be released for unrestricted use." The SCFS comments on the NRC investigation, prepared by two radiation specialists, two geologists, a medical doctor, a safety engineer, and an environmental policy anaylst, state that "the method used by the NRC in their quick review—a brief walk over a very small portion of the proposed lease area with hand-held gamma detectors—is scientifically totally inadequate to make any determination as to potential hazards from internal (beta) emitters buried at the site or for the possibility of strong gamma emitters buried at other locations, and gives no data whatsoever regarding possible chemical waste burial."

The SCFS is also concerned about other types of waste which are or might be buried at the site. Since the VA only has chemical waste disposal records dating back to 1978, for chemicals other than Dioxane and Toluene, "all records are destroyed after two years", the SCFS questioned the VA about pre-1978 chemical waste disposal. The VA's answer was "As to how chemical waste had been disposed of by the VA during the various periods since its inception, it would be pure conjecture on our part." When the SCFS asked the VA if any chemical waste was disposed of by soil burial, the VA replied that "there is no evidence to the effect that there was, and there is no evidence to the effect that there wasn't." The SCFS concludes from this evidence that "if indeed 'there could have been' disposal of chemical wastes in the soil of the area being considered for the park project, potential hazards of unknown nature and unknown magnitude and unknown location are possible." The SCFS is also concerned about "the possibility of bacterial or viral agents possibly present in the soil from disposal of infected laboratory experimental animals or other wastes potentially carrying pathogens."

When contacted about the subject of the disposal site, Ms. Kay Slavkin; Field representative to Congressman Anthony Beilenson; stated that the burial site is "not an issue." When asked about materials which were buried before 1960, for which there are no records, she stated that, since at that time only minimal amounts of radioactive materials were available, only minimal amounts could have been buried at the site. She also stated that groups like the Committee to Bridge the Gap and the Southern California Federation of Scientists are "trying to make a big deal about it", and added that these groups are not made up of "PHd's or MD's" as are the people who performed the testing for and gave opinions to Congressman Beilenson's and Councilman Braude's office.

Mr. Leonard (Skip) Wetterau, Radiation Safety Officer for the VA, and the VA official who supervised most of the post-1960 burials, granted an exclusive interview to the Flyer to discuss the VA's position on the disposal site. Mr. Frank Marquart, Director of Public Affairs for the VA, was also present at the interview. When asked if the materials dumped are harmful in their present state, Wetterau replied with a definite "no." He also stated that, in regards to following regulations, he would "rather bend over backwards than fall flat on (his) face." According to Wetterau, broken glass is the most dangerous material in the disposal area.

Whether or not any danger truly exists from the site is clearly a disputed question. The city and the Veterans' Administration claim that no health threat to the public exists. While other groups, such as the Committee to Bridge the Gap and the Southern California Federation of Scientists, do not claim a hazard does exist, they maintain that enough unanswered questions remain to postpone the park project until reliable answers to these questions are obtained.

77-207

5

January 25, 1984

Mr. David Attaway
Recreation and Parks, Room 1290
200 No. Main Street
Los Angeles, CA. 90012

Dear Mr. Attaway:

Am very much opposed to have a Recreation and Park facility at the Barrington Avenue in Brentwood for the children and families.

This land if not used for the Veterans is to revert back to the original owners, a spanish family who gave the land to the government for the use of those who served their country in time of war.

Already the land has been divided to college buildings and baseball fields. I do no not underatand why the V.A. has any right to give to organizations which does not pertain to the Veterans.

When they turned away several thousand military men who had served their country and needed a place to live and be cared for by the government. Also the women in the Womens' Cottage and other facilities were turned out of their buildings without any time to look for another place and sent to convalescent homes away from their home. Some women were sent to Arizona and Oregon in a days notice. Shoved OUT.

The veterans need a place to go when they are older and should be cared for in homes and hospitals.

77-208

We have not only World War I, and II veteran veterans, but also Korean and Vitnam veterans, who will need security in their later years.

There is a recreational Park called "Stoner Park" which can be used for the children and families. Why take the Veterans land given to them by a deed.

(LU) Am very much opposed to any land being given to any group that does not take care of the soldier of this Country.

Sincerely,

Helen E. Hull

Helen E. Hull, (Mrs. Wm. S.)
821 Terrace Drive
Long Beach, CA. 90807

77-209

COMMITTEE TO BRIDGE THE GAP
1637 BUTLER AVENUE #203
LOS ANGELES, CALIFORNIA 90025
(213) 478-0829

6

RESPONSE BY THE COMMITTEE TO BRIDGE THE GAP TO THE DRAFT ENVIRONMENTAL IMPACT REPORT PREPARED BY THE CITY OF LOS ANGELES' DEPARTMENT OF RECREATION & PARKS AS TO THE PROPOSAL TO BUILD A CITY PARK ON THE SITE OF A FORMER RADIOACTIVE WASTE DUMP AT THE VA

Abstract

The Committee to Bridge the Gap, which first brought to the attention of the City of Los Angeles the existence of radioactive wastes buried on the site of the proposed park development, has reviewed the City's Draft Environmental Impact Report and finds the DEIR grossly inadequate. In particular: (1) assessment of radioactive wastes buried prior to 1960 (when the available records begin) is purely speculative and totally unscientific, (2) there is absolutely no assessment of the potential environmental impacts of chemical wastes (other than the toluene and dioxane that were buried with the radioactive materials), even though the VA now admits that other chemical wastes may have been buried at the site, and (3) the assessment that has been done to date has consisted largely of theoretical estimates made on the basis of admittedly incomplete records and sketchy monitoring attempts that cannot meet traditional scientific standards for statistical significance.

In short, the proposed construction of a city park on a known radioactive waste dump and a possible chemical dump poses unassessed potential hazards. By failing to thoroughly assess these potential environmental impacts, the City Department of Recreation and Parks has failed to meet its obligations under the California Environmental Quality Act and may be initiating a project which could have substantial deleterious effects. A thorough environmental impact review is necessary, which should involve both a concerted attempt to ascertain what materials were buried in the site as well as physical testing.

Details

In 1979 the Committee to Bridge the Gap learned of the existence of a radioactive waste disposal site in the Brentwood area of West Los Angeles. Upon investigation we learned that the site, on Veterans Administration property just off Barrington Avenue, had been used for a number of years up through 1968 for disposal of radioactive wastes. This disposal, we were informed, was by burial in four-six feet of dirt, either uncontainerized or merely in plastic bags.

The next two years were spent in a largely fruitless effort to get responsible agencies to monitor the site and particularly the water wells downstream. Only when the City realized that the former dumpsite was part of the proposed lease by the VA to the City for the proposed park did some action occur, action which has been less than satisfactory. It is interesting to note that the City had not been informed by the VA of the existence of the buried wastes during any of the several years of negotiation over the proposed lease.

77-210

After the initial revelation that radioactive wastes had been buried at the facility, the VA asserted that materials had only been buried from 1960-1968, that no materials generated by other entities had been buried at the VA site (i.e., that no institution such as UCLA had had its wastes buried at the same location), and that no chemical wastes, other than two solvents used in scintillation fluids for radioactive measurement purposes, had been buried at the site. Further investigation by CBG and by the Southern California Federation of Scientists developed information which seriously call into question each of these assertions.

The VA now admits that radioactive materials were buried at least as early as nineteen fifty-two, but asserts that it cannot find the records of what, where, and how much were buried for that entire decade. Conversations with one of the former VA radwaste officers suggests that the materials were buried in locations other than those indicated for the post-1960 sites, creating considerable uncertainties in terms of environmental effects of the park.

The record also indicates that the VA during the nineteen sixties did dispose of radioactive wastes generated by UCLA. This raises serious questions about disposal prior to 1960 of radwaste generated by institutions such as UCLA. (This question is quite serious because there were no commercial burial sites in the U.S. until the early nineteen sixties, thus making burial on federal reservations such as the VA, where VA-generated wastes were already being buried, a possibility for numerous institutions using radioactive materials in the Southern California area.) Furthermore, UCLA hosts one of the four nuclear weapons labs operated for the government, and has hosted it since at least the mid 1940s. That lab utilized some very "hot" materials--plutonium, strontium-90, cesium-137, and so on. CBG has been unable to obtain a satisfactory answer from UCLA where the wastes generated by that UCLA project were disposed of prior to the establishment of commercial waste sites in this country in the early sixties. Furthermore, UCLA has for decades had scientific labs on the VA property in question. In short, the wastes that may have been disposed of at the VA may include wastes other than biomedical wastes generated by the VA hospital. These possibilities are unanalyzed in the DEIR.

(BW-5)

Lastly, and most importantly, the VA now admits that chemical wastes, generated other than in connection with radioactive wastes, may well have been buried at various times in the land in question. The VA says, however, it has no idea what, how much, or where, because records are destroyed after three years and the facility has been there for roughly ten decades. Aside from a cursory examination of the toluene and dioxane recorded as buried in scintillation liquids used for radiometric analysis, no consideration whatsoever is given in the DEIR to the potential impacts of past chemical burials at the site, nor any attempt to determine if such burials took place and if so, of what materials and in what quantities and at what locations on the property in question.

COMMENTS ABOUT SPECIFIC ASSERTIONS IN THE DEIR

. The DEIR lists the members of the scientific community consulted and implies unanimity of agreement of the safety of the site. That is far from the truth. The DEIR fails to mention that the scientific advisory committee established by Councilman Braude and Congressman Beilenson split on the issue of the park's safety, that the Southern California Federation of Scientists submitted a very detailed critique of the Initial Study prepared by the City (not even acknowledged, nor responded to, in the DEIR), and that a number of radiation specialists, geologists, environmental health and safety specialists, and other scientists have raised s rious questions about the prudence of moving forward on the proposed park project in the absence of a clear idea of what was buried in the site.

Great weight is given to the NRC calculations of potential exposures from radioactive materials at the site, but those calculations are based entirely on the now-discredited VA records. One cannot calculate effects from unknown materials in unknown quantities.

(BW-5) Great weight is also given in the DEIR to single grab samples taken at each of five water wells in the vicinity, yet one of those samples showed alpha radioactivity contamination at levels in excess of what the law mandates further monitoring for specific isotopes causing the contamination. Yet no additional analysis was done, as required. The argument that the high reading was not statistically significant because it was a single grab sample is spurious; the law requires further identification of the cause of the high reading, and if the high reading is not statistically valid because it was a single grab sample, so are the low readings, which were likewise based on single grab samples. In short, the water monitoring is inadequate; all it can do is serve to raise questions that contamination may indeed exist.

(BW-5) The six soil samples likewise seem inadequate upon which to rest a finding of no environmental impact. As stated by others, only one of the six samples was taken near the area asserted by the City to have been the site of the radioactive wastes. Furthermore, the City has asserted that the wastes are buried under at least six and perhaps more than thirty feet of dirt; samples taken six inches from the surface are obviously not the appropriate way to determine if materials are buried considerably deeper. Core samples must be taken.

(BW-5) The only other monitoring identified in the DEIR was a once-over lightly with gamma-radiation detection equipment. (1) Several CBG members witnessed the supposed monitoring attempt and saw that virtually none of the monitoring took place in the area where the VA claims it buried the wastes, and (2) the VA claims the materials it buried there are primarily beta-emitting materials, and buried beta-emitting materials cannot be detected by gamma-radiation devices. Lastly, none of the "monitoring" took place in areas where pre-1960 dumping appears to have occurred.

The brief letters from the Health Physics Society (saying that based on the records, everything looks safe) and from Dr. Wegst (in charge of UCLA's radioactive wastes, some of which were disposed of at the VA site in question, according to the VA records) are of little utility, because they represent mere opinion on safety based on records which have now been shown to be incomplete, to say the least.

The DEIR's assessment of pre-1960 radwaste burials is so completely speculative as to be useless. No information whatsoever is provided as to what radioactive materials were buried at the site. Instead, the DEIR merely asserts--erroneously--that there weren't significant quantities of radioactive materials available in the entire nation during the 1950s. This is completely off-base. The 1940s and 1950s were periods of intense research into the

the effects of nuclear materials. For example, Intensive research was going on in Los Angeles and elsewhere on what is known as LD50/30 threshholds for various organisms (including humans) for various radioisotopes (i.e., what level of intake of various radionuclides would produce a 50% likelihood of death within 30 days.) Just a few miles from the VA Atomics International had a series of nuclear reactors, producing significant amounts of radioactive materials. And, as indicated above, UCLA was one of the prime Atomic Energy Commission facilities doing work as part of the nuclear weapons test program being carried out in the atmosphere. While the amounts of those materials may be somewhat less than those available today, the difference is not so (BW-5) significant as to declare, as the DEIR does, that it is not possible for any dangerous materials to have been buried at the VA. Radioactive materials are dangerous in extremely small quantities (a few millionths of a gram of plutonium, for example, is sufficient to virtually guarantee death from cancer.)

The one significant difference between the fifties and today is that we now have much stricter standards and a much greater awareness of the dangers of radioactivity. In the fifties, soldiers (many of whom are now being treated at the VA for cancer) were exposed to very significant amounts of radioactivity in tests in Nevada and elsewhere; the government was referring to Strontium 90 as "sunshine units"; and material that today would be disposed of at a special, licensed, radioactive waste dump was thrown out as common trash. The above is unanalyzed in the DEIR; no attempt has been made to (BW-1) ascertain specifically what radioactive materials the VA possessed during the period in question nor what materials may have been buried in that site, (BW-2) be they produced on or off site.

Dr. David Pieri, a geologist who served on the "blue ribbon" panel put together by Councilman Braude and Congressman Beilenson, has long opposed going forward with the proposed park until serious attempts have been made to determine what is buried there and to take core samples (i.e., not merely the few surface samples taken to date). Early on he suggested that the field be looked at for patches of ground where vegetation didn't grow; this would be a sign, he said, of possible upward migration (through capillary action, etc.) of toxic materials. CBG inspected the site two years ago, found a series of three-foot in diameter circular patches of ground where vegetation did not grow, surrounded by lush and even vegetation all around. These holes" were in the area indicated by the VA to have been the burial site; they were each about six feet apart, one after another, in the pattern the VA claims it followed in burying the wastes.

The City arranged for a helicopter to overfly the site, at Dr. Pieri's suggestion, to attempt to photograph from the air the site and locate other possible indications of upward migration. He suggested using infra-red film to detect the areas where vegetation was stunted or absent, creating a "map" of the area that could then be used for sampling purposes. In other words, surface or subsurface sampling would be hit-and-miss, requiring many samples to assure some degree of statistical certainty, unless a better idea of the actual burial locations could be obtained in such a manner or through detailed indications by those responsible for the burials.

The helicopter flew over the site, but at the very moment it did a tractor was plowing up the entire site, plowing under the vegetation and making all such photographing impossible.

(BW-6) No discussion whatsoever of the observed patches of no-growth is found in the DEIR, nor of Dr. Pierl's suggestions for further monitoring. (BW-7) The observed possible Indications of upward migration are unanalyzed.

The most egregious omission in the DEIR is of analysis of the potential impacts of possible past use of the site for disposal of chemical, in addition to radioactive wastes.

It is known that several hundred gallons of extremely toxic chemicals were buried in the VA field as solvents used in scintillation measurements. The radioactive materials were dissolved in toluene or dioxane for use, and the toluene and dioxane were thus disposed of along with the radioactive materials. This at least is mentioned in the DEIR, although the analysis of it is insufficinent; these are very toxic materials (lethal dose of toluene for a child is about ½ teaspoon; dioxane a potent carcinogen). The State Hazardous Materials people said in their letter that if the earth is not disturbed in the park construction, these materials may not cause injury, but how park construction is to occur without disturbing the ground is most unclear.

HOWEVER, THE VA NOW ADMITS THAT, IN ADDITION TO THE RADIOACTIVE MATERIALS AND THE TOLUENE AND DIOXANE, IT MAY HAVE, AT VARIOUS PERIODS IN THE LONG TIME THAT FACILITY HAS BEEN IN BRENTWOOD, BURIED OTHER CHEMICAL TOXIC MATERIALS AT VARIOUS UNKNOWN LOCATIONS IN THE SITE IN QUESTION. The VA says it has no records of what, how much, or where these chemical toxic materials may be buried.

(BW-4) THIS IS COMPLETELY UNADDRESSED IN THE DEIR, AND POSES THE GREATEST POSSIBLE HAZARD TO THE PUBLIC IF PARK CONSTRUCTION PROCEEDS WITHOUT DETERMINING WHAT, IF ANY, CHEMICAL WASTES MAY HAVE BEEN BURIED AT THE SITE.

The assertion that the former disposal site only grazes the proposed lease site is unsupportable. (1) The map prepared by the VA of where it buried the wastes would, if correct, indicate it buried them in the stream bed, which the VA denies. The map is thus obviously distorted to make it look like the burials did not occur in the area in question. (2) The new map included in the DEIR, which contradicts the other map, maintains the fiction that the materials were buried near the edge of the lease area by moving the portrayal of the lease area. (3) The VA says it doesn't know where it buried the pre-60s radwaste; conversations with the former VA official responsible indicates those wastes were buried in other locations. (4) The VA also doesn't know where or even if it buried chemical wastes in that site.

The assertion that the old burial site is now covered with thirty feet of dirt is also unsupported. While parts of that site may well have such covering, the area where the "holes" were identified and where the VA indicates post-60 burials took place is near the ridge overlooking the streambed; added fill was backfilled from the ridge top, so little if any fill actually appears to be on top of the one area that appears known to be the dump area (certainly there isn't thirty feet on top).

No attempt has been made to determine the content of the message on the now-rusted sign posted near the site, the first line of which appears to read, "THIS AREA IS USED..."

SUMMARY

The City is proceeding with its plans to build a public park on an area known to have been used as a radioactive waste dump, which may have been also used as a toxic chemical dump, without determining what, how much, and where the materials were disposed of there. The potential environmental and public health impacts could be severe; those impacts are unanalyzed in the DEIR in any but the most cursory of fashions; and it would be irresponsible on the part of the City to proceed with the proposed park on the basis of this DEIR. The park idea is an excellent idea; placing that park on a known dumpsite without knowing what materials were dumped there is an irresponsible idea.

77-215

SOUTHERN CALIFORNIA FEDERATION OF SCIENTISTS
3425 McLaughlin Avenue, Suite 209
Los Angeles, California 90066

January 24, 1983

David Attaway, Environmental Planning Specialist
Department of Recreation and Parks
200 No. Main Street
Room 1290, City Hall East
Los Angeles, CA 90012

Re: Response to DEIR for Proposed Brentwood Playground

Our basic criticisms of the preliminary EIR were conveyed to you in detail on February 4, 1982. However, you failed to take into account any of our technical criticisms or suggestions or even acknowledge them in the DEIR. Therefore, these were mentioned again at the public meeting January 12, 1983 along with supporting data and materials and are reported herein as follows:

(BW-8)
1). It is not possible to evaluate the health-safety of the dump site accurately and completely unless all of the materials buried there are known. No reports exist for radioactive materials that were buried on the site prior to 1960 nor any reports for chemical materials prior to 1968.
2). One random water sample for each of five locations as noted in the DEIR is not adequate to draw any significant safety conclusions.
3). One random soil sample six inches below ground level at each of six dispersed locations, only one of which is within or near the known dump area, cannot serve as a satisfactory measure of ground radiation above background or of potential chemical hazard.

(BW-9)
4). The NRC spent only forty-five minutes taking measurements around the site, not six hours cited in the DEIR. Their readings have essentially no significance relative to the presence of radioactive materials. The rationale for this assessment was explained by Dr. Plotkin in detail at the public meeting.

To resolve these criticisms to everyone's satisfaction, a three-phase study and test program is recommended:

(BW-8)
Phase (1) Because no burial records of chemical material prior to 1968 exist or radioactive material prior to 1960 exist, it is required that there be a determination of the materials buried at the proposed park site throughout the years and their locations. This requires investigations similar to those carried out by the EPA elsewhere by competent and experienced investigators.
Phase (2) Analysis of three-level core samples at specified locations based entirely upon Phase (1) results. These analyses would include water samples.
Phase (3) Evaluation of Phase (2) results.

This study and test program was discussed by Dr. Plotkin of SCFS and Mr. Baietti of ICN Pharmaceuticals after the public meeting. Therefore, it is recommended that it be carried out under their joint and coordinated direction. Dr. Plotkin would represent critics of the DEIR and Mr. Baietti would represent those convinced that no significant additional material has been buried at the site other than that listed in the DEIR.

This program would take about one year and the cost will be dependent upon the confidence level required for the results. No study and test program can provide 100% confidence, but an initial goal of 90% confidence seems quite reasonable at this time. Dr. Plotkin and Mr. Baietti would have the responsibility of specifying the dollar cost for various levels of confidence. While this may not be easily understood by non-technical persons, resolution of uncertainties cannot be adequately dealt with in any other way. By comparison, the confidence level of the present test results is from 3% to 5%.

As noted in our letter of December 30, 1982 we are not able to review the DEIR and public meeting material and respond to them as thoroughly as we would like within the too short two-week period allowed. SCFS participants are employed full time and perform public service in their spare time. While our detailed criticisms have been ignored by the Department of Recreation and Parks in the past, we, SCFS, remain willing to explain in detail any of the above items.

We hope that this proposal will be accepted in the spirit in which it is offered: a method designed to provide that degree of assurance of safety and health that users of the proposed facility have a right to expect from their municipal and regional representatives.

Toxic Waste Task Group
Southern California Federation of Scientists

TWTG:sp
cc: A. Baietti

77-217

8

11601 Bellagio Road
Los Angeles, CA 90049
January 23, 1983

Mr. David Attaway
Dept. of Recreation and Parks
200 N. Main St.
Room 1290, City Hall East
Los Angeles, CA 90012

Dear Mr. Attaway:

I supplied some comments on the DEIR for the VA dumpsite at the hearing held a couple of weeks ago.

(BW-4) I would briefly add again that I think the DEIR fails to address the issues of chemical wastes the VA says it may have buried at the site. (I am not talking about the toluene and dioxane buried in the radioactive scintillation fluids). Furthermore, the assessment of pre-1960 radwaste burials is just guess-work, not scientific environmental assessment.

I propose: (1) a thorough effort be made, by interviewing past and current VA officials, as well as rad safety personnel from nearby licensees, to garner what information one can as to what and where wastes were buried. (2) with that information, core samples, along the lines Dr. Pieri has repeatedly suggested, be taken, targetted at the specific locations that seem most likely based on the information obtained through the anecdotal and document acquisition effort.

To proceed with the park on the basis of the DEIR would be most imprudent from a public health and safety standpoint. The park is a lovely idea, and I am all for more parks; parks on old radioactive and/or chemical (BW-5) waste dumps need a substantial amount of thorough environmental monitoring and data acquisition and assessment before a go-ahead should be given. The DEIR fails to meet those standards; going ahead with the proposed park on the basis of the DEIR would be to risk substantial public harm.

Sincerely,

Daniel Hirsch

Daniel Hirsch

77-218

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January 28, 1983

David Attaway
Dept of Recreation and Parks
200 N. Main St
Room 1290, City Hall East
Los Angeles, CA 90012

Dear David,

Here are some additional comments on the Draft EIR:

Perhaps everyone would agree that if the only substances buried at the Brentwood site were those noted in the records, then there would indeed be no problem. But we know that that is not so-- the records are admittedly incomplete.

I personally am reluctant to accept on faith anyone's assertion that "of course it's safe". For a long time certain people were claiming passionately (and falsely) that "of course the records are complete". Before that the VA "neglected" to inform the City that anything had been buried at all.

In light of this history of deception, the City will be setting a very dangerous precedent if it goes ahead and develops the site without first getting a reasonably good idea of what is buried there.

(BW-5) It is my opinion as an engineer and environmental researcher that not one of the tests performed at the site is conclusive. I therefore urge additional, thorough testing. Of particular concern is the question whether chemicals other than toluene (BW-4) and dioxane were dumped, a question not addressed in the DEIR at all.

Then (and only then), assuming that a consensus of no hazard can be reached, and that any other difficulties, such as the claims of the veterans, can be resolved, I would support the planned development.

Yours sincerely,

Steven Aftergood

7050 Arizona Ave
Los Angeles, CA 90045

4446 Keever
Long Beach, California 90807

January 24, 1983

10

Mr. David Attaway
Environmental Planning Specialist
Department of Recreation and Parks
200 North Main Street
Room 1290, City Hall East
Los Angeles, California 90012

Dear Mr. Attaway:

I would like to comment on the Draft EIR for the Barrington Recreation Center Addition. My credentials are the following:

1. 20 years of experience in therapeutic radiation physics.

2. Masters of Science, Radiation Physics, Columbia University, New York.

3. Certified by the American Board of Radiology in Therapy Radiation Physics.

4. Past President, Southern California Chapter of American Association of Physicists in Medicine.

5. Member, Southern California Chapter of Health Physics Society

6. Author of 20 articles in the scientific literature on radiation safety, radiation biology and radiation therapy physics.

I have carefully reviewed the Draft EIR and I am not convinced the land can be safely used as a park. My principal concern is that the report in effect overlooks the lack of any records concerning the existence of potentially harmful radioactive and chemical wastes buried on the proprosed park site. This lack of documentation is due to two factors:

(BW-2) 1. There are no records available on any dumping of radioactive or chemical materials on the site prior to 1960. Such dumping is known to have occurred but no-one knows the type or quantities of material buried nor where they were buried.

(BW-3) 2. Neither the NRC Radiological Survey conducted in May, 1981 nor Mr. Robert Wood's soil samples taken in April-May, 1982 specifically for the EIR were extensive enough to provide reliable and verifiable results.

Common sense would dictate that before proceeding to develop this site for use with a high level of public activities, questions left unanswered at this point in time must be addressed and answers found.

In attempting to deal with the lack of information, the report states that the supply of nuclear material were limited before 1960 and therefore everything is safe. However, one needs to know precisely what the Veterans Administration Hospital buried there. The radioactive materials could include long-lived materials some of which were indeed available prior to 1960.

One such material is documented in the radioactive waste disposal records maintained by the NRC as having been available to the V.A. This material named Thorotrast was given to UCLA for burial at sea in 1960. This material was probably given to UCLA because it was too dangerous to bury at the V.A.'s own site. Thorotrast is a half-life of 10 billion years which means that all of this material would still be there as dangerous today as it was 20 years ago. Thorotrast has been shown to cause cancers of the liver, colon, stomach, larynx, uterus, nasal sinus, breast and leukemia 20 years or more after exposure.

Fortunately, in this case the reported material was disposed of properly. However, this example indicates that dangerous radioactive chemicals were indeed available to the V.A. before 1960. The question remains, what, in fact, did the V.A. bury?

(BW-1, 2, 3)

The conclusion I have reached is that scientific sampling of the land must be undertaken. Mr. Wood's report on sampling in the EIR is titled, "Preliminary Investigation of the Proposed Barrington Park Site". In the body of the report, he refers to "This very preliminary study" (page 5). Whether this report is preliminary (in the title) or very preliminary (in the text) it is clearly an inadequate study. The site covers 12 acres and hazardous material could be buried anywhere on the site.

Mr. David Attaway
Department of Recreation and Parks
January 24, 1983

Mr. Wood took two (2) samples at 6 locations, one from the surface and one at 6" deep. In a 12 acre site where hazardous material may be buried 4 to 6 feet deep, there is an obvious need for more extensive sampling to provide scientifically valuable results. (BW-3)

Multiple sampling at least down to the assumed level of the burials should be undertaken. The capillary action of ground water could bring up any material buried even 6 feet deep. Thus, we need to know what is there before children playing soccer on the field, ingest or inhale radioactive materials brought to the surface. There are proven scientific methods that can be used for such field testing. (BW-6)

I feel strongly that it is a dangerous precedent to build a park on land containing unknown types and amounts of radioactive and chemical materials without adequate testing of the soil. It is the responsibility of the Department of Parks and Recreation to prove that this land is safe for the public. In my judgment, they have not fulfilled their obligation to the public. Take more samples, get the facts.

Sincerely yours,

Myron Wollin

Myron Wollin, M.S.

MW:dg

January 12, 1983

Name: Ted Richards
289 So. Barrington
Los Angeles, Ca.

11

I have lived at present address for 16 years.

I am not against a recreation center adjoining Barrington.

I managed Little League teams for six years on Sepulveda when my boys were growing up, about 16 years ago in the West L.A. Little League.

Being a graduate of UCLA in 1949 also adds to my feeling of West Los Angeles.

I want to thank the committee "for the Soccer Fields" for keeping me informed. The large report and the meeting place and time of meeting.

The report did not discuss the coyote packs and deer that roam the veterans administration grounds late at night. You can hear these wild animals, especially the coyotes, as they kill their prey (dogs, cats, deer, etc.). (NSEI)

At least 80% of the report was the negation of the problem of nuclear waste that is buried there, which leads me to a conclusion that there must be more of a problem than the contiguous residents ever dreamed.

Enough for opening thoughts.

I wrote the committee to review the traffic situation on Barrington.

77-223

In the report I saw no number of accidents on Barrington, between Sunset and San Vicente! Outside my window on Barrington there must have been one hundred accidents, reported or not. Today, Barrington is a definate traffic hazard.

Reason: The two main streets between Sunset and San Vicente are Bundy and Barrington. During both weekdays and weekends they are very dangerous for the residents as the traffic is heavy.

I don't think the Committee wants to create a further traffic hazard. My letter to the committee tells of the condition and relegates the legal responsibility to those connected with this project.

Reccomendation: Why didn't the Committee lease 50 acres - to enlarge present park, not 12 acres.

1. The park needs more tennis courts. Over-crowded.
2. The touch football needs more room. Over-used.
3. The baseball field is over-used. Over-crowded.
4. More basketball courts, they are over-used.
5. The parks could have 3 soccer fields, numerous tennis courts, baseball diamonds, picnic grounds, etc.
6. The traffic could be routed through and around the Veteran's Administration for safety.

We would have a truly beautiful and delightful recreation facility of which West Los Angeles could be proud.

77-224

COUNTY OF LOS ANGELES • DEPARTMENT OF HEALTH SERVICES

313 NORTH FIGUEROA STREET • LOS ANGELES, CALIFORNIA 90012 • (213) 974-

12

January 31, 1983

Reply refer to:

2615 South Grand Avenue, Room 608
Los Angeles, California 90007
(213) 744-3247

Department of Recreation and Parks
200 North Main Street
Room 1290, City Hall East
Los Angeles, California 90012

Attention: Mr. David Attaway
Environmental Planning Specialist

Gentlemen:

REQUEST FOR COMMENTS ON THE DRAFT ENVIRONMENTAL REPORT (DEIR) BARRINGTON RECREATION CENTER ADDITION

The staff of Environmental Management have reviewed the subject report and have found the presentation of the environmental health related impacts to be satisfactory. All relevant impacts are adequately addressed and analyzed by the subject report.

If you have any questions regarding this matter, please contact Richard L. Dennerline at 744-3235.

The opportunity to review this report is appreciated.

Very truly yours,

Joseph E. Karpus, Director
Occupational Health & Radiation Management

JEK:w

cc: R. L. Dennerline
H. Battle

77-225

13

DON ROTHMAN

615 SOUTH FLOWER STREET · LOS ANGELES, CALIFORNIA 90017 · (213) 626-2311

RESIDENCE
(213) 472-5784

January 27, 1983

David Attaway
City Parks & Recreation
200 No. Main Street, Ste. 1290
East Annex - City Hall
Los Angeles, CA 90012

Re: Barrington Park/
Veterans' Administration Lease

Dear Mr. Attaway:

My family and I wish to express our endorsement to the above referenced project. We are enthusiastic about the entire project.

The Environmental Impact Report added to our enthusiasm and we wish you to know that we wholeheartedly support the program.

Yours very truly,

Don Rothman

DON ROTHMAN

DR/tw

77-226

20656 PACIFIC COAST HWY
MALIBU CA 90265

Western Union Mailgram

4-0605585028 01/28/83 ICS IPMRNCZ CSP LSAB
2134566587 MGM TDRN MALIBU CA 82 01-28 0800P EST

14

DAVID ATTAWAY, ENVIRONMENTAL PLANNING
SPECIALIST
DEPT OF RECREATION AND PARKS
200 NORTH MAIN ST RM 1290 CITY HALL EAST
LOS ANGELES CA 90012

DEAR MR ATTAWAY,

THANK YOU SO MUCH FOR THE TIME AND METICULOUS EFFORT SPENT ON PREPARATION OF THE DRAFT E.I.R. REGARDING THE BARRINGTON RECREATION CENTER ADDITION I HAVE READ THE REPORT AND FEEL THAT, WITHOUT A DOUBT, THERE IS ABSOLUTELY NO RADIOLOGICAL OR BIOLOGICAL HAZARD. LET'S GET ON WITH THE PROJECT. GOD KNOWS THE COMMUNITY NEEDS IT.
JOHN MILLS

19:58 EST

MGMCOMP

77-227

shannon

2434 arbutus drive los angeles, california 90049

15

January 26, 1983

Mr. David Attaway
Department of Recreation and Parks
Room 1290, City Hall East
Los Angeles, CA 90012

Dear Mr. Attaway,

As a youth of the Brentwood community, I am greatly distressed by the lengthy process in the realization of the BarringtonRecreation Addition. I believe that the threats of the people opposing it are just that--threats, without anything backing them up.

While attending the January hearing at Stoner Park, I was disturbed by the representatives of the American Legion concern that the Veterans would no longer have use of this land. I feel the motto of this park is that of the American Youth Soccer Association, "Everybody plays." This land must be shared by all ages.

Several years ago, my teammate's father, Dr. Arthur Schenke, participated on a committee examining the safety of the radioactive wastes buried there. As Director of Radiation at a local hospital, he is well qualified. He concluded that the potential hazzard is minuscule. Just as he feels it won't be harmful to jog there, I feel comfortable to play there. He and the DEIR demonstrated the safety of the land.

This project began when I was a sixth grader and I believed I would be playing there within a year or two. I'm now a senior and leaving the area. Please expedite the process so we all live to enjoy it!

Yours truly,

Shannon Carney

Shannon Carney

77-228

16

MARSHALL E. BARSHAY, M.D., F.A.C.P.
INTERNAL MEDICINE & NEPHROLOGY
1260 - 15th STREET – SUITE 816
SANTA MONICA, CALIFORNIA 90404

Telephone (213) 451-8666

January 15, 1983

David Attaway, Environmental Planning Specialist
Department of Recreation and Parks
200 North Main Street
Room 1290 City Hall East
Los Angeles, California 90012

Re: Draft Environmental Impact Report (DEIR) - Barrington Recreation Center Addition

Dear Mr. Attaway,

I am a physician specialized in internal medicine and an assistant clinic professor at UCLA. I also did a residency and fellowship at Wadsworth VA Hospital from 1967-68 and 1971-72 and presently teach medical students at Wadsworth VA Hospital. I live in Brentwood less than one mile from the Brentwood Recreation Center. I have three children, ages 8,5 1/2, and 3 1/2, the older two being very active in sports and I hope the third will very shortly be also. I coach young children's soccer, basketball, and baseball and I am a very concerned parent.

There is definitely a need for more recreational space in Brentwood and the proposed site sounds ideal. On the other hand, I would not want my children or any other children to play in an area where they may be a significant health hazard. I reviewed the draft environmental impact report (D.E.I.R.) which I feel was excellently written and which indicated to me that a lot of careful work went into preparing this report. It was also written in simple terms so that a layman could easily understand it and yet there were technical discussions so that it would satisfy more knowledgeable people in the area. I discussed the D.E.I.R. with numerous people and also attended the hearing on January 12, 1983 at Stoner Park. I signed up to speak but had to leave before my opportunity came.

I am firmly convinced beyond a reasonable doubt that the proposed area is safe, proposes no significant health hazards, and I would not hesitate to let my children play there on a regular basis.

77-229

By listening to many of the comments from the speakers opposed to the proposed Barrington Recreation Center addition, I believe that no evidence on earth would convince them the area was safe. Some of the arguments used by the opposition are:

(1) There are no records to indicate what materials may have been buried in the area prior to 1960.

Response: However as the D.E.I.R. so ably points out on page 77, the quantities of radioactive material buried there could not possibly be significant. Let us assume that the amount of radionuclides distributed by Oakridge National Laboratory, the sole supplier of radionuclides during the period from 1946-1958 went to the Wadsworth VA Hospital and nowhere else in the world. Let us also assume the total amount was buried in that site which is preposterous. The total amount of C-14 and H-3, (the more significant radionuclides because of their longer half life) would only be a little more than the amount buried there from 1960-1968 and would still be an insignificant amount. The I^{131} and P^{32} radionuclides distributed from 1946-1958 was significantly more than that buried from 1960-1968 but the half life of these radionuclides are so short that large amounts become insignificant at this point in time.

(2) Not enough soil or water samples were taken in the area during the assessment.

Response: If twice as many samples were taken these people would probably still complain that not enough were taken. If four times or ten times the amount were taken (wasting more time and money), would that satisfy them? Probably not. No matter how many samples were taken or studies done complaints could be made that more samples or repeat studies should be done. In reviewing the seven studies by qualifed individuals and agancies, I am well satisfied that the studies done were appropriate and accept the results which show no significant health hazard.

The words radioactivity, radioactive fallout, and radiation are very emotional words that frighten us. Significant exposure to radioactive materials could certainly be lethal or cause mutation in our offspring and there is no known treatment at present. However we are constantly being exposed to radiation which is all around us as well as to other potential health hazards which we never even think about. We must objectively decide what is significant and dangerous.

In the following paragraphs I have listed 10 health hazards with their possible prophylaxis. These health hazards are negligible and the prophylaxis absurd, however no more absurd than not building a recreational area on land with buried wastes which has shown to be safe beyond a reasonable doubt:

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(1) Potential carcinogenicity of sunlight which may be a cause of melanoma, one of the most malignant cancers known.

Prevention: Keep children in the house as much as possible and prevent them from ever going out in direct sunlight.

(2) Radiation danger from atomic bomb dropped on Hiroshima and Nagasaki in 1945. We know there is an increased rate of cancer and especially leukemia from survivors of the blast.

Prevention: Never travel to Japan.

(3) Sodium intake m drinking tap water. Increased sodium intake in the diet can lead to high blood pressure which is a leading risk factor in the development of heart disease and strokes.

Prevention: Never drink tap water.

(4) Accidents are a leading cause of death among children and a large percentage of these are due to children crossing streets and being hit by a car.

Prevention: Do not allow children to cross the street.

(5) Harmful effects from aspirin which causes bleeding in almost 100% of people taking even one apirin tablet.

Prevention: Never take aspirin and help avoid the gastrointestinal bleeding and possible peptic ulcer.

(6) Harmful effects from x-rays. X-rays can cause cancer and possible mutations in offsprings. Someone in a dental office, not being x-rayed, but being near a room where x-rays are being taken is exposed to some degree.

Prevention: Never go to a dentist. Never marry an x-ray technician who has had radiation exposure.

(7) Smoking is known to be hazardous to ones health, not only to the smoker but also anyone near the smoker and especially in an enclosed room.

Prevention: Never go to a movie theater where people may smoke. Even if a smoker is in the balcony and you are in the orchestra, there is a risk of inhaling smoke.

(8) Smog can cause significant lung problems.

Prevention: Move out of Los Angeles which is one of the smoggiest cities in the world.

(9) There are a significant number of people in our population allergic to Penicillin. A person may die immediately from anaphyl actic

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shock after taking a dose of Penicillin.

Prevention: Never take Penicillin even if it is indicated for pneumonia or other illnesses.

(10) All sports can be dangerous. Many people fracture their arms and legs and develop other serious injuries while engaging in sports.

Prevention: Keep our children sedentary and prevent them from playing any sports.

The above health hazards are present in our everyday life but the risk is very small and the prophylaxis I suggested ridiculous, but no more ridiculous and absurd than not building a recreation area and allowing our children to play there because of the negligible risk of radiation to them. I hope the above 10 health hazards helps place this risk of radiation danger in this area in the proper perspective.

In summary, I am strongly in favor of building the proposed Barrington Recreation Center Addition and feel there is no significant health hazard and no need to delay this any further. I would suggest checking water and soil samples every few years to satisfy the critics and everyone else that the area is still safe.

Sincerely yours,

Marshall E. Barshay

Marshall E. Barshay, M.D.

cc: Anthony Beilenson, Congressman 23rd District
    Marvin Braude, City Councilman

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MELVIN AVEDON, M.D.
ROBERT J. TAUB, M.D.
R. CLIFFORD OSSORIO, M.D.

AVEDON, TAUB, OSSORIO
A MEDICAL CORPORATION
6733 BEVERLY BOULEVARD
LOS ANGELES, CALIFORNIA 90048
(213) 657-1550

17

January 27, 1983

David Attaway
Environmental Planning Specialist
Department of Recreation and Parks
200 North Main Street, Room 1290
City Hall East
Los Angeles, CA 90012

RE: Barrington Recreation Center Addition

Dear Mr. Attaway:

This letter will summarize the statement I made in support of the proposed Barrington Recreation Center addition at the public hearing held on January 12, 1983.

My medical specialty is Hematology-Oncology and therefore I have some knowledge of the risks of exposure to radiation. I share the expressed concern regarding unnecessary exposure to any significant amount of radiation, however, there is no due risk to health with the development of the proposed park.

I have reviewed the environmental impact report with colleagues who are experts in the field of Nuclear Medicine and can find no significant risk to public health in this project. The small amount of biomedical waste buried at the edge of the proposed site in excess of 20 feet below the surface does not constitute any significant hazard to health.

My son and I have had the pleasure of using your recreation center on Barrington Ave. for the past several years and look forward to the development of the proposed addition.

Sincerely yours,

Robert J. Taub, M.D. (hd)

Robert J. Taub, M.D.
Clinical Co-Chief
Division of Hematology-Oncology
Cedars-Sinai Medical Center
Associate Clinical Professor of Medicine
UCLA Center for the Health Sciences

RJT:cb

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REGGIE FISHER

Jan 27, 1983

Dear Mr. Attorney,

We have read the D.E.I.R. concerning the Barrington Recreation Center Addition. We feel the D.E.I.R. is concise, complete, and clear.

We agree there is no evidence of significant health hazard to us or our children.

We urge you to accept and approve the D.E.I.R. re: Barrington Recreation Center Addition and to proceed at once with this project as it is desperately

(over)

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needed.

Sincerely yours,

Reggie Fisher

Robert Fisher MD.

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2434 Arbutus Drive
Los Angeles, CA 90049
January 25, 1983

Mr. David Attaway
Environmental Planning Specialist
Department of Recreation and Parks
Room 1290, City Hall East
Los Angeles, CA 90012

Dear Mr. Attaway,

As parent, coach, and player who hopes to utilize the Barrington Recreation Center Addition, I am appreciative of the consummate efforts shown by you and your department in the public's behalf. The DEIR appears both extensive and intensive. I feel relaxed about the safety of the participants.

However, that feeling doesn't extend to the opposing elements nor to their ability to listen. During the Stoner Park hearing the American Legion and neighborhood group repeated themselves, contratidcted the drawings (there are three lanes at the entrance not two), and misrepresented the facts. This land was never intended for the Brentwood School nor to be a 'private park'.

Also, the other groups seemed to read the DEIR 'conveniently'. Complaining that no water samples were collected, they overlooked pages 67-69. This lists the results of water analysis from five wells located near or on the property. Then, there was Mr. Moore. Explaining that his "C" in chemistry excused him from understanding a certain chemical, he proceeded to alarm the audience about it making everyone nauseous (at best!). My husband whispered, "He should have received an 'F'. It's a solvent we use all the time." I noticed the health physicists shaking their heads in disbelief at Mr. Moore's diagnosis.

Hopefully, the doomsayers will concentrate on 'the world' and not bring the sportfields to 'an end' nor delay it perhaps another year. I'm angry that so few who do not apparently intend to use the park seem to control the many who do want to --and soon.

Thank you for your concern and your efforts to move forward in the public's behalf.

Very truly yours,

Suzanne Eisler

Suzanne Eisler

cc: A. Beilenson

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1-27-83

Dear Mr. Attaway,

After reading the environmental report and listening to the experts, I feel very confident that the report is sufficient and the children deserve the development of the park.

May God Bless You,

Rosey and Margie Grier

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STATE OF CALIFORNIA—HEALTH AND WELFARE AGENCY

EDMUND G. BROWN JR., Governor

DEPARTMENT OF HEALTH SERVICES
714/744 P STREET
SACRAMENTO, CA 95814
(916) 323-2772

January 26, 1983

21

Mr. David Attaway
Environmental Planning Specialist
Department of Recreation and Parks
City of Los Angeles
City Hall East, Room 1290
200 North Main Street
Los Angeles, CA 90012

Dear Mr. Attaway:

We have reviewed your Draft Environmental Impact Report (DEIR) on the proposed Barrington Recreation Center addition. From a radiological viewpoint the evaluation of potential hazards is quite complete using very conservative assumptions. We agree with the conclusion that the buried biomedical wastes poses no undue radiological health risks to the public.

The comments given below should be considered as our suggested improvements to make the text more complete:

1) Page 53, Man-Made Radiations; Plutonium is deposited on the earth from global fallout and although the levels are quite low it can be detected and will remain in the ocean or on land for years.

2) Page 65, regarding the three requirements for waste burial; The State of California has since 1962, identical standards as given for the U.S. Nuclear Regulatory Commission. Since the Veterans Administration facility and property are Federally owned and regulated, the State is excluded from imposing any regulatory restrictions on this facility. However, we could exert influence if off-site contamination derived from the facility was found. If there are public concerns of inaction by the State Health Services Department on this matter, perhaps the foregoing could serve as a rebuttal. It could be placed as a note on page 60, or after the discussion on page 65. In an effort to put the amounts of disposed waste in the 1960-1968 period in perspective with the regulations, we have determined the following aspects about the four long-lived radionuclides:

   a) all of the tritium could have been buried in two batches.

   b) all the chlorine-36 was less than 3 allowed disposals.

   c) all 9 years of the carbon-14 and sodium-22 waste could be buried at one time.

3) Page 69, second paragraph; The amount of soil should be 1 cubic meter. Subsequent referrals to 1 meter of soil should also be corrected.

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4) Appendix B, third page of Sanitary Engineering Division memo 6/5/81, last paragraph; The reference to interim drinking water standards was incomplete in that Section 141.16(a) refers to man-made radionuclides not producing more than 4 mrem/year whole body or for any internal organ. In EPA 570/9-76-003, pages 155-158 are tables of isotopes giving concentrations in water which would produce 4 mrem/yr. For C-14 the value is 2000 pCi/ℓ for a 2 liter daily intake.

If we can help you further, please contact this office.

Sincerely,

Kenneth B. Fess
Senior Health Physicist
Facilities and Environmental Standards
Radiologic Health Branch

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UNIVERSITY OF CALIFORNIA, LOS ANGELES UCLA

BERKELEY · DAVIS · IRVINE · LOS ANGELES · RIVERSIDE · SAN DIEGO · SAN FRANCISCO SANTA BARBARA · SANTA CRUZ

COMMUNITY SAFETY DEPARTMENT
OFFICE OF RESEARCH & OCCUPATIONAL SAFETY
LOS ANGELES, CALIFORNIA 90024

January 27, 1983

22

David Attaway
Department of Recreation & Parks
200 N. Main Street
City Hall East, Rm 1360
Los Angeles, CA 90012

Dear Mr. Attaway:

I have carefully reviewed the Radiological Health & Safety section of the "Draft EIR" for the "Barrington Recreation Center Addition". In my opinion, the report addresses all of the potential concerns relative to the burial of small quantities of radionuclides and organic chemicals during the 1950's and 60's. Further, I think that the report adequately demonstrates that there is no potential hazard associated with building a park on this site.

I have personally visited the site and also reviewed all of the existing disposal records. I note the following:

1) The waste is now buried under 20-30 feet of overburden and another 5 feet of soil will be added during park construction;

2) The waste was initially relatively innocuous, even before natural detoxification processes had an opportunity to reduce most of the material to harmless forms;

3) No crops will be grown on the site;

4) Park construction will not disturb materials 20-30 feet underground; and

5) There is absolutely no evidence that the buried waste is affecting plant life in the area, or ground water.

In view of these facts, I cannot imagine any way that this old burial site could pose any safety hazard to users of the proposed park.

I completely endorse the conclusions of the Draft EIR, relative to the lack of hazards posed by the radiological and /or chemical nature of the buried materials.

Very Truly Yours,

Walt F. Wegst

Walter F. Wegst, Director
Research & Occupational Safety

WFW/gr

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INGLEWOOD RADIOLOGY MEDICAL GROUP, INC.

FREEMAN MEDICAL TOWER
323 NORTH PRAIRIE AVENUE
INGLEWOOD, CALIFORNIA 90301
TELEPHONE 674-7733

S. D. ZUCHERMAN, M. D.
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S. B. TRACHTENBERG, M. D.
JACK L. BERMAN, M. D.
LAWRENCE J. COHEN, M. D.
MICHAEL S. SHAUB, M. D.
RICHARD J. SUKOV, M. D.

DIPLOMATES
AMERICAN BOARD OF RADIOLOGY

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CHARLES C. DIAMOND, M. D.
JOHN E. SETO, M. D.
R. SCOTT KINGSTON, M. D.
ANDREW L. DEUTSCH, M. D.

January 26, 1983

Mr. David Attaway
Department of Recreation and Parks
200 North Main Street, Room 1290
City Hall
East Los Angeles, CA 90012

Dear Mr. Attaway:

I spoke in favor of the Environmental Impact report concerning the proposed soccer playing field at Barrington and Sunset, on the Veterans' Administration property. I understand that later on that evening during the course of the hearings, the Committee to Bridge the Gap suggested that core samples be obtained. In view of the facts as established in the Environmental Impact Report, I feel that the core sampling is an unnecessary and wasteful expenditure of public funds. It is my feeling that, even if the core samplings were obtained and were found to be negative, that the Committee to Bridge the Gap would insist that the core samplings that had been obtained were inadequate and would insist upon more core samplings.

The chances of injury to the core samplers by equipment in obtaining the core samplings, or even the exposure to superficial bacteria in the dirt would be much more hazardous to their health than the possibility of contamination from miniscule radiation related to residuals 30 feet deep.

I recommend acceptance of the report as it is and feel that the City should progress with development of this facility.

Very truly yours,

Arthur F. Schanche, MD

Arthur F. Schanche, MD

/ba

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Southern California Chapter

Health Physics Society

A. L. Baletti
ICN - C&R Division
2727 Campus Drive
Irvine, CA 92715
Ph: (714) 833-2500

24 Jan '83

David Attaway
Dept. of Recreation & Parks
200 N. Main Street
Rm 1290, City Hall East
Los Angeles, CA 90012

Subject: Draft Environmental Impact Report; comments on

Ref: (a) Draft Environmental Impact Report for Barrington Recreation Center Addition, dtd Dec 1982

At a scheduled meeting of the Southern California Chapter of the Health Physics Society on 20 Jan '83, information relative to ref (a) was presented. After vigorous discussion, it was the consensus of Chapter Members present that the Chapter go on record as endorsing the following statements:

1. We concur with the conclusions and recommendations made by three Chapter members at a special meeting (May 1981) (see pg 69, para 2 of ref (a)). Namely, that the types and quantities of radio nuclides buried at the VA's former biomedical waste disposal site - as documented in Table 9 (pg 68 of ref (a))-would not produce an impact on public health and safety.
2. We concur with the evaluation made by several Chapter members that the information documented in ref (a)-regarding the significance to public health and safety of the radioactive material and possible toxic chemicals buried-is technically sound and consistent with state of the art technology (see App B, D & E of ref (a)).

   Note: The mere presence of radioactivity or toxic chemicals does not in itself constitute a hazard. The degree of availability (exposure potential) of the material is the key factor. Even if current estimates of the quantity of toxic or radioactive material is off by orders of

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magnitude, the pathway to humans is so long and remote that public health and safety can not be affected.

3. At the Public Hearing on ref (a) (held on 12 Jan '83), several participants were of the opinion that the degree of danger than might exist had not been adequately assessed. They maintained there was uncertainity as to the types and amounts of material that were buried and a paucity of soil and water samples analyzed. Thus, if the park project were continued, the absence of a threat to public health and safety had not been demonstrated. We can not agree with this opinion.

It is essential that the effort expended to confirm or deny the existance of a problem be compatible with the possibility that any problem exists at all. The main technical weakness of the recommendation to conduct additional studies is the unwillingness to accept the very low degree of availability of any toxic and radioactive materials that may be present. The unavailability of the material eliminates any public health and safety impact, no matter how incomplete the record of waste disposal may be. Further, the VA Hospital is not a commercial, chemical manufacturing plant. It could not produce large quantities (1000's of gallons of waste per day) of toxic chemicals. It was and is managed by responsible, professional people. The inferred casual release of significant amounts of toxic material into the environment is not consistent with the operation of a facility devoted to health care. It is most improbable that the actual quantities released can even approach that of potential concern. Therefore, we believe the data and analyses provided in ref (a) adequately evaluates the public health and safety aspects of any toxic or radioactive material involved.

4. As professionals involved in the health and safety aspects of radioactive material, we are not judging the adequacy of ref (a) in evaluating: 1) noise, 2) traffic, 3) land use and related problems. However, we do firmly believe that rejection of the proposed park addition cannot be based upon "inferred dangers" from "unknown quantities" of toxic chemicals or radioactive material.

If additional detail or discussion is needed on any of the above points, please contact me, at your convenience.

A L Baietti

A. L. Baietti, Chairman
Public Information Committee

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25

SHELDON C. PLOTKIN, PhD., & ASSOCIATES
Systems Engineering Consultants
3425 McLaughlin Avenue, Suite 209
Los Angeles, California 90066
(213)390-0306

January 25, 1983

David Attaway, Environmental Planning Specialist
Department of Recreation and Parks
200 No. Main Street
Room 1290, City Hall East
Los Angeles, CA 90012

Re: Comments on DEIR

Dear Mr. Attaway;

My point of view and background are undoubtedly well know to you and your colleagues. However, what is new at this time is a long discussion or short conference between myself and Albert Baietti of ICN Pharmaceuticals held after the public meeting on January 12, 1983.

Even though he and I expressed considerable technical differences both that night as well as during the one "blue-ribbon-panel" meeting held many months ago, there happens to also be considerable agreement between the two of us regarding what constitutes valid testing, the general confidence level associated with different testing programs, and what would constitute a satisfactory test procedure for determination of significant measurements of this particular proposed park site. In short, we agreed that the two of us could easily work together, if requested, to specify and conduct the type of testing program probably required to satisfy the fears of almost all, if not all, community prople not presently satisfied that adequate testing of the land has been done.

While Mr. Baietti is convinced, I believe, that there is not a health-safety hazard at the proposed park site, I simply do not know and believe we should find out much more than is presently known about the technical aspects of the site. If it is recognized that suffieient doubt exists in enough people's minds to warrant further testing, then I would be willing to volunteer as a registered Safety Engineer to co-head with Mr. Baietti a health-safety analysis as outlined in the Southern California Federation of Scientists written comments.

Cordially yours,

S C Pl

Sheldon C. Plotkin, Ph.D., P.E.

SCP:sp
cc: A. Baietti

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26

A. L. Baletti
2448 Windward Lane
Newport Beach, CA 92660

24 Jan '83

David Attaway
Dept. of Recreation & Parks
200 N. Main Street
Rm 1290, City Hall East
Los Angeles, CA 90012

Subject: Public Hearing on 12 Jan '83 re Draft Environmental Impact Report

Ref: (a) Draft Environmental Impact Report, dtd Dec '82, for Barrington Recreation Center Addition

I attended the Public Hearing on ref (a). I also provided testimony as Chairman of the Public Information Committee of the Southern California Chapter of the Health Physics Society. I am writing this letter as an individual and not as representing any technical society. As a certified health physicist with more than 30 years experience in applied health physics (radiation protection), I consider myself to be a qualified expert.

After the Hearing, I talked with Shell C. Plotkin, who also testified at the Hearing. During this conversation, I stated that, many times, in dealing with the public about technical matters, the difficulty is remembering to deal with the "perceived" problem rather than the "real" problem. It is still my opinion that there can be no public health and safety problem from the quantity of toxic chemicals or radioactive material that are present (or assumed to be present) in the VA's former biomedical waste disposal site. However, if a significant number of people believe there is, or may be, a problem, then, it may be necessary to develop sufficient data (to confirm the absence of such a problem) to satisfy those who are concerned.

As Mr. Plotkin pointed out, he and I represent opposing views concerning the adequacy of data. I believe that ref (a) is a more than adequate evaluation of the problem potential of toxic chemicals and radioactivity that might be present. Mr. Plotkin believes that "enough significant questions remain unanswered, that it would be imprudent to move forward with the park project in the absence of reliable answers to those questions."

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Therefore, if the Dept. of Recreation and Parks believes that additional data to evaluate the significance of the public health aspects of the material buried in the VA's former biomedical waste disposal site is needed, I am willing to work with Mr. Plotkin to develop a consensus opinion as to the scope of such a data acquisition program.

However, I repeat that, in my opinion, the rejection of the proposed park addition can not be based upon "inferred dangers" from "unknown quantities" of toxic chemicals or radioactive material.

Please let me know if I can be of any further assistance.

A L Baletti

A. L. Baletti
Certified Health Physicist

cc: S. C. Plotkin

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AMERICAN YOUTH SOCCER ORGANIZATION
a nonprofit corporation dedicated to youth soccer
everyone plays

27

January 24, 1983

Mr. David Attaway
Dept. of Recreation and Parks
200 N. Main
E. Los Angeles, CA 90012

Re: Proposed park and soccor field on federal land
near Barrington post office

Dear Mr. Attaway:

I want to take this opportunity to again reiterate the satisfaction with the Enviromental Impact Report that members of AYSO soccer region 69 have.

We believe that the report which was presented at the meeting the other night was entirely satisfactory, comprehensive and sufficient to allay any fears for whatever reasons regarding the proposed park.

We would urge you to proceed with all due speed to impliment the installation of soccer fields and a park at the Barrington location. The users of the potential park have been quite patient in waiting through the delays and continuances. Further time need not elapse and should not elapse before steps and procedures go forward for the installation of the park.

Very truly yours,

Ray Meline

RAY MELINE
Regional Commissioner
American Youth Soccer Organization
Region 69

cc: Suzanne Eisler

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AMERICAN YOUTH SOCCER ORGANIZATION
a nonprofit corporation dedicated to youth soccer
everyone plays

January 26, 1983

James E. Hadaway, General Manager
Department of Recreation and Parks
Room 1330, City Hall East
Los Angeles CA 90012

Attention: David Attaway, Environmental Planning Specialist

Re. Draft Environmental Impact Report, Barrington Recreation Center Addition

Dear Mr. Attaway,

I have attended all hearings and carefully read the DEIR on the subject project. The following observations can be made:

1. The project is needed to serve the community.

2. There will be no significant environmental impact from the project.

3. Biomedical waste products on site presently are buried beneath adequate cover to preclude any exposure to dangerous materials by persons who may use the park. Also, the project will result in additional covering of this material and will not impact the water table in any negative fashion.

4. Possible traffic problems have been mitigated to the maximum possible extent through widening Barrington Avenue adjacent to the site, construction of an extra-wide entrance way, provision of substantial parking for the nearby residents and by installation of a traffic signal, a measure ignored by persons testifying at the January 12 hearing.

The DEIR is extremely thorough and completely addresses all issues, in my opinion. Further, adequate notice has been given to all parties, including through articles in all locally distributed newspapers and the necessary hearings held. Therefore, I request that you not extend the deadline for comments beyond the 45-day period which ends January 28, 19

In conclusion, the American Youth Soccer Organization will have no reluctance whatsoever to have our children and volunteers use the new facilities when completed.

Thank you,

George Wolfberg

SECTION 1 / AREA P

GEORGE WOLFBERG, [redacted] Director / 14107 Attilla Road / Santa Monica Canyon, CA. 90402 / H (213) [redacted]

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THONY C. BEILENSON
23RD DISTRICT, CALIFORNIA

COMMITTEE:
MITTEE ON RULES

Congress of the United States
House of Representatives
Washington, D.C. 20515

WASHINGTON OFFICE:
1025 Longworth Building 20515
(202) 225-5911

LOS ANGELES OFFICE:
11000 Wilshire Boulevard 90024
(213) 824-7801

VALLEY OFFICE:
18401 Burbank Boulevard
Tarzana, California 91356
(213) 345-1560

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January 25, 1983

Mr. David Attaway
Environmental Planning Specialist
Department of Recreation and Parks
200 North Main Street
Room 1290 City Hall East
Los Angeles, California 90012

Dear David:

Enclosed for your official record is a copy of Congressman Beilenson's testimony on the Draft EIR for the Barrington Recreation Center Addition, given before the Department of Recreation and Parks on January 12, 1983.

Thank you.

Sincerely,

Kay Slavkin

Kay Slavkin
Field Representative to
ANTHONY C. BEILENSON
Member of Congress

Enclosure

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ITHONY C. BEILENSON
23RD DISTRICT, CALIFORNIA

COMMITTEE:
IMITTEE ON RULES

Congress of the United States
House of Representatives
Washington, D.C. 20515

WASHINGTON OFFICE:
[illegible] Longworth Building 20515
(202) [illegible]

LOS ANGELES OFFICE:
11000 Wilshire Boulevard [illegible]
(213) [illegible]

VALLEY OFFICE:
[illegible] Burbank Boulevard
Tarzana, California [illegible]
[illegible]

January 12, 1983

Testimony on the Draft EIR for
the Barrington Recreation Center
Addition submitted by Congressman
Anthony C. Beilenson

I thank you for this opportunity to express my support for the Draft Environmental Impact Report for the Barrington Recreation Center Addition, which my office and I have reviewed.

It is my belief that the Draft EIR, which has been prepared by the Department of Recreation and Parks, is both comprehensive and thorough in its analysis of the environmental impacts which will result from this needed park addition. The issues of land use, parking, noise, traffic, and health have been thoroughly researched and addressed in this document. I am pleased to note that numerous experts have been consulted in the preparation of this Report, and that any potential environmental impacts which may result from the Park addition can be adequately mitigated.

I would also like to add that I am well aware of the legitimate concerns which were raised two years ago when a report was brought to our attention that medical waste products were buried on the proposed park-site. Therefore, two years later, it is very reassuring to know that all the concerns have been addressed and to realize the concensus within the established and recognized scientific community that no health hazard exists.

The expansion of Barrington Park will be a wonderful addition for the residents of this area. The need for additional recreation space is clear, and it is only through the cooperative efforts of the City of Los Angeles and the federal government that the children and adults in West Los Angeles will benefit from this project. To this end I strongly urge the Recreation and Parks Commissioners to approve this EIR.

Thank you very much for allowing me to express my support for this project.

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Washington, D.C. 20420

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Veterans Administration

JAN 17 1983

In Reply Refer To:

Mr. David Attaway
Environmental Planning Specialist
Department of Recreation and Parks
City of Los Angeles
200 North Main Street
Room 1290, City Hall East
Los Angeles, CA 90012

Dear Mr. Attaway:

This will constitute agency response to the Draft Environmental Impact Report (DEIR) prepared by the City of Los Angeles regarding the proposed Barrington Recreation Center Addition on property at the VA Medical Center, West Los Angeles, California.

Our comments as to suggested modifications are as follows:

1. Section II. Background (page 6): insert "for an initial term of 3 years" following the words "is to lease" on second line, and delete word "surplus" at end of second line in the first paragraph.

2. Section II. (page 7): delete word "surplus" between "land" and "property" in third paragraph, line 17.

3. Section II. (page 8): delete words "surplus" appearing in first line of third paragraph and in fifth line of fourth paragraph.

4. Section II. (page 9): delete last sentence in second paragraph and insert, in its place the following, "Presently, the City, through the Department of Recreation and Parks, has expressed formal interest in entering into a 3 year lease arrangement with the VA for use of the 12 acres of Government land for public recreational purposes."

We appreciate the opportunity to submit our comments.

Very truly yours,

Jon E. Baer

JON E. BAER
Acting Director,
Land Management Service

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UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION V
1450 MARIA LANE, SUITE 210
WALNUT CREEK, CALIFORNIA 94596

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January 11, 1983

David Attaway, Environmental Planning Specialist
Department of Recreation and Parks
200 North Main Street
Room 1290, City Hall East
Los Angeles, CA 90012

Dear Sir:

We appreciate the opportunity to comment on the Draft Environmental Impact Report, Barrington Recreation Center Addition, recently transmitted to us. Our review was limited to Section V.L. "Radiological Health and Safety," and to those appendicies related to radiological matters.

We find the Draft Environmental Impact Report accurate and complete. It confirms our own analyses which conclude that there is no radiological hazard associated with the property, and we see no reason for any restriction on future use of the property.

We have no substantive comments on the report. Some minor editorial comments are detailed on the attachment to this letter.

Sincerely,

H. E. Book, for

George S. Spencer, Director
Division of Radiological Safety and
Safeguards Programs

Enclosure:
As stated

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Editorial Comments on

Draft Environmental Impact Report

Page 48 - "terrestrial" is misspelled in the third line of the second paragraph.

Page 60 - We suggest the last part of the first paragraph be revised to read "---nor is it responsible for machine produced radiation (x-rays) or for radionuclides produced----."

Page 63 - We suggest the last sentence of the second paragraph be revised to read, "These waste materials were generated as a result of medical----." The use of the term "by-product" may be confusing, since the term "byproduct material" is also a generic term used to describe a group of radioactive materials regulated by the NRC.

Page 65 - The word "separated" is misspelled in the third subparagraph.

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OAK RIDGE NATIONAL LABORATORY

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NUCLEAR DIVISION

POST OFFICE BOX X

OAK RIDGE, TENNESSEE 37830

January 26, 1983

Mr. David Attaway, Environmental Planning Specialist
Department of Recreation and Parks
200 N. Main Street
Room 1290, City Hall East
Los Angeles, California 90012

Dear Mr. Attaway:

Enclosed are our comments on the Draft Environmental Impact Report (DEIR) of the Barrington Recreation Center Addition, Department of Recreation and Parks, City of Los Angeles. We believe that these comments are constructive and will be of some use to you.

The primary reviewer of this document was Dr. Craig A. Little. Dr. Little received a Ph.D. in radioecology from Colorado State University in 1976. Since that time, Dr. Little has been at Oak Ridge National Laboratory (ORNL) in the Technology Assessments Section of the Health and Safety Research Division, where from 1976 to 1982 he was involved in routine radiological assessments including environmental transport modeling of radionuclides. Since 1982, Dr. Little has been involved in the Remedial Action Survey and Certification Activities (RASCA) group. His responsibilities have been to plan and conduct radiological surveys of potentially contaminated sites, document results of these surveys, and assess the potential health risks to occupants of these properties. Dr. Little has previously reviewed numerous documents similar to the DEIR on the Barrington Addition and has contributed to the preparation of other environmental impact reports.

General Comments

After reviewing the radiological sections of the report, we conclude that the chances of any health risk to patrons of the proposed park is extremely small. This conclusion has been reached for several reasons: (1) the very small inventory of radiological material that was buried on the site; (2) the radiological characteristics of the inventory (relatively low energy or short half-life); (3) the large amount of cover over the buried material; and (4) the large numbers of investigators who have already examined the site. Therefore, regarding the radiological health aspects of the site, we concur with the conclusions of this report. Nevertheless, we believe that the quality of this report could be substantially improved.

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These concerns center around several facets. First, we believe that sections L.1 and L.2 should be completely reorganized. Section L.2 defines radioactive decay and radiation after section L.1 has described a variety of radiation exposures. We suggest the following outline:

I. Radioactive decay.
II. Radionuclides.
III. Natural radiation.
IV. Man-made radiation and its uses.
V. Pertinent radiation regulations.

This approach seems to be more logical than the present format.

Second, section L.1 describes "External Sources" and "Internal Sources." These are unwieldy titles and should be retitled "Sources of External Exposures" and "Sources of Internal Exposures."

Last, the section on radioactive decay seems to be confused about its audience. One one hand, the section is trying to explain such concepts as half-life while failing to adequately describe such ideas as transmutation and "induced nuclear reactions." For these reasons, we believe that this section should be rewritten for either the lay public or the educated reader, not both.

Regarding other specific sections, the glossary is not extensive enough to be particularly useful. If one is needed, it should be expanded to include such words as: transmutation, neutron activation, low-level radioactive waste, low-level radiation, liquid scintillation, alpha, beta, gamma, X-ray, bioassay, milli-, micro-, etc.

A discussion of Table 9 should be included to compare the known disposed inventory to some baseline (such as unrestricted releases to waterways, the atmosphere, etc.). Such a comparison would greatly strengthen this section.

To summarize, given the reported amounts of material buried, and the depth of burial, it seems unlikely that any health risk might ensue. This conclusion is, of course, qualified by assuming that no extensive, unknown inventory has been omitted from the analysis. It should be noted that this conclusion pertains only to the radiological aspects of the DEIR.

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Specific Comments

Page	Comment
48, L.1.a.	Under <u>external sources</u>, alpha and beta radiation are not mentioned. Although they are not important from an external exposure standpoint, perhaps they should be mentioned.
48, L.1.a.	Cosmic radiation includes more than hydrogen nuclei. Further, they may or may not collide with matter while passing through the earth or its atmosphere.
49, Paragraph 1, line 5	All things are exposed to background radiation, not just "biological life forms."
49, Paragraph 2	Is tritium an important source of "external ionizing radiation?" I think not; it is certainly important internally, as is carbon-14.
49, Paragraph 3	Why are there separate sections for "External Sources" and "Terrestrial Radiation?" These groups are not completely mutually exclusive.
50, Paragraph 2	Same comment as 49, Paragraph 3, but with regard to "Internal Sources."
50, Paragraph 3	We disagree that "the primary mode of entry . . . is through the food chain." From a risk standpoint, direct inhalation is often more important as a critical pathway.
51, Paragraph 1	Foliar depositions may lead to contamination of <u>meat</u> as well as milk.
51, Paragraph 3	It would be better to say that plants have an intrinsic ability to absorb elements, including radionuclides, through their roots. Some, such as ^{226}Ra (which is chemically similar to a required nutrient, Ca), are taken up to a larger extent than others.

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Page	Comment
52, Paragraph 3	Regarding tritium (^3H), it is safe to say that it finds its way into all water, not only by liquid forms, but as water vapor. Therefore, more than the hydrologic cycle is involved in tritium's presence in plants and animals.
54, L.2.a.	Why include the word "spontaneous;" spontaneous as opposed to what? Also, use of the word "induced" later in the paragraph is not clear; especially because the term is undefined. Additionally, the term "transmutations" is undefined. What is the meaning of "geologically short lifetimes . . . ?" Is this statement intended to mean "short half-lives relative to geologic time?"
54, Last sentence	All daughters are <u>not</u> unstable, and not all radioactive decay occurs in decay chains.
57, Paragraph 3	How does this paragraph fit in with the previous one? Which of the three branches of nuclear medicine is the subject of discussion?
58, Paragraph 3	The reference to Table 8 seems out of place and gratuitous.
65, Paragraph 2	Concerning the trench depth at Brentwood, how much overburden (cover) was placed over the materials buried in the trenches that were 6 to 8 feet long?
69, Paragraph 3, line 7	The term "minute quantities" is really meaningless in this context. List the lower limit of detection for some nuclide or omit the phrase. Also, omit the word "randomly;" perhaps substitute another word such as "thoroughly," if appropriate.
72, Paragraph 2	In the last sentence, delete the parenthetic phrase; even the extremely long-lived nuclides will have decayed.

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Page	Comment
73, Paragraph 2	The units of the variables should be defined. The symbol "λ" is usually used to mean "ln 2/half-life," not half-life alone. The equation has a typographical error, "In 2" should be "ln 2."

If we may be of further assistance, or provide greater detail in our comments, please let us know. Again, we hope these comments will be useful, and feel free to contact us at any time.

Sincerely,

Barry A. Berven

B. A. Berven, Ph.D
RASCA Program Manager, ORNL

BAB:CAL:rrl

cc: S. V. Kaye
C. A. Little
P. S. Rohwer

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FORM GEN. 160 (Rev. 6-80)

CITY OF LOS ANGELES

INTER-DEPARTMENTAL CORRESPONDENCE

33

Date: FEB - 7 1983

To: James E. Hadaway, General Manager
Department of Recreation and Parks
Attn: David Attaway

From: Phil King
City Engineer

By: B. W. Riley
B. W. Riley, Division Engineer
Project Management Division

Subject: BARRINGTON RECREATION CENTER ADDITION--DRAFT ENVIRONMENTAL IMPACT REPORT

The above referenced Draft Environmental Impact Report (EIR) has been reviewed and the following comment is offered to assist you in the preparation of the Final EIR:

> Dedication of 13 feet along Barrington Avenue will be necessary in order to upgrade the roadway to Secondary Highway Standards.

BWR/MMR:vg

cc: Joseph M. Russell, District Engineer
West Los Angeles District

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LAW OFFICES OF
FRIEMAN, ROSENFELD & ZIMMERMAN
A PROFESSIONAL CORPORATION

GARY L. ZIMMERMAN
RONALD ALLAN ROSENFELD
ALAN R. FRIEMAN (1935-1982)
JEFFREY F. GERSH
GARY M. SCHNEIDER
MARLENE A. KOVAR

SUITE 201 - EAST TOWER
9100 WILSHIRE BOULEVARD
BEVERLY HILLS, CALIFORNIA 90212
TELEPHONE (213) 279-7560

December 29, 1982

David Attaway
Department of Recreation
and Parks
Room 1290
200 North Main Street
Los Angeles, CA 90012

Re: Barrington Recreation Center

Dear Mr. Attaway:

A preliminary site plan for the Barrington Recreation Center was printed in the Thursday, December 30, 1982 edition of the Brentwood Westwood Press. That plan indicated two Pony League baseball diamonds with 80-foot base pads.

In my opinion it would be a great mistake to build two baseball diamonds that were not adaptable to 90-foot regulation base paths. You may not be aware of the fact that Pony League in the West Los Angeles area has been out of existence for sometime. Other than "park" leagues, the Little League is the major organization that serves the community. In the 13- to 15-year-old age group, the children participate in the Senior League Division of Little League. The Senior League requires 90-foot base paths. This is the same requirement for Babe Ruth Leagues.

At the present time the Senior League plays its games at the Westwood Park field. You may recall there were considerable objections expressed by those of us involved in the Little League Program regarding the backstops that were installed in the Westwood Park field. If more appropriate backstops were installed at the Barrington Recreation Center, those diamonds may be more appropriate for all types of advanced baseball. This would better serve the baseball needs of the community.

Very truly yours,

RONALD ROSENFELD

RR:dl
cc: Dave Ruderman
cc: Gary Plotkin

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Westwood National Little League

Serving the youth of Westwood for more than a quarter century

35

P. O. BOX 24365 VILLAGE STATION • LOS ANGELES, CALIFORNIA 90024 • Field telephone 479-9494

January 4, 1983

Mr. David Attaway
Department of Recreation
and Parks
Room 1290
200 North Main Street
Los Angeles, California 90012

Re: Barrington Recreation Center

Dear Mr. Attaway:

The undersigned is president of West Los Angeles Senior League and as such, I have had an opportunity to review the Brentwood-Westwood Press article relating to the West Los Angeles proposed recreation area expansion.

I concur with the letter sent to you by Ronald Rosenfeld that the fields should be in accordance with the requirements of Senior League Division of Little League and Babe Ruth League and not Pony League.

By using the fields in the manner suggested, they will be more versatile, can be used by more recreational groups, including Senior League, Babe Ruth League, as well as the local high schools and universities.

Very truly yours,

Gary Alan Plotkin

GARY A. PLOTKIN

GAP:dh
cc: Ronald Rosenfeld
Dave Ruderman

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COLLEGE OF NATURAL AND AGRICULTURAL SCIENCES
CITRUS RESEARCH CENTER AND
AGRICULTURAL EXPERIMENT STATION
DEPARTMENT OF SOIL AND ENVIRONMENTAL SCIENCES

RIVERSIDE, CALIFORNIA 92521

March 10, 1983

Mr. David Attaway
Department of Recreation
and Park
200 North Main Street
Room 1290
City Hall East
Los Angeles, CA 90012

Dear Dave,

This letter is in reference to the proposed park site near the VA Hospital in West Los Angeles. The most critical question concerning the advisability of proceeding with the park development is the hazard associated with wastes which were buried on part of the proposed site. From the records obtained on materials which were buried, it would appear that the probability of hazard being very low. The organic solvents disposed are rather rapidly degraded in soil systems and would not be expected to be dissipated into the atmosphere. The radioactive materials either have a short half life or are beta and alpha emitters which have extremely low health hazards. I recognize that there is always concern about the possibility of other radioactive substances being buried in the area because of either incomplete records or other wastes being disposed of that were from other sources. The key question is not so much what is buried there but does it pose any threat to individuals using the park in the future. Let us consider a worse case scenario whereby some long lived gamma emitting radioactive substances were buried at the site at some time. The burial of such compounds does not automatically create a health risk for park users. The critical question is whether park users would be exposed to gamma radiation that could impair health. The gamma radiation would be attenuated by the soil material overlying the waste. The present health hazard can be determined by monitoring the area for gamma radiation. I understand this has been done and that the radiation was not significantly different than background. This indicates either one of two conditions. There are no gamma radiating waste materials buried on the site or if they are, there is sufficient attenuation by the soil to eliminate radiation hazard at the soil surface. In either case, there is no present threat. The second question is if there are hazardous waste buried, will they migrate toward the surface and provide a health hazard in the future. The main mechanism of moving compound significant distances in soil systems is to transport by water. Water flow through soils responds to and flows in the direction of hydraulic head gradients. Under irrigated conditions designed to provide vegetation the net hydraulic gradient is downward rather than upward. In other words,

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if there is going to be any significant movement of any buried compounds, it will be downward rather than toward the surface. Therefore, the probability of varied materials migrating toward the surface is extremely small under the proposed conditions. It is my professional judgment that future health hazards associated with movement of any buried compounds to the soil surface have a very low probability of occurrence.

I can best sum up my opinions by stating that I would not be concerned about using the park if it is developed or recommending that my children or grandchilren use the park. The probabilities of health hazard are simply too low for me to be concerned.

Sincerely yours,

J. Letey

J. Letey
Professor of Soil Physics

JL:mds

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UNIVERSITY OF CALIFORNIA, RIVERSIDE

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DEPARTMENT OF SOIL AND ENVIRONMENTAL SCIENCES

RIVERSIDE, CALIFORNIA 92521

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March 30, 1983

David Attaway
Environmental Planning Specialist
Department of Recreation & Parks
200 N. Main St., Room 1290,
City Hall East
Los Angeles, CA 90012

Dear Mr. Attaway:

Per our recent discussion on the fate of organic solvents such as toluene, xylene, 1,4-dioxane and similar low-molecular weight organic compounds buried in soil, I would have no concern for these compounds ever reaching the soil surface. Compounds such as this would be subject to rapid degradation processes, particularly microbial degradation processes, in the soil.

I have devoted much of my professional career to the study of the fate and behavior of synthetic organic compounds in soils and have published numerous research articles on the subject. In addition, I teach a course in the Environmental Sciences program at the University of California, Riverside, on the transport of environmental contaminants in soils. As a result of my experience with organic compounds in soils it is clear that most organic compounds are rapidly decomposed or transformed to naturally-occurring compounds in soil. The types of chemicals that have been of concern for persistence and movement in soil are generally the halogenated organic compounds; that is, compounds containing either fluorine, chlorine, or bromine. In the particular system you described, where the compounds have been buried several feet below the soil surface, the compounds would be present at relatively high concentrations at the actual site of burial and would begin to move by diffusion towards the soil surface. As they did so, they would become diluted in the soil and be subject to microbial attack by soil organisms. As the compounds diffused closer to the soil surface, where biological activity is greatest, the rate of degradation would increase rapidly. Once the compounds diffuse away from the point of burial they would not persist for more than a few days to a few weeks and would be degraded before reaching the soil surface.

If I can be of further assistance, please feel free to contact me.

Sincerely,

Walter J. Farmer
Professor of Soil Science

WJF/lsd

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RESPONSES

BIOMEDICAL WASTE DISPOSAL AND PUBLIC HEALTH

1) What types of waste were buried at the Veteran Administration's (West Los Angeles) former land disposal site?

RESPONSE: Existing disposal records, covering the period 1960-1968, indicates the VA buried biomedical wastes. These wastes were the end-product of medical research and diagnostic/therapeutic radiology, and can be categorized as follows:

- 0 Dry Solids: syringes, vials, test tubes and other disposable labware, absorbent papers, gloves, planchets, etc.
- 0 Biological Wastes: predominantly carcasses of small laboratory animals, also including animal tissues, bedding and excreta.
- 0 Liquid Scintillation Counting Wastes: includes counting vials (20-25 ml) and the liquid scintillation media, comprised of organic solvents such as toluene or 1,4-dioxane.

Because radionuclides are used in the course of medical research and diagnostic/therapeutic radiology - as tracers of metabolic processes and for treatment of human diseases - the biomedical wastes are generally contaminated with low levels of radioactivity.

The majority of radionuclides buried by the VA consisted of short-lived materials such as iodine-131 and phosphorous-32 (See Table 9, p. 68).

Liquid scintillation media and animal carcasses, both containing tracer quantities of hydrogen-3 and carbon-14, constituted the largest volume of the VA's radioactive biomedical wastes.

2) The VA's on-site land disposal activities occurred from the early 1950's up till 1968. With records available only for 1960-1968, how does one go about assessing the nature of the pre-1960 waste burials?

RESPONSE: Because there are no disposal records in the VA's possession covering on-site land burials during the 1950's, no definite statements can be made as to precisely what materials were buried and in what quantities.

However, given the nature of the VA's diagnostic, therapeutic, and research activities, a reasonable assumption can be made that biomedical wastes documented in the 1960-1968 disposal records are representative of materials buried during the 1950's. It is important to note though, that due to such factors as radionuclide availability and usage; alternative disposal practices; and the practical application of liquid scintillation counting techniques, the quantities of waste buried during the 1950's would have been considerably smaller than those buried during the 1960's. These factors are enumerated below.

0 Radionuclide Availability

During the early 1950's, radionuclides were prohibitively expense to purchase, and there was a very limited inventory available to a large number of qualified users - in both domestic and foreign markets (See p. 76 of Final EIR: Pre-1960 Burials).

0 Radionuclide Usage

The use of radionuclides for diagnostic, therapeutic and medical research purposes usually involves microcurie to low-millicurie amounts of radioactivity. Therefore, the quantity of radionuclides buried on-site would, likewise, be extremely small-even smaller if one accounts for radioactive decay.

0 Alternative Disposal Practices

During the 1950's, ocean disposal was an accepted practice for disposing of radioactive wastes (this practice was banned in the early 1960's). Therefore, as an alternative to on-site land burial, the VA undoubtedly used ocean disposal at times to dispose of their radioactive biomedical wastes.

0 Liquid Scintillation Counting Technology

Liquid scintillation counting - the primary source of chemical wastes buried by the VA during the period 1960-1968 - did not become a practical biological instrumentation technique until the early 1960's (approximately 1960-1963)*. Prior to the 1960's, the VA used geiger counters or proportional counters to count radioactivity in biological samples - processes that generated primarily dry solid wastes. Therefore, liquid scintillation counting wastes would not have been part of the VA's waste stream during the 1950's.

*Packard; Beckman Instruments

3) Were infectious and/or pathogenic wastes buried at the VA's former biomedical waste disposal site?

RESPONSE: Infectious and pathogenic wastes were not buried in the VA's former biomedical waste disposal site, but rather, were disposed of in accordance with the following environmental health practices: infectious wastes were sterilized in a steam autoclave and then transported to an off-site licensed disposal facility; pathogenic waste materials were incinerated in an on-site oven.

4) Were liquid chemical wastes buried at the VA's biomedical waste disposal site?

RESPONSE: Yes. Based on existing disposal records (1960-1968), waste liquid scintillation media (LSM) - an end-product of liquid scintillation counting - was the primary type of chemical waste

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buried. The LSM was comprised of a base organic solvent such as toluene, 1,4-dioxane, xylene, 1,2,4-trimethylbenzene, or benzene. These non-halogenated compounds *are not persistent in the soil environment. Rather, they are detoxified and reduced to simple by-products through microbial degradation.

Because of its high scintillation efficiency and availability in a high purity form at a moderate cost, toluene was the primary solvent used in liquid scintillation counting. Hence, it constituted the largest volume of any scintillation solvents buried (a few hundred gallons over an eight year period).

With respect to the burial of liquid chemical wastes prior to 1960, the quantities would have been very small. This is due to the fact that liquid scintillation counting didn't come into use as a viable instrumentation technique until the early 1960's. Before that time radioactive biological samples were assayed with geiger counters or proportional counters - processes that generated primarily dry solid wastes. These dry wastes were generally stored until any radioactivity decayed to background levels. The wastes were then buried at the VA's biomedical waste disposal site or hauled away to an off-site disposal facility.

*Chemical compounds that contain no chlorine functional groups on its structure. Chlorinated-compounds are typical of highly persistent chemicals such as pesticides (i.e., DDT).

5) The advent of nuclear reactors occurred during the 1940's. Since the first commercial land disposal facility for burial of radioactive wastes was not available until September 1962 (Beatty, Nevada), did research institutions in the greater Los Angeles area - such as UCLA and Rockwell International's Energy Systems Group (formerly Atomics International) - make use of the VA's biomedical waste disposal area for the burial of nuclear wastes?*

RESPONSE: No. The VA is a medical facility whose business is health care and not nuclear waste disposal. All available evidence indicates that the only types of wastes buried on-site at the VA (West Los Angeles) were demolition debris from the old Wadsworth Hospital, and biomedical wastes produced from diagnostic, therapeutic and medical research activities. The waste materials included small quantities of radionuclides purchased by medical researchers from UCLA (with UCLA funds), and used in conjunction with research conducted at the VA's medical/clinical laboratories.

Prior to the development of commercial land burial facilities in the 1960's and early 1970's: Beatty, Nevada (1962); Kentucky (1962); New York (1963); Washington (1965); Illinois (1967); and South Carolina (1971), radioactive wastes generated by institutions such as UCLA and Atomics International, were disposed of in accordance with the accepted practice of the time: disposal in designated areas of the Pacific Ocean. In June 1960, the Atomic Energy Commission (AEC) placed a moratorium on the issuance of new licenses for ocean disposal. During the time until commercial radioactive waste disposal facilities could be developed, the AEC's Oak Ridge National Laboratory in Tennessee and the National Reactor Testing Station in Idaho were made available for radioactive waste disposal.

*Nuclear wastes pertains to fissionable materials (i.e. strontium-90, cesium-137), plutonium and other transuranic wastes produced during the operation of nuclear reactors.

6) Can radionuclides that remain buried in the VA's former biomedical waste disposal site be brought to the surface through capillarity (the upward movement of water in the soil)?

RESPONSE: No. It is possible for one to devise a scenario where groundwater - under the influence of capillary forces - is drawn upward through several feet of soil, thereby serving as the transport medium for carrying weakly-absorbed radionuclides to the earth's surface. In reality, the phenomenon of capillarity plays no significant role in saturated or unsaturated soil water movement. Dependent on such soil characteristics as pore geometry, soil texture and structure, etc., the upward movement of water in soils generally achieves a height of rise on the order of only a few millimeters to several inches. In many cases, capillarity is prevented due to the tortuous nature and variability in the size of soil pores, and because of entrapped air in soil pores. In short, capillarity is not going to cause the mass movement of water upward through the soil*

The dominant forces in soil water movement are gravity and the natural hydraulic gradient. These two forces alone dictate that water flows downward rather than upward through soils. Therefore, with respect to the transport of radionuclides in soils, a more appropriate scenario - simplified as it may be - is as follows: water reaching the soil surface from precipitation, lawn irrigation systems, etc., would percolate downward, carrying any weakly-absorbed radionuclides deeper into the soil.

*Dr. J. Letey, Professor of Soil Physics - University of California, Riverside, Department of Soil and Environmental Sciences.

7) Will grading activities (i.e., cutting) during the site preparation phase of the project, or the staging of sports events and other community activities, disturb any remaining biomedical wastes?

RESPONSE: The probability of unearthing any biomedical wastes is so low as to be virtually non-existant, due to the following reasons:

1) Major grading modifications on the project site will be accomplished through the importation and placement of several thousand cubic yards of fill material. Any required cutting will be restricted primarily to the northeastern portion of the site - away from the VA's former biomedical waste disposal area, located at the southeastern corner of the proposed project's boundaries.

2) Several feet of overburden lies atop the former biomedical waste disposal area, including tons of demolition debris (i.e., concrete rubble and bricks) from the old Wadsworth Hospital. Anyone desiring to get at any of the remaining biomedical wastes would require the use of power excavation equipment.

8) The tests that were done to assess the public health status of the VA's former biomedical waste disposal site were inadequate and unscientific. What is needed is a more extensive environmental monitoring program consisting of the analysis of core samples from varying levels of depth, as well as groundwater sampling, to determine precisely what radiological and chemical materials were buried.

RESPONSE: The VA's former biomedical waste disposal site lies near the southeastern boundary of the proposed Barrington Recreation Center Addition. Considering the nature and scope of the project, a reasonable assumption can be made that the only possible health hazard would be from chronic exposure to long-lived medical radionuclides (i.e., tritium and carbon-14) on or near the soil surface (within the first few inches of soil). Since the radionuclides buried were predominately beta-emitters, external radiation exposure is not a public health concern, whereas internal exposure, resulting from the inhalation or ingestion of airborne radionuclides, would be.

The tests that have been conducted (i.e., radiological survey; soil and plant radioassays) were performed by qualified scientists and radiation specialists. The specific intent of these tests were to determine whether a hazard actually exists, and if so, what additional tests would be required.

Radiological testing for surficial contamination from alpha, beta and/or gamma-emitting materials revealed no radiation above natural background levels (Appendices C and E).

Analytical tests were also performed to determine the radiological characteristics of the groundwater. A few grab samples were taken from the one active well on the VA grounds, and from four wells in nearby Santa Monica. The samples were tested for gross alpha activitiy, gross beta activity, and carbon-14 and tritium activity, with the results indicating radioactivity levels well below the maximum contamination limits (MCL) set forth in the Safe Drinking Water Act (Appendix B). As far as its relationship to the proposed project, groundwater quality is not an issue of concern since it will not be used for drinking or irrigation purposes.

Moreover, any physical attempts to determine precisely what chemical or radiological materials were buried 15-30 years ago are unnecessary and an exercise in futility. Radiological materials have completely decayed with the exception of small quantities of long-lived radionuclides - specifically tritium and carbon-14. Organic solvents, such as those used in liquid scintillation counting (i.e., toluene, benzene, xylene), have completely volatilized, or through the process of biodegradation, have been transformed to simpler, innocuous products in the soil environment. The environmental fate of organic solvents in soils - particularly aromatic hydrocarbons (i.e., toluene and benzene) - is well documented in the scientific literature.

In sum, long-term environmental monitoring is not justified in light of test results, the frequency of past disposal activities (an average of 7 burials/year for the period 1960-1968), the types and quantities of wastes involved, and the number of years that have elapsed since biomedical wastes were last buried. Furthermore, among those who reviewed the DEIR who are actively involved in the areas of hazardous waste management and radiological health and safety: State and local agencies (i.e., Calif. Dept. of Health Services), scientists, health physicists, etc., the overriding consensus was that the development of the proposed recreation facility would not create any undue health risks to the public.

9) The radiological survey conducted by the Nuclear Regulatory Commission (NRC) consisted of only forty-five minutes of measurements, and not six hours as indicated in the NRC radiological survey (Appendix C).

RESPONSE: There is some misunderstanding as to what the six hours of inspection time, as indicated in the NRC radiological report, represents. The six hours represents total man-hours, which not only includes the actual time it took to take the measurements, but also pre-inspection preparation, report writing and other administrative requirements, etc. Therefore, the six hours was derived as follows: 2 man-hours/inspector x 3 inspectors (out of the five NRC representatives who participated in the survey, three were certified inspectors) = six man-hours.

TRAFFIC CIRCULATION AND PARKING

1) The traffic study that was completed for the proposed Barrington Recreation Center Addition is inadequate. Therefore, a new study is needed.

RESPONSE: The traffic study and analyses for the proposed Barrington Recreation Center Addition was prepared by a qualified consultant: Crain and Associates, in accordance with established traffic engineering methodology. All assumptions, supporting data (i.e., traffic volume counts; turning movement data), and the Intersection Capacity Utilization (ICU) analysis were reviewed and approved by the City of Los Angeles Department of Transportation.

2) As designed, the only vehicular access point into the proposed recreation facility is off Barrington Avenue. In order to alleviate some of the traffic circulation problems on Barrington Avenue and Barrington Place, an alternate entry/exit point should be provided.

RESPONSE: The design is consistent with the fact that Barrington Avenue is the only street abutting the proposed recreation facility. The use of Bringham Avenue as a possible entry/exit route was explored. However, this alternative was declared infeasible by the Veterans Administration due to security-related problems.

3) With respect to parking, the traffic report did not take into account the business district (Brentwood Village) north of the proposed recreation facility. Shoppers will utilize the Barrington Recreation Center Addition parking area, thereby reducing the number of spaces available for facility users and neighborhood residents.

RESPONSE: Presently, merchants and shoppers use the existing parking area just east of the Brentwood Village and north of the U. S. Post Office, and will continue to do so. However, if parking conflicts develop as a result of shoppers using the recreation facility parking area, the Department of Recreation and Parks will encourage the use of parking restrictions and/or enforcement measures.

9-17-1999 12:31PM FROM

Brentwood School
R 2
WO. 4965-E

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
75 Hawthorne Street
San Francisco, CA 94105-3901

Mr. Kenneth J. Clark
U.S. Veterans Administration Medical Center
West Los Angeles
11310 Wilshire Boulevard
Los Angeles, California 90073

RE: U.S. Veterans Administration Medical Center – West Los Angeles
EPA ID No.: CA2360030033

Dear Mr. Clark:

Enclosed are the results of our review of the documentation that has been reviewed by EPA for the U.S. Veterans Administration Medical Center. The purpose of our review is twofold: 1) to determine if the facility meets CERCLA requirements as defined in Section 120; and 2) to determine if site conditions at the facility pose a significant threat to human health and the environment such that it warrants placement on the National Priorities List (NPL).

You have submitted enough information for EPA to certify that the PA requirements have been met for the facility. This decision will be entered into the CERCLIS database. Based on the submitted information, we were able to make a decision of no further action warranted at this time. You should be aware that if additional information is provided to EPA that affects the no further action decision, this site may be reevaluated. A copy of our evaluation is enclosed.

So what

Should you have any questions pertaining to this matter, please feel free to contact Philip Armstrong of the Planning and Assessment Section at (415) 744-2349.

Call this guy

Sincerely,

Betsy Curnow

Betsy Curnow, Chief
Planning and Assessment Section

Enclosure

(?) (?) Call These guys

cc: Mr. H.R. Maar, Jr., Veterans Administration Medical Center
Mr. Kenneth J. Clark, Department of Veterans Affairs Medical Center
Miguel Monrroy, DTSC
Jim Ross, RWQCB

Printed on Recycled Paper

10/15/99 14:23 TX/RX NO.3413 P.011

77-271

1.0 Introduction

The U.S. Environmental Protection Agency (EPA), Region IX, under authority of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) and the Superfund Amendments and Reauthorization Act of 1986 (SARA), has tasked URS Consultants, Inc. to conduct a review of Federal Facility Preliminary Assessment (PA) documentation at the Veterans Administration Medical Center at West Los Angeles, Los Angeles County, California.

The Veterans Administration Medical Center, West Los Angeles, was identified as a potential hazardous waste site and entered into the Comprehensive Environmental Response Compensation, and Liability Information System (CERCLIS) on May 19, 1989 (1). It was listed in the Federal Agency Hazardous Waste Compliance Docket of November 18, 1993 (2). PA-equivalent documentation was completed by the Veterans Administration Medical Center on March 28, 1995 (3). The purpose of a PA is to review existing information on the site and its environs to assess the threat(s), if any, posed to public health, welfare, or the environment, and to determine if further investigation under CERCLA/SARA is warranted. As a part of the PA process, URS has been tasked by the EPA to evaluate the site using the EPA's Hazard Ranking System (HRS) criteria. The HRS assesses the relative threat associated with actual or potential releases of hazardous substances from the site. It is the principal mechanism the EPA uses to place sites on the National Priorities List (NPL). The NPL identifies sites at which the EPA may conduct remedial response actions. This report is the result of URS's evaluation of the submitted data.

1.1 Apparent Problem

The Veterans Administration Medical Center, West Los Angeles (VAMC WLA), generates low-level radioactive wastes. Radionuclide tracers and radiopharmaceutical wastes are generated as a result of medical research and medical diagnostic and therapeutic applications (3). The VAMC WLA conducted on-site land burials of low-level radioactive biomedical wastes during the period of the early 1950s up to 1968. Buried biomedical wastes included small animal carcasses, and approximately 400 gallons of toluene and 1,4-dioxane, components of liquid scintillation solvents. The wastes were buried at a depth of 6 to 8 feet below ground surface (bgs) on approximately 2 acres of designated undeveloped property located in the northwestern portion of the site (4). The materials were buried in three trenches and then covered with compacted earth. The wastes were either placed directly into the soil to promote degradation and dispersal, or were placed into a waste receptacle such as a polyethylene bag or laboratory safety canister prior to burial. Results of on- and off-site groundwater well samples, taken in April 1981 by the Santa Monica Water Company, indicated that radioactivity levels did not exceed established health-based benchmarks (4). Soil and plant sampling events were conducted in April 1982 and April 1983 by the University of California, Los Angeles, Laboratory of Biomedical and Environmental Sciences (UCLA). Results of the soil and plant sampling indicated that no radiation above natural background levels was present (4).

Tons of soil, concrete debris, and reinforcement steel from demolished Veterans Administration (VA) hospital facilities in Los Angeles, resulting from the San Fernando earthquake of February 1971, have been dumped and spread over the area of the former biomedical waste disposal site. This has resulted in placement of an additional 15 to 20 feet of soil over the former burial site, making the effective burial depth of the radioactive wastes 20 to 30 feet bgs (4).

2.0 Site Description

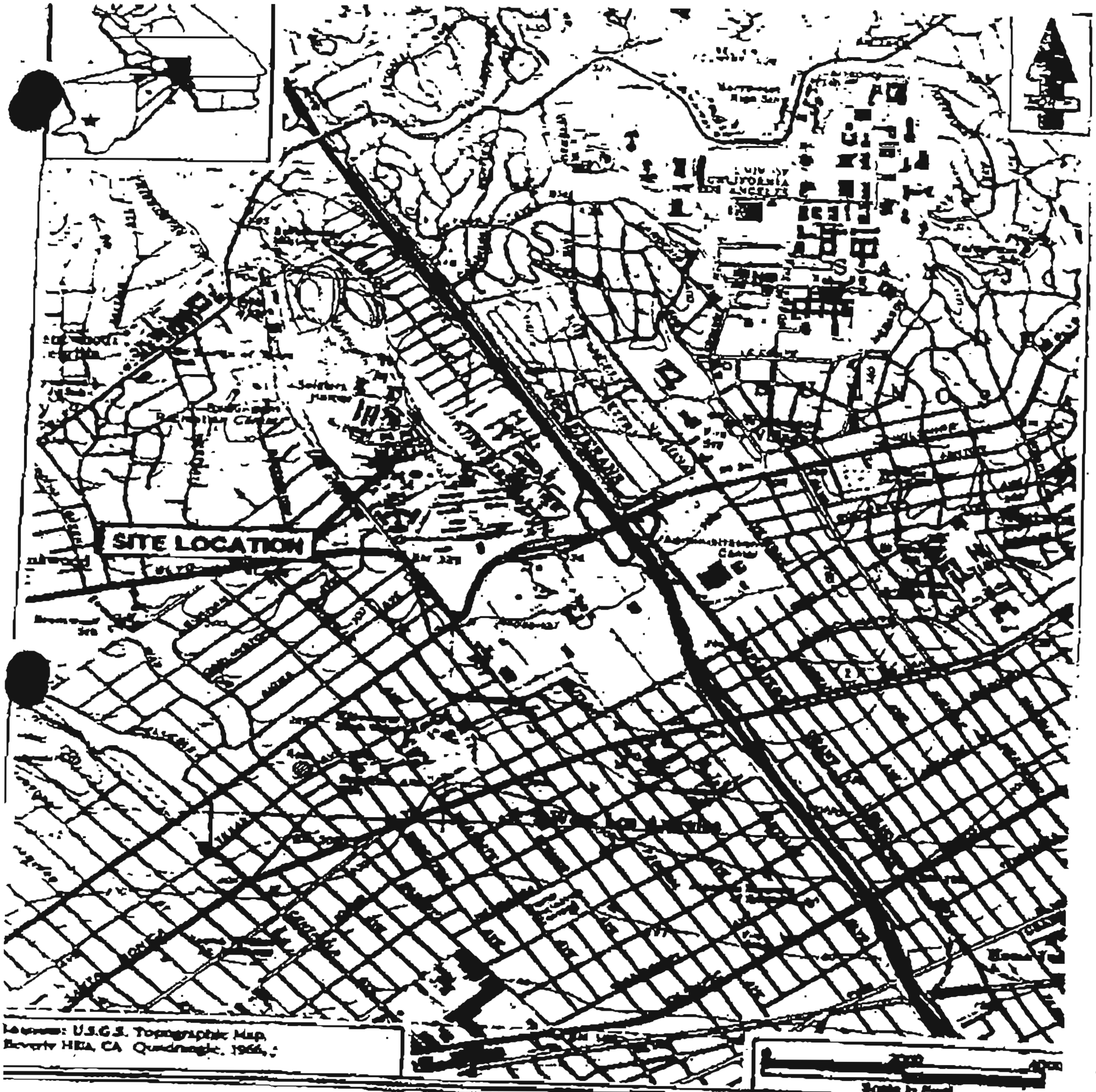
The VAMC site is located in West Los Angeles south of the Santa Monica Mountains between Sunset Boulevard and Ohio Avenue. The site is located between the communities of Westwood to the east, and Brentwood to the west. UCLA is located approximately 0.50 mile to the northeast of the VAMC WLA site. Wilshire Boulevard truncates the lower one-third portion of the site. Interstate Highway 405 is located to the immediate east of the site, and San Vicente Boulevard is the western boundary of the site. The geographical coordinates of the site are Latitude 34° 03' 35" North and Longitude 118° 27' 42" West, San Bernardino Baseline and Meridian (see Figure 1, Site Location Map) (5).

The VAMC WLA is situated upon 431.2 acres with 149 buildings, and is the largest and most complex medical facility in the Department of Veterans Affairs (VA) (see Figure 2, Site Facility Map). Building 342, the hazardous waste storage building for hazardous waste other than those wastes contaminated by radiation, is located in the western central portion of the site near San Vicente Boulevard. Low-level radiation waste is stored nearby in Building 340. The former burial area for radioactive wastes is located in the northwestern portion of the site, part of which is leased out as the Brentwood Park complex, a community outdoor recreational facility (4). The burial area consisted of three trenches, designated A, B, and C. A portion of trench B overlaps the southeastern corner of the Brentwood Park complex (4).

3.0 Operational History and Waste Characteristics

The United States Congress passed an act in 1887, establishing the Pacific Branch of the National Home for Disabled Volunteer Soldiers (Home) in Los Angeles, California. A 300-acre site was chosen. Over the next 3 years, the original 300-acre site was expanded to 600 acres. The site currently occupies 431.2 acres. The Home was a self-sufficient community with clear-water springs, orchards, grainfields, and livestock. Over time, wars brought more veterans to the Home, increasing the need for medical care. In 1927, the main hospital for the Home was opened, and was named the James Wadsworth Hospital (4). By the early 1960s, there were over 4,500 patients in Wadsworth Hospital, in addition to over 2,000 patients in the Brentwood Neuropsychiatric Hospital, also located on site grounds (6).

The February 9, 1971 earthquake struck Los Angeles, causing seismic evaluations to be conducted to determine if the Wadsworth Medical Center met current earthquake standards. In July 1973, ground-breaking ceremonies were held for a new, 832-bed, seismically safe medical center to replace the old building. The medical center was completed in March 1977. There are approximately 1,450 operational beds in the facility; 496 medical/surgical beds, 421 psychiatric beds, 300 domiciliary beds, and 240 nursing home care unit beds. The facility treats approximately 35,000 thousand hospital patients annually and conducts approximately 400,000 outpatient visits (6).



Source: U.S.G.S. Topographic Map, Beverly Hills, CA Quadrangle, 1966.

URS Consultants
100 California Street
San Francisco, CA 94111
May 24, 1995

Site Location Map
U.S. Veterans Administration Medical Center
West Los Angeles, California

FIGURE 1

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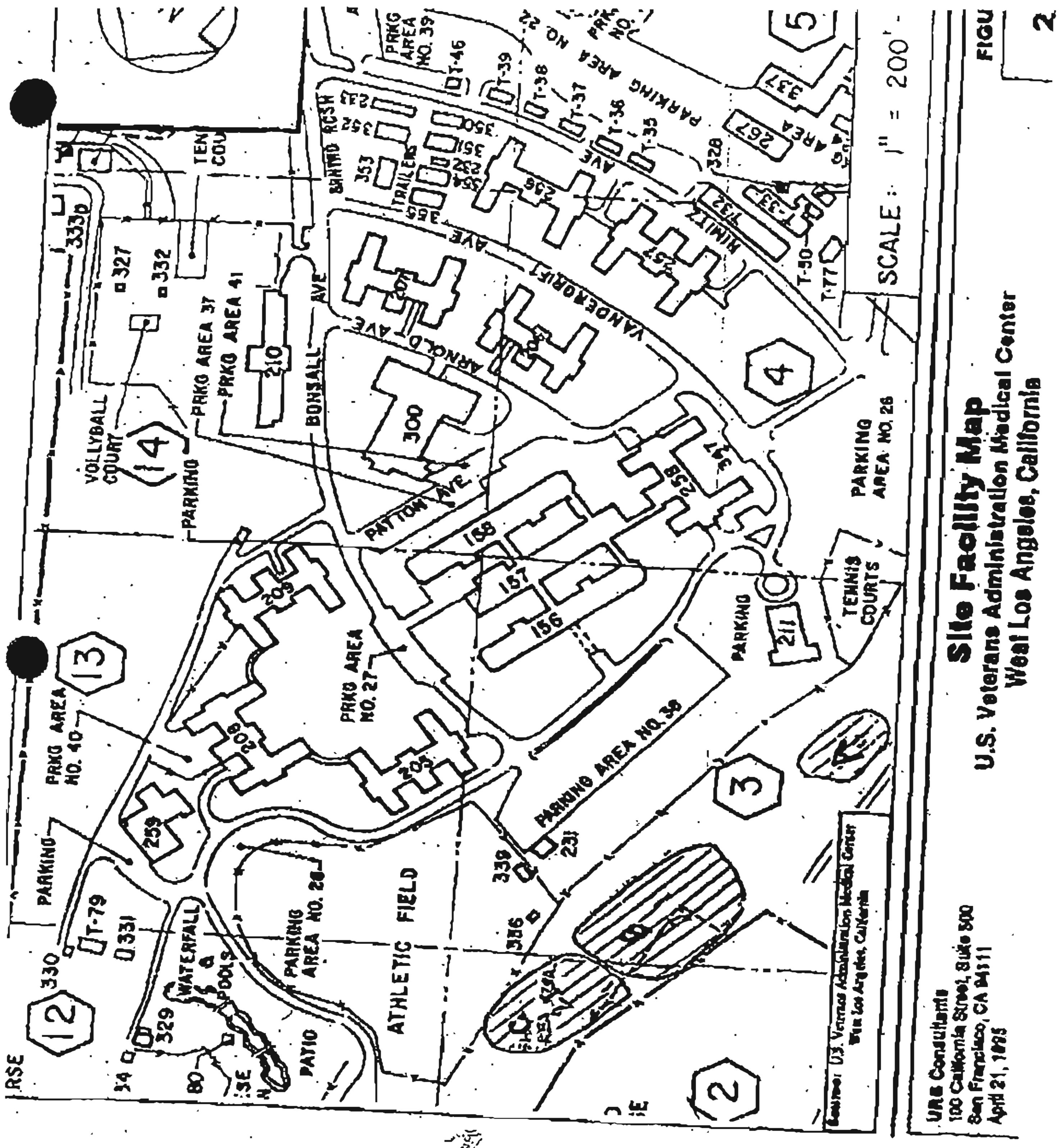
FIGURE 2
Site Facility Map
U.S. Veterans Administration Medical Center
West Los Angeles, California
URS Consultants
100 California Street, Suite 500
San Francisco, CA 94111
April 21, 1995
Source: U.S. Veterans Administration Medical Center
West Los Angeles, California
SCALE: 1" = 200'
VANDERGRIFT AVE
ARNOLD AVE
BONSALL AVE
PATTON AVE
WIMITT AVE
PARKING AREA NO. 22
PRKG AREA NO. 39
PRKG AREA 37
PRKG AREA 41
PRKG AREA NO. 27
PRKG AREA NO. 40
PARKING AREA NO. 36
PARKING AREA NO. 26
PARKING AREA NO. 28
VOLLYBALL COURT
TENNIS COURTS
ATHLETIC FIELD
WATERFALL & POOLS
PATIO
TRAILERS
PARKING
300
210
205
208
209
256
257
258
259
267
337
156
157
158
211
231
339
336
330
331
329
327
332
T-79
T-30
T-77
T-46
T-39
T-38
T-37
T-36
T-35
2
3
4
5
12
13
14

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Commencing in the early 1950s, and continuing until 1968, the VAMC WLA site used approximately 2 acres of undeveloped land in the northwestern section of the site property for the burial of radioactive biomedical wastes. These waste materials were generated as a result of medical research programs and medical diagnostic and therapeutic practices. Radionuclides have been used extensively in biomedical research, providing an effective and practical approach to studying the etiology and genesis of human diseases that cannot be achieved with equal effectiveness by any other means. Radiopharmaceuticals are almost ideal diagnostic tools because they do not alter body physiology, and permit external monitoring with minimal instrumentation. They are used for physiological function studies to study the function of the thyroid and kidneys, for the radionuclide imaging procedure, and for therapeutic techniques. Tritium and carbon-14 are two commonly used radionuclides (4).

The VAMC WLA averaged approximately seven burial events of radioactive wastes per year (for the period 1960-1968). The materials were buried in three trenches, designated A, B, and C, at a depth of 6 to 8 feet bgs, and then covered with well-compacted earth. None of the trenches was lined. A portion of Trench B of the burial site is currently located on land leased by the VAMC WLA to the Brentwood Park complex (7). At the time these disposal practices were occurring, there were no pre-disposal packaging requirements; the wastes were either placed directly into the soil to promote degradation and dispersal, or were placed into some type of waste receptacle, such as a polyethylene bag or laboratory safety canister, prior to burial.

The quantity of biomedical wastes buried on-site is unknown, but was characterized as solid wastes consisting of contaminated papers and rags, syringes, labware, planchets, small animal excreta and carcasses, liquid scintillation counting vials, and liquid wastes primarily consisting of liquid scintillation "cocktails" (LSC). LSC is one of the most-used biological instrumentation techniques used to trace metabolic processes. LSC has three components: the solvent, the solute, and the biological sample. At one time, 1,4-dioxane was the preferred solvent for aqueous samples, due to its complete miscibility with water. The immiscible solvents that are primarily used today include toluene, xylene, and 1,2,4-trimethylbenzene. Approximately 400 gallons of organic solvent component of the LSC (toluene and 1,4-dioxane) were estimated to have been disposed of in the burial site. Toluene constituted the largest volume of waste solvents. The waste disposal activities were authorized and monitored by the Radiation Safety Officer of the VAMC WLA. According to a 1983 Environmental Impact Report (EIR), periodic inspections by the Atomic Energy Commission/Nuclear Regulatory Commission's (AEC/NRC) Division of Compliance found the VAMC WLA in conformance with all regulations set forth in 10 CFR 20. Since the termination of on-site land disposal in 1968, the VAMC WLA has contracted the services of a commercial waste hauler to transport the biomedical wastes to an authorized landfill (4). Radiation wastes are currently stored in Building 340 (7).

As part of the EIR for the Brentwood Park complex, the Santa Monica Water Company collected groundwater samples from four municipal wells located 1.75 and 3 miles downgradient of the VAMC WLA site in April 1981. The on-site standby well at VAMC WLA was also sampled. No background samples were collected for comparison. The samples were submitted to the Sanitary Engineering Division of the Department of Water and Power (DWP) for analytical testing of gross alpha activity, gross beta activity, and the activity levels of tritium and carbon-14 (see Table 3-1) (4, 8). The groundwater samples were not analyzed for solvents, which may migrate to groundwater underlying the site, provided there are no aquards. Results indicated that the radioactivity levels for tritium were below the cancer risk screening concentration of 360 picocuries per liter (pCi/L) (9) · Health-based benchmarks for gross alpha activity, gross beta activity, or carbon-14, which were analyzed for during the sampling event, have not been established (9)

Table 3-1
Veterans Administration, West Los Angeles
Groundwater Sampling Results, April 1981

Sub-stance	S. M. #3	Arcadia #4	Charnock #12	Charnock #15	VAMC	Bench-mark
Alpha	3.4 ± 0.9	0.8 ± 0.6	6.1 ± 0.9	2.0 ± 0.7	1.9 ± 0.8	N/E
Beta	4.8 ± 1.0	2.4 ± 0.7	6.8 ± 1.0	2.9 ± 0.8	4.9 ± 1.0	N/E
Tritium	<180 ± 180	<180 ± 180	<180 ± 180	<180 ± 180	<190 ± 190	360
Carbon-14	<120 ± 120	<120 ± 120	<120 ± 120	<120 ± 120	<120 ± 120	N/E

NE - Not Established
All above wells are Santa Monica municipal wells, except VAMC

According to a representative of the VAMC WLA, a news media incident in the 1980s occurred which involved a transformer containing PCBs, which was temporarily placed in the paved parking lot before it was transported off-site to an appropriate disposal site. The transformer was placed near a puddle of ponded rainwater. A local television station arrived on-site to report what they believed to be a spill of PCBs; however, there is no evidence to support that a PCB spill occurred or that PCBs leaked onto the ground before being transported off-site. There are no other on-site incidents involving hazardous substances (10).

The following agencies do not maintain files or have information relating to the VAMC WLA: the California Environmental Protection Agency, Department of Toxic Substances Control (Cal-EPA DTSC), the California Regional Water Quality Control Board, Los Angeles Region, and the Los Angeles Fire Department (11, 12, 13). The South Coast Air Quality Management District (SCAQMD) had a violation entry of Rule 1503, which consisted of a failure to submit trip reduction plans. The trip reduction plan is an incentive plan to decrease individual employee commutes by using car pools and van pools. The plan is geared towards companies employing greater than 100 employees. The violation date was January 14, 1993 (14).

The groundwater pathway is potentially a pathway of concern. Although the buried radioactive materials may degrade naturally into the environment, solvents, such as 1,4-dioxane, are potentially available to migrate into the underlying aquifer. No groundwater samples have been collected on-site to establish an observed release of hazardous substances. An observed release is when the chemical analysis of an environmental sample from a site is found to be three or more times above the background, and some portion of the release is attributable to the site (15). The depth to groundwater, as measured from the VAMC WLA well, is approximately 200 feet bgs (16). Groundwater flow moves mainly toward the south (17). The presence of aquicludes and aquitards in the site area is not documented (17). The on-site standby well is located near Building 317 in the Transportation Yard adjacent to the freeway in the eastern portion of the site (18) This well is maintained for irrigation purposes. In the event of an emergency, the VAMC WLA maintains bottled water on-site for drinking (19). The on-site well is drilled to a depth of 250 feet bgs with a pumping capacity of 400 gallons per minute (gpm) (16). The net annual precipitation in the area of the VAMC WLA is 6.38 inches per year (20). Approximately 100,000 people are served by municipal groundwater wells within 4 miles of the site (21, 22, 23).

The surface water pathway is not a pathway of concern because the nearest surface water, an ephemeral stream draining the Santa Monica Mountains, is located approximately 1.5 miles to the northeast of the site (5). Drinking water is derived from municipal wells and/or imported surface water (21, 22, 23). According to a representative of the California Department of Fish and Game, fish would not be present in ephemeral streams draining the Santa Monica Mountains (24). Malibu Creek, the nearest stream, which drains into the Pacific Ocean, is located greater than 2 miles to the west of the site. No sensitive aquatic environments are located within 15 miles downstream of the site (24, 25).

The soil exposure pathway is not a pathway of concern at the VAMC WLA site, as there is no area of observed contamination. Radioactive biomedical and solvent waste is not exposed at the former burial location on-site, and is covered by up to 20 feet of soil and/or demolition materials from buildings. The buried waste site is restricted from public access by a 20-foot-high fence, is vegetated, and has some demolition materials exposed at the surface (26). A portion of the buried waste is covered by cement and asphalt from the Brentwood Park complex, a recreational facility (26) There are no residences, schools, or daycare facilities located on or within 200 feet of the buried materials (7). The nearest residence is located approximately 750 feet west of the former burial site (5). There are approximately 5,000 workers at the VAMC LA site (6).

The air migration pathway is not a pathway of concern at the VAMC WLA site. While no ambient air sampling has been conducted at the site, contaminated waste materials are buried beneath approximately 20 feet of soil and/or demolition materials. Approximately 29,450 people are located within 1 mile of the site. There are approximately 110,667 people within 4 miles of the site (see Table 3-2) (25). Two sensitive plant species are located within 3 to 4 miles of the site (25). They include the federally proposed endangered Brauntons milk-vetch (*Astragalus brauntonii*), and the federally proposed endangered Ventura Marsh milk-vetch (*Astragalus pycnostachyus var lanosissimus*) (25).

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- There are no drinking water intakes, fisheries, or sensitive environments located downstream of the site.
- The radioactive waste and solvent materials are covered by up to 20 feet of soil and construction debris.

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Table 3-2
Population within 4 miles of the
Veterans Administration Medical Center, West Los Angeles

Distance (miles)	Total Population within distance ring
0 to 0.25	757
0.25 to 0.50	5365
0.50 to 1	29,453
1 to 2	71,868
2 to 3	73,154
3 to 4	110,667

4.0 Current Conditions of the Site

The VAMC WLA is currently an active facility. The former burial site for low-level radioactive and solvent wastes is covered with up to 20 feet of soil and construction debris. Trench areas A, B, and C, which received radioactive wastes, are restricted from public access by a 20-foot-high fence. The burial area is covered with vegetation, although some demolition material is visible on the surface. The area beyond the fence that corresponds to a small portion of Trench B is paved with asphalt and cement (4, 26). The site is listed in the February 12, 1994 Resource Conservation and Recovery Information Service (RCRIS) database as a large-quantity generator. The notification date for the facility was listed in RCRIS as October 26, 1982 (1). Resource Conservation and Recovery Act (RCRA) wastes generated on-site include flammable liquids such as alcohols and xylene, two substances commonly used throughout medical diagnostic/clinical and medical research laboratories. Other RCRA hazardous wastes include liquid, solid, and aerosol flammables; liquid and solid poisons; liquid and solid corrosives; and oxidizers. A comparison of hazardous waste manifested for disposal for the years 1990 and 1994 indicate that 15,405 pounds of RCRA liquid and solid waste were generated in 1990, and 15,542 pounds of similar wastes were generated in 1994 (3).

Non-RCRA hazardous wastes generated during 1990 included 135,711 pounds of asbestos, 10,140 pounds of hazardous waste liquids, 2,653 pounds of hazardous waste solids, and 13,059 pounds of polychlorinated biphenyls (PCBs). Non-RCRA hazardous wastes generated during 1994 included 22,450 pounds of asbestos, 50,145 pounds of hazardous waste liquids, 5,125 pounds of hazardous waste solids, 1,715 pounds of diesel fuel, and 65 pounds of aerosols. Asbestos waste had decreased in 1994 due to continued efforts to manage asbestos in place, and fewer renovation projects. Hazardous waste liquids increased in 1994, largely due to an increase in oil disposal and diesel fuel rinse from tank clean-outs. The hazardous waste liquid amount includes formalin, diluted/used alcohols, and glutaraldehyde. Formalin is a 10 percent solution of formaldehyde, a liquid waste that is passed through human tissue (3, 27). Hazardous waste solids increased in 1994 due to the removal of unused paints and empty drums (3).

Hazardous waste, RCRA and non-RCRA, is stored or transported under manifest to an approved Transfer Storage and Disposal Facility (TSDF) location. Hazardous wastes are currently stored in three locations, with at least 75 percent located in Building 342 in the western portion of the site. Building 342, approximately 20 feet by 12 feet, is a metal, flame-resistant building with its own ventilation system. Caustics and reactives are stored in three large, metal, flame-resistant cabinets. Acids are stored in wooden cabinets in a separate area. A 4-inch-high berm, in the shape of a T, separates the incompatible types of chemicals. Formalin and additional chemicals for the scintillation process are stored in Building 117, the animal research building. Wastes are kept in a refrigerated area in Building 117 until they are removed and placed into 55-gallon polyethylene drums and packed with vermiculite. Building 500, within the main hospital area, has two locations, the morgue and a histopathology laboratory, where formalin is stored in two 55-gallon drums. Cidex, a 2 percent solution of glutaraldehyde, used for disinfecting medical equipment, is kept in approximately 15 locations throughout the VAMC WLA (18).

The VAMC WLA also has an on-site hazardous waste treatment operation to recover silver from X-Ray fixer developing processes. Silver is plated on to an electrode and sent to an out-of-state VA site for reclamation (3, 18). Total gallons processed during Fiscal Years (October to September) 1993 and 1994 are 9,990 and 10,350, respectively (3).

5.0 Summary and Conclusion

The Veterans Administration Medical Center, West Los Angeles (VAMC WLA) is located adjacent to Interstate Highway 405 between the communities of Westwood and Brentwood. The VAMC WLA occupies 431.2 acres with 149 buildings, and is the largest and most complex medical facility in the Department of Veterans Affairs. From the early-1950s to 1968, approximately 2 acres of the VAMC WLA, located in the northwestern portion of the site, were used to bury radioactive biomedical wastes and solvents. The radioactive wastes were generated as a result of medical research programs and medical diagnostic and therapeutic practices. Approximately seven burial events occurred. The radioactive biomedical wastes were deposited into three unlined trenches, designated A, B, and C, at a depth of 6 to 8 feet below the ground surface (bgs). A portion of the wastes were containerized in polyethylene bags or laboratory canisters, while other wastes were left to degrade naturally. Periodic inspections by the Atomic Energy Commission/Nuclear Regulatory Commission's Division of Compliance found that the VAMC WLA site was in conformance with all regulations set forth in 10 CFR 20. A groundwater sampling event conducted by the Santa Monica Water Company in April 1981 of an on-site well and four downgradient municipal wells detected no radiation levels above established health-based benchmarks for tritium. Health-based benchmarks have not been established for gross alpha activity, gross beta activity, or carbon-14. No background groundwater samples were collected for comparison. The groundwater samples were not analyzed for solvents, which may migrate to groundwater underlying the site, provided there are no aquitards. The depth to groundwater underlying the site is approximately 200 feet bgs. The presence of aquitards or aquicludes in this section of the Santa Monica Basin is not documented.

Look at ... [illegible]

The following Hazardous Ranking System factors are pertinent to the site:

- Municipal groundwater wells within 4 miles of the site serve approximately 100,000.
- There are no workers, residences, schools, day care facilities, or sensitive environments on-site or within 200 feet of the buried radioactive and solvent waste materials.

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REMEDIAL SITE ASSESSMENT DECISION - EPA REGION IX

Site Name: Veterans Administration Medical Center, West L.A. EPA ID #: CA2360030033

Alias Site Names:

City: Los Angeles County or Parish: Los Angeles County State: CA

Refer to Report Dated: June 9, 1995 Report Type: Federal Facility PA Review

Report developed by: URS Consultants, Inc.

DECISION:

☒ 1. Further Remedial Site Assessment under CERCLA (Superfund) is not required because:

☒ 1a. Site does not qualify for further remedial site assessment under CERCLA (Site Evaluation Accomplished - SEA)

☐ 1b. Site may qualify for further action, but is deferred to: ☐ RCRA ☐ NRC

☐ 2. Further Assessment Needed Under CERCLA

2a. (optional) Priority: ☐ Higher ☐ Lower

2b. Activity Type ☐ PA ☐ ESI ☐ SI ☐ HRS evaluation ☐ Other

DISCUSSION/RATIONALE:

The available information demonstrates that conditions at the site do not pose a threat to human health and the environment. Biomedical wastes buried at the site are covered with ~ 20 ft of soil and construction debris. No further action under CERCLA is warranted.

Report Reviewed and Approved by: Signature: Carolyn Douglas Date: 8/22/95

Site Decision Made by: Signature: Carolyn J. Douglas Date: 8/22/95

Project Management\A\EPA Form 9910-3

References

1. U.S. Environmental Protection Agency. (U.S. EPA). Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS) Database, February 15, 1994.

2. U.S. EPA, Federal Facilities Docket Master Report, November 18, 1993.

3. Clark, Kenneth J., Department of Veterans Affairs Medical Center, West Los Angeles, to Carol Weinstein, URS Consultants, Inc. (URS), letter re: information on hazardous waste management practices, March 28, 1995.

4. City of Los Angeles, Department of Recreation and Parks, *Final Environmental Impact Report (EIR), Barrington Recreation Center Addition*, April 1983.

5. U.S. Geologic Survey (USGS) 7.5-minute topographic map of the Beverly Hills, California quadrangle, 1966, Photorevised 1981, Minor Revision 1994.

6. Spaulding, Kate, VAMC WLA, to Carol Weinstein, URS, letter, re: historical information, January 31, 1995.

7. Master Plot Plan, U.S. Veterans Administration Medical Center, West Los Angeles, October 16, 1989.

8. Kurimoto, R., Los Angeles Department of Water and Power (LADWP), Sanitary Engineering Division, to L. McReynolds, (LADWP), memorandum re: lab results of groundwater sampling, May 28, 1981.

9. Superfund Chemical Data Matrix, Appendix B Tables, June 1994.

10. Maar, Hank, VAMC WLA, and Carol Weinstein, URS, telephone conversation, December 2, 1994.

11. Abraham, Johnson, California Environmental Protection Agency, Department of Toxic Substances (Cal-EPA DTSC), and Carol Weinstein, URS, telephone conversation, November 30, 1994.

12. Gonzalez, Juan, California Regional Water Quality Control Board, Los Angeles Region (RWQCB), and Carol Weinstein, URS, telephone conversation, November 30, 1994.

13. Inspector Jackson, Los Angeles Fire Department, and Carol Weinstein, URS, telephone conversation, November 30, 1994.

14. South Coast Air Quality Management District (SCAQMD), January 14, 1993 Master Violation Entry Printout, December 8, 1994.

15. La Courreye, Paul, Senior Site Assessment Manager, EPA Region IX, to EPA Site Assessment Managers, EPA ARCS Contractors, and State Site Assessment

77-783

Programs. memo re: definition of observed release in site assessment reports. September 3, 1992.

16. Crockett, Ben. VAMC WLA, and Carol Weinstein, URS, telephone conversation, February 9, 1995.

17. State of California, Department of Water Resources, Southern District. *Bulletin No. 104, Planned Utilization of the Groundwater Basins of the Coastal Plain of Los Angeles County, Appendix A, Groundwater Geology*, June 1961.

18. Marcus, Raody, VAMC WLA, and Carol Weinstein, URS, telephone conversation, June 6, 1995.

19. Cole, Harry, VAMC WLA, and Carol Weinstein, URS, telephone conversation, June 13, 1995.

20. U.S. Department of Commerce, National Oceanic and Atmospheric Administration, National Environmental Satellite Data and Information Service, National Climatic Data Center. *Comparative Climatic Data for the United States Through 1985*. Nashville, Tennessee.

21. Ozuka, Ed, City of Beverly Hills, and Carol Weinstein, URS, telephone conversation, February 9, 1995.

22. Harvey, Robert, City of Santa Monica, Engineering Division, and Carol Weinstein, URS, telephone conversation, February 9, 1995.

23. Delgadillo, Charles, South California Water Company, and Carol Weinstein, URS, telephone conversation, February 9, 1995.

24. Sanada, John, California Department of Fish and Game, and Carol Weinstein, URS, telephone conversation, June 1, 1995.

25. U.S. EPA Geographical Information System (GIS) Printout, December 12, 1994.

26. Maar, Hank, VAMC WLA, and Carol Weinstein, URS, telephone conversation, June 1, 1995.

27. Spaulding, Kate, VAMC WLA, and Carol Weinstein, URS, telephone conversation, January 27, 1995.

Appendix A
Contact Log and Reports

Contact Log

Facility Name: Veterans Administration Medical Center, West Los Angeles
Facility ID #: CA2360030033

Contact	Affiliation	Phone #	Date	Information
Johnson Abraham	California Environmental Protection Agency, Department of Toxic Substances Control (Cal-EPA DTSC)	(818) 551-2864	11/30/94	Mr. Abraham stated that their agency does not maintain a file on the Veterans Administration located at the intersection of Wilshire and Sawtelle. He would check to see if they had a file on the hospital listed as the Wadsworth Veterans Hospital.
Inspector Jackson	Los Angeles Fire Department	(213) 485-7543	11/30/95	The Los Angeles Fire Department does not maintain a file on the VAMC WLA.
Juan Gonzalez	Regional Water Quality Control Board, Los Angeles (RWCQB)	(213) 266-7500	11/30/94	The agency maintains no files on the Veterans Administration Medical Center in West Los Angeles.
Earl Scott	Veterans Administration Medical Center, West Los Angeles (VAMC WLA)	(310) 478-3318	12/1/94	Mr. Scott stated that the newer and older portions of the Veterans Administration hospitals are part of the same medical center. The two portions have had the address of 11301 Wilshire Boulevard for the past 8 years. The 11296 Wilshire Boulevard address does not exist any longer. He referred me to the Industrial Hygiene Division for information regarding hazardous wastes.
Kate Spaulding	VAMC WLA, Industrial Hygiene	(310) 824-6966	12/1/94	Ms. Spaulding stated that URS should send a letter to her requesting information for this report. She also asked the date that the report was due to the EPA.

Bob Baxter	Cal-EPA DTSC	(818) 551-2886	12/2/94	Mr. Baxter stated that their agency has no records or files on the VA located at either 11310 or 11296 Wilshire Boulevard.
Hank Maar	VAMC WLA	(310) 824-4345 Extension 7433	12/2/94	Mr. Maar stated that the hazardous materials generated on-site include low-level radioactive material that is regulated by the NRC. The facility had a news media incident in the 1980s involving a transformer containing polychlorinated biphenyls (PCBs) that was placed in the parking lot near ponded rainwater before it was transported off-site to an appropriate disposal site. There was no evidence that PCBs leaked onto the ground. There are no other incidents involving hazardous substances.
Glenda Davidson	VAMC WLA Administrative Office	(310) 824-3101	12/2/94	The facility has radioactive wastes that are picked up periodically. Infectious wastes are not treated as hazardous wastes. The main focus at the VA at the present time is to recycle.

Kate Spaulding	VAMC WLA Industrial Hygiene	(310) 824-6966	1.27.95	Ms. Spaulding stated that the majority of wastes generated at the VAMC WLA are RCRA flammable wastes. A breakdown of wastes is as follows: 70 percent RCRA wastes, 20 percent asbestos, and 10 percent non-RCRA wastes. The non-RCRA wastes include wastes that are passed through human tissue such as formalin, which is a 10 percent solution of formaldehyde.
Robert Harvey	City of Santa Monica, Engineering Division	(310) 826-6712	2/9/95	See Contact Report.
Robert Pierotti	Department of Water Resources (DWR)	(818) 543-4600	2/9/95	Mr. Pierotti stated that the Central and West Basins are the major water-bearing areas in the Los Angeles area. The Santa Monica Basin is not a ~~significant~~ groundwater basin. Besides Bulletin 104, DWR has not done anything in the site area. The area is on the fringes of the study areas of Bulletin 104. Formations tend to pinch out in the fringe area. There are city wells
Ed Ozuka	City of Beverly Hills	(310) 285-2495	2/9/95	The municipal wells that appear on the GIS database were abandoned in 1977 after a decision to supply Beverly Hills with surface water purchased from the Metropolitan Water District (MWD). The city is currently constructing a new production well located at Burton Way and Rexford Drive.

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Charles Delgadillo	South California Water Company	(310) 838-2143	2/9/95	Well #8 has been abandoned. The only active well is #9, which is drilled to a depth of approximately 450 feet below ground surface (bgs), with screening interval at 260 to 400 feet bgs. The well produces 300 gallons per minute (gpm)and contributes less than 0.4 percent groundwater to a blended system, using 99.6 surface water from MWD.
Ben Crockett	VAMC WLA, Engineering Department	(213) 478-3871	2/9/95	The VAMC has an on-site standby well drilled to a depth of 250 feet bgs with a pumping capacity of 400 gpm. The water level is approximately 200 feet bgs. A fault may be located on the south side of the facility.
John Sanada	California Department of Fish and Game	(310) 590-5182	6/1/95	Mr. Sanada stated that fish would not be present in ephemeral streams draining the Santa Monica Mountains. The nearest perennial surface water body drains Malibu Canyon, which is located greater than 2 miles west of the site.
Hank Maar	VAMC WLA	(310) 824-4345	6/1/95	Mr. Maar called URS from the buried nuclear waste trench site on VAMC WLA property. The burial area is prevented from public access by a 20-foot-tall fence. The burial area is covered with vegetation, although some demolition material is visible on the surface. The area beyond the fence that may correspond to Trench B is paved with asphalt and cement.

Randy Marcus	VAMC WLA	(310) 824-4345	6/6/95	See Contact Report
Harry Cole	VAMC WLA	(310) 824-4345	6/13/95	The on-site standby well is maintained for irrigation water only. In the event of an emergency, the VAMC WLA has bottled water on-site for drinking

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URS Consultants
Environmental Protection Agency
Site Assessment Program

Contact Report

Contact Made Concerning: CA2360030033
U.S. Veteran's Administration Medical Center
11310 Wilshire Boulevard
Los Angeles, CA 90073
Los Angeles County

Agency or Affiliation Contact: City of Santa Monica
Department: Engineering Department
Address: 1228 South Bundy Drive
City, State, Zipcode: Los Angeles CA 90025
County: Los Angeles

Representative Contact:

	1.	2	3
Name:	Robert Harvey		
Title:	Water Superintendent		
Contact Phone Number:	(310) 826-6712		
Contact Date:	2/9/95		
Contact Facsimile Number:			

Contacted by URS Representative: Carol Weinstein

Discussion:

Mr. Harvey stated that the two nearest wells, located within 2 miles of the site, are at Bundy Drive and Wilshire Boulevard. The wells are located within 50 feet of each other, and only one of the wells is pumped at a time. The wells are approximately 500 feet deep, with perforations at 100 feet to 450 feet below ground surface (bgs). The water level is at 15 feet bgs, and water is pumped out from about 150 feet bgs. These wells are not contaminated. These wells are small, and yield approximately 250 gallons per minute (gpm). Groundwater is shallow in the site area. Mr. Harvey does not know the groundwater flow direction. An artesian well is located less than 1 mile southwest of the site near University High School.

Additional City of Santa Monica wells are located at Olympic Boulevard and Stewart Street. Well 3 at this location is contaminated with trichloethylene, and is being stripped as part of a Superfund process. Wells 2 and 7 are standby wells, but the remaining two wells are pumped. These wells are also about 500 feet deep and are perforated from 200 to 500 feet bgs. These wells yield approximately 2,000 gpm.

There are an additional four wells, called the Charnock wells, located to the south within 4 miles of the site. These wells are also about 500 feet deep, with perforations at 150 to 500 feet deep. Groundwater is not contaminated at these locations. The four wells pump 6,000 gpm.

End Contact Report

his contact report was sent for confirmation by: ☐ Letter ☐ Phone ☐ Fax ☐ Other ________

This contact report was reviewed by: ______________________
(Signature and Date)

Site Assessment Program

Contact Report

Contact Made Concerning: CA2360030033
U.S. Veteran's Administration Medical Center
11310 Wilshire Boulevard
Los Angeles, CA 90073
Los Angeles County

Agency or Affiliation Contact: U.S. Veteran's Administration Medical Center
Department: Industrial Hygiene
Address: 11310 Wilshire Boulevard
City, State, Zipcode: Los Angeles CA 90073
County: Los Angeles

Representative Contact:
Name: 1. Randy Marcus 2. 3.
Title:
Contact Phone Number: (310) 824-4345
Contact Date: 6/6/95
Contact Facsimile Number:
Contacted by URS Representative: Carol Weinstein

Discussion:
Hazardous waste, RCRA and non-RCRA, is stored or transported under manifest to an approved disposal location. Hazardous wastes are currently stored in three locations, with at least 75 percent located in Building 342 in the western portion of the site. Building 342, approximately 20 feet by 12 feet, is a metal, flame-resistant building with its own ventilation system. Caustics and reactives are stored in three large, metal, flame-resistant cabinets. Acids are stored in wooden cabinets in a separate area. A 4-inch-high berm, in the shape of a T, separates the different types of chemicals. Formalin and additional chemicals for the scintillation process are stored in Building 117, the animal research building. Wastes are kept in a refrigerated area until they are removed and placed into 55-gallon polyethylene drums and packed with vermiculite. Building 500, within the main hospital area, has two locations, the morgue and a histopathology laboratory, which store formalin in two 55-gallon drums. Cidex, a 2 percent solution of glutaraldehyde, used for disinfecting medical equipment, is kept in approximately 15 locations throughout the VAMC WLA.

End Contact Report

This contact report was sent for confirmation by: ☐ Letter ☐ Phone ☐ Fax ☐ Other ____________

This contact report was reviewed by: ______________________
(Signature and Date)

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Appendix B
Latitude/Longitude Worksheet

LATITUDE AND LONGITUDE CALCULATION WORKSHEET #1 WHEN USING CUSTOM RULER OR COORDINATOR (TM)

SITE: U.S. Veterans Administration Medical Center NUMBER: CA2360030033

AKA: Wadsworth VA SSID:

ADDRESS: 11310 Wilshire Boulevard

CITY: Los Angeles STATE: CA ZIP CODE: 90073

SITE REFERENCE POINT: Middle of Site

TOPO MAP Beverly Hills, CA TOWNSHIP: 1South RANGE 15 West

SCALE: 1:24,000 MAP DATE: 1927 SECTION: N/A 1/4 N/A 1/4 N/A 1/4 N/A 1/4

MAP DATUM: ☒ 1927 ☐ 1983 MERIDIAN: San Bernardino

COORDINATES FROM LOWER RIGHT (SOUTHEAST) CORNER OF 7.5' MAP:

LONGITUDE: 118° 22' 30" LATITUDE: 34° 00' 00"

COORDINATES FROM LOWER RIGHT (SOUTHEAST) CORNER OF 2.5 SUB-MAP:

LONGITUDE: 118° 25' 0" LATITUDE: 34° 02' 30"

CALCULATIONS: LATITUDE (7.5 MINUTE QUADRANGLE MAP)

A) ALIGN THE BOTTOM OF THE SCALE WITH BOTTOM OF GRID. ALIGN THE TOP OF THE SCALE WITH THE TOP OF GRID. POSITION EDGE OF RULER OVER SITE REFERENCE POINT WHILE KEEPING TOP AND BOTTOM ALIGNED.

B) READ TICS ON RULER AT 1 OR 0.5 SECOND INTERVALS. (INTERPOLATE IF POSSIBLE)

1' 05"

C) RECORD LATITUDE: 34° 03' 35 N

CALCULATIONS: LONGITUDE (7.5 MINUTE QUADRANGLE MAP)

A) ALIGN THE BOTTOM OF THE SCALE WITH THE RIGHT SIDE OF GRID. ALIGN THE TOP OF THE SCALE WITH THE LEFT SIDE OF GRID. POSITION EDGE OF RULER OVER SITE REFERENCE POINT WHILE KEEPING TOP AND BOTTOM ALIGNED.

B) READ TICS ON RULER AT 1 SECOND INTERVALS. (INTERPOLATE IF POSSIBLE)

2' 42"

C) RECORD LONGITUDE: 118° 27' 42" W

INVESTIGATOR: Carol Weinstein DATE: 6/1/95

CLOSED SITE ASSESSMENT FORM

te Name: Veteran's Administration Medical enter- West L.A. /Brentwood Med. Center	AKA: Wadsworth V.A., Barrington Recreation Center, Brentwood Park	SWIS #:/Class: 19-AR-5108/Unclassified

Current Address: (Include County) 330 South Barrington Ave. Brentwood Ca- uncorporated Los Angeles County

Other Addresses: (Include County)

Location: (Include Site Location Quad Map) Beverley Hills Quad in cm. From top; North West 27.9 North East=28.2; South West 28.8, South East 28.8; From left: NW=13.3, NE=13.5; SW=13.3, SE=13.514

Section, Township, Range, Parcel #(s)

Operator(s): US Veterans Administration

Current Land Owner(s): 1. U.S. Veterans 2. Lease holder- L.A. City	Address: (1)WLA Medical Center Wilshire and Sawtelle Blvd., 90073 (2) Dept. of Parks and Rec., 200 N. Main, City Hall East, 90012	Phone: (1) 310-824-4478 (2)213-485-5551
Disposal Area: (acres) 2	Depth of Fill: 6-8 feet	Site Boundary: (acres)
Type of Waste: Inert, Radioactive, biomedical waste, Liq.	Type of Site: Landfill trenches	Cover Information: Buried 6-8 feet and covered with well compacted earth. Additional 15-20 ft. of earth and concrete debris (see addenda).
SWFP DATE: None	Dates of Operation: 1950-1968	Tonnage: None
WDR Date: None	Date Site Closed: 1968	Closure Approved By:

Maps, Boring Logs, Special Structural Drawings, and Other Technical Documents:

Land use on or within 1000 ft of waste boundary: Res Com water supply wells surface water bodies - ravine duri rainy season hospital

land use or within 1 mile of waste boundary: Water Supply Wells, Surface Water Bodies Res, Com.

Present Use(s): Partly vacant land with some vegetation, recreation center, playing fields, jogging trails

Surface Condition: Vacant land with vegetation, grass, playing fields.	Landfill Gas Migration: none reported	Leachate Migration: non visible or reported

Other Observations:

COMMENTS; PRIORITY NO. (justify) C1 In 1983, LAC DHS Occupational Health and Radiation Management reviewed DEIR and found the document satisfactory. Also, State DOHS concluded that buried biomedical waste poses no health risk to public.

Source of Information: Final EIR for Barrington Recreation Center

Pictures: 5/11/94	Taken By: Ziba Atai
Date: Computer entered - 1/9/95	Prepared By: Atai

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1. Total Surface Area (acres): 2	Max. Depth of Waste (ft): 30	Ave. Depth of Waste (ft): 20	Ave. annual precipitation (in):	Waste & groundwater separation in ft.:
Waste Area w/in 100 yr flood plain: (Y/N) No		Soil Type: ? A -low permeability (clay, silt, loam) B -Med Permeability (sand, pebble) C -High permeability (gravel, cobble, rocks)		
2. Air Quality SWAT completed: (Y/N) If yes, reference the report. NO	Gas Monitoring System at site: (Y/N) If yes, reference the plan. No		Gas Control System at site: (Y/N) If yes, reference the plans. No	
Surface methane emissions > 500 ppm: (Y/N/U) If Unknown, conduct surface emissions screening. No		If no, based on surface emissions screening, age & moisture content of the waste & the existing cover, will surface emission > 500 ppm occur? (Yes or No) No		
Has > 1.25% methane by volume accumulated in on site structures? (Y/N/U) If unknown, conduct structural screening for presence of landfill gas. NO		If no, based on structural screening, age and moisture content of waste, land use and the existing cover, is landfill gas accumulation likely to occur in structures on or around the site? (Yes or No) No.		
Are methane concentrations > 5% at the site boundary? (Y/N/U) If unknown, conduct perimeter screening of landfill gas migration.		If no, based on a perimeter screening, age and moisture content of the waste, and the existing cover is landfill gas migration likely to occur beyond the boundaries of the site: (Yes or No) NO		
3. Water Quality SWAT completed: (Y/N) If yes, reference the report. If no and if applicable, provide SWAT rank. NO Rank 7	Water Quality Monitoring System: (Y/N) If yes, provide reference the plan. No		Leachate control system: (Y/N) If yes, briefly describe the system and reference the plans. No	
Approved lining system by RWQCB: (Y/N) If yes, reference the report and Regional Board approval. No		Approved final cover by RWQCB: (Y/N) If yes, reference the report and Regional Board approval. AEC/NRC's Division of Compliance (Region V) found the VA in conformance.		
Is the waste generating leachate? (Y/N/U) If no or unknown, based on the annual precipitation, site drainage patterns, cover on the waste, and age of the waste, is leachate generation likely to occur? (Y/N) No		Is there ground water contamination occurring at the site? (Y/N/U) If no, or unknown, based on the annual precipitation, site drainage patterns, cover on the waste, depth to ground water, soil type, and age of the waste is ground water contamination likely to occur? (Y/N) No		
4. Is site access adequately restricted? (Y/N) Yes		Is the waste adequately covered to prevent human contact? (Y/N) Yes		
Is the final drainage system for the site adequate to prevent erosion? (Y/N) Yes		Is the final grading adequate to promote run-off? (Y/N) Are the slopes less than 33% or 18 degree? (Y/N) Yes		
5. Has the land use of the site been changed since closure? (Y/N) Yes		If yes, include or reference site improvement plans. Planned recreation center.		
Give date improvements were constructed. 1985-86	Have the improvements compromised the integrity of the final cover? (Y/N) No		Has differential settlement effected the improvements? (Y/N) No	
Is there a proposed change in postclosure land use that may jeopardize the integrity of previously closed sites or pose a potential threat to public health and safety or the environment? (Y/N) If yes, describe the proposed project. NO				
6. Disposal Site Priority: A1 A2 A3 B1 B2 B3 C1 C2 C3 D				

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During a period that spanned from the early 1950's up till 1968, the Veterans Administration (West Los Angeles) conducted on-site land burials of low-level radioactive biomedical wastes. These waste materials were generated as a result of medical research programs and medical diagnostic and therapeutic practices.

The waste disposal activities were authorized and monitored by the Radiation Safety Officer. Periodic inspections by the AEC/NRC's Division of Compliance (Region V) found the VA in conformance with all regulations set forth in 10 CFR 20.

The VA averaged about seven burials per year (for the period 1960-1968), disposing of its biomedical wastes in a designated undeveloped area (covering approximately two acres) on the northwestern portion of the Brentwood Medical Center (Figure 7). The materials were buried in trenches to a depth of six to eight feet and then covered with well compacted earth. As there were no pre-disposal packaging requirements, the wastes were either placed directly into the ground to promote degradation and dispersal, or were placed into some type of waste receptacle such as a polyethylene bag or laboratory safety cannister, prior to burial.

1

Based on an inventory of existing disposal records covering an eight year period (6/60-10/68), biomedical wastes buried on-site at the VA Wadsworth/Brentwood Medical Center were characterized by solid wastes consisting of contaminated papers and rags, syringes, labware, planchets, small animal excreta and carcasses, liquid scintillation counting vials, and liquid wastes primarily consisting of liquid scintillation "cocktails" (LSC)*.

Liquid scintillation media and small animal carcasses, both containing primarily tracer quantities of tritium and carbon-14, constituted the largest volume (greater than 50%) of the VA's radioactive biomedical wastes.

*An estimated 350-400 gallons of the organic solvent component of the LSC (i.e., toluene, 1,4-dioxane) were disposed of in the burial site (1960 - 1968). Toluene constituted the largest volume of waste solvents.

Buffer Zone. After the San Fernando earthquake (Feb. 1971) destroyed the VA Hospital in San Fernando, the VA Wadsworth Hospital was inspected and declared seismically unsafe. Subsequently, the old hospital buildings were demolished and a modern, seismically sound hospital complex was built. Tons of concrete debris and reinforcement steel from the demolished buildings, along with many thousand cubic yards of soil were dumped and spread over unused VA property (including the former biomedical waste disposal site). This resulted in the placement of an additional 15-20 feet of soil over the former disposal site (6-8 feet in depth), making the effective burial depth of the biomedical wastes 20-30 feet.

3

Conclusions:

Based on the scientific community's broad understanding of environmental radioactivity today; the nature of the VA's biomedical wastes; and the environmental fate of these materials, it has been determined that the development of the proposed outdoor recreation facility near the VA's former biomedical waste disposal site will not have any adverse or deleterious impacts on the public health. The following "highlights" form the basis for this finding.

o After conducting scientific assessments and field tests, radiological health and safety experts concluded that the development of the project site for recreational uses would pose no conceivable health risk to the public.

For example, the 1.5 mrems/yr calculated by the NRC as the maximum exposure one could receive from the buried radionuclides (based on a worst case scenario) is trivial in comparison to the average dose rates (mrems/yr) from natural background radiation and other sources of radiation exposure. [redacted].

CEA list)
— no records available at Veterans Administration

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- The burial of a few hundred gallons of organic scintillation solvents (i.e., toluene and 1,4-dioxane) in the soil environment poses no long term health hazards, for these solvents have been rendered innocuous through microbial decomposition and detoxification.

- Because the majority of the medical radionuclides buried had short half-lives, they would not have bioaccumulated or persisted in the environment. Considering that radionuclides decay exponentially, and the fact that it has been at least fourteen years (as of 1993) since radionuclides were last buried on-site, any remaining activity would be so low as not to constitute a threat to human health. Furthermore, the remains of any biomedical wastes (i.e., organic wastes containing tracer quantities of tritium and carbon-14; inorganic wastes such as the counting vials) are buried under many feet of soil and demolition debris, so that the likelihood of these materials coming in contact with the public is highly improbable.

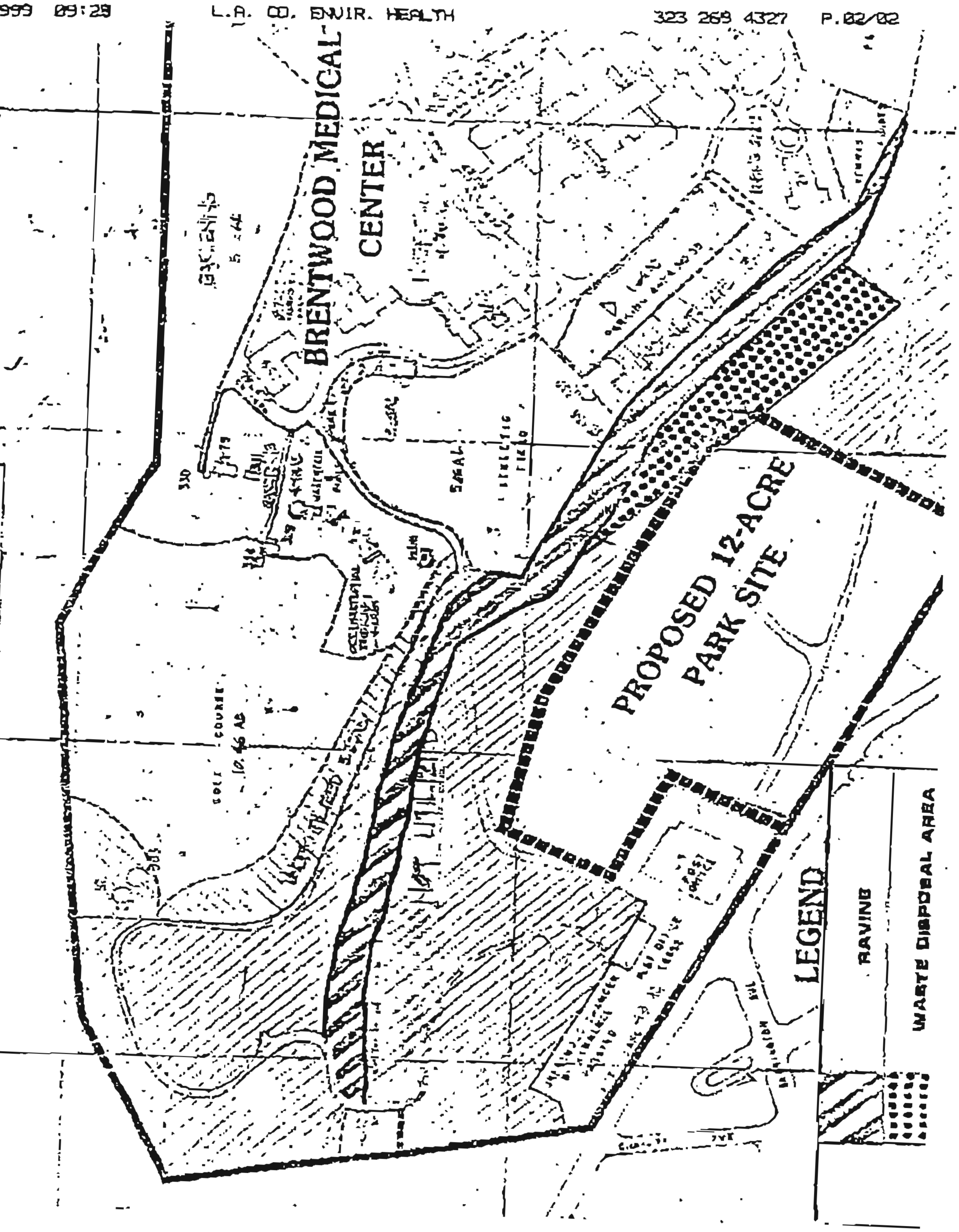
Mitigation Measures

None required.

- NO information available at SCAQMD (not on their CEA list)
- NO information available at county public works (not on their CEA list)
- NO records available at Veterans Administration

TOTAL P.07

FIGURE 7
LOCATION OF FORMER BIOMEDICAL WASTE DISPOSAL AREA



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Environmental Assessment

Veterans Administration Medical Center
Los Angeles, California

Job No. 94090-C01

REGISTERED PROFESSIONAL ENGINEER
JACK KENDALL BRYANT
No. 9801
Exp. 12/96
CIVIL
STATE OF CALIFORNIA

June 1995

Jack K. Bryant ENGINEERS
a division of Bryant - Palmer - Soto, Inc.
2601 Airport Drive, Suite 310 Torrance, Ca., 90505
Phone: (310) 539-1161
Fax: (310) 325-0271

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Jack K. Bryant ENGINEERS
a division of Bryant • Palmer • Soto, Inc.

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1.0 INTRODUCTION

This environmental assessment is being prepared on behalf of the Veterans Administration by Jack K. Bryant ENGINEERS (JKB), in order to identify impacts to the environment as a result of the proposed scope of work, In accordance with the National Environmental Policy Act (NEPA) and the California Environmental Quality Act (CEQA) Guidelines.

2.0 PROJECT DESCRIPTION

This section provides a(n) description of the project location, project background, project objectives, analysis of the alternatives to the project, project implementation and the completed project characteristics.

2.1 Project Location

The project site is located on Veterans Administration Medical Center (VAMC) land approximately two miles south of the Santa Monica Mountains, just west of the 405 Freeway, and split by Wilshire Boulevard (Figure 1). The Veterans Administration owns approximately 450 acres of land at this location. The southern and central portions of this land are used for medical and administrative purposes. The northern portion is largely undeveloped except for a golf course, athletic fields and Japanese gardens.

A small arroyo bisects the northern portion of land into an east and west area. It can be divided into an upper reach, approximately 1150 feet long containing 0.836 acre of wetlands; a middle reach, approximately 1700 feet long containing 0.981 acre of wetlands; and a lower reach, approximately 450 feet long containing 0.230 acre of wetlands. The upper reach tends to be narrow and supports mainly scrub vegetation. The middle reach tends to be broad and supports

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willow tree and shrubs. The lower reach tends to be narrow, without arroyo banks, and nearly void of vegetation. The hydric soils (one factor in determining wetlands, see Section 3.9.6) along the entire arroyo average 25-28 feet in width.

The arroyo is currently undeveloped, with the exception of small access roads and an upstream City of Los Angeles storm drain with a dissipater and a downstream County of Los Angeles storm drain. The first storm drain discharges into the arroyo's upstream end through an outlet structure at a peak design flow of 400 cubic feet per second. This storm drain discharges water which has been intercepted from inlets located on and northerly of Sunset Boulevard. The second drain begins at the downstream end of the arroyo and intercepts all water from the arroyo by way of a large inlet structure. The length of the arroyo is approximately 3600 linear feet from the outlet structure at the upstream end to the inlet structure at the downstream end, with an elevation change of approximately 70 feet.

2.2 Project Background

The land surrounding the northern part of the VA property has been nearly fully developed, leaving the northern part the only undeveloped land in the area. The arroyo is bordered by Brentwood School to the north, condominiums to the south, athletic fields and courts to the east and the Brentwood Post Office and Brentwood Park to the west. It is not fenced and is often used by transients, students from nearby Brentwood School, and the public for recreational purposes.

The banks of the arroyo are covered with vegetation including non-native grassland (mostly annual plants) and other non-native invasive species. During storms, water runs down the slopes of the arroyo, eroding its sides and the edges of the adjacent athletic fields and courts and gathers sediment and plant debris. This mixture joins the water rushing through the arroyo at speeds of over 20 miles per hour and sends the high volumes of debris below and occasionally over the access roads and further downstream to the drain inlet. In fact, the velocity and quantity of water rushing down the arroyo during a rainstorm was enough to uproot a eucalyptus tree near the downstream inlet. These large quantities of sediment and debris effectively block off the culverts below the access roads and the downstream drain inlet. This has caused flooding damage to condominiums on Barrington Avenue.

During the dry season, the large areas of grassland along the banks of the arroyo turn brown and present a sizable fire hazard. VA personnel conduct periodic trimming of the grassland surrounding the arroyo, but the existing topography makes access and maintenance within the arroyo difficult.

Flood damage to property on Barrington Avenue and erosion damage to the athletic fields above and bordering the arroyo have been considerable and will continue without a course of action to prevent erosion of the arroyo and debris build-up. A previously installed debris basin located near the downstream inlet was destroyed by a severe storm several years ago. Over the past ten years, the Veterans Administration has spent hundreds of thousands of dollars correcting access road washouts and erosion of the athletic fields and courts above the site (see Appendix A - Photo Log).

The flooding at the downstream inlet, the erosion in the athletic fields and courts and around the access roads and the fire hazard presented during the dry season, threaten the safety of people utilizing the area and the lives and property of the persons living in the area. As it stands, the arroyo is a very dangerous area and could be libelous to the VA as an "attractive nuisance".

2.3 Project Objectives

The main objective of this project is to eliminate the damage to property and the potential threat to human life, health and welfare from flooding and erosion damage due to the arroyo. This objective will be achieved in three steps (Phase I, Phase II and Phase IIA) listed below:

1. By extending the upstream City of Los Angeles storm drain from its current outlet location 2500 linear feet into the arroyo. The pipe will contain catch basins spaced approximately 300 feet apart to allow run-off to drain into the pipe. Construction documents will be processed and approved by the City of Los Angeles Department of Public Works.

2.
   A. By covering the 2500 linear feet of pipe with 50,000 cubic yards of soil beginning at the upstream end and grading the area to provide for positive drainage The source of the fill earth is a stockpile located beneath an existing helicopter landing pad at the southern end of the VAMC. The stockpile is the result of a basement excavation for a new hospital and contains approximately 134,000 cubic yards of soil. The graded area will be planted to avoid erosion and help decrease the debris produced in the arroyo area (refer to Section 3.9.8 for mitigation measures).

   B. By using the remaining 84,000 cubic yards of soil to reduce the slope of the arroyo sides and allowing possible development consistent with current land use. This phase of the project (Phase IIA) will be started sometime after Phase I and Phase II are completed.

2.4 Analysis of Alternatives to the Project

Section 2.2 describes the flooding, erosion and fire hazard that are associated with the arroyo. The Veterans Administration proposes to end downstream flooding, erosion, and fire hazard by installing a storm drain and filling and grading the area to allow for proper management. A number of alternatives were considered prior to dismissal and the VA believes the storm drain will provide the best long term benefit to the area and the people who utilize it and inhabit the surrounding residential areas. The alternatives considered are listed below:

1. Increased Maintenance. This alternative would consist of the regular removal of debris from the arroyo bottom and downstream inlet, and the removal of vegetation from the tributary area and arroyo banks. Water would still flow through the arroyo at high velocities and erosion would continue. In addition, the steep sides of the arroyo in most areas make it dangerous for personnel to access the area especially after storms.

2. Terracing of the arroyo banks. This alternative would have been feasible if more area was available to decrease the slope of the arroyo banks. Terracing could not be completed with out encroaching on the parking lot for Brentwood School, the parking lot for the Post Office, Brentwood Park and the athletic fields and courts. In addition, this would not decrease the velocity of water rushing through the arroyo or reduce sediment build-up downstream.

3. Lining of the arroyo bottom. This alternative would consist of a concrete or gunite channel which would extend for the same length as the storm drain. This would only prevent the erosion of the arroyo bottom and not the sides. Water velocity would not be decreased and debris build-up downstream would continue. The same acreage of wetlands would be impacted as with the installation of a storm drain.

4. Fencing of the arroyo. This alternative was immediately discarded as not only expensive and difficult to maintain, but also because it did not address the concerns of fire hazard, erosion and debris production.

5. Debris basins and/or debris fences. The VA had previously constructed a debris basin which was destroyed shortly after construction. The size of this debris basin seems to have been small in light of the large undeveloped contributory area. Debris basins and fences typically are not only expensive to construct, but also to maintain. Maintenance of the basins and fences would be required most often during the rainy season, when the arroyo is most difficult and dangerous to access.

2.5 Project Implementation

The scope of work is proposed to be completed in two phases; Phase I being the installation of the storm drain and Phase II being the filling and grading of the arroyo. Both of these project phases will require coordination of various personnel and equipment.

Table I below lists the minimum quantity and type of heavy equipment vehicles expected to be needed to complete the scope of work in Phase I:

TABLE I- Projected Equipment needs for Phase I

Type of Equipment	Quantity
Backhoe	1
Crane	1
Concrete Mixer	1
Flatbed Truck	1

Table 2 lists the minimum quantity and type of heavy equipment vehicles expected to be needed to complete the scope of work in Phase II.

TABLE 2- Projected Equipment needs for Phase II

Type of Equipment	Quantity
Grader	1
Front Loader	1
Bulldozer	1
Dump Truck	4
Roller	1
Water Truck	1

Table 3 lists the minimum quantity and type of heavy equipment vehicles expected to be needed to complete the scope of work in Phase IIA.

TABLE 3- Projected Equipment needs for Phase IIA

Type of Equipment	Quantity
Grader	1
Front Loader	1
Bulldozer	1
Dump Truck	7
Roller	1
Water Truck	1

Earth will be removed from the stockpile, loaded onto trucks and transported to the arroyo site. At the arroyo site, the soil will be appropriately dispersed and compacted.

Trucks carrying stockpiled earth will exit the helicopter pad area via Parking Area No. 5, turn right onto Dowlen Drive East, take an immediate left on Bonsall Avenue and continue until it ends at Vandergrift Avenue, turning right or left depending on which end of the arroyo needs to be accessed. After Vandergrift, small access roads lead along the banks of the arroyo. The entire trip is approximately 1 mile.

It is estimated that 50,000 cubic yards of soil will need to be moved from the stockpile to the arroyo for the first part of Phase II. One Dump Truck can carry approximately 10 cubic yards per load. At 70 trips per day, the earth moving activity would take approximately 60 days (using 4 Dump Trucks).

The remaining 84,000 cubic yards of earth will be moved during Phase IIA. At 70 trips per day this would take approximately 60 days (using 7 Dump Trucks).

2.6 Completed Project Characteristics

Upon completion of the project, the site is expected to exhibit the following characteristics:

1. The extended storm drain will lie up to 40 feet below the surface after fill and grading.

2. The site will be graded and the arroyo sides will be shaped and reduced in slope to allow for controlled, positive drainage.

3. Area will be landscaped to include native shrubs and other drought tolerant species to restore the natural vegetation currently and previously found on the site.

4. Artificial streams and ponds will be developed on the site.

5. The site will be available for possible future recreational development in accordance with the County of Los Angeles guidelines for urban open space.

6. Three acres of wetlands will be created as part of the habitat mitigation plan in accordance with U.S Army Corps of Engineers guidelines.

3.0 ENVIRONMENTAL IMPACT ANALYSIS

The purpose of this section is to identify components that could possibly be adversely impacted by the proposed lengthening of the existing upstream storm drain, moving of earth and filling in the existing arroyo with the earth.

3.1 Transportation and Parking

All storm drain installation activity and earth moving will take place on Veterans Administration property. Traffic around the VAMC is light and is only composed of workers and visitors seeking services. Construction and earth moving traffic traveling from one end of the center to the other is not expected to significantly affect public use of the center.

It is expected that workers will travel to and from the site once a day during both phases of the project. Normally, workers from a contracting company will travel from their place of employment to the work site in one vehicle or the amount of vehicles necessary to perform that day's work.

Adequate parking and equipment staging area are available surrounding the helicopter pad. The addition of these vehicles should not significantly affect access to surrounding buildings by personnel or customers.

Access roads surrounding the arroyo can be used for heavy equipment parking and closed to through traffic during the course of the project. All surrounding locations have at least one alternate access route. These access roads can be made available in the event of an emergency evacuation.

3.2 Aesthetics

The topography of the site allows for stormwater runoff from nearby roads and parking lots to collect in the bottom of the arroyo. Debris from runoff or dumping (including an abandoned automobile) has collected in the arroyo over time.

The proposed filling and grading of the arroyo would eliminate the probability of it being used as a dumping ground. Introduction of vegetation consistent with its current composition will mitigate any negative visual impact. The reduction of erosion, elimination of debris collection, the shaping of the arroyo sides, replanting of the area and development of ponds and streams will actually serve to increase the aesthetic value of the site.

The area which currently maintains the stockpiled soil will be returned to its former use as a parking area.

3.3 Air Resources

The site lies within the South Coast Air Basin which has been designated a non-attainment area due to violations of the national ambient air quality standards for carbon monoxide, ozone, nitrogen dioxide, and total suspended particulate. These high air pollutant concentrations are a direct result of the South Coast Air Basin's topographical and meteorological conditions which do not allow dispersal.

Impacts expected to the air quality of the site include exhaust from trucks and heavy equipment and fugitive dust emissions during storm drain installation, earth moving and grading. Exhaust emissions from heavy equipment vehicles would be short-term in nature, but spot violations of carbon monoxide standards could occur in the vicinity. Trucks used to haul the soil only have to travel approximately 1 mile from the stockpile to the arroyo which would not significantly increase air emissions in the general area. The proposed project is not expected to create any new air pollution sources once it is completed.

The proposed exhaust emissions from diesel-powered vehicles during Phase I are provided in Table 4.

TABLE 4- Estimated Diesel-Powered Vehicle Emissions for Phase I work

Pollutant	Emission Factor (EF) grams/mile*	Total Emissions per day (grams) EF X 4 miles	Total Emissions for Phase I (grams) for 90 days
Carbon Monoxide	8.37	209.25	18,832.5
Exhaust Hydrocarbons	2.93	73.25	6592.5
Nitrogen Oxides	17.20	430	38,700
Sulfur Oxides	3.2	80	7200
Particulate	3.3	82.5	7425

*Emission Factors from the South Coast Air Quality Management District's Air Quality Handbook for Preparing Environmental Impact Reports, 1987

Table 4 was prepared using a conservative estimate of 4 diesel-powered vehicles traveling one mile per day during operation at the site.

Likewise, the proposed exhaust emissions from diesel-powered vehicles during Phase II are provided in Table 5.

TABLE 5- Estimated Diesel-Powered Vehicle Emissions for Phase II work

Pollutant	Emission Factor (EF) grams/mile*	Total Emissions per day (grams) EF X 585 miles	Total Emissions for Phase II (grams) for 60 days
Carbon Monoxide	8.37	4896.5	293,790
Exhaust Hydrocarbons	2.93	1714.1	102,846
Nitrogen Oxides	17.20	10,062	603,720
Sulfur Oxides	3.2	1872	112,320
Particulate	3.3	1930.5	115,830

*Emission Factors from the South Coast Air Quality Management District's Air Quality Handbook for Preparing Environmental Impact Reports, 1987

It is anticipated that 4 Dump Trucks will complete the earth-moving in 70 trips per day for 60 days. In addition, approximately 5 other diesel-powered vehicles will be needed per day, either in the helicopter pad area or at the arroyo site. These vehicles can be estimated to travel up to 5 miles per day.

Finally, the proposed exhaust emissions from diesel-powered vehicles during Phase IIA are provided in Table 6.

TABLE 6 - Estimated Diesel-Powered Vehicle Emissions for Phase IIA work

Pollutant	Emission Factor (EF) grams/mile*	Total Emissions per day (grams) EF X 1005 miles	Total Emissions for Phase IIA (grams) for 60 days
Carbon Monoxide	8.37	8411.9	504,711
Exhaust Hydrocarbons	2.93	2944.6	176,679
Nitrogen Oxides	17.20	17,286	1,037,160
Sulfur Oxides	3.2	3216	192,960
Particulate	3.3	3316.5	198,990

*Emission Factors from the South Coast Air Quality Management District's Air Quality Handbook for Preparing Environmental Impact Reports, 1987

It is anticipated that 7 Dump Trucks will complete the earth-moving in 70 trips per day for 60 days. In addition, approximately 5 other diesel-powered vehicles will be needed per day, either in the helicopter pad area or at the arroyo site. These vehicles can be estimated to travel up to 5 miles per day.

Significant fugitive dust emission is not expected during Phase I. Work will be conducted in a moist area and dust is expected to settle before it reaches any sensitive receptors. Most of the pipe will be laid on grade and will not need any excavation.

For Phase II and IIA, fugitive dust emissions are expected during earth-moving activities and grading. This can be mitigated by using water as a dust suppression technique which effectively reduces emissions by 50 percent.

3.3.1 Mitigation Measures

The following actions will be taken to mitigate the impact on air resources at the site:

1. Water arroyo site during grading to limit fugitive dust emission.

2. Cover soil stockpiles when not in use.

3. After grading is completed, seed areas earmarked for re-planting and water until plant cover is evident; spread soil binders on remaining area.

4. Avoid unnecessary idling of heavy equipment.

5. Avoid earth moving during periods of high winds (greater than 15 miles per hour).

3.4 Earth Resources

This section addresses the earth resources of the site location including topography, geology, hydrogeology, hydrology and water quality.

3.4.1 Topography

The United States Geological Survey (USGS) topographic map for the project area was reviewed in order evaluate existing topography. The site lies a few miles south of the foothills to the Santa Monica Mountains. Rolling hills lie to the northwest and northeast, while to the southwest, the topography gently slopes to the Ocean Park Plain. The southeastern boundary leads to the rolling hills of Beverly Hills. The elevation on the VA property ranges from 473 feet above sea level at the northern end of the arroyo to approximately 280 feet above sea level at the southern end of the property (south of Wilshire Boulevard). Upon completion of the proposed project, the elevation within the arroyo should slope gradually from an elevation of 473 feet above sea level 400 feet above sea level.

3.4.2 Geology

The site lies in the Sawtelle Plain of the Coastal Plain of Los Angeles County, almost equidistant from the Charnock fault to the southwest and the Overland Avenue fault to the southeast (approximately 3/4 mile to either fault). The Sawtelle Plain was formed by streams draining the Santa Monica Mountains which eroded and backfilled the area. It is considered an alluvial apron and is composed of a layer of alluvium only 30 to 40 feet deep.

Two major fault systems, the San Andreas Fault System and the Newport-Inglewood Fault System affect the Los Angeles region including the project area. Both these faults have been responsible for major earthquakes in the past 65 years. The San Andreas Fault System is located approximately 50 miles northeast of the site while the Newport-Inglewood Fault System is within 5 miles southeast of the site.

3.4.3 Hydrogeology

Underlying the Sawtelle Plain is the Santa Monica Basin which contains the San Pedro Formation's Silverado Aquifer. The Silverado Aquifer is composed of mostly sand and gravel with a little clay and ranges from approximately 150 feet to 250 feet below ground surface at the site. The groundwater in the Santa Monica Basin flows mainly to the south. The Charnock fault and Overland Avenue fault appear to affect groundwater movement as water levels are not consistent on either side of these faults. In addition, higher groundwater levels in the Sawtelle Plain than in surrounding plains suggest the existence of a perched or semiperched aquifer in the area. Groundwater level at Los Angeles County Department of Public Works (LACDPC) Well No. 2524, which is approximately 1 mile west of the site, was measured at 72.3 feet below ground surface on October 27, 1989. LACDPC Well No. 2535J, which is approximately 1.5 miles southwest of the site, was measured at 43.6 feet below ground surface on April 30, 1994.

The proposed scope of work is not expected to impact existing groundwater.

3.4.4 Hydrology

Table 7 presents calculations for annual average stream flow in the arroyo.

TABLE 7 - Average Annual Stream Flow

Drainage Area from VA property	49.8 acres
Drainage area from upstream	97.1 acres
Total drainage area	6,398,964 square feet
Average rainfall/year	2.0 feet
Volume of water/year (drainage area X average rain/year)	12,637,954 cubic feet
Volume of water/year per second (volume/year ÷ seconds/year)	0.40 cubic feet/second

The hydrology for the proposed storm drain extension was determined by combining the flow from the upstream City of Los Angeles storm drain with the flow intercepted along the new storm drain path. The hydrology for the area contributory to the extension was determined using the County of Los Angeles Rational Method computer program and a 50-year design frequency storm. This flow was added to the 400 cfs flow given on the city drawings at the outlet of the city drain.

The proposed scope of work is not expected to significantly affect existing hydrology in the arroyo.

3.4.5 Water Quality

The Los Angeles Department of Water and Power (LADWP) provides drinking water to the City of Los Angeles. According to the 1993 Annual Water Quality Report, LADWP complied with all state and federal drinking water regulations except the Surface Water Treatment Rule, which requires water agencies to ensure that drinking water is protected from microbiological contamination. The LADWP expects to be in compliance, after construction of 3-4 major facilities, in 2003.

The proposed scope of work is not expected to impact existing water quality.

3.5 Land Use

The VAMC property lies in an unincorporated area of Los Angeles County, surrounded by the City of Los Angeles. The Los Angeles County Department of Regional Planning lists the property as urban open space. According to the Los Angeles County General Plan Program, an urban open space "may contain structures and facilities compatible with, and appurtenant to, open space and recreation uses and the character of the surrounding area." The existing adjoining areas surrounding the subject site within the VAMC property contain administration and medical buildings, supporting parking lots, an athletic fields, tennis courts, a golf course, Japanese gardens and a waterfall and pools area. The proposed project and any future development would be in keeping with the definition listed above.

3.6 Noise

Noise, unwanted and/or excessive sound, is considered a type of environmental degradation when present in excessive quantities. The goal of the State of California and the County of Los Angeles in particular, is to minimize noise so that it does not jeopardize human health and welfare. Typical sources of noise in the outdoor environment are vehicles, trains, aircraft and industrial operations.

Diesel-powered vehicles involved in earth moving and grading are expected to be the major source of noise for this project. Table 8 lists noise level ranges for construction equipment.

TABLE 8 - Noise Levels at a distance of 50 feet*

Type of Equipment	Noise level range in dba
Compactors (Rollers)	70-75
Front Loaders	70-85
Backhoes	70-95
Scrapers, Graders	80-95
Trucks	80-95
Concrete Mixers	75-85
Cranes (movable)	75-85

*table adapted from data source: EPA, 1971 NTID 300-1 (based upon limited samples)

According to the Los Angeles County Noise Control Ordinance, the daily maximum noise level allowed for "non-scheduled, intermittent , short-term" operation of mobile equipment at Business Structures is 85 dba. As the scope of work will be conducted greater than 50 feet from any buildings (which attenuate sound vibrations when sealed), a significant adverse noise impact is not expected if mitigation measures are applied.

3.6.1 Mitigation Measures

The following mitigation measures can be applied to reduce noise levels during project implementation:

1. Conduct earth-moving and grading work between 7:00 AM and 6:00 PM or as permitted by the Los Angeles County Noise Control Ordinance.

2. Use only vehicles containing muffled or baffled exhaust.

3.7 Historic and Cultural Resources

This section describes the procedures for research and field study to determine historical and/or cultural value of the site.

3.7.1 Introduction

Background research was conduct at the Regional Information Center at UCLA on February 14, 1995 by Delman James. Investigation revealed that the site had not been previously surveyed for archaeological resources and that no cultural resource sites had been recorded. An unrelated field survey that yielded negative results, was conducted a short distance away along Barrington Avenue near the Post Office.

The field survey was conducted on February 15, 1995 by Delman James and Michelle Green. A detailed map (1 inch = 200 feet scale) provided clear defineation of the survey area. The survey included a visual examination of the bottom, sides and banks of a deep intermittent drainage (arroyo) that trends mostly northwest-southeast. The sides of the arroyo are quite steep and the recent severe rains caused extensive erosion in places along the east bank. As a result, deep gullies were present over much of the southeastern portion of the site.

The survey was conducted using 15 meter transect intervals along the north half and then the south half of the site. Dense grassland growing along the banks of the arroyo in the southern section reduced visibility in that area. Overall, however, the visibility was over 50% and all areas were adequately examined. The vegetation located within the survey area was dominated by grassland and other introduced trees and plants. Almost all of the area has been disturbed by grading, and the potential for intact prehistoric deposits was therefore greatly reduced.

3.7.2 Findings

No prehistoric sites or isolated artifacts were found; however, one historic refuse scatter, temporarily designated VA-S-1H, was discovered. The historic debris is visible in three places (loci). Locus A, the most dense and largest of the three loci, is located in the central portion of the survey area, on the east bank of the drainage (see Figure 2). The concentration of historic artifacts observed includes well over 250 fragments of glass and 100 fragments of ceramic china.

The debris includes numerous fragments of amethyst colored glass made before 1914, and other specimen of cobalt blue and aqua glass that are indicative of the 1920s to the 1940s era. Other

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indications of this time period include ceramic fragments that display willow ware patterns that were also popular during the 1920s to the 1940s. The scatter of historic debris at Locus A is confined to an area about 100 meters long and 25 meters wide.

Two additional concentrations of historic debris (Locus B and Locus C), although considered ephemeral scatters of similar trash, were also encountered during the field survey. Locus B is located in the northern portion of the site on the eastern bank of the arroyo while Locus C is situated along the western bank, between Locus A and Locus B. Neither Locus B or Locus C appears to contain substantial evidence that might qualify them as important resources; they are identified as ephemeral scatters of historic debris similar to that identified at Locus A. Only 25 items were observed within a 20 X 20 meter area at Locus B, and a 20 X 30 meter area at Locus C contained less than 20 historic specimens.

The historic debris observed in all three locations is consistent with glass and ceramic refuse from the 1920s through the 1940s, possibly from an institutional source. The artifacts were dominated by patent medicine bottle fragments and inexpensive china shards. Some of the glass was melted, indicative of periodic burning, a practice that was typical for trash dumps during this time period.

3.7.3 Recommendations

It is the opinion of JKB that the debris found on the site is trash from Veterans Administration past operations and warrants no further investigation.

3.8 Economic Aspects

The proposed project will provide jobs to personnel in construction, engineering and landscaping. Once grading is completed, maintenance personnel will be needed to oversee plant growth and site use.

3.9 Biological Resources

This section describes the procedures for research and field study to evaluate the biological resources of the site.

3.9.1 Introduction

The biological resources of the undeveloped portion of the site were assessed in a walkover survey by Dr. Ted L Hanes, on February 13, 1995, between 0900 and 1330. The weather was clear and balmy with temperatures ranging from the low 70s to the low 80s. The plants and animals displayed early springtime activity following the rains of January and the warm days of February. The site is composed of a natural water course (arroyo) flanked by upland rolling terrain and some flattened areas.

The site has a long history of human activity as evidenced by dirt roads, disc harrowed upland fields, many weedy plants that thrive on disturbed areas, assorted types of dumped domestic refuse in the arroyo, and erosion and flooding associated with human intrusion into the arroyo. A small putting golf course and several athletic fields and courts are maintained above the arroyo. Storm water runoff enters the on-site arroyo from the north through the upstream storm drain outlet and exits the property along the mid-western property line through the downstream storm drain inlet. Considerable erosion and flooding has occurred at the inlet structure in recent weeks due to heavy rain storms, clogging the structure with mainly fallen plant debris.

There is no perennial water on the site; the arroyo creek bed carries water only after rainstorms. The field study was conducted two days after a heavy rainstorm and yet no water was flowing in the channel. The wetland trees and shrubs in the arroyo are therefore supported by subsurface water supplies during the dry months of the year.

3.9.2 Vegetation

The plant species observed on the project site are listed in Section 3.9.9, giving their common and scientific names and relative frequency of occurrence. These species occur in seven (7) vegetation types which are shown in Figure 3. Three of the vegetation types (Mule Fat Scrub, Southern Willow Scrub, Giant Reed) are hydrophytic (riparian / wetland) and are of special importance since they help delineate state and federal jurisdictional wetlands. The vegetation types occurring on the site are listed below.

Venturan Coastal Sage Scrub

This type of vegetation is composed of low, soft-woody subshrubs, 1-6 feet tall, rather dense, and dominated by California sagebrush *(Artemisia californica)*. On site the stands are not dense and are dominated by California sagebrush, laurel sumac *(Malosma laurina)*, coast goldenbush *(Isocoma menziesii var. minziesii)*, chaparral mallow *(Malacothamnus fasciculatus)*, and California encelia *(Encelia californica)* with annual grasses and herbaceous plants between the shrubs. This vegetation is found on undisturbed slopes on several locations of the site.

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Non-Native Grassland

This herbaceous type is composed of an assortment of non-native, naturalized Eurasian grasses and weeds, most of which are annual plants that grow abundantly from seed and complete their life cycles by early summer. The disturbed areas on the broad hilltops of the site are covered by this type and are dominated by wild oats (*Avena spp.*), field mustard *(Brassica rapa)*, brome grasses *(Bromus* spp.), and filaree *(Erodium cicutarium)*. The unstable slopes of the arroyo support extensive stands of castor bean *(Ricinus communes)*, and the alien tree tobacco *(Nicotiana glauca)*.

Mule Fat Scrub

This vegetation type is a rather dense, tall (up to 10 feet), soft-woody riparian scrub associated with intermittent streams, washes, and arroyos. It is dominated by mule fat *(Baccharis salicifolia)*, a multi-stemmed, willow-like, aromatic shrub. On site, this species forms nearly pure stands that are confined to the stream bed of the arroyo.

Southern Willow Scrub

This vegetation type forms dense, winter-deciduous riparian thickets dominated by willow shrubs and small trees, with scattered cottonwood and sycamore trees. On site, this vegetation is confined to the arroyo and is dominated by shrub and tree forms of arroyo willow *(Salix lasiolepis)*, but three large sycamore trees *(Platanus racemosa)* are located near the downstream culverts. Cattail *(Typha latifolia)* is found in the upper reach of the stream bed near the upstream storm drain outlet.

Coast live Oak-Walnut Woodland

This vegetation type is an open woodland dominated by coast live oak *(Quercus agrifolia)* and Southern California black walnut *(Juglans californica var., californica).* On site there are two scattered, poorly represented woodlands on the flanks of the arroyo in the upper reach of the creek (see Figure 3). Associated species are toyon *(Heteromeles arbutifolia)*, holly-leaved cherry *(Prunus ilicifolia)*, and poison oak *(Toxicodendron diversilobum).* There is an herbaceous understory on the woodland floor composed of non-native annual grasses and Bermuda Buttercup *(Oxalis pes-capreae).*

Eucalyptus Plantings

Mature eucalyptus trees are found in various upland locations on the site, but not in the arroyo. These Australian native trees were planted many decades ago as wind breaks, as street trees, as individual specimens, and in small groves. The main species found on the site are blue gum *(Eucalyptus globulus)*, slaty gum (*E. tereticornis)*, and red gum (*E camaldulensis)*.

Giant Reed Thickets

Giant reed *(Arundo donax)* in southern California is an invasive non-native bamboo-like wetland plant. It is found in various locations of the arroyo; some of these stands are sparse, but most are dense thickets. This plant tends to crowd out native plants and creates habitats unsuitable for wildlife.

3.9.3 Fauna

Species of vertebrate animals observed (or their signs) or those expected to occur on the site are listed by their common and scientific names in Section 3.9.10. The species listed are those that could be residents on the site as well as those that may use the site only seasonally.
The long periods without water in the arroyo limit the possibility or preclude the occurrence of amphibians. None was observe during the field study.

Some reptiles are expected to occur on the site but none was observed during the field study. Both lizards and snakes are not active during the winter months. Also, they have low population numbers and are secretive, making their sighting difficult.

Several bird species were observed on the site. Both seed and insect eating birds were most abundant and included sparrows, mourning dove, European starling, scrub jay, western meadowlark, common bushtit, northern mockingbird, Say's phoebe, and common towhee. A red-tailed hawk was sighted over the property two different times during the field study. One Anna's hummingbird was observed collecting nectar from the blossoms of a tree tobacco.

Few mammals were observed directly, but some animal signs such as tracks and droppings were seen in various areas. Audubon cottontail, California ground squirrel, and pocket gopher were observed throughout the site. Signs of coyote were also evident on dirt roads and within the arroyo. Undoubtedly other mammals occur on the site but were not observed since most species are nocturnal (night active). These could include various mouse and rat species, raccoon, weasel and skunk.

3.9.4 Species of Concern*

Since the project site is so close to the Santa Monica Mountains, certain sensitive species of plants and animals known from the Santa Monica Mountains, might be found on the project site. Their potential presence is of importance to various public agencies. These species are listed by the California Native Plant Society as species of concern. The California Natural Diversity Data Base (RareFind) lists species as "CSC" or "California Special Concern" and may or may not be listed by Federal agencies.

*State Listed Plants

CE	= State listed, endangered
CR	= State listed, rare
CT	= State listed, threatened

*Federally Listed Plants

FE	= Federally listed, endangered
FT	= Federally listed, threatened
CI	= Enough data are on file to support the federal listing
C2	= Threat and/or distribution data insufficient to support federal listing
C3a	= Extinct
C3b	= Taxonomically invalid
C3c	= Too widespread and/or not threatened

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Plant Species of Concern		Status*
Plummer's Baccharis	Baccharis plummeri	CR
Catalina Mariposa Lily	Calochortus catalinae	CR
Fragrant Pitcher-Sage	Lepechinia fragrans	CR
Plummer's Grappling Hook	Harpogonella palmeri var. palmeri	CR

None of these plant species was observed on the site.

Animals Species of Concern*		Status*
San Diego Coast Horned Lizard	Phryosoma coronatum blainvillei	FE
Black-shouldered Kite	Elanus caeruleus	CP
Golden Eagle	Aquila chrysaetos	FS, CP
Peregrine Falcon	Falco peregrinus	FE, CE, CP
Least Bell's Vireo	Vireo bellii pusillus	FE, CE
Ringtail	Bassariscus astutus	CP

None of these animals was observed on the site.

However, Least Bell's Vireo could use the willow thickets on-site during its breeding season. It is a seasonal visitor to southern California, entering the region to breed and nest in early to mid April.

*Status Legend

CE	= designated as endangered species by the California Fish and Game
CR	= designated a rare species by the California Fish and Game
CP	= fully protected species in California
FE	= designated an endangered species by the Federal Government
FS	= Forest Service sensitive

The California Department of Fish and Game considers the following bird species as **sensitive**, hence, are being studied for possible classification. **These species are unlikely to occur on the site due to unsuitable habitat and inadequate food supply:**

Cooper's Hawk	Accipiter cooperi
Sharp-shinned Hawk	Accipiter striatus
Northern Harrier	Circus cyaneus
Western Bluebird	Sialia mexicana
Loggerhead Shrike	Lanius ludovicianus

The site contains several coast live oak (Quercus agrifolia). These trees are protected by a City of Los Angeles (as well as Los Angeles County) Oak Tree Ordinance. Any change in their status requires prior notification of the planning department, and a detailed oak tree report must be presented and approved by the department. The general location of the oak trees is indicated in Figure 3.

3.9.5 Determination of Jurisdictional Wetlands

The field survey of the site established the presence of riparian (wetland) vegetation and habitat associated with the arroyo that runs through the northwest portion of the Veterans Administration property. Therefore, in conformance with the Clean Water Act, it was expedient to determine the extent of the wetlands over which State and Federal agencies have jurisdiction.

Regulations

The U.S. Fish and Wildlife Service (FWS) and the California Department of Fish and Game (CDF&G) have regulations that provide legal protection for rare or endangered plant and animal species and habitats that are unique or support sensitive species. The Endangered Species Acts of the state and federal governments empower the agencies to review projects for their potential impacts to sensitive species or habitats.

Federal Jurisdiction

Under Section 404 of the Clean Water Act, the U.S. Army Corps of Engineers (USACE) regulates impacts caused by filling or dredging waters of the United States, and has jurisdiction over possible impacts to wetland vegetation. Policies concerning loss of wetlands generally stress a water-dependent use and the need to compensate for wetlands lost by creating wetlands from non wetland habitat on at least an acre-for-acre basis. Less than one acre of wetland impacts are approved under a nationwide permit and do not require notification of the Corps. An impact of one to 10 acres requires notification of the Corps and possibly an individual 404 permit depending on impacts and proposed mitigation. Impacts to wetland biological resources are assessed for the Corps by the U.S. Fish and Wildlife Service.

State Jurisdiction

Wetland protection policies within the state are defined by the California Department of Fish & Game (CDF&G). A Stream or Lake Alteration Agreement (CG Code Section 1601/1603) must be approved if a proposed project includes activities that will change the natural state of any river, stream, or lake in California. Chapter 6 of the Code prohibits substantial diversion or obstruction (i.e., sedimentation) of drainages designated by CDF&G without prior notification. Designated drainages include all blue line water courses as shown on USGS topographic quadrangle maps and jurisdictional wetlands as defined in the Federal Manual for Identifying and Delineating jurisdictional Wetlands (1989). The CDF&G evaluates applications based upon the anticipated impact of the proposed project on fish and wildlife resources. The final agreement may include modifications of the initial proposal and mitigation measures developed to protect or restore those resources.

The CDF&G is empowered to review projects for their potential impacts on listed species, including species of special concern, and their habitats. Also administered by the CDF&G are Species of Special Concern. These include state and federal Candidate Species and Species of Special Concern, the Audubon Society Blue List, and the California Native Plant Society's "Inventory of Rare and Endangered Vascular Plants of California." These various species and habitats are not legally protected, although the lists are used as a planning tool and often include candidate species.

Both federal and state agencies use the following characteristics in defining wetlands and in administering the Section 404 and 1603 permit programs:

1. Hydrophytic vegetation - plants growing in or near water

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2. Hydric soils - soils periodically or permanently deficient in oxygen

3. Wetland hydrology - basins or water courses periodically or permanently inundated with water.

3.9.6 Field Methodology and Findings

The creek on site is approximately 3250 feet in length between the discharge and intake structures. There was a limited flow of above ground water for approximately 83 feet below the storm drain outlet. Below that point there was no surface water flowing in the streambed to the storm drain inlet.

The arroyo is defined by moderate to steep banks. The current creek bottom is approximately 30 feet below the top of the arroyo banks. Hydric soil determination within the creek involved the following methodology:

1. A topographic site map was used to determine the elevational contours of the creek bottom as it descends through the site from north to south.

2. Starting at the upper reach of the creek, at the outlet structure, and proceeding every 40 feet down the creek, a visual cross section of the creek showed the current creek bottom varies in width from 1 to 4 feet.

3. Between the arroyo banks and lateral to the creek channel is a creek terrace present on one or both sides of the creek. It is composed of loose sediments deposited by former creek flood waters and/or bank erosion materials. The creek terrace varies in width from 1 to 7 feet, has an inclining surface of 5 to 10 per cent and extends from the current creek channel upward to

the base of the arroyo bank face. In the lower reaches of the creek the current creek channel broadens and creek terrace is usually absent.

4. Signs of high water and scouring on the base of the arroyo banks and the presence of debris caught in the woody vegetation within the broad creek channel established the height of hydric soils in this study. Generally, peak water flow was judged to be no deeper than two feet. One to two days post peak flow the water level drops in volume and returns to the current creek channel, allowing recently wetted soils to become unsaturated (nonhydric).

5. The upper limits of hydric soils on both sides of the creek were originally recorded on a 1:200 scale topographic map and were connected linearly to delineate the area of hydric soils; the width averaged between 25-28 feet. The area of hydric soils for:
   a. the upper reach was determined to be 0.836 acre
   b. the middle reach was determined to be 0.981 acre
   c. the lower reach was determined to be 0.230 acre

The arroyo is a natural water course, influenced by surrounding urban development, that carries rainstorm runoff during the wet season that leads to the formation of saturated soils within the broad creek channel. During the remaining seasons, the arroyo receives runoff from car-washing, irrigation and other sources via the storm drain inlet and the surrounding areas which downslope to the steep sides of the arroyo. Hence, the arroyo is a well defined hydrological feature on the site.

Based on the three criteria for identifying and delineating jurisdictional wetlands, the creek supports a jurisdictional wetland of 2.1 acres. The proposed project is expected to impact the upper reach and most of the middle reach of the arroyo for a total of 1.5 acres of wetlands (Figure 4).

3.9.7 Impacts

The proposed project includes the installation of a storm drain within the arroyo. The first 2500 linear feet of arroyo would be filled and the site would be graded to prevent erosion.

Most of the existing vegetation would be removed, including the arroyo vegetation and upland plants, including trees. However, the upland perimeter tree plantings would not be greatly impacted.

Some of the coast live oak (Quercus agrifolia) would be removed in the grading operation. Any loss of the coast live oak trees will be mitigated in compliance with the Los Angeles County Oak Tree Permit Regulations.

Secondary impacts would occur to various wildlife species with the removal of trees, shrubs, and herbaceous plants. Such removal would reduce the potential nesting and roosting sites of large raptors as well as reduce the tree habitat for other wildlife species by the elimination of forage, protective cover, nesting, and reproductive sites. This would result in the reduction in population sizes of various animal species. Such reductions could lead to the local extinction of certain species.

The proposed development could have cumulative impacts on the biological resources within and adjacent to the project site by fragmenting natural populations and disrupting wildlife movement patterns, causing them to be less viable over time. Urban species of birds may increase at the expense of rural species.

3.9.8 Mitigation Measures

The following mitigation measures are proposed as part of this project:

1. The replacement of lost coast live oak trees in a ratio of two 15 gallon trees of the same species for each tree removed.

2. Landscaping the fill area to include species adapted to the coastal southern California climate and soils. Native shrubs and other drought tolerant species will be emphasized in the design to restore the natural vegetation currently and previously found on the site.

3. Landscaping the fill area with plants that yield abundant nectar, seeds, or juicy berries in order to attract various native birds to the site.

4. The introduction of ponds and streams to the site to create wetland conditions to support wetland plant species.

5. Wetlands will be created at a ratio of 1 1/2 times the area lost for a total of 2.25 acres (1.5 X 1 1/2) as part of the habitat mitigation plan in accordance with U.S Army Corps of Engineers guidelines.

A monitoring strategy of the planting plan in the fill area will be initiated by the developer with the approval of the California Department of Fish and Game to ensure that trees and shrubs will become established and be actively growing two years after installation.

3.9.9 Plant Species Observed and Their Occurrence on the Site

(Plant names follow *The Jepson Manual*, 1993)

Subdivision III. PTEROPSIDA

Class 4. ANGIOSPERMAE, FLOWERING PLANTS

Subclass I. DICOTYLEDONS

COMMON NAME	SCIENTIFIC NAME	OCCURRENCE
FIG-MARIGOLD FAMILY	AIZOACEAE	
Hottentot-Fig*	*Carpobrotus edulis*	C
SUMAC FAMILY	ANACARDIACEAE	
Laurel Sumac	*Malosma laurina*	C-D
Poison Oak	*Toxicodendron diversilobum*	O
CARROT FAMILY	APIACEAE	
Fennel*	*Foeniculum vulgare*	O-C
SUNFLOWER FAMILY	ASTERACEAE	
California Sagebrush	*Artemisia californica*	C-D
Mugwort	*Artemisia douglasiana*	C
Mule Fat	*Baccharis salicifolia*	D
Bull Thistle*	*Cirsium vulgare*	I
California Encelia	*Encelia californica*	C-D
Cudwood	*Gnaphalium palustre*	I
Coast Goldenbush	*Isocoma menziesii var. menziesii*	C-D

COMMON NAME	SCIENTIFIC NAME	OCCURRENCE
Bristly Ox-Tongue*	*Picris echioides*	O
SUNFLOWER FAMILY	ASTERACEAE	
Milk Thistle*	*Silybum marianum*	O
Common Sow-Thistle*	*Sonchus oleraceus*	O
Dandelion*	*Taraxacum officinale*	I
MUSTARD FAMILY	BRASSICACEAE	
Field Mustard*	*Brassica rapa*	C-D
Wild Radish*	*Raphanus sativus*	O
CACTUS FAMILY	CACTACEAE	
Prickly-Pear	*Opuntia ficus-indica*	I
HONEYSUCKLE FAMILY	CAPRIFOLIACEAE	
Blue Elderberry	*Sambucus mexicana*	C
GOOSEFOOT FAMILY	CHENOPODIACEAE	
Australian Saltbush*	*A triplex semibaccata*	C
Russian Thistle*	*Salsola tragus*	C
STONECROP FAMILY	CRASSULACEAE	
Jade Plant*	*Crassula argentea*	O
GOURD FAMILY	CUCURBITACEAE	
Calabazilla	*Cucurbita foetidissima*	O

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COMMON NAME	SCIENTIFIC NAME	OCCURRENCE
Wild Cucumber	*Marah macrocarpus*	O-C
SPURGE FAMILY	EUPHORBIACEAE	
Castor Bean*	*Ricinus communes*	D
LEGUME FAMILY	FABACEAE	
Green Acacia	*Acacia decurrens*	I
OAK FAMILY	FAGACEAE	
Coast live Oak	*Quercus agrifolia*	O
GERANIUM FAMILY	GERANIACEAE	
Filaree*	*Erodium cicutarium*	C-D
WALNUT FAMILY	JUGLANDACEAE	
Southern California Black Walnut	*Juglans californica var. californica*	D
MINT FAMILY	LAMIACEAE	
Horehound*	*Marrubium vulgare*	O
Black Sage	*Salvia mellifera*	I

COMMON NAME	SCIENTIFIC NAME	OCCURRENCE
MALLOW FAMILY	MALVACEAE	
Chaparral Mallow	*Malacothamnus us fasciculatus*	C
Cheeseweed*	*Malva parviflora*	O-C
MYRTLE FAMILY	MYRTACEAE	
Gum Trees*	*Eucalyptus camaldulensis, globulus, tereticornis*	D
OXALIS FAMILY	OXALIDACEAE	
Bermuda Buttercup*	*Oxalis pes-capr-ae*	D
BUCKWHEAT FAMILY	POLYGONACEAE	
Curly Dock*	*Rumex crispus*	O
ROSE FAMILY	ROSACEAE	
Toyon	*Heteromeles arbutifolia*	O
Carolina Laurel Cherry*	*Prunus caroliniana*	I
Holly-Leaved Cherry	*Prunus ilicifolia*	O
California Blackberry	*Rubus ursinus*	O
WILLOW FAMILY	SALICACEAE	
Arroyo Willow	*Salix lasiolepis*	D

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COMMON NAME	SCIENTIFIC NAME	OCCURRENCE
NIGHTSHADE FAMILY	SOLANACEAE	
Jimson Weed	*Datura stramonium*	O
Tree Tobacco*	*Nicotiana glauca*	C-D
Blue Nightshade	*Solanum xanti*	C
ELM FAMILY	ULMACEAE	
Chinese Elm*	*Ulmus parvifolia*	I

Subclass 11. MONOCOTYLEDONS

COMMON NAME	SCIENTIFIC NAME	OCCURRENCE
GRASS FAMILY	POACEAE	
Bent Grass	*Agrostis spp.*	O
Giant Reed*	*Arundo donly*	C-D
Slender Wild Oat*	*Avena barbata*	C
Wild Oat*	*Avena fatua*	D
Ripgut Grass*	*Bromus diandrus*	D
Foxtail Chess*	*Bromus madritensis ssp. rubens*	D
Pampus Grass*	*Cortaderia selloana*	O
Bermudagrass*	*Cynodon dactylon*	O-C
Blue Wildrye	*Elymus glaucus*	C
Foxtail Barley*	*Hordeum jubatum*	O
Italian Ryegrass*	*Lolium multiflorum*	O

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COMMON NAME	SCIENTIFIC NAME	OCCURRENCE
CATTAIL FAMILY	TYPHACEAE	
Broad-Leaved Cattail	*Typha la ifolia*	C

*Non-native: introduced, adventive, ruderal, exotic, naturalized

Occurrence Categories:

I Infrequent (one to few individuals on the site)

O Occasional (several to many individuals on the site-, may be confined to one location or habitat)

C Common (frequently encountered and widespread, but not abundant)

D Dominant (abundant, large number of individuals in one or more habitats, or dominant by their size and/or mass)

3.9.10 Animal Species or Their Signs Observed* and Those That Could Occur on the Site

COMMON NAME	SCIENTIFIC NAME	OCCURRENCE
AMPHIBIANS		
Pacific Slender Salamander	Batrachoseps pacificus	
Western Toad	Bufo boreas	
Pacific Tree Frog	Hyla regilla	
REPTILES		
Western Fence Lizard	Sceloporus occidentalis	
Side-blotched Lizard	Uta stansburiana	
Southern Alligator Lizard	Gerrhonotus multicarinatus	
Ringneck Snake	Diadolphis punctatus	
Gopher Snake	Pituophis melanoleucus	
BIRDS		
Red-tailed Hawk*	Buteo jamaicensis	I
American Kestrel	Falco sparverius	
California Quail	Callipepla californica	
Mourning Dove*	Zenaida macroura	C
Greater Roadrunner	Geococcyx californianus	
Western Screech Owl	Atus kennicottii	
White-Throated Swift	Aeronautes saxatalis	
Anna's Hummingbird*	Calypte anna	I
Common Flicker	Colaptes auratus	

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COMMON NAME	SCIENTIFIC NAME	OCCURRENCE
Say's Phoebe*	Sayornis saya	I
Violet-Green Swallow	Tachycineta thalassina	
Scrub Jay*	Aphelocoma coerulescens	I
Common Raven	Corvus corax	
American Crow	Corvus brachyrhynchos	
Common Bushtit*	Psaltriparus minimus	I
House Wren	Troglodytes aedon	
Bewick's Wren	Thryomanes bewickii	
Northern Mockingbird*	Mimus polyglottos	I
European Starling*	Sturnus vulgaris	I
Hutton's Vireo	Vireo huttoni	
Least Bell's Vireo	Vireo bellii pusillus	
Yellow Warbler	Dendroica petechia	
Yellow-Rumped Warbler	Dendroica auduboni	
House Sparrow*	Passer domesticus	I
Western Meadowlark*	Sturnella neglecta	C
Brewer's Blackbird	Euphagus cyanocephalus	
Red-Winged Blackbird	Agelaius phoeniceus	
House Finch	Carpodacus mexicanus	I
Common Towhee*	Pipilo fuscus	C
White-Crowned Sparrow*	Zonotrichia leucophrys	I
Song Sparrow*	Melospiza melodia	I

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COMMON NAME	SCIENTIFIC NAME	OCCURRENCE
MAMMALS*		
Opossum	Didelphis marsulpialis	
Audubon Cottontail*	Syvilagus audubonI	I
California Ground Squirrel*	Spermophilus beecheyi	C
Botta Pocket Gopher*	Thomomys bottae	I
California Pocket Mouse	Perognathus californicus	
California Mouse	Peromyscus californicus	
Brush Mouse	Peromyscus boylei	
Coyote*	Canis latrans	
Raccoon	Procyon lotor	
Spotted Skunk	Spilogale putorius	
Mule Deer	Adocoileus hemionus fuliginatus	

A = abundant

C = common but not abundant

I = infrequent (one to few sightings)

3.10 Solid / Hazardous Waste

Any solid or hazardous waste removed from the arroyo or produced in the course of the project will be disposed of in accordance with pertinent federal, state and local regulations.

3.11 Community Services and Utilities

The proposed project is not expected to significantly impact any community services and utilities with the exception of water supply. Water will be used to reduce fugitive emissions during earth removal and grading and will be used as necessary to support introduced plant species on the site.

Proposed grading will provide for positive drainage from the upstream end to the end of the project. This and the construction of a continuous storm drain should eliminate the flooding problem described in Section 2.2.

4.0 ENVIRONMENTAL COMPLIANCE

This assessment has been prepared pursuant to the NEPA guidelines for an environmental assessment and to the CEQA guidelines for an initial study. As such, it addresses requirements set forth in the Clean Water Act, the California State Fish and Game Code, the South Coast Air Quality Management District Rules and Regulations, the Los Angeles County Noise Control Ordinance and the Los Angeles County Oak Tree Permit Regulations.

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33 Code of Federal Regulations, Parts 320 and 330

33 United States Code 1251 et seq., Clean Water Act

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40 Code of Federal Regulations;Part 6; Part 230; Part 232; Part 1501

42 United States Code 4321 et. seq., National Environmental Policy Act

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FIGURES

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LIST OF FIGURES

Figure No.

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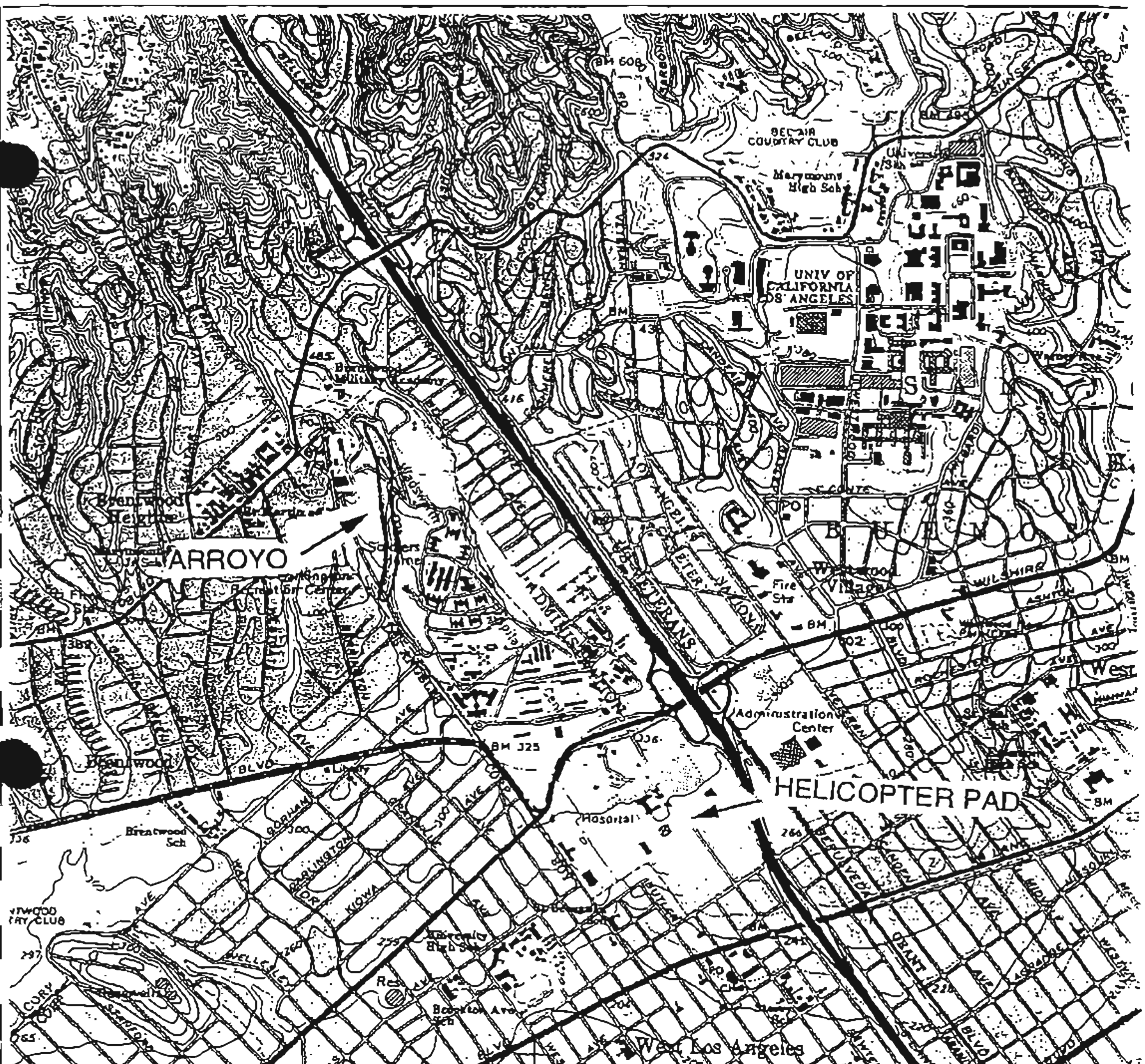

Map reproduced from :
USGS Topographic Map
Beverly Hills Quadrangle

Scale: 1 inch = 2000 feet

Jack K. Bryant ENGINEERS
a division of Bryant • Palmer • Soto, Inc.
Civil • Environmental • Structural • Architecture
2601 Airport Drive, Suite 310, Torrance, Ca. 90505
Telephone: [redacted]
Fax: [redacted]

SHEET TITLE:	SITE LOCATION
PROJECT:	Environmental Assessment Veterans Administration Medical Center Los Angeles, California
Job No:	94090-C0
Dwn. By:	LDW
Chkd. By:	JKB
Date:	6/6/95
Figure	1

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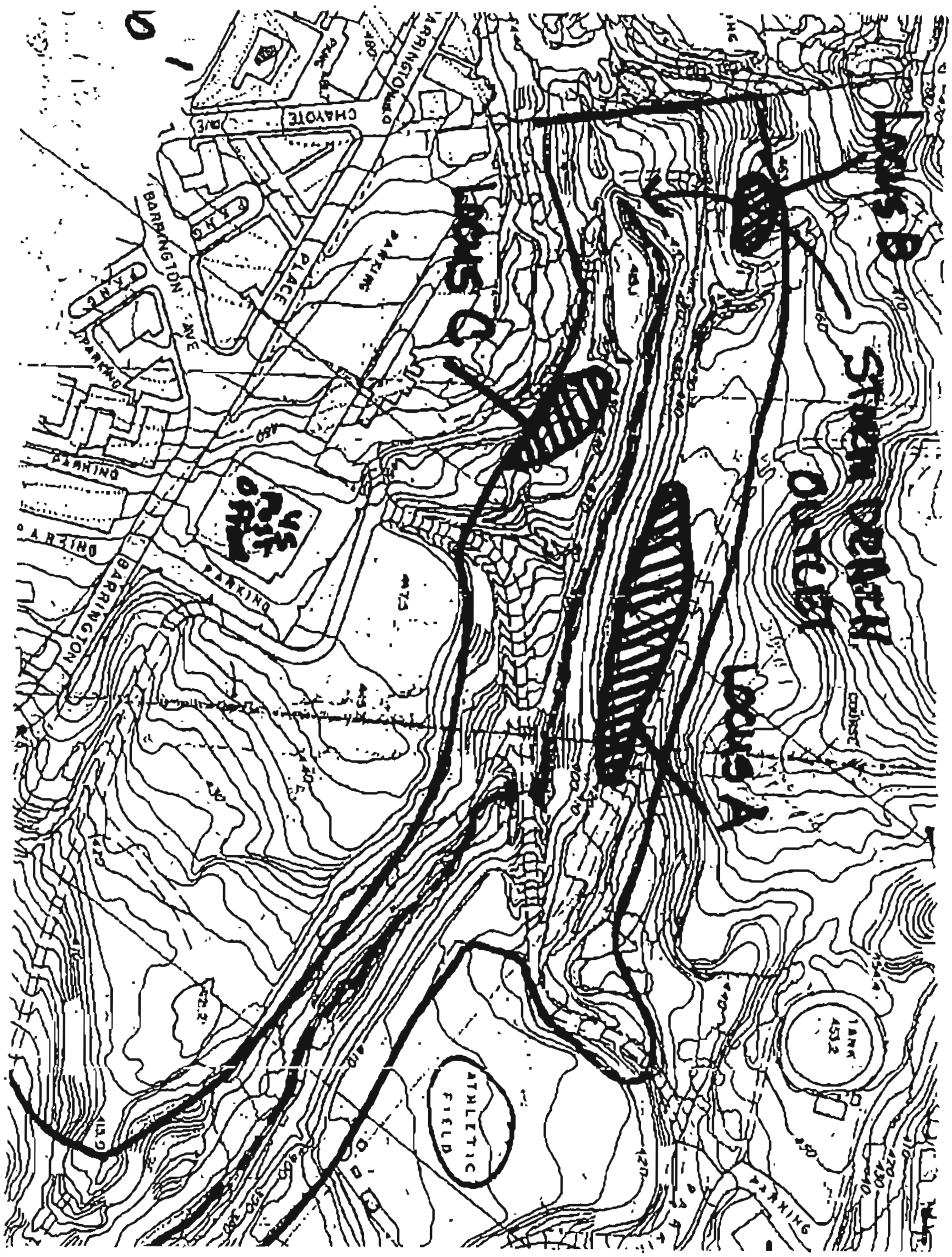

Scale: 1 inch = 200 feet

JACK K. BRYANT ENGINEERS

HISTORICAL DEBRIS LOCATIONS

ENVIRONMENTAL ASSESSMENT
VETERANS ADMINISTRATION MEDICAL CENTER
LOS ANGELES, CALIFORNIA

REVISIONS

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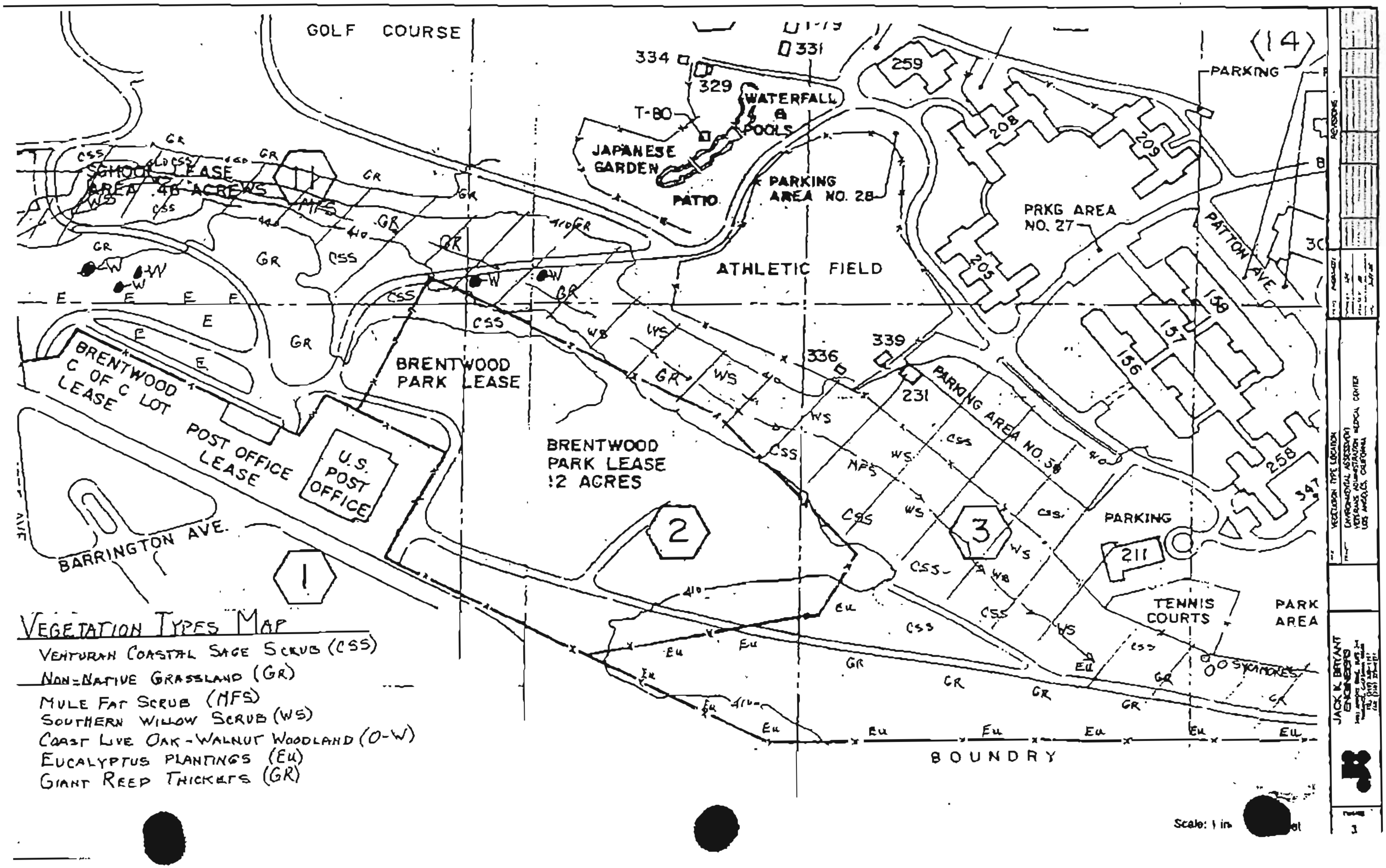
GOLF COURSE
(14)
PARKING
334
331
329
WATERFALL & POOLS
T-80
JAPANESE GARDEN
PATIO
PARKING AREA NO. 28
PRKG AREA NO. 27
259
208
209
205
PATTON AVE.
ATHLETIC FIELD
138
137
136
258
339
336
231
PARKING AREA NO. 58
PARKING
211
TENNIS COURTS
PARK AREA
SYCAMORES
SCHOOL LEASE AREA 46 ACRES
BRENTWOOD PARK LEASE
BRENTWOOD PARK LEASE 12 ACRES
BRENTWOOD C OF C LOT LEASE
POST OFFICE LEASE
U.S. POST OFFICE
BARRINGTON AVE.
1
2
3
BOUNDRY
Vegetation Types Map
Venturan Coastal Sage Scrub (CSS)
Non-Native Grassland (GR)
Mule Fat Scrub (MFS)
Southern Willow Scrub (WS)
Coast Live Oak-Walnut Woodland (O-W)
Eucalyptus Plantings (Eu)
Giant Reed Thickets (GR)
VEGETATION TYPE LOCATION
ENVIRONMENTAL ASSESSMENT
VETERANS ADMINISTRATION MEDICAL CENTER
LOS ANGELES, CALIFORNIA
JACK K. BRYANT ENGINEERS
Scale: 1 in

BRENTWOOD Schools W04965-E

SID GEOTECHNICAL, INC.

SOIL ENGINEERING, GEOLOGY, ENVIRONMENTAL ENGINEERIN

March 16, 1995

Project No. 940118-01

TO: Jack K. Bryant Engineers
2601 Airport Drive
Suite 310
Torrance, California 90505

ATTENTION: Messrs Massoud Heravi and Allen Rigg

SUBJECT: Soil Investigation Report for Parking Driveway West/North of Building T-27, Helipad Soil Mound, and Storm Drain Extension West of the Athletic Field, Veterans Administration Center, West Los Angeles, California

In accordance with your authorization, SID Geotechnical, Inc., have performed a geotechnical exploration at the subject site; refer to Figure 1, Site Location Map. Environmental and potential soil/groundwater contamination related exploration is not within the scope of this investigation. The accompanying report presents a summary of our findings, with conclusions and recommendations.

If you have any questions regarding this report, please do not hesitate to call this office. We appreciate this opportunity to be of service to Jack K. Bryant ENGINEERS.

Very truly yours,

SID Geotechnical, Inc.

Haytham Nabilsi, RCE 45449
Project Engineer

REGISTERED PROFESSIONAL ENGINEER
No. C 45449
Exp. 12/31/98
CIVIL
STATE OF CALIFORNIA

Sid A. Siddiqui, GE 775
Principal Engineer

9/30/97

Distribution: (3) Addressee

Dr. Temple
Sharing Agent
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LIST OF ILLUSTRATIONS AND APPENDICES

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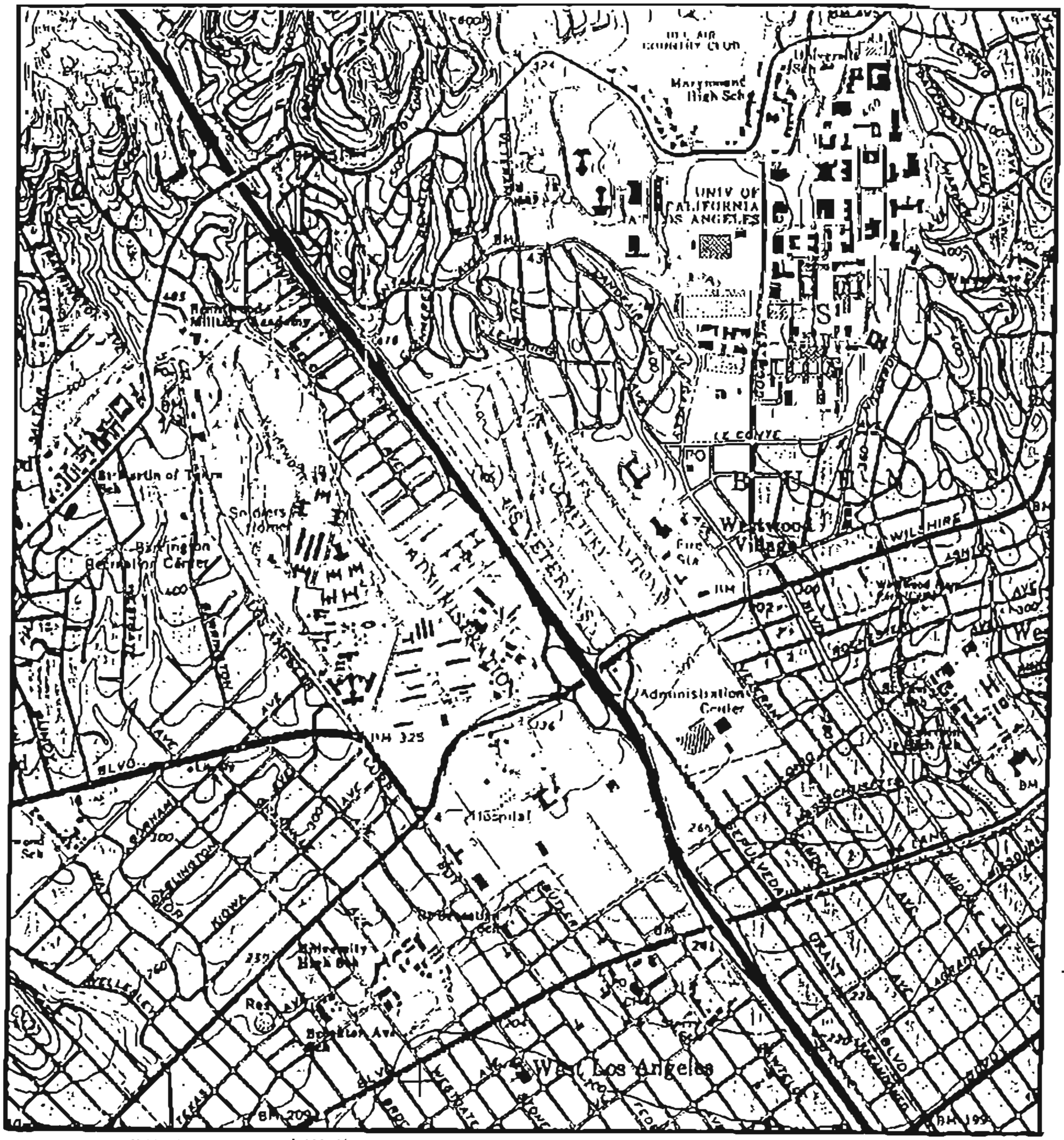

0 2000 4000

scale feet

SITE LOCATION MAP

Base Map: 7½ Min Series, Beverly Hills Quadrangle, 1966 (Riv. 1994)

V.A. Medical Center West Los Angeles Los Angeles, California	**Project No.** 940118-01 **Date** 3/27/95 77-362 **Figure No.**

SID GEOTECHNICAL, INC.

INTRODUCTION

The purpose of this investigation was to determine existing geotechnical conditions pertinent to existing soil mound at the site (Heli-Pad site), loop road reconstruction, and the proposed storm drain extension for the open natural drainage course located in the northern part of the hospital property; west of the athletic field.

The scope of our investigation included:

- Review of available geotechnical information.
- Obtain utility markouts.
- Visually observe pavement distress areas.
- Field exploration by means of borings drilled by a drill rig equipped with hollow stem auger to a maximum depth of 30 feet. Additional borings were manually drilled by Jack K. Bryant Engineers to a depth of 8 feet below stream bed for the proposed storm drain.
- Logging of borings and sampling of representative soils for laboratory testing.
- Backfilling of borings with native soils.
- Laboratory testing of representative soil samples.
- Analysis of field and laboratory data.
- Attendance at meetings.
- Preparation of a draft report for your review.
- Preparation of a final geotechnical report presenting our findings, conclusions and recommendations.

SUMMARY OF SITE CONDITIONS

A. General:

The subject development/improvements are located on land owned by the Veterans Administration approximately two miles south of the Santa Monica Mountains, just west of the 405 Freeway in West Los Angeles, California. The southern one-third of the land is separated by Wilshire Boulevard. The Veterans Administration owns approximately 450 acres of property at this location. The southern and central portions of this land are used for medical and administrative purposes. The northern portion is largely undeveloped except for a golf course, athletic field, and japanese gardens.

B. Heli-Pad:

The Heli-Pad is cited on a portrion of a large soil mound located south of building 304, west of building 345, east of California National Guard property, and north of parking area No 3. The Heli-Pad is a 75 X 75 feet square asphalt concrete paved area. The soil mound is approximately 400 X 360 feet and 25 feet high. Access to the Heli-Pad is via a paved road from the west side of the mound. This paved road is approximately 15 feet wide and in a very poor condition. The road embankment has suffered significant erosion. The soil mound top perimeter is secured with a 6 feet chain link fence with a double gate at road entrance. A wood frame office building is located at the northwest corner of the mound. It appears that this building is an office or control building for air lift operations. The building was locked with a dead bolt lock. A military mobile generator was noted at the southwest corner of the mound. A water system consisting of 2 inch diameter metal piping, valves, and risers were noted at the surface of the mound. An approximately 4 feet berm was noted all around the top of mound. Standing water was also noted near the paved Heli-Pad. Vegetation across the site consists of dense annual weeds and grasses.

C. Loop Road:

The loop road is located in the southern part of the hospital property; south of Wilshire Boulevard and southwest of West Los Angeles Medical Center building (building 500). The road is the driveway extending from building 309 north of parking area No 6A toward the west end of parking area No 6, and then toward the southern portion of parking area No 3. The driveway passes through parking area No 6A, 6, and 3. The investigated portion of the driveway (from parking area No 6A to parking area No 6) is paved and appears to be more than 20 years old. It is severely cracked with vegetation noted in cracks. The general area of the driveway and parking area is in poor condition. Pot holes, uneven surface, numerous cracks, and new patches are common features in the area. Two storm drain inlets were noted on both sides of the driveway in parking area No 6 and one inlet in parking area No 6A.

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D. Storm Drain:

The site of the proposed 60 inch storm drain is an open natural drainage course with sloped and occasionally vertical sides; located in the northern part of the hospital property; west of the athletic field, south of the twin water tanks, north of the post office on Barrington Place, and west of Chayote Street extension. The site is in a small valley that bisects the northern part of the property into east and west areas. The valley is currently undeveloped with the exception of small and poorly paved access roads and two City of Los Angeles storm drains. The first storm drain discharges into the canyon's upstream end through an outlet structure. This storm drain discharges water which has been intercepted from inlets located on and northerly of Sunset Boulevard. The second storm drain begins at the downstream end of the valley and intercepts all water from the canyon by way of a large inlet structure. The length of the canyon is approximately 3600 feet from the outlet structure at the upstream end to the inlet structure at the downstream end, with an elevation change of approximately 70 feet. Water was flowing during our site investigation. Vegetation in the stream bed is native shrubs and bushes. Medium to large trees were also observed.

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PROPOSED DEVELOPMENT

A. *Heli-Pad:*

We understand that the soil mound underlying the Heli-Pad was generated from demolishing of an old hospital and the basement excavation for a new hospital. At this time, the soil is proposed to be moved to fill and grade approximately 1200 feet of the proposed storm drain canyon area.

B. *Loop Road:*

We understand that the proposed loop road alignment will extend from the northwest corner of building 500 at Bonsall Avenue, then west toward parking area 6A, then south toward parking area 6, then east toward parking area 3 to meet Bonsall Avenue again. Asphalt concrete flexible pavement section is proposed for the new loop road.

C. *Storm Drain:*

We understand that as a result of grading the canyon, the upstream existing storm drain will be extended from its present outlet location by means of a 60 inches diameter reinforced concrete storm drain pipe to the end of area to be graded. At this time approximately 1200 feet of the canyon area will be graded, as indicated above. Cut and compacted fill slopes will be proposed at 2:1 (horizontal to vertical) inclination, or flatter. Local small segments of cut slopes may be proposed at inclinations of no steeper than 1½:1 (horizontal to vertical).

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SUMMARY OF GEOTECHNICAL CONDITIONS

Subsurface Exploration

Drill Rig

A total of seven exploratory borings were drilled for the proposed construction. The borings were drilled on March 15, 1995 utilizing a B-61 flight auger drill rig equipped with a six inch hollow stem auger. The continuous flight auger borings were advanced to depths ranging from 5 to 35-feet below the existing surfaces. Refer to Plate 1, Exploratory Boring Location Map for boring locations.

Relatively undisturbed samples were obtained with a California Ring Sampler. This sampler has three inches external diameter, and is lined with one inch high brass rings, with an inside diameter of 2.41-inches. This sampler consists of a steel driving shoe and tube that split longitudinally in half, and a coupling at the top. The coupling connects the sampler to the drill rod. The sample barrel is driven into the ground at the bottom of the boring with a 140-pound hammer with a free fall of approximately 30-inches. Bulk samples were also collected from the auger cuttings during drilling. The sampling was performed by SID Geotechnical, Inc. personnel.

Manual Sampling

A total of two exploratory borings were manually drilled in the bottom of the stream bed. The borings were drilled during March, 1995 utilizing an AMS soil sampling kit and hand auger. The borings were advanced to a maximum depth of 8 feet. Samples were collected at two feet interval. From each interval, a relatively undisturbed two inch ring sample and a bulk sample were collected. The sampler has 2½-inches external diameter, and is lined with one six-inch brass ring, with an inside diameter of two inches. This sampler consists of a steel driving shoe and tube that split longitudinally in half, and a coupling at the top. The coupling connects the sampler to the extension rod. The sample barrel is manually driven into the ground at the bottom of the boring with a 20-pound hammer. This sampling was performed by Jack Bryant Engineers personnel.

Subsurface Findings

Driveway:

The driveway pavement is underlain by aggregate base. The subgrade soil primarily consists of medium to dark brown sandy clay, clayey sand and silty sand with varying content of fine to coarse grained sand. The material is relatively moist and its consistency ranges from medium firm to firm.

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Heli-Pad/Soil Mound:

As encountered in our three borings in the area, the materials of the Heli-Pad soil mound consist of a mixture of silt, sand, clay, and pebbley gravel. In general the soils can be classified as clayey sand and sandy clay depending on the sand and pebble gravel content. Occasionally, the concentration of gravel causes the soils to be considered as gravelly in nature. Percent passing No 200 sieve of the sandier soil ranges from 18 to 29 percent. Percent passing No 200 sieve of the clayey soil ranges from 72 to 84. The sand equivalent value of the material is less than 15. The moisture content of the soils near the surface is high due to the winter rains. Moisture content at depth is normal for this type of soil. Significant free water was encountered in Boring No 3 and some seepage was encountered in Boring 4. Pieces of asphalt, brick, and wood were encountered in the borings. In Boring No 5, an object was encountered at a depth of 28 feet below surface and it may be a large rock, etc.

Storm Drain:

Two borings were drilled utilizing a B-61 drill rig. The borings were advanced from the top of the stream embankment; where accessible. Two other borings were drilled manually in the bottom of the stream with hand tools and a 2½-inch (external diameter) sampler. These borings were drilled by Jack Bryant Engineers.

In Boring No 7 (drilled at an approximate lateral distance of ten feet from stream bed), water was encountered at approximately six feet below stream bed elevation. However, water was encountered near the surface in the boring drilled in the stream bed.

The soils encountered during drilling with drill rig at and below stream bed elevation are classified as sandy clay and clayey sand. Moisture content of the materials is above the plastic limit of the soils. The consistency of the soils is firm and becomes harder with depth. The expansion potential is low to medium.

The soils encountered during manual drilling ranged from sand-silty sand (SW-SM), sandy silty clay (CL-ML), silty sand (SM), to sandy clay (CL). These materials were wet near the surface to very moist near the bottom of drilled borings (total depth was 8-feet). The expansion potential of the sandy clay was determined to be medium.

Laboratory Testing

In order to determine the physical and engineering properties of the soils, laboratory tests were performed on representative samples obtained from the borings. The tests consisted primarily of natural moisture contents, densities, sieve analysis, maximum dry density/optimum moisture content, sand equivalent, expansion index, Atterberg limits, direct shear, remolded shear, R-value, and pH, and sulfate. The soil classifications are in conformance with the Unified Soil Classification System (USCS), as outlined in the classification and symbols chart (Appendix B). A summary of laboratory test results is presented in Appendix C with some of the results shown on the Geotechnical Boring Logs in Appendix B.

77-368

Groundwater

Groundwater was encountered in several of our borings. Water seepage was encountered at 14 and 25 feet below surface in two borings drilled on the soil mound (Heli-Pad site). This water may be trapped in coarse grained layers from recent rains. Water was encountered in Boring No 7 drilled for the storm drain at 14 feet below surface (approximately 6 feet below stream bed). Borings 8 and 9 were drilled in the stream bed and water was near the surface.

According to Mr. Rodney Brown of Los Angeles Public Works, Hydraulic Water Conservation Division, groundwater was measured at 43.6 below surface (Elevation 236.4) in Well No 2535J on April 30, 1994. This well is located just southwest of the site at the intersection of Texas Avenue and Bundy Drive; approximately 0.75 miles from the V.A. Hospital boundary.

Flooding

Based on our verbal communication with City and County of Los Angeles personnel, the V.A. Hospital flood zone is not included on their plans and community maps. As a result, we have contacted Mr. Henry Choa of the Federal Emergency Management Agency (FEMA) Western Division to request flood zone information on Federal properties. Mr. Choa indicated that Federal, Indian, and State Forest lands are not studied under the flood insurance program. Mr. Choa added that Zone A_0 and C are very close to the subject site. This should be further verified by the design civil engineering consultant.

Liquefaction

Liquefaction occurs when loose saturated cohesionless soils are subject to ground shaking during an earthquake of large magnitude. Liquefaction generally occurs in loose fine grained sand when the water table is less than 40 feet below ground surface. Based on the clayey soil types at the site the potential for liquefaction is considered to be low.

Seismically Induced Settlement

Seismically induced settlement generally occurs within areas of loose soils with relatively low density. The possibility of seismically induced settlement within surficial soils is low, however it cannot be entirely precluded.

Secondary Seismic Hazards

Considering the location, topography, subsurface conditions and absence of near by large bodies of water, tsunamis, seiches, flooding (due to dam rupture), landslides and rock falls are not a potential hazard for this site. As indicated above, flooding potential of the improvements should be evaluated by the design civil engineer.

Faulting/Seismicity

"State of the Art" assessments of seismogenic fault sources generally include estimating the maximum credible earthquake (MCE) and the maximum probable earthquake (MPE). The California Division of Mines and Geology (CDMG Note No. 43) defines the MCE as the maximum earthquake that appears capable of occurring under the presently-known tectonic framework. The MPE has been defined as being the largest or maximum earthquake that is likely to occur during a 100-year interval and shall not be less than the maximum historical event.

A computer search of known Quaternary major faults within 50 miles of the site is presented in Appendix D. The computer search was performed by two different programs; EQFAULT and PGA/3.

In EQFAULT, the "mean" represents the best-fit curve for the range of acceleration levels (the median value or the 50th percentile of data scattered about a regression curve). The "mean+1 sigma" (one standard deviation) encompasses 84 percent of the data about a regression curve.

The tables in Appendix D summarize the shortest distance to the causative faults, magnitude of the maximum credible and maximum probable earthquake, and horizontal peak ground accelerations at the site. Also included, are expected durations of strong groundshaking and the predominant period of the ground motion, in seconds. Tables 1 and 2 below summarize the computer fault search results for EQFAULT and PGA/3 programs.

It is probable that not all active or potentially active faults in the region have been identified. Furthermore, seismic potential of the smaller and less notable faults is not sufficiently developed for assignment of maximum credible and maximum probable magnitudes and associated levels of ground shaking that might occur at the site due to these faults.

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SUMMARY OF ESTIMATED PEAK HORIZONTAL ACCELERATION

Table 1, EQFAULT PROGRAM

SITE	COORDINATE	CLOSEST FAULT (Kilometer) (Maximum Credible Magnitude)	DESIGN FAULT (Miles)	MAXIMUM CREDIBLE MAGNITUDE	MAXIMUM PROBABLE MAGNITUDE	PEAK HORIZONTAL ACCELERATION (Search Radius is 75 Miles)			
						MCE (Mean)	MPE (Mean)	MCE (Mean + σ)	MPE (Mean + σ)
V. A. Hospital	034.0651 N 118.4507 W	Santa Monica-Hollywood (2) (7.5)	Santa Monica-Hollywood (2)	7.5	5.25	0.653	—	0.961	—
			Newport-Inglewood Offshore (3)	7.0	5.75	—	0.312	—	0.521

Table 2, PGA/3 PROGRAM

SITE	CAUSATIVE FAULT	CREDIBLE FAULT MAGNITUDE	DISTANCE TO SITE (Kilometer)	PREDOMINANT PERIOD (sec)	AVERAGE MAXIMUM GROUND ACCELERATION (g)	GROUND SHAKING DURATION (Sec)
V. A. Hospital	Santa Monica	6.7	2	0.29	0.53	21
	SA/Mojave-San Bernardino	8.0	62	0.40	0.13 (Peak)	50 (Maximum)

77-371

CONCLUSIONS

Based on our exploration, limited laboratory test results, and a review of available data from this investigation, we are of the opinion that the proposed improvements are feasible from a geotechnical engineering standpoint, provided the recommendations of this report (presented for your consideration) are implemented during planning, design and construction. Our specific conclusions are listed below.

General

1. In general, the onsite earth materials including soil mound below Heli-Pad are suitable for use as compacted fill and can be readily excavated using conventional heavy duty equipment in good working condition. We anticipate that the onsite soils can be readily compacted using a combination of watering and wheel-rolling with a sheepsfoot or equivalent equipment. Remedial soil treatment consisting of some processing, moisture conditioning or drying will be required.

2. Existing buried utilities will be encountered throughout the project area. Removal or protection of these utilities prior to start of construction operations would be an important consideration.

3. Based on our subsurface investigation, overexcavation and recompaction of the near surface soils should be anticipated to provide adequate support for shallow foundations, slabs-on-grade, and the structural pavement section.

4. Ground water was not encountered during our field investigation for the loop road and therefore is not expected to affect the construction operation. Water seepage trapped within the sandy layers was encountered during our field investigation for the soil mound at Heli-Pad and water may appear during excavation. Water was flowing in the wash during our field investigation and may require control during construction of the storm drain.

5. Based on the existing asphalt concrete condition of the loop road and its thickness, overlay may not be advisable. Reconstruction as recommended later in this report may therefore be a consideration. Crushed and ground asphalt recycled from existing pavement may be mixed, graded and used as aggregate base for reconstruction provided the materials meet the "R" value requirements of at least 70.

77-372

6. Based on laboratory testing, the near surface soils at the site in general are expected to have a medium expansion potential. Design of sidewalks, curb/gutter, and concrete flat work should consider medium expansion of the subgrade soils. This should be further verified (as necessary) subsequent to site grading.

7. Asphalt and concrete chunks (free from reinforcement steel) and broken into small pieces may be incorporated in deep fill areas. No deleterious materials should be used in the upper three feet of any fill.

8. No known faults are located at the site.

9. Since the site is located within an active seismic region, the seismicity discussed within this report and Appendix D should be considered along with the local building codes and other pertinent seismic and design requirements.

10. Due to the presence of cohesive soils and fairly dense and coarse texture of the underlying sandy soils; liquefaction potential is considered low. Presence of loose sandy soils in local areas, however, cannot be entirely precluded.

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RECOMMENDATIONS

General

All grading should be in accordance with our General Earthwork and Grading Specifications (Appendix E). Pavement reconstruction work, like new construction, should be planned to provide 20 years of future service life.

Site Preparation, Grading and Overexcavation

In order to provide firm, uniform support for foundations and pavement, the grading area should be cleared of all roots, debris, and other deleterious materials which should be hauled off site. Existing utility lines should be re-routed or protected as necessary and old segments be removed and hauled off site. Concrete pipes may be crushed in place or filled with slurry; this will be determined by the soil engineer during grading.

We recommend that any soft or spongy soils should be removed from below the storm drain pipe to a depth of at least 12-inches and replaced with select, durable sand or crushed stone free from organic materials. The pipe should be embeded in sand from 12-inches below the pipe to 12-inches above the pipe. The bedding should be carefully placed to provide good contact and provide uniform support for the pipe. Fill materials from the Heli-Pad soil mound may be placed above the bedding sand. This fill should be compacted to at least 90 percent relative compaction. The pipe manufacturer/supplier should be consulted regarding the minimum cover over the pipe before heavy compaction equipment can oporate on the backfill surface.

Cut/Fill Slopes

Cut and fill slopes should be designed at an inclination of 2:1 (horizontal to vertical) or flatter. Cut slopes in firm clayey soils may be inclined at 1½:1 (horizontal to vertical) in local segments, however these are subject to grading plan review and verification of site conditions during construction. Fill slopes should be overfilled and compacted to at at least 90 percent relative compaction and then trimmed back to expose compacted core.

Compacted Fill

Import fill (if required) should conform to the specifications in Appendix E. Imported soils should be evaluated prior to importing and placement as compacted fill. Fill materials should be placed in 6- to 8-inch loose lifts, moisture conditioned or heavily watered if granular and compacted to at least 90 percent relative compaction. This is relative to the maximum dry density as determined by ASTM D1557-91 Test Method. The existing asphalt concrete pavement and concrete chunks free from reinforcement may be incorporated within deep fills, provided that pieces are no larger than 3-inches.

77-374

Excavation Stability

We recommend that the maximum height of vertical excavation be five feet. For vertical excavations greater than five feet deep, shoring is recommended. Alternatively, temporary excavations may be constructed at 1:1 (horizontal to vertical) slope ratios to heights of 10 feet. A combination of vertical and sloped excavation may be allowed provided the vertical portion is five feet or less and the total excavation is less than fifteen feet.

Braced Shoring/Trench Shield

Appropriate shoring is recommended for vertical excavations greater than five feet deep. The recommended lateral earth pressures for design of braced shoring/trench shield are shown on Plate 2. In most cases, the usual steel shield should suffice for shoring provided it can withstand the recommended lateral earth pressures, and the top of the shield is no more than five feet below existing grade.

Surcharge loads within a 1:1 plane extending up from the base of the excavation should be converted to lateral pressures by adding 80 psf to the indicated values in Plate 2.

Construction Excavation and Backfill

All backfill should be compacted by mechanical means to at least 90 percent of the maximum dry density. Representative soil samples collected from our exploratory borings indicate very low to fairly low sand equivalent values (SE= 4, 5, 8, 11, 15, 15, 18, 27). Therefore flooding or jetting should not be permitted. Imported sandy soil should be utilized in the pipe zone. If sandy soil is exposed in temporary construction excavations it should be kept moist, but not saturated, to retard raveling and sloughing during construction.

Lateral Earth Pressures (Appurtenant Structures)

The walls of buried vaults, concrete pipes, box culverts, thrust blocks, manholes, or basins appurtenant to the storm drain should be designed to resist the appropriate applied lateral earth pressures as shown in Plate 3. These values are based on level, properly compacted/drained backfill behind the walls; refer to Plate 4, Retaining Wall Backfill and Subdrain Detail.

Determination of the appropriate condition, active or at-rest, for design will depend on the flexibility of the wall. Cantilever walls which are free to rotate at least 0.001 radian (0.06 degrees) may be assumed flexible and designed for active condition. Walls not capable of this movement should be assumed rigid and designed for at-rest condition. The effect of any surcharge (dead or live load) should be added to the appropriate lateral earth pressure. The corresponding lateral pressure coefficients for a uniform vertical surcharge behind the wall are 0.3 and 0.5 for active and at-rest conditions, respectively. Specific point or strip surcharges, sloped backfill or other retained earth conditions may be evaluated upon request.

77-375

Lateral Load Resistance

Applied lateral loads may be resisted by passive earth pressures acting against the sides of buried structures and/or by frictional resistance between supporting materials and the bottom of structures. The allowable sliding resistance along the bottom of wall foundations and slabs may be based on an allowable coefficient of friction of 0.25 for dead loads bearing on onsite soils. The allowable lateral bearing value for the sides of buried structures placed against firm native materials or properly compacted fill is shown on Plate 2. Passive resistance should not exceed 2500 psf at any depth.

Bearing Capacity

Native soils that are anticipated to be encountered along pipeline alignment and proposed fill should have adequate bearing capacity to support the proposed buried storm drain. The allowable bearing capacity of the native soils and compacted backfill is 1200 psf.

Average Soil Unit Weight

Compacted backfills may be assumed to have an average unit weight of 130 pcf. In-place soils may be assumed to have an average unit weight of 118 pcf.

Supporting Existing Utilities

The proposed improvements are located near and may cross several existing utilities. Care should be exercised by the contractor not to disturb these utilities and/or to support them during construction. When compacting backfill above the pipe zone would be detrimental to surrounding utilities, we recommend a weak cement (one sack) sand/slurry mix be used for backfilling operations.

Corrosion Potential/Cement Type

Five soil samples were selected from the Heli-Pad soil mound (Boring No 5) and the storm drain (Boring Nos 6, 7, 8, 9) and delivered to Edward S. Babcock, Inc. laboratory for pH measurements and sulfate content. Based on the laboratory test results, the soluble sulfate content of the soils in mound is on the order of 57 ppm with a pH value of 7.6. The test results for basement soils of the proposed storm drain show that the solubale sulfate content varies between 20 and 46 ppm with a pH range between 6.5 and 7.1. Based on the above test results, we recommend Type 2 cement for all concrete in contact with earth materials. We also recommend the use of low slump concrete (on the order of 4-inches) at the time of placement). In addition, for ferrous metals, we recommend corrosion control measures in accordance with recommendations by a corrosion consultant.

NORMAL

77-376

Drainage

- As a minimum, surface drainage across the parking area and along the new loop road alignment should be improved by means of appropriate drainage devices such as gutters in critical water flow areas and middle of driveways. Water must not be allowed to pond on pavements, near structures, or saturate subgrade soils.

- Surface water runoff should be intercepted by subsurface drainage devices below pavement surface directing water to nearby storm drain. This device should have the capacity to prevent ponding on pavements.

- Water; either natural or by irrigation from adjacent properties, businesses, open fields should be eliminated.

- Over the slope runoff must not be allowed.

- Surface drainage must be directed and maintained away from foundations.

Seismic Consideration

We do not know of any major active or potentially active faults transacting the site. Thus the potential hazards due to surface rupture is considered to be low. The site lies within seismic zone 4 as defined in the Uniform Building Code (UBC). The structural engineer should consider city/county local codes, Uniform Building Code,the latest requirements of the Structural Engineers Association, and any other pertinent data in selecting seismic design parameters.

Structural Pavement Design Recommendations

Structural pavement design recommendations have been provided under a separate cover and are included in Appendix F of this reportfor easy reference.

77-377

Plan Review:

Recommendations herein reflect the site, subsurface and the proposed structures and loads as we know them. We should be permitted to review the grading and improvement plans to revise our conclusions and recommendations, as necessary.

Limitation of Investigation

The recommendations provided in this report are based on preliminary design information and subsurface conditions as interpreted from limited exploration of the site. Our preliminary conclusions and recommendations should be reviewed and verified during site grading and construction and revised accordingly if exposed geotechnical conditions vary from our preliminary findings and interpretations.

Additional Investigation/Observations and Testing:

SID Geotechnical, Inc., should observe and or test at the following stages of construction:

- During site clearance and removal of obstructions, old foundations, etc..
- During all overexcavations, and fill placement.
- During retaining walls and trench backfills and subgrade and base compaction prior to paving.
- When any unusual conditions are encountered.

Final Report

A final grading control report including geotechnical data gathered should be prepared subsequent to completion of rough grading. The report should include final foundation and pavement design recommendations.

CLOSURE

This report has been prepared for the exclusive use of Jack K. Bryant ENGINEERS, to assist the project engineer in the design of the pavement and storm drain improvements. It is recommended that SID Geotechnical, Inc., be engaged to review the final design drawings and specifications prior to construction. This is to verify that the recommendations contained in this report have been properly interpreted and are incorporated into the project specifications.

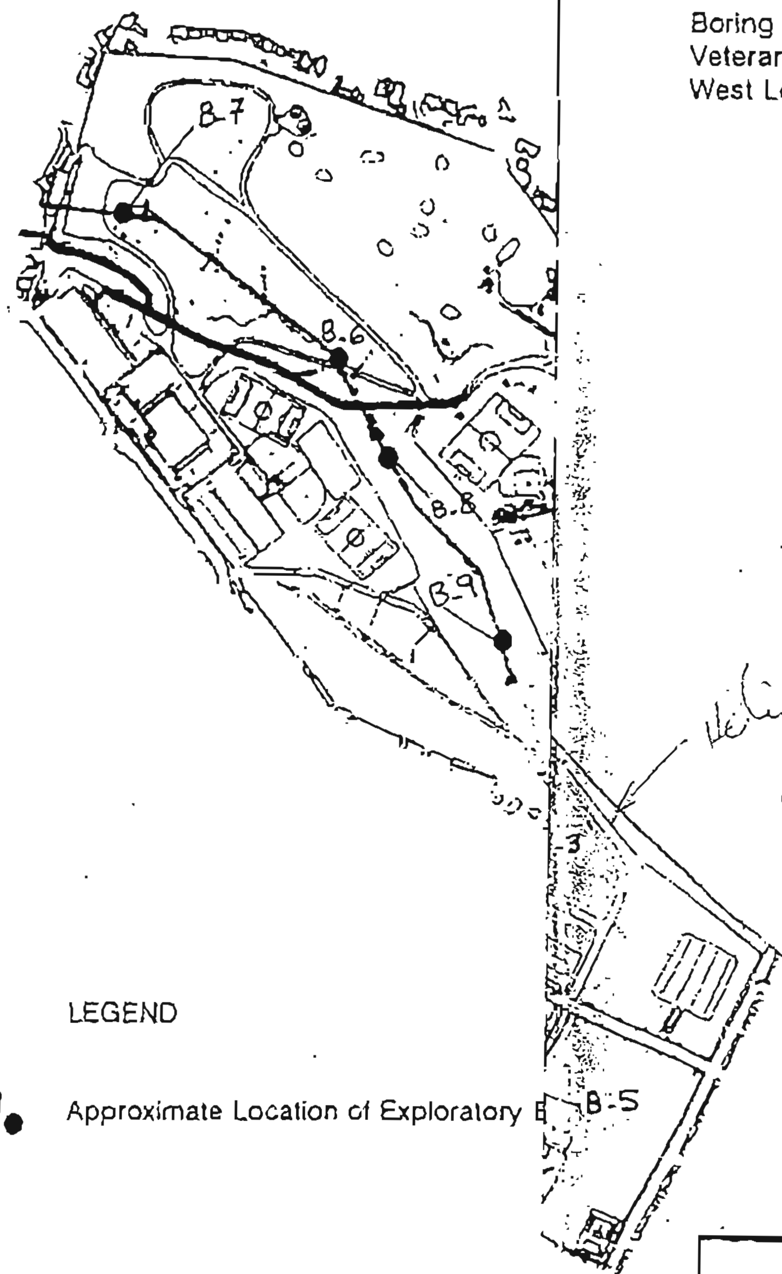
The findings of this report are based upon our evaluation and interpretation of the subsurface conditions encountered in the exploratory borings and the results of the laboratory testing program. The soil conditions on the subject site have only been determined at the specific locations. Conditions between or beyond the borings may vary significantly, and interpretation or extrapolation of the results may not be appropriate, especially at shallow depths.

If the project plans change significantly, we should be retained to review our original design recommendations and their applicability to the revised construction. If conditions are encountered during construction that appear to be different than those indicated in this report, this office should be notified immediately. Design and construction revisions may be required.

Our findings and recommendations were obtained in accordance with generally accepted professional principles and practice in geotechnical engineering. We make no other warranty, either expressed or implied.

Plate 1

Boring Location Map
Veteran Administration Medical Center
West Los Angeles, California



LEGEND

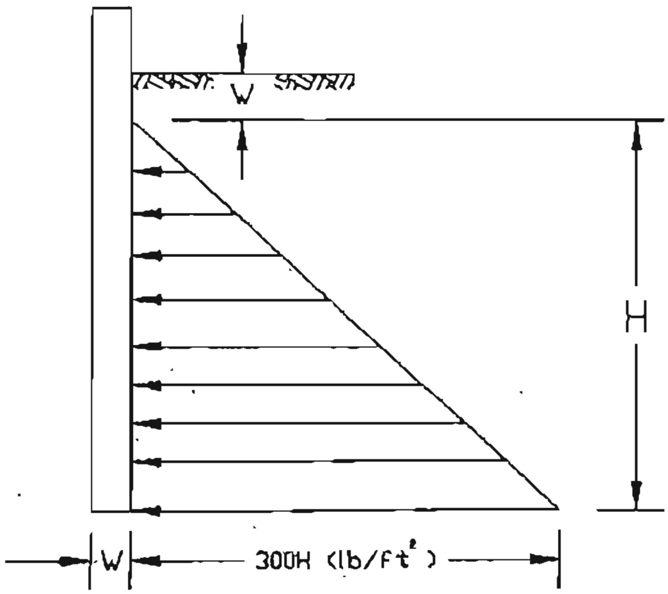
B-9 ● Approximate Location of Exploratory B

SITE PLAN
SCALE: 1"=800'

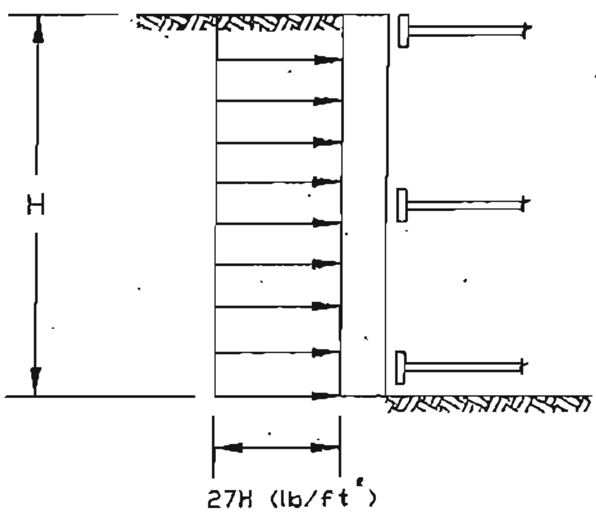
NORTH

JACK K. BRYANT ENGINEERS
A DIVISION OF BRYANT - PALMER - SOTO INC.
2601 AIRPORT DRIVE, SUITE 310
TORRANCE, CALIFORNIA 90505
TEL: [redacted] FAX: [redacted]

77-380



PASSIVE CONDITION
(NO WATER)



BRACED SHORING
(NO WATER)

LATERAL PRESSURE DIAGRAMS	Project No: 940118-01 Plate No: 7

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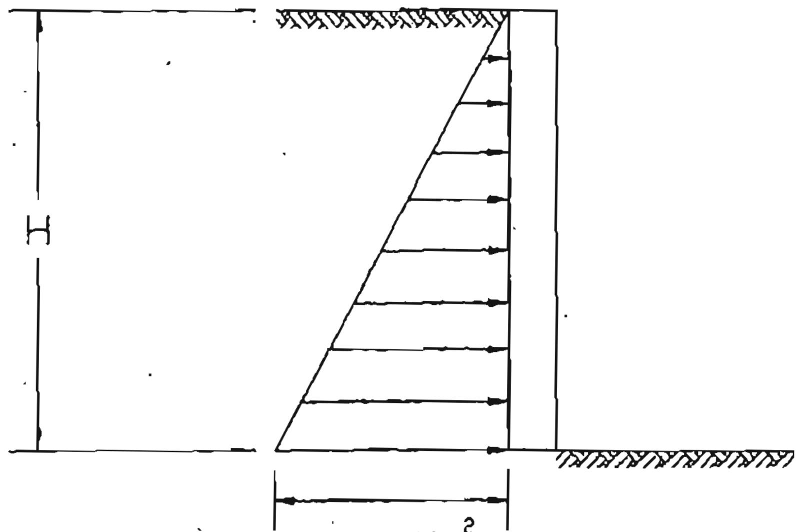
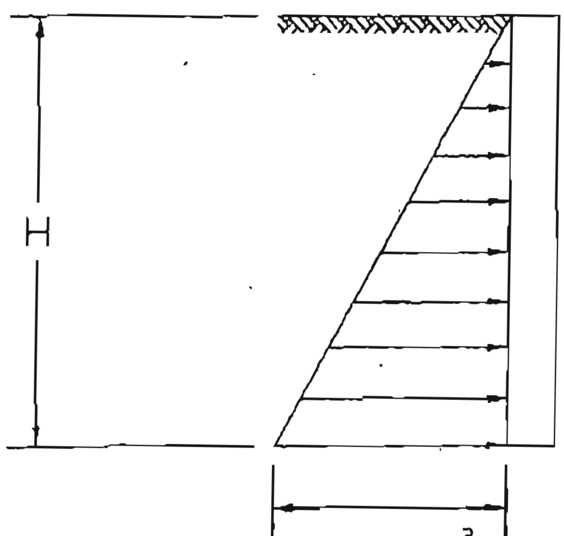


ACTIVE CONDITION
(NO WATER)

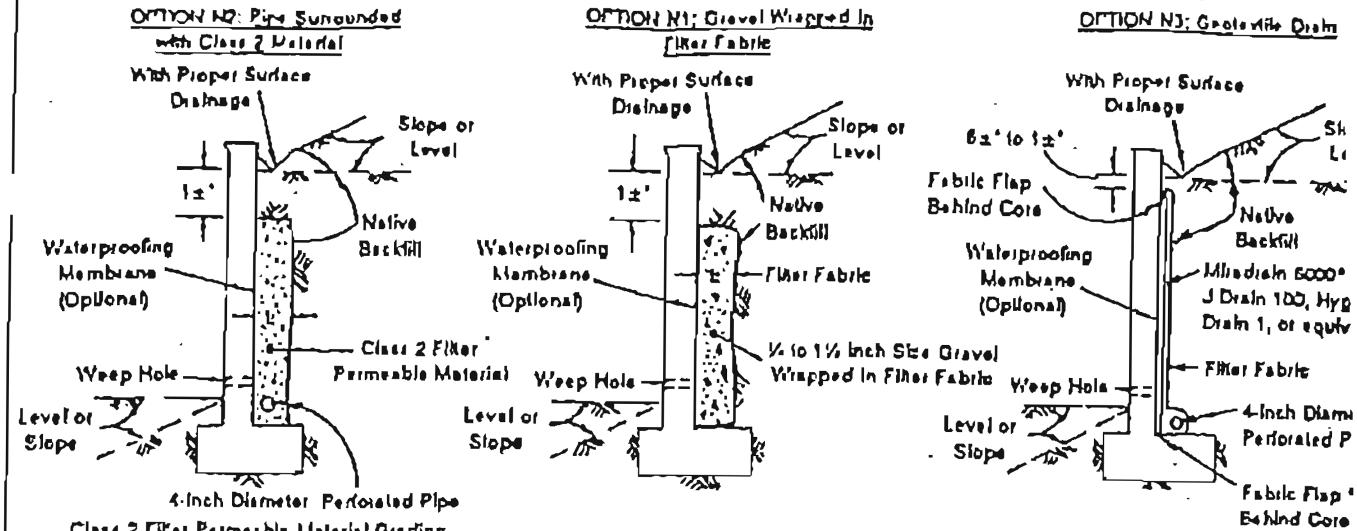


AT-REST CONDITION
(NO WATER)

LATERAL PRESSURE DIAGRAMS	Project No: 940118-01 Plate No: 3

77-382

SUBDRAIN OPTIONS FOR NATIVE MATERIAL BACKFILL



Class 2 Filter Permeable Material Grading Per Caltrans Specifications

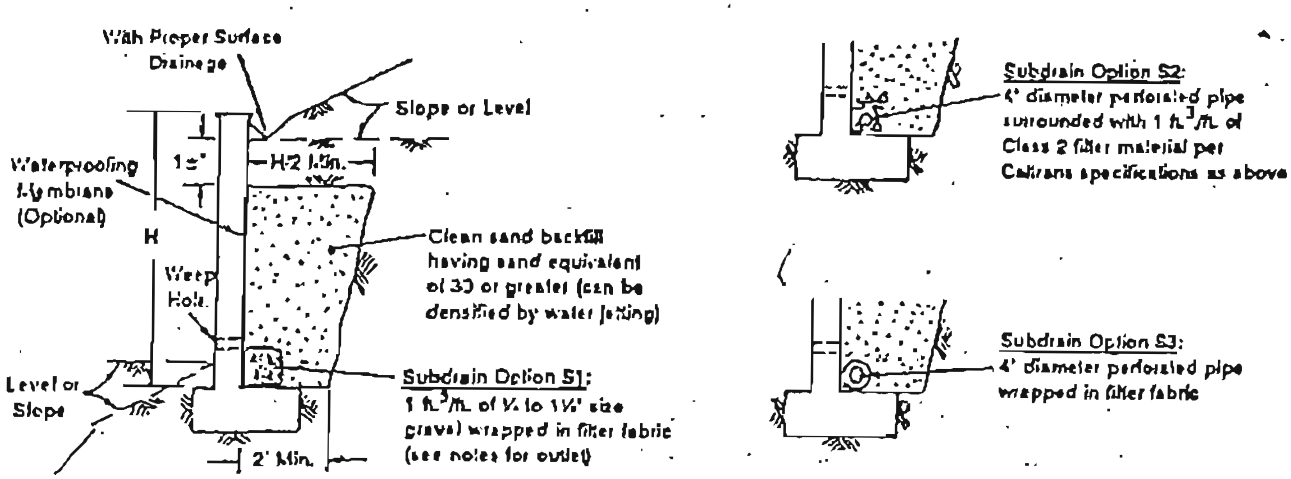
Sieve Size	Percent Passing
1"	100
3/4"	90-100
3/8"	40-100
No. 4	25-40
No. 8	18-33
No. 30	5-15
No. 50	0-7
No. 200	0-3

Proper Outlet Should be Provided for Gravel Subdrain (See Notes)

* Miradrain 6000 or J Drain 100 for non-waterproofed walls; Miradrain 6200 or J Drain 200 for completed waterproofed walls

** Peel back the bottom fabric flap, place pipe next to core, wrap fabric around pipe and tuck behind core.

SUBDRAIN OPTIONS FOR CLEAN SAND BACKFILL



Notes:

- Pipe type should be ASTM D1527 Acrylonitrile Butadiene Styrene (ABS) SDR35 or ASTM D1785 Polyvinyl Chloride plastic (PVC), Schedule 40, Armco A2000 PVC, or approved equivalent. Pipe should be installed with perforations down.
- Filter fabric should be Mirafi 140N, 140NS, Supac 4NP, Amoco 4545, Trevira 1114, or approved equivalent.
- All drains should have a gradient of 1 percent minimum.
- Outlet portion for gravel subdrain should have a 4"-diameter pipe with the perforated portion inserted into the gravel approximately 2' minimum and the nonperforated portion extending approximately 1' outside the gravel. Proper sealing should be provided at the pipe insertion enabling water to run from the gravel portion into rather than outside the pipe.
- Waterproofing membrane may be required for a specific retaining wall such as a stucco or basement wall.
- Weephole should be 2" minimum diameter and provided at 25' minimum in length of wall. If exposure is permitted, weephole should be located at 3±" above finished grade. If exposure is not permitted such as for a wall adjacent to a sidewalk/curb, a pipe under the sidewalk to discharge through the curb face or equivalent should be provided, or for a basement-type wall, a proper subdrain outlet system should be provided. Open vertical masonry joints (i.e., omit mortar from joints of first course above finished grade) at 32" maximum intervals may be substituted for weepholes. Screening such as with a filter fabric should be provided for weepholes/open joints to prevent earth materials from entering the holes/joints.

RETAINING WALL BACKFILL AND SUBDRAIN DETAIL

PLATE 4

77-383

APPENDIX A

SID GEOTECHNICAL, INC.

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REFERENCES

- 1995, SID Geotechnical, Inc. "Estimated Thickness of Structural Pavement Section, Proposed Loop Road and New Road Across North End of Creek, West Los Angeles V.A. Medical Center, Los Angeles, California." Project Number 940118-01, Report Dated April 18, 1995.
- 1994, USGS, 7½ Min. Series, Beverly Hills Quadrangle, 1966, Revised 1994.
- 1991, Dibblee Foundation, Map DF-31, Geology, Beverly Hills-Van Nuys (south 1/2) Quadrangles, Map Dated May, 1991.

APPENDIX B

SID GEOTECHNICAL, INC.

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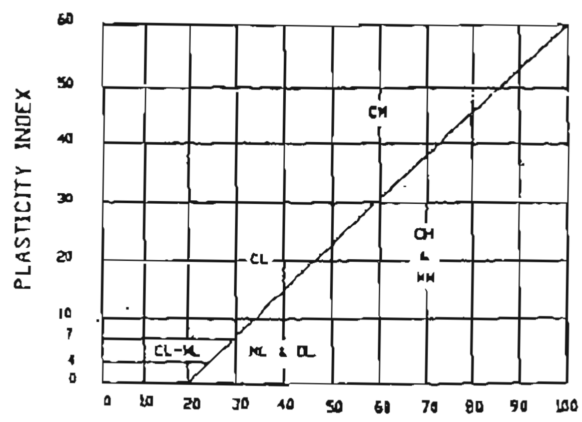
MAJOR DIVISIONS			SYMBOLS	TYPICAL NAMES
COARSE-GRAINED SOILS (More than 1/2 of soil > no. 200 sieve)	GRAVELS (More than 1/2 of coarse fraction > no. 4 sieve size)		GW	Well-graded gravels or gravel-sand mixtures, little or no fines
			GP	Poorly graded gravels or gravel-sand mixtures, little or fines
			GM	Silty gravels, gravel-sand-silt mixtures
			GC	Clayey gravels, gravel-sand-clay mixtures
	SANDS (More than 1/2 of coarse fraction < no. 4 sieve size)		SW	Well-graded sands or gravelly sands, little or no fines
			SP	Poorly graded sands or gravelly sands, little or no fines
			SM	Silty sands, sand-silt mixtures
			SC	Clayey sands, sand-clay mixtures
FINE-GRAINED SOILS (More than 1/2 of soil < no. 200 sieve)	SILTS & CLAYS	LL < 50	ML	Inorganic silts and very fine sands, rock flour, silty or clayey fine sands or clayey silts with slight plasticity
			CL	Inorganic clays of low to medium plasticity, gravelly clays, sandy clays, silty clays, lean clays
			OL	Organic silts and organic silty clays of low plasticity
	SILTS & CLAYS	LL > 50	MH	Inorganic silts, micaceous or diatomaceous fine sandy or silty soils, elastic silts
			CH	Inorganic clays of high plasticity, fat clays
			OH	Organic clays of medium to high plasticity, organic silty clays, organic silts
	HIGHLY ORGANIC SOILS		Pt	Peat and other highly organic soils

CLASSIFICATION CHART

(UNIFIED SOIL CLASSIFICATION SYSTEM)

CLASSIFICATION	RANGE OF GRAIN SIZES: U.S. Standard Sieve Size	RANGE OF GRAIN SIZES: Grain Size in Millimeters
BOULDER	ABOVE 12"	ABOVE 305
COBBLES	12" to 3"	305 TO 76.2
GRAVEL	3" to No. 4	76.2 to 4.76
COARSE	3" to 3/4"	76.2 to 19.1
FINE	3/4" to No.4	19.1 to 4.76
SAND	No. 4 to 200	4.76 to 0.074
COARSE	No. 4 to 10	4.76 to 2.00
MEDIUM	No. 10 to 40	2.00 to 0.420
FINE	No. 40 to 200	0.420 to 0.074
SILT & CLAY	BELOW No. 200	BELOW 0.074

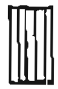
GRAIN SIZE CHART



PLASTICITY CHART

METHOD OF SOIL CLASSIFICATION	Project No. : 940118-01 Plate No. :

77-387

NR	NO RECOVERY
	RING SAMPLE
	BAG SAMPLE
	STANDARD PENETRATION TEST
(90)	RELATIVE COMPACTION
GS	GRAIN SIZE ANALYSIS
SE	SAND EQUIVALENT
CP	MAXIMUM DRY DENSITY/OPTIMUM MOISTURE
CN	CONSOLIDATION
DS	DIRECT SHEAR
RS	REMOLDED SHEAR
EI	EXPANSION INDEX
AL	ATTERBERG LIMITS
	GROUND WATER

- Classification in accordance with ASTM D2487 " Classification of Soils for Engineering Purposes"
- Description and visual identification in accordance with ASTM D2488 "Description and Identification of Soils (Visual/Manual Procedure).
- All Sieve sizes shown are US Standard.
- Refusal with the Standard Penetration Test is defined as one of the following:
  10 blows for no apparent advancement of the sampler; or
  50 blows for less than 6-inches advancement of the sampler; or
  100 blows for 6-inch to 18-inch advancement of the sampler.

KEY FOR GEOTECHNICAL LOGS

77-388

GEOTECHNICAL BORING LOG

Drill Hole No. B-1 (Loop Road)

Date: March 15, 1995

Project No. 940118-01

Drilling Company: G&E Drilling

Type of Rig: B-61

Hole Diameter: 6" **Drive Weight:** 140 lbs. **Drop:** 30"

Elevation: Existing Surface

DEPTH FEET	TYPE OF TEST	SAMPLE TEST	BLOWS PER 6 INCH	DRY DENSI. PCF	MOIS. %	SOIL CLASS USCS	GEOTECHNICAL DESCRIPTION LOGGED BY HMN SAMPLED BY HMN
1–5	R-value		5 11 13	102	12	SM	SILTY SAND: Light tan brown, yellowish fine to coarse grained with gravel and r fragments, slightly cohesive. Very moist, Medium dense. R-value = 20
			8 8 11	104	12		
6–10			3 5 7	98	16	SC	CLAYEY SAND: Medium brown, fine to coarse grained, moderately cohesive. Ve Moist. Medium firm
11–25							TOTAL DEPTH = 10 FEET NO GROUNDWATER HOLE BACKFILLED

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GEOTECHNICAL BORING LOG

Drill Hole No. B-2 (Loop Road)

Date: March 15, 1995

Project No. 940118-01

Drilling Company: G&E Drilling

Type of Rig: B-61

Hole Diameter: 6" **Drive Weight:** 140 lbs. **Drop:** 30"

Elevation: Existing Surface

DEPTH FEET	TYPE OF TEST	SAMPLE TEST	BLOWS PER 6 INCH	DRY DENSI. PCF	MOIS. %	SOIL CLASS USCS	GEOTECHNICAL DESCRIPTION LOGGED BY HMN SAMPLED BY HMN
1	GS		5 / 7 / 17	100	16	CL	SANDY CLAY: Dark brown, trace of fin coarse grained sand, moderately cohe Very Moist. Firm % Passing #200 = 79
2							
3			8 / 24 / 32	100	17		
4							
5						SC	CLAYEY SAND: Medium brown, fine to coarse grained and gravel, moderately cohesive. Very Moist. Hard.
6							
7							
8							
9							
10							
11							
12							TOTAL DEPTH = 5 FEET NO GROUNDWATER HOLE BACKFILLED
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							
23							
24							
25							

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GEOTECHNICAL BORING LOG

Drill Hole No. B-3 (Heli-Pad)

Date: March 15, 1995 **Project No.** 940118-01

Drilling Company: G&E Drilling **Type of Rig:** B-61

Hole Diameter: 6" **Drive Weight:** 140 lbs. **Drop:** 30" **Elevation:** Existing Surface

DEPTH FEET	TYPE OF TEST	SAMPLE TEST	BLOWS PER 6 INCH	DRY DENSI. PCF	MOIS. %	SOIL CLASS USCS	GEOTECHNICAL DESCRIPTION LOGGED BY HMN SAMPLED BY HMN
1	CP EI					CL/ SC	CLAYEY: SAND/SANDY CLAY: Dark b[...] with fine to coarse grained sand and [...] of gravel. Very Moist. Hard EI = 35
2							
3							
4							
5			8 40 45	102	10		Hard.
6							
7							
8							
9							
10			6 9 10	115	12	SM	GRAVELLY SILTY SAND: Dark brown, [...] to coarse grained with plenty of gravel. Very Moist. Medium dense. % Passing # 200 = 29 Sand Equivalent = 11
11							
12							
13							
14							
15			9 15 16	-	-		Medium Dense
16							
17							
18							
19							
20			5 7 9	-	-	CL	SANDY CLAY: Medium to dark brown [...] plenty of fine to coarse sand, moderat[...] cohesive. Firm.
21							
22							
23							
24							
25							

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GEOTECHNICAL BORING LOG

Drill Hole No. B-3 (Heli-Pad, Continue)

Date: March 15, 1995 **Project No.** 950118-01

Drilling Company: G&E Drilling **Type of Rig:** B-61

Hole Diameter: 6" **Drive Weight:** 140 lbs. **Drop:** 30" **Elevation:** Existing Surface

DEPTH FEET	TYPE OF TEST	SAMPLE TEST	BLOWS PER 6 INCH	DRY DENSI. PCF	MOIS. %	SOIL CLASS USCS	GEOTECHNICAL DESCRIPTION LOGGED BY HMN SAMPLED BY HMN
25			4 6 6	103	18	CL	Continue. Firm.
26							
27							
28							
29							
30			5 7 8	97	21		Wet. A piece of brick in sample. Firm.
31							
32							
33							
34							
35			11 19 25	94	13		Very Moist. Very Firm.
36							
37							
38							
39							
40							
41							
42							TOTAL DEPTH = 35 FEET WATER SEEPAGE AT 14 FEET HOLE BACKFILLED
43							
44							
45							
46							
47							
48							
49							

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GEOTECHNICAL BORING LOG

Drill Hole No. B-4 (Heli-Pad)

Date: March 15, 1995 **Project No.** 9450118-01

Drilling Company: G&E Drilling **Type of Rig:** B-61

Hole Diameter: 6" **Drive Weight:** 140 lbs. **Drop:** 30" **Elevation:** Existing Surface

DEPTH FEET	TYPE OF TEST	SAMPLE TEST	BLOWS PER 6 INCH	DRY DENSI. PCF	MOIS. %	SOIL CLASS USCS	GEOTECHNICAL DESCRIPTION LOGGED BY HMN SAMPLED BY HMN
1						GC-GM	CLAYEY GRAVEL WITH SAND: Dark b fine to coarse grained sand and gravel, very moist. Medium dense.
2							
3							
4							
5			9 12 12	122	10		
6							
7							
8							
9							
10			3 6 7	115	12	SC	CLAYEY SAND: Medium brown, fine to coarse grained, moist. Firm.
11							
12							
13							
14							
15			5 7 9	103	13		At 15' becoming interbeded with sand a gravel. Moist. Firm.
16							
17							
18							
19							
20	GS AL pH Sulfates		12 19 25	96	17	CL	SANDY CLAY: Dark brown with fine to coarse grained sand, very moist. A small wood fragment. Very Firm. % Passing #200 = 72 LL=50, PL=18, PI=32
21							
22							
23							
24							
25							

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GEOTECHNICAL BORING LOG

Drill Hole No. B-4 (Heli-Pad, Continue)

Date: March 15, 1995 **Project No.** 940118-01

Drilling Company: G&E Drilling **Type of Rig:** B-61

Hole Diameter: 6" **Drive Weight:** 140 lbs. **Drop:** 30" **Elevation:** Existing Surface

DEPTH FEET	TYPE OF TEST	SAMPLE TEST	BLOWS PER 6 INCH	DRY DENSI. PCF	MOIS. %	SOIL CLASS USCS	GEOTECHNICAL DESCRIPTION LOGGED BY HMN SAMPLED BY HMN
25			12 15 15	108	14	SM	SILTY SAND: Dark brown, fine to coar grained with plenty of gravel. Very mc Medium dense.
26							
27							
28							
29							
30							
31							TOTAL DEPTH = 25 FEET
32							WATER SEEPAGE AT 25 FEET
33							HOLE BACKFILLED
34							
35							
36							
37							
38							
39							
40							
41							
42							
43							
44							
45							
46							
47							
48							
49							

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GEOTECHNICAL BORING LOG

Drill Hole No. B-5 (Heli-Pad)

Date: March 15, 1995 **Project No.** 940118-01

Drilling Company: G&E Drilling **Type of Rig:** B-61

Hole Diameter: 6" **Drive Weight:** 140 lbs. **Drop:** 30" **Elevation:** Existing Surface

DEPTH FEET	TYPE OF TEST	SAMPLE TEST	BLOWS PER 6 INCH	DRY DENSI. PCF	MOIS. %	SOIL CLASS USCS	GEOTECHNICAL DESCRIPTION LOGGED BY HMN SAMPLED BY HMN
1						SM	SILTY SAND: Dark brown, fine to coars grained with plenty of gravel, moist. Medium dense.
2							
3							
4							
5	GS SE	■	9 8 13	111	10		% Passing # 200 = 18 Sand Equivalent = 15
6							
7							
8							
9							
10		■	5 7 8	82	26	CL	SANDY CLAY: Dark brown with fine to coarse grained sand and gravel. Very moist. Firm.
11							
12							
13							
14							
15	GS pH Sulfate	■	7 7 9	88	24		At 15' becoming black. Very moist. Firn % Passing # 200 = 84
16							
17							
18							
19							
20		■	7 7 9	99	16		At 20' becoming dark brown with plenty c gravel. Very Moist. Firm.
21							
22							
23							
24							
25							

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GEOTECHNICAL BORING LOG

Drill Hole No. B-5 (Heli-Pad, Continue)

Date: March 15, 1995 | **Project No.** 940118-01

Drilling Company: G&E Drilling | **Type of Rig:** B-61

Hole Diameter: 6" **Drive Weight:** 140 lbs. **Drop:** 30" | **Elevation:** Existing Surface

DEPTH FEET	TYPE OF TEST	SAMPLE TEST	BLOWS PER 6 INCH	DRY DENSI. PCF	MOIS. %	SOIL CLASS USCS	GEOTECHNICAL DESCRIPTION LOGGED BY HMN SAMPLED BY HMN
25			7 13 13	104	20	CL	SANDY CLAY: Medium brown with fine t[o] coarse grained sand and some gravel, v[ery] moist. Very firm.
26							
27							A piece of asphalt
28			21 44 45	87 (On Rock)	17		
29							Large object could not penetrate in reasonable time.
30							
31							
32							
33							
34							TOTAL DEPTH = 29 FEET NO GROUNDWATER HOLE BACKFILLED
35							
36							
37							
38							
39							
40							
41							
42							
43							
44							
45							
46							
47							
48							
49							

GEOTECHNICAL BORING LOG

Drill Hole No. B-6 (Storm Drain)

Date: March 15, 1995 **Project No.** 940118-01

Drilling Company: G&E Drilling **Type of Rig:** B-61

Hole Diameter: 6" **Drive Weight:** 140 lbs. **Drop:** 30" **Elevation:** Existing Surface

DEPTH FEET	TYPE OF TEST	SAMPLE TEST	BLOWS PER 6 INCH	DRY DENSI. PCF	MOIS. %	SOIL CLASS USCS	GEOTECHNICAL DESCRIPTION LOGGED BY HMN SAMPLED BY HMN
1						SM	SILTY SAND: Medium brown, fine to coa grained.
2							
3							
4							
5						CL	SANDY CLAY: Medium brown with fine tc coarse grained sand, moist, moderately cohesive.
6							
7							
8							
9							Moist. Hard
10			16 34 38	112	11		
11							
12							**12' Approximate Elevation of Stream Bottom.**
13	CP EI						
14	GS SE pH						
15	Sulfate		11 10 34	111	14	SC	CLAYEY SAND: Medium brown with fine t coarse grained sand and gravel, moist. Dense %Passing # 200 = 43 Sand Equivalent = 8 EI = 35.5
16							
17							
18							
19							
20				98	19		Very Moist
21							
22							
23							
24							
25							

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GEOTECHNICAL BORING LOG

Drill Hole No. B-6 (Storm Drain, Continue)

Date: March 15, 1995 **Project No.** 940118-01

Drilling Company: G&E Drilling **Type of Rig:** B-61

Hole Diameter: 6" **Drive Weight:** 140 lbs. **Drop:** 30" **Elevation:** Existing Surface

DEPTH FEET	TYPE OF TEST	SAMPLE TEST	BLOWS PER 6 INCH	DRY DENSI. PCF	MOIS. %	SOIL CLASS USCS	GEOTECHNICAL DESCRIPTION LOGGED BY HMN SAMPLED BY HMN
25			17 46 50/4"	83	18	CL	SANDY CLAY: Dark brown with fine to coarse grained sand, very moist.
26							
27							
28							
29			13 29 50/2"	NR	20		
30							
31							
32							
33							TOTAL DEPTH = 30 FEET NO GROUNDWATER HOLE BACKFILLED
34							
35							
36							
37							
38							
39							
40							
41							
42							
43							
44							
45							
46							
47							
48							
49							

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GEOTECHNICAL BORING LOG

Drill Hole No. B-7 (Storm Drain)

Date: March 15, 1995 | **Project No.** 940118-01

Drilling Company: G&E Drilling | **Type of Rig:** B-61

Hole Diameter: 6" **Drive Weight:** 140 lbs. **Drop:** 30" | **Elevation:** Existing Surface

DEPTH FEET	TYPE OF TEST	SAMPLE TEST	BLOWS PER 6 INCH	DRY DENSI. PCF	MOIS. %	SOIL CLASS USCS	GEOTECHNICAL DESCRIPTION LOGGED BY HMN SAMPLED BY HMN
1						CL	SANDY CLAY: Medium to dark brown with fine to coarse grained sand and plenty of gravel, very moist.
2							
3							
4							
5							
6							
7							
8							**8' Approximate Elevation of Stream Bottom.**
9							
10			11 19 23	112	15		Very Firm. % Passing # 200 = 67 Sand Equivalent = 5 LL=28, PL=14, PI=14
11							
12	GS SE pH Sulfate CP RSI AL						
13							
14							
15			5 7 9	93	24		Wet, Firm.
16		▽					
17							
18							
19							
20			11 25 30	85	27		Wet, Hard.
21							
22							
23							TOTAL DEPTH = 20 FEET GROUNDWATER AT 14 FEET HOLE BACKFILLED
24							
25							

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GEOTECHNICAL BORING LOG

Drill Hole No. B-9

Date: March 15, 1995 | **Project No.** 950118-01

Drilling Company: Jack K. Bryant Engineers | **Type of Rig:** Manual Drilling

Hole Diameter: -- **Drive Weight:** -- **Drop:** -- | **Elevation:** Stream Bed

DEPTH FEET	TYPE OF TEST	SAMPLE TEST.	BLOWS PER 6 INCH	DRY DENSI. PCF	MOIS. %	SOIL CLASS USCS	GEOTECHNICAL DESCRIPTION LOGGED BY JB Engineers SAMPLED BY JB Engineers
1						SWSM	SAND-SILTY SAND: Medium brown, fin coarse grained. %Passing #200 = 11 Sand Equivalent = 27
2	GS SE			74	21		
3							
4	GS SE AL			89	25	CLML	SANDY SILTY CLAY: Medium brown wit moderate content of fine sand. Percent Passing #200 = 51 LL=27, PL=20, PI=7 Sand Equivalent = 4
5							
6	EI AL			97	19		
7							
8							
9						CL	SANDY CLAY: Medium brown with trace content of fine sand. LL=32, PI=20, PI=12 Expansion Index = 56
10							
11							
12							
13							
14							
15							
16							TOTAL DEPTH = 8 FEET GROUNDWATER AT SURFACE HOLE BACKFILLED
17						-	
18							
19							
20							
21							
22							
23							
24							
25							

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APPENDIX C

SID GEOTECHNICAL, INC.

77-401

SOIL TYPE OR SAMPLE LOCATION	SOIL DESCRIPTION	MAXIMUM DRY DENSITY* (pcf)	OPTIMUM MOISTURE CONTENT (%)
B3 @ 0-5'	Clayey Sand/Sandy Clay: Dark brown with fine to coarse grained sand and plenty of gravel.	126.5	10.0
B6 @ 15'	Clayey Sand: Medium brown with fine to coarse grained sand and some gravel.	125.0	11.0
B7 @ 10-15'	Sandy Clay: Medium to dark brown with fine to caorse grained sand and plenty of gravel.	123.0	10.5

* TEST METHOD: ASTM D1557-91

MAXIMUM DRY DENSITY TEST RESULTS	PROJECT NO. 940118-01 PLATE NO.

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SAMPLE LOCATION	SAMPLE DESCRIPTION	CLASSIFICATION	PERCENT PASSING NO. 200	SAND EQUIVALENT*
B3 @ 10'	Gravelly Silty Sand: Dark brown, fine to coarse grained with plenty of gravel.	SM	29	11
B5 @ 5'	Silty Sand: Dark brown, fine to coarse grained with plenty of gravel.	SM	18	15
B6 @ 15'	Clayey Sand: Medium brown with fine to coarse grained sand and gravel.	SC	43	8
B7 @ 10'	Sandy Clay: Medium to darl brown with fine to coarse grained sand and plenty of gravel.	CL	67	5
B8 @ 4'	Silty Sand: Medium brown, fine to medium grained with trace of coarse grained.	SM	35	15
B8 @ 8'	Silty Sand: Medium brown, fine to coarse grained.	SM	15	18
B9 @ 2'	Sand/Silty Sand: Medium brown, fine to coarse grained	SWSM	11	27
B9 @ 4'	Sandy Silty Clay: Medium brown with moderate content of fine sand.	MLCL	51	4

* TEST METHOD: ASTM D2419-74

SAND EQUIVALENT TEST RESULTS	Project No: 940118-01 Plate No:

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Improvements at
West Los Angeles V.A. Medical Center
Los Angeles, California

SAMPLE LOCATION	USCS CLASSIFICATION	COMPACTED MOISTURE (%)	COMPACTED DENSITY (PCF)	FINAL MOISTURE (%)	VOLUMETRIC SWELL (%)	EXPANSION INDEX	EXPANSION CLASSIFICATION
B3@0-5'	CL/SC	10.0	109.3	20.8	3.5	35	Low
B6@15'	SC	11.0	107.0	20.3	3.55	35.5	Low
B9@6'	CL	10.5	107.8	26.2	5.6	56	Medium

EXPANSION INDEX TEST RESULTS

Project No. : 940118-01
Plate No. :

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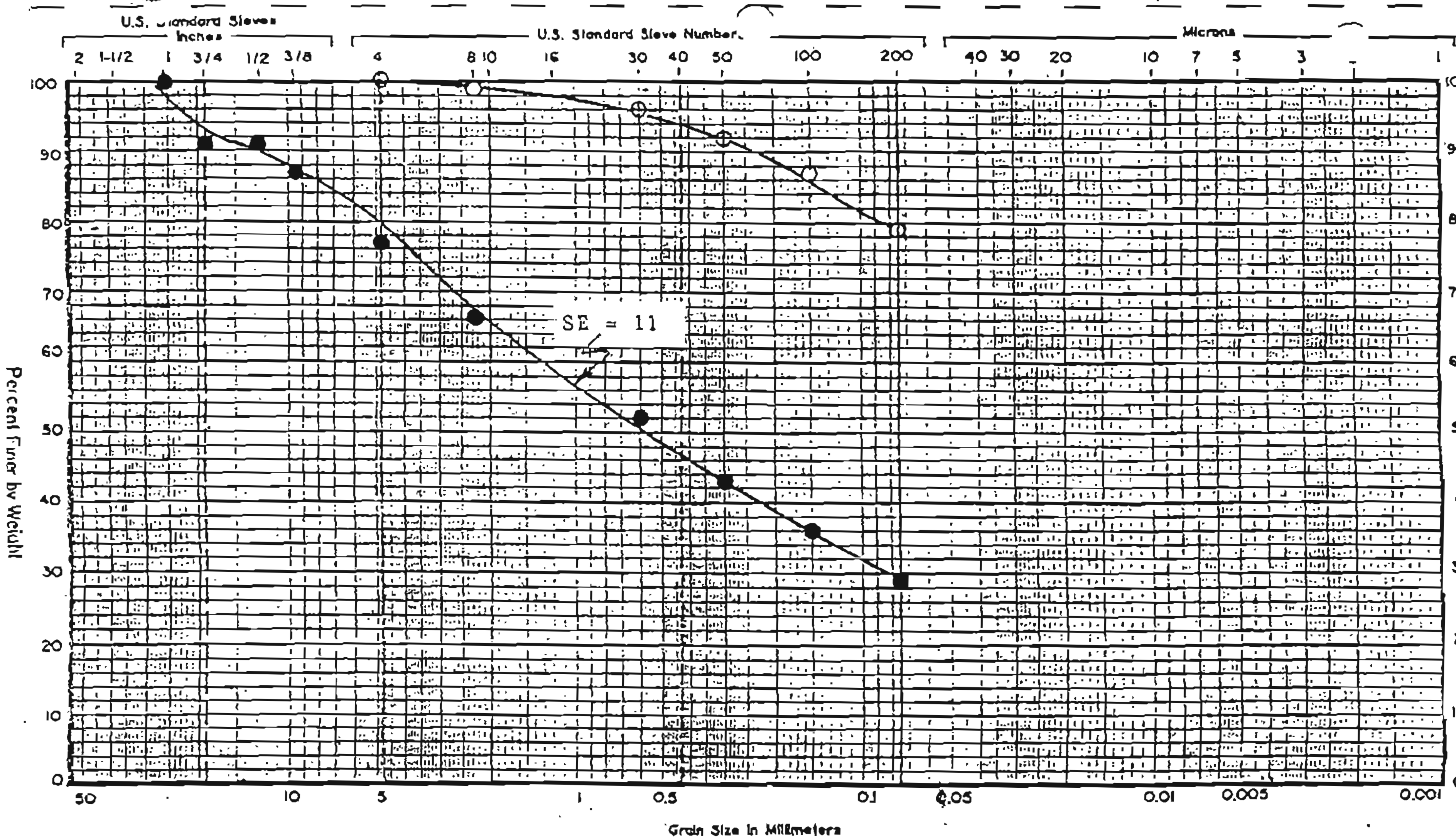

Gravel				Sand							Silt or Clay
Coarse		Fine		Coarse		Medium		Fine			
Symbol	Sample Location	Sample No.	Field Moisture (%)	LL (%)	PI (%)	Activity PI/-2u	Cu D_{60}/D_{10}	Cc $\frac{(D_{30})^2}{D_{10} \times D_{60}}$	Percent Passing No.200	Percent Passing 2u	U.S.C.S.
○	B2 @ 1	-	16	-	-	-	-	-	79	-	CL
●	B3 @ 10	-	12	-	-	-	-	-	29	-	SM

GRADATION TEST RESULTS

Project No. 940118-01

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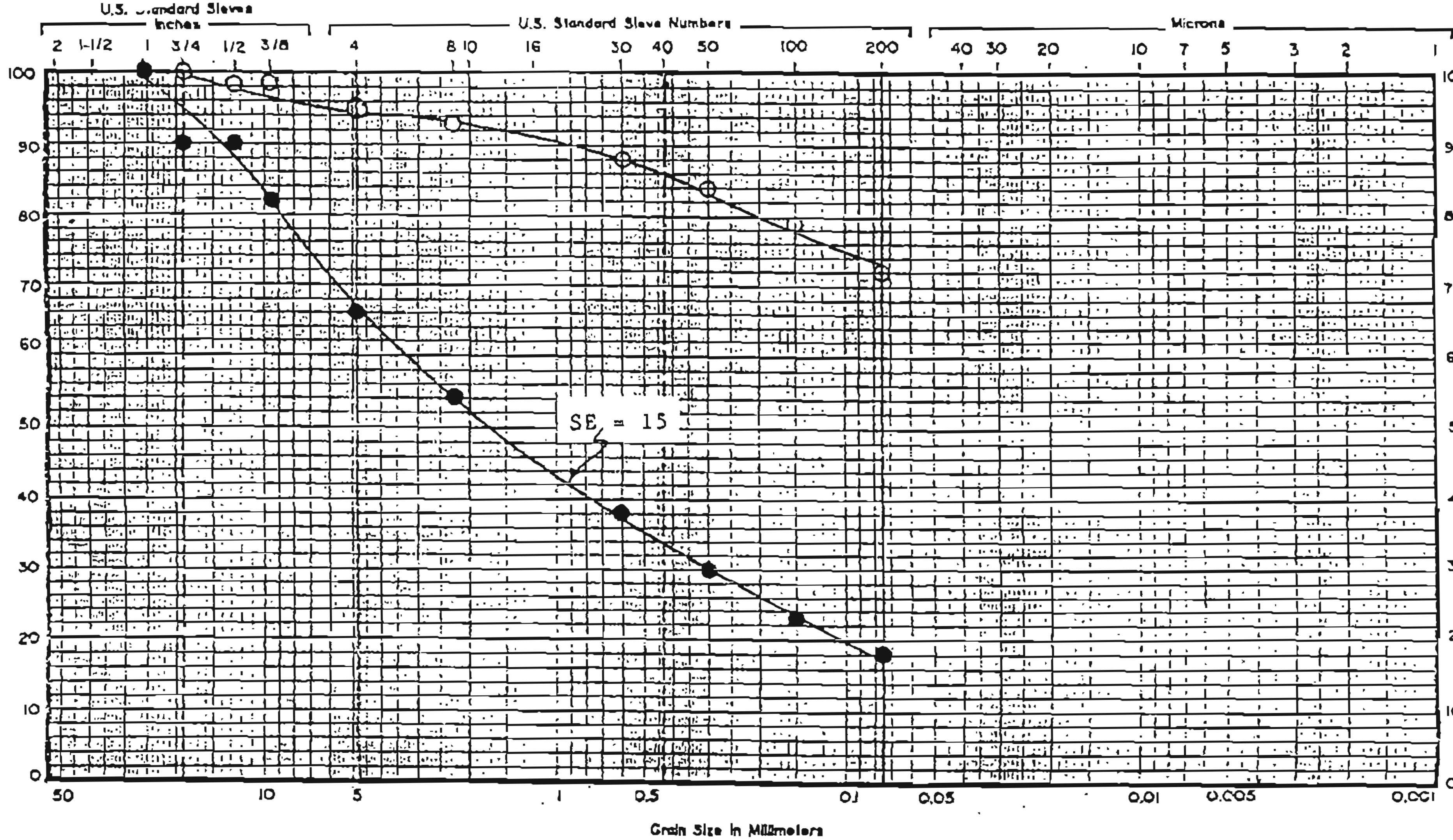

Gravel				Sand								Silt or Clay
Coarse		Fine		Coarse		Medium			Fine			
Symbol	Sample Location	Sample No.	Field Moisture (%)	LL (%)	PI (%)	Activity PI/-2u	Cu D_{60}/D_{10}	Cc $\frac{(D_{30})^2}{D_{10} \times D_{60}}$	Percent Passing No.200	Percent Passing 2u	U.S.C.S.	
○	B4 @ 20	-	17	50	32	-	-	-	72	-	CL	
●	B5 @ 5	-	10	-	-	-	-	-	18	-	SM	

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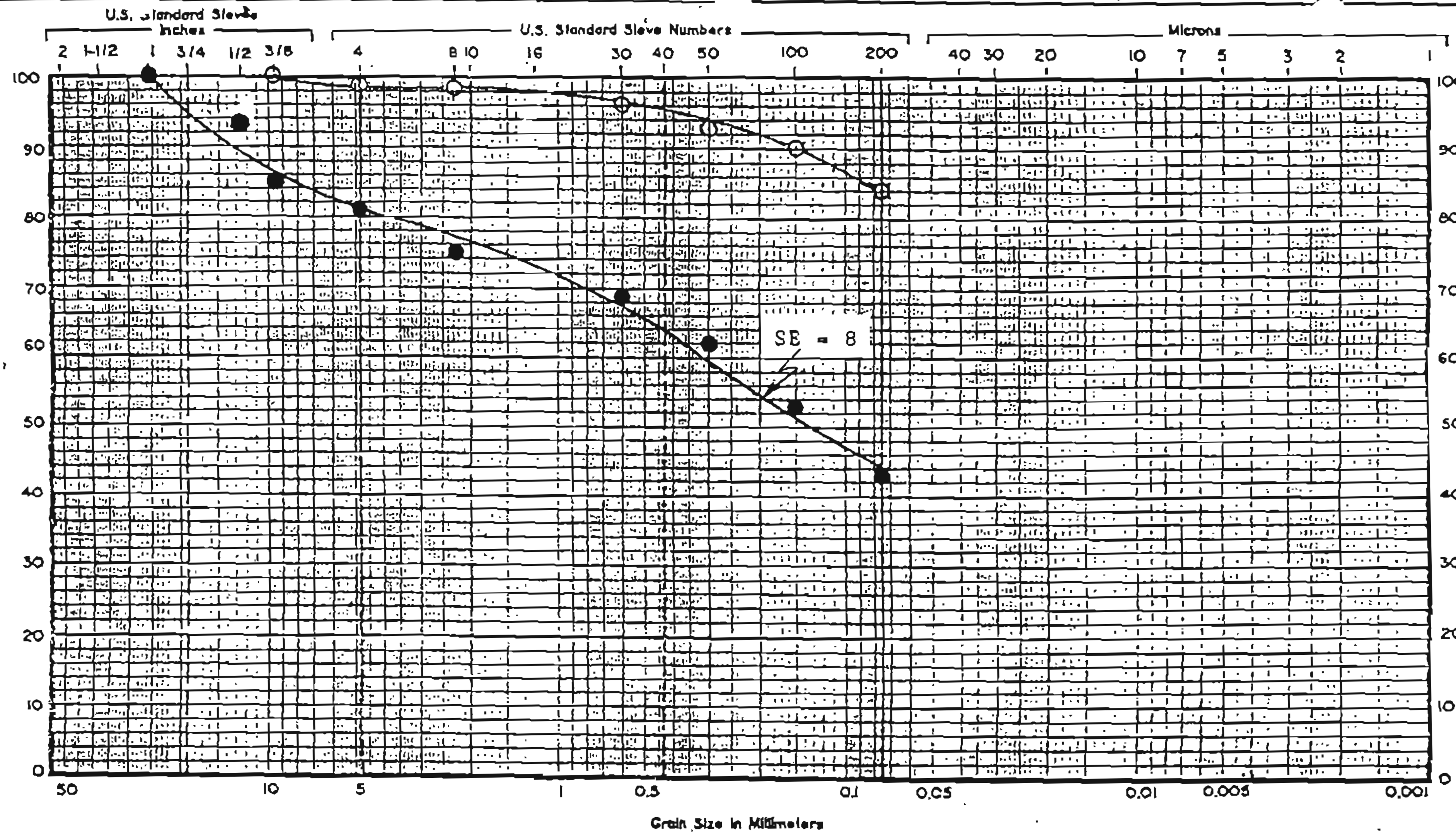
GRADATION TEST RESULTS

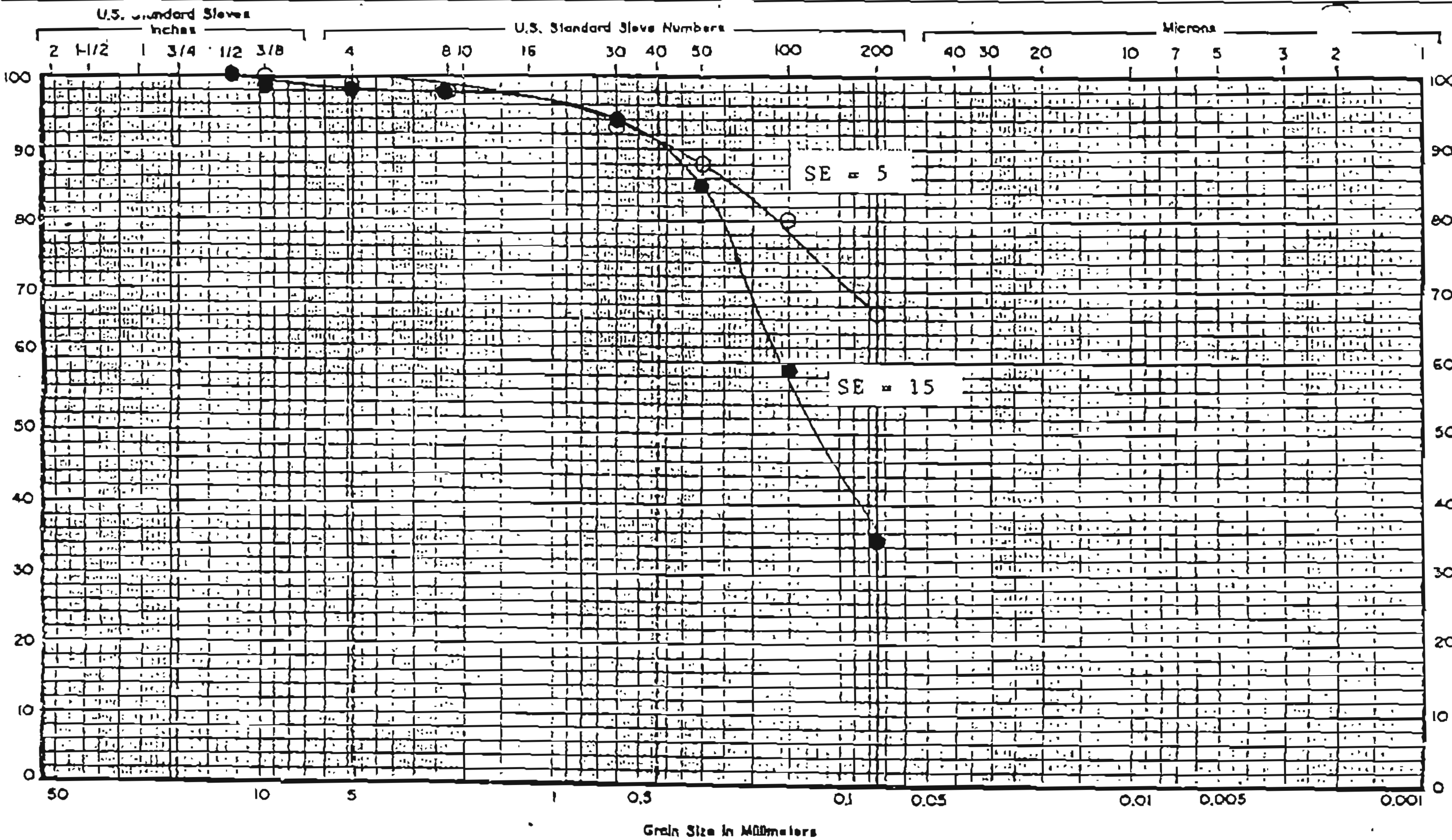
Project No. 940118-01



Gravel		Sand									Silt or Clay
Coarse	Fine	Coarse	Medium		Fine						
Symbol	Sample Location	Sample No.	Field Moisture (%)	LL (%)	PI (%)	Activity PI/-2u	Cu D_{60}/D_{10}	Cc $\frac{(D_{30})^2}{D_{10} \times D_{60}}$	Percent Passing No.200	Percent Passing 2u	U.S.C.S.
○	B5 @ 15	-	24	-	-	-	-	-	84	-	CL
●	B6 @ 15	-	14	-	-	-	-	-	43	-	SC

GRADATION TEST RESULTS

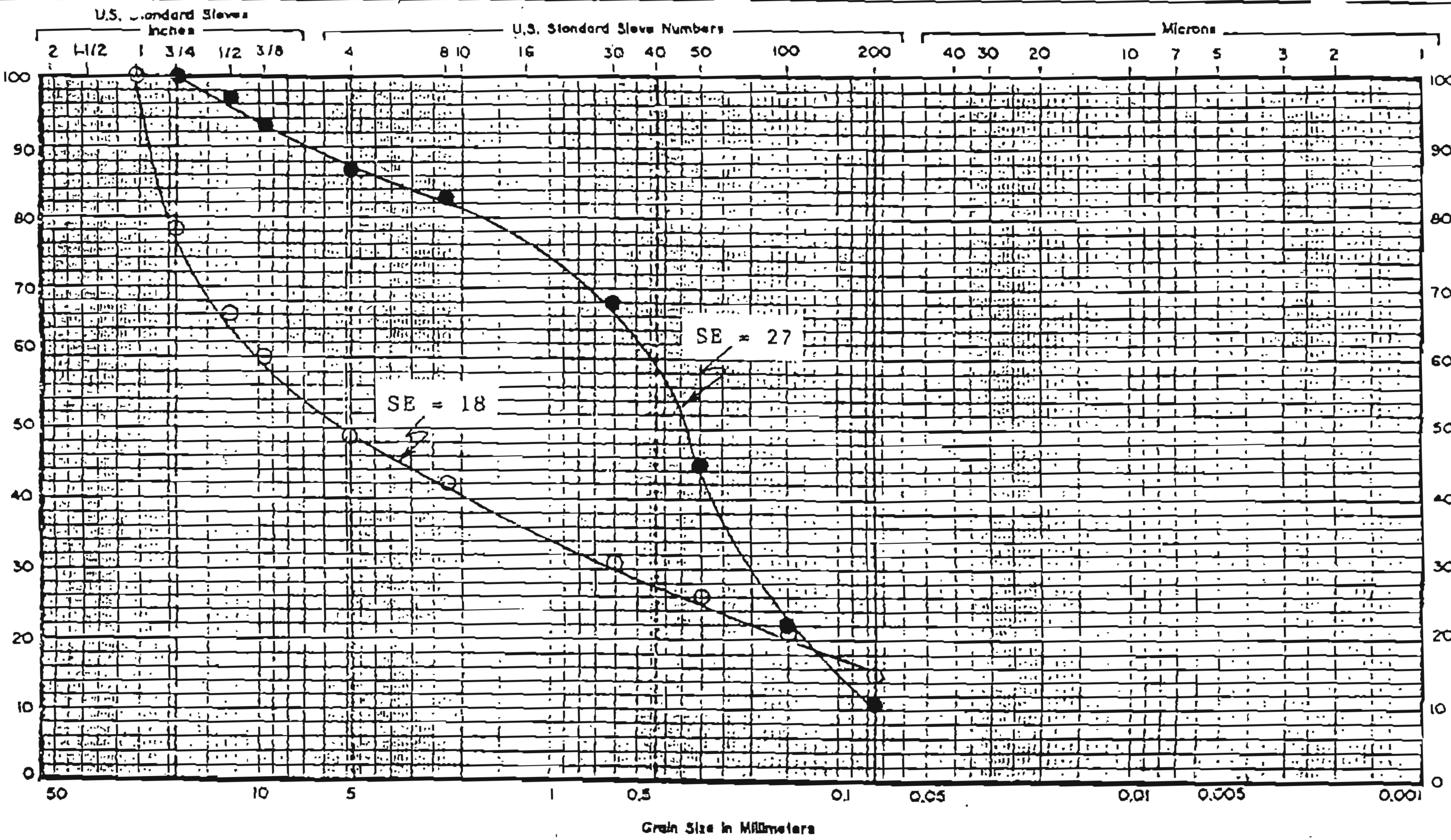
Project No. 940118-01



Gravel		Sand									Silt or Clay
Coarse		Fine		Coarse	Medium		Fine				
Symbol	Sample Location	Sample No.	Field Moisture (%)	LL (%)	PI (%)	Activity PI/-2u	Cu D_{60}/D_{10}	Cc $\frac{(D_{30})^2}{D_{10} \times D_{60}}$	Percent Passing No.200	Percent Passing 2u	U.S.C.S.
○	B7 @ 10	-	15	28	14	-	-	-	67	-	CL
●	B8 @ 4	-	32	24	4	-	-	-	35	-	CLML

GRADATION TEST RESULTS

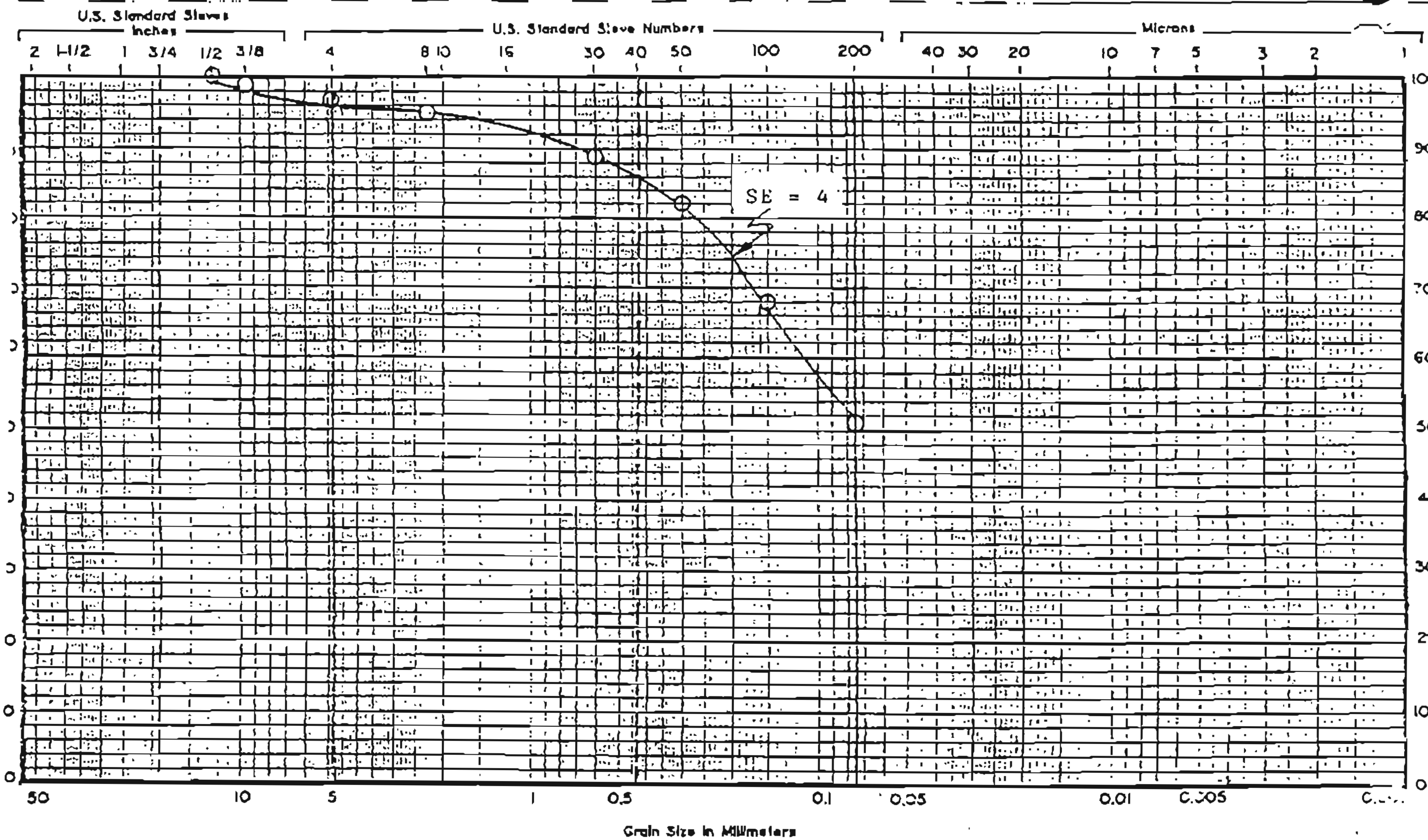
Project No. 940118-01



Gravel				Sand								Silt or Clay
Coarse		Fine		Coarse		Medium			Fine			
Symbol	Sample Location	Sample No.	Field Moisture (%)	LL (%)	PI (%)	Activity PI/-2u	Cu D_{60}/D_{10}	Cc $\frac{(D_{30})^2}{D_{10} \times D_{60}}$	Percent Passing No.200	Percent Passing 2u	U.S.C.S.	
○	B8 @ 8	-	17	-	-	-	-	-	15	-	SM	
●	B9 @ 2	-	21	-	-	-	6	1.2	11	-	SWSM	

GRADATION TEST RESULTS

Project No. 940118



Gravel				Sand								Silt or Clay
Coarse	Fine			Coarse		Medium		Fine				
Symbol	Sample Location	Sample No.	Field Moisture (%)	LL (%)	PI (%)	Activity PI/-2u	Cu D_{60}/D_{10}	Cc $\frac{(D_{30})^2}{D_{10} \cdot D_{60}}$	Percent Passing No.200	Percent Passing 2u	U.S.C.S.	
O	B9 @ 4	-	25	27	7	-	-	-	51	-	CLML	

GRADATION TEST RESULTS

Project No. 940118-01

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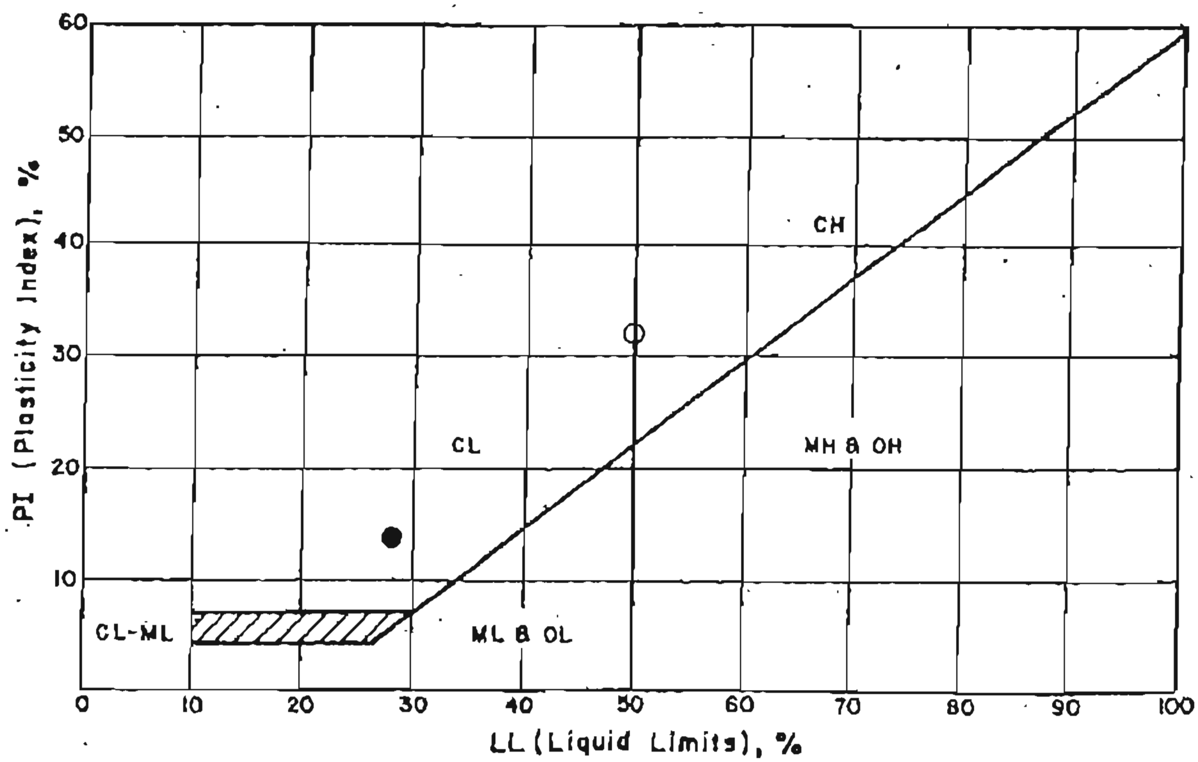
ATTERBERG LIMITS TEST RESULTS

SYMBOL	HOLE NO.	DEPTH	FIELD MOISTURE (%)	LL (%)	PL (%)	PI (%)	U.S.C.S.
○	B-4	20'	17	50	18	32	CL
●	B-7	10-15'	15	28	14	14	CL



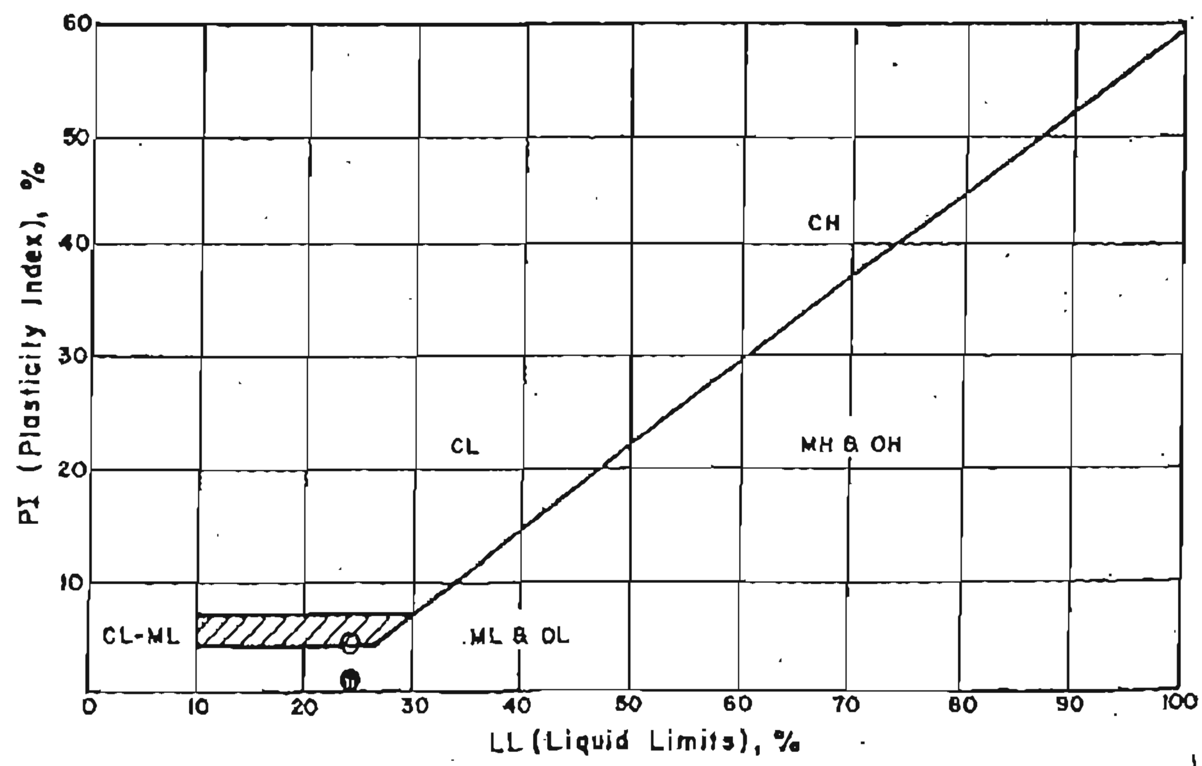
77-410

roject No.: 940118-01

Plate No.:

ATTERBERG LIMITS TEST RESULTS

SYMBOL	HOLE NO.	DEPTH	FIELD MOISTURE (%)	LL (%)	PL (%)	PI (%)	U.S.C.S.
○	B-8	4'	32	24	20	4	CL-ML
●	B-8	6'	20	24	22.5	1.5	ML



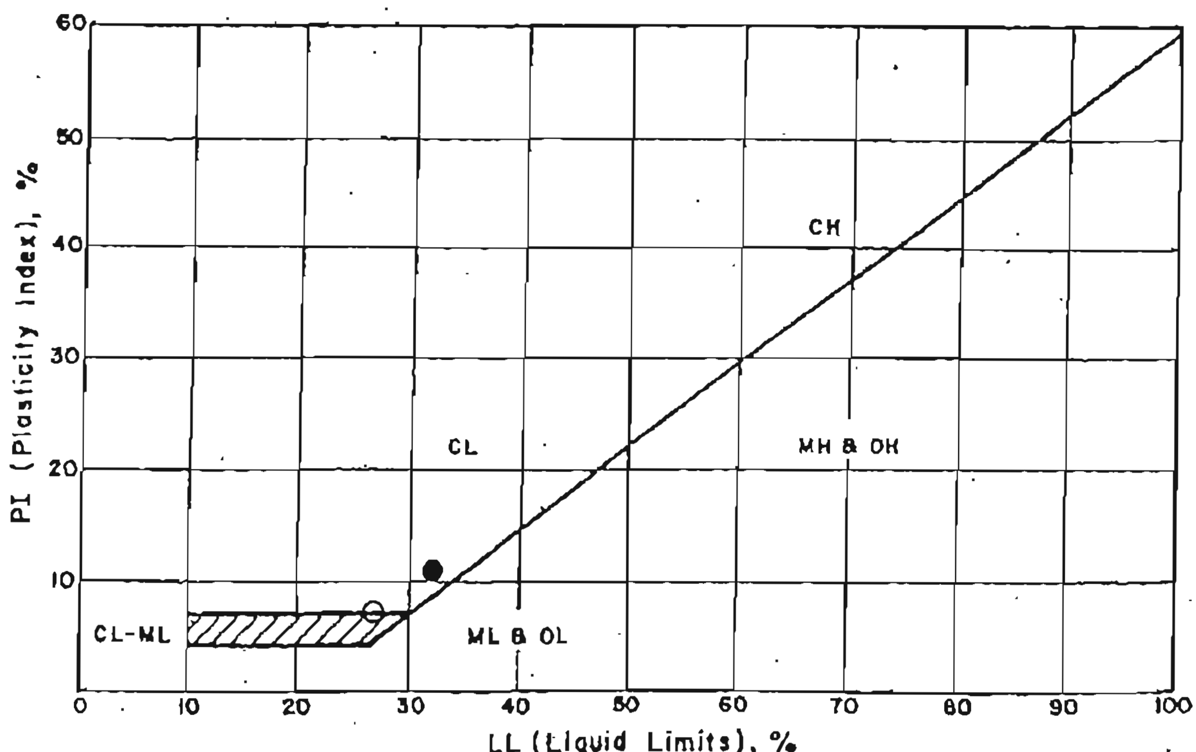
77-411

roject No.: 940118-01

Plate No.:

ATTERBERG LIMITS TEST RESULTS

SYMBOL	HOLE NO.	DEPTH	FIELD MOISTURE (%)	LL (%)	PL (%)	PI (%)	U.S.C.S.
○	B-9	4'	25	27	20	7	CL-ML
●	B-9	6'	18	32	20	12	CL



77-412

BACTERIOLOGY
WATER TESTING
HAZARDOUS WASTE TESTING
CA DHS CERTIFICATION 1156

). BOX 432
RIVERSIDE, CA 92502

E.S. BABCOCK
& SONS, INC.
ESTABLISHED 1906

[redacted]
FAX [redacted]

LABORATORIES
6100 QUAIL VALLEY COURT
RIVERSIDE, CA 92507

04/19/95

To: SID Geotechnical, Inc.
Attn: Haytham Nabilsi
7265 Jurupa Avenue, E
Riverside, CA 92504

Lab No.	L6736-001

Sample Marked:
B-5 @ 15' VA Hospital
Proj.#940118-01 Soil

Submitted	Sampled
Haythan 04/06/95 7:50	

Chain of Custody on file: N

Parameter Name	Results	Parameter Name	Result
pH (Saturated Paste)	7.6 units		
·er Extractable:			
ulfate (SO_4)	57 ppm		
*Expressed as ppm dried soil			

Date analysis completed: 04/17/95
Notes:

cc:

Edward S. Babcock & Sons, Inc.

Laurence J Chrzanowski

77-413

BACTERIOLOGY
WATER TESTING
HAZARDOUS WASTE TESTING
CA DHS CERTIFICATION 1156

O. BOX 432
RIVERSIDE, CA 92502

E.S. BABCOCK
& SONS, INC.
ESTABLISHED 1906

[redacted]
FAX [redacted]

LABORATORIES
6100 QUAIL VALLEY COURT
RIVERSIDE, CA 92507

04/19/95

To: SID Geotechnical, Inc.
Attn: Haytham Nabilsi
7265 Jurupa Avenue, E
Riverside, CA 92504

Lab No. L6736-002

Sample Marked:
B-6 @ 15' VA Hospital
Proj.#940118-01 Soil

Submitted	Sampled
Haythan 04/06/95 7:50	

Chain of Custody on file: N

Parameter Name	Results	Parameter Name	Result
pH (Saturated Paste)	6.8 units		
Water Extractable:			
Sulfate (SO_4)	27 ppm		
Expressed as ppm dried soil			

Date analysis completed: 04/17/95
Notes:

cc:

Edward S. Babcock & Sons, Inc.

Laurence J Chrysler
77-414

BACTERIOLOGY
WATER TESTING
HAZARDOUS WASTE TESTING
CA DHS CERTIFICATION 1156

O. BOX 432
,VERSIDE, CA 92502

E.S. BABCOCK
& SONS, INC.
ESTABLISHED 1906

[redacted]
FAX [redacted]

LABORATORIES
6100 QUAIL VALLEY COURT
RIVERSIDE, CA 92507

04/19/95

To: SID Geotechnical, Inc.
Attn: Haytham Nabilsi
7265 Jurupa Avenue, E
Riverside, CA 92504

Lab No.	L6736-003

Sample Marked:
B-7 @ 10' VA Hospital
Proj.#940118-01 Soil

Submitted	Sampled
Haythan 04/06/95 7:50	

Chain of Custody on file: N

Parameter Name	Results	Parameter Name	Result
pH (Saturated Paste)	7.1 units		
Water Extractable:			
lfate (SO_4)	26 ppm		
expressed as ppm dried soil			

Date analysis completed: 04/17/95
Notes:

cc:

Edward S. Babcock & Sons, Inc.

Laurence J Chrzanowski

77-415

BACTERIOLOGY
WATER TESTING
HAZARDOUS WASTE TESTING
CA DHS CERTIFICATION 1156

.O. BOX 432
RIVERSIDE, CA 92502

E.S. BABCOCK
& SONS, INC.
ESTABLISHED 1906

[redacted]
FAX [redacted]

LABORATORIES
6100 QUAIL VALLEY COURT
RIVERSIDE, CA 92507

04/19/95

To: SID Geotechnical, Inc.
Attn: Haytham Nabilsi
7265 Jurupa Avenue, E
Riverside, CA 92504

Lab No. L6736-004

Sample Marked:
B-8 @ 8' VA Hospital
Proj.#940118-01 Soil

Submitted	Sampled
Haythan 04/06/95 7:50	

Chain of Custody on file: N

Parameter Name	Results	Parameter Name	Result
pH (Saturated Paste)	6.8 units		
Water Extractable:			
ılfate (SO_4)	46 ppm		
Expressed as ppm dried soil			

Date analysis completed: 04/17/95
Notes:

cc:

Edward S. Babcock & Sons, Inc.

77-416

BACTERIOLOGY
WATER TESTING
HAZARDOUS WASTE TESTING
DHS CERTIFICATION 1156

P.O. BOX 432
RIVERSIDE, CA 92502

E.S. BABCOCK
& SONS, INC.
ESTABLISHED 1906

[redacted]
FAX [redacted]

LABORATORIES
6100 QUAIL VALLEY COURT
RIVERSIDE, CA 92507

04/19/95

To: SID Geotechnical, Inc.
Attn: Haytham Nabilsi
7265 Jurupa Avenue, E
Riverside, CA 92504

Lab No.	L6736-005

Sample Marked:
B-9 @ 6' VA Hospital
Proj.#940118-01 Soil

Submitted	Sampled
Haythan 04/06/95 7:50	

Chain of Custody on file: N

Parameter Name	Results	Parameter Name	Results
pH (Saturated Paste)	6.5 units		
..cer Extractable:			
*Sulfate (SO_4)	20 ppm		
*Expressed as ppm dried soil			

Date analysis completed: 04/17/95
Notes:

cc:

Edward S. Babcock & Sons, Inc.

77-417

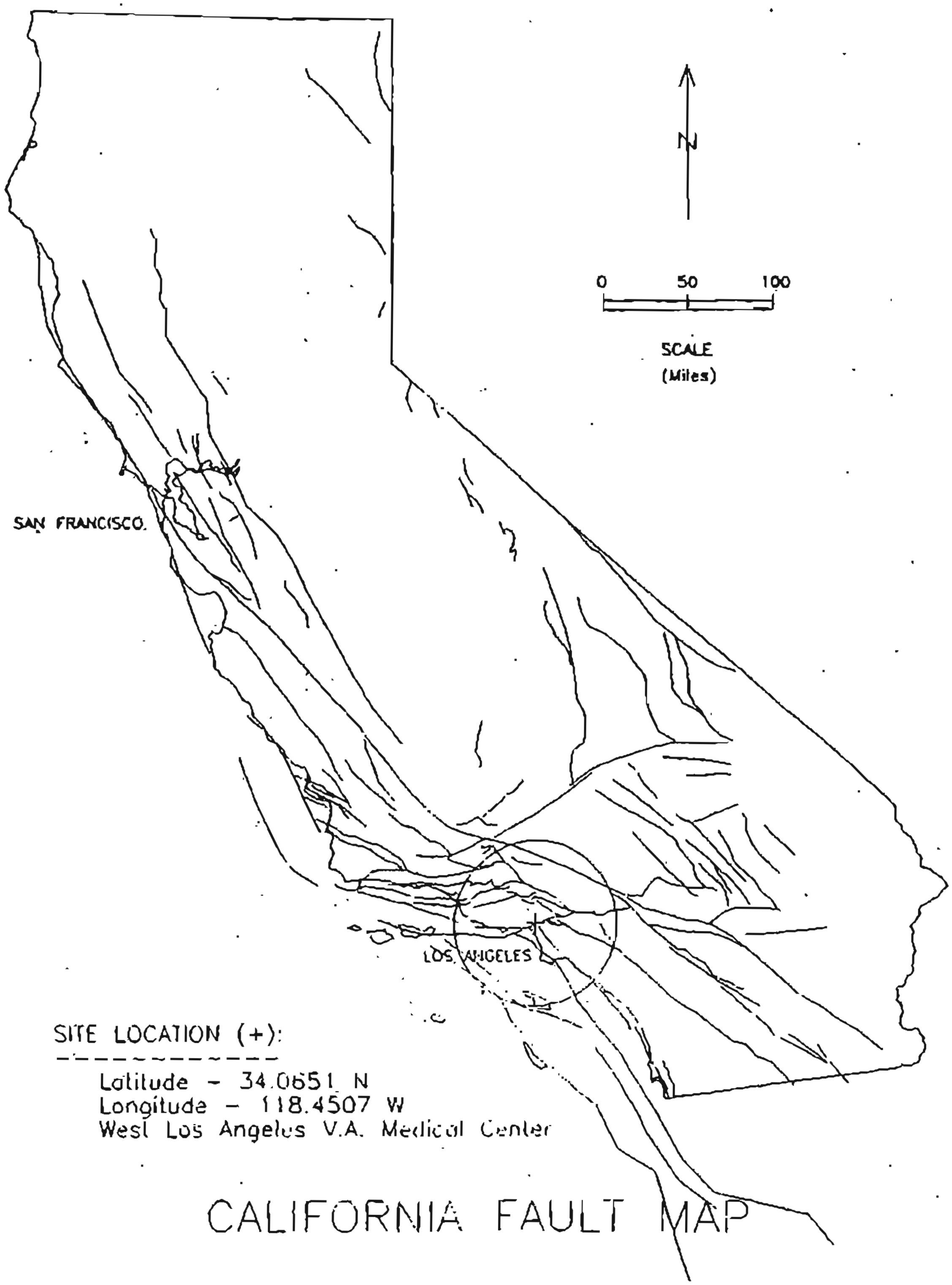
APPENDIX D

SID GEOTECHNICAL, INC.

77-418

PEAK HORIZONTAL ACCELERATION COMPUTATION

DATE:	Monday, March 27, 1995
SEARCH PERFORMED FOR:	Jack Bryant Engineers
JOB NUMBER:	940118-01
JOB NAME:	West Los Angeles V.A. Medical Center
SITE COORDINATES:	LATITUDE 34.0651 N LONGITUDE 118.4507 W
SEARCH RADIUS:	60 Mile
ATTENUATION RELATION:	2) Campbell (1991R) Horiz. - Deep Soil & Soft Roc
UNCERTAINTY	(M=Mean, S=Mean+1-Sigma): M
SCOND:	0
FAULT-DATA FILE USED:	CALIFLT.DAT
SOURCE OF DEPTH VALUES	(A=Attenuation File, F=Fault Data File): A



SITE LOCATION (+):

Latitude - 34.0651 N
Longitude - 118.4507 W
West Los Angeles V.A. Medical Center

CALIFORNIA FAULT MAP

77-420

DETERMINISTIC SITE PARAMETERS

ABBREVIATED FAULT NAME	APPROX. DISTANCE mi (km)	MAX. CREDIBLE EVENT			MAX. PROBABLE EVE		
		MAX. CRED. MAG.	PEAK SITE ACC. g	SITE INTENS MM	MAX. PROB. MAG.	PEAK SITE ACC. g	SIT INTE MM
ANACAPA	20 (32)	7.00	0.219	IX	5.00	0.060	VI
ARROYO PARIDA - MORE RANCH	47 (75)	7.50	0.100	VII	5.25	0.021	IV
CATALINA ESCARPMENT	41 (66)	7.00	0.068	VI	6.25	0.039	V
CHINO	40 (64)	7.00	0.088	VII	5.50	0.033	V
CLEARWATER	36 (58)	7.00	0.103	VII	3.00	0.006	II
CUCAMONGA	36 (58)	7.00	0.101	VII	6.25	0.058	VI
ELYSIAN PARK SEISMIC ZONE	8 (13)	7.00	0.535	X	5.75	0.288	IX
GLN.HELEN-LYTLE CR-CLREMNT	50 (80)	7.00	0.050	VI	6.50	0.034	V
HOLSER	25 (40)	6.60	0.128	VIII	5.75	0.079	VII
MALIBU COAST	7 (12)	7.50	0.690	XI	6.50	0.448	X
[illegible]D-CHANNEL	47 (76)	7.50	0.099	VII	5.50	0.025	V
NEWPORT-INGLEWOOD-OFFSHORE	2 (3)	7.00	0.733	XI	5.75	0.521	X
NORTHRIDGE HILLS	12 (19)	6.50	0.289	IX	5.00	0.112	VII
OAK RIDGE (Offshore)	42 (67)	7.20	0.095	VII	5.50	0.030	V
OAK RIDGE (Onshore)	27 (44)	7.20	0.170	VIII	6.50	0.104	VII
PALOS VERD-CORON.B.-A.BLAN	11 (17)	7.50	0.434	X	6.75	0.293	IX
PINE MOUNTAIN	42 (68)	7.00	0.080	VII	4.25	0.012	III
RAYMOND	13 (21)	7.50	0.468	X	4.00	0.050	VI
SAN ANDREAS (Mojave)	39 (62)	8.30	0.187	VIII	8.00	0.153	VIII
SAN CAYETANO	31 (49)	7.50	0.182	VIII	6.25	0.075	VII
SAN CLEMENTE - SAN ISIDRO	48 (78)	8.00	0.111	VII	6.50	0.036	V
SAN GABRIEL	19 (31)	7.00	0.185	VIII	5.75	0.088	VII
[illegible]NTA MONICA - HOLLYWOOD	1 (2)	7.50	0.961	XI	5.25	0.412	X
SANTA SUSANA	16 (26)	7.00	0.273	IX	6.00	0.159	VIII
SANTA YNEZ (East)	44 (70)	7.50	0.090	VII	5.25	0.019	IV

77-421

DETERMINISTIC SITE PARAMETERS

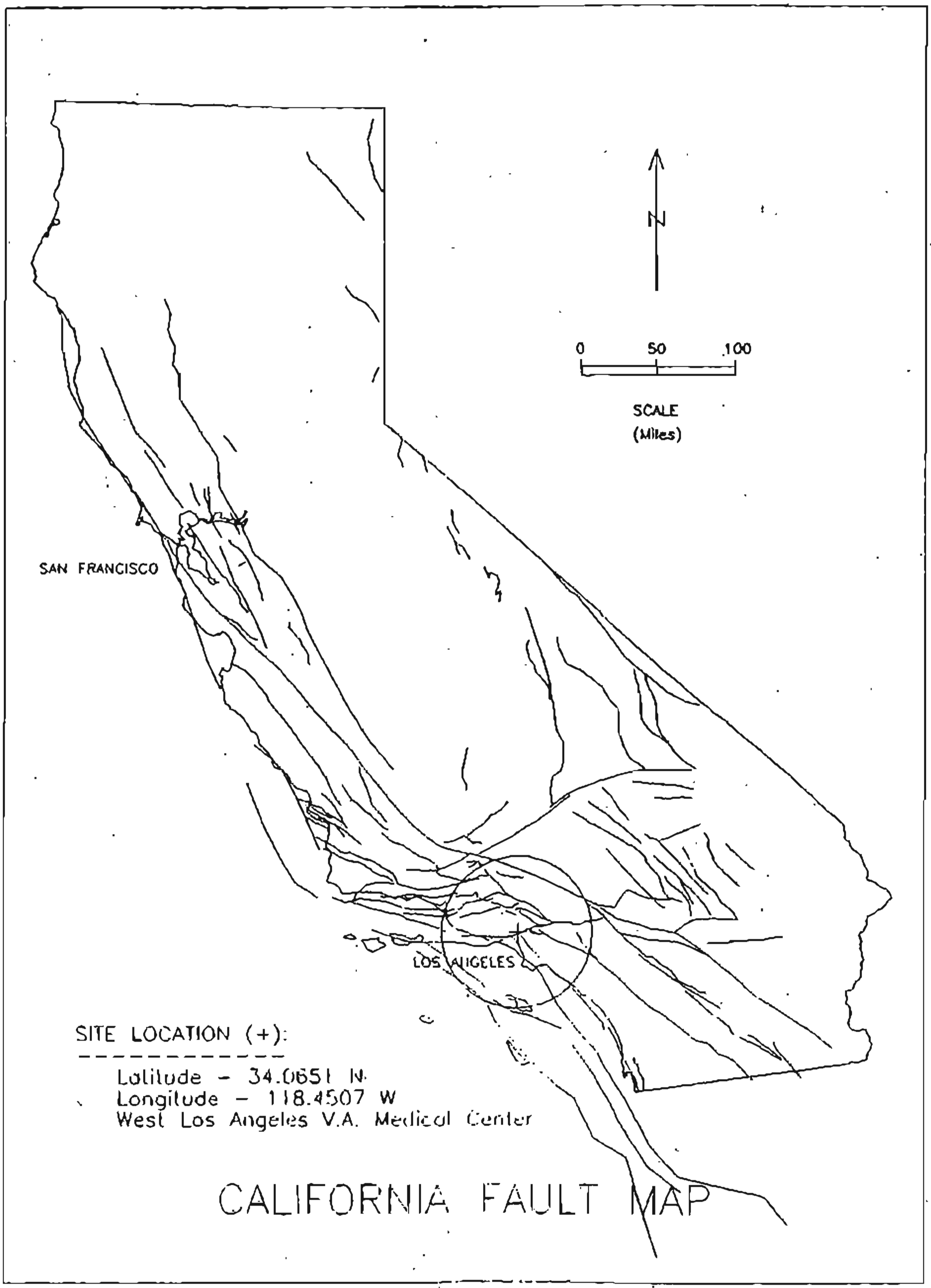
ABBREVIATED FAULT NAME	APPROX. DISTANCE mi (km)	MAX. CREDIBLE EVENT			MAX. PROBABLE EVE		
		MAX. CRED. MAG.	PEAK SITE ACC. g	SITE INTENS MM	MAX. PROB. MAG.	PEAK SITE ACC. g	SIT INTE MM
SIERRA MADRE-SAN FERNANDO	15 (24)	7.50	0.280	IX	6.00	0.108	VI
SIMI - SANTA ROSA	20 (33)	7.00	0.146	VIII	5.25	0.042	VI
VENTURA - PITAS POINT	45 (72)	7.20	0.058	VI	5.75	0.020	IV
VERDUGO	11 (18)	6.70	0.224	IX	4.50	0.048	VI
WHITTIER - NORTH ELSINORE	14 (22)	7.50	0.240	IX	6.00	0.094	VI:

-END OF SEARCH- 30 FAULTS FOUND WITHIN THE SPECIFIED SEARCH RADIUS

THE SANTA MONICA-HOLLYWOOD FAULT IS CLOSEST TO THE SITE. IT IS ABOUT 1.1 MILES AWAY.

LARGEST MAXIMUM-CREDIBLE SITE ACCELERATION: 0.653 g

LARGEST MAXIMUM-PROBABLE SITE ACCELERATION: 0.312 g

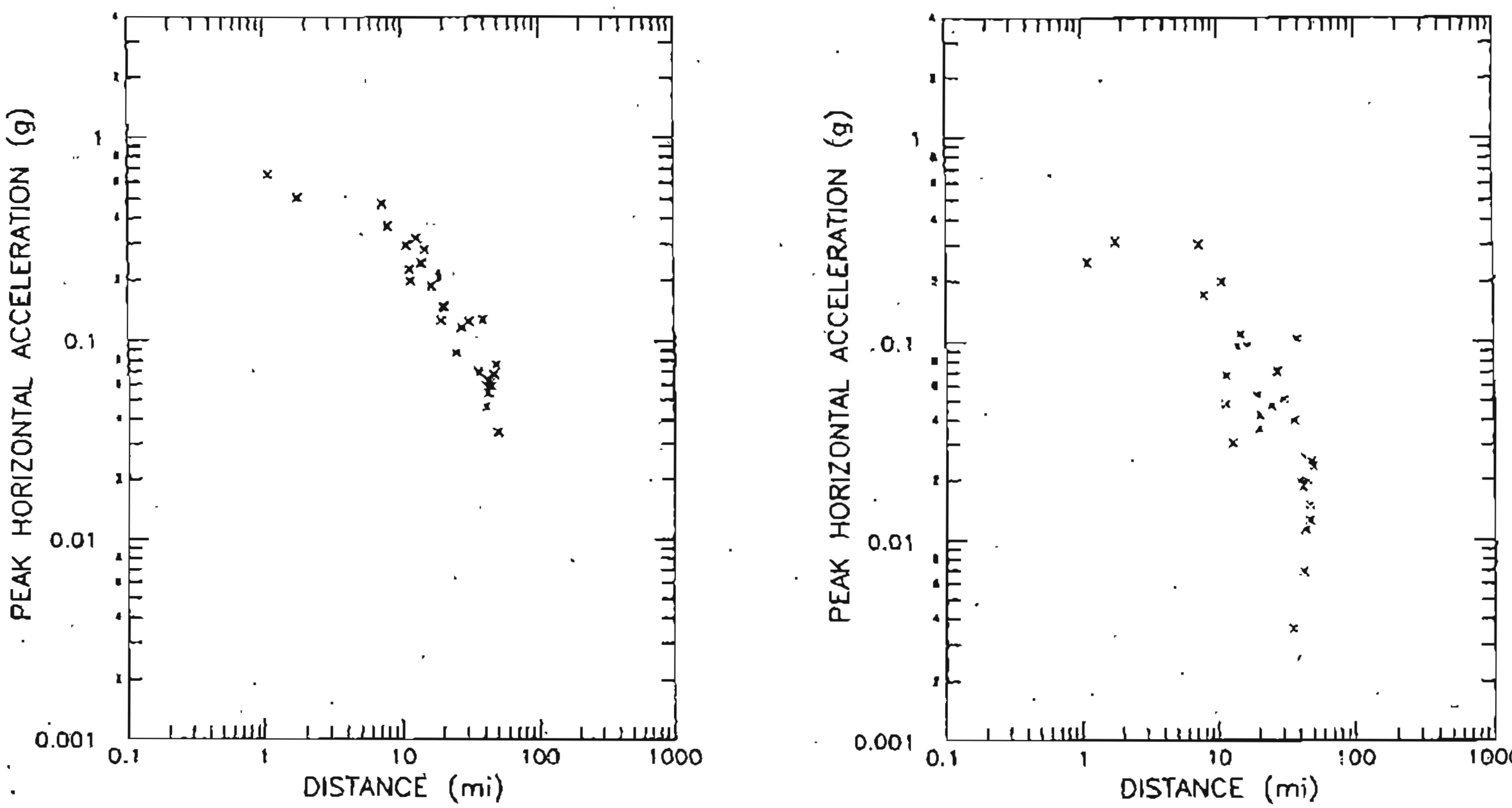

N
0 50 100
SCALE
(Miles)
SAN FRANCISCO
LOS ANGELES
SITE LOCATION (+):
Latitude - 34.0651 N
Longitude - 118.4507 W
West Los Angeles V.A. Medical Center
CALIFORNIA FAULT MAP

77-423

COMPARISON OF MAXIMUM EARTHQUAKES

MAXIMUM CREDIBLE EARTHQUAKES

MAXIMUM PROBABLE EARTHQUAKES



JOB NO.: 940118-01

LATITUDE: 34.0651 N – LONGITUDE: 118.4507 W

77-424

DETERMINISTIC SITE PARAMETERS

ABBREVIATED FAULT NAME	APPROX. DISTANCE mi (km)	MAX. CREDIBLE EVENT MAX. CRED. MAG.	PEAK SITE ACC. g	SITE INTENS MM	MAX. PROBABLE EV MAX. PROB. MAG.	PEAK SITE ACC. g	SI INT M
ANACAPA	20 (32)	7.00	0.219	IX	5.00	0.060	V
ARROYO PARIDA - MORE RANCH	47 (75)	7.50	0.100	VII	5.25	0.021	I
CATALINA ESCARPMENT	41 (66)	7.00	0.068	VI	6.25	0.039	
CHINO	40 (64)	7.00	0.088	VII	5.50	0.033	
CLEARWATER	36 (58)	7.00	0.103	VII	3.00	0.006	I
CUCAMONGA	36 (58)	7.00	0.101	VII	6.25	0.058	V
ELYSIAN PARK SEISMIC ZONE	8 (13)	7.00	0.535	X	5.75	0.288	I
GLN.HELEN-LYTLE CR-CLREMNT	50 (80)	7.00	0.050	VI	6.50	0.034	
HOLSER	25 (40)	6.60	0.128	VIII	5.75	0.079	V
MALIBU COAST	7 (12)	7.50	0.690	XI	6.50	0.448	
MID-CHANNEL	47 (76)	7.50	0.099	VII	5.50	0.025	
NEWPORT-INGLEWOOD-OFFSHORE	2 (3)	7.00	0.733	XI	5.75	0.521	
NORTHRIDGE HILLS	12 (19)	6.50	0.289	IX	5.00	0.112	VI
OAK RIDGE (Offshore)	42 (67)	7.20	0.095	VII	5.50	0.030	
OAK RIDGE (Onshore)	27 (44)	7.20	0.170	VIII	6.50	0.104	VI
PALOS VERD-CORON.B.-A.BLAN	11 (17)	7.50	0.434	X	6.75	0.293	IX
PINE MOUNTAIN	42 (68)	7.00	0.080	VII	4.25	0.012	II
RAYMOND	13 (21)	7.50	0.468	X	4.00	0.050	VI
SAN ANDREAS (Mojave)	39 (62)	8.30	0.187	VIII	8.00	0.153	VII
SAN CAYETANO	31 (49)	7.50	0.182	VIII	6.25	0.075	VI
SAN CLEMENTE - SAN ISIDRO	48 (78)	8.00	0.111	VII	6.50	0.036	
SAN GABRIEL	19 (31)	7.00	0.185	VIII	5.75	0.088	VI
SANTA MONICA - HOLLYWOOD	1 (2)	7.50	0.961	XI	5.25	0.412	
SANTA SUSANA	16 (26)	7.00	0.273	IX	6.00	0.159	VI
SANTA YNEZ (East)	44 (70)	7.50	0.090	VII	5.25	0.019	I

77-425

DETERMINISTIC SITE PARAMETERS

ABBREVIATED FAULT NAME	APPROX. DISTANCE mi (km)	MAX. CREDIBLE EVENT			MAX. PROBABLE EVE		
		MAX. CRED. MAG.	PEAK SITE ACC. g	SITE INTENS MM	MAX. PROB. MAG.	PEAK SITE ACC. g	SIT INTE MM
SIERRA MADRE-SAN FERNANDO	15 (24)	7.50	0.412	X	6.00	0.181	VII
SIMI - SANTA ROSA	20 (33)	7.00	0.214	VIII	5.25	0.070	VI
VENTURA - PITAS POINT	45 (72)	7.20	0.086	VII	5.75	0.033	V
VERDUGO	11 (18)	6.70	0.331	IX	4.50	0.080	VII
WHITTIER - NORTH ELSINORE	14 (22)	7.50	0.354	IX	6.00	0.157	VIII

-END OF SEARCH- 30 FAULTS FOUND WITHIN THE SPECIFIED SEARCH RADIUS

THE SANTA MONICA - HOLLYWOOD FAULT IS CLOSEST TO THE SITE.
IT IS ABOUT 1.1 MILES AWAY.

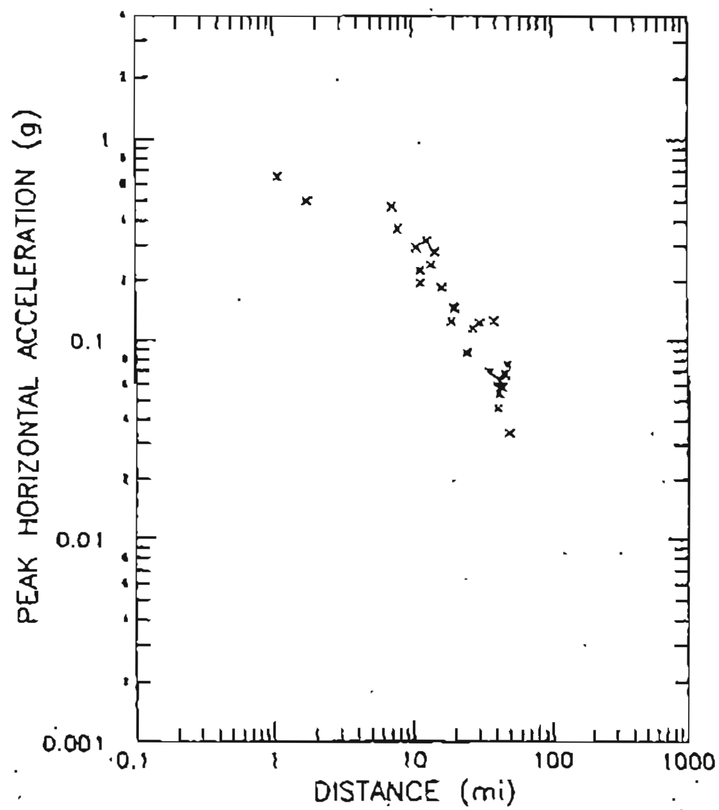
LARGEST MAXIMUM-CREDIBLE SITE ACCELERATION: 0.961 g

LARGEST MAXIMUM-PROBABLE SITE ACCELERATION: 0.521 g

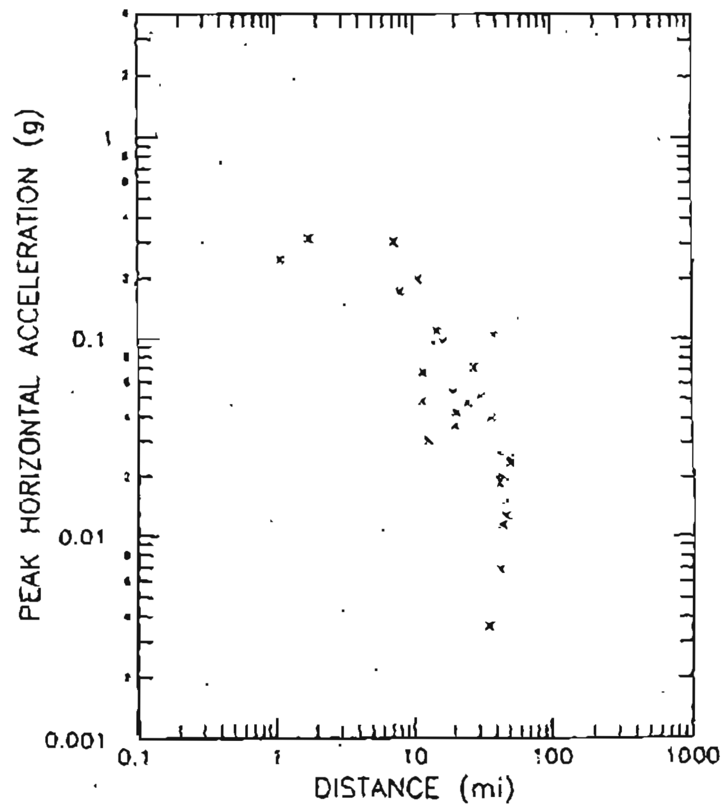
77-426

COMPARISON OF MAXIMUM EARTHQUAKES

MAXIMUM CREDIBLE EARTHQUAKES



MAXIMUM PROBABLE EARTHQUAKES



JOB NO.: 940118-01

LATITUDE: 34.0651 N – LONGITUDE: 118.4507 W

77-427

Deterministic Seismic Parameter Analysis
Century Crowell Communities
Site Latitude = 33.8778, Site Longitude = 117.2061

List of Variables

L:	Length of the fault in km (9,11,12)
X:	Shortest distance from the site to the fault in km
Mcr:	Magnitude of the Maximum Credible earthquake (9,4)
Tr:	The expected return period for the Maximum Credible earthquake (9,4)
Y1:	Horizontal peak ground acceleration, Campbell (1988) (2)
Y2:	Horizontal peak ground acceleration, Joyner & Boore (1981) (7)
Y3:	Horizontal peak ground acceleration(deep soil site), Idriss (1987) (4)
Y4:	Similar to Y3 but for a rock or shallow stiff soil site (4)
D:	Expected duration in seconds (3,10)
Per:	Expected predominant period of the ground motion in seconds (8)
L:	Length of the fault in km (9,11,12)
X:	Shortest distance from the site to the fault in km
Mcr:	Magnitude of the Maximum Credible earthquake (9,4)
Tr:	The expected return period for the Maximum Credible earthquake (9,4)
Y5:	Vertical peak ground acceleration, Campbell (1989) (1)
V1:	Vertical peak ground velocity, Campbell (1989) (1)
V2:	Horizontal peak ground velocity, Campbell (1988) (2)
V3:	Horizontal peak ground velocity , Joyner and Boore (1981) (7)

- Duration is based on interpratation of the work by Dobry (1978) and Trifunac (1975).
- Predominant period is based on Seed (1969) result.
- Return period of Mcr earthquake is calculated assuming that the accumulated strain on the fault is released only by the Mcr earthquake
- The estimated peak ground accelerations and velocities are for strike slip faults. For thrust and reverse faults Campbell recommends increasing the values by a factor of 1.4. Joyner and Boore do not recommend any correction for various faulting mechanisms.
- Peak horizontal velocities may be corrected for the site effect using a correction factor S; log(S) = -0.45log(V/1190), where V is the average shear wave velocity (m/s) of the top 40 meters of soil.

SEISMIC DESIGN PARAMETERS

The average maximum peak ground acceleration at this location, (Y1 + Y2 + Y4)/3, is 0.53 g. This ground motion is due to an earthquake of magnitude 6.7 on the SANTA MONICA fault at an epicentral distance of 2 km. This earthquake would cause 21 seconds of ground shaking with an expected predominant period of 0.29 second.

The expected maximum ground shaking duration at this site is 50 seconds due to an earthquake of magnitude 8.0 on the SA/Mojave-San Bernardino fault at an epicentral distance of 62 km. The peak acceleration for this earthquake would be 0.13 g, with an expected predominant period of 0.40 second.

77-428

940118-01

/3

Deterministic Seismic Parameter Analysis

West Los Angeles V. A. Medical Center

Site Latitude = 34.0651, Site Longitude = 118.4507
Vertical Acceleration and Horizontal Velocity
Depth to the bedrock type material 40 meters

	L km	X km	Mcr	Tr Years	Y1 g	Y2 g	Y3 g	Y4 g	D SEC	PER SEC
SAN ANDREAS(CARRIZO)	145	66	8.0	300	.11	.09	.13	.13	50	.40
SAN ANDREAS(MOJAVE)	107	62	7.5	160	.08	.07	.10	.10	35	.35
SAN ANDREAS(SAN BERNARDINO Mnts)	110	90	7.5	200	.05	.04	.07	.07	35	.35
SAN ANDREAS(COACHELLA VALLEY)	112	179	7.5	260	.02	.01	.03	.03	35	.35
SA/Mojave-San Bernardino	217	62	8.0	160	.12	.10	.13	.14	50	.40
SA/Coachella-San Bernardino	222	90	8.0	260	.07	.06	.10	.10	50	.40
PALOS VERDES	45	19	7.0	2900	.21	.22	.21	.23	25	.31
CHINO	28	70	6.8	?	.04	.04	.06	.05	22	.30
WHITTIER	74	40	7.3	730	.12	.12	.14	.14	31	.33
NEWPORT INGLEWOOD-A	28	8	6.8	1450	.35	.39	.32	.38	22	.30
NEWPORT INGLEWOOD-B	34	36	6.9	1650	.10	.11	.12	.12	24	.30
OFFSHORE NEWPORT INGLEWOOD	29	76	6.8	?	.04	.04	.05	.05	22	.30
SANTA MONICA	24	2	6.7	3960	.53	.52	.45	.56	21	.29
MALIBU COAST	34	7	6.9	?	.39	.44	.35	.41	24	.30
RAYMOND	22	30	6.7	3000	.11	.12	.13	.13	21	.29
OAKRIDGE	39	50	6.9	520	.07	.07	.09	.08	24	.30
SAN FERNANDO	17	24	6.5	200	.12	.14	.14	.15	19	.27
SIERRA MADRE-A	14	30	6.4	5000	.09	.10	.11	.11	18	.27
SIERRA MADRE-B	17	25	6.5	5000	.12	.13	.14	.14	19	.27
SIERRA MADRE-C	15	30	6.5	5000	.10	.11	.12	.12	19	.27
SIERRA MADRE-D	14	41	6.4	5000	.06	.07	.08	.08	18	.27
SIERRA MADRE-E	14	57	6.4	5000	.04	.05	.06	.05	18	.27
CUCAMONGA	20	70	6.6	700	.03	.04	.05	.04	20	.28
SANTA SUSANA	38	26	6.9	630	.15	.15	.16	.17	24	.30
ARROYO PARIDA	44	71	7.0	5350	.05	.05	.06	.06	25	.31
SAN CAYETANO	49	50	7.1	430	.08	.08	.10	.10	27	.32
SANTA YNEZ(EAST)	84	69	7.3	3200	.06	.06	.08	.08	31	.33
PINE MOUNTAIN	59	66	7.1	?	.06	.06	.07	.07	27	.32
SAN GABRIEL-A	47	44	7.0	?	.09	.09	.11	.10	25	.31
SAN GABRIEL-B	24	31	6.7	?	.11	.11	.13	.13	21	.29
VERDUGO	26	18	6.7	?	.19	.20	.20	.22	21	.29
HOLLYWOOD	17	1	6.4	1630	.54	.45	.46	.57	18	.27

77-429

PC 3

Deterministic Seismic Parameter Analysis

West Los Angeles V. A. Medical Center

940118-01

Site Latitude = 34.0651, Site Longitude = 118.4507
Vertical Acceleration and Horizontal Velocity
Depth to the bedrock type material 30 meters

	L km	X km	Mcr	Tr Years	Y5 g	V1 CM/S	V2 CM/S	V3 CM/S
SAN ANDREAS(CARRIZO)	145	66	8.0	300	.08	8.9	15.2	14.4
SAN ANDREAS(MOJAVE)	107	62	7.5	160	.06	5.6	9.9	8.9
SAN ANDREAS(SAN BERNARDINO Mnts)	110	90	7.5	200	.04	3.8	6.7	5.2
SAN ANDREAS(COACHELLA VALLEY)	112	179	7.5	260	.01	1.6	3.0	1.5
SA/Mojave-San Bernardino	217	62	8.0	160	.09	9.4	16.1	15.7
SA/Coachella-San Bernardino	222	90	8.0	260	.06	6.8	11.3	9.1
PALOS VERDES	45	19	7.0	2900	.16	9.7	18.5	21.0
CHINO	28	70	6.8	?	.03	2.0	3.9	3.4
WHITTIER	74	40	7.3	730	.09	6.9	12.5	12.5
NEWPORT INGLEWOOD-A	28	8	6.8	1450	.32	14.7	29.5	38.7
NEWPORT INGLEWOOD-B	34	36	6.9	1650	.07	4.9	9.2	9.1
OFFSHORE NEWPORT INGLEWOOD	29	76	6.8	?	.02	1.8	3.6	3.0
SANTA MONICA	24	2	6.7	3960	.66	21.8	46.9	70.9
MALIBU COAST	34	7	6.9	?	.38	16.7	33.7	48.3
RAYMOND	22	30	6.7	3000	.07	4.6	9.0	9.0
OAKRIDGE	39	50	6.9	520	.05	3.4	6.5	6.0
SAN FERNANDO	17	24	6.5	200	.08	4.6	9.2	9.2
SIERRA MADRE-A	14	30	6.4	5000	.06	3.1	6.5	6.4
SIERRA MADRE-B	17	25	6.5	5000	.08	4.4	8.8	8.8
SIERRA MADRE-C	15	30	6.5	5000	.06	3.6	7.3	7.2
SIERRA MADRE-D	14	41	6.4	5000	.04	2.2	4.6	4.4
SIERRA MADRE-E	14	57	6.4	5000	.02	1.4	3.1	2.9
CUCAMONGA	20	70	6.6	700	.02	1.5	3.1	2.7
SANTA SUSANA	38	26	6.9	630	.10	6.7	12.7	13.3
ARROYO PARIDA	44	71	7.0	5350	.03	2.6	4.9	4.2
SAN CAYETANO	49	50	7.1	430	.05	4.4	8.1	7.6
SANTA YNEZ(EAST)	84	69	7.3	3200	.04	3.9	7.1	6.1
PINE MOUNTAIN	59	66	7.1	?	.04	3.2	6.0	5.2
SAN GABRIEL-A	47	44	7.0	?	.06	4.4	8.3	7.9
SAN GABRIEL-B	24	31	6.7	?	.07	4.5	8.7	8.6
VERDUGO	26	18	6.7	?	.14	7.6	14.8	15.8
HOLLYWOOD	17	1	6.4	1630	.67	21.2	45.7	55.0

77-430

PG

Deterministic Seismic Parameter Analysis

West Los Angeles V. A. Medical Center

940118-01

Site Latitude = 34.0651, Site Longitude = 118.4507
Vertical Acceleration and Horizontal Velocity
Depth to the bedrock type material 30 meters

	L km	X km	Mcr	Tr Years	Y5 g	V1 CM/S	V2 CM/S	V3 CM/S
SAN ANDREAS(CARRIZO)	145	66	8.0	300	.08	8.9	15.2	14.4
SAN ANDREAS(MOJAVE)	107	62	7.5	160	.06	5.6	9.9	8.9
SAN ANDREAS(SAN BERNARDINO Mnts)	110	90	7.5	200	.04	3.8	6.7	5.2
SAN ANDREAS(COACHELLA VALLEY)	112	179	7.5	260	.01	1.6	3.0	1.5
SA/Mojave-San Bernardino	217	62	8.0	160	.09	9.4	16.1	15.7
SA/Coachella-San Bernardino	222	90	8.0	260	.06	6.8	11.3	9.1
PALOS VERDES	45	19	7.0	2900	.16	9.7	18.5	21.0
CHINO	28	70	6.8	?	.03	2.0	3.9	3.4
WHITTIER	74	40	7.3	730	.09	6.9	12.5	12.5
NEWPORT INGLEWOOD-A	28	8	6.8	1450	.32	14.7	29.5	38.7
NEWPORT INGLEWOOD-B	34	36	6.9	1650	.07	4.9	9.2	9.1
OFFSHORE NEWPORT INGLEWOOD	29	76	6.8	?	.02	1.8	3.6	3.0
SANTA MONICA	24	2	6.7	3960	.66	21.8	46.9	70.9
MALIBU COAST	34	7	6.9	?	.38	16.7	33.7	48.3
RAYMOND	22	30	6.7	3000	.07	4.6	9.0	9.0
OAKRIDGE	39	50	6.9	520	.05	3.4	6.5	6.0
SAN FERNANDO	17	24	6.5	200	.08	4.6	9.2	9.2
SIERRA MADRE-A	14	30	6.4	5000	.06	3.1	6.5	6.4
SIERRA MADRE-B	17	25	6.5	5000	.08	4.4	8.8	8.8
SIERRA MADRE-C	15	30	6.5	5000	.06	3.6	7.3	7.2
SIERRA MADRE-D	14	41	6.4	5000	.04	2.2	4.6	4.4
SIERRA MADRE-E	14	57	6.4	5000	.02	1.4	3.1	2.9
CUCAMONGA	20	70	6.6	700	.02	1.5	3.1	2.7
SANTA SUSANA	38	26	6.9	630	.10	6.7	12.7	13.3
ARROYO PARIDA	44	71	7.0	5350	.03	2.6	4.9	4.2
SAN CAYETANO	49	50	7.1	430	.05	4.4	8.1	7.6
SANTA YNEZ(EAST)	84	69	7.3	3200	.04	3.9	7.1	6.1
PINE MOUNTAIN	59	66	7.1	?	.04	3.2	6.0	5.2
SAN GABRIEL-A	47	44	7.0	?	.06	4.4	8.3	7.9
SAN GABRIEL-B	24	31	6.7	?	.07	4.5	8.7	8.6
VERDUGO	26	18	6.7	?	.14	7.6	14.8	15.8
HOLLYWOOD	17	1	6.4	1630	.67	21.2	45.7	55.0

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APPENDIX E

S I D GEOTECHNICAL, INC.

77-437

APPENDIX E

GENERAL EARTHWORK AND GRADING SPECIFICATIONS

1.0 GENERAL INTENT

These specifications present general procedures and requirements for grading and earthwork as shown on the approved grading plans, including preparation of areas to be filled, placement of fill, installations of subdrains, and excavations. The recommendations contained in the geotechnical report are a part of the earthwork and grading specifications and shall supersede the provisions contained hereinafter in the case of conflict. Evaluations performed bythe consultant during the course of grading may result in new recommendations which could supersede these specifications or the recommendations of the geotechnical report.

2.0 EARTHWORK OBSERVATIONS AND TESTING

Prior to the commencement of grading, a qualified geotechnical consultant (soils engineer and engineering geologist, and their representatives) shall be employed for the purpose of observing earthwork procedures and testing the fills for conformance with the recommendations of the geotechnical report and these specifications. It will be necessary that the consultant provide adequate testing and observations so that he may determine that the work was accomplished as specified. It shall be the responsibility of the contractor to assist the consultant and keep him apprised of work schedules and changes so that he may schedule his personnel accordingly.

It shall be the sole responsibility of the contractor to provide adequate equipment and methods to accomplish the work in accordance with applicable grading codes or agency ordinances, these specifications and approved grading plans. If, in the opinion of the consultant, unsatisfactory conditions, such as questionable soil, poor moisture conditions, inadequate compaction, adverse weather, etc., are resulting in a quality of work less than required in these specifications, the consultant will be empowered to reject the work and recommend that construction be stopped until the unsatisfactory conditions are rectified.

Maximum dry density tests used to determine the degree of compaction will be performed in accordance with the American Society of Testing and Materials, test method ASTM D1557-78.

3.0 PREPARATION OF AREAS TO BE FILLED

3.1 Clearing and Grubbing

All brush, vegetation, and debris shall be removed or piled and otherwise disposed of.

3.2 Processing

The existing ground which is determined to be satisfactory for support of fill shall be scarified to a minimum depth of 6 inches. Existing ground which is not satisfactory shall be overexcavated as specified in the following section. Scarification shall continue until the soils are broken down and free of large clay lumps or clods and until the working surface is reasonably uniform and free of uneven features which would inhibit uniform compaction.

3.3 Overexcavation

Soft, dry, spongy, highly fractured or otherwise unsuitable ground, extending to such depth that surface processing cannot adequately improve the condition, shall be overexcavated down to firm ground, approved by the consultant.

3.4 Moisture Conditioning

Overexcavated and processed soils shall be watered, dried-back, blended, and/or mixed, as required to attain a uniform moisture content near optimum.

3.5 Recompaction

Overexcavation and processed soils which have been properly mixed and moisture-conditioned shall be recompacted to a minimum relative compaction of 90 percent.

3.6 Benching

Where fills are to be placed on ground with slopes steeper than 5:1 (horizontal : vertical), the ground shall be stepped or benched. The lowest bench shall be a minimum of 15 feet wide, shall be at least 2 feet deep, shall expose firm materials, and shall be approved by the consultant. Other benches shall be excavated in firm materials for a minimum width of 4 feet. Ground sloping flatter than 5:1 (horizontal : vertical) shall be benched or otherwise overexcavated when considered necessary by the consultant.

3.7 Approval

All areas to receive fill, including processed areas, removal areas and toe-of-fill benches shall be approved by the consultant prior to fill placement.

4.0 FILL MATERIAL

4.1 General

Material to be placed as fill shall be free of organic matter and other deleterious substances, and shall be approved by the consultant. Soils of poor gradation, expansion, or strength characteristics shall be placed in areas designated by consultant or shall be mixed with other soils to serve as satisfactory fill material.

4.2 Oversize

Oversize materials defined as rock, or other irreducible material with maximum dimension greater than 12 inches, shall not be buried or placed in fills, unless the location, materials, and disposal methods are specifically approved by the consultant. Oversize disposal operations shall be such that nesting of oversize material does not occur, and such that the oversize material is completely surrounded by compacted or densified fill. Oversize material shall not be placed within 10 feet vertically of finish grade or within the range of future utilities or underground construction, unless specifically approved by the consultant.

4.3 Import

If importing of fill material is required for grading, the import material shall meet the requirements of Section 4.1.

5.0 FILL PLACEMENT AND COMPACTION

5.1 Fill Lifts

Approved fill material shall be placed in areas prepared to receive fill in near-horizontal layers not exceeding 6 inches in compacted thickness. The consultant may approve thicker lifts if testing indicates the grading procedures are such that adequate compaction is being achieved with lifts of greater thickness. Each layer shall be spread evenly and shall be thoroughly mixed during spreading to attain uniformity of material and moisture in each layer.

5.2 Fill Moisture

Fill layers at a moisture content less than optimum shall be watered and mixed, and wet fill layers shall be aerated by scarification or shall be blended with drier material. Moisture conditioning and mixing of fill layers shall continue until the fill material is at a uniform moisture content at or near optimum.

5.3 Compaction of Fill

After each layer has been evenly spread, moisture-conditioned, and mixed, it shall be uniformly compacted to not less than 90 percent of maximum dry density. Compaction equipment shall be adequately sized and shall be either specifically designed for soil compaction or of proven reliability, to efficiently achieve the specified degree of compaction.

5.4 Fill Slopes

Compacting of slopes shall be accomplished, in addition to normal compacting procedures, by backrolling of slopes with sheepsfoot rollers at frequent increments of 2 to 3 feet in fill elevation gain, or by other methods producing satisfactory results. At the completion of grading, the relative compaction of the slope out to the slope face shall be at least 90 percent.

77-435

5.5 Compaction Testing

Field tests to check the fill moisture and degree of compaction will be performed by the consultant. The location and frequency of tests shall be at the consultant's discretion. In general, the tests will be taken at intervals not exceeding 2 feet in vertical rise and/or 1,000 cubic yards of embankment.

6.0 SUBDRAIN INSTALLATION

Subdrain systems, if required, shall be installed in approved ground to conform to the approximate alignment and details shown on the plans or herein. The subdrain location or materials shall not be changed or modified without the approval of the consultant. The consultant, however, may recommend and upon approval, direct changes in subdrain line, grade or material. All subdrains should be surveyed for line and grade after installation and sufficient time shall be allowed for the surveys, prior to commencement of filling over the subdrain.

7.0 EXCAVATION

Excavations and cut slopes will be examined during grading. If directed by the consultant, further excavation or overexcavation and refilling of cut areas shall be performed, and/or remedial grading of cut slopes shall be performed. Where fill-over-cut slopes are to be graded, unless otherwise approved, the cut portion of the slope shall be made and approved by the consultant prior to placement of materials for construction of the fill portion of the slope.

8.0 TRENCH BACKFILLS

8.1 Trench excavations for utility pipes shall be backfilled under engineering supervision.

8.2 After the utility pipe has been laid, the space under and around the pipe shall be backfilled with clean sand or approved granular soil to a depth of at least one foot over the top of the pipe. The sand backfill shall be uniformly jetted into place before the controlled backfill is placed over the sand.

8.3 The onsite materials, or other soils approved by the soil engineer, shall be watered and mixed as necessary prior to placement in lifts over the sand backfill.

8.4 The controlled backfill shall be compacted to at least 90 percent of the maximum dry density as determined by the ASTM D1557-78 test method.

8.5 Field density tests and inspection of the backfill procedures shall be made by the soil engineer during backfilling to see that proper moisture content and uniform compaction is being maintained. The contractor shall provide test holes and exploratory pits as required by the soil engineer to enable sampling and testing.

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APPENDIX F

SID GEOTECHNICAL, INC.

77-437

SID

GEOTECHNICAL, INC.

SID GEOTECHNICAL, INC.

SOIL ENGINEERING, GEOLOGY, ENVIRONMENTAL ENGINEERI

April 18, 1995

Project No. 940118-01

TO: Jack Bryant Engineers
2601 Airport Drive
Suite 310
Torrance, California 90505

ATTENTION: Mr. Massoud Heravi, P.E.

SUBJECT: Estimated Thickness of Structural Pavement Section, Proposed Loop Road and New Road Across North End of Creek, West Los Angeles V.A. Medical Center, Los Angeles, California

Per your request, we have estimated the pavement sections for the subject roads based on traffic indices of 5.0, 6.0, 6.5, and 7.0. A typical R-value of 20 was obtained for onsite silty sands with clay. Considering this, the estimated pavement sections are tabulated as follows.

STREET	TI	R-value	ASPHALT CONCRETE	AGGREGATE BASE
LOOP ROAD and CREEK CROSSING REALIGNMENT	5.0	20	4"	5.0"
	6.0	20	4"	8.5"
	6.5	20	4"	10.5"
	7.0	20	4"	12.0"

The subgrade and Class 2 aggregate base should be compacted at/or near optimum moisture to at least 90 and 95 percent relative compaction, respectively. This is relative to the laboratory maximum dry density determined in accordance with ASTM D1557-91 Test Method. The subgrade and the aggregate base must be firm and unyielding prior to placement of asphalt paving. Final pavement design should be based on actual R-value test results of street subgrade subsequent to completion of grading.

Should you have any questions or need further assistance please do not hesitate to call this office. We appreciate this opportunity to be of service.

Very truly yours,

SID Geotechnical, Inc.

Haytham Nabilsi, RCE 45449
Project Engineer

REGISTERED PROFESSIONAL ENGINEER
HAYTHAM ALNABILSI
No. C 45449
Exp. 12/31/98
CIVIL
STATE OF CALIFORNIA

Sid A. Siddiqui, GE 77
Principal Engineer

Exp. 9/30/97

Distribution: (1) Addressee

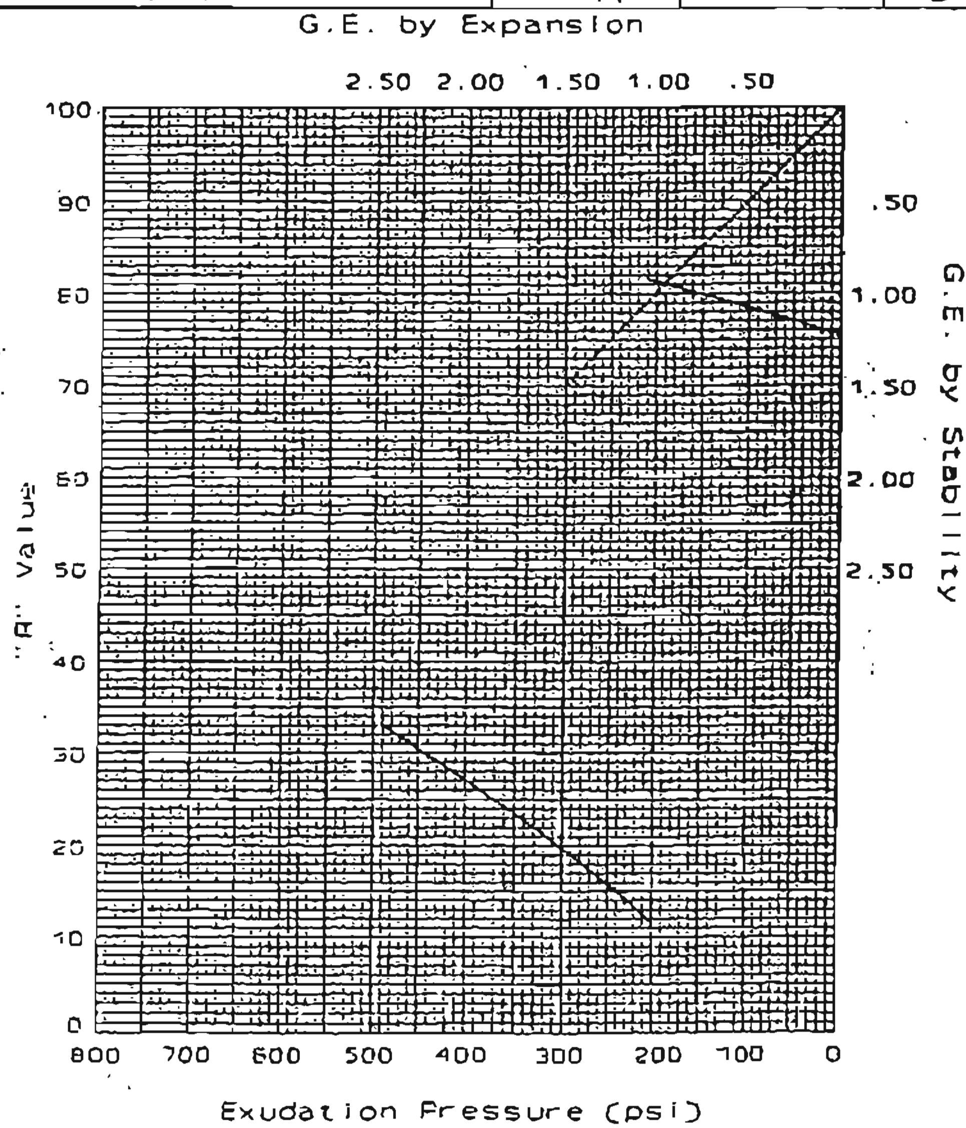
Attachment: R-value Test Result

7265 JURUPA AVENUE, SUITE E • RIVERSIDE, CA 92504 • TEL.: [redacted] • FAX: [redacted]

97-438

SAMPLE LOCATION B-1 @ 0-5 (LOOP ROAD) | SOIL TYPE SILTY SAND WITH CLAY

		TEST SPECMEN	A	B	C	D	E
		INITIAL MOISTURE %	4.4	4.4	4.4		
Specimen Fabrication		Compactor Air Pressure psi	170	60	100		
		Expansion Pressure Dial	14	0	0		
		Mosture at Compaction %	12.2	14.8	13.5		
		Briquette Height in.	2.49	2.53	2.52		
		Density pcf	122.2	115.6	118.5		
		EXUDATION PRESSURE psi	471	229	336		
		Ph at 2000 lbs	93	123	108		
Stabil-ometer		Turns Displacement	3.83	4.73	4.11		
		Corrected R-Value	32	14	23		
		Traffic Index	5.0	5.0	5.0		
		G.E. by Stability	1.09	1.38	1.23		
		G.E. by Expansion	0.47	0.00	0.00		



R-Value by Expansion: 41

R-Value by Stability: 20

Equilibrium R-value: 20

Lab No.

Date Tested: 3-28-9

Tested By: LHA

R-VALUE TEST RESULTS

Project No. 940118-01

Project Name VA HOSPITAL

Date 4-18-95 Figure No. 1

77-439

PEAK HORIZONTAL ACCELERATION COMPUTATION

DATE:	Monday, March 27, 1995
SEARCH PERFORMED FOR:	Jack Bryant Engineers
JOB NUMBER:	940118-01
JOB NAME:	West Los Angeles V.A. Medical Center
SITE COORDINATES:	LATITUDE 34.0651 N LONGITUDE 118.4507 W
SEARCH RADIUS:	50 Mile
ATTENUATION RELATION:	2) Campbell (1991R) Horiz. - Deep Soil & Soft Ro
UNCERTAINTY	(M=Mean, S=Mean+1-Sigma): S
SCOND:	0
FAULT-DATA FILE USED:	CALIFLT.DAT
SOURCE OF DEPTH VALUES	(A=Attenuation File, F=Fault Data File): A

Attachment No. 1

VETERANS ADMINISTRATION
WADSWORTH HOSPITAL CENTER
WILSHIRE AND SAWTELLE BOULEVARDS
LOS ANGELES, CALIFORNIA 90073

7-12-79

IN REPLY REFER TO: 691/115

Regional Director, Western Region (10BA4/115)
VA Central Office
810 Vermont Ave., N.W.
Washington, DC 20420

SUBJ: Disposal of radioactive material by burial in soil at VA Medical Center

1. In response to your memo dated June 28, 1979, we submit the following:

a. Wadsworth Medical Center has on-site soil disposal records dating from June 1960 thru August 1968. During this time, waste products were disposed of in accordance with 10-CFR-20.

b. Objects buried include laboratory organic wastes, liquids, liquid scintillation vials, and animal carcasses.

c. Identity and quantity of the major nuclides disposed of are:

H-3	=	1,212.9 mCi
C-14	=	48.3 mCi
S-35	=	2.2 mCi
Cr-51	=	0.5 mCi
Fe-59	=	2.0 mCi
I-125	=	10.0 mCi
I-131	=	102.1 mCi

d. Please note that Mo-99 - Tc-99m isotopes are not listed, due to short half-lives.

2. We would be happy to supply additional information as you may require.

WILLIAM K. ANDERSON
Director

Attachment 2

From June 1960 to December 1961, the following items were buried at the dump (quantities are included in the CO report).

H-3	=	6.94 mCi
C-14	=	2.71 mCi
P-32	=	0.3 mCi
S-35	=	0.1 mCi
Cr-51	=	0.02 mCi
Fe-59	=	0.02 mCi
I-131	=	0.14 mCi
		10.23 mCi Total

77-442

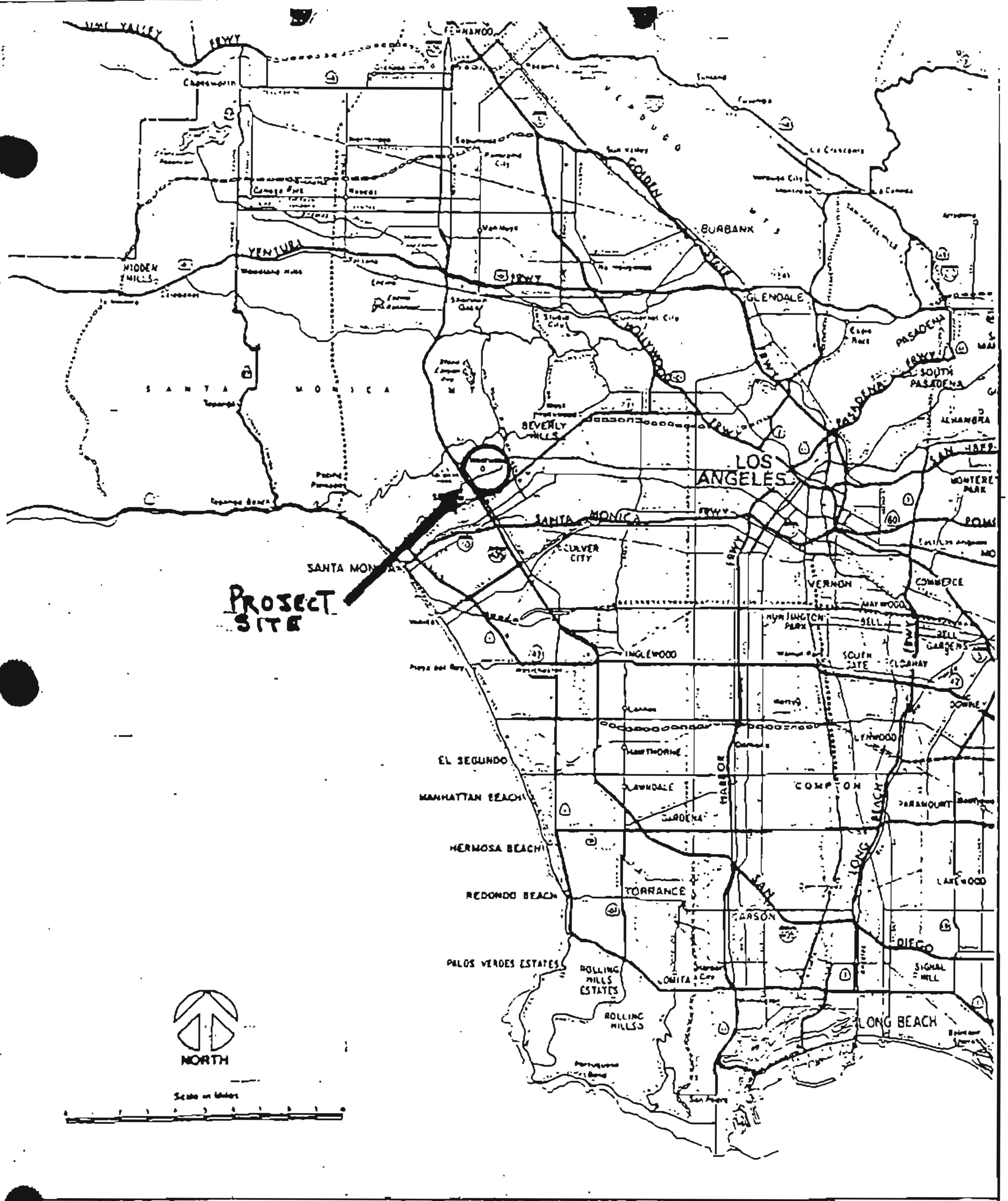
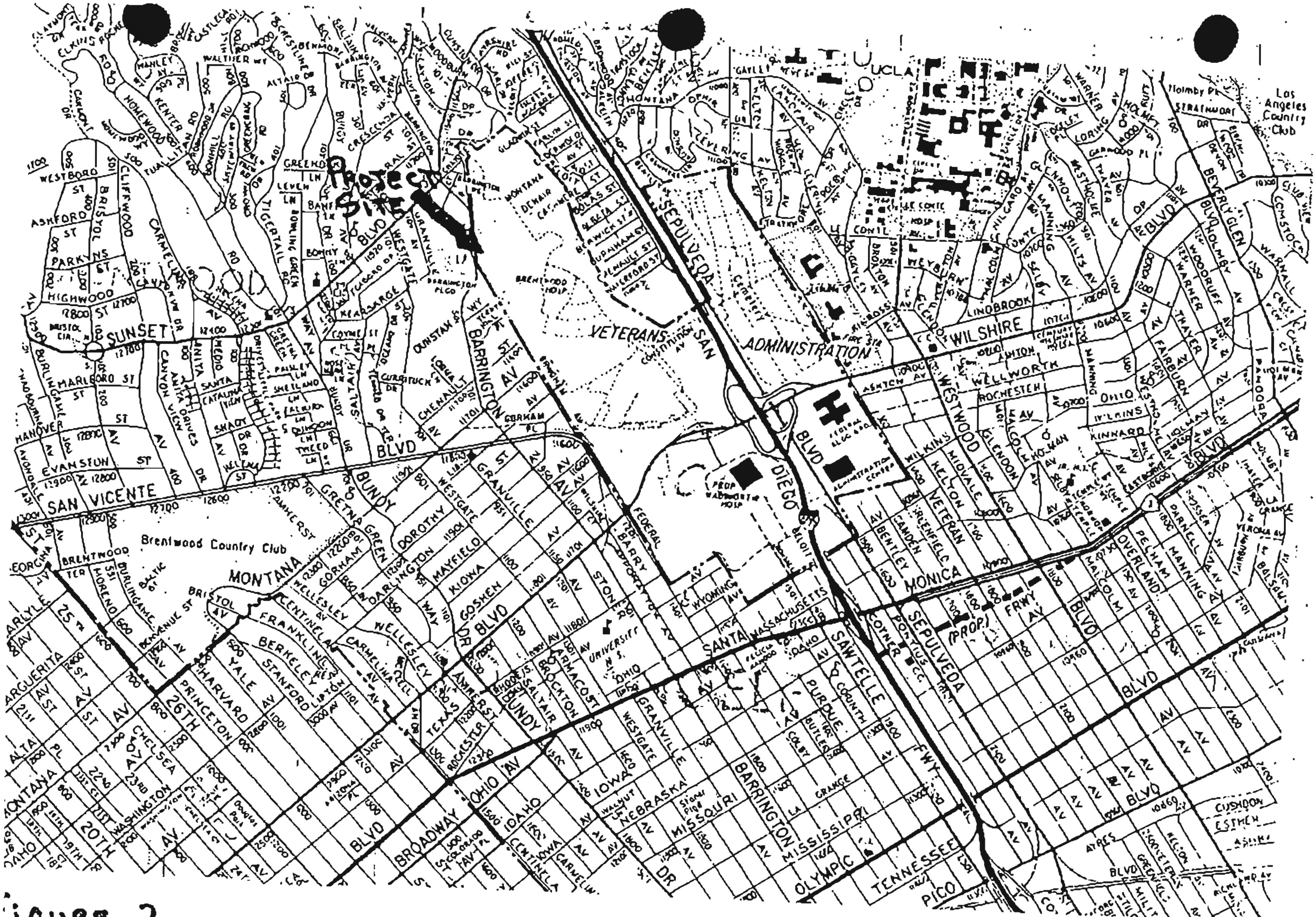


FIGURE 1.
REGIONAL LOCATION MAP

77-443



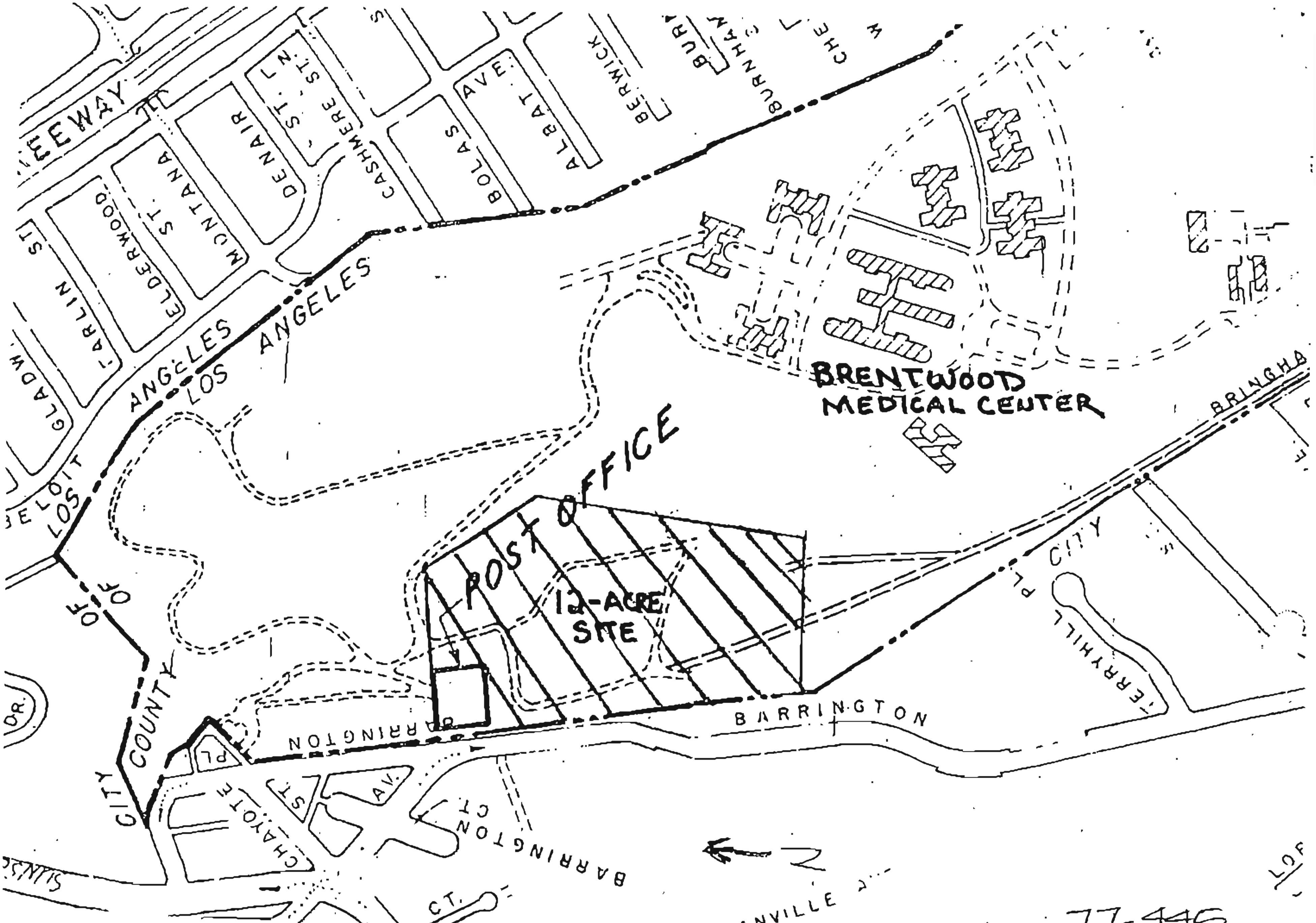
ꞮGURE 2.

LOCAL VICINITY MAP

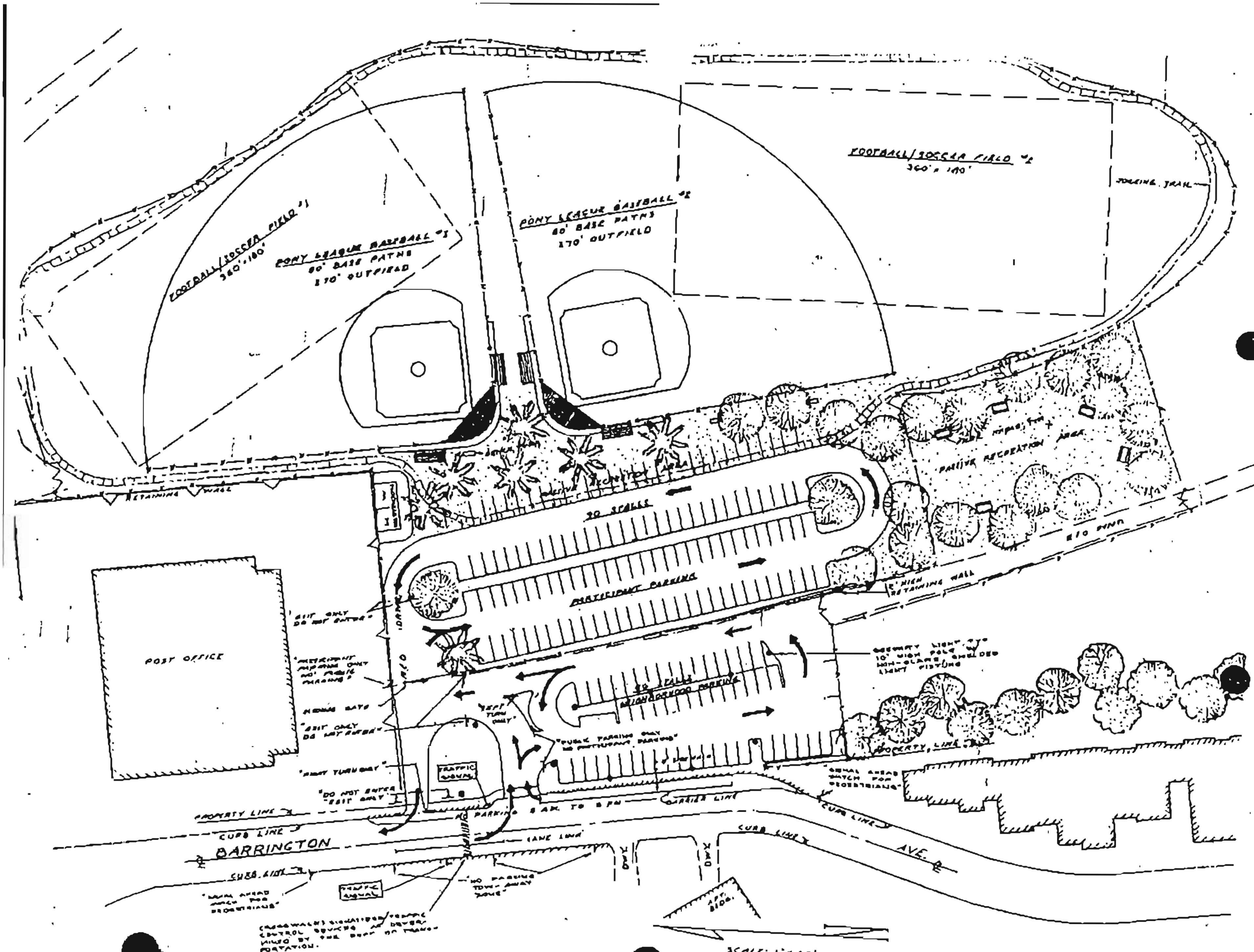
77-444

SOURCE: THOMAS B[ROS.] MAPS

LOCAL VICINITY MAP (EXPANDED)



77-445



BARRINGTON REC. CTR. - PREL. SITE PLAN II A

77-446

Los Angeles Federation of Scientists
P.O. Box 67941
Los Angeles, CA 90067
[redacted]

Freedom of Information Office
Veteran's Administration
810 Vermont Avenue NW
Washington, D.C. 20420

RE: FREEDOM OF INFORMATION REQUEST

Dear Gentleperson:

Pursuant to the Freedom of Information Act, 5 U.S.C. 552, the Los Angeles Federation of Scientists herewith requests that it be provided the following documents or categories of documents:

(1) all records of wastes--chemical or radioactive--buried by disposal in soil on the Veterans Administration property in West Los Angeles any time prior to 1960.

(2) all records of wastes--chemical or radioactive--buried by disposal in soil on the Veteran's Administration property in West Los Angeles from 1960 to the present, other than the records provided by Radiation Safety Officer Wettarau to a group of scientists convened on April 14, 1981, by staff of Congressman Beilenson and LA City Councilperson Braude.

(3) all records which indicate precisely when burial of radwaste began at the site in question.

(4) all drawings and maps indicating burial site locations, current and previous drawings and maps.

(5) all documents which provide evidence that waste burials were not conducted at the site prior to 1960.

(6) all documents which provide evidence that waste burials were conducted at the site prior to 1960.

(7) all records of radioactive materials present on site (i.e. prior to burial) prior to 1960.

(8) all documents regarding sea disposal of radwastes from the VA in West Los Angeles.

(9) all documents regarding shipment of chemical and radioactive wastes for disposal off the VA property, other than those provided regarding item (8), up to the present.

(10) all documents regarding transfer of chemical or radioactive wastes from offsite to the VA property in West Los Angeles for disposal onsite, up to the present.

(11) all records of monitoring at or near the site for chemical or radioactive contamination, other than NRC inspection report 81-02.

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(12) Memo from Chief of the Engineering Division at the VA in WLA dated 2-14-69 "regarding various changes in the VAC radioactive waste disposal program."

(13) all minutes, up to the present, of the VAC Radioisotope Committee, or any other radiation safety committee at the VA in WLA, including but not limited to the minutes of the 2-18-69 meeting.

(14) all correspondence, memoranda, reports or other documents, other than those listed in 1-13 above, in possession of VA regarding the disposal of radioactive ~~or chemical~~ wastes on the VA property in West Los Angeles.

(15) Memo of June 28, 1979, from VA Regional Director to Wm. Anderson, Director of VA Wadsworth Hospital in LA.

Due to the public interest use to which the requested documents will be put, and to the limited financial resources of the Los Angeles Federation of Scientists (a non-profit, voluntary association), it is hereby requested that search and copying fees be waived. For those documents located in West Los Angeles, we are willing to review those documents in person if they are extensive and indicate which we wish to have copied. Otherwise, we request copies be provided directly to us.

We request that documents be searched for that are in files of VA national and regional headquarters, as well as documents in files of the VA in West Los Angeles. To expedite matters, a copy of this FOIA request is being sent to the WLA VA.

A significant public matter has been raised by proposals to establish a park on the land formerly used as a disposal site for low-level radioactive wastes by the VA. A Draft Environmental Impact Statement has been issued for comment by the City of Los Angeles. In order that public confidence be ensured, it is very much in the public interest that all available data be provided that might aid in assessing potential environmental impacts in this situation. We therefore request, in addition to the waiving of copying and search fees, that this request be expedited. We understand a response is due within ten days.

Sincerely,

Robert Nelson, Ph.D.
Co-Chairperson
Los Angeles Federation of Scientists

cc: Director, VA, West Los Angeles ✓

77-448

ATTACHMENT A

1. The map of the former disposal sites included in NRC inspection report 81-02, provided to NRC by Mr. Wetterau, would appear to indicate that the burials took place in part in the streambed separating the proposed leased area and the baseball field. Did the burials occur in or near the streambed? Please explain. If the map is in error, please indicate the correct locations.

2. We understand landfill was deposited on top of the former disposal area. Was fill deposited to an even depth across the entire area, or in varying depths? Was material deposited on top of the ridge overlooking the streambed, or backfilled from there? If deposited, roughly what depth? Can you provide a description or map of where fill was added and to what depth?

3. When the AEC did its initial review of the site in 1969, were disposal records provided for the period 1963-68, or for some other period?

4. Precisely when did disposal of radwaste by soil burial begin at the VA, and what evidence does VA have that no disposal occurred prior to that date?

5. Prior to the date identified in (4) above, what radioactive materials did the VA have on site and how were those materials disposed of? What evidence exists upon which that answer is based?

6. Were wastes other than those generated by the VA ever buried on VA property? Please give details if so, including source of the materials and time period. If not, what evidence exists that such burial did not occur?

7. Were radwastes generated by the VA ever disposed of by sea burial? Please give details.

8. When were radioactive materials first utilized on the VA property, and what evidence is that answered based upon?

9. Certain of the burial records we have seen refer to the N.P. dumpsite. What is the "N.P." dumpsite? Were there any other dumpsites?

10. Were joint projects ever conducted between the VA and the Atomic Energy Project at UCLA; if so, please give details? Did the AEP ever conduct activities at the VA? Were any materials from AEP ever disposed of at the VA?

11. Please give us the name and last known address and phone number for individuals involved in the disposal of radwastes at the VA prior to Mr. Wetterau.

12. When was the main paved road into the proposed leased area put in?

13. There is an old rusted sign just west of that road and of the former disposal site. What did that sign say and what was it there for?

14. Please provide any information you have that might indicate that wastes were disposed of at locations other than those marked A, B, and C on the map in NRC inspection report 81-02.

15. Monitoring conducted by the VA of the site of which we are aware consists of monitoring on October 4, 1979. The locations are not clear to us—where is the fish pond and precisely where were the other measurements taken? Why were measurements taken along the road and on the knoll west of picnic area? What other measurements besides those of October 4 has VA made?

77-449

16. How long has the VA been at this site?

17. How have, and where have, chemical wastes been disposed of by the VA during the various periods since its inception? What records are there for this?

18. Why was the land (50 acres) including the former radwaste disposal site declared excess in 1969? How was it intended to be disposed of, and for what purpose? Why was the land removed from excess?

19. Do you have any information how radwastes generated off the VA site but in the Southern California area were disposed of 1940-1962, i.e. prior to the opening of commercial land-based disposal sites?

20. Were any chemical wastes disposed of by soil burial at the VA? If so, where, what and when? If not, what evidence is there to that effect?

21. Were scintillation liquids buried in containers, poured directly into holes, or both? If in containers, what kinds of containers?

22. What information can you provide regarding patches of ground in the disposal area where reportedly vegetation was stunted or non-existent?

23. Did the VA prior to 1969 ever ship radwaste for disposal to commercial land-based disposal sites such as Beatty, Nevada? If so, please indicate what kinds of materials and when, and how it was determined which materials would be buried onsite and which shipped offsite.

24. How were leaking sources (e.g. Cobalt-60, Strontium-90 eye applicators), disposed of prior to 1969? Prior to 1962?

25. During what period was Thorotrax used at the VA, and how was it disposed of?

26. Were radwastes ever transferred to UCLA for disposal? If so, on what basis was that relationship?

27. Did UCLA ever provide to the VA radwaste for disposal? If so, please give details, time periods, and amounts.

28. When was the C14 lab established?

77-450

ANSWER TO REQUEST FOR PRODUCTION OF DOCUMENTS

1. Apparently no records available. You will be allowed access to all the records we have pertaining to rad waste disposal and chemical disposal we have in our possession. To do so please contact Mr. Alan K. Achen of the District Counsel's Office at [redacted] to arrange for a time and place for pick-up.

2. Same as No. 1 above.

3. Same as No. 1 above.

4. See Exhibit "A". See second half of Answer No. 1 above relating to review of our records.

5. See Answer to No. 1 above.

6. See Answer to No. 1 above.

7. See Answer to No. 1 above.

8. See Answer to No. 1 above.

9. See second half of Answer to No. 1 above relating to review of records.

10. See Answer to No. 1 above.

11. See second half of Answer to No. 1 relating to review of records.

12. See the Answer to No. 13 below.

13. The Veterans Administration will deny this request, in part, pursuant to 38 CFR Section 1.554(a)(5) and 5 USC Section 552(b)(5) relating to inter-agency ~~or~~ intra-agency memoranda and letters which would not be available by law to a party other than an agency in litigation with the agency. The Minutes you refer to are pre-decisional communications designed to aid in the formulation of policy by the Veterans Administration and would disturb the agency's decision-making process. Any portions not dealing with this predecisional process will be provided to you and your organization and not protected

by another provision of the law from disclosure.

14. See Answer to No. 1 above.

15. See Answer to No. 13 above.

77 452

Wadsworth
Medical Cen.

Wilshire and
Sawtelle Boulevards
Los Angeles, CA 90073

Veterans
Administration

OCT 29 1979

Ms. Christie Harris
Committee to Bridge the Gap
10915 Strathmore Drive
Los Angeles, CA 90024

Dear Christie:

We are sorry for the delay in responding to your latest request. Following is the information you requested.

(1) Prior to 1961, radiowaste was disposed mainly by decay of short-lived materials. Some materials were interred at the Barrington radiowaste disposal site (see attachments 1 and 2).

(2) The site was monitored on August 15, 1968, on the occasion of last disposal. Monitoring was by Geiger counter survey after burial. The results indicated only background radioactivity. Included is a xerox copy of the last burial (Attachment 3). We monitored the area again on October 4, 1979. The results are attached (Attachment 4). Please note that soil and plant sample results are similar in count rate for the dump site and Mr. Wetterau's home.

(3) There are no signs posted regarding the fact that the area was a radioactive disposal site. This is not required of us by NRC regulation.

As you may already know, our activities are under the surveillance of the NRC. They are the independent government agency responsible for surveillance and all of our activities in this area are undertaken in complete compliance with their regulations. You may wish to pursue your investigation through NRC.

Sincerely,

William K. Anderson

WILLIAM K. ANDERSON
Director

In Reply Refer To: 691/002

77-453

VETERANS ADMINISTRATION
WADSWORTH HOSPITAL CENTER
WILSHIRE AND SAWTELLE BOULEVARDS
LOS ANGELES, CALIFORNIA 90073

SEP 19 1979

IN REPLY REFER TO: 691/002

Ms. Christie Harris
Committee to Bridge the Gap
10915 Strathmore Dr.
Los Angeles, CA 90024

Dear Christie:

We apologize for the delay in responding to your request. Following is the information you requested as related to you by phone by Ed Spohr, a member of our staff, on September 17, 1979.

1) The location of the former radioactive waste dump site is northeast of Bringham Ave., halfway between San Vicente and Sunset Blvds., parallel to approximately the 400 block of Barrington Avenue. The dump site is approximately 500 yards to the inside of the VA property line.

2) There is not, nor has there ever been, disposal of radioactive waste from VA Wadsworth to the ocean.

3) We are informed that you already have copies of our NRC license, which includes waste handling procedures. These documents are obtained from the public document room in Washington, D.C. We do not have a copy of our old AEC license, authorizing on-site waste disposal, since this license has long since expired and a copy was not retained.

We hope this additional information will be helpful to you.

Sincerely,

William K. Anderson

WILLIAM K. ANDERSON
Director

77-454

RESPONSE TO INTERROGATORIES

1. Don't understand the words "would appear to indicate". It either does or doesn't. The inference is misleading. To the best of our knowledge no burials occurred in or near the stream bed.

2. According to Mr. Thomas Keenan, Chief of Engineering at Brentwood VAMC, there are no records in his possession regarding this information. Neither does Mr. Witterau have any information regarding this matter. Mr. Keenan did not become involved with the VA facility until the approximate time of the destruction and burial of the old Wadsworth VA facility at the fifty-acre spot at the Brentwood VAMC.

3. For the most accurate information on this subject, check with the Nuclear Regulatory Commission in San Francisco. Mr. Herb Brook would be the best person to answer this question. Any records evidencing our submission of these records to the NRC would be in Mr. Brook's possession.

4. June 24, 1960 is the earliest date for records in our possession evidencing rad waste disposal by burial. Prior to that date no records exist that are in our possession. Statements of former employees (who are still alive) confirm the fact that all AEC (Atomic Energy Commission) standards were complied with in regards to the disposal of rad waste. Burial began in the early 1950's.

5. I-131, P-32 and C-14. Quantities of the foregoing were so minute, in particular C-14. All radioactive materials prior to that date were disposed of in accordance with the then applicable standards for disposal of rad waste as established by the Atomic Energy Commission. This answer is based upon statements of former and present employees involved in Nuclear Medicine at the Wadsworth

77-455

VAMC at or near the time in question. No record exists prior to June 24, 1960 that are in our possession. So little C-14 was utilized by the VA and even then it was disposed of by a commerical disposal company and not buried on VA property to the best of our knowledge. Any burial that did take place, if any, at Brentwood would have been P-32 and I-131 in minute quantities, and then only after all appropriate safeguards were taken.

6. No. No evidence exists in our possession except the statements of employees or former employees.

7. The VA has utilized the services of commerical disposal companies. Disposal was made according to applicable AEC or NRC standards at any given point in time. Whatever was "authorized" was probably undertaken by the disposal company. Best to check with the disposal companies themselves. We have no information as to who the disposal companies would have been at that time.

8. In 1948. Based upon the statement of an employee who began with the Nuclear Medicine Department at Wadsworth VA Medical Center in 1948.

9. N.P. stands for neuro-psychiatric. Neuro-psychiatric dump site would mean the Brentwood facility dump site. There were no other dump sites.

10. Yes. A joint project was undertaken with UCLA in the development of a radio-isotope scanner. No exchange took place of radioactive material. The only joint activity was the development of the instrument itself. See minutes for further activities between both parties.

11. Mr. Butler Sanchez, Dr. John Erickson, Dr. Franz Ba[illegible] Dr. Raymond Libby. 5 CFR Section 294.702(2) limits the release

77-456

personal information regarding a present or past employee. Please refer to 5 CFR 294.702 for further explanation.

12. According to Mr. Keenan, Chief Engineer at Wadsworth VA Medical Center, there are no records as to the exact date, in their possession, as to when the road was paved in. According to Mr. Stockwell, it was probably done out of convenience to dispose of excess road material.

13. There are no records of what the sign said.

14. Please refer to your document search request. That information may or may not exist.

15. To the best of our knowledge no map was made showing precisely where the measurements were taken. The fish pond is located in the Occupational Therapy garden at the Brentwood VA Medical Center facility. According to Mr. Stockwell, it is not a fish pond but a duck pond. The measurements were taken along the road and on the knoll west of the picnic area in order to obtain a representative sample of the area. Mr. Witterau took samples from his home soil and found them to be of the same "level" as the Brentwood dump site samples. None according to Mr. Witterau's best recollection. Perhaps you will discover additional samples when you review the records. No one is exactly sure of the exact date.

16. There is a building of the Veterans Administration dating back to sicra 1880. Veterans Administration came into existence 1936.

17. According to Mr. Sommers, Chief of the Fire Department at Wadsworth VA Medical Center and Custodian of the Records for disposal of chemical waste at the VA facilities, all records are destroyed after two years. The earliest records he has in his possession relate back

77-457

to 1978. As to how chemical waste had been disposed of by the VA during the various periods since its inception, it would be pure conjecture on our part. At present the VA gives all animal carcasses to the City of Los Angeles. All chemical waste disposal is consummated by a chemical waste disposal company. The name of the company that contracts for disposal of all chemical waste is Findlay Company. You will be provided copies of any of our records regarding chemical waste disposal.

18. See attached memo regarding reasoning.

19. No.

20. There could have been. There is no evidence to the effect that there was, and there is no evidence to the effect that there wasn't. The only authoritative person on the subject is a Milt Kaufman. Mr. Kaufman has been with the VA for 31 years and to the best of his recollection most of the chemical waste disposal was done by contract service, but that in no way means that the VA at no point in their history did not dispose of small amounts of chemical waste at the Brentwood dump site.

21. The question is unintelligible. How do you bury scintillation materials in a container? If you are asking how scintillation liquids were disposed of by the Veterans Administration, according to Mr. Witterau, the liquid scintillator was placed in a glass counting vial. The glass viles were placed in a container and buried at the dump site. The primary scintillating liquids were Dioxane or Toulene.

22. None. If any were, it is probably due to the tons of concrete buried there from the remnants of the old VA Hospital that were disposed at the same site. The attached "Exhibit 'A'" would have information, if any.

77-458

23. See attached Exhibit "A".

24. No knowledge of any leaking sources except that, if any, which is outlined in Exhibit "A".

25. ~~The first~~ part of your question is unknown. To the second part of your question, see Exhibit "A".

26. See Exhibit "A" for record of disposal, if any.

27. See Exhibit "A" for record of disposal, and for period of time involved, if any. To the best of our recollection, none. The record speaks for itself.

28. Dr. Franz Bauer. Approximately 1956. NRC has a record of issuing a license to Dr. Bauer.

FOOTNOTE:

1) Please note that Mr. Witterau noted that two small and innocuous rad waste dumps were done in 1968. See the attached records for a further description of the events. This was an oversight he made in making an earlier report to another group.

2) Dr. William Bladh, in the Minutes of the Medical Radioisotope dated, February 18, 1969 stated "according to existing records." The words "existing records" means June 24, 1960. Any records in existence at that time are no longer in existence or are lost. Dr. ~~Bladh does~~ not, nor does anyone else know where they could be located.

77-459

Wadsworth Medical Center
Wilshire and Sawtelle Boulevards
Los Angeles, CA 90073

Veterans Administration

MAR 27 1981

Honorable Anthony C. Beilenson
11000 Wilshire Blvd.
Los Angeles, CA 90024

Dear Congressman Beilenson:

This is a followup of our meeting of 3-25-81, and to convey items of information which you requested relevant to the former radioactive waste disposal site at Brentwood Medical Center. Enclosed please find:

1. Complete xerox copy of radioisotope burial record from 6-24-60 to 3-28-68.

2. Copy of plot plan of intended lease area indicating approximate locations and number of burials.

3. Copies of NRC and AEC inspection reports from Sept. 4, 1980, back to Sept. 23, 1965, indicating no items of noncompliance.

4. Copy of Title 10-CFR-20.301, etc., regarding current waste burial requirements.

Mr. Wetterau contacted Robert Thomas of the NRC, Walnut Creek Office, with regard to NRC approval of the lease site's intended use as a city park. Mr. Thomas said that the NRC would have to evaluate the situation before the site may be released. We anticipate a reply from the NRC in the near future.

You also requested information with respect to the V.A. Central Office authority which requested that we cease on-site radiowaste disposal activities. We cannot find any information in our files relating to this.

I hope that the above information will be of assistance to you.

Sincerely,

William K. Anderson

WILLIAM K. ANDERSON
Director

Enclosures

In Reply Refer To: 691/115

77-460

March 30, 1981

Mr. Carl E. Behrens
Analyst, Energy and
Natural Resources
Room 423 Madison
Congressional Research
Service
10 First Street, S.E.
Washington, D.C. 20540

Dear Carl:

Per our telephone conversation, enclosed is a copy of the materials which we received from the Veteran's Administration concerning the radioactive waste disposal site.

We would appreciate it if you would analyze the information and provide us with your opinion as to any threat this may pose to the health and safety of area residents.

Thank you very much for your prompt attention to our request.

Sincerely,

Joan Shaffran-Brandt
Legislative Assistant to
CONGRESSMAN ANTHONY C. BEILENSON

Enclosure

on original

77-461

January 15, 1982

344/02A9

Robert Nelson, Ph.D.
Chairperson
Los Angeles Federation of Scientists
P. O. Box 67941
Los Angeles, CA ~~90067~~

SUBJ: Response to January 4, 1982 Request for Information Pursuant to the Freedom of Information Act

Dear Dr. Nelson:

We are in receipt of your January 4, 1982 letter, received January 6, 1982 at the Wadsworth VAMC, requesting release of information pursuant to the Freedom of Information Act (hereinafter FOIA). Pursuant to 38 CFR Section 1.553a(1) and (3), we are requesting an additional ten day period in order to process your request. Please note that the ten day response time excludes Saturdays, Sundays and legal holidays. The initial ten day period does not commence until the receipt of the request for information and it, too, excludes Saturdays, Sundays, and legal holidays.

The basis for our extension in responding to your request is in order to make a thorough search of our Brentwood and Wadsworth facilities in order to locate the requested records, if any, and consult with other components of the Veterans Administration having substantial subject-matter interest therein, i.e., the Department of Medicine and Surgery in Washington, D.C., Nuclear Medicine. In addition, we will personally be interviewing those individuals that can provide you with the most accurate information available on your topic of inquiry.

Regarding your request for waiver of fees, there is nothing in 38 CFR which delineates a "non-profit corporation" exemption from fee requirements. Fees may be waived though, where the reduction of fee is in the public interest because furnishing the information can be considered as "primarily benefiting the general public." Accordingly, please furnish our office with your basis for invoking this general public benefit exemption.

77-462

Robert Nelson, Ph.D.
Chairperson
L.A. Federation of Scientists

Response to Jan. 4, 1982 Request for Information Pursuant to the FOIA

We have scheduled time for the week of January 18 through January 22 to work at the VAMCs to locate your requested information. If you have any further questions or comments please feel free to contact Alan Achen of my office at [redacted].

Respectfully,

L. H. BENRUBI
District Counsel

cc: Pat Ryan (624K)
General Counsel's Office
Veterans Administration
810 Vermont Avenue, N.W.
Washington, D. C. 20420

William Anderson (691/00)
Director
Wadsworth VA Medical Center
Wilshire & Sawtelle Blvds.
Los Angeles, CA 90073

Frank Robinson (691/136)
Chief of Medical Administration
Wadsworth VA Medical Center
Wilshire & Sawtelle Blvds.
Los Angeles, CA 90073

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2.
77-463

January 15, 1982

344/02A9

Robert Nelson, Ph.D.
Chairperson
Los Angeles Federation of Scientists
P. O. Box 67941
Los Angeles, CA 90067

SUBJ: Response to January 4, 1982 Request for Information Pursuant to the Freedom of Information Act

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77-464

The laboratory results (Report # 1114), which considered gross alpha activity, gross Beta activity, as well as tritium and carbon-14 content indicated no levels of unsatisfactory radioactive contamination in accordance with acceptable levels defined in the Safe Drinking Water Act. A comparison of the laboratory results with federal standards are as follows:

	Federal Maximum Contamination Limits (MCL)	Laboratory Results
Gross Alpha activity:	15 picocuries/litre (pCi/l)	.8-6.1 (pCi/l)
Gross Beta activity:	50 picocuries/litre	2.4-6.8 (pCi/l)
^{3}H activity:	20,000 picocuries/litre (pCi/l)	$<$180 (pCi/l)
^{14}C activity:	No limit	$<$120 (pCi/l)

(4) Officials from the Hazardous Materials Management Section of the California Department of Health Services reviewed the disposal records and inspected the site. They felt that the conversion of the former disposal site to a recreation area would not create any public health hazards unless the buried materials were disrupted by heavy site excavation.

(5) The NRC's Uranium Fuel Licensing Branch performed extensive calculations to estimate the maximum potential radiation dose an individual could receive from exposure to the buried low-level radioactive materials on Veterans Administration property.

In the radiation dosimetry calculations, both external and internal exposure pathways were examined. The internal exposures calculations were based on two projected pathways:

(a) Ingestion of food grown on the disposal areas contaminated by root uptake. These calculations were based on the assumption that after reclamation of the project site all agricultural, beef or dairy products any one individual would consume would be grown or supported on the disposal site.

(b) Inhalation of airborne radioactive particulates. These calculations were based on the assumption that in the disposal areas, the buried materials mixed with one meter of soil were brought to the surface during reclamation of the project site, and the top one centimeter layer of the contaminated soil became airborne as a result of wind resuspension.

Utilizing a worst case scenario, the NRC scientists estimated the maximum dosage a person could conceivably receive from the projected exposure pathways was 1.5 millirems per year. This dosage level is considered trivial in comparison to natural background levels and other radiation sources. (See Table 2)

During the course of events, the Committee to Bridge the Gap, a community-based organization researching abandoned hazardous waste sites in Southern California, brought to the attention of Congressman Beilenson and Councilman Braude that a portion of the twelve acre site encompassed the Veterans Administration's former medical waste repository. As a result of these new findings, plans to develop the site were temporarily suspended so that conclusive evidence and expert testimony could be gathered to assess the degree of public health risks.

Exhibit 3 illustrates the location of the twelve acre site in relation to the old waste disposal areas represented by A, B, and C - an area covering approximately 1 1/2 - 2 acres. The exact boundaries of the burial sites are not known with complete certainity.

C. Nature of the Medical Wastes

A NRC review of the Veterans Administation's disposal records kept during the period of 1960-1968 determined that the majority of the buried waste materials consisted of low level medical radioisotopes of extremely short half-lives. The types of radioisotopes, quantities disposed, and their respective half-lives are documented in Table 1.*

*NOTE: This table does not show data for medical radioisotopes disposed of during 1960, 1961, and 1962. A review of the disposal records indicated that no radioisotopes other than those listed in Table 1 were disposed during those three years, the waste quantities being considerably lower than in following years.

Considering it has been thirteen years since waste materials were last buried in the site, most of the radioisotopes have decayed to natural background levels or exist in minute quantities that have been thoroughly distributed and diluted over the volume of the disposal site. It was determined that of all the original radioisotopes subject to burial only two exist in quantities to warrant an assessment of their radiation exposure/risks to human health: tritium (^3H) and Carbon-14 (radiocarbon or ^{14}C), both low toxicity radioisotopes with half lives of 12 years and 5730 years respectively. Most of the tritium and carbon-14 wastes buried by the Veterans Administration consisted of animal carcasses and scintillation liquids.

Besides medical radioisotopes, a review of the disposal records by UCLA's Office of Research and Occupational Safety revealed that approximately 358 gallons of scintillation solvents, consisting primarily of toluene and/or dioxane, were buried in the VA's disposal site.

77-466

Dioxane has been shown to be carcinogenic in rats and mice when given orally. It is a reasonably toxic material with a threshold limit value (TLV) of 50 parts per million (ppm). However, the Office of Research and Occupational Safety stated that the buried dioxane poses no threats to human health since it is water miscible, oxidizing rapidly in the presence of soil moisture to nontoxic by-products.

Toluene is considered to comprised the bulk of buried liquid scintillation solvents. It is slightly water soluble, a noncarcinogen, and has a 200 ppm TLV - considerably less toxic than dioxane. Like dioxane, the health risks of the waste toluene is inconsequential, since any material that was not volatilize would be carried downward by percolating water and dissipated to harmless concentrations in the groundwater.

D. Health Risk Assessment of Tritium and Carbon - 14

After assessing the recorded data on the quantities of tritium and carbon-14 buried, number of years waste materials has been buried, half-lives, and other important variables, the NRC calculated that approximately 450 millicuries of tritium and 54 millicuries of carbon-14 are currently buried within the former disposal areas. As a reference for comparison 600 millicuries of tritium is approximately the amount contained in 2 or 3 digital wristwatches with tritium night-lights. The 53 millicuries of carbon-14 is equivalent to the amount of natural radioactive material in the top three meters of soil under a field 50 x 100 meters.

In evaluating the radiation hazards associated with converting the V.A.'s former disposal site into a public recreation area the following actions and circumstances all contributed to assessing the degree of public health risks:

(1) A group of three professional health physicists certified by the American Board of Health Physics performed an independent evaluation of the former disposal areas and agreed that the radiological nature of the materials buried did not present a health risk. In addition, this group consulted with prominent health physicists from the Industrial Safety Division at Oak Ridge National Laboratory (Oak Ridge, Tennessee), who agreed with their evaluation of the health risks.

(2) On May 7, 1981, a radiological survey (Report No. 81-02) of the former disposal site was conducted by five NRC inspectors. Using certified, highly sensitive instrumentation, radiation readings were taken at random locations throughout the site. The survey results concluded that no radiation levels were detected beyond the natural radiation background levels.

(3) In April, 1981, the City of Santa Monica Water Company collected and submitted groundwater samples from five ~~wells~~ near the waste disposal areas to the Los Angeles Department of Water and Power for laboratory analysis. Groundwater quality data representative of the overall groundwater basin were compared with the results of the water sample analysis.

77-467

	YES	MAYBE	
5. ANIMAL [illegible] ill the proposal result in:			
a. Change in the diversity of species, or numbers of any species of animals (birds, land animals including reptiles, fish and shellfish, benthic organisms or insects)?			
b. Reduction of the numbers of any unique, rare or endangered species of animals?			
c. Introduction of new species of animals into an area, or result in a barrier to the migration or movement of animals?			
d. Deterioration to existing fish or wildlife habitat?			
6. NOISE. Will the proposal result in:			
a. Increases in existing noise levels?	X		
b. Exposure of people to severe noise levels?			
7. LIGHT AND GLARE. Will the proposal			
a. Produce new light or glare from street lights or other sources?	X		
b. Reduce access to sunlight of adjacent properties due to shade and shadow			
8. LAND USE. Will the proposal result in an alteration of the present or planned land use of an area?	X		
9. NATURAL RESOURCES. Will the proposal result in:			
a. Increase in the rate of use of any natural resources?			X
b. Depletion of any non-renewable natural resource?			X
10. RISK OF UPSET. Will the proposal involve:			
a. A risk of an explosion or the release of hazardous substances (including, but not limited to, oil, pesticides, chemicals or radiation) in the event of an accident or upset conditions?			X
b. Possible interference with an emergency response plan or an emergency evacuation plan.			X
11. POPULATION. Will the proposal result in:			
a. The relocation of any persons because of the effects upon housing, commercial or industrial facilities?			X
b. Change in the distribution, density or growth rate of the human population of an area?			X
12. HOUSING. Will the proposal:			
a. Affect existing housing, or create a demand for additional housing?			X
b. Have an impact on the available rental housing in the community?			X
c. Result in demolition, relocation or remodeling of residential, commercial, or industrial buildings or other facilities?			X
13. Transportation/Circulation. Will the proposal result in:			
a. Generation of additional vehicular movement?	X		
b. Effects on existing parking facilities, or demand for new parking?	X		
c. Impact upon existing transportation systems?	X		
d. Alterations to present patterns of circulation or movement of people and/or goods?			X
e. Alterations to waterborne, rail or air traffic?			X
f. Increase in traffic hazards to motor vehicles, bicyclists or pedestrians?			X
14. PUBLIC SERVICES. Will the proposal have an effect upon, or result in a need for new or altered governmental services in any of the following areas:			
a. Fire protection?			X
b. Police protection?			X
c. Schools?			X
d. Parks or other recreational facilities?			X
e. Maintenance of public facilities, including roads?			X
f. Other governmental services?			X
15. ENERGY. Will the proposal result in:			
a. Use of exceptional amounts of fuel or energy?			X
b. Increase in demand upon existing sources of energy, or require the development of new sources of energy?			

77-468

	YES	MAYBE	NO
16. UTILITIES. Will the proposal result in a need for new systems, or alterations to the following utilities:			
a. Power or natural gas?			X
b. Communications systems?			X
c. Water?			X
d. Sewer or septic tanks?			X
e. Storm water drainage?			X
f. Solid waste and disposal?			X
17. HUMAN HEALTH. Will the proposal result in:			
a. Creation of any health hazard or potential health hazard (excluding mental health)?			X
b. Exposure of people to potential health hazards?		X	
18. AESTHETICS. Will the proposed project result in:			
a. The obstruction of any scenic vista or view open to the public?			X
b. The creation of an aesthetically offensive site open to public view?			X
c. The destruction of a stand of trees, a rock outcropping or other locally recognized desirable aesthic natural feature?			X
d. Any negative aesthetic effect?			X
19. RECREATION. Will the proposal result in an impact upon the quality or quantity of existing recreational opportunities?	X		
20. CULTURAL RESOURCES:			
a. Will the proposal result in the alteration of or the destruction of a prehistoric or historic archaeological site?			X
b. Will the proposal result in adverse physical or aesthetic effects to a prehistoric or historic building, structure, or object?			X
c. Does the proposal have the potential to cause a physical change which would affect unique ethnic cultural values?			X
d. Will the proposal restrict existing religious or sacred uses within the potential impact area?			X
21. MANDATORY FINDINGS OF SIGNIFICANCE.			
a. Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?			X
b. Does the project have the potential to achieve short-term, to the disadvantage of long-term, environmental goals.			X
c. Does the project have impacts which are individually limited, but cumulatively considerable?*			X
d. Does the project have environmental effects which cause substantial adverse effects on human beings, either directly or indirectly?			X

* "Cumulatively considerable" means that the incremental effects of an individual project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.

DISCUSSION OF ENVIRONMENTAL EVALUATION (Attach additional sheets if necessary)

See attached sheet entitled "Environmental Evaluation".

PREPARED BY	TITLE	TELEPHONE	DATE
David Attaway	Environmentalist	[redacted]	

77-469

INITIAL STUDY CHECKLIST - EXPLANATION SHEET

1. Earth

(a, b) During the site preparation phase of the project, importation of soil will be required to modify existing grade characteristics; to fill in low areas; etc. Furthermore, development of the sportsfields and parking area will entail soil compaction to support intensive-use activities.

2. Air

(a) The project will result in minor increases in automobile emissions. However, the ambient air quality will not be significantly reduced. Emissions occurring from patron automobiles will be spread over extended time periods and readily dispersed by air current movement. It is anticipated that on days wherein smog is sufficiently strong to cause the Air Quality Management District to issue health warnings (smog alerts), sponsored activities at the subject site will be curtailed or cancelled.

3. Water

(b) The construction of asphalt parking areas and compaction of soil for sportsfield development will alter soil absorption characteristics. However, the alterations will be extremely localized, not disrupting regional hydrologic continuity.

4. Plant Life

(a) The development of landscape amenities for the passive recreation areas, sportsfields, etc., will result in the planting of grass, some shrubs and a few trees. There may be some on-site relocation of existing trees to accommodate development of the sportsfields.

6. Noise

(a) The project will generate an increase in existing noise levels by virtue of humans at play, automobiles and periodic maintenance (lawn mowers, etc.). The levels that will be produced are insignificant when one considers that Barrington Avenue is a heavily travelled street and considerable noise emanates therefrom. In addition, the proposed development is adjacent to a post-office wherein there is constant vehicular-traffic (patrons and postal activities) occurring during business hours and in the evenings, generating noise. There will be no sound amplification systems used or allowed within the recreation facility.

Moreover, the sources of noise will be spread over most of the twelve acre site, thus reducing the already minimal intensity. The large amount of open space to the east of the site will allow easy dispersion of noise via wind vectors. It should be noted that there will be no activities on the site after 8:30 p.m. in the summer and 5:00 p.m. in the winter, nor will any activity be permitted before 9:00 a.m. Monday through Saturday and 10:00 a.m. on Sunday.

7. Light and Glare

(a) The project will provide low intensity lighting within the neighborhood parking area for security purposes. There will be no installation of high-intensity sportsfield lighting.

8. Land Use

There will be a change in land use from undeveloped, unused open space to developed open recreational areas. Only those portions utilized for parking and access will be covered with non-natural materials. The balance of the site will be covered with grass, landscaping and soil.

13. Transportation

(a,b,c) Traffic studies conducted by the City's Department of Transportation indicate that over a 16 hour weekday period on Barrington Avenue, south of Sunset, there are a total of 15,753 vehicles (7,779 northbound and 7,974 southbound). Peak hours occur at 4:30 p.m. to 6:00 p.m. northbound - 756 vehicles/hour; and 3:30 p.m. to 6:00 p.m. southbound - 772 vehicles/hour, for a total of 1528 vehicles/hour.

To evaluate the traffic generated as a result of project implementation, a worst case scenario was developed based on the following assumptions:

(a) Planned usage of the sportsfields (Field 1 & 2) will be scheduled on a staggered start/stop basis, with a twenty minute time interval between events at each field. (See Exhibits 1 and 2).

(b) There will be 15 participants per team. This translates into 30 participants per field per event, or 60 total participants during the times both fields are in use.

(c) All participants will be driven to the site, dropped off, and then picked up at the end of the event. In other words, participants will be picked up at the conclusion of a sport event, while at the same time others will be dropped off to participate in the next scheduled event, all occurring within the twenty minute intermission period.

When considering the data on peak traffic periods on Barrington Avenue, the scheduling of sport events (for both the winter and summer schedules) indicates the worst case traffic periods would occur between 4:40 p.m.-5:20 p.m.

Therefore, when the two fields are being used simultaneously, 120 additional cars will be generated on Barrington Avenue during this 40 minute time interval (4:40 p.m.-5:20 p.m.), above and beyond the observed peak traffic flow of 1528 vehicles/hour. This translates into two additional cars per minute during a peak traffic period now experiencing twenty-five cars per minute (both directions) - an 8% increase in hourly traffic flow. This is an insignificant impact given existing traffic density on Barrington Avenue.

77-471

MEMORANDUM OF CALL

TO: Alan

[X] YOU WERE CALLED BY— [ ] YOU WERE VISITED BY—

Mr. Sanchez

OF (Organization)

[ ] PLEASE CALL → PHONE NO. CODE/EXT. [redacted] [ ] FTS

[ ] WILL CALL AGAIN [ ] IS WAITING TO SEE YOU

[X] RETURNED YOUR CALL [ ] WISHES AN APPOINTMENT

MESSAGE

Recollection long isotopes' I 131

P 32

1956 - 1959 - C-14

No disposal outside used

of laboratory

Marked Container —

Commercial washington

— AEC + [illegible]

Carbon 14

Dr. Nomo Baker

DR. Raymond Libby

Bd. 114

Malibu

Brentwood

[illegible] -1956

RECEIVED BY Margaret

DATE 1/12

TIME 3:25

63-108

STANDARD FORM 63 (Rev. 8-76)
Prescribed by GSA
FPMR (41 CFR) 101-11.6

77-472

Table 2

Radiation Sources	Millirems per Year
One coast to coast airplane flight:	2
Natural background radiation in L.A.	100
Average medical exposure in U.S. (dental/chest x-ray)	90
Fallout from Nuclear Weapons testing (Maximum):	8
Nuclear power plants:	0.28
Consumer products (watches, smoke detectors):	0.03

To quantitatively bring the degree of risk into perspective, if one assumes that one in every four people die from cancer, then if a population of three million people receive the 1.5 millirem calculated dose, statistically one excess cancer might develop. Therefore, instead of 750,000 cancer related deaths, there might be 750,001 deaths.

(6) The medical waste materials were originally buried at a depth of 6-8 feet. However as a result of the demolition of the old V.A. Wadsworth Hospital building, concrete debris, reinforced steel, and soil were deposited on top of the disposal areas thereby creating an additional buffer zone of 10-20 feet (total depth would then be in the range of 20-30 feet) between the buried materials and the ground surface.

E. Conclusions

The results of the radiological assessment indicate that the overriding consensus among experts in the fields of nuclear medicine and radiation health and safety is that the V.A.'s property will not require any land-use or public-use restrictions.

During calculations of the maximum potential radiation exposure, the worst case scenario that was formulated assumed the entire twelve acre site had been used for low-level radioactive waste disposal. However, only a small portion of the site encompasses the former disposal areas. This fact coupled with the situation where a small quantity of existing radioisotopes are heavily buffered by a soil and concrete barrier constitutes a hazard to public health that is virtually nonexistant.

19. Recreation

The proposed project will result in increases in the quality and quantity of recreation in the area. The only public recreation facility now serving the community is Barrington Recreation Center which totals 5.04 acres, part of which is occupied by a community building/gymnasium. Only one sportsfield is available at Barrington and the community is in dire need of additional sportsfields.

The proposal will result in more enriching recreation programs being available to the community. It must be noted that the community has been instrumental in obtaining permission from the Veterans Administration to utilize the subject property. A great number of community persons have been concerned about the lack of sufficient parkland for open space activities. The development of the sportsfields is viewed by most responsible residents as the solution to the acute shortage of recreational opportunities.

20. Cultural Resources

An archaeological survey of the site was conducted by an independent archaeologist in November, 1980. It was concluded that the development of the subject property into sportsfields will not adversely impact any known archaeological resources. The possibility does exist that cultural resources of significance may be obscured or hidden. Therefore, in the course of development, all work will cease immediately if anything of archaeological or historical significance is discovered and experts will be contacted.

ENVIRONMENTAL EVALUATION

After evaluating and assessing a wide scope of environmental concerns related to project implementation (community input was instrumental in identifying such concerns), it is concluded that the development of twelve acres of Veterans Administration property into a public recreation area will not generate significant and/or adverse impacts on the environment. This conclusion was based on the nature of the project and implementation of mitigation measures.

With respect to traffic impacts, the estimated number of cars generated by the project are considered minimal in comparison to prevailing traffic conditions on Barrington Avenue. Moreover, mitigation measures have been incorporated into the project scope of work to accommodate park patrons and neighborhood residents, as well as to foster greater pedestrian and motor vehicle safety.

Noise, a concern of residents living in the vicinity of the proposed recreation site, will obviously be generated during scheduled uses of the sportsfields. However, no amplification systems will be utilized during sport events, and the use of the fields will be held to stringent time schedules so as not to cause annoyance to local residents during the late evening hours. Furthermore, the project site is in a urban setting where continuous noise levels are experienced daily. Therefore, any noise resulting from activities at the recreation area will not exceed ambient noise levels, and will fall within the range of human tolerance.

Past disposal of medical wastes within the vicinity of the proposed recreation site is an issue of genuine concern among the community, public officials, and political representatives.

To bring the situation into perspective, the issue was given considerable coverage in the environmental assessment. In considering the public health implications of using the site as a recreation area, the expert testimony of a number of scientists involved in the radiation health and safety field were sought; on-site inspections and analytical tests were conducted; disposal records reviewed; and the maximum potential radiation dosages from exposure to buried materials were calculated, etc.

The preponderance of evidence indicates that the buried medical wastes will not present any health hazards, obviating the need for any land use restrictions. As an important note, major excavation activities will not occur during the site preparation phase, alleviating any concerns over unearthing buried materials. In fact, soil will be imported and spread over the site, thereby increasing the depth of the buffer zone.

All in all, the development of the site as a recreation area will benefit the social environment by providing more leisure opportunities to a community that is presently suffering from a scarcity of outdoor recreation space.

77-475

Office of Di[illegible]sel 11000 Wilshire Blvd.
Los Angeles, CA 90024

Veterans Administration

February 1, 1982

In Reply Refer To:
344/02A9

Robert Nelson, Ph.d.
Chairperson
Los Angeles Federation of Scientists
P.O. Box 67941
Los Angeles, CA 90067

SUBJ: Response to January 4, 1982 Request for Information Pursuant to the Freedom of Information Act (Herein-after FOIA)

Dear Dr. Nelson:

I have not had a response to my January 15, 1982 letter to you regarding your request for waiver of fees. Your request for information has been processed. In my office I have a completed set of records for your use. In addition, I have answered as many of the Interrogatories as I was able to given the time constraints.

As I am sure you are aware, the FOIA does not mandate that we answer Interrogatories propounded to us in the course of processing of Freedom of Information Act requests. We have done so out of consideration to yourself and the other interested parties you may be representing.

Unless I hear from you within the next ten working days I can only assume that you have withdrawn your request dated January 6, 1982.

Again, my telephone number is [redacted]. Please feel free to contact me by telephone regarding this situation. I look forward to hearing your prompt reply.

Respectfully,

FOR THE DISTRICT COUNSEL

Alan K. Aghen

ALAN K. AGHEN, Attorney

... proceedings involving security require-

77-476

February 1, 1982

Robert Nelson, P.H.D. & Members of the
Los Angeles Federation of Scientists

ALAN K. ACHEN, Attorney

WITHHOLDING OF INFORMATION FROM MINUTES OF
MEDICAL RADIOISOTOPE COMMITTEE

1. The basis for our withholding of certain information from these minutes can be found in 5USC 552(b)(5) or 38CFR 1.554(a)(5). Subsection (b5) exempts from the disclosure provisions of the Freedom of Information Act "inter-agency or intra-agency memorandums or letters which would not be available by law to a party other than an agency in litigation with the agency." The purpose of this exemption is twofold; one, to prevent the premature disclosure of agency transactions; and, two, to encourage the full and frank discussion of views within an agency in formulating its policies in decisions. In NLRB vs. Sears Roebuck Co., 421 U.S. 132, 95 S.CT. 1504, 44L.Ed. 2d29(1975), the court discusses the nature of pre-decisional communications --- those which are made before the final disposition and are designed to aid in its formulation --- should be privileged, because their disclosure would disturb the agency's decision-making process. A broad reading of the above entitled case conceivably extends protection of the (b)(5) exemption to all pre-decisional documents, whether they are factual or deliberate. The Veterans Administration is not maintaining that position at this time in order to provide the maximum amount of disclosure and to comply with the spirit of open government.

2. If all the information in the attached minutes were disclosed it would greatly inhibit the problem solving and effective operation of the Radioisotope Committee. Important problems and issues would not be brought to light and the effective operation of the hospital would be greatly disturbed.

3. You will note that the paragraph 8 of the November 18, 1981 minutes contains two additional bases for withholding the information contained therein. That information was withheld on the basis of potential employee misconduct, leading to a civil and/or criminal investigation. In addition, you will note that the other basis for withholding information would be unwarranted invasion of personal privacy. This posture was maintained where it was impossible to get the consent of the third party and still comply with your request for information within the allotted period of time. I don't think you would find that information highly relevant.

FOR THE DISTRICT COUNSEL

ALAN K. ACHEN, Attorney

AKA:ms

77-477

Office of D.[illegible]sel 11000 Wilshire Blvd.
Los Angeles. CA 90024

Veterans Administration

February 1, 1982

In Reply Refer To:
344/02A9

Robert Nelson, Ph.d.
Chairperson
Los Angeles Federation of Scientists
P.O. Box 67941
Los Angeles, CA 90067

SUBJ: Response to January 4, 1982 Request for Information Pursuant to the Freedom of Information Act (Hereinafter FOIA)

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Unless I hear from you within the next ten working days I can only assume that you have withdrawn your request dated January 6, 1982.

Again, my telephone number is [redacted]. Please feel free to contact me by telephone regarding this situation. I look forward to hearing your prompt reply.

Respectfully,

FOR THE DISTRICT COUNSEL

Alan K. Achen

ALAN K. ACHEN, Attorney

77-478

[redacted]

(8) Contained in or related to examination, operating, or condition reports prepared by, on behalf of, or for the use of any agency responsible for the regulation or supervision of financial institutions.

(9) Geological and geophysical information and data (including maps) concerning wells.

(b) Information in the categories exempted under paragraph (a) of this section, other than in subparagraph (3) which is applicable to Veterans Administration claimant records, will be released only as authorized in § 1.550. The release of information from Veterans Administration claimant records will be made only in accordance with §§ 1.501 through 1.526.

[32 FR 10850, July 25, 1967, as amended at 40 FR 12657, Mar. 20, 1975; 42 FR 37976, July 25, 1977]

§ 1.555 Fees.

(a) Charges will not be made for the use of reading facilities for examination of materials which are to be available to the public under § 1.552. Charges will be made, except as provided in paragraphs (c), (d), (e), (f), and (g) of this section, in accordance with the uniform schedule of fees in paragraph (h) of this section, established pursuant to notice in the FEDERAL REGISTER, and receipt of public comment, to recover only the reasonable, standard, direct costs for document search and duplication of such materials in response to requests from the public. The desired copy will not be delivered, except under court subpoena, until the full amount of the lawful charge is deposited. Any excess deposited over the lawful charge will be returned.

(b) Charges will be made, except as provided in paragraphs (c), (d), (e), (f), and (g) of this section, on each request from the public to examine, copy, or to be furnished copies of other reasonably described records under § 1.553. Such charges, in accordance with the uniform schedule of fees in paragraph (h) of this section will be made to recover only the reasonable, standard, direct costs for such document search and, if requested, duplication of copies. Searches will not be undertaken until the requester has paid, or has provided sufficient assurance of payment of whatever fee is determined to be appropriate. Desired copies will not be delivered, except under court subpoena, until the full amount of the lawful charge is deposited. Any excess deposited over the lawful charge will be returned. When a deposit is received with a request, such a deposit will be returned if the request is denied.

(c) Where a contract with a reporting service requires that copies of transcripts be sold only by the service, the copy in Veterans Administration's possession may be made available for inspection. If a copy is requested, the requester will be referred to the reporting service.

(d) No charges will be made for services rendered to or for other agencies or branches of the Federal Government, or State and local governments when the Veterans Administration, veterans and their beneficiaries, or the general public has a substantial interest in the purpose for which the service is requested.

(e) When information, statistics, or reports are approved by the Administration or the Deputy Administrator for release under § 1.550, the fee charge, if any, will be determined upon the merits of each individual application.

(f) Under the following circumstances services may be provided free at the discretion of station heads or responsible Central Office officials:

(1) When requested by press, radio, television, or other information representatives for dissemination to the general public.

(2) When furnishing the service free is in conformance with generally established business custom, such as furnishing personal reference data to prospective employers of former Government employees.

(3) To the extent of one copy, to those who require copies of records or information from the records in order to obtain financial or other benefits to which they may be entitled (e.g., employees with workmen's compensation claims).

(4) To an individual directly concerned in a hearing or other formal proceeding involving security require-

77-479

CITY OF LOS ANGELES
OFFICE OF THE CITY CLE
ROOM 395, CITY HALL
LOS ANGELES, CALIFORNIA 90012

CALIFORNIA ENVIRONMENTAL QUALITY ACT

INITIAL STUDY AND CHECKLIST

(Article IV — City CEQA Guidelines)

LEAD CITY AGENCY	COUNCIL DISTRICT	DATE
Department of Recreation and Parks	11	September 29, 198

PROJECT TITLE/NO.: Barrington Recreation Center Addition

CASE NO.:

PREVIOUS ACTIONS CASE NO.:

☐ DOES have significant changes from previous actions.
☐ DOES NOT have significant changes from previous actions.

PROJECT DESCRIPTION:

Leasing of twelve acres of Veterans Administration property for development as a public recreation area.

PROJECT LOCATION

230 South Barrington Avenue - south of the U. S. Post Office, Brentwood, California

PLANNING DISTRICT: Westwood

STATUS:
☐ PRELIMINARY
☐ PROPOSED
XX ADOPTED 7-25 date 1972

EXISTING ZONING	MAX. DENSITY ZONING	PROJECT DENSITY
N/A	N/A	

PLANNED LAND USE & ZONE	MAX. DENSITY PLAN	
Public and Quasi-Public	N/A	☐ DOES CONFORM TO PLAN
PLAN DENSITY RANGE	PROJECT DENSITY	☐ DOES NOT CONFORM TO PLAN
N/A	N/A	☐ NO DISTRICT PLAN

DETERMINATION (to be completed by Lead City Agency)

On the basis of the attached initial study checklist and evaluation:

NEGATIVE DECLARATION ☐ I find the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.

CONDITIONAL NEGATIVE DECLARATION ☒ I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because the mitigation measures described on an attached sheet have been added to the project. A CONDITIONAL NEGATIVE DECLARATION WILL BE PREPARED. (See attached condition(s))

ENVIRONMENTAL IMPACT REPORT ☐ I find the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

A. Carmichael — SIGNATURE: Alvy G. Carmichael — 11-4-'81 — TITLE: Planning Officer

INITIAL STUDY CHECKLIST (To be completed by Lead City Agency)

BACKGROUND

PROPONENT NAME	PHONE
Department of Recr ation and Parks Attn: Joel Breitbart	[redacted]

PROPONENT ADDRESS

AGENCY REQUIRING CHECKLIST	DATE SUBMITTED

PROPOSAL NAME (If applicable)

ENVIRONMENTAL IMPACTS

(Explanations of all "yes" and "maybe" answers are required to be attached on separate sheets.)

	YES	MAYBE	NO
1. EARTH. Will the proposal result in:			
a. Unstable earth conditions or in changes in geologic substructures?			X
b. Disruptions, displacements, compaction or overcovering of the soil?	X		
c. Change in topography or ground surface relief features?..........	X		
d. The destruction, covering or modification of any unique geologic or physical features?			X
e. Any increase in wind or water erosion of soils, either on or off the site?			X
f. Changes in deposition or erosion of beach sands, or changes in siltation, deposition or erosion which may modify the channel of a river or stream or the bed of the ocean or any bay, inlet or lake?.....			X
g. Exposure of people or property to geologic hazards such as earthquakes, landslides, mudslides, ground failure, or similar hazards?....			X
2. AIR. Will the proposal result in:			
a. Air emissions or deterioration of ambient air quality?............	X		
b. The creation of objectionable odors?..........................			X
c. Alteration of air movement, moisture or temperature, or any change in climate, either locally or regionally?..........................			X
d. Expose the project residents to severe air pollution conditions?			X
3. WATER. Will the proposal result in:			
a. changes in currents, or the course or direction of water movements, in either marine or fresh waters?..........................			X
b. Changes in absorption rates, drainage patterns, or the rate and amounts of surface water runoff?..........................		X	
c. Alterations to the course or flow of flood waters?...............			X
d. Change in the amount of surface water in any water body?........			X
e. Discharge into surface waters, or in any alteration of surface water quality, including but not limited to temperature, dissolved oxygen or turbidity?			X
f. Alteration of the direction or rate of flow of ground waters?........			X
g. Change in the quantity of ground waters, either through direct additions or withdrawals, or through interception of an aquifer by cuts or excavations?..........................			X
h. Reduction in the amount of water otherwise available for public water supplies?			X
i. Exposure of people or property to water related hazards such as flooding or tidal waves?			X
j. Changes in the temperature, flow, or chemical content of surface thermal springs.			X
4. PLANT LIFE. Will the proposal result in:			
a. Change in the diversity of species, or number of any species of plants (including trees, shrubs, grass, crops and aquatic plants)?.....	X		
b. Reduction of the numbers of any unique, rare or endangered species of plants?			X
c. Introduction of new species of plants into an area, or is a barrier to the normal replenishment of existing species?..........			X
d. Reduction in acreage of any agricultural crop?			X

77-421

Robert Nelson, Ph.D.
Chairperson
L.A. Federation of Scientists

Response to Jan. 4, 1982 Request for Information Pursuant to the FOIA

We have scheduled time for the week of January 18 through January 22 to work at the VAMCs to locate your requested information. If you have any further questions or comments please feel free to contact Alan Achen of my office at [redacted].

Respectfully,

L. H. BENRUBI
District Counsel

cc: Pat Ryan (624K)
General Counsel's Office
Veterans Administration
810 Vermont Avenue, N.W.
Washington, D. C. 20420

William Anderson (691/00)
Director
Wadsworth VA Medical Center
Wilshire & Sawtelle Blvds.
Los Angeles, CA 90073

Frank Robinson (691/136)
Chief of Medical Administration
Wadsworth VA Medical Center
Wilshire & Sawtelle Blvds.
Los Angeles, CA 90073

77-482

AACHEN:imt (02A9) (02)

CITY OF LOS ANGELES
OFFICE OF THE CITY CLERK
ROOM 395, CITY HALL
LOS ANGELES, CALIFORNIA 90012

CALIFORNIA ENVIRONMENTAL QUALITY ACT

NOTICE OF PREPARATION

(Article VI, Section 2 — City CEQA Guidelines)

TO:	RESPONSIBLE OR TRUSTEE AGENCY N/A ADDRESS (Street, City, Zip)	FROM:	LEAD CITY AGENCY Dept. of Recreation & Parks ADDRESS (Street, City, Zip) Planning, Development, and Administration 200 N. Main St., Room 1290 City Hall East Los Angeles, CA 90012

▶ SUBJECT: Notice of Preparation of a Draft Environmental Impact Report

PROJECT TITLE	CASE NO.
Barrington Recreation Center - Expansion	

PROJECT APPLICANT, IF ANY
N/A

The City of Los Angeles will be the Lead Agency and will prepare an environmental impact report for the project identified above. We need to know the views of your agency as to the scope and content of the environmental information which is germane to your agency's statutory responsibilities in connection with the proposed project. Your agency will need to use the EIR prepared by this City when considering your permit or other approval for the project.

The project description, location and the probable environmental effects are contained in the attached materials.

☒ A copy of the Initial Study is attached.

☐ A copy of the Initial Study is not attached.

Due to the time limits mandated by state law, your response must be sent at the earliest possible date but not later than 45 days after receipt of this notice.

Please send your response to David Attaway at the address of the lead City Agency as shown above. We will need the name of a contact person in your agency.

Note: If the Responsible or trustee agency is a state agency, a copy of this form must be sent to the State Clearinghouse in the Office of Planning and Research, 1400 Tenth Street, Sacramento, California 95814. A state identification number will be issued by the Clearinghouse and should be thereafter referenced on all correspondences regarding the project, specifically on the title page of the draft and final EIR and on the Notice of Determination.

SIGNATURE	TITLE	TELEPHONE NUMBER	DATE
Alonzo A. Carmichael Alonzo A. Carmichael	Planning Officer	[redacted]	12/15/81

77-483

Project Objective

The objective of the project is to meet community recreational needs through the leasing and development of a 12-acre public recreation area. This action will accommodate the demand for youth/adult sports activities and passive leisure pursuits.

Project Description/Design Features

The project involves the leasing of 12 acres of Veterans Administration property for development into a public recreation area.

A public meeting was held on February 24, 1981, to identify community concerns and preferences associated with project development, and to allow public participation in the environmental impact assessment process. Public feedback was both meaningful and constructive, resulting in amendments to the project's design features. These features are illustrated in Preliminary Site Plan II-A and includes:

1. Two multipurpose sportsfields for team sport activities (i.e., baseball, soccer, football). The perimeter of the sportsfields will be fenced;

2. A jogging trail;

3. On-site parking area (90 spaces for participant/spectators, and approximately 50 spaces for neighborhood parking);

4. Passive recreation area and landscape amenitites. Picnic tables and park benches will be provided in this area;

5. Portable restroom facilities;

6. Installation of a landscape/turf irrigation system;

7. Parking and traffic safety features:

   (a) Signalized pedestrian crossing on Barrington Avenue

   (b) Low-intensity security lighting in the neighborhood parking area

   (c) Deceleration lane for safer traffic entry into the facility

   (d) Street parking restrictions

   (e) Traffic directional/safety markings and signs

77-484

Project Location

The project site is located on Veterans Administration property in the Brentwood Community (Council District 11), just east and parallel to approximately the 400 block of Barrington Avenue and south-southeast of the U. S. Post Office. (See Figures 1, 2, and 3).

295	0	0.722	18.1(5.0%)	9.0(7.0%) — Co BLK
296	0	0.730	47635.0(0.2%)	118.4(2.0%) — 3H STd
297	0	0.747	4945.2(0.3%)	21567.7(0.2%) — MC STd
298	0	0.112	23.3(5.0%)	14.8(7.0%) — HOH Blank
299	0	0.016	21.5(5.0%)	12.5(7.0%) — BF Blank
300	0	8.010	24.8(5.0%)	12.9(7.0%) — BF Blank
1	0	3.570	29.0(5.0%)	17.1(5.0%) — Plant Sample Area 1
2	0	3.833	25.8(5.0%)	15.5(7.0%) — Fish Pond H_2O
3	0	4.805	19.9(5.0%)	16.9(5.0%) — Culvert Soil
4	0	4.025	26.2(5.0%)	16.7(5.0%) — Plant Sample [illegible]
5	0	4.088	19.9(5.0%)	16.6(5.0%) — Soil " "
6	0	3.808	24.3(5.0%)	16.8(5.0%) — ~~Paper~~ Sample Area 1

77-486

NI ' STATES GOVERNMENT

Memorandum

DATE: January 14, 1982

TO: File

OM: ALAN K. ACHEN
VA Attorney

SUBJ: FOIA

1. FOIA request for release of information to primary indivuduals involved in the use of radioisotopes at the VAMC-Wadsworth are Skip Witterau and Dr. Blahd. Skip Witterau's telephone number is 824-3130, Dr. Blahd's telephone number is 478-3711, ext. 3063.

2. The primary individual involved with information release

Medical Release Specialist/Frank Robinson Medical Records Information Release Specialist.

3. According to Skip Witterau there are no records in the possession of the VA Facilities either at Wadsworth or Brentwood showing the exact procedure for disposal of radioisotopes. June 24, 1960 is the earliest date for any system of records being kept regarding disposal. Dr. Blahd became employed by the VA-Wadsworth Medical Center in 1952 and/or 1953. According to his best recollection, the half life of all radioisotopes used at the VA at that time was 7-14 days. Those used isotopes were placed in a lead-lined box and upon the expiration of their half life were disposed in the regular ~~exposure~~ procedure for any waste products, i.e., trash at the VA Facilities. VA Facilities first used radioactive material in 1948. The only records in our possession showing the type of matter used are in the medical records of patients treated during that period of time. It would perhaps be advantageous to have a cursory search of those medical records for the type of radioisotope used up to and including June 24, 1960. Of course, the names and any other identifying material of individuals would have to be deleted from such report. Since the VA does not have any system of records or record relating to disposal prior to June 24, 1960 in their possession, it is possible that such records may have been 1) destroyed, 2) released to the Atomic Energy Commission and now known as the Nuclear Regulatory Commission, 3) had simply been lost over the years, 4) were simply never kept. It would also be important to obtain a copy of the requirements for disposal of such waste during the period of 1948 to June 24, 1960 as to what requirements were in affect at that time. There is no reason to suspect or any reason the VA would be in non-compliance with such regulations. Congressionally there is no evidence to substantiate the VA was in compliance. Given the state of the science and the relatively short half life of radioactive material at that time there does not appear to be the significant need for such documentation as with the later development of the more highly radioactive and longer half life of the C14 material. In addition, on January 14, 1982 I telephoned Lee MacMann, Acting Director for Director Anderson of

Memo to File

FOIA

Wadsworth VA Medical Center and informed him of my proposed course of responding to the FOIA request. Step one would be to respond to the Federation's request by seeking a 10 day extension on responding with information due to the substantial burden in conducting a search for the relevant records. Two, that this letter would ~~be~~ forthcoming from Mr. Terry or Mr. Robinson of the VA Medical Centers. Three would be then to review the old medical records obtaining relevant samples of the documents for treatment during that period of time up to 1960 showing the exact type of radioisotope used. Four, cursory telephone calls to the Nuclear Regulatory Commission, formerly the Atomic Energy Commission to see if they have any records in their possession demonstrating the exact procedure utilized by the VA Facilities in disposing of radioisotopes from 1948 to 1960. Five, the telephone call to the Veterans Administration in Washington D.C., particularly the FOIA Attorney in the GC's Office who is handling the National request for information. And lastly addressing of a letter containing all the information provided and an explanation with citations to the CFR regarding the FOIA and Privacy Act considerations involved.

4. After the completion of these steps, the information and letter should be approved by Mr. Benrubi, Mr. Anderson, and Mr. Anthony Beilenson's Office. All of this must be completed by January 25, 1982.

ALAN K. ACHEN (02A9)
VA Attorney

77-488

Los Angeles Federation of Scientists
P.O. Box 67941
Los Angeles, CA 90067
[redacted]

January 4, 1982

Director
Veterans Administration
Wilshire and Sawtelle Boulevards
Los Angeles, California 90073

Gentlepersons:

The Los Angeles Federation of Scientists, an independent organization of scientists and engineers in the Southern California area, is conducting a review of the Draft Environmental Impact Statement issued by the City of Los Angeles regarding the proposed park to be built on land leased from the VA near the Brentwood post office.

In order to facilitate that review, the Los Angeles Federation of Scientists has identified certain matters for which it requires additional information.

Please find enclosed a list of questions (Attachment A). We would greatly appreciate any information you can provide about those matters.

For your information, we have also enclosed a copy of a Freedom of Information request submitted to VA headquarters.

We look forward to hearing from you shortly.

Sincerely,

Robert Nelson, Ph.D.
Co-Chairperson
Los Angeles Federation of Scientists

Enclosures:
Attachment A questions
FOIA request (copy)

cc:
VA HQ, Washington, DC

[illegible] 1/11/82

77-489

ATTACHMENT A

1. The map of the former disposal sites included in NRC inspection report 81-02, provided to NRC by Mr. Vetterau, would appear to indicate that the burials took place in part in the streambed separating the proposed leased area and the baseball field. Did the burials occur in or near the streambed? Please explain. If the map is in error, please indicate the correct locations. NO

2. We understand landfill was deposited on top of the former disposal area. Was fill deposited to an even depth across the entire area, or in varying depths? Was material deposited on top of the ridge overlooking the streambed, or backfilled from there? If deposited, roughly what depth? Can you provide a description or map of where fill was added and to what depth? No,

3. When the AEC did its initial review of the site in 1969, were disposal records provided for the period 1963-68, or for some other period?

4. Precisely when did disposal of radwaste by soil burial begin at the VA, and what evidence does VA have that no disposal occurred prior to that date?

5. Prior to the date identified in (4) above, what radioactive materials did the VA have on site and how were those materials disposed of? What evidence exists upon which that answer is based?

6. Were wastes other than those generated by the VA ever buried on VA property? Please give details if so, including source of the materials and time period. If not, what evidence exists that such burial did not occur? NO

7. Were radwastes generated by the VA ever disposed of by sea burial? Please give details. MAY HAVE BEEN

8. When were radioactive materials first utilized on the VA property, and what evidence is that answered based upon?

9. Certain of the burial records we have seen refer to the N.P. dumpsite. What is the "N.P." dumpsite? Were there any other dumpsites?

10. Were joint projects ever conducted between the VA and the Atomic Energy Project at UCLA; if so, please give details? Did the AEP ever conduct activities at the VA? Were any materials from AEP ever disposed of at the VA?

11. Please give us the name and last known address and phone number for individuals involved in the disposal of radwastes at the VA prior to Mr. Vetterau.

12. When was the main paved road into the proposed leased area put in?

13. There is an old rusted sign just west of that road and of the former disposal site. What did that sign say and what was it there for?

14. Please provide any information you have that might indicate that wastes were disposed of at locations other than those marked A, B, and C on the map in NRC inspection report 81-02.

15. Monitoring conducted by the VA of the site of which we are aware consists of monitoring on October 4, 1979. The locations are not clear to us--where is the fish pond and precisely where were the other measurements taken? Why were measurements taken along the road and on the knoll west of picnic area? What other measurements besides those of October 4 has VA made?

16. How long has the VA been at this site?

17. How have, and where have, chemical wastes been disposed of by the VA during the various periods since its inception? What records are there for this?

18. Why was the land (50 acres) including the former radwaste disposal site declared excess in 1969? How was it intended to be disposed of, and for what purpose? Why was the land removed from excess?

19. Do you have any information how radwastes generated off the VA site but in the Southern California area were disposed of 1940-1962, i.e. prior to the opening of commercial land-based disposal sites? NO

20. Were any chemical wastes disposed of by soil burial at the VA? If so, where, what and when? If not, what evidence is there to that effect?

NO - chemical

21. Were scintillation liquids buried in containers, poured directly into holes, or both? If in containers, what kinds of containers?

22. What information can you provide regarding patches of ground in the disposal area where reportedly vegetation was stunted or non-existent? NONE

23. Did the VA prior to 1969 ever ship radwaste for disposal to commercial land-based disposal sites such as Beatty, Nevada? If so, please indicate what kinds of materials and when, and how it was determined which materials would be buried onsite and which shipped offsite.

24. How were leaking sources (e.g. Cobalt-60, Strontium-90 eye applicators), disposed of prior to 1969? Prior to 1962?

25. During what period was Thorotrax used at the VA, and how was it disposed of?

26. Were radwastes ever transferred to UCLA for disposal? If so, on what basis was that relationship?

27. Did UCLA ever provide to the VA radwaste for disposal? If so, please give details, time periods, and amounts.

28. When was the C14 lab established? -

77-491

Los Angeles Federation of Scientists
P.O. Box 67941
Los Angeles, CA 90067
[redacted]

Freedom of Information Office
Veteran's Administration
810 Vermont Avenue NW
Washington, D.C. 20420

RE: FREEDOM OF INFORMATION REQUEST

Dear Gentleperson:

Pursuant to the Freedom of Information Act, 5 U.S.C. 552, the Los Angeles Federation of Scientists herewith requests that it be provided the following documents or categories of documents:

(1) all records of wastes--chemical or radioactive--buried by disposal in soil on the Veterans Administration property in West Los Angeles any time prior to 1960. No records.

(2) all records of wastes--chemical or radioactive--buried by disposal in soil on the Veteran's Administration property in West Los Angeles from 1960 to the present, other than the records provided by Radiation Safety Officer Wetterau to a group of scientists convened on April 14, 1981, by staff of Congressman Beilenson and LA City Councilperson Braude. [illegible]

(3) all records which indicate precisely when burial of radwaste began at the site in question. [illegible]

(4) all drawings and maps indicating burial site locations, current and previous drawings and maps. [illegible]

(5) all documents which provide evidence that waste burials were not conducted at the site prior to 1960. [illegible]

(6) all documents which provide evidence that waste burials were conducted at the site prior to 1960. [illegible]

(7) all records of radioactive materials present on site (i.e. prior to burial) prior to 1960. ~~[illegible]~~ No records [illegible] with NRC [illegible]

(8) all documents regarding sea disposal of radwastes from the VA in West Los Angeles. None

(9) all documents regarding shipment of chemical and radioactive wastes for disposal off the VA property, other than those provided regarding item (8), up to the present. [illegible]

(10) all documents regarding transfer of chemical or radioactive wastes from offsite to ~~the~~ VA property in West Los Angeles for disposal onsite, up to the present. [illegible]

(11) all records of monitoring at or near the site for chemical or radioactive contamination, other than NRC inspection report 81-02. [illegible]

77-492

(12) Memo from Chief of the Engineering Division at the VA in WLA dated 2-14-69 "regarding various changes in the VAC radioactive waste disposal program."

(13) all minutes, up to the present, of the VAC Radioisotope Committee, or any other radiation safety committee at the VA in WLA, including but not limited to the minutes of the 2-18-69 meeting.

(14) all correspondence, memoranda, reports or other documents, other than those listed in 1-13 above, in possession of VA regarding the disposal of radioactive or chemical wastes on the VA property in West Los Angeles.

(15) Memo of June 28, 1979, from VA Regional Director to Wm. Anderson, Director of VA Wadsworth Hospital in LA.

Due to the public interest use to which the requested documents will be put, and to the limited financial resources of the Los Angeles Federation of Scientists (a non-profit, voluntary association), it is hereby requested that search and copying fees be waived. For those documents located in West Los Angeles, we are willing to review those documents in person if they are extensive and indicate which we wish to have copied. Otherwise, we request copies be provided directly to us.

We request that documents be searched for that are in files of VA national and regional headquarters, as well as documents in files of the VA in West Los Angeles. To expedite matters, a copy of this FOIA request is being sent to the WLA VA.

A significant public matter has been raised by proposals to establish a park on the land formerly used as a disposal site for low-level radioactive wastes by the VA. A Draft Environmental Impact Statement has been issued for comment by the City of Los Angeles. In order that public confidence be ensured, it is very much in the public interest that all available data be provided that might aid in assessing potential environmental impacts in this situation. We therefore request, in addition to the waiving of copying and search fees, that this request be expedited. We understand a response is due within ten days.

Sincerely,

Robert Nelson, Ph.D.
Co-Chairperson
Los Angeles Federation of Scientists

cc: Director, VA, West Los Angeles

77-493

~~Dr. Fran~~

DR. JOHN ERICKSON - [redacted]

FORMER HEAD of NUCLEAR MEDICINE AT WADSWORTH - 1949 to 1960

-1- Minor isotopes generally P32 + I131 were allowed to decay well beyond their half life in lead lined boxes, ~~for~~. Manner of disposal was to dump at Brentwood site in manner prescribed by the Atomic Energy Commission. July 1, 1949 to ~~present~~ such as 1960.

-2- Major radioisotopes C-14 were disposed of at sea by ~~either giving out~~ a commercial disposal company. Person in charge was a Butter Sanchez. The best that our investigation could ~~was~~ uncover is that Mr Sanchez is somewhere located in the San Francisco Bay Area. On occasion a "drum" with a concrete block containing radioactive material would be sent to UCLA for disposal in accordance with their procedures.

3- Another individual involved with the disposal of radioactive material was a Manual Tubis, a former resident of of West Los Angeles, now, allegedly residing in Ross More Leisure World.

-4- Dr. Franz Bauer was formerly chief of the nuclear medicine section and who was involved in the use of C-14 is deceased.

~~-5- Dr Erickson has no way of knowing whether C-14 or any other~~

77-494

Los Angeles Federation of Scientists
P.O. Box 67941
Los Angeles, CA 90067
[redacted]

January 4, 1982

Representative Anthony Beilenson
U.S. House of Representatives
Washington, D.C. 20515

Dear Congressman Beilenson:

The Los Angeles Federation of Scientists noted with interest your announcement of October 15, 1981, regarding the safety of the proposed parksite at the Veterans Administration facility in West Los Angeles.

We would greatly appreciate receiving copies of all data from the tests described in your announcement, as well as all other information you have acquired which sheds light on what was actually buried at the site and its current safety.

We are particularly interested in all information which demonstrates that the radwaste burials for which the VA has records represent the only chemical or radioactive wastes buried on the property (for example, we would appreciate seeing what evidence there is that no materials were buried prior to 1960 and that no wastes generated offsite were disposed of onsite).

In addition, perhaps you can help us with an answer to a more general issue. Commercial sites for land-based disposal of radioactive waste did not open in the United States until 1962. Prior to that time, how and where were such wastes disposed of, particularly those generated in the Southern California area (i.e. 1940-1962)? Any information you have on these matters would be greatly appreciated.

Your early response would be appreciated.

Sincerely,

Robert Nelson, Ph.D.
Co-chairperson
Los Angeles Federation of Scientists

cc: district office
11000 Wilshire Blvd.

77-495

[illegible] called & left message: 1/7/82 - [illegible]

17. Human Health

DISPOSAL OF LABORATORY WASTE SOLVENTS AND LOW LEVEL MEDICAL RADIONUCLIDE

A. Historical

During the period 1960-1968 (no waste burials has taken place since 1968), the Wadsworth-Veterans Administration Medical Center had a license from the Atomic Energy Commission (AEC) - was changed to the Nuclear Regulatory Commission (NRC) on January 19, 1975 - to dispose of limited quantities of low level radioactive wastes generated from medical diagnostic, therapeutic, and research programs. On a volume basis, approximately fifty percent of the waste materials were small animal carcasses, with the remainder consisting of glassware, planchets, paper and liquid scintillation counting vials.

These burials were authorized under Title 10, Code of Federal Regulations Part 20, of the AEC's radiation protection standards. Based on the audit reports from the AEC's Division of Compliance (Region V), the licensee's disposal records and practices were in accordance with the limitations and conditions mandated under Section 20.304.

In 1969, the General Services Administration (GSA) began proceedings to dispose of fifty acres of the Veterans Administration' property. Included among the fifty acres was the area where burials of the low level radioactive wastes had occurred. Because of its status as a former disposal site the GSA asked the AEC if there should be any "restrictive or limiting conditions" imposed on future uses of the property. The Materials Licensing Branch of the AEC was directed to examine the disposal records for the property, and to evaluate the situation with respect to the types, quantities, and chemical and radiological properties of the wastes involved. They concluded that the property could be disposed of without the imposition of regulatory or land-use restrictions. However, for reasons unknown, the Veterans Administration decided not to follow through with the land disposal proceedings, thereby retaining control of the property.

B. Lease Negotiations

In August, 1979, due to a cooperative effort by the Barrington Recreation Center Service Association and the American Youth Soccer Association (AYSO), along with strong support and assistance from the offices of Congressman Beilenson and Councilman Braude, a lease was obtained for the development of twelve acres of Veterans Administration property as a public recreation area.

Recognizing that the Los Angeles Department of Recreation and Parks would be better prepared to develop, administer and maintain the site, the Association and Councilman Braude requested the Department to assume the lease. Subsequently, a new lease was prepared and submitted by the Veterans Administration, and is awaiting approval by the Board of Recreation and Parks Commissioners.

The following mitigation measures will be implemented to promote motor vehicle and pedestrian safety as well as to minimize parking problems:

(1) A ten foot wide deceleration lane (with a designated barrier line), northbound on Barrington, will be constructed to allow segregation of motor vehicles entering the recreation facility from the main traffic stream.

(2) A thirty foot wide driveway into the recreation facility will be constructed. Changes in the original design features has resulted in the entry driveway being relocated further north to prevent interference with the condominium's traffic ingress/egress.

(3) Southbound, at the entrance to the recreation facility, Barrington will be marked with a 200 foot long lane line to allow left turns into the facility while allowing through traffic to continue southbound unhampered.

(4) Construction of on-site parking with at least 90 spaces for participants/spectators and approximately 50 spaces for neighborhood parking. Through self-policing of the organizations using the facility and Department policy, park patrons will not be permitted to park on the street or in commercial parking lots in the area. Furthermore, rules restricting the use of the neighborhood parking area to the general public (not to be used by park patrons) will be strictly enforced.

(5) Low intensity security lighting will be installed in the neighborhood parking area.

(6) On street parking along the park frontage (totalling 14 spaces) will be limited to the hours between 8 p.m. and 8 a.m. daily.

(7) Only right turns will be permitted onto Barrington Avenue during egress from the recreation facility (this will be indicated by directional signs).

(8) A signalized crosswalk will be installed to allow pedestrians leaving or entering the recreation facility safer access across Barrington Avenue.

(9) Sidewalks will be provided along the park frontage area to connect to existing sidewalks, thus facilitating pedestrian traffic.

(10) Traffic directional/safety signs will be erected at strategic points to guide motor vehicles and pedestrians.

United States Atomic Energy Commission - prior to

FA ~~NRC formerly Atomic Energy C~~

First license obtained by the V.A. from the NRC in March 30, 1956.
Regulations promulgated by the NRC ~~[illegible]~~
in 1957 first time allowed disposal by burial, see
10CFR(1957) in addition, the first time reporting requirements
were established by the NRC. To the best of our
~~[illegible]~~

DR. Franz Bauer C-14; April 1956 - NRC -
license - V.A. Employee

Done prior to 1953 at sea under contract
Primary method for short live radioisotopes
according to D. Bueld was storage in lead lined containers until half life was over
and disposal through ordinary ~~[illegible]~~ was trash
~~[illegible]~~ waste disposal of ~~a trash~~ V.A. trash, i.e.,
garbage disposal

In all other instances disposal could have been at
sea but no records to substantiate the utilization
of that procedure.

Radioisotopes ~~[illegible]~~ primarily used I 131; P32 -
half lifes 8 days and 14 days respectfully

77-498

DEPARTMENT OF VETERANS AFFAIRS
Medical Center
West Los Angeles
11301 Wilshire Boulevard
Los Angeles CA 90073

In Reply Refer To 691/115
Docket Number [redacted]
License Number [redacted]

SEP 17 '96

Mr. Frank Wenslawski
Chief, Materials Branch
U.S. Nuclear Regulatory Commission, Region IV
Walnut Creek Field Office
1450 Maria Lane
Walnut Creek, CA 94596-5368

Dear Mr. Wenslawski:

In accordance with NRC Information Notice 96-47 we are informing you that we have a radioactive waste burial site authorized under former 10 CFR 20.304 and 20.302. Three closely located burial sites are located between our parking lot number 38 and the Brentwood Park lease. The last burial was made in August 1968 and the sites were inspected by the NRC in May 1981. The conclusion of the NRC's report was that radiation levels detected at randomly selected location within the burial sites indicated only background readings. Initially the sites contained H-3, C-14, S-35, Cr-51, Fe-59, I-125, and I-131, now only an estimated 246 mCi of Tritium and 48 mCi of C-14 remain.

The site analysis methodology promised in IN 96-47 has not been received, so we are waiting for further information as to what you require.

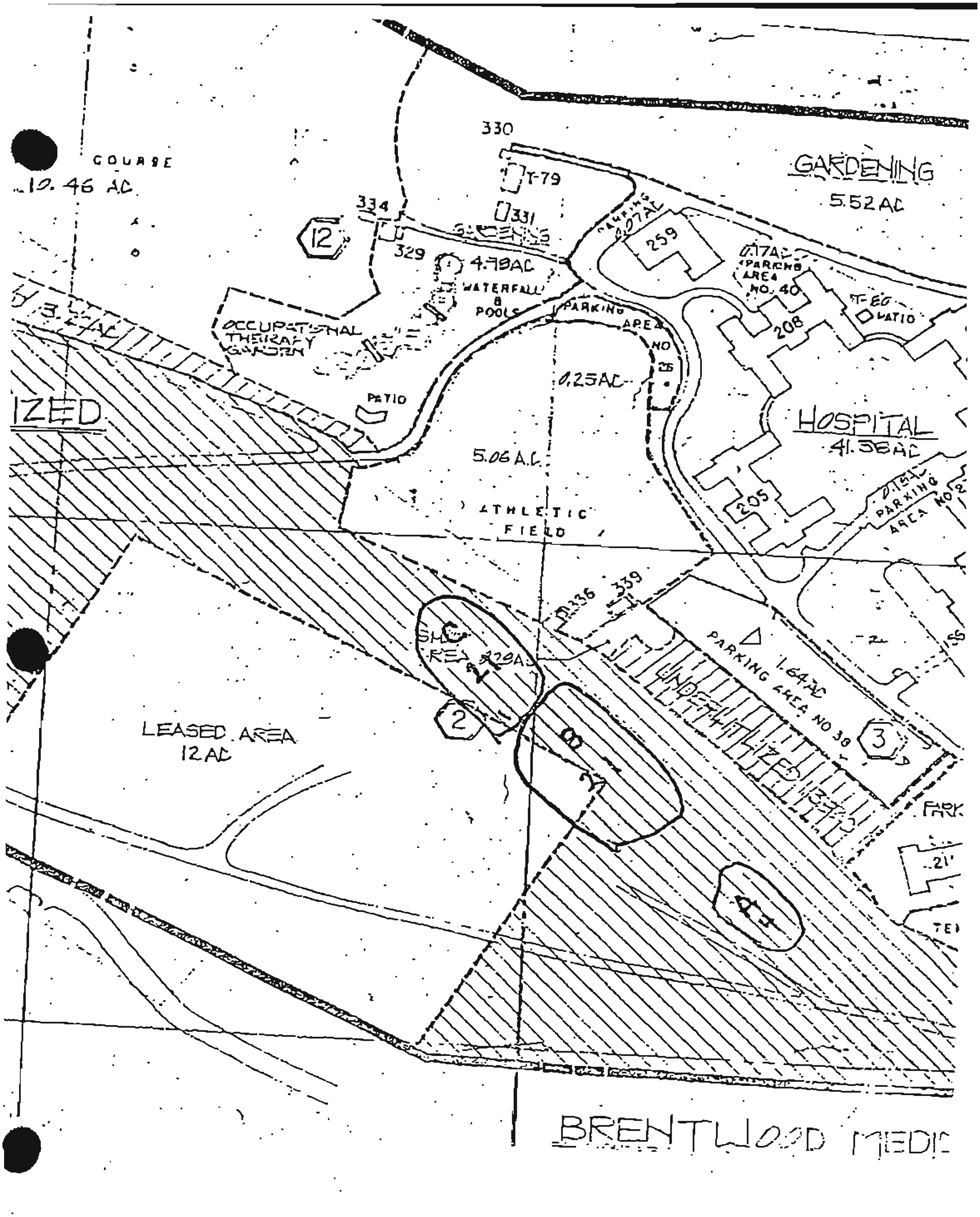
Sincerely,

David Norman MD for

KENNETH J. CLARK
Executive Director

Enclosure

77-499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T-79
GARDENING
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331
12
329
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WATERFALL
POOLS
259
.17 AC
PARKING AREA NO. 40
208
PATIO
OCCUPATIONAL THERAPY GARDEN
PARKING AREA NO 25
0.25 AC
IZED
PATIO
HOSPITAL
41.56 AC
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205
PARKING AREA NO
ATHLETIC FIELD
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LEASED AREA
12 AC
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3
UNDERUTILIZED
BRENTWOOD MEDI

77-500

UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION IV

Walnut Creek Field Office
1450 Maria Lane
Walnut Creek, California 94596-5368

113

SEP 30 1996

Department of Veterans Affairs
Medical Center
West Los Angeles
ATTN: Kenneth J. Clark
Executive Director
11301 Wilshire Blvd.
Los Angeles, California 90073

SUBJECT: RECEIPT OF LETTER DATED SEPTEMBER 17, 1996

Dear Mr. Clark:

We are acknowledging receipt of your letter dated September 17, 1996, notifying NRC of your former onsite burial of radioactive wastes and complying with the notification requirements of the decommissioning Timeliness Rule specified in 10 CFR 30.36(d). As discussed in Information Notice 96-47, NRC is currently developing a methodology that can be used as a screening tool to determine whether these burial sites are acceptable without further action. We will provide you with this screening tool as soon as it is available.

If you have any questions about this information, please contact Beth Prange of my staff at [redacted]

Sincerely,

Frank A. Wenslawski

Frank A. Wenslawski, Chief
Materials Branch

Docket: 030-01213
License: 04-00181-04

RECEIVED
96 OCT -4 PM 1:53
OFFICE OF THE DIRECTOR

77-501

APPENDIX C

NRC RADIOLOGICAL SURVEY

77-502

OFFICE OF INSPECTION AND ENFORCEMENT

REGION V

Report No. 81-02

License No. 04-00181-04 Priority 3 Category G1

Licensee: Veterans Administration Center
Wilshire and Sawtelle Boulevards
Los Angeles, California

Inspection at: Wadsworth Hospital Waste Burial Sites A, B and C

Inspection Conducted: May 7, 1981

Inspectors:	G. S. Spencer, Director Division of Technical Inspection	5/19/81 Date Signed
	for H. E. Book, Chief Radiological Safety Branch	5/20/81 Date Signed
	R. D. Thomas, Chief Materials Radiation Protection Section	5/19/81 Date Signed
	for L. Camper, NRC Materials Licensing Branch	5/19/81 Date Signed
	B. A. Riedlinger, Radiation Specialist	5/19/81 Date Signed
Approved by:	R. D. Thomas, Chief Materials Radiation Protection Section	5/19/81 Date Signed
Approved by:	for H. E. Book, Chief Radiation Safety Branch	5/20/81 Date Signed

Summary:

Inspection of Waste Burial Sites A, B and C on May 7, 1981 (Report No. 81-02)

Former land burial sites which had been used for disposal of licensed material were surveyed. The locations of the three burial sites A, B and C are shown on Attachment A. An area survey was conducted using instrumentation capable of detecting minute quantities of gamma ray emitting materials.

The inspection of the waste disposal area involved a total of six hours on site by five NRC inspectors.

Results: The radiation levels detected at randomly selected locations within the burial sites indicated only background readings. See paragraph 4. for more details.

77-503

DETAILS

1. Persons Contacted

Mr. Leonard Wetterau, Nuclear Medicine Service Radiation Safety Officer
Mr. Thomas Keenan, Chief Engineer, V. A., L.A.
Ms. Kay Slavkin, Field representative to Congressman Anthony Beilenson
Ms. Joan Shaffran-Brandt, Legislative assistant to Anthony Beilenson
Ms. Claire Rogger, Deputy Councilman to Marvin Braude, 11th District, City of Los Angeles

2. Background

The licensee buried low-level radioactive medical waste from about 1960 until 1968 at three locations which are on hospital controlled property. During this period of time, the burials were authorized by NRC regulations. The waste consisted primarily of short-lived medical radioisotopes, carbon-14, and tritium. The licensee recently contacted the NRC requesting a position or guidance on release of the property for conversion to a public park. The NRC Licensing Branch is presently making an evaluation study pertinent to the release of the burial sites.

3. Instruments Used

An Eberline Model PRM-7 micro-R meter with NRC #006383 was used during this survey. The instrument had a background of 6 micro-R per hour and is due for recalibration on or before March 30, 1982.

A Technical Associates Model PUG-1AB instrument with NRC #004279 was also used during this survey. The PUG-1AB was used with a gamma scintillatio probe. The instrument had a background of 1200-1500 counts per minute and is due for recalibration on or before July 15, 1981.

4. Survey Results

A radiological survey was conducted on May 7, 1981 by NRC inspectors in areas A, B and C as shown on Attachment A to this report. Radiation measurements were taken at several locations on a random basis by placing the instruments at ground level and at varying heights up to five feet above the ground.

There were no radiation levels detected which were in excess of the natural radiation background levels particular to the instruments.

Based upon the results of the radiological survey conducted, there was no radioactive material detected.

77-504

5. Licensee Comments

Discussions with Mr. Thomas Keenan, Chief Engineer for the Veterans Administration in Los Angeles, stated that during the demolition of the old hospital, many yards of broken concrete, reinforcement steel and soil from the old hospital site were dumped on top of the burial sites. Mr. Keenan estimated that approximately 10 to 15 feet of the mixed debris and soil were placed on top of Area A, and Areas B and C were also covered with about 20 feet of the same material. Since the original burials were at a depth of 6 to 8 feet, the total depth presently would be approximately 20 to 30 feet due to the fill which has been added.

6. Description of Areas A, B and C

Attachment A indicates the locations of the burial sites in relation to the hospital proper, and the proposed park area. The nearest public access is Barrington Avenue which is located approximately 200 yards to the west of burial sites B and C. The overall area of sites A, B and C is overgrown with foxtail grass which is approximately 24 to 30 inches high. Pictorially, the areas can be seen in picture 1 (Area A), picture 2 (Area B), and picture 3 (Area C) which are included in this report.

It should be noted that only a small portion of the southeast corner of the proposed park area incorporates a portion of burial sites B and C.

7. Conclusions

A. Based upon the results of the radiological survey conducted on May 7, 1981, there were no radioactive materials detected.

B. Based upon the amount of fill material and dirt which has been added to the burial sites, the original burials are presently at a depth of 20 to 30 feet.

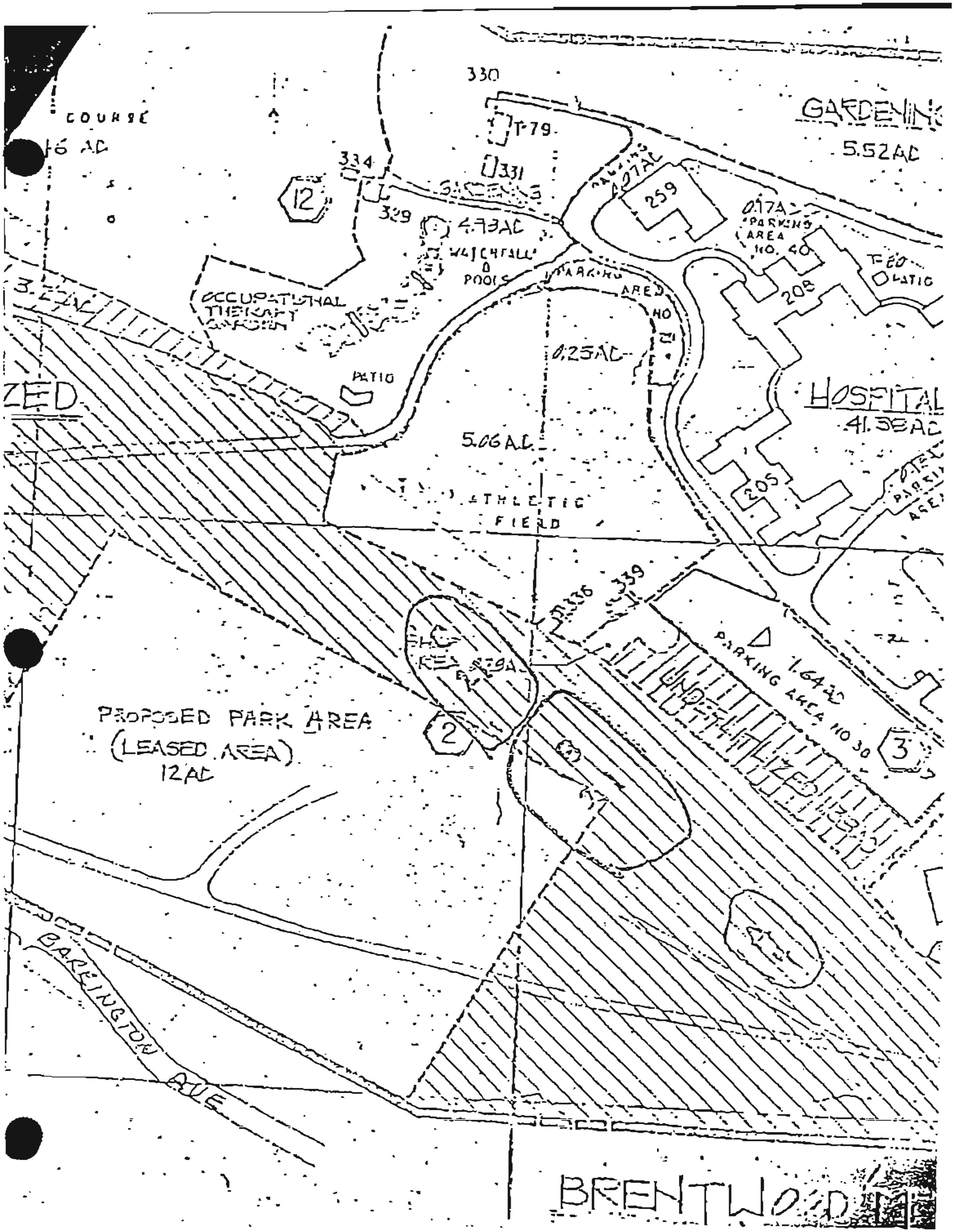
C. Based upon the results of the radiological survey and the evaluation of the sites based upon observations made at the time of the inspection, it is recommended that the overall area be released for unrestricted use.

8. Exit Discussion

At the conclusion of the radiological survey, the above conclusions were discussed with those individuals listed in paragraph 1.

Three members of the "Committee to Bridge the Gap" were present on site during the time of the survey; however, they did not participate in the survey or in the final discussions.

77-505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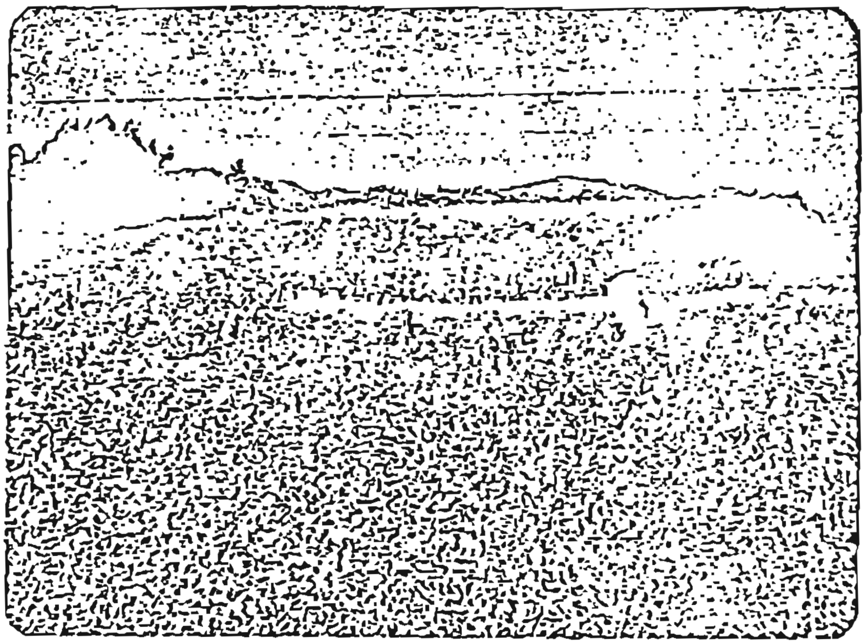
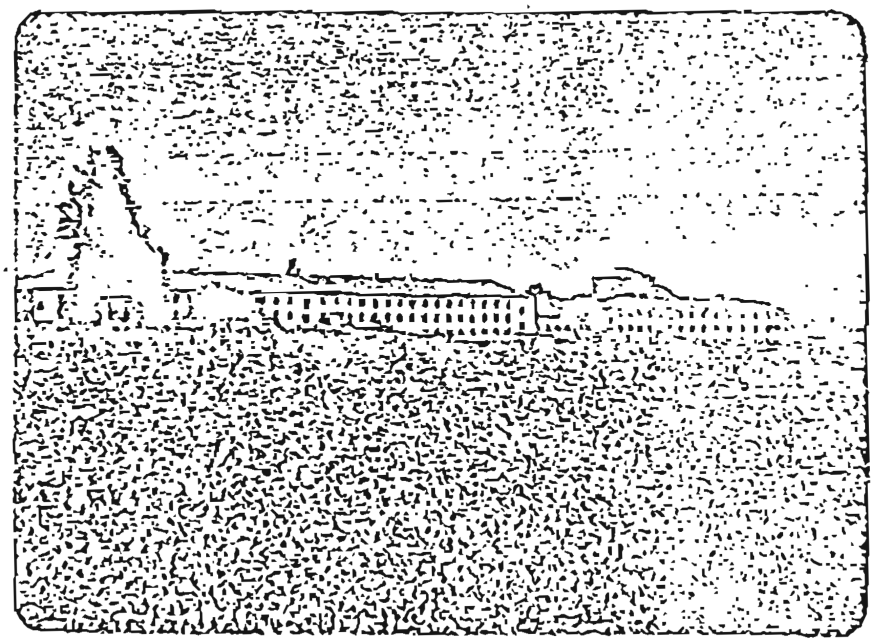
OCCUPATIONAL
THERAPY
GARDEN
PATIO
0.25AC
ZED
HOSPITAL
41.38AC
5.06AC
205
ATHLETIC
FIELD
336
339
1.64AC
PARKING AREA NO 30
PROPOSED PARK AREA
(LEASED AREA)
12AC
2
3
BARRINGTON AVE
BRENTWOOD

77-506



Picture 1
Area A



Picture 2
Area B

77-507

Picture 3
Area C

77-508

8012

Wadsworth
Medical Center

Wilshire and
Sawtelle Boulevards
Los Angeles, CA 90073

Veterans
Administration

SERVING THE VETERAN FOR FIFTY YEARS 1930 VETERANS ADMINISTRATION

Mr. H. E. Book
Chief, Fuel Facility and
Materials Safety Branch
Nuclear Regulatory Commission
Region V
1990 N. California Blvd.
Suite 202, Walnut Creek Plaza
Walnut Creek, CA 94596

SUBJ: Request to release land formerly utilized as radioactive waste disposal site to the City of Los Angeles

1. This memo is submitted, as requested, to formally document telephone conversations between Mr. Bob Thomas of your office, and Mr. Wetterau of VA Wadsworth Medical Center, concerning the above subject. As you are aware, the City of Los Angeles is interested in obtaining this land for the development of a public park, and we would like to accommodate them, with proper authority.

2. May I ask that you exercise whatever actions are necessary to obtain NRC approval for its possible future public use.

WILLIAM K. ANDERSON
Director

In Reply Refer To:

77-509

WADSWORTH HOSPITAL
VETERANS ADMINISTRATION CENTER
Los Angeles, Calif.

February 18, 1969

RADIOISOTOPE COMMITTEE MEETING

The Veterans Administration Center Radioisotope Committee was convened by the Chairman, Dr. Wm. H. Blahd, on February 18, 1969 at 1:30 PM in the Executive Conference Room, C-235. The following members were in attendance:

Drs. W. Blahd
S. Dayton
H. Fishkin
L. Fred
O. True
Mr. L. Wetterau

Ex-Officio: Dr. W. Haas

Absent: Dr. L. Guze

The Chairman discussed a memo received from the Chief, Engineering Division, dated February 14, 1969 (attached) concerning the practice of on-Station burial of radioactive waste materials.

The Chairman also presented a historical review of on-Station burial of radioactive materials which according to existing records has been practiced since 1952. During this 17 year period, there have been approximately 50 radioactive waste disposal operations totaling approximately 1.2 curies of radioactivity, primarily tritium and carbon-14. The disposal sites are a matter of record and are located in the N.P. dump area near the Heilman Barn. The practice and procedure of on-Station radioactive waste disposal has been approved on numerous occasions by the AEC Division of Compliance and is documented in the VA Center Byproduct Materials license (4-1S1-4).

The Committee recommended, as suggested by the Engineering Service, that a contract be negotiated with The Calif. Salvage Co., a commercial waste disposal company which has received AEC approval and which could provide regular waste disposal services for the VA Center. Approximately four 55-gallon drums of radioactive waste materials are generated each month. Based on a unit cost of $55/drum, it can be projected that yearly commercial disposal costs will approximate $2640.

The VA Center Radiation Safety Officer recommended, as an integral part of the proposed revised radioactive waste materials disposal program, the establishment of a radioactive waste storage shed to be located behind Bldg. 114 which will serve as a storage and repackaging center for radioactive waste, eliminating lab storage of radioactive waste materials thereby reducing radiation and fire hazards. The Committee recommended that the Engineering Service establish a radioactive waste storage shed to be designed and ultimately supervised by the VA Center Radiation Safety Officer.

77-510

The Committee requested that the Radiation Safety Officer identify all on-Station radioactive waste burial sites as requested by the Engineering Service. It also recommended that AEC inspection of these sites be obtained prior to the disposal of these areas for possible public use.

The Chairman was instructed by the Committee to forward in writing its recommendations to the Engineering Service and to duly inform the Center Director of the proceedings of this meeting and the various Committee recommendations.

There being no further business, the meeting was adjourned at 2:15 PM.

W. H. BLAHD, M.D.
Chairman
VAC Radioisotope Committee

77-511

DEPARTMENT OF VETERANS AFFAIRS
Medical Center
West Los Angeles
11301 Wilshire Boulevard
Los Angeles CA 90073

In Reply Refer To. 691/115
Docket Number 030-01213
License Number 04-00181-04

SEP 17 [illegible]

Mr. Frank Wenslawski
Chief, Materials Branch
U.S. Nuclear Regulatory Commission, Region IV
Walnut Creek Field Office
1450 Maria Lane
Walnut Creek, CA 94596-5368

Dear Mr. Wenslawski:

In accordance with NRC Information Notice 96-47 we are informing you that we have a radioactive waste burial site authorized under former 10 CFR 20.304 and 20.302. Three closely located burial sites are located between our parking lot number 38 and the Brentwood Park lease. The last burial was made in August 1968 and the sites were inspected by the NRC in May 1981. The conclusion of the NRC's report was that radiation levels detected at randomly selected location within the burial sites indicated only background readings. Initially the sites contained H-3, C-14, S-35, Cr-51, Fe-59, I-125, and I-131, now only an estimated 246 mCi of Tritium and 48 mCi of C-14 remain.

The site analysis methodology promised in IN 96-47 has not been received, so we are waiting for further information as to what you require.

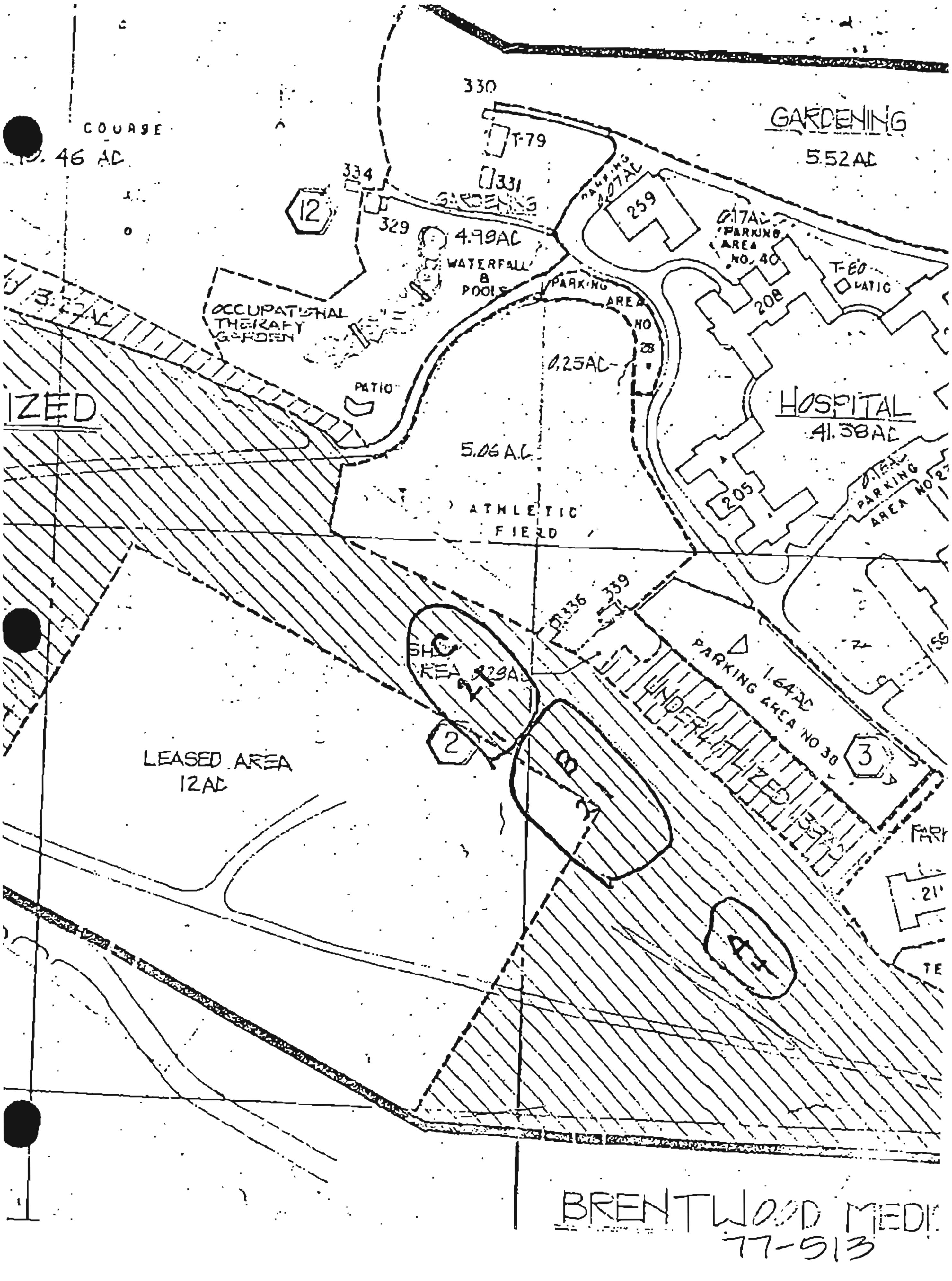
Sincerely,

David Norman MD for

KENNETH J. CLARK
Executive Director

Enclosure

77-512



330
COURSE
46 AC
GARDENING
5.52AC
T-79
334
331
12
GARDENING
329
4.99AC
WATERFALL & POOLS
259
.17AC PARKING AREA NO. 40
T-80
PATIO
208
OCCUPATIONAL THERAPY GARDEN
PARKING AREA NO 28
0.25AC
PATIO
IZED
HOSPITAL
41.38AC
5.06 A.C.
ATHLETIC FIELD
205
PARKING AREA
336
339
1.64AC PARKING AREA NO 30
C
B
A
UNDERUTILIZED
2
3
LEASED AREA 12AC
BRENTWOOD MEDI
77-513

Barrington
Dump site
as of July 1996

Aug 1968 → July 1996   28 yrs - 1 mon

mCi		[illegible] Ci		$t_{1/2}$	9861.5 days.
250.6	H-3	1212.9	12.26 yrs.	2.3	334.2 $\boxed{10195.7}$
47.1	C-14	48.3	5730 yrs	0.0049.	
	S-35	2.2	88 days.	115.9	
	Cr-51	0.5	28 days.	364.1	
	Fe 55	2.0	46 days.	221.6	
	I-125	10.0	60 days.	169.9	
	I-131	102.1.	8 days.	1274.5	

Dump site in use from June 24, 1960 to Aug 1968

77-514

MEMORANDUM

DATE: JANUARY 16, 1997

FROM: RADIATION SAFETY OFFICER (130C)

SUBJ: SCREENING METHODOLOGY FOR ASSESSING PRIOR LAND BURIALS

TO : DIRECTOR FACILITIES MANAGEMENT (00FM)

THRU: DIRECTOR OFFICE OF ENVIRONMENT OF CARE (130)

1. No response is required, at this time, to the NRC letter concerning land burial of radioactive waste. When the NRC develops a final assessment method, the Radiation Safety Officer will be required to make the calculations and send a report to the NRC. The purpose of this report to the NRC is to ensure that, if the land containing our three radioactive waste dumpsites should ever be released for public use, no member of the public would be exposed to as much as 100 millirem in a year. There are two screening levels, one assumes that a family of four obtains its entire water supply from the dumpsite for a year and that all of the radioactive remaining in the dumpsite is leached into this water. Our dumpsite fails this screening test. The next level assumes that someone builds a home on the dumpsite and farms the area. In order to evaluate this screening test, the exact method of disposal must be known since it depends on the dilution of the radioisotopes in the soil. If our dumpsite should fail this second screening level, the NRC will probably require us to sample the dumpsites.

2. Background: There are three dumpsites located in an area starting west of the Brentwood theater and ending abreast of the athletic field. None of the dumpsites are covered by the Brentwood Park lease fill. This method of radioactive waste disposal was legal at the time. Dumping started in June of 1960 and ended in August 1968. All the short lived radioisotopes have decayed away in the nearly thirty years since the last disposal, but an estimated 250.6 millicuries of H-3 and 48.1 millicuries of C-14 remain.

John E. Basinski

John E. Basinski
Radiation Safety Officer (130C)

77-515

UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION IV

Walnut Creek Field Office
1450 Maria Lane
Walnut Creek, California 94596-5368

T 115

SEP 30 1996

Department of Veterans Affairs
Medical Center
West Los Angeles
ATTN: Kenneth J. Clark
Executive Director
11301 Wilshire Blvd.
Los Angeles, California 90073

SUBJECT: RECEIPT OF LETTER DATED SEPTEMBER 17, 1996

Dear Mr. Clark:

We are acknowledging receipt of your letter dated September 17, 1996, notifying NRC of your former onsite burial of radioactive wastes and complying with the notification requirements of the decommissioning Timeliness Rule specified in 10 CFR 30.36(d). As discussed in Information Notice 96-47, NRC is currently developing a methodology that can be used as a screening tool to determine whether these burial sites are acceptable without further action. We will provide you with this screening tool as soon as it is available.

If you have any questions about this information, please contact Beth Prange of my staff at [redacted]

Sincerely,

Frank A. Wenslawski

Frank A. Wenslawski, Chief
Materials Branch

Docket: 030-01213
License: 04-00181-04

RECEIVED
96 OCT -4 PM 1:53
OFFICE OF THE DIRECTOR

77-516

APPENDIX C

NRC RADIOLOGICAL SURVEY

77-517

REGION V

Report No. 81-02

License No. 04-00181-04 Priority 3 Category G1

Licensee: Veterans Administration Center
Wilshire and Sawtelle Boulevards
Los Angeles, California

Inspection at: Wadsworth Hospital Waste Burial Sites A, B and C

Inspection Conducted: May 7, 1981

Inspectors:	G. S. Spencer, Director Division of Technical Inspection	5/19/81 Date Signed
	for H. E. Book, Chief Radiological Safety Branch	5/20/81 Date Signed
	R. D. Thomas, Chief Materials Radiation Protection Section	5/19/81 Date Signed
	for L. Camper, NRC Materials Licensing Branch	5/19/81 Date Signed
	B. A. Riedlinger, Radiation Specialist	5/19/81 Date Signed
Approved by:	R. D. Thomas, Chief Materials Radiation Protection Section	5/19/81 Date Signed
Approved by:	for H. E. Book, Chief Radiation Safety Branch	5/20/81 Date Signed

Summary:

Inspection of Waste Burial Sites A, B and C on May 7, 1981 (Report No. 81-02)

Former land burial sites which had been used for disposal of licensed material were surveyed. The locations of the three burial sites A, B and C are shown on Attachment A. An area survey was conducted using instrumentation capable of detecting minute quantities of gamma ray emitting materials.

The inspection of the waste disposal area involved a total of six hours on site by five NRC inspectors.

Results: The radiation levels detected at randomly selected locations within the burial sites indicated only background readings. See paragraph 4. for more details.

77-518

1. Persons Contacted

Mr. Leonard Wetterau, Nuclear Medicine Service Radiation Safety Officer
Mr. Thomas Keenan, Chief Engineer, V. A., L.A.
Ms. Kay Slavkin, Field representative to Congressman Anthony Beilenson
Ms. Joan Shaffran-Brandt, Legislative assistant to Anthony Beilenson
Ms. Claire Rogger, Deputy Councilman to Marvin Braude, 11th District, City of Los Angeles

2. Background

The licensee buried low-level radioactive medical waste from about 1960 until 1968 at three locations which are on hospital controlled property. During this period of time, the burials were authorized by NRC regulations. The waste consisted primarily of short-lived medical radioisotopes, carbon-14, and tritium. The licensee recently contacted the NRC requesting a position or guidance on release of the property for conversion to a public park. The NRC Licensing Branch is presently making an evaluation study pertinent to the release of the burial sites.

3. Instruments Used

An Eberline Model PRM-7 micro-R meter with NRC #006383 was used during this survey. The instrument had a background of 6 micro-R per hour and is due for recalibration on or before March 30, 1982.

A Technical Associates Model PUG-1AB instrument with NRC #004279 was also used during this survey. The PUG-1AB was used with a gamma scintillatio probe. The instrument had a background of 1200-1500 counts per minute and is due for recalibration on or before July 15, 1981.

4. Survey Results

A radiological survey was conducted on May 7, 1981 by NRC inspectors in areas A, B and C as shown on Attachment A to this report. Radiation measurements were taken at several locations on a random basis by placing the instruments at ground level and at varying heights up to five feet above the ground.

There were no radiation levels detected which were in excess of the natural radiation background levels particular to the instruments.

Based upon the results of the radiological survey conducted, there was no radioactive material detected.

77-519

5. Licensee Comments

Discussions with Mr. Thomas Keenan, Chief Engineer for the Veterans Administration in Los Angeles, stated that during the demolition of the old hospital, many yards of broken concrete, reinforcement steel and soil from the old hospital site were dumped on top of the burial sites. Mr. Keenan estimated that approximately 10 to 15 feet of the mixed debris and soil were placed on top of Area A, and Areas B and C were also covered with about 20 feet of the same material. Since the original burials were at a depth of 6 to 8 feet, the total depth presently would be approximately 20 to 30 feet due to the fill which has been added.

6. Description of Areas A, B and C

Attachment A indicates the locations of the burial sites in relation to the hospital proper, and the proposed park area. The nearest public access is Barrington Avenue which is located approximately 200 yards to the west of burial sites B and C. The overall area of sites A, B and C is overgrown with foxtail grass which is approximately 24 to 30 inches high. Pictorially, the areas can be seen in picture 1 (Area A), picture 2 (Area B), and picture 3 (Area C) which are included in this report.

It should be noted that only a small portion of the southeast corner of the proposed park area incorporates a portion of burial sites B and C.

7. Conclusions

A. Based upon the results of the radiological survey conducted on May 7, 1981, there were no radioactive materials detected.

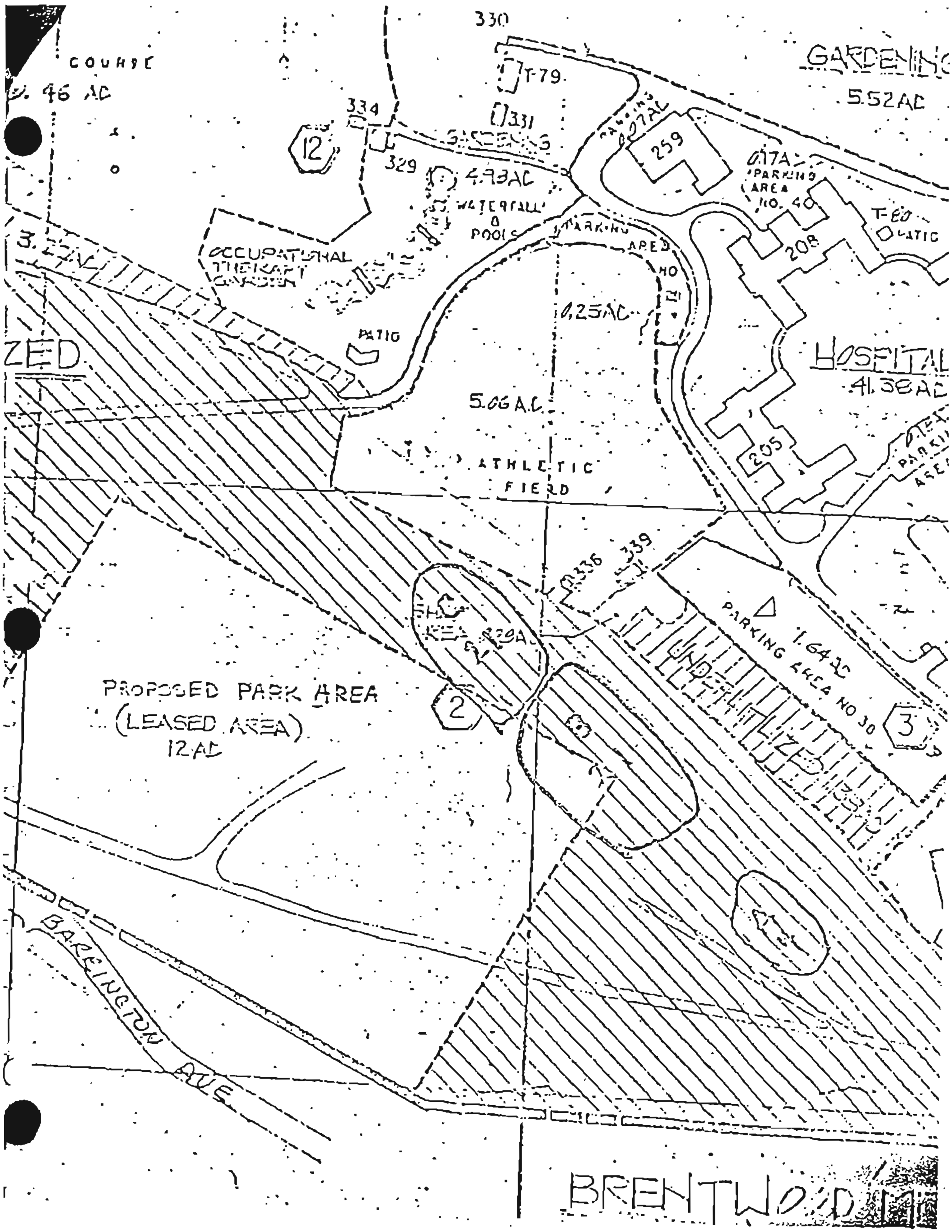
B. Based upon the amount of fill material and dirt which has been added to the burial sites, the original burials are presently at a depth of 20 to 30 feet.

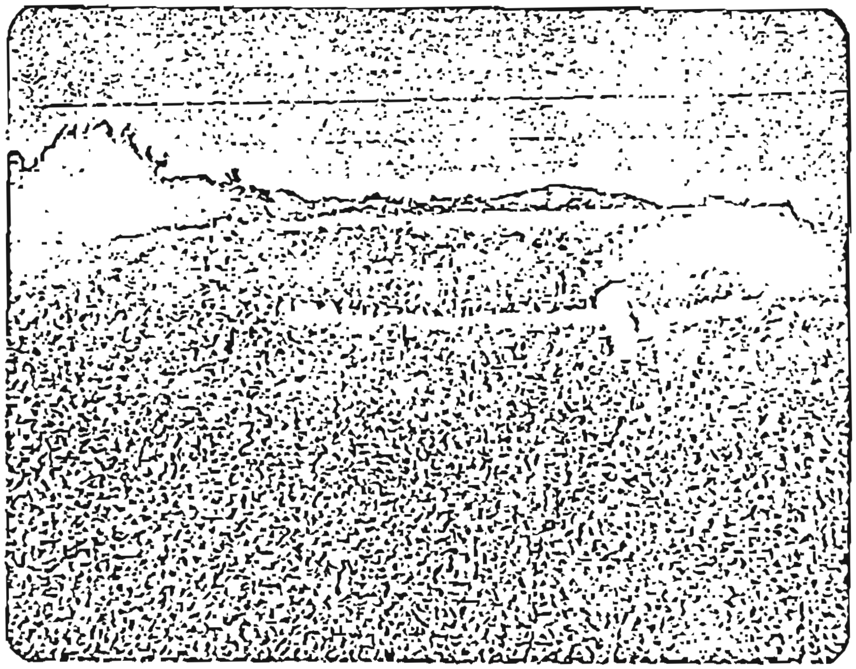
C. Based upon the results of the radiological survey and the evaluation of the sites based upon observations made at the time of the inspection, it is recommended that the overall area be released for unrestricted use.

8. Exit Discussion

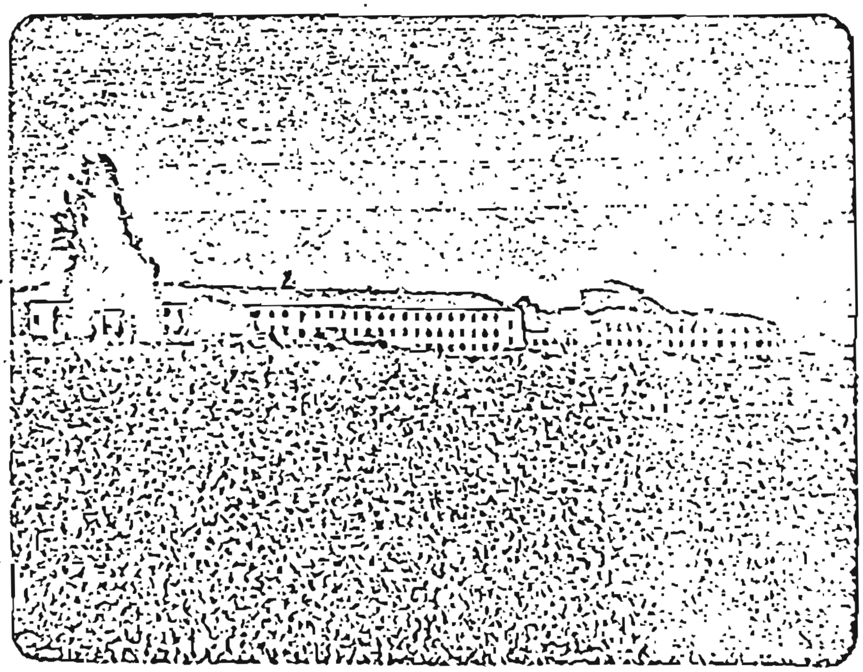
At the conclusion of the radiological survey, the above conclusions were discussed with those individuals listed in paragraph 1.

Three members of the "Committee to Bridge the Gap" were present on site during the time of the survey; however, they did not participate in the survey or in the final discussions.


330
COURSE
46 AC
334
T-79
331
12
GARDENING
329
4.93AC
WATERFALL
POOLS
OCCUPATIONAL THERAPY GARDEN
PATIO
ZED
GARDENING
5.52AC
0.07AC
259
0.17AC
PARKING AREA NO. 40
T-80
PATIO
208
PARKING AREA NO.
0.25AC
HOSPITAL
41.58AC
5.06A.C.
ATHLETIC FIELD
205
PARKING AREA
336
339
PARKING AREA NO 30
1.64AC
3
2
PROPOSED PARK AREA
(LEASED AREA)
12AC
BARRINGTON AVE
BRENTWOOD
77-521



Picture 1
Area A



Picture 2
Area B

77-577

Picture 3
Area C

77-523

Medical Center

Sawtelle Boulevards
Los Angeles, CA 90073

Veterans Administration

Mr. H. E. Book
Chief, Fuel Facility and
Materials Safety Branch
Nuclear Regulatory Commission
Region V
1990 N. California Blvd.
Suite 202, Walnut Creek Plaza
Walnut Creek, CA 94596

SUBJ: Request to release land formerly utilized as radioactive waste disposal site to the City of Los Angeles

1. This memo is submitted, as requested, to formally document telephone conversations between Mr. Bob Thomas of your office, and Mr. Wetterau of VA Wadsworth Medical Center, concerning the above subject. As you are aware, the City of Los Angeles is interested in obtaining this land for the development of a public park, and we would like to accommodate them, with proper authority.

2. May I ask that you exercise whatever actions are necessary to obtain NRC approval for its possible future public use.

WILLIAM K. ANDERSON
Director

In Reply Refer To:

77-524

[illegible]
VETERANS ADMINISTRATION [illegible]
Los Angeles, Calif.

February 1[illegible], 1969

RADIOISOTOPE COMMITTEE MEETING

The Veterans Administration Center Radioisotope Committee was convened by the Chairman, Dr. Wm. H. Blahd, on February 1[illegible], 1969 at 1:30 PM in the Executive Conference Room, C-235. The following members were in attendance:

Drs. W. Blahd
S. Dayton
B. Fishkin
L. Fred
O. True
Mr. L. Watteray

Ex-Officio: Dr. W. Haas

Absent: Dr. L. Cuze

The Chairman discussed a memo received from the Chief, Engineering Division, dated February 14, 1969 (attached) concerning the practice of on-Station burial of radioactive waste materials.

The Chairman also presented a historical review of on-Station burial of radioactive materials which according to existing records has been practiced since 1952. During this 17 year period, there have been approximately 50 radioactive waste disposal operations totaling approximately 1.? curies of radioactivity, primarily tritium and carbon-14. The disposal sites are a matter of record and are located in the V.P. dump area near the Hillman Farm. The practice and procedure of on-Station radioactive waste disposal has been approved on numerous occasions by the AEC Division of Compliance and is documented in the VA Center Byproduct Materials license (4-181-4).

The Committee recommended, as suggested by the Engineering Service, that a contract be negotiated with The Calif. Salvage Co., a commercial waste disposal company which has received AEC approval and which could provide regular waste disposal services for the VA Center. Approximately four 55-gallon drums of radioactive waste materials are generated each month. Based on a unit cost of $55/drum, it can be projected that yearly commercial disposal costs will approximate $2640.

The VA Center Radiation Safety Officer recommended, as an integral part of the proposed [illegible] radioactive waste materials disposal program, the establishment of a radioactive waste [illegible] 110 which will serve as a storage and repackaging center for radioactive waste, eliminating lab storage of radioactive waste materials [illegible] radiation and fire hazards. The Committee recommended that the [illegible] Service [illegible] radioactive waste [illegible] supervised by the VA Center Radiation Safety Officer.

77-525

The Committee requested that the [illegible] facility of on-Station radioactive waste burial sites as requested by the Engineering Service. It also recommended that AEC inspection of these sites be obtained prior to the disposal of these areas for possible public use.

The Chairman was instructed by the Committee to forward in writing its recommendations to the Engineering Service and to duly inform the Center Director of the proceedings of this meeting and the various Committee recommendations.

There being no further business, the meeting was adjourned at 2:15 p.m.

W. R. BLAND, M.D.
Chairman
VAC Radioisotope Committee

77-526

United States Atomic Energy Commission - prior to

FA ~~NRC formerly Atomic Energy C~~

First license obtained by the VA from NRC in March 30, 1956.
Regulations promulgated by the NRC ~~[illegible]~~
in 1957 first time allowed disposal by burial, see
10CFR(1957) in addition, the first time reporting requirements
were established by the NRC. To the best of our
~~[illegible]~~

DR. Franz Bauer C-14; April 1956 - NRC -
license - V.A. Employee

Done prior to 1953 at sea under contract
Primary method of short live radioisotopes
according to Dr. Bluhd was storage in lead lined containers until half life was over
and disposal was then made through ordinary ~~[illegible]~~
~~[illegible]~~ waste disposal of a trash V.A. trash, i.e.,
garbage disposal
In all other instances disposal could have been at
sea but no records to substantiate this utilization
of that procedure.

Radioisotopes ~~used~~ primarily used I 131; P32
half lifes 8 days and 14 days respectfully

United States Atomic Energy Commission - prior to

FA[4] as NRC formerly ~~Atomic Energy C~~

First license obtained by the VA from NRC in March 30, 1956.
Regulations promulgated by the NRC ~~...~~
in 1957 first time allowed disposal by burial, see
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were established by the NRC. To the best of our
~~...~~

DR. Franz Bauer C-14; April 1956 - NRC - license - V.A. Employee

Done prior to 1958 at sea under contract
Primary method for short live radioisotopes
according to D. Budd was storage in lead lined containers until half life was over
and disposal was made through ordinary ~~...~~
~~...~~ waste disposal of ~~trash~~ V.A. trash, i.e.,
garbage disposal.
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Radioisotopes ~~...~~ primarily used I 131; P32 -
half lifes 8 days and 14 days respectfully