

Final -- June 29, 1987

Preliminary Assessment
Redwood Road Dump
Salt Lake City, Utah
UTD980961502

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Prepared For
Utah State Department of Health
Bureau of Solid and Hazardous Waste

by Michael C. Long

SCANNED

DERR-1987-005202

Final -- June 29, 1987

EXECUTIVE SUMMARY

Preliminary Assessment
Redwood Road Dump
Salt Lake City, Utah
UTD980961502

Setting

The Redwood Road Dump (RRD), located at 2000 West Indiana Avenue in Salt Lake City, Utah (see Figure 1), is the site of an old Salt Lake City landfill which operated between the years 1923 and 1962. It was the primary landfill for Salt Lake City (SLC) from the time it opened until the mid-50's when the North Temple Landfill (UTD000463489) was started. It is likely that the volume of incoming refuse at the Redwood Road Dump began to decrease at that time, and continued to do so until its termination as a dump in 1962.

While in operation as a landfill, open dumping was practiced. No manifest system is known to have been in use. Incoming refuse was dumped in piles and periodically covered with fill dirt. Open burning of refuse was also a common practice at this site.

The 70-acre site is entirely owned by SLC Corporation. From 1962 to the present, SLC has been using the property to dispose of debris (leaves, grass trimmings, tree and bush trimmings, storm drain sludge, etc.) collected by the local street maintenance crews. The site is currently closed to the public, and the access road has a locked gate (see Figure 2). It is poorly fenced, however, and could potentially be the site of illegal/unauthorized dumping.

Potential Source of Contamination

Information about waste disposal practices at the site is not available. However, there is some tangible evidence that materials other than household refuse and inert debris were disposed of there. A report prepared for the Utah Department of Transportation (UDOT) by David Eckhoff (an independent Engineering Consultant at that time) entitled Preliminary Investigations Disposition of Garbage Materials in Abandoned Landfill, July 1977, states that 21 soil borings were performed 12 of which contained a "petroleum product" at or near the water table. In one drilling log, the driller states that chemical waste was encountered. No chemical analyses were performed on these soil borings because the study was done to assess the site's viability as the location for a portion of Interstate Highway 215, not its potential as a hazardous waste site. The study concluded that the site was safe enough for the proposed use of the property; i.e., the potential hazards from explosive gases generated by decomposing organic materials were minimal and the soil was sufficiently stable to support the proposed construction.

ML/psw
4209U

Draft-- April 15, 1987

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While in operation as a landfill, open dumping was practiced. No manifest system is known to have been in use. Incoming refuse was dumped in piles and periodically covered with fill dirt. Open burning of refuse was also a common practice at this site.

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During the site's use as a primary landfill for SLC, no regulations were in effect for controlling disposal of hazardous materials such as pesticides, solvents, acids, bases, or oil sludges. Since no known manifest system was in use during the operating period, precisely what has been disposed of at the site and in what quantities and concentrations is unknown.

Pathways and Receptors

A. Ground Water

Ground water is the principle potential pathway associated with this site. The depth to the aquifer of concern varies seasonally, but is generally between 0 and 15 feet. This aquifer consists of a deep, semi-confined artesian aquifer which is considered hydraulically connected to an upper, unconfined aquifer. The water quality of this aquifer decreases rapidly near the surface, and is generally quite saline. In the deeper regions, however, water quality is very good.

A recent well survey conducted by Dames & Moore as part of the Remedial Investigation activities currently underway at a neighboring NPL site, the Portland Cement Company, Site # 3 (this NPL site is located directly south of RRD, on the opposite side of Indiana Avenue) indicates that a total of 67 drinking water wells are located within three miles of the site. Of these, six are municipal, five are high yield non-municipal, and 56 are private wells. These wells all draw water from the deeper regions of the aquifer where the water quality is quite good. Screening depths vary between < 100 feet and > 600 feet (refer to item II-G, Part 3 of the Preliminary Assessment form).

The native soil consists mainly of lake sediments existing as unconsolidated deposits, and an interlayered suite of clays, clayey silts and thin sand stringers varying in thickness from less than 1/10 in to several feet. This thin interlayering of low permeability clays and silts with higher permeability sandy layers creates a strong anisotropic ground water flow condition; i.e., ground water can flow more readily in a horizontal direction than in a vertical direction. Hence, there is a potential for ground water contamination by migration of hazardous materials possibly present at the site.

B. Surface Water

Surface water is not a major concern here because the only surface water in the area that is not confined to the site is the City Drain which borders the site on the west (refer to Figure 1). This water has no known domestic uses and does not flow directly into any major water bodies like the Great Salt Lake or the Jordan River. Local fauna use the water for drinking, and are therefore the only known potential receptors of hazardous materials migrating from the site via the City Drain.

In addition to City Drain, a ditch runs north and south across the center of the site (no outlets), and a small pond (possibly recharged by ground water) is located in the north end of the site (see Figure 3 - Site Sketch). Again, there are no known domestic uses of this water, but local fauna use it for drinking.

C. Air

The potential for air contamination by volatile organics exists; however the probability of a substantial air release is quite low. The quantity of methane and other explosive gases generated by landfilled waste was measured in 1977 in the previously mentioned UDOT study and was not considered to be sufficient for concern.

Conclusions and Recommendations

The potential for ground water contamination by hazardous materials possibly present at the site does exist. Since the deeper portion of the aquifer serves as a valuable drinking water supply, and since it is hydraulically connected to the upper portion, the potential for such contamination is of concern.

In order to evaluate this potential threat, I recommend that a site inspection be performed with medium priority.

EPA

POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
PART 1 - SITE INFORMATION AND ASSESSMENT

I. IDENTIFICATION
01 STATE 02 SITE NO.
UTD980961502

II. SITE NAME AND LOCATION

01 SITE NAME (Logo, common or descriptive name of site)

Redwood Road Dump

02 STREET, ROUTE NO. OR SPECIFICATION LOCATION IDENTIFIER 03 CITY

2000 West Indiana Avenue Salt Lake City

04 STATE 05 ZIP CODE 06 COUNTY 07 COUNTY CODE 08 CONG DIST.

Utah 84044 Salt Lake 004 UT-02

09 COORDINATES LATITUDE LONGITUDE

45 45'30.0" 111 56'30.0"

10 DIRECTIONS TO SITE (Starting from nearest public road)

Proceed south on Redwood Road to Indiana Avenue (800 South). Turn west on Indiana Avenue and drive for approximately 2 blocks. Site gate is on the north side of Indiana Avenue.

III. RESPONSIBLE PARTIES

01 OWNER (if known) 02 STREET (Business, mailing, residential)

Salt Lake City Corporation (Public Works) 72 East 400 South

03 CITY 04 STATE 05 ZIP CODE 06 TELEPHONE NUMBER

Slt Lake City Utah 84111 801-535-6131 *fax*

07 OPERATOR (if known and different from owner) " - 6231

(Same as owner)

08 STREET (Business, mailing, residential) 09 CITY 10 STATE

11 ZIP CODE 12 TELEPHONE NUMBER

13 TYPE OF OWNERSHIP (Check one)

- A. PRIVATE
 - B. FEDERAL: _____
 - C. STATE
 - D. COUNTY
 - E. MUNICIPAL
 - F. OTHER: _____
 - G. UNKNOWN
- (Specify)

14 OWNER/OPERATOR NOTIFICATION ON FILE (Check all that apply)

- A. RCRA 3001 DATE RECEIVED ___/___/___
- B. UNCONTROLLED WASTE SITE (CERCLA 103c) DATE RECEIVED ___/___/___
- C. NONE

IV CHARACTERIZATION OF POTENTIAL HAZARD

01 ON SITE INSPECTION BY (Check all that apply)

- YES DATE 04/03/87
- NO (Windshield Survey)
- A. EPA
- B. EPA CONTRACTOR
- C. STATE
- D. OTHER CONTRACTOR
- E. LOCAL HEALTH OFFICIAL
- F. OTHER: _____

(Specify)

CONTRACTOR NAME(S):

02 SITE STATUS (check one)

- A. ACTIVE
- B. INACTIVE
- C. UNKNOWN

03 YEARS OF OPERATION 1923 Present UNKNOWN
BEGINNING YEAR ENDING YEAR

04 DESCRIPTION OF SUBSTANCES POSSIBLY PRESENT KNOWN OR ALLEGED

During a 1977 UDOT investigation, 12 out of 21 soil borings indicated that a petroleum like material was encountered. One also reported encountering chemical wastes of unknown character.

05 DESCRIPTION OF POTENTIAL HAZARD TO ENVIRONMENT AND/OR POPULATION

The site was used as Salt Lake City's primary landfill from 1923 until the mid-50's. No liner was emplaced before the site was used as a dump. No regulations were in effect during the site's use as a dump and dumping of hazardous materials on-site is likely. The petroleum-like materials encountered in the above mentioned study were found at the level of the water table. Ground water and surface water contamination are potential hazards (see drinking water contamination).

V PRIORITY ASSESSMENT

01 PRIORITY FOR INSPECTION (Check one, if high or medium is checked, complete Part 2 - Waste Information and Part 3 - Description of Hazardous Conditions and Incidents)

- A. HIGH (inspection required promptly) B. MEDIUM (inspection required)
C. LOW (inspect on time available basis) D. NONE (No further action needed, complete current disposition form)

VI INFORMATION AVAILABLE FROM

01 CONTACT 02 OF (Agency, Organization) 03 TELEPHONE NUMBER
Michael C. Long UBSHW Utah Dept. of Health 801-538-6170

04 PERSON RESPONSIBLE FOR ASSESSMENT 05 AGENCY 06 ORGANIZATION 07 TELEPHONE NO.
Micahel C. Long UBSHW Utah Dept. of Health 801-538-6170

08 DATE

April 15, 1987

EPA FORM 2070-12(7-81)

II. HAZARDOUS CONDITIONS AND INCIDENTS

- 01 A. GROUNDWATER CONTAMINATION 02 OBSERVED (DATE: _____) POTENTIAL
03 POPULATION POTENTIALLY AFFECTED: 80,000 ALLEGED
04 NARRATIVE DESCRIPTION Hazardous materials possibly present on-site could leach into ground water. No liner was emplaced prior to opening the site as a city dump. The aquifer of concern is less than 15 feet below the surface. Drilling logs indicate that petroleum like wastes were encountered at the level of the water table.
- 01 B. SURFACE WATER CONTAMINATION 02 OBSERVED (DATE: _____) POTENTIAL
03 POPULATION POTENTIALLY AFFECTED: 0 ALLEGED
04 NARRATIVE DESCRIPTION On-site surface water could become contaminated by hazardous materials which may have been disposed of at the site during its use as a city dump. The City Drain bounds the site on the west (see Figure 1). No domestic uses of this water are known. Local fauna use it for drinking.
- 01 C. CONTAMINATION OF AIR 02 OBSERVED (DATE: _____) POTENTIAL ALLEGED
03 POPULATION POTENTIALLY AFFECTED: 500, population within 1 mile radius 04 NARRATIVE DESCRIPTION
The potential for air contamination by volatile organics exists. This pathway is considered minor, however based on the UDOT study previously mentioned.
- 01 D. FIRE/EXPLOSIVE CONDITIONS 02 OBSERVED (DATE: _____) POTENTIAL
03 POPULATION POTENTIALLY AFFECTED: 5600 (population within 1 mile radius) ALLEGED
04 NARRATIVE DESCRIPTION Gas monitoring in the 1977 UDOT study confirmed low level decomposition/fermentation activity in the on-site refuse deposits. Seven out of 43 gas probe locations consistently showed explosive gas concentrations greater than the Lower Explosive Limit. The potential hazards from explosive gas are minimal. Low levels of anaerobic biological activity indicate that very small quantities of explosive gas is being generated in the refuse deposits.
- 01 E. DIRECT CONTACT 02 OBSERVED (DATE: _____) POTENTIAL ALLEGED
03 POPULATION POTENTIALLY AFFECTED: 0 04 NARRATIVE DESCRIPTION
No potential for direct contact exists.
- 01 F. CONTAMINATION OF SOIL 02 OBSERVED (DATE: _____) POTENTIAL ALLEGED
03 AREA POTENTIALLY AFFECTED: 70 acres 04 NARRATIVE DESCRIPTION
Disposal of hazardous materials could contaminate the soil. Whether or not such disposal has occurred is unknown, however, drilling logs indicate that petroleum and chemical wastes were encountered. The area effected is the surface area of the site.
- 01 G. DRINKING WATER CONTAMINATION 02 OBSERVED (DATE: _____) POTENTIAL
03 POPULATION POTENTIALLY AFFECTED: 80,000 (see item III.IV) ALLEGED
04 NARRATIVE DESCRIPTION There are a total of 67 drinking water wells within three miles of the site. Of these, six are municipal, five are high yield non-municipal, and 56 are private wells. The municipal wells and non-municipal wells are screened at varying depths - 149 feet - 600 feet. Private wells are screened from less than 100 feet up to more than 150 feet.
- 01 H. WORKER EXPOSURE/INJURY 02 OBSERVED (DATE: _____) POTENTIAL ALLEGED
03 WORKERS POTENTIALLY AFFECTED: 3 04 NARRATIVE DESCRIPTION
Caving in of surface materials on-site where the ground has settled could be a problem. The number of workers affected is the number of city employees present on any given day at any given time.
- 01 I. POPULATION EXPOSURE/INJURY 02 OBSERVED (DATE: _____) POTENTIAL ALLEGED
03 POPULATION POTENTIALLY AFFECTED: 0 04 NARRATIVE DESCRIPTION
There is no record of exposure to hazardous materials or injury from hazardous materials.

EPA

POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
PART 3 - SITE INFORMATION AND ASSESSMENT

I. IDENTIFICATION
01 STATE 02 SITE NO.
UTD980961502

II. HAZARDOUS CONDITIONS AND INCIDENTS (Continued)

01 J. DAMAGE TO FLORA 02 OBSERVED (Date: _____) POTENTIAL ALLEGED
04 NARRATIVE DESCRIPTION Hazardous materials possibly present at the site could migrate via ground water. The water table is generally quite high in the area (0" - 30") fluctuating seasonally. Salt deposits on-site and in neighboring regions indicates that surficial discharge of ground water has occurred in the past and is therefore possible in the future. Migration of contaminants in the fashion described could therefore damage native flora.

01 K. DAMAGE TO FAUNA 02 OBSERVED (DATE: _____) POTENTIAL ALLEGED
04 NARRATIVE DESCRIPTION Several on-site surface water sources could potentially be contaminated with toxic/hazardous substances. Local fauna drinking from that water could ingest of toxic/hazardous substances. The City Drain bounds the site on the west and could carry contamination off-site thereby potentially endangering fauna off-site as well.

01 L. CONTAMINATION OF FOOD CHAIN 02 OBSERVED (DATE: _____) POTENTIAL ALLEGED
04 NARRATIVE DESCRIPTION The seven municipal wells and the six non-municipal wells are used to irrigate crops at several local farms, in addition to their use as drinking water wells.

01 M. UNSTABLE CONTAINMENT OF WASTES 02 OBSERVED (Date: _____) POTENTIAL ALLEGED
(Soils/runoff/standing liquids/leaking drums)
03 POPULATION POTENTIALLY AFFECTED: 80,000' 04 NARRATIVE DESCRIPTION
The site was used as a city dump between 1923 and 1962. No liner was emplaced prior to the property's use as a landfill. All wastes disposed of at the site were uncontained. Burning of waste was common practice; however, any remaining, unburned waste exists in an uncontained, unstable state. Some liquids were encountered in the 1977 study previously mentioned. Runoff does not appear to be a problem.

01 N. DAMAGE TO OFFSITE PROPERTY 02 OBSERVED (DATE: _____) POTENTIAL ALLEGED
04 NARRATIVE DESCRIPTION No potential for damage to off-site property exists.

01 O. CONTAMINATION OF SEWERS, STORM DRAINS, WWTPs 02 OBSERVED (DATE: _____)
04 NARRATIVE DESCRIPTION POTENTIAL ALLEGED
There is a sewer line which crosses the site in a north-south direction. Leachate from hazardous materials possibly present on-site could seep through cracks in that pipe-line, thereby contaminating it, and the WWTP receiving the wastes carried by that pipe-line.

01 P. ILLEGAL/UNAUTHORIZED DUMPING 02 OBSERVED (DATE: _____) POTENTIAL ALLEGED
04 NARRATIVE DESCRIPTION No unauthorized dumping is known of; however, the site is not adequately fenced to prevent unauthorized dumping. There is a locked gate across the access road, but the north end of the site is not fenced and potential illegal/unauthorized dumping could occur.

05 DESCRIPTION OF ANY OTHER KNOWN, POTENTIAL OR ALLEGED HAZARDS
In 1975, a UBSHW employee was inspecting the site. While walking on-site, the ground gave way under his feet and he sunk 5 feet into the ground. Caving in of surface material in areas where settling has occurred could be a problem.

III. TOTAL POPULATION POTENTIALLY AFFECTED: 80,000'

IV COMMENTS

This number is the population served by the Granger-Hunter District public water supply system. Two of their wells are located within three miles of the site. These wells are connected to the main system which serves 80,000.

V. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

Bureau solid waste file; CERCLA site file; UDOT report of July 1977: Preliminary Investigations Disposition of Garbage Materials In Abandoned Landfill.

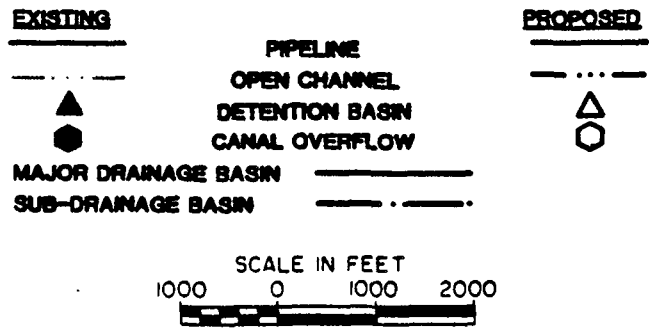
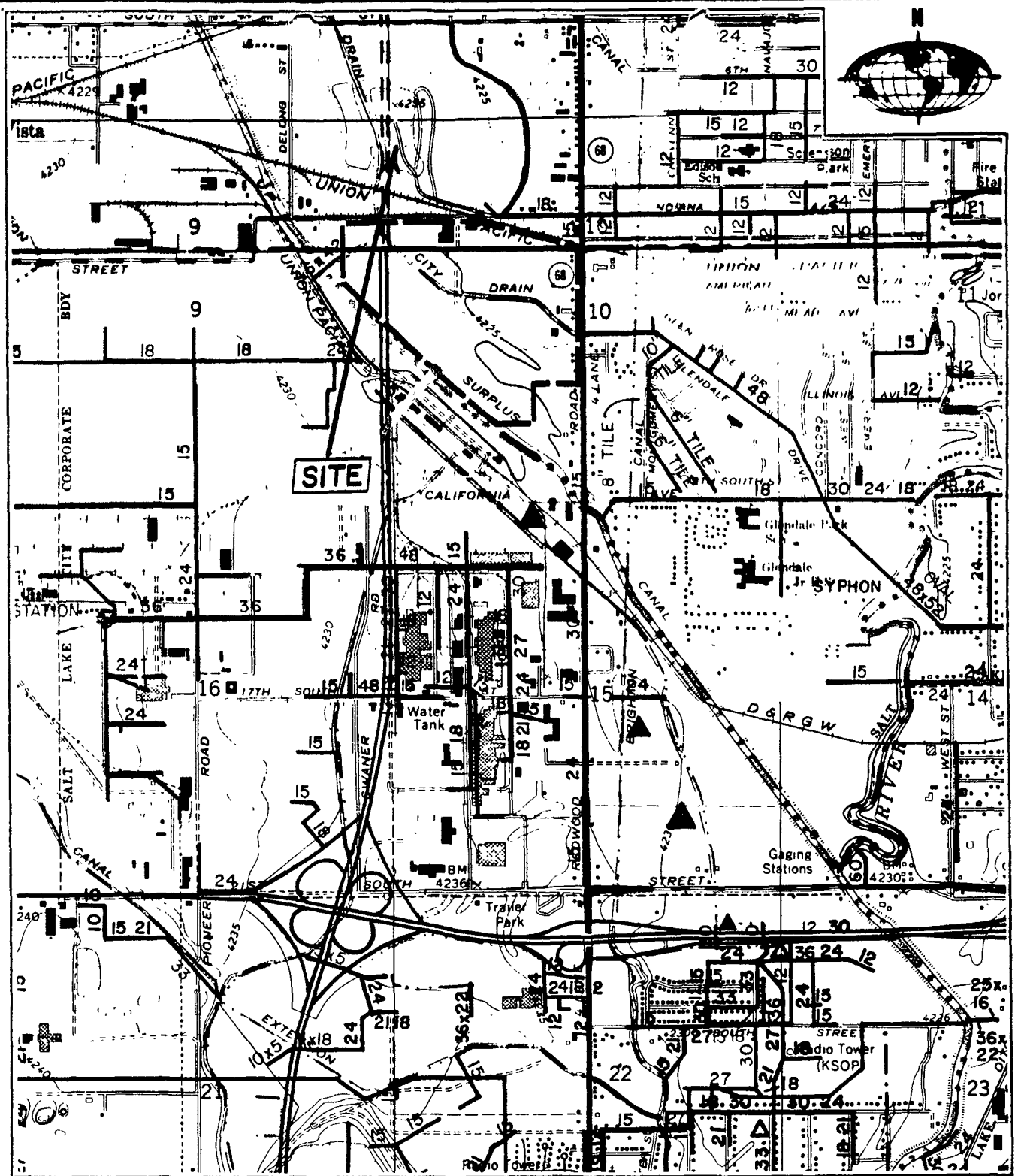


Figure 1 - Site Location
Redwood Road Dump

REFERENCE
ADAPTED FROM MAP ENTITLED "URBAN STORM DRAINAGE - EXISTING AND PROPOSED FACILITIES" AS PREPARED BY THE SALT LAKE COUNTY DEPT. OF PUBLIC WORKS - DATED SEPTEMBER, 1963.

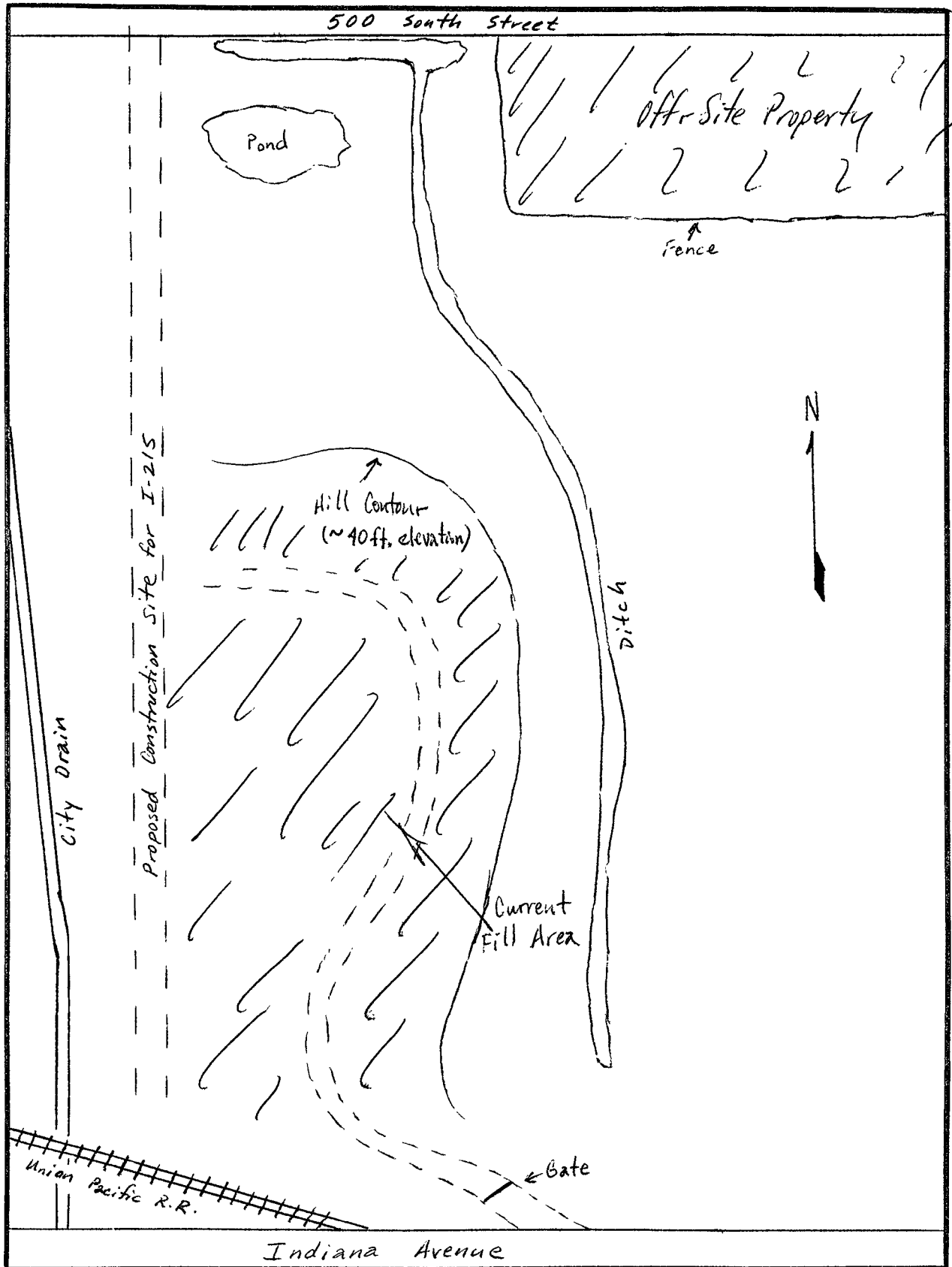


Figure 3 - Site Sketch
(Not to scale)

EPA

POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
PART 1 - SITE INFORMATION AND ASSESSMENT

I. IDENTIFICATION
01 STATE 02 SITE NO.
UTD980961502

II. SITE NAME AND LOCATION

01 SITE NAME (Logo, common or descriptive name of site)

Redwood Road Dump

02 STREET, ROUTE NO. OR SPECIFICATION LOCATION IDENTIFIER 03 CITY

2000 West Indiana Avenue

Salt Lake City

04 STATE

05 ZIP CODE

06 COUNTY

07 COUNTY CODE

08 CONG DIST.

Utah

84044

Salt Lake

004

UT-02

09 COORDINATES

LATITUDE

LONGITUDE

45 45'30.0"

111 56'30.0

10 DIRECTIONS TO SITE (Starting from nearest public road)

Proceed south on Redwood Road to Indiana Avenue (800 South). Turn west on Indiana Avenue and drive for approximately 2 blocks. Site gate is on the north side of Indiana Avenue.

III. RESPONSIBLE PARTIES

01 OWNER (if known)

Salt Lake City Corporation (Public Works)

02 STREET (Business, mailing, residential)

72 East 400 South

03 CITY

04 STATE

05 ZIP CODE

06 TELEPHONE NUMBER

Slt Lake City

Utah

84111

801-535-6131

07 OPERATOR (if known and different from owner)

08 STREET (Business, mailing, residential) 09 CITY

10 STATE

11 ZIP CODE 12 TELEPHONE NUMBER

13 TYPE OF OWNERSHIP (Check one)

A. PRIVATE

B. FEDERAL:

C. STATE

D. COUNTY

X E. MUNICIPAL

F. OTHER:

G. UNKNOWN

(Specify)

14 OWNER/OPERATOR NOTIFICATION ON FILE (Check all that apply)

A. RCRA 3001 DATE RECEIVED ___/___/___

B. UNCONTROLLED WASTE SITE (CERCLA 103c) DATE RECEIVED ___/___/___

C. NONE

IV. CHARACTERIZATION OF POTENTIAL HAZARD

01 ON SITE INSPECTION BY (Check all that apply)

X YES DATE 04/03/87

NO

(Windshield survey)

A. EPA B. EPA CONTRACTOR

X C. STATE D. OTHER CONTRACTOR

E. LOCAL HEALTH OFFICIAL

F. OTHER:

(Specify)

CONTRACTOR NAME(S):

02 SITE STATUS (check one)

X A. ACTIVE

B. INACTIVE

C. UNKNOWN

03 YEARS OF OPERATION

1923

Present

BEGINNING YEAR

ENDING YEAR

UNKNOWN

04 DESCRIPTION OF SUBSTANCES POSSIBLY PRESENT KNOWN OR ALLEGED

During a 1977 UDOT investigation, 12 out of 21 soil borings indicated that a petroleum like material was encountered. One also reported encountering chemical wastes of unknown character.