IHI ENVIRONMENTAL

September 14, 2009

Ms. Renee Zollinger
Salt Lake City Corporation
451 South State Street
Salt Lake City, Utah 84111

RE: Phase I Environmental Site Assessment - Rose Park Sports Complex Site
Approximately 2100 North Rose Park Lane, Salt Lake City, Utah
IHI Project #09E-7120

Dear Ms. Zollinger:

Attached is an electronic copy of a Phase I Environmental Site Assessment conducted at the future Rose Park Sports Complex site located at approximately 2100 North Rose Park Lane, Salt Lake City, Utah.

Recommendations for further investigations are presented in Section 10 of this report. Details of each issue are provided in the body of the text and summarized in Sections 9.

IHI Environmental would be pleased to provide you with assistance for any of these services and to answer any additional questions you may have regarding this project. Please feel free to contact Kent Wheeler or me at (801) 466-2223.

Sincerely,

Alysia M. Watanabe, REA
Senior Environmental Assessor

Enclosures

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SALT LAKE CITY SAN FRANCISCO PHOENIX DENVER SEATTLE

IHI ENVIRONMENTAL

PHASE ONE
ENVIRONMENTAL SITE ASSESSMENT

Rose Park Sports Complex Site
Approximately 2100 North Rose Park Lane
Salt Lake City, Utah

September 14, 2009

Prepared for:

Salt Lake City Corporation
451 South State Street
Salt Lake City, Utah 84111

Prepared by:

Leia Larsen
Environmental Assessor

Reviewed by:

Kent Wheeler, P.G.
Environmental Professional

Project #09E-7120

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SALT LAKE CITY SAN FRANCISCO PHOENIX DENVER SEATTLE

EXECUTIVE SUMMARY

A Phase I Environmental Site Assessment (ESA) was conducted on the Rose Park Sports Complex site located at approximately 2100 North Rose Park Lane, Salt Lake City, Utah. IHI Environmental (IHI) conducted this Phase I ESA at the request of Salt Lake City Corporation, Salt Lake City, Utah. The Phase I ESA is designed to meet the American Society for Testing and Materials (ASTM) Standard E 1527-05 for Phase I ESAs.

As part of the Phase I ESA, IHI evaluated the subject property for known or suspect environmental conditions. Environmental conditions and Recognized Environmental Conditions associated with the site are presented in Section 9 and summarized below:

Environmental Conditions

Environmental Conditions (ECs)	EC present at Site	De Minimis
Regulatory Issues - Section 5		
Adjoining or Surrounding Properties (adjoining LUST and CERCLA Sites)	Y	
Historical Issues - Section 6		
Subject Property (historical dumping on the subject property)	Y	
Adjoining or Surrounding Properties (historical issues with dumping and industrial use in immediate area)	Y	X
Inspection Issues – Section 7		
Suspect land use / suspect fill materials (adjoining industrial properties)	Y	
Non-scope Issues – Section 7.3		
Wetlands	Y	

Recognized Environmental Conditions (RECs)

This assessment has revealed no evidence of Recognized Environmental Conditions (RECs) in connection with this property, except the following.

1. Impacts from Adjoining LUST site

The east-adjoining Ricci Investment Company leaking underground storage tank (LUST) site operated a diesel underground storage tank (UST) from 1976 until 1993. Several thousand gallons of diesel fuel were released. Groundwater and soil sampling activities conducted at the site and on the subject property from 1996 until the present confirmed soil and groundwater impacts to the subject property. Currently, it appears the groundwater impacts are not present, but have been historically, and low concentrations of petroleum hydrocarbons are present in the soils. Remedial activities at the site are ongoing, although remedial activities on the subject property are unlikely.

Historical Recognized Environmental Conditions
This assessment has revealed no evidence of Historical Recognized Environmental Conditions (HRECs) in connection with this property, except the following.

1. Historical Dumping
Historical research showed dumping activities on the southeast portion of the subject property since at least the 1970s. No information was identified regarding the source of the materials placed on the subject property. IHI believes there is a low to moderate potential for soil and groundwater impacts to the subject property from the historical filling.

Other Environmental Issues
No other environmental issues were identified with the subject property that in IHI's opinion may represent business environmental risks, except the following.

1. Wetlands
According to the National Wetlands Inventory map, several wetland areas appear to be present on the subject property. While the map is based off aerial photographs and not verified by the Army Corps of Engineers, areas of hydrophilic vegetation were observed during the site inspection. In addition, LUST files reviewed at the Division of Environmental Response and Remediation (DERR) noted several Army Corps of Engineers' wetland-delineations on the easternmost portion of the subject property, near the Jordan River levee area. While not an environmental condition, wetland issues may impact future construction and development activities.

Data Gaps
No data gaps were encountered during this Phase I ESA, except the following.

1. Limited Historical Data
The earliest standard historical resource information identified was from the mid-1960s, at which time the subject property appeared to be agricultural land. An area of dumping on the southeast corner of the site was identified in the 1970s. IHI believes these limitations may affect the conclusion drawn in regards to the subject property.

Deviations
There were no deviations or additions to the ASTM Standard practice.

Additional Investigations
In IHI's professional opinion, no additional investigations are warranted, except the following.

1. Phase II Study

A Phase II Site Investigation is warranted to determine if significant impacts are present from historical dumping activities on the subject property.

2. Adjoining LUST Site

Based on remedial efforts and investigations conducted by Utah DERR, IHI does not believe any further investigation is needed regarding impacts from the adjoining LUST site; however, IHI recommends any current or future property owners cooperate with the state in its ongoing investigations. This should include the closure of the monitoring wells.

2. Wetlands

IHI recommends a wetlands delineation to determine if wetland issues have the potential to impact future development at the site.

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1.0 INTRODUCTION

On July 1, 2009, Salt Lake City Corporation retained IHI Environmental (IHI) to conduct a Phase I Environmental Site Assessment (ESA) of the future Rose Park Sports Complex site, located at approximately 2100 North Rose Park Lane, Salt Lake City, Utah. The subject property owners are listed in Section 2.0.

1.1 All Appropriate Inquiry and the ASTM Standard

The all appropriate inquiry (AAI) rule was developed to establish landowner liability protections (LLPs) for property owners under Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA, a.k.a. the "Superfund Law") as innocent landowners, bona fide prospective purchasers, and/or contiguous property owners. In order to use the LLPs under CERCLA, a purchaser must perform all appropriate inquiry before acquiring the property. Part of this due diligence is the completion of a Phase I ESA and an evaluation of the relevant and applicable specialized knowledge and experience of the User (see Section 3). Additionally, EPA requires the purchaser to meet ongoing continuing obligations if they want the LLPs. These continuing obligations are generally stated below.

1. Land Use Restrictions and Institutional Controls
Compliance with any established environmental land use restrictions.

2. Hazardous Releases
Take "reasonable steps" with respect to hazardous substance releases. Reasonable steps generally include the following:

- Stop continuing releases,
- Prevent threatened future releases, and
- Prevent or limit human, environmental, or natural resource exposure to existing hazardous substance releases.

3. Cooperation, Assistance, and Access
Provide full cooperation, assistance, and access to authorized personnel to investigate the site.

4. Compliance with Information Requests and Administrative Subpoenas
Compliance with any requests for information or administrative subpoenas issued by EPA.

5. Providing Legally Required Notices
Provide all legally required notices with respect to the discovery or release of any hazardous substances at the facility.

This Phase I ESA was prepared in accordance with the American Society for Testing and Materials (ASTM) Standard for Phase I ESAs (E 1527-05). The standard was established

and updated to reflect EPA's requirements for all appropriate inquiry (40 CFR §312) under CERCLA.

1.2 Purpose

The purpose of this assessment was to identify environmental conditions associated with the subject property, which may be characterized as "Recognized Environmental Conditions (RECs)" or "historical RECs" or may otherwise represent business environmental risks, otherwise stated in 40 CFR 312 as "conditions indicative of releases or threatened releases of hazardous substances, as defined in CERCLA."

ASTM Standard E-1527-05 defines a REC as:

> "The presence or likely presence of any hazardous substances or petroleum products on a property under conditions that indicate an existing release, a past release, or a material threat of a release of any hazardous substances or petroleum products into structures on the property or into the ground, groundwater or surface water of the property. The term includes hazardous substances or petroleum products even under conditions in compliance with laws. The term is not intended to include de minimis conditions that generally do not present a threat to human health or the environment and that generally would not be the subject of an enforcement action if brought to the attention of appropriate governmental agencies."

ASTM Standard E-1527-05 defines a Historical REC (HREC) as:

> "An environmental condition which in the past would have been considered a REC, but which may or may not be considered a REC currently. The final decision rests with the environmental professional and will be influenced by the current impact of the HREC on the subject property. If a past release of any hazardous substances or petroleum products has occurred in connection with the property and has been remediated, with such remediation accepted by the responsible regulatory agency (for example, as evidenced by the issuance of a no further action letter or equivalent), this condition shall be considered an HREC and included in the findings section of the Phase I ESA report. The environmental professional shall provide an opinion of the current impact on the property of this HREC in the opinion section of the report. If the HREC is determined to be a REC at the time the Phase I ESA is conducted, the condition shall be identified as such and listed in the conclusions section of the report."

1.3 Detailed Scope-of-Services

Elements of the Phase I ESA of the Rose Park Sports Complex site (referred to as the subject property) included the following:

1. **Site Description**
   Includes a general location and description of structure.
2. **User Provided Information**
   Describes the information provided by the Client.

3. **Interview(s)**
Interviews of selected individuals associated with the subject property and regulatory officials familiar with potential issues identified on the subject and adjoining properties.

4. **Regulatory Review**
Review of federal, state and county agency records to identify regulatory-listed sites within the prescribed ASTM minimum search distances; and reviews of specific regulatory agency records to collect pertinent information on regulated sites of concern in the vicinity of the subject property, where deemed necessary by IHI.

5. **Historical Review**
A historical review of the subject property and adjoining areas designed to identify past land uses that may have impacted the subject property. If information is available, the review will go back to 1940 or property development.

6. **Site Reconnaissance**
The site reconnaissance is conducted to visually evaluate the subject property for the presence of environmental conditions.

7. **Written Findings, Opinions, Conclusions, and Recommendations**

A summary of informational resources used for the project is presented in Section 12 of this report. A glossary of terms and a list of acronyms used in this report are presented in Appendix 4.

1.4 Significant Assumptions

As per the ASTM Standard, IHI assumes the information obtained from the record review and other third-party sources, including existing reports, is reliable; however, IHI does not warrant or guarantee that the information provided by these other sources is reliable.

1.5 Limitations and Exceptions

This Phase I ESA was performed using the practices specified in ASTM E 1527-05 and a level of diligence typically exercised by environmental consultants performing similar services. The ASTM standard recognizes that the level of inquiry is variable, not exhaustive, dependent upon professional judgment, and that no environmental site assessment can wholly eliminate uncertainty regarding the potential for RECs in connection with a property. Accordingly, IHI's level of diligence and investigative procedure are intended to reduce, but not eliminate, potential uncertainty regarding environmental conditions and RECs at the site.

The ASTM standard attempts to establish a balance between the competing goals of limiting investigative costs and time and reducing the uncertainty about unknown conditions. Therefore, because the conclusions in this report were derived within the scope, cost, time,

and other limitations, the conclusions should not be construed as a guarantee that all RECs, or other environmental conditions associated with the property were identified. Furthermore, IHI assumes no responsibility for omissions or errors resulting from inaccurate information provided by sources outside of IHI or from omissions or errors in public records. As per the ASTM Standard, this report will remain valid for 180 days from the date of issue.

1.6 Special Terms and Conditions

No special terms or conditions were associated with this report.

1.7 User Reliance

IHI believes that the User (Salt Lake City Corporation) and its affiliated entities can rely on the information contained in this report. This information was obtained using procedures and protocols as defined in ASTM Standard E 1527-05 and that the information presented in the report represents the conditions of the subject property at the time the Phase I ESA was performed. Section 4.5 of the ASTM Standard outlines the principles on which this reliance is based. This reliance is subject to the terms, conditions, and limitations of the original contract under which the report was prepared.

2.0 SITE DESCRIPTION

The subject property consists of following parcels:

Parcels Owned by Provo-Jordan River Parkway Authority

Parcel ID No.	Address	Acreage
08-15-100-010	Approximately 1863 West 2451 North	29.89
08-15-351-002	Approximately 1921West 2199 North	85.48
08-22-100-001	1835 North Redwood Road	31.46
08-22-100-009	1905 North Redwood Road	0.18
08-22-100-002	2101 North 1750 West	0.81
08-15-376-007	2150 North 1750 West	1.07
08-15-376-003	2180 North 1750 West	1.66
08-15-376-002	2311 North Redwood Road	0.97
08-15-327-002	2250 North 1750 West	1.89
08-15-327-001	2270 North 1750 West	0.57
08-15-100-016	2407 North Redwood Road	0.41
08-15-100-011	2409 North Redwood Road	2.56

Parcels Owned by Salt Lake City

Parcel ID No.	Address	Acreage
08-15-376-009	2151 North Redwood Road	0.24
08-15-376-001	Approximately 1823 West 2295 North	0.66
08-15-326-001	Approximately 1845 West 2295 North	3.50
08-15-401-011	2309 North Redwood Road	0.60

Parcels Owned by Utah Division of Parks and Recreation

Parcel ID No.	Address	Acreage
08-15-100-009	Approximately 2503 West 2445 North	2.40
08-15-301-004	2349 North Rose Park Lane	12.62

Parcel Owned by Leone K. Hill et al.

Parcel ID No.	Address	Acreage
08-15-351-003	2223 North Rose Park Lane	6.10

Location maps are presented in Appendix 1. The total acreage of the subject property parcels is 183.07 acres. Access to the property is from Redwood Road and Rose Park Lane. The subject property is located immediately east of Interstate 215. The Client provided copies of the Commitments for Title Insurance that include legal descriptions (Appendix 2).

2.1 Site and Vicinity General Characteristics

The subject property is located within a residential and industrial area in the north portion of Salt Lake City. Surrounding properties include residential neighborhoods, a water reclamation plant, oil refineries, horse properties, a heavy equipment auctioneer, and an off-highway vehicle course.

2.2 Current Use of the Property

The subject property is currently used as agricultural land, undeveloped land, and an airport for model airplanes. Photographs of the subject and adjoining properties are attached.

2.3 Descriptions of Structures and Improvements

Figure 4 (Appendix 1) shows the general layout of the subject property. One wooden shelter building, a vault toilet building, and a pole-built shelter structure are located on the subject property (Photographs 3 and 4) at the model plane airport. The County Assessor does not have construction dates or building information for the structures due to the parcel's tax-exempt status; however, according to Mr. David Wagner, Park Manager, the model plane

airport shelter structures were constructed in the late 1980s, and the vault toilet building was added in the early 1990s. The wooden shelter building and the vault toilet building are constructed of wood on concrete slabs. The pole-built structure is constructed of wood and steel on a concrete slab. None of the buildings are connected to water supplies or wastewater disposal systems.

The model plane airport has an asphalt-paved parking area, asphalt-paved access road, and asphalt-paved runway. The remaining subject property has no permanent structures or improvements. Dirt trails are present to the west of the length of the Jordan River. A levee area, wetland area, and trail are present to the east of the Jordan River. A stone-bermed pathway is present along the south portion of the property.

2.5 Current Uses of the Adjoining Properties

The adjoining properties are described below. Any identified environmental conditions that were potentially impacting the subject property are described in Section 7.

Adjoining Properties

North	An undeveloped property owned by Brent Sainsbury and state land used as an off-highway vehicle driving terrain border the north boundary (Photograph 5).
South	A residential subdivision and Northwest Middle School border south boundary (Photograph 6).
East	From north to south, the east-adjoining properties include undeveloped land, TNT heavy-equipment auctions (Photograph 7), Lone Star Transportation trucking, Brambade Trucking, Stallion Tank tank cleaning and machinery repair (Photograph 8), Baker Corporation, Sunstate heavy equipment rentals, Crossroads West Auto Transport, Rocky Mountain Truck Climate Systems, Utah Animal Adoption Center, and undeveloped land.
West	Rose Park Lane borders the west boundary. Beyond Rose Park Lane is the City Drain Canal, followed by horse properties, Interstate 215, and a city pumping station (Photograph 9).

2.6 Physical Setting

Surface topography of the subject property is generally flat. The elevation is approximately 4,215 feet above sea level (USGS Topographic Map, Salt Lake City North, Utah Quadrangle; Appendix 1; Figure 3).

2.7 Local Geology and Hydrogeology

In general there are four aquifer systems in the Salt Lake Valley: 1) a shallow unconfined (water-table) aquifer; 2) a deep unconfined (water-table) aquifer near the mountains; 3) a

deep confined (artesian) aquifer in the center of the valley; and 4) locally perched aquifers. The two deep aquifers are generally referred to as the principal aquifer (Waddell, et al, TP-89, 1987).

Where present, the shallow water-table aquifer is typically five to fifteen feet below ground surface (bgs). Groundwater flow in the water table aquifer is generally toward the Jordan River (Seiler and Waddell, 1984). The deep artesian aquifer is typically present below 100 feet bgs in the center of the valley. The deep water-table aquifer is commonly greater than 100 feet bgs on the margins of the valley where it is the first groundwater encountered.

Subsurface investigations conducted on east-adjoining properties (see Section 5.3) indicated the groundwater level was 3 to 6 feet below ground surface. Hydraulic groundwater direction was described as west; however, groundwater flow is likely influenced by the Jordan River, which flows through the easternmost portion of the subject property. The City Drain Canal is present along the west boundary of the property.

3.0 USER OR CLIENT PROVIDED INFORMATION

As outlined in 40 CFR §312, Users cannot avail themselves of the Landowner Liability Protections (LLPs) provided to property owners who have conducted all appropriate inquiry (AAI), unless they have taken into account the relevant and applicable specialized knowledge and experience of the User. These additional inquiries are required to be conducted by the User and provided to the environmental professional. These inquiries include:

- Identification of environmental cleanup liens against the subject property, if not otherwise obtained by the environmental professional;
- Identification of any Activity and Use Limitations (AULs), such as engineering controls, land use restrictions, or institutional controls;
- Consideration of the purchase price to the fair market value of the property;
- Specialized knowledge or experience regarding the subject property;
- Commonly known or reasonably ascertainable information regarding the subject property, if not otherwise obtained by the environmental professional; and
- Obvious contamination on the subject property.

This Phase I was prepared for Salt Lake City, which is a current Owner of a portion of the property (see Section 2.0). As such, any future User should evaluate their knowledge of any relevant and applicable specialized knowledge or experience regarding the subject property.

The User (Salt Lake City) noted that apart from land use restrictions on parcels along the Jordan River, they did not have any relevant and applicable specialized knowledge or experience regarding the subject property. A copy of their completed User Questionnaire attached in Appendix 2.

Salt Lake City conducted interviews with Mr. Dale Christensen and Mr. Jeff Niermeyer, Wastewater Treatment Plant Managers, regarding suspected biosolids observed in a 1993 aerial photograph during IHI's historical review (see Section 6.0). Both Mr. Christensen and Mr. Niermeyer stated that, to their knowledge, no biosolids or other wastes from the reclamation plant had been deposited on the subject property. Mr. Christensen has worked at the plant since 1989.

3.1 Owner, Key Site Manager, and Occupant Information

The identified owner representatives for the Provo-Jordan River Parkway Authority parcels and the Utah Division of Parks and Recreation parcels are Ms. Susan Zarekarizi and Mr. Eric Stucki. The identified owner representative for the Salt Lake City-owned parcels is Mr. Duran Lucas. The identified owner representative for the Leone K. Hill et al. parcel is Ms. Lola Christensen. Mr. David Wagner, Park Manager, was identified as the Key Site Manager for the state-owned parcels. Mr. Wagner also works at the property.

3.2 Reason for Performing Phase I ESA

This Phase I ESA was performed to assist the User in qualifying for Landowner Liability Protection (LLP) from CERCLA Liability.

3.3 User/Client/Owner Provided Documents

Below is a summary of relevant non-public reports provided by the User, Client, or Owner. Portions of these previous environmental studies may have been relied upon for this report. Further discussion of the findings of these reports is presented in the pertinent sections. Copies of relevant portions of documents with applicable information are provided in Appendix 2.

Commitments for Title Insurance
No environmental liens or AULs were noted in Sections 2b – Exception to Title.

3.4 Commonly Known or Obvious Issues

Neither the User nor IHI was aware of any commonly known, reasonably ascertainable information or obvious issues that are not identified in the text of this report.

4.0 INTERVIEWS

4.1 Interview with Owner

The subject property consists of multiple parcels owned by individual property owners. All available property owners were interviewed, and copies of owner questionnaires are included in Appendix 5. Interviews were conducted between July 16, 2009, and August 17, 2009. All owners interviewed stated that they have owned their respective properties for at least 15 years and were not aware of any pending, threatened, or past litigation, administrative proceedings, or notices from any governmental entity relating to hazardous substances, petroleum products, or other environmental issues associated with the property.

The owner representative for the state-owned parcels, Mr. Eric Stucki, noted issues associated with wells, septic tanks/leach fields, and utility corridors. In a follow-up interview, Ms. Susan Zarekarizi noted that these issues are associated with an irrigation well, a vault toilet, and power lines/municipal waterlines, respectively. IHI does not believe these issues represent environmental concerns.

Other information provided by property owners regarding past uses of the subject property parcels is summarized in Section 6.0.

4.2 Interview with Key Site Manager

The Utah State Park Manager, Mr. David Wagner, was identified as the Key Site Manager and was interviewed during the site reconnaissance. Mr. Wagner has been park manager for one year and was not aware of any environmental issues associated with the property. He noted occasional illegal dumping on the property, but stated he was not aware of any hazardous materials, drums, or sludge materials dumped on the property. Other information provided by Mr. Wagner is included in Section 7.0.

4.3 Interviews with Occupants

Mr. Wagner also works at the property.

4.4 Interviews with Local Government Officials

For local agency information on the subject property, IHI contacted the Salt Lake City Fire Department to determine if the fire department had responded to any environmental incidents near the subject property. At the time of report completion, IHI had not heard from the fire department; however, if relevant information is found, it will be sent as an addendum to this report.

IHI contacted Mr. Bill Reese, Project Manager at the Division of Environmental Response and Remediation, regarding the nearby Northwest Oil Drain CERCLA site. Mr. Reese stated that he did not have any information beyond what was contained in the DERR files.

IHI also contacted Ms. Melissa Turchi, DERR Project Manager, regarding the adjoining Ricci Investment Company leaking underground storage tank site. Information provided by Ms. Turchi is included in Section 5.3.

4.5 Interviews with Others

IHI contacted Mr. Brent Sainsbury, owner of a north-adjoining property, regarding fill material deposited on the subject property due to border disputes. Information provided by Mr. Sainsbury is included in Section 7.0.

5.0 RECORDS REVIEW

The following section reviews regulatory databases, reports in the public record, and other non-regulatory reports provided by the User, Client, and or property owner that are potentially relevant.

5.1 Environmental Regulatory Record Sources

A search report of environmental regulatory lists was obtained from Environmental FirstSearch, Inc. (EFS) and reviewed by IHI to identify Federal, State and Tribal regulated facilities in the area. A copy of the database report is included in Appendix 3. A summary of the database report results is provided below.

Regulatory Database Results

Regulatory Database	Approximate Search Radius	Federal # of sites	State # of sites
NPL- Superfund (listed, delisted, and proposed)	1 mile	0	0
CERCLIS / CERCLIS NFRAP Sites	0.5 miles	2	0
CORRACTS (RCRA Corrective Action) Sites	1 mile	2	NA
RCRA TSD Sites	0.5 mile	0	NA
RCRA Generator Sites	sub & adjoining	0	NA
Institutional Control List	subject	not established	not established
ERNS Sites	subject	0	NA
Landfill/Solid Waste Disposal Site List	0.5 mile	NA	0
Leaking Underground Storage Tank List	0.5 mile	NA	4
Underground Storage Tank List	sub & adjoining	NA	4
VCP and Brownfields	0.5	NA	1

Additional regulatory research was conducted for selected sites that were considered by IHI to be potential sources of contamination for the subject property. Copies of relevant reports are provided in Appendix 5. In general, additional review was considered warranted due to: 1) close proximity of the site to the subject property; 2) location hydrologically up gradient from the subject property; or 3) facility status reports in the database (such as violations or groundwater impacts), indicating a potential for extensive environmental impacts. Findings from any additional research are discussed in Sections 5.2 through 5.4.

5.1.1 Additional Regulatory Sources

In addition, the Utah Division of Environmental Response and Remediation website's Interactive Map of regulated sites was reviewed for sites within the subject property area.

5.1.2 Non-public Environmental Reports

No relevant non-public reports were reviewed.

5.2 Subject Property Findings

The subject property was not identified on any of the regulatory lists reviewed during this investigation.

5.3 Adjoining Property Findings

The **Ricci Investment Company LUST site** (Facility ID #4000796, Release ID IIW) was identified on an east-adjoining property at 2021 North Redwood Road. According to files reviewed at DERR, the site was investigated from 1994 to 1996 due to a release of diesel fuel

detected in November 1993. The release was detected during the closure of a 12,000-gallon UST, which was installed in 1976. Investigations conducted in September 1994 noted a sheen of light non-aqueous phase liquid (LNAPL) and petroleum odors. The release volume was estimated to be several thousands gallons of diesel fuel. The release was suspected to have also resulted from waste oil or transformer oil; however, no PCBs or chlorinated hydrocarbons were present in samples collected at the site.

In 1996, LNAPL was removed from the excavation using a vacuum truck. An up-gradient sump and monitoring pits were installed at the site and on the subject property's Jordan River Parkway to facilitate additional LNAPL removal. Over 3,500 gallons of LNAPL were removed during skimming activities, and a private contractor conducted air-sparging of the contaminated groundwater. Migration of the impacted groundwater was thought to be affected by the presence of a septic leach field north of the release area, which was suspected of altering the natural hydraulic gradient. No petroleum hydrocarbons were observed in the Jordan River.

A risk assessment dated January 1996 indicated that the source of the impacts had been eliminated and recommended no further action at the site; however, DERR responded with a request for additional investigation in August 1999, January 2000, and April 2000. The additional investigations included monitoring water levels and sampling groundwater from test pit wells.

A subsurface investigation conducted in August and September 2003, which included groundwater well installation and sampling (seven of the monitoring wells are located on the subject property), suggested that impacted soils and groundwater extended from the source area into the wetlands area located on the subject property. Groundwater at the site is listed at 5.5 to 9 feet below ground surface, flowing to the west-southwest.

IHI interviewed Ms. Melissa Turchi, DERR Project Manager for the site, who confirmed that both soil and groundwater impacts have been identified on the subject property; however, she stated that the plume area has been delineated and that the subject property impacts are low. Historical groundwater samples detected benzene impacts up to 5.9 mg/l, and TPH-DRO impacts up to 4,600 mg/L; however, no impacts have been detected in the last two sampling

events, with the exception of 0.35 ug/l of MTBE, which is well below the action levels of 200 ug/l. The most recent sampling results, conducted in 2008, are included in Appendix 5.

Ms. Turchi stated that future plans at the site include the removal of soil impacts and ongoing groundwater monitoring. Maps showing the plume area and the specific locations of monitoring wells on the subject property are included in Appendix 5.

The **Energy Express, Inc. LUST site** (Facility ID #4000276, Release ID IXM) was identified on an east-adjoining property at 2125 North Redwood Road. According to files reviewed at DERR, aboveground storage tanks containing diesel fuel were removed from the site in September 1988, and the soil below the AST area was over-excavated. Soil was stockpiled on site, and the excavation was left open. A release was reported to the state in April 1995 based on a site inspection conducted by the Salt Lake County Health Department, and the excavation area was closed. In November 1995, monitoring wells were installed at the site and soil samples collected. Groundwater samples showed no indication of impacts. Soil samples showed contamination at nine feet below grade; however, levels were low. Based on the industrial use of the property and surrounding area, the site was closed by DERR and issued "No Further Action" status in January 1998. Groundwater at the site was listed at 3 to 6 feet below ground surface, flowing to the west. Based on the regulatory status of the site and lack of groundwater impacts, IHI believes this adjoining site represents a de minimis condition.

The **Sunstate Equipment LUST site** (Facility ID #4001471, Release ID JSE) was identified on an east-adjoining property at 2051 North Redwood Road. According to files reviewed at DERR, a 550-gallon underground storage tank was permanently closed and removed from the site in July 1996. Low levels of petroleum hydrocarbons were detected in closure samples, and a release was reported to the state in August 1996; however, DERR concluded that levels of detectable petroleum contamination complied with state rules, and the site was closed and issued "No Further Action" status. Based on the regulatory status, IHI believes this adjoining site represents a de minimis condition.

The **City Drain Pumping Station UST site** (Facility ID #4001371) was identified on a west-adjoining property. According to DERR records, one 10,000-gallon diesel UST made of fiberglass-reinforced plastic is currently present at the site. The UST was installed in March

1987. No releases have been reported at the site. As such, IHI does not believe it represents a significant environmental concern.

5.4 Surrounding Area Findings

The **Portland Cement Kiln Dust Site #4 CERCLIS site** (Facility ID #UTD980952824) was identified approximately 120 feet from the subject property, beyond Redwood Road, at 1850 North Redwood Road, and comprises 5.27 acres. Approximately 68,000 cubic yards of waste cement kiln dust were deposited on 60 acres in various areas in the Salt Lake Valley. The dust is highly alkaline and contains trace quantities of heavy metals. Site #4 is currently occupied by an industrial property, and the waste at the site is located below a parking lot that has been topped with clean backfill. Impacts were not found to have migrated off site, and the site was issued "No Further Remedial Action Planned" status by EPA in 1990. A removal sampling event was conducted on the site in 1993, which found little documented evidence of a release at Site #4. Based on the distance and regulatory status, this site is not expected to represent a potential source of environmental impact to the subject property.

The subject property is located in the area of the **Northwest Oil Drain** (Facility ID #UTD980667000), which was identified as a CERCLIS site and a Voluntary Cleanup Program (VCP) site (VCP ID #C035). The Northwest Oil Drain covers over five miles of canals; the north portion and east branch are still operating as storm and wastewater canals. The system of canals eventually discharges into the Great Salt Lake.

According to files reviewed at DERR, a 1980 investigation of the Rose Park area resulted in a geophysical survey identifying the location of canals located below ground in the Rose Park neighborhood. EPA investigations in 1982 (DERR, 1991) identified the impacts from the canal as being approximately 40 feet wide by 10 feet deep. The Oil Drain Canal was approximately 20 feet wide, 10 feet deep, with a band of sludge extending beyond the canal walls as far as 10 feet on each side. Drilling revealed the sludge material was at an average depth of four feet. Four sludge and soil samples collected from residential crawlspaces showed a maximum concentration of lead at 5,000 parts per million (ppm), copper at 169 ppm, and arsenic at 105 ppm. Heavy oil interfered with analysis for volatile organics, pesticides, and PCBs. Some polynuclear aromatic hydrocarbons were found in the ppm range.

A 1987 Preliminary Assessment identified substances of concern based on potential sources discharging into the Oil Drain Canals. However, the report gave the site a low priority based on the apparent immobile nature of the sludges within the canals (DERR, 1991).

In 1998, the EPA sampled along the length of the Northwest Oil Drain and presented the results in an Expanded Site Characterization (ESC) (EPA, 1999). The ESC looked at sediments, soils, sludges, groundwater, surface water and indoor air along portions of the NWOD. The ESC divided the NWOD into four sections:

1. A 0.75 mile section on the west boundary of the Union Pacific Rail Yard (This section has been remediated through the Utah Voluntary Cleanup Program and issued a Certificate of Completion);
2. The buried portion of the canal passing underneath I-15 and under a developed residential neighborhood and school;
3. A predominantly dry 0.25-mile section of the canal north of the Rose Park tennis courts and extending to the wastewater treatment plant out fall at Boy Scout Drive; and,
4. An 8.6-mile segment of the canal that is flowing and ending at the Farmington Bay Waterfowl Management Area.

Because the impacted soils are believed to be buried, exposure was thought to be limited, and the report recommended No Further Action with regards to the impacted soils. However, the report did recommend educating the public to encourage them to not excavate soils in the former NWOD footprint.

Groundwater impacts are possible because the water table is above the sludge. However, limited groundwater monitoring did not show significant impacts, and no further studies were recommended.

The City Drain Canal, which is present along the east boundary of the subject property, appears to flow into the Northwest Oil Drain approximately one mile north of the subject property. No issues were identified with the City Drain Canal in the DERR files. Based on the distance and down-gradient location with respect to the subject property, IHI does not believe this site represents a potential source of environmental impact to the subject property.

The **Radio Station Property CERCLA NFRAP site** (Facility ID #UTD988066031) was identified approximately 0.25 miles east of the subject property, at 1500 West 2300 North.

According to files reviewed at DERR, the site consists of 48 acres and three properties. Between 1976 and 1978, 30 piles of spent sludge were dumped at the site. The sludge was generated at the Flinco oil refinery at 1628 North Chicago Street in Salt Lake City. The refinery recycled waste oils using an acid-clay process. Spent clays were neutralized with lime. The Utah Bureau of Solid and Hazardous Waste investigated the site in September 1980 and conducted a joint inspection of the site in October 1988 with the Salt Lake County Health Department.

In March 1990, DERR installed five monitoring wells at the site. DERR then conducted a site investigation at the site in April 1991, which noted 3,500 cubic yards of sludge, 1,000 cubic yards of oily waste, and 4,000 cubic yards of heavy metals. The sludge was located near the Oil Drain Canal on the east boundary of the site. DERR collected samples of soil, sediment, sludge, surface water, and groundwater at the site, which were analyzed for metals, volatiles, and semivolatiles. All sludge samples and samples collected from a groundwater monitoring well contained organic compounds and high levels of heavy-metals, including lead and arsenic.

According to an EPA letter in DERR files dated April 1994, EPA concluded investigations at the site due to a lack of human receptors at the site. A DERR letter dated August 1994 stated that the state had no authority to compel a Superfund cleanup at the property, and, if property owners wished to conduct cleanup on their own, they could enter into a voluntary agreement with DERR. According to the EFS report, EPA archived the site in September 1993.

Several other regulatory-listed properties were identified within one mile of the subject property. Based on the distances and anticipated groundwater flow directions of these sites with respect to the subject property, none of these sites are expected to represent a potential source of environmental impact to the subject property.

6.0 HISTORICAL RECORDS REVIEW

The following section reviews standard and non-standard historical records, to develop a history of the previous uses of the property and surrounding area, in order to help identify the likelihood of past uses having led to recognized environmental conditions in connection with the property.

6.1 Standard Historical Records

Historical aerial photographs for the years 1966, 1976, 1986, 1996, and 2008 were reviewed at the Olympus Aerial Photo Office, Salt Lake City, Utah. Historical aerial photographs for the years 1993 and 2006 were reviewed on the Google Earth aerial photograph website. Salt Lake City provided a historical aerial photograph for the year 1970 (Appendix 2).

Sanborn Fire Insurance Maps were reviewed at the Utah Historical Library, Salt Lake City, Utah. The maps did not provide coverage for the subject property.

The historical topographic map for Salt Lake City North, Utah, dated 1975, was reviewed.

R. L. Polk Directories were reviewed at the Utah Historical Society Library, Salt Lake City, Utah, for the years 1936, 1940, 1952, 1961, 1972, 1982, 1985, 1993, and 1998. For the years 1936-1985, the directories did not provide coverage for the area of the subject property.

6.1.1 Additional Historical Record Sources

The property owner representatives (see Section 4.1) noted that, to their knowledge, their respective properties have historically been undeveloped land and/or open space. The owners of the state parcels indicated that the model plane airport was developed in the 1980s.

6.2 Historical Use Information Findings

Presented below is a detailed chronological summary of the subject, adjoining, and area's land uses.

Historical Summary

1960s In a 1966 historical aerial photograph, the majority of the subject property appeared to be undeveloped agricultural land. Small buildings appeared to be present on the southeast corner of the property, to the west of the Jordan River. The buildings were likely small residential buildings or sheds. An area of debris or construction storage was present on the west boundary of the property, near the current city pumping station. The north-adjoining property appeared to be undeveloped agricultural land. A canal was visible along the south boundary of the property, in a similar location to the current raised pathway, and was followed by agricultural land. A junkyard was visible on the northern east-adjoining property. A large commercial building was visible on the central portion of the east-adjoining property, in the current location of one of the TNT heavy equipment auction buildings. A small commercial building was also visible on the southern east-adjoining property. The remaining east-adjoining properties appeared to be agricultural land. Redwood Road and the city water reclamation plant were visible farther to the east. The City Drain Canal was visible along the west boundary of the property, and was followed by agricultural land and scattered residences. A dairy farm or horse stables property appeared to be present on the northern west-adjoining property.

1970s In a 1970 historical aerial photograph, the buildings on the southeast corner of the subject property appeared to have been removed from the site; however, a small building was visible on the northeast portion of the property, to the west of the Jordan River. Only a trace of the construction material or debris was visible on the southwest portion of the site. Interstate 215 was visible under construction to the west. The west-adjoining residences appeared to have been cleared. There were no other major changes to the subject property or adjoining properties when compared with the 1966 photograph. In a 1976 historical aerial photograph, the construction debris was no longer present on the west boundary of the property. A building was added to the area that was likely the city pumping station. An area of serpentine fill was visible on the southeast corner of the property. Some debris or storage also appeared to have been added to the west-adjoining property. There were no other major changes to the subject property or adjoining properties when compared with the 1970 photograph.

1980s In a 1986 historical aerial photograph, all buildings formerly observed on the subject property were no longer present. The model plane airport appeared to have been recently added to the central portion of the property. The area of serpentine fill was still visible on the southeast portion of the property. The north- and south-adjoining properties were agricultural land. The east-adjoining properties appeared to be mostly industrial. Several buildings were added, and the junkyard appeared to have expanded. The residential properties on the west-adjoining properties appeared to have been demolished, and Interstate 215 was under construction. The city pumping station was visible.

1990s An August 1993 historical aerial photograph showed areas of windrowed materials immediately north of the road bisecting the southern corner of the site. The area of serpentine fill was also visible in the southeast corner of the property. The windrows appeared similar to patterns of bio-solids drying areas at the nearby sewer plant; however, because the windrows were only present for a very short period of time, they were likely windrows of hay. A 1993 city directory listed S.S. Franklin Estimating Systems, Petrolane Warehouse, Petroleum International gas tank cleaning, Metro Oil Products Inc. oil and lubricant dealers, Jensen and Crowell CPAs, Coles Plant Soils garden and lawn implement dealers, and Natures Original rock mineral and lapidary equipment on the east-adjoining properties. There were no listings for the subject property or remaining adjoining properties.

In a 1996 historical aerial photograph, the northern two-thirds of the subject property appeared to be unused land, apart from the model plane airport. The remaining property appeared to be agricultural land. Only a faint outline of the windrow area was visible on the southeast corner of the property; however, the serpentine fill area was still present. The north-adjoining property appeared to be unused land with several winding dirt roads. The area may have been used as an off-highway vehicle course at this time. The south-adjoining property appeared to be agricultural land. There were no major changes to the east-adjoining property when compared with the 1986 photograph. Interstate 215, a dairy farm or horse stables, the city pumping station, and the City Drain Canal were visible on the west-adjoining properties. A 1998 city directory listed Sm Foreign Auto Wrecking, Seagull Enterprises auto repair, Truckers Express Trucking, Alpha Transport, Laidlaw Environmental Services, Sunstate Equipment Co. heavy construction equipment rental, Trench Safety Equipment, Franklin Masoners, Lowis Rock Shop, and Natures Originals gift shop on the east-adjoining properties. There were no listings for the subject property or remaining adjoining properties.

2000s A historical aerial photograph for the year 2006 showed the area of the serpentine fill and the area of the former windrows on the southeast corner of the subject property as heavily

vegetated. The 2006 aerial photograph also showed a large area of fill dirt near the north boundary of the property. According to Park Manager Mr. David Wagner, the soil has been stockpiled to create a sound barrier for the adjoining off-highway vehicle terrain park. The east-adjoining junkyard appeared to have cleared half its operations, and it no longer adjoined the subject property. A 2008 aerial photograph showed the subject property and adjoining properties as they appeared during the site inspection.

Summary In all the photographs, maps, and directories reviewed, the subject property was historically used for agricultural purposes since at least the 1960s. Small sheds or residential buildings may have been present on the north and south portions of the property, to the west of the Jordan River, in the 1960s and 1970s. The current model airplane airport was added to the site in the 1980s, and most of the property ceased agricultural operations around this time.

Evidence of possible windrows was visible on the south end of the property at approximately 1800 North in the Google Earth aerial photograph date August 1993. Additional historical aerial photographs were reviewed at Olympus Aerial, dated March 1986, 1990, 1992, 1993, 1994, 1995, and 1996. The windrow pattern was not present in these photographs. Salt Lake City conducted interviews with Mr. Dale Christensen and Mr. Jeff Niermeyer, Wastewater Treatment Plant Managers, who stated that, to their knowledge, no biosolids or other wastes from the reclamation plant had been deposited on the subject property. Based on the date of the Google aerial photograph (Aug 13, 1993), the historical agricultural use of the property, and the information provided by the City, IHI believes the windrowing observed was from a haying operation and not industrial wastes.

Winding or serpentine patterns of fill dirt on the southeast corner of the site, which are currently present, were visible in all these aerial photographs reviewed from the 1970s until the present (Figure 5). The source of this fill material could not be identified.

Several industrial properties began adjoining the subject property to the east, beginning in the 1970s. Suspect-adjoining properties included large auto repair facilities, heavy-equipment auctioneers and rental facilities, and a tank cleaning and equipment repair business. Three LUSTs were identified at these east-adjoining sites in the 1990s (see Section 5.3). Other adjoining properties have historically included agricultural land, a city water pumping station, and scattered residences. However, no historical information was identified

suggesting the subject properties were impacted by these adjoining properties, with the exception of the LUST sites discussed in Section 5.3.

7.0 SITE RECONNAISSANCE

On September 9, 2009, Ms. Leia Larsen and Ms. Ashley Pizzello, Environmental Assessors, IHI, walked the surface of the area as part of the visual reconnaissance of the subject property. As per the ASTM Standard, this report does not warrant that all areas were visually inspected. Areas that may not have been observed include weedy, overgrown areas. Due to the size of the property, the entire surface could not be inspected. The property was mainly observed from the boundaries and access trails. The entire model plane airport area of the property was closely inspected.

If a potential environmental issue was present that did not warrant any further consideration, it was described as not a significant environmental condition or a significant issue. These issues are not further discussed. Other environmental issues that may warrant some consideration, but, in IHI's opinion are de minimis and do not present a threat to human health or the environment, and generally would not be the subject of an enforcement action if brought to the attention of the appropriate governmental agency, are described as de minimis conditions. If a de minimis condition is identified, IHI has provided an opinion to support this finding in this section (Section 7). Opinions and conclusions on all other identified environmental conditions that represent a REC, a HREC, or environmental conditions that IHI believes represent business environmental risk are discussed in Section 9.

Mr. Wagner provided access to the property. At the time of the site inspection, the subject property was undeveloped, unused land apart from a model plane airport located in the central portion of the property and a small area of agricultural land located on the west boundary of the property. The model plane airport consisted of an asphalt-paved parking area, asphalt-paved runway, an enclosed wooden shelter building, a pole-built shelter building, and a vault toilet building. Dirt paths were present to the west of the Jordan River, and a raised pathway was present along the south boundary of the property. The subject property also included a levee and wetland area located to the west of the Jordan River. As part of the inspection, the property boundaries and activities on adjoining properties were specifically observed.

The subject property was inspected for the following potential environmental issues.

1. Poor housekeeping issues
2. Suspect land use and suspect fill materials
3. Poor handling and disposal practices of hazardous substances including stains, corrosion, stressed vegetation, and odors
4. Industrial wastewater system including septic systems, vaults, wash downs, drywells, surface water impoundment, etc.
5. Improper storm or surface water management
6. Improper on site or offsite disposal of industrial wastewater including ponds pits or lagoons
7. Monitoring wells, remediation system, or other evidence of past or ongoing releases
8. Storage and use of suspect hazardous substances and wastes
9. Storage tanks (ASTs and USTs) used for the storage of hazardous substances
10. Leaking hydraulic equipment
11. Suspect PCB containing equipment
12. Other identified issues

No environmental issues associated with the exterior areas were identified during the site inspection, except the following.

Suspect Land Use

Numerous industrial properties adjoin the subject property to the east, including a heavy-equipment auction property and a tank cleaning business. During the site inspection, three large aboveground storage tanks were observed near the subject property boundary at the Stallion Tank cleaning business property (Photograph 10). No staining, stressed vegetation, or other issues were noted. As such, IHI believes the observed adjoining uses represent a de minimis condition.

Solid Waste Disposal Issues / Suspect Fill

Several mounds of fill dirt (Photograph 11) were observed throughout the southeast portion of the subject property (Figure 5). The mounds were heavily vegetated and could not be closely inspected, and they appear to be associated with the serpentine fill discussed in Section 6.0.

Small areas of constructions debris (Photograph 12) were also observed on the southeast portion of the subject property (Figure 5). The debris consisted of construction material and abandoned tires. No staining or suspect materials were observed. Abandoned tires were also observed along the north boundary of the property. Due to the generally unregulated nature of construction debris and the small volume of debris, in IHI's opinion, the debris piles do not represent a significant environmental issue.

An area of fill dirt (Photograph 5) is present on the boundary of the subject property shared with property owned by Mr. Brent Sainsbury (Figure 4). Some of the fill dirt is present on the subject property due to boundary disputes. Visually, the fill appeared to be clean and free of debris, odors, or staining. IHI contacted Mr. Sainsbury, who stated the fill dirt was acquired from construction sites in Davis and Salt Lake Counties. He stated that the dirt was clean, and had not come from any of the surrounding oil refineries or other suspect sites.

Several piles of fill dirt are also present on the north boundary of the subject property shared with the off-highway vehicle terrain park. According to Mr. Wagner, the soil has been stockpiled to create a sound barrier. Based on this information, IHI does not believe the material represents a significant environmental concern.

Monitoring Wells

Six monitoring wells were observed in the levee and wetlands area along the east boundary of the subject property (Photographs 13 and 14). A seventh well is believed to be present but could not be found due to the heavy vegetation. The wells are associated with the Ricci Investment Company LUST site, which is discussed further in Section 5.3. The general location of the monitoring wells is shown in Figure 4. The specific location of the monitoring wells is show in maps included in Appendix 5.

Two PVC pipes were observed in the central portion of the subject property (Figure 4). The PVC pipes protruded out of the ground approximately 8 feet (Photograph 15). Mr. Wagner did not have any information regarding these pipes; however, based on the current and historical use of the property, IHI believes the pipes do not represent an environmental concern.

Suspect hazardous substances or wastes

An abandoned car battery was observed on the southeast portion of the subject property (Photograph 16). Due to the small volume of hazardous material associated with a single batter, IHI does not believe it represents a significant environmental concern.

Non-Scope Issues

The following issues were evaluated to determine if they represented significant business environmental risks:

Wetlands

According to the National Wetlands Inventory (Appendix 5), several wetland areas appear to be present on the subject property. While the map is based off aerial photographs and not verified by the Army Corps of Engineers, areas of hydrophilic vegetation were observed during the site inspection. In addition, LUST files reviewed at DERR noted several Army Corps of Engineers' wetland-delineations on the easternmost portion of the subject property, near the Jordan River levee area. While not an environmental condition, wetland issues may impact future construction and development activities.

8.0 FINDINGS OF ENVIRONMENTAL CONDITIONS

This report identifies environmental issues that were evaluated as part of this investigation. Issues that in IHI's opinion were significant enough to be considered ASTM environmental conditions are identified in the following table.

Environmental Conditions (ECs)	EC present at Site	De Minimis
Regulatory Issues - Section 5		
Subject Property	N	
Adjoining or Surrounding Properties (adjoining LUST and CERCLA Sites)	Y	
Historical Issues - Section 6		
Subject Property (historical dumping on the subject property)	Y	
Adjoining or Surrounding Properties (historical issues with dumping and industrial use in immediate area)	Y	X
Inspection Issues – Section 7		
Housekeeping issues	N	
Suspect land use / suspect fill materials (adjoining industrial properties)	Y	
Solid waste disposal / suspect fill	N	
Poor handling / disposal practices of haz. substances	N	
Industrial wastewater handling	N	
Improper industrial water or stormwater management	N	
Monitoring wells (Monitoring wells present as part of LUST Site)	N	
Known / suspect hazardous substances	N	
Storage tanks – USTs/ASTs	N	
Leaking hydraulic equipment	N	
Suspect PCB-containing equipment	N	
Non-scope Issues – Section 7.3		
Wetlands	Y	

9.0 OPINIONS AND CONCLUSIONS

Below, IHI has presented our professional opinion as to the impact of the identified environmental conditions on the subject property. Opinions regarding de minimis conditions are presented in the text of the report.

9.1 Recognized Environmental Conditions (RECs)

IHI has performed a Phase I Environmental Site Assessment, in conformance with the scope and limitations of ASTM Practice E 1527-05, of the Rose Park Sports Complex site, located at approximately 2100 North Rose Park Lane, Salt Lake City, Utah. Potential data gaps are

described in Section 9.4 of this report. Any exceptions to or deletions from this practice are described in Section 9.5. This assessment has revealed no evidence of RECs in connection with this property, except the following.

1. Impacts from Adjoining LUST site

The east-adjoining Ricci Investment Company LUST site operated a diesel UST from 1976 until 1993. Several thousand gallons of diesel fuel were released. Groundwater and soil sampling activities conducted at the site and on the subject property from 1996 until the present confirmed soil and groundwater impacts to the subject property. Currently, it appears the groundwater impacts are not present, but have been historically, and low concentrations of petroleum hydrocarbons are present in the soils. Remedial activities at the site are ongoing, although remedial activities on the subject property are unlikely.

9.2 Historical Recognized Environmental Conditions

This assessment has revealed no evidence of HRECs in connection with this property, except the following.

1. Historical Dumping

Historical research showed dumping activities on the southeast portion of the subject property since at least the 1970s. No information was identified regarding the source of the materials placed on the subject property. IHI believes there is a low to moderate potential for soil and groundwater impacts to the subject property from the historical filling.

9.3 Other Environmental Issues

No other environmental issues were identified with the subject property that, in IHI's opinion, may represent business environmental risks, except the following.

1. Wetlands

According to the National Wetlands Inventory map, several wetland areas appear to be present on the subject property. While the map is based off aerial photographs and not verified by the Army Corps of Engineers, areas of hydrophilic vegetation were observed during the site inspection. In addition, LUST files reviewed at DERR noted several Army Corps of Engineers' wetland-delineations on the easternmost portion of the subject property, near the Jordan River levee area. While not an environmental condition, wetland issues may impact future construction and development activities.

2. Monitoring wells

Seven monitoring wells are believed to be present on the subject property. These wells should be property closed when no longer needed as part of the LUST investigation.

9.4 Data Gaps

No data gaps were encountered during this Phase I ESA:

1. Limited Historical Data
The earliest standard historical resource information identified was from the mid-1960s, at which time the subject property appeared to be agricultural land. An area of dumping on the southeast corner of the site was identified in the 1970s. IHI believes these limitations may affects the conclusion drawn in regards to the subject property.

9.5 Deviations

There were no deviations or additions to the ASTM Standard practice.

10.0 ADDITIONAL INVESTIGATIONS

In IHI's professional opinion, no additional investigations are warranted, except the following:

1. Phase II Study
A Phase II Site Investigation is warranted to determine if significant impacts are present from historical dumping activities on the subject property.

2. Adjoining LUST Site
Based on remedial efforts and investigations conducted by Utah DERR, IHI does not believe any further investigation is needed regarding impacts from the adjoining LUST site; however, IHI recommends any current or future property owners cooperate with the state in its on-going investigations. This should include the closure of the monitoring wells.

2. Wetlands
IHI recommends a wetlands delineation to determine if wetland issues have the potential to impact future development at the site.

Details of each issue are provided in the body of the text and summarized in Section 9.

11.0 CERTIFICATIONS AND QUALIFICATIONS

11.1 Certifications

I declare that, to the best of my professional knowledge and belief, I meet the definition of an Environmental Professional as defined in 40 CFR §312, and I have the specific qualifications based on my education, training, and experience to assess a property of the nature, history, and setting of the subject property. I have developed and performed all of the appropriate inquiries in conformance with the standards and practices set forth in 40 CFR §312.

Kent Wheeler, P.G.
Senior Scientist

11.2 Project Personnel Qualifications

Kent Wheeler
M.S., Hydrology-Watershed Sciences, Colorado State University, 1987
B.S. Geology, Western State College, 1983
Utah Licensed Professional Geologist, No. 5274992
Mr. Wheeler has been working on environmental issues related to property transactions since 1988. He has evaluated residential dwellings, retail, commercial, light industrial, heavy industrial properties, raw land, Brownfields sites, NPL/Superfund sites, RCRA facilities, UST/LUST sites, and bulk fuel facilities, including refineries and transfer stations. His responsibilities include reviewing all reports, client interaction, and bid and contract preparation, as well as senior project manager duties on large projects.

Leia M. Larsen
Bachelor of Arts, University of Utah, 2006
Ms. Larsen has two years of experience conducting ASTM-compliant Phase I Environmental Site Assessments on industrial, commercial, agricultural, and residential properties. She has completed over 150 environmental investigations, including an eight-mile stretch of State Street in Salt Lake City, Utah, a twenty-mile stretch of 3300/3500 South Street in Salt Lake County, Utah. Other studies included large tracts of agricultural and rangeland in Idaho; a study for the State Trust Lands Administration of a 64-acre rural community with gas stations, pipelines, and historical use of petroleum storage, and investigations conducted near former smelters, roundhouses, and rail yards for UTA rail projects. Ms. Larsen is a Utah-certified Asbestos Building Inspector and certified in operation, monitoring, and machine maintenance of the NITON XRF Spectrum Analyzer.

12.0 CONTACTS AND REFERENCES

12.1 Contacts

Christensen, Lola, Property Owner Representative; (801) 266-3667.

Lucas, Duran, Property Owner Representative; (801) 356-3741.

Reese, Bill, Utah Division of Environmental Response and Remediation; (801) 536-4167.

Sainsbury, Brent, Adjoining Property Owner; (801) 560-1991.

Stucki, Eric, Property Owner Representative; (801) 533-5127.

Turchi, Melissa, Utah Division of Environmental Response and Remediation; (801) 536-0078.

Zarekarizi, Susan, Property Owner Representative; (801) 538-7496.

12.2 References

Anderson, P.B., D.D. Susong, S.R. Wold, V.M. Heilweil, and R.L. Baskin; 1994. *Hydrogeology of Recharge Areas and Water Quality of the Principal Aquifers Along the Wasatch Front and Adjacent Area, Utah.* USGS Water Resources Investigations Report 93-4221.

Environmental FirstSearch, San Diego, California; (619) 741-1355.

Olympus Aerial Surveys, Inc., 30 West 2950 South, Salt Lake City, Utah.

Salt Lake County Archives, 4505 South 5600 West, West Valley City, Utah; (801) 963-7330.

Seiler, R.L. and K.M. Waddell; 1987. *Reconnaissance of the Shallow Unconfined Aquifer in the Salt Lake Valley, Utah.* USGS Water Resources Investigation Report 83-4272.0.

TerraServer aerial photograph website; www.terraserver-usa.com.

Utah Historical Society, Special Collections Department, Polk City Directory and Sanborn Fire Insurance Map Collections, 300 S. Rio Grande Street, Salt Lake City, Utah.

Utah Department of Environmental Quality, Division of Environmental Response and Remediation, 1950 West North Temple, Salt Lake City, Utah; (801) 536-4100; http://environmentalresponse.utah.gov.

Utah Department of Environmental Quality, Division of Water Quality and Division of Solid and Hazardous Waste, 288 N. 1460 West, Salt Lake City, Utah.

Utah Department of Natural Resources, Water Rights Division; 1636 West North Temple, Salt Lake City, Utah; (801) 538-7240; http://nrwrt1.nr.state.ut.us.

Waddell, K.M., R.L. Seiler, M. Santini, and D.K. Solomon; 1987. *Groundwater Conditions in the Salt Lake Valley, Utah, 1969-1983, and Predicted Effects of Increased Withdrawals from Wells.* Utah Department of Natural Resources-Technical Publication No. 87.

Waddell, K.M., R.L. Seiler, and D.K. Solomon; 1987. *Chemical Quality of Groundwater in the Salt Lake Valley, Utah, 1969-1985.* Utah Department of Natural Resources-Technical Publication No. 89.

Photograph 1
General view of the north portion of the subject property, looking north.

Photograph 2
General view of the south portion of the subject property, looking south.

Photograph 3
Subject property modelport shelter building, looking north.

Photograph 4
Subject property modelport vault toilet building, looking west.

Photograph 5
North-adjoining Sainsbury property will fill dirt, looking northeast.

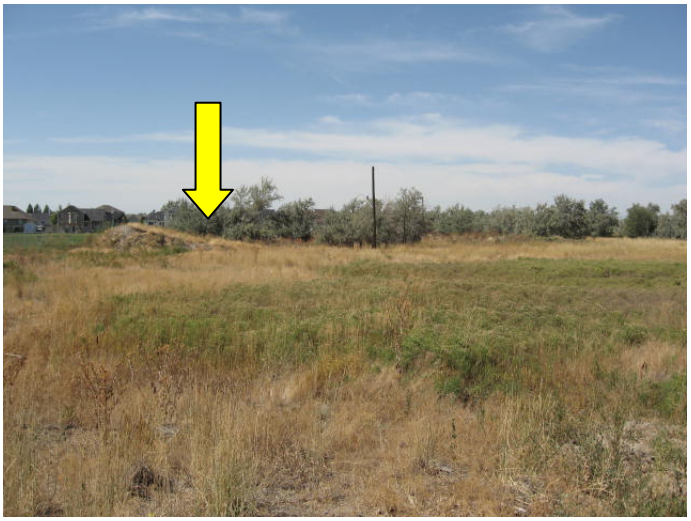
Photograph 6
Typical south-adjoining properties, looking southeast.

Photograph 7
East-adjoining TNT heavy equipment auctioneers property, looking northeast.

Photograph 8
East-adjoining Stallion Tank property, looking northeast.

Photograph 9
West-adjoining city pump station, looking southwest.

Photograph 10
ASTs observed on an adjoining property.



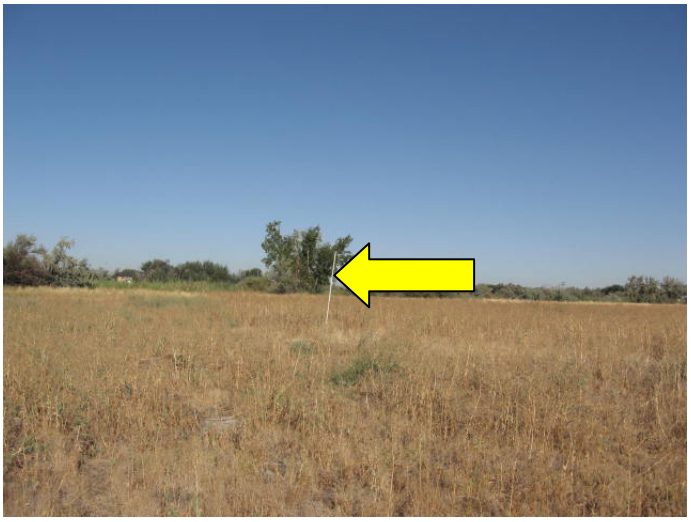
Photograph 11
View of mounds of fill observed on the southeast portion of the property.

Photograph 12
Debris observed on the southeast portion of the property.

Photograph 13
Typical monitoring well observed on the subject property levee area.

Photograph 14
Pit monitoring well observed on the subject property levee area.

Photograph 15
PVC pipe observed protruding from the ground.



Photograph 16
Abandoned car battery.

APPENDIX 1

Location Maps

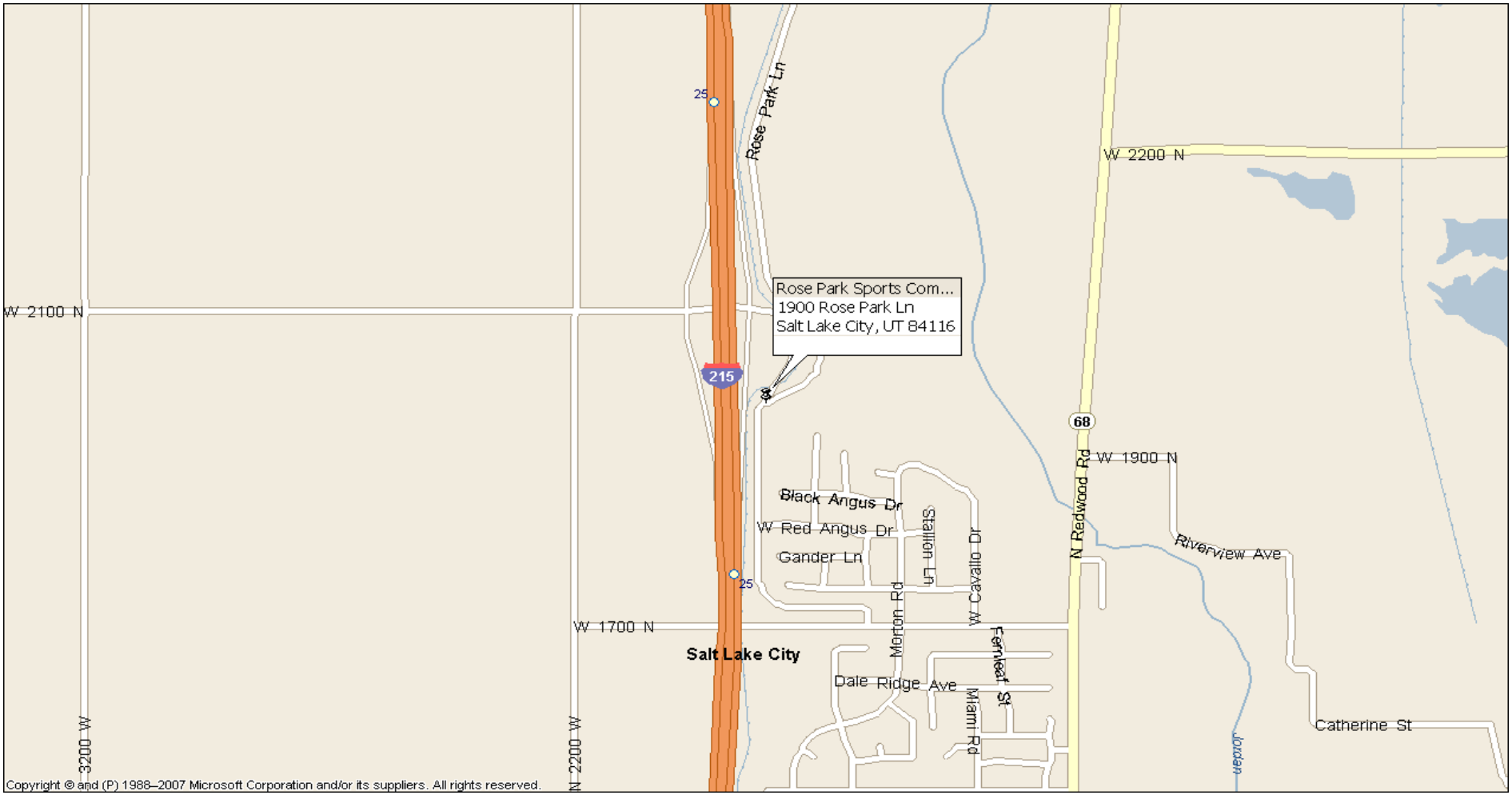
N

IHI ENVIRONMENTAL
640 EAST WILMINGTON AVENUE
SALT LAKE CITY, UT 84106
801.466.2223
ihi@ihi.env.com

Rose Park Sports Complex
Salt Lake City, Utah

Figure 1 – General Location Map

PROJECT No:	09E-7120
DRAWN BY:	Alisha
DATE:	9/10/09
FILE NAME:	Fig1.docx



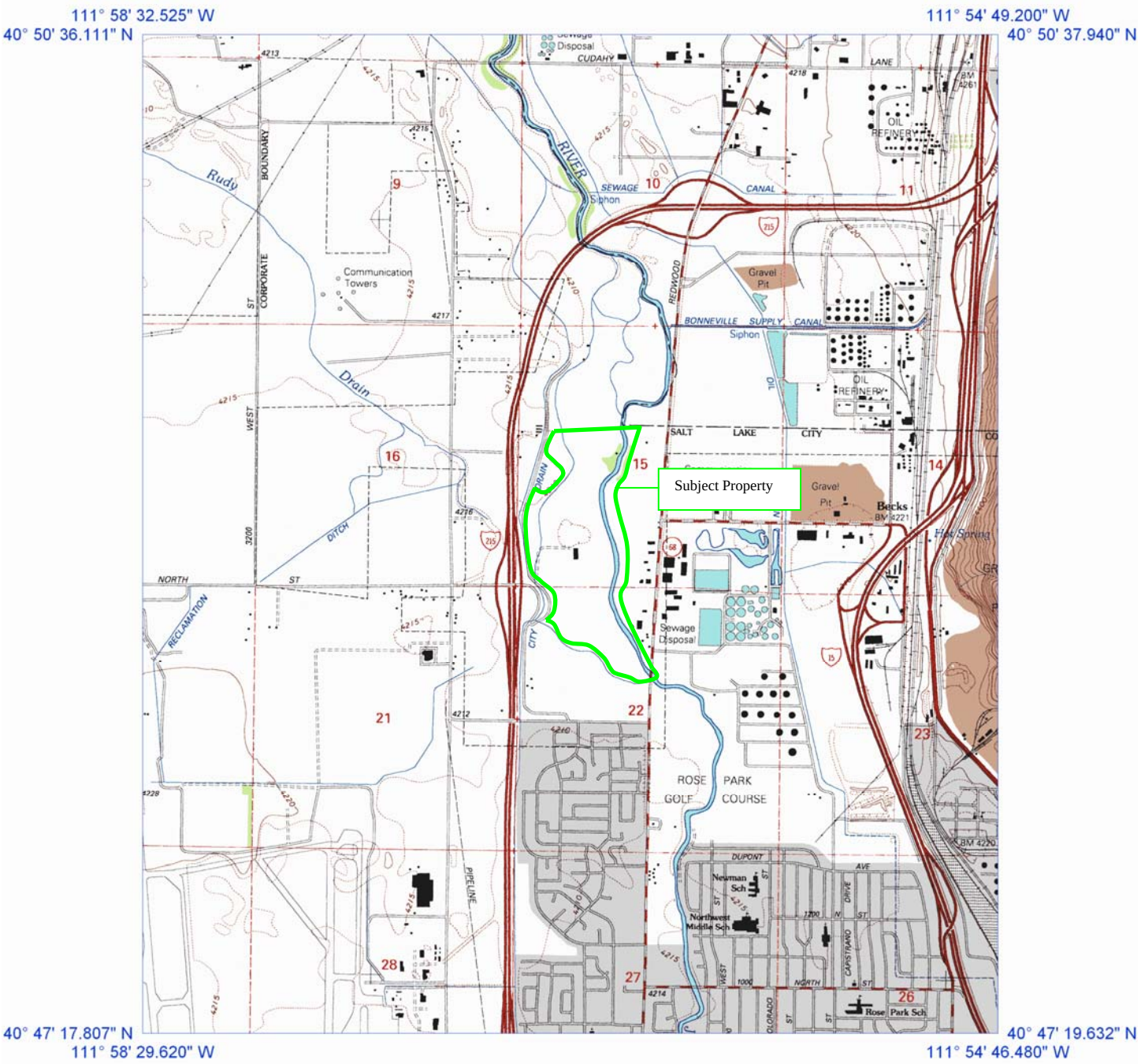
N

ENVIRONMENTAL
640 EAST WILMINGTON AVENUE
SALT LAKE CITY, UT 84106
801.466.2223
ihi@ihi.env.com

Rose Park Sports Complex
Salt Lake City, Utah

PROJECT No:	09E-7120
DRAWN BY:	Alisha
DATE:	9/10/09
FILE NAME:	Fig2.docx

Figure 2 – Detailed Location Map

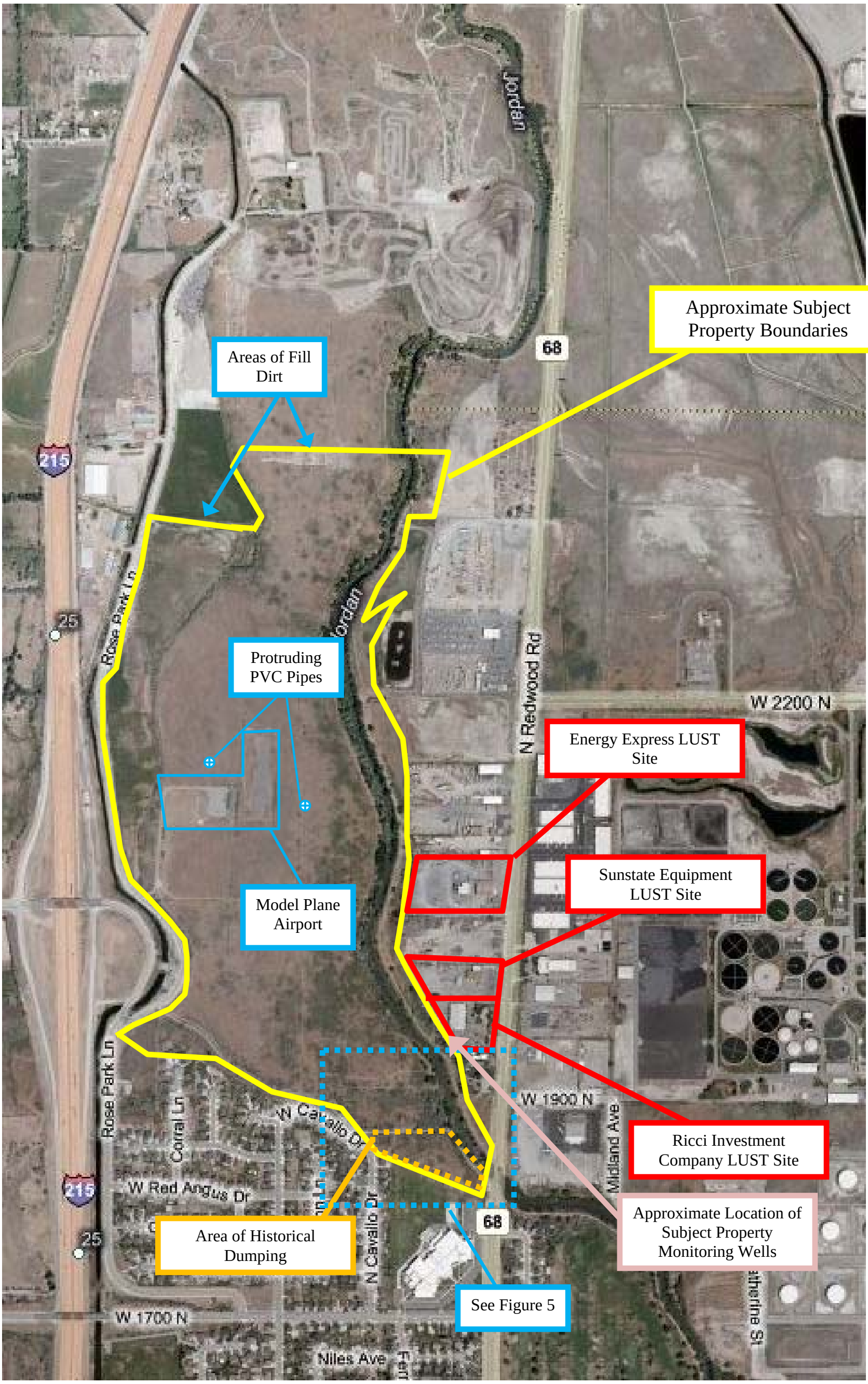


ENVIRONMENTAL
640 EAST WILMINGTON AVENUE
SALT LAKE CITY, UT 84106
801.466.2223
ihi@ihi.env.com

Rose Park Sports Complex
Salt Lake City, Utah

Figure 3: Topographic Map

PROJECT No:	09E-7120
DRAWN BY:	Alisha
DATE:	9/10/09
FILE NAME:	Fig3.docx

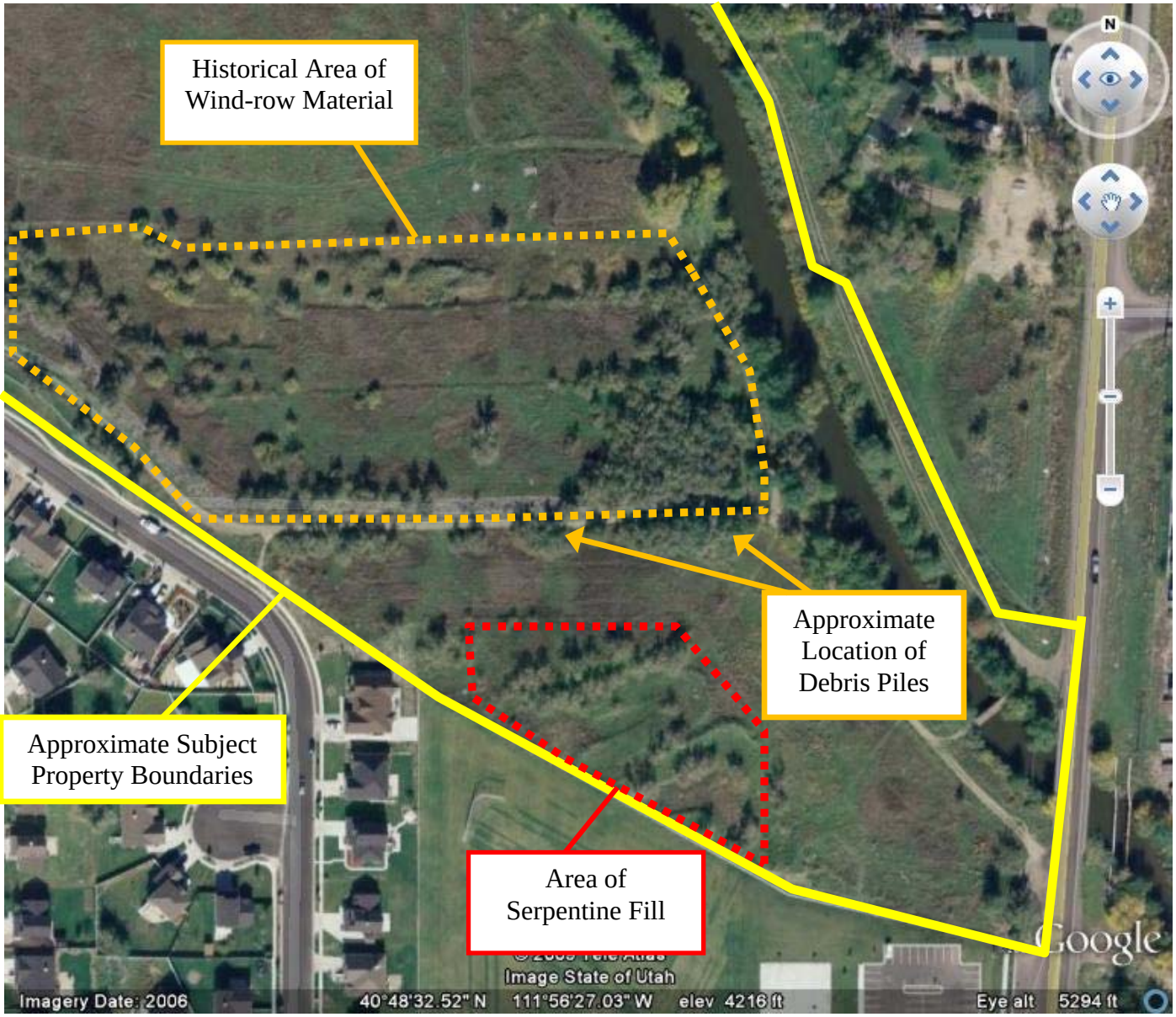


ENVIRONMENTAL
640 East Wilmington Avenue
Salt Lake City, UT 84106
801.466.2223
ihi@ihi.env.com

Rose Park Sports Complex Site
Approximately 2100 North Rose Park Lane
Salt Lake City, Utah

PROJECT No:	09E-7120
DRAWN BY:	Leia
DATE:	09/10/09
FILE NAME:	Project#-Fig4.docx

Figure 4 – Site Layout



ENVIRONMENTAL
640 East Wilmington Avenue
Salt Lake City, UT 84106
801.466.2223
ihi@ihi.env.com

Rose Park Sports Complex Site
Approximately 2100 North Rose Park Lane
Salt Lake City, Utah

Figure 5 – Southeast Corner Detail Map

PROJECT No:	09E-7120
DRAWN BY:	Leia
DATE:	9/11/09
FILE NAME:	Fig5.docx

APPENDIX 2

User, Owner and Other Third Party Provided Information and Questionnaires

User Questionnaire

Please return by Fax 801-466-9616 or email llarsen@ihi-env.com to: Leia Larsen

Property Name / Address Rose Park Sports Complex /~1900 North Rose Park Lane, Salt Lake City, UT

In order to qualify for the protection offered under the EPA **All-Appropriate Inquiry** (AAI) standard, the user (entities relying on the Phase I) must provide the following information (if available) to the environmental professional. Failure to provide this information could result in a determination that AAI is not complete. Please provide details in the space provided or on a separate sheet of paper. **This information should be the collective knowledge of the entities relying on the Phase I. You are not being asked to evaluate the property, but to provide your known information on the property.**

1. Environmental cleanup liens (40 CFR 312.25)

Are you aware of any environmental cleanup liens against the property?
No.

2. Activity and land use limitations (40 CFR 312.26).

Are you aware of any AULs, such as engineering controls, land use restrictions or institutional controls that are in place at the site? Yes. Parcels along the river have development restrictions.

3. Specialized knowledge or experience of the person seeking to qualify for the LLP (40 CFR 312.28)

Do you have any specialized knowledge or experience related to the property or nearby properties? For example, are you involved in the same line of business as the current or former occupants of the property or an adjoining property so that you would have specialized knowledge of the chemicals and processes used by this type of business?
No.

4. Relationship of the purchase price to the fair market value of the property (40 CFR 312.29)

Does the purchase price reasonably reflect the fair market value of the property?	No.
If you conclude that there is a difference, is the lower purchase price because contamination is known or believed to be present at the property?	No. It is influenced by cooperative agreement.

5. Commonly known information about the property (40 CFR 312.30).

Are you aware of commonly known or reasonably ascertainable information about the property that would help the environmental professional to identify conditions indicative of releases or threatened releases? For example, as user,	
a. Do you know the past uses of the property?	No
b. Do you know of specific chemicals that are present or once were present at the property?	No
c. Do you know of spills or other chemical releases that have taken place at the property?	No
d. Do you know of any environmental cleanups that have taken place at the property?	No

6. The degree of obviousness of the presence of likely presence of contamination at the property, and the ability to detect the contamination by appropriate investigation (40 CFR 312.31).

As the user of this ESA, based on your knowledge and experience related to the property are there any obvious indicators that point to the presence or likely presence of contamination at the property?
No

I have completed the above questionnaire to the best of my knowledge.

Signature: Duran Lucas Date 09/09/09

Printed name: Duran Lucas Company: Salt Lake City Corp

COMMITMENT FOR TITLE INSURANCE

ISSUED BY

NATIONAL TITLE AGENCY, LLC

An Agent of First American Title Insurance Co.
5295 South Commerce Drive, Ste. 250, Murray City, UT 84107
Phone: (801)265-3200 | Fax: (801)265-3201

Salt Lake City Corp.
451 South State, Room 225
Salt Lake City, Utah 84111
Attn: Duran Lucas

File Number: 5191675
Client No.
Amendment No.

We agree to issue a policy to you according to the terms of this Commitment. When we show the policy amount and your name as the proposed insured in Schedule A, this Commitment becomes effective as of the Commitment Date shown in Schedule A.

If the Requirements shown in this Commitment have not been met within six months after the Commitment Date, our obligation under this Commitment will end. Also, our obligation under this Commitment will end when the Policy is issued and then our obligation to you will be under the Policy.

Our obligation under this commitment is limited by the following:

The Provisions in Schedule A.
The Requirements in Schedule B-1.
The Exceptions in Schedule B-2.
The Conditions on the inside cover page.

The Commitment is not valid with out SCHEDULE A and Sections 1 and 2 of SCHEDULE B.

Underwritten by:

First American Title Insurance Company

BY Gary L. Kennett PRESIDENT

ATTEST Mark R. Arnett SECRETARY

SCHEDULE A

ESCROW/CLOSING INQUIRIES should be directed to your Escrow Officer: **Julie Wright at (801)265-3210** located at 5295 South Commerce Drive, Ste. 250, Murray City, UT 84107.

Effective Date: May 27, 2009 at 7:30 a.m.

1. Policy or (Policies) to be issued:

ALTA 2006 Standard Owners for $TBD PREMIUM $TBD

Proposed Insured:

Salt Lake City Corporation

2. The estate or interest in the land described or referred to in this commitment and covered herein is fee simple and title thereto is at the effective date hereof vested in:

Provo-Jordan River Parkway Authority, a division of the Department of Natural Resources of the State of Utah

3. The land referred to in this Commitment is located in Salt Lake County, UT and is described as:

PARCEL 1:

A parcel of land in fee, being part of an entire tract of property, in the North Half of the Southwest Quarter and the South Half of the Northwest Quarter and in Lots 5 and 8, all of Section 15, Township 1 North, Range 1 West, Salt Lake Base and Meridian. The boundaries of said parcel of land are described as follows:

Commencing 24 rods North and 61.92 rods West from the Southeast corner of Lot 8, Section 15, Township 1 North, Range 1 West, Salt Lake Meridian North 56 rods East 337.1 feet North 27°00' East 131.1 feet North 26°33' East 1.75 chains North 5°50' East 2 chains North 24°10' West 3.5 chains North 10°05' East 3 chains West to Jordan River. Southerly 1283.7 feet South 54° East 45 rods to beginning.

Also: Beginning in Cen. E. branch of Jordan River at point 19.695 chains, North and 9.17 chains, West from Cen. Section 15, Township 1 North, Range 1 West, Salt Lake Meridian, West 19.53 chains, to East Bank of Jordan River. Thence along East bank of said river South 1°30' East 5.125 chains, South 6° East 1 chains, South 16° East 4.18 chains, East along County in Salt Lake & Davis Counties 18.50 chains more or less to point where Cen. Of E. Branch of River crosses said County line Northerly along East branch the following course: North 10°05' East 3 chains, North 6°10' West 2 chains, North 32°35' East 1.8 chains, North 16°45' West 3 chains, to beginning.

PARCEL 2:

A parcel of land in fee, being part of an entire tract of property, in the Southeast Quarter of the Northwest Quarter of Section 15, Township 1 North, Range 1 West, Salt Lake Base and Meridian. The boundaries of said parcel of land are described as follows:

Beginning on the Salt Lake and Davis County Line at a point 636.66 feet North and 293.46 feet West from the center of said Section 15, thence South 17°24'41" West 528 feet, more or less, to the South boundary line of said entire tract; thence West 167.87 feet along said South boundary line to the Southwest corner of said entire tract; thence Northerly the following four courses along the Westerly boundary line of said entire tract; North 26°33' East 1.75 chains (115.5 feet); thence North 5°50' East 2 chains (132 feet); thence North 24°10' West 3.50 chains (231 feet); thence North 10°05' East 59 feet, more or less, to said Salt Lake County Line; thence East 345 feet, more or less, along said Salt Lake County Line to the point of beginning.

PARCEL 3:

A parcel of land in fee, being part of an entire tract of property, in the Southeast Quarter of the Northwest Quarter of Section 15, Township 1 North, Range 1 West, Salt Lake Base and Meridian. The boundaries of said parcel of land are described as follows:

Beginning on the South line of said Southeast Quarter of the Northwest Quarter at a point 491.47 feet West from the center of said Section 15; thence North 17°24'41" East 123 feet, more or less to a point 116.82 feet North and 454.61 feet West from the center of said Section 15; thence West 167.87 feet; thence South 27°00' West 131.1 feet to said South line; thence East 192 feet along said South line to the point of beginning.

PARCEL 4:

Two parcels of land in fee, being part of entire tract of property, in the Northeast Quarter of the Southwest Quarter and Lots 1 and 2, Block 1, Midland Five Acre Plat, all in Section 15, Township 1 North, Range 1 West, Salt Lake Base and Meridian. The boundaries of said parcel of land are described as follows:

Beginning on the South boundary line of said entire tract at a point 682.82 feet West from the Southeast corner of said Lot 2; thence North 17°29'35" East 246.32 feet to the Northwesterly boundary line of said entire tract; thence Southwesterly the following two courses along said Northwesterly boundary line: Southwesterly 24.17 feet along the arc of a 340.00-foot radius curve to the right (Note: Tangent to said curve at its point of beginning bears South 41°53'46" West); thence South 45°58'08" West 312.96 feet to the Southwest corner of said entire tract; thence East 167.72 feet along said South boundary line to the point of beginning.

Also: Beginning on the North boundary line of said entire tract at a point 491.47 feet West from the center of said Section 15; thence South 17°29'35" West 93.93 feet to the Westerly boundary line of said entire tract; thence North 1°59'45" East 56.59 feet; thence West 126 feet to the Easterly bank of the Jordan River; thence Northerly 34 feet along said bank to the Northwest corner of said entire tract; thence East 142 feet along said North boundary line to the point of beginning.

PARCEL 5:

A parcel of land in fee, being part of an entire tract of property, in Lots 3 and 4, Block 1, Midland Five Acre Plat in Section 15, Township 1 North, Range 1 West, Salt Lake Base and Meridian. The boundaries of said parcel of land are described as follows:

Beginning on the South boundary line of said entire tract at a point 725.28 feet West from the Southeast corner of said Lot 4; thence West 104 feet, more or less, to the Southwest corner of said entire tract; thence Northerly the following three courses along the Westerly boundary line of said entire tract: Northerly 36.02 feet along the arc of an 885.00-foot radius curve to the right (Note: Tangent to said curve at its point of beginning bears North 11°16'28" West); thence North 8°56'23" West 496.21 feet to the point of tangency with a 100.00-foot radius curve to the right; thence Northerly 50 feet, more or less, along the arc of said curve to the Northwest corner of said entire tract; thence East 226 feet, more or less, along the North boundary line of said entire tract to a point 682.82 feet West from the Northeast corner of said Lot 3; thence South 17°29'45" West 160.58 feet; thence South 5°19'42" East 45.18 feet; thence South 8°31'08" West 203.38 feet; thence South 10°17'44" East 177.60 feet to the point of beginning.

PARCEL 6:

A parcel of land in fee, being all of an entire tract of property, partly within the United States Government Meander Line Survey of the Jordan River being in Block 7, Midland 5 Acre Plat, and in the Southwest Quarter of Section 15 and the Northwest Quarter of the Northwest Quarter of Section 22, Township 1 North, Range 1 West, Salt Lake Base and Meridian. The boundaries of said parcel of land are described as follows:

Beginning at the Southeast corner of said Block 7; thence Northerly the following four (4) courses along the East boundary line of said Block 7: North 13°45' East 320 feet; thence North 290 feet; thence North 17°30' West 600 feet; thence North 10°00' West 551.31 feet to the Northeast corner of said entire tract; thence West 130.90 feet along the North boundary line of said entire tract to a point approximately 1716 feet North and 1068 feet West from the Southeast corner of said Southwest Quarter; thence North 54°00' West 805 feet to the East bank of the West branch of said Jordan River; thence Southwesterly and Southerly along said bank the following eight (8) courses: South 43°45' West 322 feet; thence South 36°00' West 455 feet; thence South 11°45' West 120 feet; thence South 205 feet; thence South 7°45' East 385 feet; thence South 4°15' West 135 feet; thence South 19°00' West 285 feet; thence South 4°30' West 396.77 feet to a point on the Northeasterly right of way line of an existing frontage road known as Utah State Highway Project No. I-215-9(3)297, said point is approximately 85 feet North and 331 feet East from the Southwest corner of said Section 15; thence South 56°39'50" East 22 feet, more or less, along said right of way line to a point of tangency with a 480.74-foot radius curve to the right; thence Southerly 788.15 feet along the arc of said curve to a point 40.00 feet radially distant Southeasterly from the center line of said frontage road opposite Engineer Station 11+93.96; thence South 37°16'09" West 120 feet, more or less, to the Southwest corner of said entire tract; thence Southeasterly the following five (5) courses along the Northerly bank of the Southerly portion of said West branch of the Jordan River: South 55°15' East 90 feet; thence South 64°45' East 225 feet; thence South 38°00' East 285 feet; thence South 60°00' East 340 feet; thence South 83°15' East 168.84 feet to a point approximately 1287 feet South and 1269.2 feet West from said Southeast corner of the Southwest Quarter; thence North 1287 feet along an Easterly boundary line to a Southeast corner of said entire tract; thence East 572.55 feet along a Southerly boundary line of said entire tract to the point of beginning.

PARCEL 7:

A parcel of land in fee, being part of an entire tract of property, in Lots 5 and 6, Block 1, Midland Five Acre Plat in Section 15, Township 1 North, Range 1 West, Salt Lake Base and Meridian. The boundaries of said parcel of land are described as follows:

Beginning on the North boundary line of said entire tract at a point 725.28 feet West from the Northeast corner of said Lot 5; thence South 10°17'44" East 80.36 feet; thence South 18°42'22" East 384.59 feet to the South boundary line of said entire tract; thence West 87 feet, more or less, along said South boundary line to the Southwest corner of said entire tract; thence Northerly the following two courses along the Westerly boundary line of said entire tract; North 20°39'30" West 325 feet, more or less, to the point of tangency with an 885.00-foot radius curve to the right; thence Northerly 144.99 feet along the arc of said curve to the Northwest corner of said entire tract; thence East 104 feet, more or less, along said North boundary line to the point of beginning.

PARCEL 8:

A parcel of land in fee, being part of an entire tract of property, in Lots 6, 7 and 8, Block 1, Midland Five Acre Plat in Section 15, Township 1 North, Range 1 West, Salt Lake Base and Meridian. The boundaries of said parcel of land are described as follows:

Beginning on the North boundary line of said entire tract at a point 417.65 feet North and 587.62 feet West from the Southeast corner of said Lot 7; thence South 18°42'26" East 258 feet, more or less; thence South 2°37'04" West 226.10 feet to the Northeast corner of a tract of land conveyed to Salt Lake County in that certain Warranty Deed recorded as Entry No. 2379207, Book 2948, Page 925; thence West 134 feet, more or less, along the North boundary line of said Salt Lake County tract to the Northwest corner of said Salt Lake County tract; thence Northerly the following two courses along the Westerly boundary line of said entire tract; North 154.35 feet; thence North 17°30' West 331 feet, more or less, to the Northwest corner of said entire tract; thence East 160.88 feet along said North boundary line to the point of beginning.

PARCEL 9:

A parcel of land in fee, being part of an entire tract of property, in Lots 8, 9 and 10, Block 1, Midland Five Acre Plat in Section 15, Township 1 North, Range 1 West, Salt Lake Base and Meridian. The boundaries of said parcel of land are described as follows:

Beginning on the South line of said entire tract at a point 24 feet South and 622.18 feet West from the Northeast corner of said Lot 10; thence North 10°52'31" East 402 feet, more or less, to the North boundary line of said entire tract; thence West 106.21 feet to the Northwest corner of said entire tract; thence Southerly the following two courses along the Westerly boundary line of said entire tract; South 13°45' West 305 feet, more or less; thence South 20°00' West 105.27 feet to the Southeast corner of said entire tract; thence East 139 feet, more or less, along said South boundary line to the point of beginning.

PARCEL 10:

A parcel of land in fee, being all of an entire tract of property, partly within the United States Government Meander Line Survey of the Jordan River and in the Northwest Quarter of Section 22, Township 1 North, Range 1 West, Salt Lake Base and Meridian. The boundaries of said parcel of land are described as follows:

Commencing at a point approximately 100.1 rods South and 33 feet West from the Northeast corner of the Northwest Quarter of Section 22, Township 1 North, Range 1 West, Salt Lake Meridian, and running thence North 35° West 61 feet, more or less; thence North 22°30' West 40 rods; thence North 51° West 10 rods; thence North 34° West 6 rods; thence North 24° West 38 rods; thence North 7°30' East 8 rods; thence North 20° East 8.2 rods to section line; thence West 34.7 rods; thence South 78 rods; thence up the East bank of the old channel of Jordan River 1931 feet to the Westerly right-of-way line of existing Redwood Road; thence North 3°53' East 194 feet along said right-of-way line to the point of beginning.

Also a right-of-way 20 feet wide along the East Bank of the Jordan River where it now runs, commencing at the end of the fourth course in above description where it now runs North 34° West 6 rods, or where road now crosses river; thence crossing the same and running South along East bank of the river 20 feet wide to a point where it now intersects open public road in Lot 7 in said Section 22.

PARCEL 11:

A parcel of land in fee, being part of an entire tract of property, in Lots 10 and 11, Block 1, Midland Five Acre Plat in Section 22, Township 1 North, Range 1 West, Salt Lake Base and Meridian. The boundaries of said parcel of land are described as follows:

Beginning on the South boundary line of said entire tract at a point 45 feet South and 681.54 feet West from the Southeast corner of said Lot 10; thence North 10°52'31" East 314 feet, more or less, to the North boundary line of said entire tract; thence West 139 feet, more or less, along said North boundary line to the Northwest corner of said entire tract; thence Southerly the following three courses along the Westerly boundary line of said entire tract: South 20°00' West 30 feet, more or less; thence South 7°30' West 132 feet; thence South 24°00' East 163 feet to the Southwest corner of said entire tract; thence East 40.79 feet along said South boundary line to the point of beginning.

PARCEL 12:

A parcel of land in fee, being part of an entire tract of property, in Lot 13, Block 1, Midland Five Acre Plat in Section 22, Township 1 North, Range 1 West, Salt Lake Base and Meridian. The boundaries of said parcel of land are described as follows:

Beginning on the North boundary line of said entire tract at a point 37 feet South and 335.29 feet West from the Northeast corner of said Lot 13; thence South 21°10'53" East 297.60 feet; thence South 20°26'02" East 88.67 feet; thence South 22°37'45" East 87.84 feet; thence South 21°51'46" East 51.37 feet; thence South 26°22'52" East 54.42 feet; thence South 29°44'02" East 72.95 feet; thence South 62°22'16" East 47 feet, more or less, to the existing Westerly right of way line of Redwood Road; thence South 3°53' West 72 feet, more or less, along said right of way line to the Southeast corner of said entire tract; thence Northwesterly the following three courses along the Westerly boundary line of said entire tract: North 35°00' West 61 feet, more or less; thence North 22°30' West 660 feet; thence North 51°00' West 56.05 feet to the Northwest corner of said entire tract; thence East 43.01 feet along said North boundary line to the point of beginning.

Said property is also known by the street address of:

SCHEDULE B - Section 1
Requirements

The following are the requirements to be complied with:

(A) Pay the agreed amounts for interest in the land and/or the mortgage or deed of trust to be insured.

(B) Pay us the premiums, fees and charges for the policy. In the event the transaction for which this commitment is furnished cancels, the minimum cancellation fee will be $100.00.

(C) Provide us with releases, reconveyances or other instruments, acceptable to us, including payment of any amounts due, removing the encumbrances shown in Schedule B-2 that are objectionable to the proposed insured.

(D) Provide us with copies of appropriate agreements, resolutions, certificates, or other evidence needed to identify the parties authorized to execute the documents creating the interest to be insured.

(E) The documents creating the interest to be insured must be signed, delivered and recorded.

***

SCHEDULE B - Section 2
Exceptions

Any policy we issue will have the following exceptions unless they are taken care of to our satisfaction.

1. Taxes or assessments which are not shown as existing liens by the records of any taxing authority that levies taxes or assessments on real property or by the public records.

2. Any facts, rights, interest or claims which are not shown by the public records but which could be ascertained by an inspection of said land or by making inquiry of persons in possession thereof.

3. Easements, claims of easements or encumbrances which are not shown by the public records.

4. Discrepancies, conflicts in boundary lines, shortage in area, encroachments and any other facts which a correct survey would disclose, and which are not shown by public records.

5. Unpatented mining claims; reservations or exceptions in patents or in Acts authorizing the issuance thereof, water rights, claims or title to water.

6. Any lien, or right to a lien, for services, labor or material heretofore or hereafter furnished, imposed by law and not shown by the public records.

7. Defects, liens, encumbrances, adverse claims or other matters, if any, created, first appearing in the public records or attaching subsequent to the effective date hereof but prior to the date the proposed insured acquires of record for value the estate or interest or mortgage thereon covered by this commitment.

8. (Affects Parcel 1)
General property taxes were not assessed against the land for the year 2008 because of ownership by a tax exempt entity. Tax Parcel No. 08-15-100-010-0000.

9. (Affects Parcel 2)
General property taxes were not assessed against the land for the year 2008 because of ownership by a tax exempt entity. Tax Parcel No. 08-15-100-011-0000.

10. (Affects Parcel 3)
General property taxes were not assessed against the land for the year 2008 because of ownership by a tax exempt entity. Tax Parcel No. 08-15-100-016-0000.

11. (Affects Parcel 4)
General property taxes were not assessed against the land for the year 2008 because of ownership by a tax exempt entity. Tax Parcel No. 08-15-327-001-0000.

12. (Affects Parcel 5)
General property taxes were not assessed against the land for the year 2008 because of ownership by a tax exempt entity. Tax Parcel No. 08-15-327-002-0000.

13. (Affects Parcel 6)
General property taxes were not assessed against the land for the year 2008 because of ownership by a tax exempt entity. Tax Parcel No. 08-15-351-002-0000.

14. (Affects Parcel 7)
General property taxes were not assessed against the land for the year 2008 because of ownership by a tax exempt entity. Tax Parcel No. 08-15-376-002-0000.

15. (Affects Parcel 8)
General property taxes were not assessed against the land for the year 2008 because of ownership by a tax exempt entity. Tax Parcel No. 08-15-376-003-0000.

16. (Affects Parcel 9)
General property taxes were not assessed against the land for the year 2008 because of ownership by a tax exempt entity. Tax Parcel No. 08-15-376-007-0000.

17. (Affects Parcel 10)
General property taxes were not assessed against the land for the year 2008 because of ownership by a tax exempt entity. Tax Parcel No. 08-22-100-001-0000.

18. (Affects Parcel 11)
General property taxes were not assessed against the land for the year 2008 because of ownership by a tax exempt entity. Tax Parcel No. 08-22-100-002-0000.

19. (Affects Parcel 12)
General property taxes were not assessed against the land for the year 2008 because of ownership by a tax exempt entity. Tax Parcel No. 08-22-100-009-0000.

20. Any charge upon the land by reason of its inclusion in Salt Lake City.

21. (Affects Parcel 1)
An easement over, across or through the land for electric transmission, distribution and telephone circuits and incidental purposes, as granted to Utah Power & Light Company by Instrument recorded February 5, 1940 as Entry No. 874048 in Book 245 of Deeds at Page 297 of Official Records.

22. (Affects Parcel 6)
Lack of access to freeway as evidenced by that certain Final Order of Condemnation recorded March 20, 1968 as Entry No. 2237940 in Book 2641 at Page 323 of Official Records.

23. (Affects Parcels 5, 6, 7, 8, 9, 11 and 12)
An easement for utilities and incidental purposes over, across or through the land, being within that portion of the vacated street, as set forth in that certain Resolution vacating said street recorded June 29, 1961 as Entry No. 1786043 in Book 1818 at Page 7 of Official Records.

24. (Affects Parcel 1)
An easement over, across or through the land for Salt Lake City Water Main Extension No. 853-33-C together with attendant service lines and meters and incidental purposes, as granted to Salt Lake City Corporation, a municipal corporation of the State of Utah, by Instrument recorded February 16, 1972 as Entry No. 2437634 in Book 3042 at Page 643 of Official Records.

25. (Affects Parcel 2)
Reservations contained in that certain Warranty Deed recorded October 6, 1978 as Entry No. 3178791 in Book 4751 at Page 261 of Official Records.

26. (Affects Parcels 6 and 8)
Subject to storm water drainage from the property to the East as shown on the Plat of M.H. Cook Commercial Subdivision recorded June 20, 1996 in Book 96-6P at Page 222.

27. The interest of the State of Utah, or others, claiming through or under it, to any portion of the "Sovereign Lands" located within the ordinary high water mark of the Jordan River, as determined by a court of competent jurisdiction or as established pursuant to Chapter 10, Title 65A of the Utah Code.

28. Subject to the rights of others as to the maintenance and incidental purposes associated with the Jordan River.

***

Title inquiries should be directed to Rollin Domire @ (801) 265-3206.

***

NOTE: The policy(ies) to be issued as a result of this Commitment contain an Arbitration Clause set forth in the Conditions/Conditions and Stipulations Section. The following is included for the information of the proposed insured(s):

Any matter in dispute between you and the company may be subject to arbitration as an alternative to court action pursuant to the rules of the American Arbitration Association or other recognized arbitrator, a copy of which is available on request from the company. Any decision reached by arbitration shall be binding upon both you and the company. The arbitration award may include attorney's fees if allowed by state law and may be entered as a judgment in any court of proper jurisdiction.

CONDITIONS

1. DEFINITIONS
   (a) "Mortgage" means mortgage, deed of trust or other security instrument.
   (b) "Public Records" means title records that give constructive notice of matters affecting the title according to the state law where the land is located.

2. LATER DEFECTS
   The Exceptions in Schedule B may be amended to show any defects, liens or encumbrances that appear for the first time in the public records or are created or attached between the Commitment Date and the date on which all of the Requirements are met. We shall have no liability to you because of this amendment.

3. EXISTING DEFECTS
   If any defects, liens or encumbrances existing at Commitment Date are not shown in Schedule B, we may amend Schedule B to show them. If we do amend Schedule B to show these defects, liens or encumbrances, we shall be liable to you according to Paragraph 4 below unless you knew of this information and did not tell us about it in writing.

4. LIMITATION OF OUR LIABILITY
   Our only obligation is to issue to you the Policy referred to in this Commitment, when you have met its Requirements. If we have any liability to you for any loss you incur because of an error in this Commitment, our liability will be limited to your actual loss caused by your relying this Commitment when you acted in good faith to:

   comply with the Requirements
   or
   eliminate with our written consent any Exceptions shown in Schedule B

   We shall not be liable for more than the Amount shown in Schedule A of this Commitment and our liability is subject to the terms of the Policy form to be issued to you.

5. CLAIMS MUST BE BASED ON THIS COMMITMENT
   Any claims, whether or not based on negligence, which you may have against us concerning the title to the land must be based on this Commitment and is subject to its terms

First American

First American Title Insurance Agency
The First American Corporation

PRIVACY POLICY

We Are Committed to Safeguarding Customer Information

In order to better serve your needs now and in the future, we may ask you to provide us with certain information. We understand that you may be concerned about what we will do with such information - particularly any personal or financial information. We agree that you have a right to know how we will utilize the personal information you provide to us. Therefore, together with our parent company, The First American Corporation, we have adopted this Privacy Policy to govern the use and handling of your personal information.

Applicability

This Privacy Policy governs our use of the information which you provide to us. It does not govern the manner in which we may use information we have obtained from any other source, such as information obtained from public records or from another person or entity. First American has also adopted broader guidelines that govern our use of personal information regardless of its source. First American calls these guidelines its *Fair Information Values*, a copy of which can be found on our web site at www.firstam.com.

Types of Information

Depending upon which of our services you are utilizing, the types of nonpublic personal information that we may collect include:

- Information we receive from you on applications, forms and in other communications to us, whether in writing, in person, by telephone or any other means;
- Information about your transactions with us, our affiliated companies, or others; and
- Information we receive from a consumer reporting agency.

Use of Information

We request information from you for our own legitimate business purposes and not for the benefit of any nonaffiliated party. Therefore, we will not release your information to nonaffiliated parties except: (1) as necessary for us to provide the product or service you have requested of us; or (2) as permitted by law. We may, however, store such information indefinitely, including the period after which any customer relationship has ceased. Such information may be used for any internal purpose, such as quality control efforts or customer analysis. We may also provide all of the types of nonpublic personal information listed above to one or more of our affiliated companies. Such affiliated companies include financial services providers, such as title insurers, property and casualty insurers, and trust and investment advisory companies, or companies involved in real estate services, such as appraisal companies, home warranty companies, and escrow companies. Furthermore, we may also provide all information we collect, as described above, to companies that perform marketing services on our behalf, on behalf of our affiliated companies, or to other financial institutions with whom we or our affiliated companies have joint marketing agreements.

Former Customers

Even if you are no longer our customer, our Privacy Policy will continue to apply.

Confidentiality and Security

We will use our best efforts to ensure that no unauthorized parties have access to any of your information. We restrict access to nonpublic personal information about you to those individuals and entities who need to know that information to provide products and services to you. We will use our best efforts to train and oversee our employees and agents to ensure that your information will be handled responsibly and in accordance with this Privacy Policy and First American's *Fair Information Values*. We currently maintain physical, electronic, and procedural safeguards that comply with federal regulations to guard your nonpublic personal information.

COMMITMENT FOR TITLE INSURANCE

ISSUED BY

NATIONAL TITLE AGENCY, LLC

An Agent of First American Title Insurance Co.
5295 South Commerce Drive, Ste. 250, Murray City, UT 84107
Phone: (801)265-3200 | Fax: (801)265-3201

Salt Lake City Corp.
Attn: Duran Lucas

File Number: 5191687
Client No.
Amendment No.

We agree to issue a policy to you according to the terms of this Commitment. When we show the policy amount and your name as the proposed insured in Schedule A, this Commitment becomes effective as of the Commitment Date shown in Schedule A.

If the Requirements shown in this Commitment have not been met within six months after the Commitment Date, our obligation under this Commitment will end. Also, our obligation under this Commitment will end when the Policy is issued and then our obligation to you will be under the Policy.

Our obligation under this commitment is limited by the following:

The Provisions in Schedule A.
The Requirements in Schedule B-1.
The Exceptions in Schedule B-2.
The Conditions on the inside cover page.

The Commitment is not valid with out SCHEDULE A and Sections 1 and 2 of SCHEDULE B.

Underwritten by:

First American Title Insurance Company

BY Gary L. Kennedy PRESIDENT

ATTEST Mark A. Amsden SECRETARY

SCHEDULE A

ESCROW/CLOSING INQUIRIES should be directed to your Escrow Officer: **Julie Wright at (801)265-3210** located at 5295 South Commerce Drive, Ste. 250, Murray City, UT 84107.

Effective Date: May 27, 2009 at 7:30 a.m.

1. Policy or (Policies) to be issued:

ALTA 2006 Standard Owners for $TBD PREMIUM $TBD

Proposed Insured:

To Be Determined

2. The estate or interest in the land described or referred to in this commitment and covered herein is fee simple and title thereto is at the effective date hereof vested in:

Salt Lake City, a municipal corporation in the State of Utah

3. The land referred to in this Commitment is located in Salt Lake County, UT and is described as:

PARCEL 1:

All of Block 7 Midland 5 Acre Plat being in Section 15, Township 1 North, Range 1 West.

Less and excepting the South 1716 feet as conveyed by that certain Final Order recorded December 11, 1975 as Entry No. 2768550 in Book 4051 at Page 481 of Official Records.

PARCEL 2:

Beginning at the point of intersection of the South line of the Lamoreaux property with the East line of a right-of-way for the Jordan River, said point being North 131.19 feet and West 675 feet, more or less, from the Southeast corner of Lot 6, Block 1, Midland Five Acre Plat Addition, and running thence North 20°39'30" West 325 feet, more or less; thence Northwesterly along the arc of a 885.00 foot radius curve to the right for a distance of 181.01 feet; thence North 8°56'23" West 496.21 feet; thence Northerly along the arc of a 100.00 foot radius curve to the right for a distance of 50 feet, more or less, to the North line of the Lamoreaux property; thence West 2 feet, more or less, to the West line of Riverview Drive; thence Southerly along the West line of the vacated Riverview Drive, 1040 feet, more or less, to a point due West of the point of beginning; thence 70 feet, more or less, to the point of beginning.

PARCEL 3:

Beginning at the point of intersection of the North line of the Sprague property with the East line of a right-of-way for the Jordan River, said point being South 52.6 feet, more or less, and West 530 feet, more or less, from the Northeast corner of Lot 8, Block 1, Midland Five Acre Plat Addition and running thence Southerly along the arc of a 400.00 foot radius curve to the right for a distance of 95 feet, more or less; thence South 15°21'57" West 65 feet, more or less, to the South line of said Sprague property; thence West 45 feet, more or less, to the West line of the vacated Riverview Drive; thence North 158 feet, more or less, to the North line of said Sprague property; thence East 75 feet, more or less, along said North line to the point of beginning.

PARCEL 4:

Beginning South 00°01'18" West 607.00 feet and East 162.46 feet and South 315.27 feet and South 03°51'10" West 210.60 feet from the center of Section 15, Township 1 North, Range 1 West, Salt Lake Base and Meridian; and running thence South 03°51'10" West 29.736 feet; thence North 89°54'43" West 875.493 feet; thence North 10°16'04" West 29.562 feet; thence South 89°58'20" East 882.76 feet to the point of beginning.

Said property is also known by the street address of:

SCHEDULE B - Section 1
Requirements

The following are the requirements to be complied with:

(A) Pay the agreed amounts for interest in the land and/or the mortgage or deed of trust to be insured.

(B) Pay us the premiums, fees and charges for the policy. In the event the transaction for which this commitment is furnished cancels, the minimum cancellation fee will be $100.00.

(C) Provide us with releases, reconveyances or other instruments, acceptable to us, including payment of any amounts due, removing the encumbrances shown in Schedule B-2 that are objectionable to the proposed insured.

(D) Provide us with copies of appropriate agreements, resolutions, certificates, or other evidence needed to identify the parties authorized to execute the documents creating the interest to be insured.

(E) The documents creating the interest to be insured must be signed, delivered and recorded.

***

SCHEDULE B - Section 2
Exceptions

Any policy we issue will have the following exceptions unless they are taken care of to our satisfaction.

1. Taxes or assessments which are not shown as existing liens by the records of any taxing authority that levies taxes or assessments on real property or by the public records.

2. Any facts, rights, interest or claims which are not shown by the public records but which could be ascertained by an inspection of said land or by making inquiry of persons in possession thereof.

3. Easements, claims of easements or encumbrances which are not shown by the public records.

4. Discrepancies, conflicts in boundary lines, shortage in area, encroachments and any other facts which a correct survey would disclose, and which are not shown by public records.

5. Unpatented mining claims; reservations or exceptions in patents or in Acts authorizing the issuance thereof, water rights, claims or title to water.

6. Any lien, or right to a lien, for services, labor or material heretofore or hereafter furnished, imposed by law and not shown by the public records.

7. Defects, liens, encumbrances, adverse claims or other matters, if any, created, first appearing in the public records or attaching subsequent to the effective date hereof but prior to the date the proposed insured acquires of record for value the estate or interest or mortgage thereon covered by this commitment.

8. (Affects Parcel 1)
General property taxes were not assessed against the land for the year 2008 because of ownership by a tax exempt entity. Tax Parcel No. 08-15-326-001-0000.

(Affects Parcel 2)
General property taxes were not assessed against the land for the year 2008 because of ownership by a tax exempt entity. Tax Parcel No. 08-15-376-001-0000.

(Affects Parcel 3)
General property taxes were not assessed against the land for the year 2008 because of ownership by a tax exempt entity. Tax Parcel No. 08-15-376-009-0000.

(Affects Parcel 4)
General property taxes were not assessed against the land for the year 2008 because of ownership by a tax exempt entity. Tax Parcel No. 08-15-401-011-0000.

9. Any charge upon the land by reason of its inclusion in Salt Lake City.

10. (Affects Parcels 2 and 3)
An easement for utilities and incidental purposes over, across or through the land, being within that portion of the vacated street, as set forth in that certain Ordinance vacating said street recorded June 29, 1961 as Entry No. 1786043 in Book 1818 at Page 7 of Official Records.

11. (Affects Parcel 1)
An easement over, across or through the land for electric transmission, distribution and telephone circuits and incidental purposes, as granted to Utah Power & Light Company by Instrument recorded February 5, 1940 as Entry No. 874048 in Book 245 of Deeds at Page 297 of Official Records.

12. (Affects Parcel 1)
An easement over, across or through the land for a pipeline and incidental purposes, as granted to Salt Lake City Corporation, a municipal corporation of the State of Utah, by Instrument recorded February 16, 1972 as Entry No. 2437633 in Book 3042 at Page 638 of Official Records.

13. (Affects All Parcels)
The interest of the State of Utah, or others, claiming through or under it, to any portion of the "Sovereign Lands" located within the ordinary high water mark of the Jordan River, as determined by a court of competent jurisdiction or as established pursuant to Chapter 10, Title 65A of the Utah Code.

***

Title inquiries should be directed to Rollin Domire @ (801) 265-3206.

***

NOTE: The policy(ies) to be issued as a result of this Commitment contain an Arbitration Clause set forth in the Conditions/Conditions and Stipulations Section. The following is included for the information of the proposed insured(s):

Any matter in dispute between you and the company may be subject to arbitration as an alternative to court action pursuant to the rules of the American Arbitration Association or other recognized arbitrator, a copy of which is available on request from the company. Any decision reached by arbitration shall be binding upon both you and the company. The arbitration award may include attorney's fees if allowed by state law and may be entered as a judgment in any court of proper jurisdiction.

CONDITIONS

1. **DEFINITIONS**
   (a) "Mortgage" means mortgage, deed of trust or other security instrument.
   (b) "Public Records" means title records that give constructive notice of matters affecting the title according to the state law where the land is located.

2. **LATER DEFECTS**
   The Exceptions in Schedule B may be amended to show any defects, liens or encumbrances that appear for the first time in the public records or are created or attached between the Commitment Date and the date on which all of the Requirements are met. We shall have no liability to you because of this amendment.

3. **EXISTING DEFECTS**
   If any defects, liens or encumbrances existing at Commitment Date are not shown in Schedule B, we may amend Schedule B to show them. If we do amend Schedule B to show these defects, liens or encumbrances, we shall be liable to you according to Paragraph 4 below unless you knew of this information and did not tell us about it in writing.

4. **LIMITATION OF OUR LIABILITY**
   Our only obligation is to issue to you the Policy referred to in this Commitment, when you have met its Requirements. If we have any liability to you for any loss you incur because of an error in this Commitment, our liability will be limited to your actual loss caused by your relying this Commitment when you acted in good faith to:

   comply with the Requirements
   or
   eliminate with our written consent any Exceptions shown in Schedule B

   We shall not be liable for more than the Amount shown in Schedule A of this Commitment and our liability is subject to the terms of the Policy form to be issued to you.

5. **CLAIMS MUST BE BASED ON THIS COMMITMENT**
   Any claims, whether or not based on negligence, which you may have against us concerning the title to the land must be based on this Commitment and is subject to its terms

First American

First American Title Insurance Agency
The First American Corporation

PRIVACY POLICY

We Are Committed to Safeguarding Customer Information

In order to better serve your needs now and in the future, we may ask you to provide us with certain information. We understand that you may be concerned about what we will do with such information - particularly any personal or financial information. We agree that you have a right to know how we will utilize the personal information you provide to us. Therefore, together with our parent company, The First American Corporation, we have adopted this Privacy Policy to govern the use and handling of your personal information.

Applicability

This Privacy Policy governs our use of the information which you provide to us. It does not govern the manner in which we may use information we have obtained from any other source, such as information obtained from public records or from another person or entity. First American has also adopted broader guidelines that govern our use of personal information regardless of its source. First American calls these guidelines its *Fair Information Values*, a copy of which can be found on our web site at www.firstam.com.

Types of Information

Depending upon which of our services you are utilizing, the types of nonpublic personal information that we may collect include:

- Information we receive from you on applications, forms and in other communications to us, whether in writing, in person, by telephone or any other means;
- Information about your transactions with us, our affiliated companies, or others; and
- Information we receive from a consumer reporting agency.

Use of Information

We request information from you for our own legitimate business purposes and not for the benefit of any nonaffiliated party. Therefore, we will not release your information to nonaffiliated parties except: (1) as necessary for us to provide the product or service you have requested of us; or (2) as permitted by law. We may, however, store such information indefinitely, including the period after which any customer relationship has ceased. Such information may be used for any internal purpose, such as quality control efforts or customer analysis. We may also provide all of the types of nonpublic personal information listed above to one or more of our affiliated companies. Such affiliated companies include financial services providers, such as title insurers, property and casualty insurers, and trust and investment advisory companies, or companies involved in real estate services, such as appraisal companies, home warranty companies, and escrow companies. Furthermore, we may also provide all information we collect, as described above, to companies that perform marketing services on our behalf, on behalf of our affiliated companies, or to other financial institutions with whom we or our affiliated companies have joint marketing agreements.

Former Customers

Even if you are no longer our customer, our Privacy Policy will continue to apply.

Confidentiality and Security

We will use our best efforts to ensure that no unauthorized parties have access to any of your information. We restrict access to nonpublic personal information about you to those individuals and entities who need to know that information to provide products and services to you. We will use our best efforts to train and oversee our employees and agents to ensure that your information will be handled responsibly and in accordance with this Privacy Policy and First American's *Fair Information Values*. We currently maintain physical, electronic, and procedural safeguards that comply with federal regulations to guard your nonpublic personal information.

COMMITMENT FOR TITLE INSURANCE

ISSUED BY

NATIONAL TITLE AGENCY, LLC

An Agent of First American Title Insurance Co.
5295 South Commerce Drive, Ste. 250, Murray City, UT 84107
Phone: (801)265-3200 | Fax: (801)265-3201

Salt Lake City Corp.
451 South State, Room 225
Salt Lake City, Utah 84111
Attn: Duran Lucas

File Number: 5191680
Client No.
Amendment No.

We agree to issue a policy to you according to the terms of this Commitment. When we show the policy amount and your name as the proposed insured in Schedule A, this Commitment becomes effective as of the Commitment Date shown in Schedule A.

If the Requirements shown in this Commitment have not been met within six months after the Commitment Date, our obligation under this Commitment will end. Also, our obligation under this Commitment will end when the Policy is issued and then our obligation to you will be under the Policy.

Our obligation under this commitment is limited by the following:

The Provisions in Schedule A.
The Requirements in Schedule B-1.
The Exceptions in Schedule B-2.
The Conditions on the inside cover page.

The Commitment is not valid with out SCHEDULE A and Sections 1 and 2 of SCHEDULE B.

Underwritten by:

First American Title Insurance Company

BY Gary L. Kerwood PRESIDENT

ATTEST Mark R. Arnesen SECRETARY

SCHEDULE A

ESCROW/CLOSING INQUIRIES should be directed to your Escrow Officer: **Julie Wright at (801)265-3210** located at 5295 South Commerce Drive, Ste. 250, Murray City, UT 84107.

Effective Date: May 26, 2009 at 7:30 a.m.

1. Policy or (Policies) to be issued:

ALTA 2006 Standard Owners for $TBD PREMIUM $TBD

Proposed Insured:

Salt Lake City Corporation

2. The estate or interest in the land described or referred to in this commitment and covered herein is fee simple and title thereto is at the effective date hereof vested in:

Salt Lake County

3. The land referred to in this Commitment is located in Salt Lake County, UT and is described as:

Beginning at the point of intersection of the South line of the Lamoreaux property and the East line of the Jordan River right-of-way, said point of intersection being 37 feet South and 300 feet, more or less, West of the Northeast corner of Lot 13, Block 1, Midland Five Acre Plat, and running thence Northeasterly along the arc of an 850 foot radius curve to the right for a distance of 25 feet, more or less; thence North 33°56'24" West, 650 feet, more or less, to the North line of the Lamoreaux property; thence West, 40 feet, more or less, to the East line of the Jordan River; thence Southerly 680 feet, more or less, to the South line of said property; thence East, 70 feet, more or less, to the point of beginning.

Said property is also known by the street address of:

SCHEDULE B - Section 1
Requirements

The following are the requirements to be complied with:

(A) Pay the agreed amounts for interest in the land and/or the mortgage or deed of trust to be insured.

(B) Pay us the premiums, fees and charges for the policy. In the event the transaction for which this commitment is furnished cancels, the minimum cancellation fee will be $100.00.

(C) Provide us with releases, reconveyances or other instruments, acceptable to us, including payment of any amounts due, removing the encumbrances shown in Schedule B-2 that are objectionable to the proposed insured.

(D) Provide us with copies of appropriate agreements, resolutions, certificates, or other evidence needed to identify the parties authorized to execute the documents creating the interest to be insured.

(E) The documents creating the interest to be insured must be signed, delivered and recorded.

***

SCHEDULE B - Section 2
Exceptions

Any policy we issue will have the following exceptions unless they are taken care of to our satisfaction.

1. Taxes or assessments which are not shown as existing liens by the records of any taxing authority that levies taxes or assessments on real property or by the public records.

2. Any facts, rights, interest or claims which are not shown by the public records but which could be ascertained by an inspection of said land or by making inquiry of persons in possession thereof.

3. Easements, claims of easements or encumbrances which are not shown by the public records.

4. Discrepancies, conflicts in boundary lines, shortage in area, encroachments and any other facts which a correct survey would disclose, and which are not shown by public records.

5. Unpatented mining claims; reservations or exceptions in patents or in Acts authorizing the issuance thereof, water rights, claims or title to water.

6. Any lien, or right to a lien, for services, labor or material heretofore or hereafter furnished, imposed by law and not shown by the public records.

7. Defects, liens, encumbrances, adverse claims or other matters, if any, created, first appearing in the public records or attaching subsequent to the effective date hereof but prior to the date the proposed insured acquires of record for value the estate or interest or mortgage thereon covered by this commitment.

8. General property taxes were not assessed against the land for the year 2008 because of ownership by a tax exempt entity. Tax Parcel No. 08-22-100-004-0000 and 08-22-100-005-0000.

9. Any charge upon the land by reason of its inclusion in Salt Lake City.

***

Title inquiries should be directed to Rollin Domire @ (801) 265-3206.

***

NOTE: The policy(ies) to be issued as a result of this Commitment contain an Arbitration Clause set forth in the Conditions/Conditions and Stipulations Section. The following is included for the information of the proposed insured(s):

Any matter in dispute between you and the company may be subject to arbitration as an alternative to court action pursuant to the rules of the American Arbitration Association or other recognized arbitrator, a copy of which is available on request from the company. Any decision reached by arbitration shall be binding upon both you and the company. The arbitration award may include attorney's fees if allowed by state law and may be entered as a judgment in any court of proper jurisdiction.

CONDITIONS

1. DEFINITIONS
   (a) "Mortgage" means mortgage, deed of trust or other security instrument.
   (b) "Public Records" means title records that give constructive notice of matters affecting the title according to the state law where the land is located.

2. LATER DEFECTS
   The Exceptions in Schedule B may be amended to show any defects, liens or encumbrances that appear for the first time in the public records or are created or attached between the Commitment Date and the date on which all of the Requirements are met. We shall have no liability to you because of this amendment.

3. EXISTING DEFECTS
   If any defects, liens or encumbrances existing at Commitment Date are not shown in Schedule B, we may amend Schedule B to show them. If we do amend Schedule B to show these defects, liens or encumbrances, we shall be liable to you according to Paragraph 4 below unless you knew of this information and did not tell us about it in writing.

4. LIMITATION OF OUR LIABILITY
   Our only obligation is to issue to you the Policy referred to in this Commitment, when you have met its Requirements. If we have any liability to you for any loss you incur because of an error in this Commitment, our liability will be limited to your actual loss caused by your relying this Commitment when you acted in good faith to:

   comply with the Requirements
   or
   eliminate with our written consent any Exceptions shown in Schedule B

   We shall not be liable for more than the Amount shown in Schedule A of this Commitment and our liability is subject to the terms of the Policy form to be issued to you.

5. CLAIMS MUST BE BASED ON THIS COMMITMENT
   Any claims, whether or not based on negligence, which you may have against us concerning the title to the land must be based on this Commitment and is subject to its terms

First American

First American Title Insurance Agency
The First American Corporation

PRIVACY POLICY

We Are Committed to Safeguarding Customer Information

In order to better serve your needs now and in the future, we may ask you to provide us with certain information. We understand that you may be concerned about what we will do with such information - particularly any personal or financial information. We agree that you have a right to know how we will utilize the personal information you provide to us. Therefore, together with our parent company, The First American Corporation, we have adopted this Privacy Policy to govern the use and handling of your personal information.

Applicability

This Privacy Policy governs our use of the information which you provide to us. It does not govern the manner in which we may use information we have obtained from any other source, such as information obtained from public records or from another person or entity. First American has also adopted broader guidelines that govern our use of personal information regardless of its source. First American calls these guidelines its *Fair Information Values*, a copy of which can be found on our web site at www.firstam.com.

Types of Information

Depending upon which of our services you are utilizing, the types of nonpublic personal information that we may collect include:

- Information we receive from you on applications, forms and in other communications to us, whether in writing, in person, by telephone or any other means;
- Information about your transactions with us, our affiliated companies, or others; and
- Information we receive from a consumer reporting agency.

Use of Information

We request information from you for our own legitimate business purposes and not for the benefit of any nonaffiliated party. Therefore, we will not release your information to nonaffiliated parties except: (1) as necessary for us to provide the product or service you have requested of us; or (2) as permitted by law. We may, however, store such information indefinitely, including the period after which any customer relationship has ceased. Such information may be used for any internal purpose, such as quality control efforts or customer analysis. We may also provide all of the types of nonpublic personal information listed above to one or more of our affiliated companies. Such affiliated companies include financial services providers, such as title insurers, property and casualty insurers, and trust and investment advisory companies, or companies involved in real estate services, such as appraisal companies, home warranty companies, and escrow companies. Furthermore, we may also provide all information we collect, as described above, to companies that perform marketing services on our behalf, on behalf of our affiliated companies, or to other financial institutions with whom we or our affiliated companies have joint marketing agreements.

Former Customers

Even if you are no longer our customer, our Privacy Policy will continue to apply.

Confidentiality and Security

We will use our best efforts to ensure that no unauthorized parties have access to any of your information. We restrict access to nonpublic personal information about you to those individuals and entities who need to know that information to provide products and services to you. We will use our best efforts to train and oversee our employees and agents to ensure that your information will be handled responsibly and in accordance with this Privacy Policy and First American's *Fair Information Values*. We currently maintain physical, electronic, and procedural safeguards that comply with federal regulations to guard your nonpublic personal information.

COMMITMENT FOR TITLE INSURANCE

ISSUED BY

NATIONAL TITLE AGENCY, LLC

An Agent of First American Title Insurance Co.
5295 South Commerce Drive, Ste. 250, Murray City, UT 84107
Phone: (801)265-3200 | Fax: (801)265-3201

Salt Lake City Corp.
451 South State, Room 225
Salt Lake City, Utah 84111
Attn: Duran Lucas

File Number: 5191677
Client No.
Amendment No.

We agree to issue a policy to you according to the terms of this Commitment. When we show the policy amount and your name as the proposed insured in Schedule A, this Commitment becomes effective as of the Commitment Date shown in Schedule A.

If the Requirements shown in this Commitment have not been met within six months after the Commitment Date, our obligation under this Commitment will end. Also, our obligation under this Commitment will end when the Policy is issued and then our obligation to you will be under the Policy.

Our obligation under this commitment is limited by the following:

The Provisions in Schedule A.
The Requirements in Schedule B-1.
The Exceptions in Schedule B-2.
The Conditions on the inside cover page.

The Commitment is not valid with out SCHEDULE A and Sections 1 and 2 of SCHEDULE B.

Underwritten by:

First American Title Insurance Company

BY Gary L. Kennedy PRESIDENT

ATTEST Mark A. Arnett SECRETARY

SCHEDULE A

ESCROW/CLOSING INQUIRIES should be directed to your Escrow Officer: **Julie Wright at (801)265-3210** located at 5295 South Commerce Drive, Ste. 250, Murray City, UT 84107.

Effective Date: May 26, 2009 at 7:30 a.m.

1. Policy or (Policies) to be issued:

ALTA 2006 Standard Owners for $TBD PREMIUM $TBD

Proposed Insured:

Salt Lake City Corporation

ALTA 2006 Extended Lenders for $TBD PREMIUM $TBD

Proposed Insured:

To Be Determined

Endorsements: (As Requested) PREMIUM $TBD

2. The estate or interest in the land described or referred to in this commitment and covered herein is fee simple and title thereto is at the effective date hereof vested in:

Utah Division of Parks and Recreation fka The State of Utah

3. The land referred to in this Commitment is located in Salt Lake County, UT and is described as:

PARCEL 1:

A tract of land in fee, being all of an entire tract of property situate in the Northwest Quarter of the Southwest Quarter and the West half of the Northwest Quarter of Section 15, Township 1 North, Range 1 West, Salt Lake Base and Meridian. The boundaries of said tract of land are described as follows:

Beginning at a Northeast corner of said entire tract at a point 268.834 m (882 feet) East and 168.554 m (553 feet) North (by record, but measures 220.3 m (722.92 feet) East and 186.2 m (610.85 feet) North) from said West Quarter corner of Section 15; running thence along a Westerly boundary line of a tract the following six (6) courses: (1) South 15°07' East 100.889 m (331 feet); thence (2) South 22°20' East 32.309 m (106 feet); thence (3) South 40°49' East 37.795 m (124 feet); thence (4) South 35°40' East 35.966 m (118 feet); thence (5) South 8°40' West 28.651 m (94 feet); thence (6) South 26°56' West 6.706 m (22 feet); thence North 85°30' West 27.127 m (89 feet) along a Northerly boundary line of said entire tract; thence South 32° West 93.574 m (307 feet) along a Northwesterly boundary line of said entire tract; thence East 37.490 m (123 feet) along a South boundary line of said entire tract; thence South 38°57 West 9.449 m (31 feet) along a Northwesterly boundary line of said entire tract, more or less; thence South 54° East 21.946 m (72 feet) to a Easterly boundary line of said tract; thence along said Easterly boundary line the following seven (7) courses: (1) North 28°01' East 10.668 m (35 feet); thence (2) North 24°02' East 98.146 m (322 feet); thence (3) North 4°29' East 36.271 m (119 feet); thence (4) North 25°40' West 42.367 m (139 feet); thence (5) North 23°58' West 30.480 m (100 feet); thence (6) North 37°16' West 32.004 m (105 feet); thence (7) North 9°48' West 91.745 m (301 feet),

more or less, to a North boundary line of said entire tract; thence West 31.394 m (103 feet), more or less, along said North boundary line to the point of beginning.

PARCEL 2:

A tract of land in fee, being all of an entire tract of property situate in the Northwest Quarter of the Southwest Quarter and the West half of the Northwest Quarter of Section 15, Township 1 North, Range 1 West, Salt Lake Base and Meridian. The boundaries of said tract of land are described as follows:

Beginning at a Northwest corner of said entire tract, which point is 19.970 m (65.52 feet) South 0°33'38" East and 129.378 m (424.47 feet) North 89°26'22" East from the West Quarter corner of said Section 15; running thence South 85°45'40" East 167.286 m (548.84 feet) along a Northerly boundary line of said entire tract; thence South 31°45'49" West 93.574 m (307.00 feet) along a Southeasterly boundary line of said entire tract; thence North 89°45'49" East 37.490 m (123.00 feet) along a Northerly boundary line of said entire tract; thence South 38°42'49" West 5.624 m (18.45 feet) along a Southeasterly boundary line of said entire tract; thence South 55°38'54" East 11.677 m (38.31 feet) along a Northeasterly boundary line of said entire tract to the East bank of the original Jordan River, also being the Easterly boundary line of said entire tract; thence along said Easterly boundary line the following four (4) courses and distances: (1) South 40°19'42" West 213.028 m (698.91 feet); thence (2) South 17°40'52" West 58.500 m (191.93 feet); thence (3) South 0°46'35" East 62.478 m (204.98 feet); thence (4) South 8°35'36" East 8.544 m (28.03 feet); thence South 87°30' West 96.707 m (317.28 feet) along the Southerly boundary line of said entire tract to an Easterly right of way fence line of the existing frontage road of record; thence along said Easterly right of way fence line the following three (3) courses and distances: (1) North 7°10'48" West 21.211 m (69.59 feet); thence (2) North 4°32'07" East 62.981 m (206.63 feet); thence (3) North 15°30'22" East 323.984 m (1062.94 feet) to the point of beginning.

Said property is also known by the street address of:
2349 North Rose Park Lane, Salt Lake City, Utah 84116

SCHEDULE B - Section 1
Requirements

The following are the requirements to be complied with:

(A) Pay the agreed amounts for interest in the land and/or the mortgage or deed of trust to be insured.

(B) Pay us the premiums, fees and charges for the policy. In the event the transaction for which this commitment is furnished cancels, the minimum cancellation fee will be $100.00.

(C) Provide us with releases, reconveyances or other instruments, acceptable to us, including payment of any amounts due, removing the encumbrances shown in Schedule B-2 that are objectionable to the proposed insured.

(D) Provide us with copies of appropriate agreements, resolutions, certificates, or other evidence needed to identify the parties authorized to execute the documents creating the interest to be insured.

(E) The documents creating the interest to be insured must be signed, delivered and recorded.

***

SCHEDULE B - Section 2
Exceptions

Any policy we issue will have the following exceptions unless they are taken care of to our satisfaction.

1. Taxes or assessments which are not shown as existing liens by the records of any taxing authority that levies taxes or assessments on real property or by the public records.

2. Any facts, rights, interest or claims which are not shown by the public records but which could be ascertained by an inspection of said land or by making inquiry of persons in possession thereof.

3. Easements, claims of easements or encumbrances which are not shown by the public records.

4. Discrepancies, conflicts in boundary lines, shortage in area, encroachments and any other facts which a correct survey would disclose, and which are not shown by public records.

5. Unpatented mining claims; reservations or exceptions in patents or in Acts authorizing the issuance thereof, water rights, claims or title to water.

6. Any lien, or right to a lien, for services, labor or material heretofore or hereafter furnished, imposed by law and not shown by the public records.

7. Defects, liens, encumbrances, adverse claims or other matters, if any, created, first appearing in the public records or attaching subsequent to the effective date hereof but prior to the date the proposed insured acquires of record for value the estate or interest or mortgage thereon covered by this commitment.

8. (Affects Parcel 1)
General property taxes were not assessed against the land for the year 2008 because of ownership by a tax exempt entity. Tax Parcel No. 08-15-100-009-0000.

9. (Affects Parcel 2)
General property taxes were not assessed against the land for the year 2008 because of ownership by a tax exempt entity. Tax Parcel No. 08-15-301-004-0000.

10. Any charge upon the land by reason of its inclusion in Salt Lake City.

11. (Affects Both Parcels)
An easement over, across or through the land for electric transmission, distribution and telephone circuits and incidental purposes, as granted to Utah Power & Light Company by Instrument recorded February 5, 1940 as Entry No. 874047 in Book 245 of Deeds at Page 297 of Official Records.

12. (Affects Parcel 1)
An easement over, across or through the land for electric transmission, distribution and telephone circuits and incidental purposes, as granted to Utah Power & Light Company by Instrument recorded February 5, 1940 as Entry No. 874048 in Book 245 of Deeds at Page 297 of Official Records.

13. (Affects Both Parcels)
An easement over, across or through the land for Salt Lake City Water Main Extension No. 853-33-C together with attendant service lines and meters and incidental purposes, as granted to Salt Lake City Corporation, a municipal corporation of the State of Utah, by Instrument recorded February 16, 1972 as Entry No. 2437635 in Book 3042 at Page 645 of Official Records.

14. (Affects Both Parcels)
Reservations contained in that certain Quit Claim Deed recorded April 1, 2002 as Entry No. 8191755 in Book 8583 at Page 1367 of Official Records.

15. (Affects Parcel 1)
Notice of Interest recorded September 16, 2005 as Entry No. 9492452 in Book 9189 at Page 684 of Official Records.

16. The interest of the State of Utah, or others, claiming through or under it, to any portion of the "Sovereign Lands" located within the ordinary high water mark of the Jordan River, as determined by a court of competent jurisdiction or as established pursuant to Chapter 10, Title 65A of the Utah Code.

17. Subject to a boundary discrepancy and overlap of the subject property shown herein Schedule A as Parcel 1 with Parcel 2.

***

Title inquiries should be directed to Rollin Domire @ (801) 265-3206.

***

NOTE: The policy(ies) to be issued as a result of this Commitment contain an Arbitration Clause set forth in the Conditions/Conditions and Stipulations Section. The following is included for the information of the proposed insured(s):

Any matter in dispute between you and the company may be subject to arbitration as an alternative to court action pursuant to the rules of the American Arbitration Association or other recognized arbitrator, a copy of which is available on request from the company. Any decision reached by arbitration shall be binding upon both you and the company. The arbitration award may include attorney's fees if allowed by state law and may be entered as a judgment in any court of proper jurisdiction.

CONDITIONS

1. **DEFINITIONS**
   (a) "Mortgage" means mortgage, deed of trust or other security instrument.
   (b) "Public Records" means title records that give constructive notice of matters affecting the title according to the state law where the land is located.

2. **LATER DEFECTS**
   The Exceptions in Schedule B may be amended to show any defects, liens or encumbrances that appear for the first time in the public records or are created or attached between the Commitment Date and the date on which all of the Requirements are met. We shall have no liability to you because of this amendment.

3. **EXISTING DEFECTS**
   If any defects, liens or encumbrances existing at Commitment Date are not shown in Schedule B, we may amend Schedule B to show them. If we do amend Schedule B to show these defects, liens or encumbrances, we shall be liable to you according to Paragraph 4 below unless you knew of this information and did not tell us about it in writing.

4. **LIMITATION OF OUR LIABILITY**
   Our only obligation is to issue to you the Policy referred to in this Commitment, when you have met its Requirements. If we have any liability to you for any loss you incur because of an error in this Commitment, our liability will be limited to your actual loss caused by your relying this Commitment when you acted in good faith to:

   comply with the Requirements
   or
   eliminate with our written consent any Exceptions shown in Schedule B

   We shall not be liable for more than the Amount shown in Schedule A of this Commitment and our liability is subject to the terms of the Policy form to be issued to you.

5. **CLAIMS MUST BE BASED ON THIS COMMITMENT**
   Any claims, whether or not based on negligence, which you may have against us concerning the title to the land must be based on this Commitment and is subject to its terms

First American

First American Title Insurance Agency
The First American Corporation

PRIVACY POLICY

We Are Committed to Safeguarding Customer Information

In order to better serve your needs now and in the future, we may ask you to provide us with certain information. We understand that you may be concerned about what we will do with such information - particularly any personal or financial information. We agree that you have a right to know how we will utilize the personal information you provide to us. Therefore, together with our parent company, The First American Corporation, we have adopted this Privacy Policy to govern the use and handling of your personal information.

Applicability

This Privacy Policy governs our use of the information which you provide to us. It does not govern the manner in which we may use information we have obtained from any other source, such as information obtained from public records or from another person or entity. First American has also adopted broader guidelines that govern our use of personal information regardless of its source. First American calls these guidelines its *Fair Information Values*, a copy of which can be found on our web site at www.firstam.com.

Types of Information

Depending upon which of our services you are utilizing, the types of nonpublic personal information that we may collect include:

- Information we receive from you on applications, forms and in other communications to us, whether in writing, in person, by telephone or any other means;
- Information about your transactions with us, our affiliated companies, or others; and
- Information we receive from a consumer reporting agency.

Use of Information

We request information from you for our own legitimate business purposes and not for the benefit of any nonaffiliated party. Therefore, we will not release your information to nonaffiliated parties except: (1) as necessary for us to provide the product or service you have requested of us; or (2) as permitted by law. We may, however, store such information indefinitely, including the period after which any customer relationship has ceased. Such information may be used for any internal purpose, such as quality control efforts or customer analysis. We may also provide all of the types of nonpublic personal information listed above to one or more of our affiliated companies. Such affiliated companies include financial services providers, such as title insurers, property and casualty insurers, and trust and investment advisory companies, or companies involved in real estate services, such as appraisal companies, home warranty companies, and escrow companies. Furthermore, we may also provide all information we collect, as described above, to companies that perform marketing services on our behalf, on behalf of our affiliated companies, or to other financial institutions with whom we or our affiliated companies have joint marketing agreements.

Former Customers

Even if you are no longer our customer, our Privacy Policy will continue to apply.

Confidentiality and Security

We will use our best efforts to ensure that no unauthorized parties have access to any of your information. We restrict access to nonpublic personal information about you to those individuals and entities who need to know that information to provide products and services to you. We will use our best efforts to train and oversee our employees and agents to ensure that your information will be handled responsibly and in accordance with this Privacy Policy and First American's *Fair Information Values*. We currently maintain physical, electronic, and procedural safeguards that comply with federal regulations to guard your nonpublic personal information.

COMMITMENT FOR TITLE INSURANCE

ISSUED BY

NATIONAL TITLE AGENCY, LLC

An Agent of First American Title Insurance Co.
5295 South Commerce Drive, Ste. 250, Murray City, UT 84107
Phone: (801)265-3200 | Fax: (801)265-3201

Salt Lake City
451 South State, Room 225
Salt Lake City, Utah 84111
Attn: Duran Lucas

File Number: 5138382
Client No.
Amendment No.

We agree to issue a policy to you according to the terms of this Commitment. When we show the policy amount and your name as the proposed insured in Schedule A, this Commitment becomes effective as of the Commitment Date shown in Schedule A.

If the Requirements shown in this Commitment have not been met within six months after the Commitment Date, our obligation under this Commitment will end. Also, our obligation under this Commitment will end when the Policy is issued and then our obligation to you will be under the Policy.

Our obligation under this commitment is limited by the following:

The Provisions in Schedule A.
The Requirements in Schedule B-1.
The Exceptions in Schedule B-2.
The Conditions on the inside cover page.

The Commitment is not valid with out SCHEDULE A and Sections 1 and 2 of SCHEDULE B.

Underwritten by:

First American Title Insurance Company

BY *Gary L. Kermott* PRESIDENT

ATTEST *Mark R. Arnesen* SECRETARY

FIRST AMERICAN TITLE INSURANCE COMPANY
INCORPORATED SEPTEMBER 24, 1968
CALIFORNIA

SCHEDULE A

ESCROW/CLOSING INQUIRIES should be directed to your Escrow Officer: **Julie Wright at (801)265-3210** located at 5295 South Commerce Drive, Ste. 250, Murray City, UT 84107.

Effective Date: January 26, 2009 at 7:30 a.m.

1. Policy or (Policies) to be issued:

   ALTA 2006 Standard Owners for $TBD PREMIUM $TBD

   Proposed Insured:

   Salt Lake City Corporation, a Utah municipal corporation

2. The estate or interest in the land described or referred to in this commitment and covered herein is fee simple and title thereto is at the effective date hereof vested in:

   Leone K. Hill, Edna H. Goulding and Lola A. Christensen, Trustees of the Leone K. Hill Revocable Trust as joint tenants with full rights of survivorship

3. The land referred to in this Commitment is located in Salt Lake County, UT and is described as:

   Beginning at a point North 00°33'38" West 119.69 feet along section line and North 89°26'22" East 356.80 feet, from the Southwest corner of Section 15. Township 1 North, Range 1 West, Salt Lake Base and Meridian, and running thence Northerly, more or less, along a right-of-way fence the following three (3) courses: North 52°43'44" West 30.89 feet along a frontage road right-of-way fence; thence North 33°34'23" West 166.11 feet; thence North 07°31'21" West 1005.99 feet; thence leaving the fence, North 87°30'00" East 317.28 feet to a point on the East bank of the original Jordan River; thence Southerly along said East bank, more or less, the following five (5) courses: South 08°35'36" East 357.19 feet; thence South 05°01'49" East 52.14 feet; thence South 13°33'26" West 83.60 feet; thence South 16°46'23" West 284.32 feet; thence South 03°30'39" West 410.44 feet to the point of beginning.

   Said property is also known by the street address of:
   2223 North Rose Park Lane, Salt Lake City, Utah 84116

SCHEDULE B - Section 1
Requirements

The following are the requirements to be complied with:

(A) Pay the agreed amounts for interest in the land and/or the mortgage or deed of trust to be insured.

(B) Pay us the premiums, fees and charges for the policy. In the event the transaction for which this commitment is furnished cancels, the minimum cancellation fee will be $100.00.

(C) Provide us with releases, reconveyances or other instruments, acceptable to us, including payment of any amounts due, removing the encumbrances shown in Schedule B-2 that are objectionable to the proposed insured.

(D) Provide us with copies of appropriate agreements, resolutions, certificates, or other evidence needed to identify the parties authorized to execute the documents creating the interest to be insured.

(E) The documents creating the interest to be insured must be signed, delivered and recorded.

***

SCHEDULE B - Section 2
Exceptions

Any policy we issue will have the following exceptions unless they are taken care of to our satisfaction.

1. Taxes or assessments which are not shown as existing liens by the records of any taxing authority that levies taxes or assessments on real property or by the public records.

2. Any facts, rights, interest or claims which are not shown by the public records but which could be ascertained by an inspection of said land or by making inquiry of persons in possession thereof.

3. Easements, claims of easements or encumbrances which are not shown by the public records.

4. Discrepancies, conflicts in boundary lines, shortage in area, encroachments and any other facts which a correct survey would disclose, and which are not shown by public records.

5. Unpatented mining claims; reservations or exceptions in patents or in Acts authorizing the issuance thereof, water rights, claims or title to water.

6. Any lien, or right to a lien, for services, labor or material heretofore or hereafter furnished, imposed by law and not shown by the public records.

7. Defects, liens, encumbrances, adverse claims or other matters, if any, created, first appearing in the public records or attaching subsequent to the effective date hereof but prior to the date the proposed insured acquires of record for value the estate or interest or mortgage thereon covered by this commitment.

8. Taxes for the year 2009 now a lien, not yet due. Taxes for the year 2008 were paid in the amount of $13.13. Tax Parcel No. 08-15-351-003-0000.

9. A resolution proposing to create a special improvement district known as **Salt Lake City** with power and authority to impose assessments for improvements, provisions, restrictions, and/or requirements as disclosed by document recorded December 29, 2008 as Entry No. 10587830 in Book 9669 at Page 83 of Official Records.

10. The effect of the 1969 Farmland Assessment Act, wherein there is a five (5) year roll-back provision with regard to assessment and taxation, by reason of that certain Application for Assessment and Taxation of Agricultural Land, recorded May 21, 1993 as Entry No. 5508388 in Book 6667 at Page 812 of Official Records.

11. Lack of access to freeway as evidenced by that certain Order of Immediate Occupancy recorded February 26, 1979 as Entry No. 3241472 in Book 4819 at Page 134 of Official Records.

12. Subject to any right, title or interest of Utah Department of Transportation by virtue of that certain Order of Immediate Occupancy recorded February 26, 1979 as Entry No. 3241472 in Book 4819 at Page 134 of Official Records.

***

The name(s) the Leone K. Hill Revocable Trust has been checked for judgments, State and Federal tax liens, and bankruptcies and if any were found are disclosed herein.

***

The name Salt Lake City Corporation, a governmental agency exempt from execution pursuant to Utah Code Annotated _63-30-22, has NOT been checked for judgments, State and Federal tax liens, or bankruptcies.

***

Chain of Title

According to Official Records, there have been no documents conveying the land described herein within a period of 24 months prior to the date of this commitment, except as follows:

Document	Grantor	Grantee	Rec Date	Entry No.	Book	Page
NONE						

***

Title inquiries should be directed to Rollin Domire @ (801) 265-3206.

***

NOTE: The policy(ies) to be issued as a result of this Commitment contain an Arbitration Clause set forth in the Conditions/Conditions and Stipulations Section. The following is included for the information of the proposed insured(s):

Any matter in dispute between you and the company may be subject to arbitration as an alternative to court action pursuant to the rules of the American Arbitration Association or other recognized arbitrator, a copy of which is available on request from the company. Any decision reached by arbitration shall be binding upon both you and the company. The arbitration award may include attorney's fees if allowed by state law and may be entered as a judgment in any court of proper jurisdiction.

CONDITIONS

1. DEFINITIONS
   (a) "Mortgage" means mortgage, deed of trust or other security instrument.
   (b) "Public Records" means title records that give constructive notice of matters affecting the title according to the state law where the land is located.

2. LATER DEFECTS
   The Exceptions in Schedule B may be amended to show any defects, liens or encumbrances that appear for the first time in the public records or are created or attached between the Commitment Date and the date on which all of the Requirements are met. We shall have no liability to you because of this amendment.

3. EXISTING DEFECTS
   If any defects, liens or encumbrances existing at Commitment Date are not shown in Schedule B, we may amend Schedule B to show them. If we do amend Schedule B to show these defects, liens or encumbrances, we shall be liable to you according to Paragraph 4 below unless you knew of this information and did not tell us about it in writing.

4. LIMITATION OF OUR LIABILITY
   Our only obligation is to issue to you the Policy referred to in this Commitment, when you have met its Requirements. If we have any liability to you for any loss you incur because of an error in this Commitment, our liability will be limited to your actual loss caused by your relying this Commitment when you acted in good faith to:

   comply with the Requirements
   or
   eliminate with our written consent any Exceptions shown in Schedule B

   We shall not be liable for more than the Amount shown in Schedule A of this Commitment and our liability is subject to the terms of the Policy form to be issued to you.

5. CLAIMS MUST BE BASED ON THIS COMMITMENT
   Any claims, whether or not based on negligence, which you may have against us concerning the title to the land must be based on this Commitment and is subject to its terms

First American

First American Title Insurance Agency
The First American Corporation

PRIVACY POLICY

We Are Committed to Safeguarding Customer Information

In order to better serve your needs now and in the future, we may ask you to provide us with certain information. We understand that you may be concerned about what we will do with such information - particularly any personal or financial information. We agree that you have a right to know how we will utilize the personal information you provide to us. Therefore, together with our parent company, The First American Corporation, we have adopted this Privacy Policy to govern the use and handling of your personal information.

Applicability

This Privacy Policy governs our use of the information which you provide to us. It does not govern the manner in which we may use information we have obtained from any other source, such as information obtained from public records or from another person or entity. First American has also adopted broader guidelines that govern our use of personal information regardless of its source. First American calls these guidelines its *Fair Information Values*, a copy of which can be found on our web site at www.firstam.com.

Types of Information

Depending upon which of our services you are utilizing, the types of nonpublic personal information that we may collect include:

- Information we receive from you on applications, forms and in other communications to us, whether in writing, in person, by telephone or any other means;
- Information about your transactions with us, our affiliated companies, or others; and
- Information we receive from a consumer reporting agency.

Use of Information

We request information from you for our own legitimate business purposes and not for the benefit of any nonaffiliated party. Therefore, we will not release your information to nonaffiliated parties except: (1) as necessary for us to provide the product or service you have requested of us; or (2) as permitted by law. We may, however, store such information indefinitely, including the period after which any customer relationship has ceased. Such information may be used for any internal purpose, such as quality control efforts or customer analysis. We may also provide all of the types of nonpublic personal information listed above to one or more of our affiliated companies. Such affiliated companies include financial services providers, such as title insurers, property and casualty insurers, and trust and investment advisory companies, or companies involved in real estate services, such as appraisal companies, home warranty companies, and escrow companies. Furthermore, we may also provide all information we collect, as described above, to companies that perform marketing services on our behalf, on behalf of our affiliated companies, or to other financial institutions with whom we or our affiliated companies have joint marketing agreements.

Former Customers

Even if you are no longer our customer, our Privacy Policy will continue to apply.

Confidentiality and Security

We will use our best efforts to ensure that no unauthorized parties have access to any of your information. We restrict access to nonpublic personal information about you to those individuals and entities who need to know that information to provide products and services to you. We will use our best efforts to train and oversee our employees and agents to ensure that your information will be handled responsibly and in accordance with this Privacy Policy and First American's *Fair Information Values*. We currently maintain physical, electronic, and procedural safeguards that comply with federal regulations to guard your nonpublic personal information.

IHI

ENVIRONMENTAL

PHONE 801-466-2223
FAX 801-466-9616

PROPERTY OWNER
SITE ASSESSMENT QUESTIONNAIRE

Please return by Fax or email to Leia Larsen FAX: (801) 466-9616 email: llarsen@ihi-env.com

Property Name/Address Undeveloped Land and Modelport / Approx. 2200 North Rose Park Lane, Salt Lake City, Utah

Project #: 09E-7120

Form Completed By: Eric Stucki Phone:801-533-5127 Date: 8-17-2009

Your relationship to the property (Owner, Owner Representative, Property Manager, Tenant, etc.): Owner Representative.

How long have you been associated with, or had knowledge of, the property? 1997 to present

How long have you owned the property? Since early 80's

Section 1 Current and Historical Uses of Property

1. Name(s) of current and any previous occupant(s) or provide a tenant list.
Modelport Club, Ed Gilmore agricultural (alfa alfa and cattle grazing), State Parks visitors - OHV and equestrian use

2. Please describe the current use(s) of the property or indicate uses on the tenant list.

Modelport, agricultural (alfa alfa and cattle grazing), OHV and equestrian use

3. Please describe the past (historical) uses of the property, with approximate dates.

Same as 2. Modelport has existed since the late 80's, the rest are seasonal uses that have been around since inception.

4. Has a previous Phase I ESA or other Environmental Investigation been done on the property? Please provide a copy of these previous studies.

No.

Section 2 Potential Environmental Conditions

If you are aware of any of the conditions identified, please answer yes, so that we can clarify all past and present environmental conditions.

Conditions	Yes	No
1. **Industrial Uses of Subject or Adjoining Properties** Industrial uses including but not limited to: gas/service stations, auto repair or painting, printing, dry cleaners, photo processing, or chrome plating, smelting, petroleum refining, and/or other chemical manufacturing		X
2. **Agricultural / Silvaculture / Aquiculture Uses** Crop production, concentrated animal feeding (poultry, cattle, fish, etc.)	X	
3. **Waste Storage or Disposal** Junkyard, recycling facility, battery storage, landfill, dump, wastewater lagoon		X
4. **Equipment Use, Storage, or Abandonment** Production lines, hydraulic equipment, vehicles, heavy equipment		X
5. **Hazardous Materials** (greater than 5-gallon containers or 25-lb bags) Pesticides, paints, solvents, acids, bases, antifreeze, other regulated materials If yes, please list approximate quantities and specify materials on a separate sheet.		X
6. **Petroleum Hydrocarbons** (greater than 5 gallon containers) Gasoline, diesel, lubricating oil, waste oil, fuel oil, heating oil or bunker oil, kerosene, benzene, toluene, ethylbenzene xylene, aviation or jet fuel If yes, please list approximate quantities and specify materials on a separate sheet.		X
7. **Spills or Releases of Petroleum Hydrocarbons or Hazardous Materials** Stained soil, dead vegetation or any other evidence of a petroleum or chemical spill		X
8. **PCBs** Transformers, hydraulic equipment		X
9. **Surface Water Issues** Pits, ponds, or lagoons associated with wastewater storage		X
10. **Groundwater Issues** Monitoring or drinking water wells, injection wells or drains that go directly into the ground	X	
11. **Wastewater Issues** Floor drains and trenches, sumps, oil water separators on the site		X

Conditions	Yes	No
12. Underground Storage Tanks (USTs) / Above ground Storage Tanks (ASTs) UST / ASTs present or removed – If yes, please specify material stored: gasoline, diesel, fuel oil, used oil, and indicate capacity.		X
13. Asbestos Issues Asbestos Survey, Inspection, Operation and Management Plans, Abatement Reports		X
14. Septic Tanks and Leachfields Currently used or abandoned	X	
15. Utility Corridors Oil or Gas Pipelines, Right-of-ways, Easements	X	
16. Regulatory Compliance Stormwater Plans, Spill Prevention Plans, Air Permits, Wastewater Discharge Permits, UST Permits, 404 Wetlands Permit. If yes, specify which Plan or Permit.		X
17. Natural Resource Issues Wetlands and Riparian Areas, Critical Habitat, Threatened and Endangered Species, Historic or Cultural Resources		X
18. Legal or Regulatory Actions Are you aware of any governmental enforcement actions or environmental liens with regards to the property, or pending lawsuits or administrative proceedings concerning a release or threatened release of any hazardous substances or petroleum products, involving the property against the owner or any tenant of the property?		X

I have completed the above questionnaire to the best of my knowledge.

Signature: Eric Stuck Date 8-17-09

Printed name: Eric Stuck Company: Utah State Parks

IHI

ENVIRONMENTAL

PHONE 801-466-2223
FAX 801-466-9616

PROPERTY OWNER
SITE ASSESSMENT QUESTIONNAIRE

Please return by Fax or email to Leia Larsen FAX: (801) 466-9616 email: llarsen@ihi-env.com

Property Name/Address 4 Salt Lake City Undeveloped Parcels / Approx. 1845 West 2295 North, Salt Lake City, Utah

Project #: 09E-7120

Form Completed By: DURAN LUCAS Phone: 801-356-3741 Date: July 16 2009

Your relationship to the property (Owner, Owner Representative, Property Manager, Tenant, etc.): OWNER REPRESENTATIVE

How long have you been associated with, or had knowledge of, the property? 1 YEAR

How long have you owned the property? 15 YEARS

Section 1 Current and Historical Uses of Property

1. Name(s) of current and any previous occupant(s) or provide a tenant list.

   NO CURRENT OCCUPANTS
   NO PREVIOUS OCCUPANTS

2. Please describe the current use(s) of the property or indicate uses on the tenant list.

   OPEN SPACE

3. Please describe the past (historical) uses of the property, with approximate dates.

   OPEN SPACE

4. Has a previous Phase I ESA or other Environmental Investigation been done on the property? Please provide a copy of these previous studies. UNKNOWN

Section 2 Potential Environmental Conditions

If you are aware of any of the conditions identified, please answer yes, so that we can clarify all past and present environmental conditions.

Conditions	Yes	No
1. **Industrial Uses of Subject or Adjoining Properties** Industrial uses including but not limited to: gas/service stations, auto repair or painting, printing, dry cleaners, photo processing, or chrome plating, smelting, petroleum refining, and/or other chemical manufacturing		X
2. **Agricultural / Silvaculture / Aquiculture Uses** Crop production, concentrated animal feeding (poultry, cattle, fish, etc.)	X	
3. **Waste Storage or Disposal** Junkyard, recycling facility, battery storage, landfill, dump, wastewater lagoon		X
4. **Equipment Use, Storage, or Abandonment** Production lines, hydraulic equipment, vehicles, heavy equipment		X
5. **Hazardous Materials** (greater than 5-gallon containers or 25-lb bags) Pesticides, paints, solvents, acids, bases, antifreeze, other regulated materials If yes, please list approximate quantities and specify materials on a separate sheet.		X
6. **Petroleum Hydrocarbons** (greater than 5 gallon containers) Gasoline, diesel, lubricating oil, waste oil, fuel oil, heating oil or bunker oil, kerosene, benzene, toluene, ethylbenzene xylene, aviation or jet fuel If yes, please list approximate quantities and specify materials on a separate sheet.		X
7. **Spills or Releases of Petroleum Hydrocarbons or Hazardous Materials** Stained soil, dead vegetation or any other evidence of a petroleum or chemical spill		X
8. **PCBs** Transformers, hydraulic equipment		X
9. **Surface Water Issues** Pits, ponds, or lagoons associated with wastewater storage		X
10. **Groundwater Issues** Monitoring or drinking water wells, injection wells or drains that go directly into the ground		X
11. **Wastewater Issues** Floor drains and trenches, sumps, oil water separators on the site		X

Conditions	Yes	No
12. Underground Storage Tanks (USTs) / Above ground Storage Tanks (ASTs) UST / ASTs present or removed – If yes, please specify material stored: gasoline, diesel, fuel oil, used oil, and indicate capacity.		X
13. Asbestos Issues Asbestos Survey, Inspection, Operation and Management Plans, Abatement Reports		X
14. Septic Tanks and Leachfields Currently used or abandoned		X
15. Utility Corridors Oil or Gas Pipelines, Right-of-ways, Easements		X
16. Regulatory Compliance Stormwater Plans, Spill Prevention Plans, Air Permits, Wastewater Discharge Permits, UST Permits, 404 Wetlands Permit. If yes, specify which Plan or Permit.		X
17. Natural Resource Issues Wetlands and Riparian Areas, Critical Habitat, Threatened and Endangered Species, Historic or Cultural Resources	X	
18. Legal or Regulatory Actions Are you aware of any governmental enforcement actions or environmental liens with regards to the property, or pending lawsuits or administrative proceedings concerning a release or threatened release of any hazardous substances or petroleum products, involving the property against the owner or any tenant of the property?		X

I have completed the above questionnaire to the best of my knowledge.

Signature: Duran Lucas Date July 16, 2009

Printed name: DURAN LUCAS Company: SALT LAKE CITY CORP

IHI

ENVIRONMENTAL

PHONE 801-466-2223
FAX 801-466-9616

PROPERTY OWNER
SITE ASSESSMENT QUESTIONNAIRE

Please return by Fax or email to Leia Larsen FAX: (801) 466-9616 email: llarsen@ihi-env.com

Property Name/Address ~~Leon~~ Leone Hill Trust Property / 2223 North Rose Park Lane, Salt Lake City, Utah

Project #: 09E-7120

Form Completed By: Lola A Christensen Phone: 801-266-3667 Date: 7/10/09

Your relationship to the property (Owner, Owner Representative, Property Manager, Tenant, etc.): Daughter

How long have you been associated with, or had knowledge of, the property? 60

How long have you owned the property? 60

Section 1 Current and Historical Uses of Property

1. Name(s) of current and any previous occupant(s) or provide a tenant list.
   LaVane Kilgore

2. Please describe the current use(s) of the property or indicate uses on the tenant list.
   No Tenants Hay Harvest

3. Please describe the past (historical) uses of the property, with approximate dates.
   Hay harvest 1949 - 2009

4. Has a previous Phase I ESA or other Environmental Investigation been done on the property? Please provide a copy of these previous studies. No

Section 2 Potential Environmental Conditions

If you are aware of any of the conditions identified, please answer yes, so that we can clarify all past and present environmental conditions.

Conditions	Yes	No
1. **Industrial Uses of Subject or Adjoining Properties** Industrial uses including but not limited to: gas/service stations, auto repair or painting, printing, dry cleaners, photo processing, or chrome plating, smelting, petroleum refining, and/or other chemical manufacturing		X
2. **Agricultural / Silvaculture / Aquiculture Uses** Crop production, concentrated animal feeding (poultry, cattle, fish, etc.)	X	
3. **Waste Storage or Disposal** Junkyard, recycling facility, battery storage, landfill, dump, wastewater lagoon		X
4. **Equipment Use, Storage, or Abandonment** Production lines, hydraulic equipment, vehicles, heavy equipment		X
5. **Hazardous Materials** (greater than 5-gallon containers or 25-lb bags) Pesticides, paints, solvents, acids, bases, antifreeze, other regulated materials If yes, please list approximate quantities and specify materials on a separate sheet.		X
6. **Petroleum Hydrocarbons** (greater than 5 gallon containers) Gasoline, diesel, lubricating oil, waste oil, fuel oil, heating oil or bunker oil, kerosene, benzene, toluene, ethylbenzene xylene, aviation or jet fuel If yes, please list approximate quantities and specify materials on a separate sheet.		X
7. **Spills or Releases of Petroleum Hydrocarbons or Hazardous Materials** Stained soil, dead vegetation or any other evidence of a petroleum or chemical spill		X
8. **PCBs** Transformers, hydraulic equipment		X
9. **Surface Water Issues** Pits, ponds, or lagoons associated with wastewater storage		X
10. **Groundwater Issues** Monitoring or drinking water wells, injection wells or drains that go directly into the ground		X
11. **Wastewater Issues** Floor drains and trenches, sumps, oil water separators on the site		X

Conditions	Yes	No
12. Underground Storage Tanks (USTs) / Above ground Storage Tanks (ASTs) UST / ASTs present or removed – If yes, please specify material stored: gasoline, diesel, fuel oil, used oil, and indicate capacity.		X
13. Asbestos Issues Asbestos Survey, Inspection, Operation and Management Plans, Abatement Reports		X
14. Septic Tanks and Leachfields Currently used or abandoned		X
15. Utility Corridors Oil or Gas Pipelines, Right-of-ways, Easements		X
16. Regulatory Compliance Stormwater Plans, Spill Prevention Plans, Air Permits, Wastewater Discharge Permits, UST Permits, 404 Wetlands Permit. If yes, specify which Plan or Permit.		X
17. Natural Resource Issues Wetlands and Riparian Areas, Critical Habitat, Threatened and Endangered Species, Historic or Cultural Resources		X
18. Legal or Regulatory Actions Are you aware of any governmental enforcement actions or environmental liens with regards to the property, or pending lawsuits or administrative proceedings concerning a release or threatened release of any hazardous substances or petroleum products, involving the property against the owner or any tenant of the property?		X

I have completed the above questionnaire to the best of my knowledge.

Signature: Lola Ann Christensen Date 9/10/09

Printed name: Lola Ann Christensen Company: _____

Provo-Jordan River Parkway Authority

08-15-100-010
08-15-351-002
08-22-100-001 Spans River
08-22-100-009
08-22-100-002 Spans River
08-15-376-007
08-15-376-003
08-15-376-002
08-15-327-002
08-15-327-001 Spans River
08-15-100-016
08-15-100-011

Utah Division of Parks and Recreation

08-15-100-009
08-15-301-004

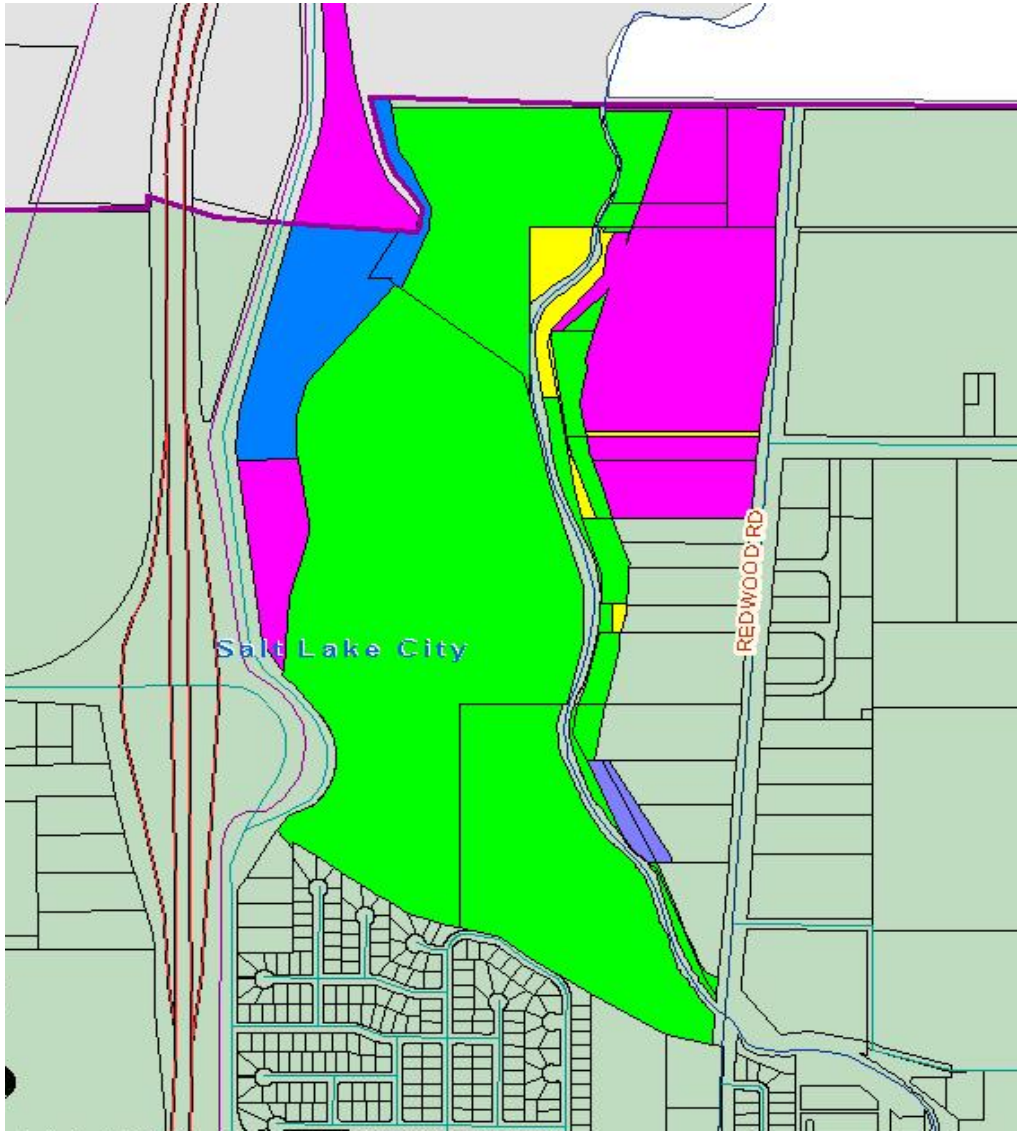
Salt Lake County

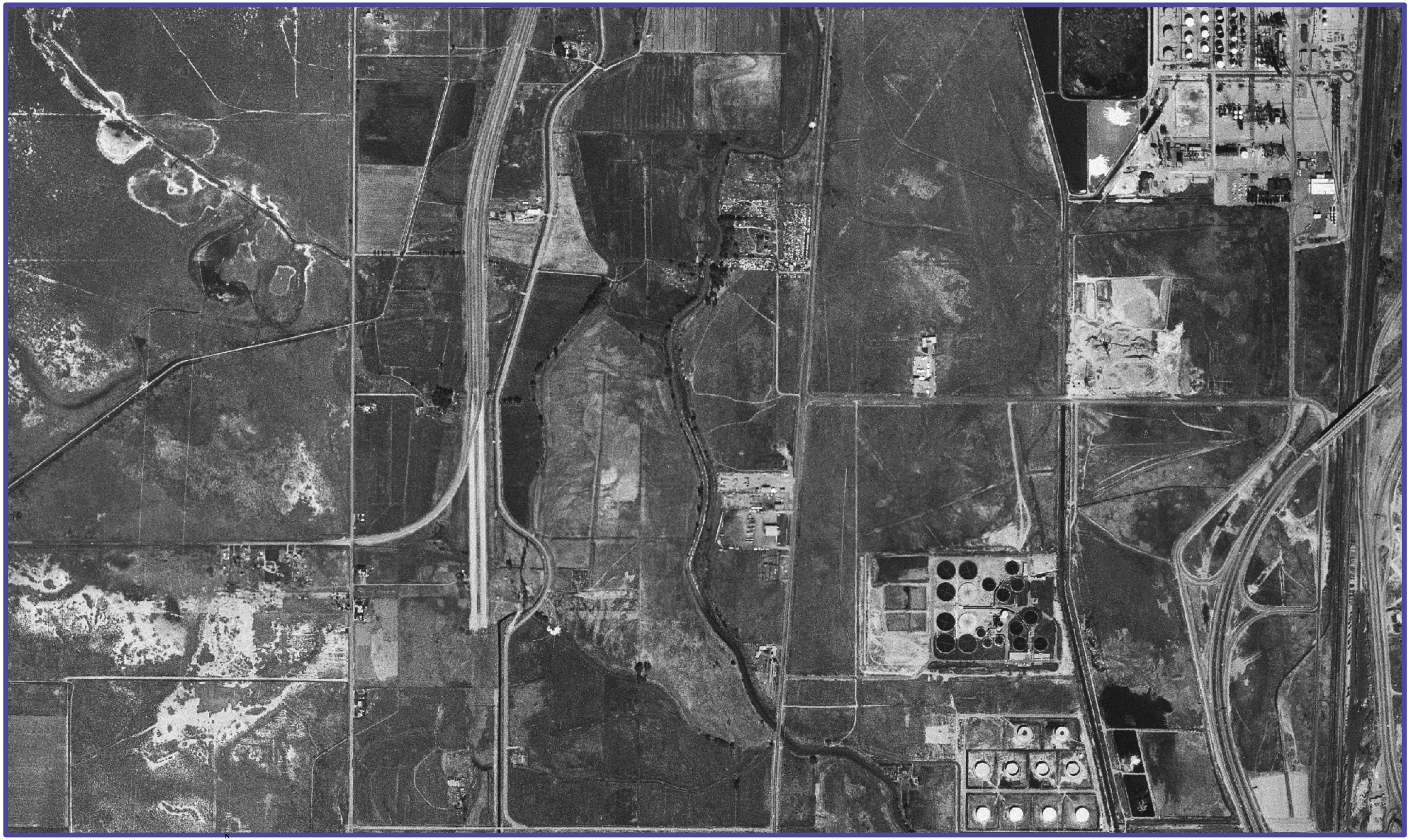
08-22-100-005
08-22-100-004

Actual Water Way (Utah Sovereign Lands)

Salt Lake City

08-15-376-009
08-15-376-001
08-15-326-001 Spans River
08-15-401-011





N
W E
S

0 400 800 Feet

SLC Sewer Treatment Plant 1970

APPENDIX 3

Environmental Database Report

InfoMap
Technologies Incorporated

Environmental FirstSearch™ Report

Target Property: ROSE PARK SPORTS COMPLEX

~2200 N REDWOOD ROAD

SALT LAKE CITY UT 84116

Job Number: 09E-7120

PREPARED FOR:

IHI Environmental

Leia Larsen

08-19-09

Tel: (610) 430-7530 *Fax: (610) 430-7535*

Environmental FirstSearch
Search Summary Report

Target Site: ~2200 N REDWOOD ROAD
SALT LAKE CITY UT 84116

FirstSearch Summary

Database	Sel	Updated	Radius	Site	1/8	1/4	1/2	1/2>	ZIP	TOTALS
NPL	Y	06-12-09	1.25	0	0	0	0	0	0	0
NPL Delisted	Y	06-12-09	0.75	0	0	0	0	0	0	0
CERCLIS	Y	05-27-09	0.75	0	0	1	0	0	0	1
NFRAP	Y	05-27-09	0.75	0	0	0	0	1	0	1
RCRA COR ACT	Y	05-13-09	1.25	0	0	0	0	2	0	2
RCRA TSD	Y	05-13-09	0.75	0	0	0	0	0	0	0
RCRA GEN	Y	05-13-09	0.50	0	0	0	0	-	0	0
RCRA NLR	Y	05-13-09	0.50	0	0	0	1	-	0	1
Federal IC / EC	Y	07-02-09	0.75	0	0	0	0	0	0	0
ERNS	Y	06-16-09	0.50	0	0	0	0	-	0	0
Tribal Lands	Y	12-01-05	1.25	0	0	0	0	0	0	0
State/Tribal Sites	Y	09-15-07	1.25	0	0	0	0	0	0	0
State Spills 90	Y	12-31-07	0.50	0	0	0	0	-	0	0
State/Tribal SWL	Y	07-02-07	0.75	0	0	0	0	0	0	0
State/Tribal LUST	Y	07-08-09	0.75	0	0	0	2	2	0	4
State/Tribal UST/AST	Y	07-08-09	0.50	0	0	0	2	-	0	2
State/Tribal EC	Y	NA	0.75	0	0	0	0	0	0	0
State/Tribal IC	Y	NA	0.50	0	0	0	0	-	0	0
State/Tribal VCP	Y	03-01-09	0.75	0	0	1	0	0	0	1
State/Tribal Brownfields	Y	03-01-09	0.75	0	0	0	0	0	0	0
NPDES	Y	08-08-09	0.50	0	0	0	0	-	0	0
FINDS	Y	07-10-07	0.50	0	0	1	4	-	0	5
TRIS	Y	06-24-09	0.50	0	0	0	0	-	0	0
- TOTALS -				0	0	3	9	5	0	17

Notice of Disclaimer

Due to the limitations, constraints, inaccuracies and incompleteness of government information and computer mapping data currently available to InfoMap Technologies, certain conventions have been utilized in preparing the locations of all federal, state and local agency sites residing in InfoMap Technologies's databases. All EPA sites are depicted by a rectangle approximating their location and size. The boundaries of the rectangles represent NPL and state landfill the eastern and western most longitudes; the northern and southern most latitudes. As such, the mapped areas may exceed the actual areas and do not represent the actual boundaries of these properties. All other sites are depicted by a point representing their approximate address location and make no attempt to represent the actual areas of the associated property. Actual boundaries and locations of individual properties can be found in the files residing at the agency responsible for such information.

Waiver of Liability

Although InfoMap Technologies uses its best efforts to research the actual location of each site, InfoMap Technologies does not and can not warrant the accuracy of these sites with regard to exact location and size. All authorized users of InfoMap Technologies's services proceeding are signifying an understanding of InfoMap Technologies's searching and mapping conventions, and agree to waive any and all liability claims associated with search and map results showing incomplete and or inaccurate site locations.

Environmental FirstSearch
Site Information Report

Request Date:	08-19-09	**Search Type:**	COORD
Requestor Name:	IHI Environmental	**Job Number:**	09E-7120
Standard:	AAI-IHI	**Filtered Report**	

Target Site: ~2200 N REDWOOD ROAD
SALT LAKE CITY UT 84116

Demographics

Sites:	17	**Non-Geocoded:**	0	**Population:**	NA
Radon:	NA				

Site Location

	Degrees (Decimal)	**Degrees (Min/Sec)**		**UTMs**
Longitude:	-111.944539	-111:56:40	**Easting:**	420341.901
Latitude:	40.817876	40:49:4	**Northing:**	4518757.522
Elevation:	4230		**Zone:**	12

Comment

Comment: REDO

Additional Requests/Services

Adjacent ZIP Codes: 0 Mile(s)

ZIP Code	City Name	ST	Dist/Dir	Sel

Services:

	Requested?	Date
Fire Insurance Maps	No	
Aerial Photographs	No	
Historical Topos	No	
City Directories	No	
Title Search/Env Liens	No	
Municipal Reports	No	
Online Topos	No	

Environmental FirstSearch
Sites Summary Report

Target Property: ~2200 N REDWOOD ROAD
SALT LAKE CITY UT 84116

JOB: 09E-7120
REDO

TOTAL: 17 **GEOCODED:** 17 **NON GEOCODED:** 0 **SELECTED:** 17

Page No.	DB Type	Site Name/ID/Status	Address	Dist/Dir	Map ID	ElevDiff
1	CERCLIS	NORTHWEST OIL DRAIN UTD980667000/NOT PROPOSED	ROSE PARK TO 1000 SALT LAKE CITY UT 84116	0.24 SW	1	+ 2
3	FINDS	NORTHWEST OIL DRAIN 110008533998/FRS	NORTH ROSE PARK TO 1000 SALT LAKE CITY UT 84116	0.24 SW	1	+ 2
5	VCP	NORTHWEST OIL DRAIN RAILYARD SEGME C035	NORTH BETWEEN 600 AND 1000 SALT LAKE CITY UT	0.24 SW	1	+ 2
6	FINDS	CITY DRAIN PUMPING STATION 110002278516/FRS	2200 NORTH ROSE PARK LANE SALT LAKE CITY UT 84116	0.29 SW	2	+ 10
7	UST	CITY DRAIN PUMPING STATION 4001371/ACTIVE	2200 NORTH ROSE PARK LANE SALT LAKE CITY UT 84116	0.29 SW	2	+ 10
8	FINDS	MH COOK PIPELINE CONSTRUCTION 110002289531/FRS	2175 NORTH REDWOOD ROAD SALT LAKE CITY UT 84101	0.36 SE	3	+ 15
9	FINDS	S and M FOREIGN AUTO WRECKING 110002264219/FRS	2401 NORTH REDWOOD ROAD SALT LAKE CITY UT 84109	0.38 NE	4	+ 2
10	LUST	ENERGY EXPRESS, INC. 4000276	2125 NORTH REDWOOD ROAD SALT LAKE CITY UT 84116	0.40 SE	5	+ 16
11	FINDS	20TH CENTURY LITES 110002161570/FRS	1560 WEST 2200 NORTH SALT LAKE CITY UT 84116	0.44 SE	6	- 0
12	LUST	20TH CENTURY LITES 4001086/CLOSED	1560 WEST 2300 NORTH SALT LAKE CITY UT 84116	0.44 SE	6	- 0
12	UST	20TH CENTURY LITES 4001086/INACTIVE	1560 WEST 2300 NORTH SALT LAKE CITY UT 84116	0.44 SE	6	- 0
13	RCRANLR	UNISYS CORPORATION WAREHOUSE UTP000000043/NLR	2100 NORTH REDWOOD ROAD SALT LAKE CITY UT 84116	0.46 SE	7	+ 15
14	LUST	SUN STATE EQUIPMENT 4001471/CLOSED	2051 NORTH REDWOOD ROAD SALT LAKE CITY UT 84116	0.51 SE	8	+ 8
14	LUST	RICCI INVESTMENT COMPANY 4000796/OPEN	2021 NORTH REDWOOD ROAD SALT LAKE CITY UT 84116	0.54 SE	9	+ 8
15	NFRAP	RADIO STATION PROPERTY UTD988066031/NFRAP-N	1500 WEST 2300 NORTH SALT LAKE CITY UT 84116	0.55 SE	10	- 0
16	RCRACOR	AMOCO CLOSED HWMF UTD000826370/CA	1700 NORTH 1200 WEST SALT LAKE CITY UT 84103	1.15 SE	11	+ 1
17	RCRACOR	CHEVRON SALT LAKE REFINERY UTD092029768/CA	2351 NORTH 100 WEST SALT LAKE CITY UT 84116	1.16 NE	12	- 0

Environmental FirstSearch
Site Detail Report

Target Property: ~2200 N REDWOOD ROAD
SALT LAKE CITY UT 84116

JOB: 09E-7120
REDO

CERCLIS

SEARCH ID: 15 **DIST/DIR:** 0.24 SW **ELEVATION:** 4232 **MAP ID:** 1

NAME: NORTHWEST OIL DRAIN
ADDRESS: ROSE PARK TO 1000
SALT LAKE CITY UT 84116
CONTACT: NANCY MUELLER

REV: 5/27/09
ID1: UTD980667000
ID2: 0800677
STATUS: NOT PROPOSED
PHONE: 3033126602

ACTION/QUALITY	AGENCY/RPS	START/RAA	END	
potentially responsible party removal Cleaned up	Responsible Party Primary	01-19-2004		
engineering evaluation/cost analysis	Responsible Party	08-22-2002 Other Start Anomaly	04-29-2003	
potentially responsible party remedial investigation/feasibility study	Responsible Party Primary	03-01-2001 Voluntary Cleanup Start and Complete	08-22-2002	
combined remedial investigation/feasibility study	EPA Fund-Financed	05-12-1998 Original Action Take Over	03-01-2001	
non-national priorities list potentially responsible party search Search Complete, Viable PRPs	Federal Enforcement Primary	04-06-1998	10-21-1999	
non-national priorities list potentially responsible party search	Federal Enforcement Primary	09-03-1992	06-02-1993	
issue request letters (104e)	Federal Enforcement		05-08-2001	
issue request letters (104e)	Federal Enforcement		10-31-2001	
issue request letters (104e)	Federal Enforcement		03-01-2002	
issue request letters (104e)	Federal Enforcement		04-15-2002	
administrative order on consent	Federal Enforcement		09-18-2003	
administrative order on consent	Federal Enforcement		04-15-2004	
discovery	EPA Fund-Financed		10-01-1980	
preliminary assessment Higher priority for further assessment	EPA Fund-Financed		11-01-1980	
preliminary assessment Higher priority for further assessment	State, Fund Financed		09-29-1987	
site inspection Higher priority for further assessment	State, Fund Financed		08-19-1991	
technical assistance	EPA Fund-Financed	12-02-2008		

- Continued on next page -

Environmental FirstSearch
Site Detail Report

Target Property: ~2200 N REDWOOD ROAD
SALT LAKE CITY UT 84116

JOB: 09E-7120
REDO

CERCLIS

SEARCH ID: 15 **DIST/DIR:** 0.24 SW **ELEVATION:** 4232 **MAP ID:** 1

NAME: NORTHWEST OIL DRAIN
ADDRESS: ROSE PARK TO 1000
SALT LAKE CITY UT 84116
CONTACT: NANCY MUELLER

REV: 5/27/09
ID1: UTD980667000
ID2: 0800677
STATUS: NOT PROPOSED
PHONE: 3033126602

DESCRIPTION:
DRAINAGE CANALS FOR SEWAGE AND INDUSTRIAL WASTE WERE FILLED IN. PRP SEARCH IS COMMENCING.

Target Property: ~2200 N REDWOOD ROAD
SALT LAKE CITY UT 84116 REDO

JOB: 09E-7120

FINDS

SEARCH ID: 16 **DIST/DIR:** 0.24 SW **ELEVATION:** 4232 **MAP ID:** 1

NAME: NORTHWEST OIL DRAIN
ADDRESS: NORTH ROSE PARK TO 1000
SALT LAKE CITY UT 84116
SALT LAKE
CONTACT:

REV: 7/10/07
ID1: 110008533998
ID2: UTD980667000
STATUS: FRS
PHONE:

FACILITY REGISTRATION INFORMATION:

PROGRAM: CIM
PROGRAM ID: 490000015235
AGENCY INTERESTED:
INTEREST ENDED:
SOURCE OF DATA: CIM
LAST EXTRACTED: 12/27/2004 7:23:11 AM
REG PROGRAM: STATE MASTER -

PROVIDED BY: STATE AGENCY
AGENCY INT QUAL:
INT END QUAL:
LAST REPORTED:
ENFORCEMENT ACT:

PROGRAM: CERCLIS
PROGRAM ID: UTD980667000
AGENCY INTERESTED: 10/1/1980
INTEREST ENDED:
SOURCE OF DATA: CERCLIS
LAST EXTRACTED:
REG PROGRAM: SUPERFUND - AN UNCONTROLLED OR ABANDONED PLACE WHERE HAZARDOUS WASTE IS LOCATED, POSSIBLY AFFECTING LOCAL ECOSYSTEMS OR PEOPLE.

PROVIDED BY: FEDERAL AGENCY
AGENCY INT QUAL: DISCOVERY DATE
INT END QUAL:
LAST REPORTED:
ENFORCEMENT ACT:

PROGRAM: FRS
PROGRAM ID: 110008533998
AGENCY INTERESTED:
INTEREST ENDED:
SOURCE OF DATA: FRS
LAST EXTRACTED:
REG PROGRAM: FACILITY -

PROVIDED BY: FEDERAL AGENCY
AGENCY INT QUAL:
INT END QUAL:
LAST REPORTED:
ENFORCEMENT ACT:

PROGRAM: ICIS
PROGRAM ID: 5869615
AGENCY INTERESTED: 9/23/2003
INTEREST ENDED:
SOURCE OF DATA: ICIS
LAST EXTRACTED: 11/14/2003 8:46:57 AM
REG PROGRAM: FORMAL ENFORCEMENT ACTION - A CIVIL JUDICIAL OR ADMINISTRATIVE ENFORCEMENT CASE UNDER AN ENVIRONMENTAL STATUTE.

PROVIDED BY: FEDERAL AGENCY
AGENCY INT QUAL: COMPLAINT/PROPOSED ORDER
INT END QUAL:
LAST REPORTED: 10/3/2003 10:49:39 AM
ENFORCEMENT ACT:

SITE TYPE: STATIONARY
INTEREST STATUS: ACTIVE
DATA QUALITY: V
LOCATION DESC: SUPERFUND SITE
ADDRESS TYPE: DIRECTION
LAST REPORTED:
POSTED TO DATABASE: 3/1/2000
DATA UPDATED: 6/6/2007 4:00:46 AM
ENTERED PERSON/METHOD: REFRESH
PARENT REG ID:
CONFIDENCE IN ADDR: MEDIUM

- Continued on next page -

Environmental FirstSearch
Site Detail Report

Target Property: ~2200 N REDWOOD ROAD
SALT LAKE CITY UT 84116

JOB: 09E-7120
REDO

FINDS

SEARCH ID: 16 **DIST/DIR:** 0.24 SW **ELEVATION:** 4232 **MAP ID:** 1

NAME: NORTHWEST OIL DRAIN
ADDRESS: NORTH ROSE PARK TO 1000
SALT LAKE CITY UT 84116
SALT LAKE
CONTACT:

REV: 7/10/07
ID1: 110008533998
ID2: UTD980667000
STATUS: FRS
PHONE:

ENFORCEMENT SENSITIVE: N
REQ MANUAL REVIEW:
REASON MAN REVIEW:
SMALL BUS POLICY:
ENFORCEMENT ACTION:
DATA PUB ACCESS: YES
INTERNAL SYS ID:

FEDERAL FACILITY: NO
FEDERAL AGENCY:
TRIBAL LAND: NO
TRIBAL LAND NAME:
CONGRESSIONAL DIST:
LEGISLATIVE DIST: 24
HYDROLOGICAL UNTIS:
EPA REGION: 08
AIRSHED:
CENSUS BLOCK:

Environmental FirstSearch
Site Detail Report

Target Property: ~2200 N REDWOOD ROAD
SALT LAKE CITY UT 84116

JOB: 09E-7120
REDO

VCP

SEARCH ID: 17 **DIST/DIR:** 0.24 SW **ELEVATION:** 4232 **MAP ID:** 1

NAME: NORTHWEST OIL DRAIN RAILYARD SEGMENT
ADDRESS: NORTH BETWEEN 600 AND 1000 NORTH/500 AND
SALT LAKE CITY UT
SALT LAKE
CONTACT:

REV: 10/01/08
ID1: C035
ID2:
STATUS:
PHONE:

VOLUNTARY CLEANUP PLAN INFORMATION

STATUS: Active Remedial Action Phase
APPLICATION DATE: 11/25/03
AGREEMENT DATE: 08/27/04
CERTIFICATE OF COMPLETION DATE: 11/26/2007
EPA CERCLIS ARCHIVE DATE:
TERMINATION DATE:
PROJECT MANAGER: Elizabeth Yeomans

Target Property: ~2200 N REDWOOD ROAD
SALT LAKE CITY UT 84116 REDO

JOB: 09E-7120

FINDS

SEARCH ID: 6 **DIST/DIR:** 0.29 SW **ELEVATION:** 4240 **MAP ID:** 2

NAME:	CITY DRAIN PUMPING STATION	**REV:**	7/10/07
ADDRESS:	2200 NORTH ROSE PARK LANE	**ID1:**	110002278516
	SALT LAKE CITY UT 84116	**ID2:**	
	SALT LAKE	**STATUS:**	FRS
CONTACT:		**PHONE:**	

FACILITY REGISTRATION INFORMATION:

PROGRAM:	FRS		
PROGRAM ID:	110002278516	**PROVIDED BY:**	FEDERAL AGENCY
AGENCY INTERESTED:		**AGENCY INT QUAL:**	
INTEREST ENDED:		**INT END QUAL:**	
SOURCE OF DATA:	FRS	**LAST REPORTED:**	
LAST EXTRACTED:		**ENFORCEMENT ACT:**	
REG PROGRAM:	FACILITY -		

PROGRAM:	CIM		
PROGRAM ID:	490000002414	**PROVIDED BY:**	STATE AGENCY
AGENCY INTERESTED:		**AGENCY INT QUAL:**	
INTEREST ENDED:		**INT END QUAL:**	
SOURCE OF DATA:	CIM	**LAST REPORTED:**	
LAST EXTRACTED:	12/27/2004 7:25:56 AM	**ENFORCEMENT ACT:**	
REG PROGRAM:	STATE MASTER -		

SITE TYPE:	STATIONARY
INTEREST STATUS:	ACTIVE
DATA QUALITY:	V
LOCATION DESC:	UNDERGROUND STORAGE TANK
ADDRESS TYPE:	REGULAR URBAN
LAST REPORTED:	
POSTED TO DATABASE:	3/1/2000
DATA UPDATED:	3/14/2001 4:45:36 PM
ENTERED PERSON/METHOD:	FRS
PARENT REG ID:	
CONFIDENCE IN ADDR:	MEDIUM
ENFORCEMENT SENSITIVE:	
REQ MANUAL REVIEW:	
REASON MAN REVIEW:	
SMALL BUS POLICY:	
ENFORCEMENT ACTION:	
DATA PUB ACCESS:	YES
INTERNAL SYS ID:	

FEDERAL FACILITY:	NO
FEDERAL AGENCY:	
TRIBAL LAND:	NO
TRIBAL LAND NAME:	
CONGRESSIONAL DIST:	01
LEGISLATIVE DIST:	23
HYDROLOGICAL UNTIS:	16020204
EPA REGION:	08
AIRSHED:	
CENSUS BLOCK:	

Environmental FirstSearch
Site Detail Report

Target Property: ~2200 N REDWOOD ROAD
SALT LAKE CITY UT 84116

JOB: 09E-7120
REDO

UST

SEARCH ID: 10 **DIST/DIR:** 0.29 SW **ELEVATION:** 4240 **MAP ID:** 2

NAME: CITY DRAIN PUMPING STATION
ADDRESS: 2200 NORTH ROSE PARK LANE
SALT LAKE CITY UT 84116
CONTACT:

REV: 07/08/09
ID1: 4001371
ID2:
STATUS: ACTIVE
PHONE:

OWNER INFORMATION

OWNER NAME: SALT LAKE COUNTY
OWNER ADDRESS: 7125 S 600 W
MIDVALE,UT 84047
OWNER PHONE: (801) 562-6474

TANK INFORMATION
TOTAL NUMBER OF TANKS: 1
TOTAL NUMBER OF CLOSED TANKS: 0

Target Property: ~2200 N REDWOOD ROAD
SALT LAKE CITY UT 84116 REDO

JOB: 09E-7120

FINDS

SEARCH ID: 7 **DIST/DIR:** 0.36 SE **ELEVATION:** 4245 **MAP ID:** 3

NAME: MH COOK PIPELINE CONSTRUCTION
ADDRESS: 2175 NORTH REDWOOD ROAD
SALT LAKE CITY UT 84101
SALT LAKE
CONTACT:

REV: 7/10/07
ID1: 110002289531
ID2:
STATUS: FRS
PHONE:

FACILITY REGISTRATION INFORMATION:

PROGRAM:	FRS		
PROGRAM ID:	110002289531	**PROVIDED BY:**	FEDERAL AGENCY
AGENCY INTERESTED:		**AGENCY INT QUAL:**	
INTEREST ENDED:		**INT END QUAL:**	
SOURCE OF DATA:	FRS	**LAST REPORTED:**	
LAST EXTRACTED:		**ENFORCEMENT ACT:**	
REG PROGRAM:	FACILITY -		

PROGRAM:	CIM		
PROGRAM ID:	490000004809	**PROVIDED BY:**	STATE AGENCY
AGENCY INTERESTED:		**AGENCY INT QUAL:**	
INTEREST ENDED:		**INT END QUAL:**	
SOURCE OF DATA:	CIM	**LAST REPORTED:**	
LAST EXTRACTED:	12/27/2004 8:52:10 AM	**ENFORCEMENT ACT:**	
REG PROGRAM:	STATE MASTER -		

SITE TYPE:	STATIONARY
INTEREST STATUS:	ACTIVE
DATA QUALITY:	V
LOCATION DESC:	UNDERGROUND STORAGE TANK
ADDRESS TYPE:	REGULAR URBAN
LAST REPORTED:	
POSTED TO DATABASE:	3/1/2000
DATA UPDATED:	3/14/2001 5:07:20 PM
ENTERED PERSON/METHOD:	FRS
PARENT REG ID:	
CONFIDENCE IN ADDR:	MEDIUM
ENFORCEMENT SENSITIVE:	
REQ MANUAL REVIEW:	
REASON MAN REVIEW:	
SMALL BUS POLICY:	
ENFORCEMENT ACTION:	
DATA PUB ACCESS:	YES
INTERNAL SYS ID:	
FEDERAL FACILITY:	NO
FEDERAL AGENCY:	
TRIBAL LAND:	NO
TRIBAL LAND NAME:	
CONGRESSIONAL DIST:	
LEGISLATIVE DIST:	24
HYDROLOGICAL UNTIS:	
EPA REGION:	08
AIRSHED:	
CENSUS BLOCK:	

Target Property: ~2200 N REDWOOD ROAD
SALT LAKE CITY UT 84116 REDO

JOB: 09E-7120

FINDS

SEARCH ID: 8 **DIST/DIR:** 0.38 NE **ELEVATION:** 4232 **MAP ID:** 4

NAME:	S and M FOREIGN AUTO WRECKING	**REV:**	7/10/07
ADDRESS:	2401 NORTH REDWOOD ROAD	**ID1:**	110002264219
	SALT LAKE CITY UT 84109	**ID2:**	
	SALT LAKE	**STATUS:**	FRS
CONTACT:		**PHONE:**	

FACILITY REGISTRATION INFORMATION:

PROGRAM:	FRS		
PROGRAM ID:	110002264219	**PROVIDED BY:**	FEDERAL AGENCY
AGENCY INTERESTED:		**AGENCY INT QUAL:**	
INTEREST ENDED:		**INT END QUAL:**	
SOURCE OF DATA:	FRS	**LAST REPORTED:**	
LAST EXTRACTED:		**ENFORCEMENT ACT:**	
REG PROGRAM:	FACILITY -		

PROGRAM:	CIM		
PROGRAM ID:	490000015898	**PROVIDED BY:**	STATE AGENCY
AGENCY INTERESTED:		**AGENCY INT QUAL:**	
INTEREST ENDED:		**INT END QUAL:**	
SOURCE OF DATA:	CIM	**LAST REPORTED:**	
LAST EXTRACTED:	12/27/2004 7:15:46 AM	**ENFORCEMENT ACT:**	
REG PROGRAM:	STATE MASTER -		

SITE TYPE:	STATIONARY
INTEREST STATUS:	ACTIVE
DATA QUALITY:	V
LOCATION DESC:	HAZ-WASTE SMALL QTY GENERATOR
ADDRESS TYPE:	REGULAR URBAN
LAST REPORTED:	
POSTED TO DATABASE:	3/1/2000
DATA UPDATED:	3/14/2001 4:24:02 PM
ENTERED PERSON/METHOD:	FRS
PARENT REG ID:	
CONFIDENCE IN ADDR:	MEDIUM
ENFORCEMENT SENSITIVE:	
REQ MANUAL REVIEW:	
REASON MAN REVIEW:	
SMALL BUS POLICY:	
ENFORCEMENT ACTION:	
DATA PUB ACCESS:	YES
INTERNAL SYS ID:	
FEDERAL FACILITY:	NO
FEDERAL AGENCY:	
TRIBAL LAND:	NO
TRIBAL LAND NAME:	
CONGRESSIONAL DIST:	
LEGISLATIVE DIST:	24
HYDROLOGICAL UNTIS:	
EPA REGION:	08
AIRSHED:	
CENSUS BLOCK:	

Environmental FirstSearch
Site Detail Report

Target Property: ~2200 N REDWOOD ROAD
SALT LAKE CITY UT 84116 REDO

JOB: 09E-7120

LUST

SEARCH ID: 12 **DIST/DIR:** 0.40 SE **ELEVATION:** 4246 **MAP ID:** 5

NAME: ENERGY EXPRESS, INC.
ADDRESS: 2125 NORTH REDWOOD ROAD
SALT LAKE CITY UT 84116
SALT LAKE
CONTACT:

REV:
ID1: 4000276
ID2:
STATUS:
PHONE:

FACILITY OWNER INFORMATION

OWNER NAME: J KEITH HANSEN
OWNER ADDRESS: 345 E BRODAWAY
SALT LAKE CITY UT 84115

LEAK INFORMATION

LEAK NOTIFICATION DATE: 4/27/95
DATE CLOSED: 1/23/98
PROJECT MANAGER: Bruce Hagans

Target Property: ~2200 N REDWOOD ROAD
SALT LAKE CITY UT 84116 REDO

JOB: 09E-7120

FINDS

SEARCH ID: 5 **DIST/DIR:** 0.44 SE **ELEVATION:** 4230 **MAP ID:** 6

NAME: 20TH CENTURY LITES
ADDRESS: 1560 WEST 2200 NORTH
SALT LAKE CITY UT 84116
SALT LAKE
CONTACT:

REV: 7/10/07
ID1: 110002161570
ID2:
STATUS: FRS
PHONE:

FACILITY REGISTRATION INFORMATION:

PROGRAM: FRS
PROGRAM ID: 110002161570
AGENCY INTERESTED:
INTEREST ENDED:
SOURCE OF DATA: FRS
LAST EXTRACTED:
REG PROGRAM: FACILITY -

PROVIDED BY: FEDERAL AGENCY
AGENCY INT QUAL:
INT END QUAL:
LAST REPORTED:
ENFORCEMENT ACT:

PROGRAM: CIM
PROGRAM ID: 490000001799
AGENCY INTERESTED:
INTEREST ENDED:
SOURCE OF DATA: CIM
LAST EXTRACTED: 12/27/2004 7:32:58 AM
REG PROGRAM: STATE MASTER -

PROVIDED BY: STATE AGENCY
AGENCY INT QUAL:
INT END QUAL:
LAST REPORTED:
ENFORCEMENT ACT:

SITE TYPE: STATIONARY
INTEREST STATUS: ACTIVE
DATA QUALITY: V
LOCATION DESC: UNDERGROUND STORAGE TANK
ADDRESS TYPE: REGULAR URBAN
LAST REPORTED:
POSTED TO DATABASE: 3/1/2000
DATA UPDATED: 4/23/2001 12:27:59 PM
ENTERED PERSON/METHOD: FUGEN
PARENT REG ID:
CONFIDENCE IN ADDR: MEDIUM
ENFORCEMENT SENSITIVE:
REQ MANUAL REVIEW:
REASON MAN REVIEW:
SMALL BUS POLICY:
ENFORCEMENT ACTION:
DATA PUB ACCESS: YES
INTERNAL SYS ID:

FEDERAL FACILITY: NO
FEDERAL AGENCY:
TRIBAL LAND: NO
TRIBAL LAND NAME:
CONGRESSIONAL DIST:
LEGISLATIVE DIST: 26
HYDROLOGICAL UNTIS:
EPA REGION: 08
AIRSHED:
CENSUS BLOCK:

Target Property: ~2200 N REDWOOD ROAD
SALT LAKE CITY UT 84116 REDO

JOB: 09E-7120

LUST

SEARCH ID: 11 **DIST/DIR:** 0.44 SE **ELEVATION:** 4230 **MAP ID:** 6

NAME: 20TH CENTURY LITES
ADDRESS: 1560 WEST 2300 NORTH
SALT LAKE CITY UT 84116
CONTACT:

REV: 07/08/09
ID1: 4001086
ID2:
STATUS: CLOSED
PHONE:

OWNER INFORMATION

OWNER NAME: 20TH CENTURY LITES
OWNER ADDRESS: 1560 W 2200 N
SALT LAKE CITY,UT 84116

LEAK INFORMATION:
LEAK NOTIFICATION DATE: 6/29/1990
DATE CLOSED: 12/20/1994
PROJECT MANAGER: [Dale Urban]

UST

SEARCH ID: 9 **DIST/DIR:** 0.44 SE **ELEVATION:** 4230 **MAP ID:** 6

NAME: 20TH CENTURY LITES
ADDRESS: 1560 WEST 2300 NORTH
SALT LAKE CITY UT 84116
CONTACT:

REV: 07/08/09
ID1: 4001086
ID2:
STATUS: INACTIVE
PHONE:

OWNER INFORMATION

OWNER NAME: 20TH CENTURY LITES
OWNER ADDRESS: 1560 W 2200 N
SALT LAKE CITY,UT 84116
OWNER PHONE: (801) 596-2846

TANK INFORMATION
TOTAL NUMBER OF TANKS: 1
TOTAL NUMBER OF CLOSED TANKS: 1

Target Property: ~2200 N REDWOOD ROAD
SALT LAKE CITY UT 84116 REDO

JOB: 09E-7120

RCRANLR

SEARCH ID: 4 **DIST/DIR:** 0.46 SE **ELEVATION:** 4245 **MAP ID:** 7

NAME: UNISYS CORPORATION WAREHOUSE
ADDRESS: 2100 NORTH REDWOOD ROAD
SALT LAKE CITY UT 84116
CONTACT: MICHAEL BOSKO

REV: 5/13/09
ID1: UTP000000043
ID2:
STATUS: NLR
PHONE: 8015945035

CONTACT INFORMATION:

MICHAEL BOSKO
8015945035

UNIVERSE INFORMATION:

GOVERNMENT PERFORMANCE AND RESULTS ACT (GPRA)

GPRA CA BASELINE UNIVERSE:	*NO*
GPRA CA 2008:	*NO*

SUBJECT TO CORRECTIVE ACTION (SUBJCA)

SUBJCA:	NO
SUBJCA TSD 3004:	NO
SUBJCA NON TSD:	NO
SUBJCA TSD DISCRETION:	NO
PERMIT WORKLOAD:	-----
CLOSURE WORKLOAD:	-----
POST CLOSURE WORKLOAD:	-----
PERMITTING /CLOSURE/POST-CLOSURE PROGRESS:	-----
CORRECTIVE ACTION WORKLOAD:	NO
GENERATOR STATUS:	NO
TRANSPORTER:	NO
UNIVERSAL WASTE:	NO
RECYCLER:	NO
USED OIL:	NO
IMPORTER:	NO
MIXED WASTE GENERATOR:	NO
ONSITE BURNER EXEMPT:	NO
FURNACE EXEMPTION:	NO
UNDERGROUND INJECTION:	NO

NAIC 1:
NAIC 2:
NAIC 3:
NAIC 4:

Target Property: ~2200 N REDWOOD ROAD
SALT LAKE CITY UT 84116 REDO

JOB: 09E-7120

LUST

SEARCH ID: 14 **DIST/DIR:** 0.51 SE **ELEVATION:** 4238 **MAP ID:** 8

NAME: SUN STATE EQUIPMENT
ADDRESS: 2051 NORTH REDWOOD ROAD
SALT LAKE CITY UT 84116
SALT LAKE
CONTACT:

REV: 07/08/09
ID1: 4001471
ID2:
STATUS: CLOSED
PHONE:

OWNER INFORMATION

OWNER NAME: BRandF LC (BETH RICCI and FAMILY)
OWNER ADDRESS: 2351 CAVE HOLLOW WAY
BOUNTIFUL,UT 84010

LEAK INFORMATION:
LEAK NOTIFICATION DATE: 8/22/1996
DATE CLOSED: 8/22/1996
PROJECT MANAGER: UST

LUST

SEARCH ID: 13 **DIST/DIR:** 0.54 SE **ELEVATION:** 4238 **MAP ID:** 9

NAME: RICCI INVESTMENT COMPANY
ADDRESS: 2021 NORTH REDWOOD ROAD
SALT LAKE CITY UT 84116
CONTACT:

REV: 07/08/09
ID1: 4000796
ID2:
STATUS: OPEN
PHONE:

OWNER INFORMATION

OWNER NAME: RICCI INVESTMENT CO
OWNER ADDRESS: 8 E BROADWAY STE 500
SALT LAKE CITY,UT 84111

LEAK INFORMATION:
LEAK NOTIFICATION DATE: 11/12/1993
DATE CLOSED:
PROJECT MANAGER: Melissa Turchi

Environmental FirstSearch
Site Detail Report

Target Property: ~2200 N REDWOOD ROAD
SALT LAKE CITY UT 84116

JOB: 09E-7120
REDO

NFRAP

SEARCH ID: 1 **DIST/DIR:** 0.55 SE **ELEVATION:** 4230 **MAP ID:** 10

NAME: RADIO STATION PROPERTY
ADDRESS: 1500 WEST 2300 NORTH
SALT LAKE CITY UT 84116
CONTACT:

REV: 1/22/09
ID1: UTD988066031
ID2: 0800910
STATUS: NFRAP-N
PHONE:

DESCRIPTION:
THE SITE CONSISTS OF AN OPEN FIELD WHERE REFINERY SLUDGES AND SUMES WERE ALLEGEDLY DEPOSITED.

ACTION/QUALITY	AGENCY/RPS	START/RAA	END
ARCHIVE SITE	EPA In-House		09-30-1993
DISCOVERY	State, Fund Financed		06-23-1988
PRELIMINARY ASSESSMENT Low priority for further assessment	State, Fund Financed		04-14-1989
SITE INSPECTION NFRAP: No further Remedial Action planned	EPA Fund-Financed		09-26-1991

Environmental FirstSearch
Site Detail Report

Target Property: ~2200 N REDWOOD ROAD
SALT LAKE CITY UT 84116

JOB: 09E-7120
REDO

RCRACOR

SEARCH ID: 2 **DIST/DIR:** 1.15 SE **ELEVATION:** 4231 **MAP ID:** 11

NAME: AMOCO CLOSED HWMF
ADDRESS: 1700 NORTH 1200 WEST
SALT LAKE CITY UT 84103

CONTACT: JOHN W WIGGER

REV: 5/13/09
ID1: UTD000826370
ID2:
STATUS: CA
PHONE: 6304345789

UNIVERSE INFORMATION:

Target Property: ~2200 N REDWOOD ROAD
SALT LAKE CITY UT 84116 REDO

JOB: 09E-7120

RCRACOR

SEARCH ID: 3 **DIST/DIR:** 1.16 NE **ELEVATION:** 4230 **MAP ID:** 12

NAME: CHEVRON SALT LAKE REFINERY
ADDRESS: 2351 NORTH 100 WEST
SALT LAKE UT 84116
CONTACT: DENTON L SCHANTZ

REV: 5/13/09
ID1: UTD092029768
ID2:
STATUS: CA
PHONE: 8015397378

SITE INFORMATION

UNIVERSE INFORMATION:

SUBJECT TO CORRECTIVE ACTION (SUBJCA)

SUBJCA:	Y - SUBJECT TO CORRECTIVE ACTION
SUBJCA TSD 3004:	Y - TSDFS POTENTIALLY SUBJECT TO CORRECTIVE ACTION UNDER 3004
SUBJCA NON TSD:	N - NO
SIGNIFICANT NON-COMPLIANCE(SNC):	N - NO
BEGINNING OF THE YEAR SNC:	N - NO
PERMIT WORKLOAD:	-----
CLOSURE WORKLOAD:	-----
POST CLOSURE WORKLOAD:	L----
PERMITTING /CLOSURE/POST-CLOSURE PROGRESS:	L--S-
CORRECTIVE ACTION WORKLOAD:	Y - CORRECTIVE ACTION WORKLOAD
GENERATOR STATUS:	LQG - LARGE QUANTITY GENERATORS: GENERATES MORE THAN 1000 KG/MONTH OF HAZARDOUS WASTE

NAIC INFORMATION

32411 - PETROLEUM REFINERIES
32411 - PETROLEUM REFINERIES
32411 - PETROLEUM REFINERIES
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32411 - PETROLEUM REFINERIES

ENFORCEMENT INFORMATION:

AGENCY:	S - STATE	**DATE:**	4/8/1991
TYPE:	340 - FINAL 3008(H) I.S. CA ORDERS (NON-HSWA)		
AGENCY:	S - STATE	**DATE:**	6/23/1988
TYPE:	120 - WRITTEN INFORMAL		
AGENCY:	S - STATE	**DATE:**	4/15/1994
TYPE:	310 - FINAL 3008(A) COMPLIANCE ORDER		
AGENCY:	S - STATE	**DATE:**	9/3/1985
TYPE:	120 - WRITTEN INFORMAL		
AGENCY:	S - STATE	**DATE:**	6/15/1993
TYPE:	210 - INITIAL 3008(A) COMPLIANCE ORDER		
AGENCY:	S - STATE	**DATE:**	2/16/1984

- Continued on next page -

Target Property: ~2200 N REDWOOD ROAD
SALT LAKE CITY UT 84116 REDO

JOB: 09E-7120

RCRACOR

SEARCH ID: 3 **DIST/DIR:** 1.16 NE **ELEVATION:** 4230 **MAP ID:** 12

NAME: CHEVRON SALT LAKE REFINERY
ADDRESS: 2351 NORTH 100 WEST
SALT LAKE UT 84116
CONTACT: DENTON L SCHANTZ

REV: 5/13/09
ID1: UTD092029768
ID2:
STATUS: CA
PHONE: 8015397378

TYPE: 120 - WRITTEN INFORMAL

AGENCY: S - STATE **DATE:** 7/15/1992
TYPE: 120 - WRITTEN INFORMAL

AGENCY: S - STATE **DATE:** 5/23/1984
TYPE: 210 - INITIAL 3008(A) COMPLIANCE ORDER

AGENCY: S - STATE **DATE:** 7/5/1990
TYPE: 210 - INITIAL 3008(A) COMPLIANCE ORDER

AGENCY: S - STATE **DATE:** 5/23/1984
TYPE: 120 - WRITTEN INFORMAL

VIOLATION INFORMATION:

VIOLATION NUMBER: 0001 **RESPONSIBLE:** S - STATE
DETERMINED: 1/20/1984 **DETERMINED BY:** S - STATE
CITATION: **RESOLVED:** 5/23/1984
TYPE: TSD-FINANCIAL RESPONSIBILITY REQUIREMENTS

VIOLATION NUMBER: 0002 **RESPONSIBLE:** X - EPA OVERSIGHT
DETERMINED: 2/7/1985 **DETERMINED BY:** X - EPA OVERSIGHT
CITATION: **RESOLVED:** 7/3/1985
TYPE: TSD-GROUNDWATER MONITORING REQUIREMENTS

VIOLATION NUMBER: 0003 **RESPONSIBLE:** S - STATE
DETERMINED: 3/28/1985 **DETERMINED BY:** S - STATE
CITATION: **RESOLVED:** 9/26/1985
TYPE: TSD-OTHER REQUIREMENTS (OVERSIGHT)

VIOLATION NUMBER: 0004 **RESPONSIBLE:** S - STATE
DETERMINED: 3/28/1985 **DETERMINED BY:** S - STATE
CITATION: **RESOLVED:** 9/26/1985
TYPE: TSD-OTHER REQUIREMENTS (OVERSIGHT)

VIOLATION NUMBER: 0007 **RESPONSIBLE:** S - STATE
DETERMINED: 5/10/1988 **DETERMINED BY:** S - STATE
CITATION: **RESOLVED:** 7/26/1988
TYPE: TSD-OTHER REQUIREMENTS (OVERSIGHT)

VIOLATION NUMBER: 0013 **RESPONSIBLE:** S - STATE
DETERMINED: 4/18/1990 **DETERMINED BY:** S - STATE
CITATION: **RESOLVED:** 8/7/1990
TYPE: TSD-OTHER REQUIREMENTS (OVERSIGHT)

VIOLATION NUMBER: 0014 **RESPONSIBLE:** S - STATE
DETERMINED: 4/18/1990 **DETERMINED BY:** S - STATE
CITATION: **RESOLVED:** 8/7/1990
TYPE: TSD-OTHER REQUIREMENTS (OVERSIGHT)

VIOLATION NUMBER: 0023 **RESPONSIBLE:** S - STATE

- Continued on next page -

Target Property: ~2200 N REDWOOD ROAD
SALT LAKE CITY UT 84116 REDO

JOB: 09E-7120

RCRACOR

SEARCH ID: 3 **DIST/DIR:** 1.16 NE **ELEVATION:** 4230 **MAP ID:** 12

NAME: CHEVRON SALT LAKE REFINERY
ADDRESS: 2351 NORTH 100 WEST
SALT LAKE UT 84116
CONTACT: DENTON L SCHANTZ

REV: 5/13/09
ID1: UTD092029768
ID2:
STATUS: CA
PHONE: 8015397378

DETERMINED: 7/20/1983 **DETERMINED BY:** S - STATE
CITATION: **RESOLVED:** 11/8/1985
TYPE: TSD-GROUNDWATER MONITORING REQUIREMENTS

VIOLATION NUMBER: 0024 **RESPONSIBLE:** S - STATE
DETERMINED: 7/20/1983 **DETERMINED BY:** S - STATE
CITATION: **RESOLVED:** 11/8/1985
TYPE: TSD-OTHER REQUIREMENTS (OVERSIGHT)

VIOLATION NUMBER: 0025 **RESPONSIBLE:** S - STATE
DETERMINED: 7/20/1983 **DETERMINED BY:** S - STATE
CITATION: **RESOLVED:** 11/8/1985
TYPE: TSD-OTHER REQUIREMENTS (OVERSIGHT)

VIOLATION NUMBER: 0026 **RESPONSIBLE:** S - STATE
DETERMINED: 7/5/1990 **DETERMINED BY:** S - STATE
CITATION: **RESOLVED:** 8/7/1990
TYPE: GENERATOR-MANIFEST REQUIREMENTS

VIOLATION NUMBER: 0027 **RESPONSIBLE:** S - STATE
DETERMINED: 7/5/1990 **DETERMINED BY:** S - STATE
CITATION: **RESOLVED:** 8/7/1990
TYPE: GENERATOR-RECORDKEEPING REQUIREMENTS

VIOLATION NUMBER: 0028 **RESPONSIBLE:** S - STATE
DETERMINED: 7/15/1992 **DETERMINED BY:** S - STATE
CITATION: **RESOLVED:** 7/15/1992
TYPE: GENERATOR-MANIFEST REQUIREMENTS

VIOLATION NUMBER: 0029 **RESPONSIBLE:** S - STATE
DETERMINED: 7/15/1992 **DETERMINED BY:** S - STATE
CITATION: **RESOLVED:** 7/15/1992
TYPE: GENERATOR-PRE-TRANSPORT REQUIREMENTS

VIOLATION NUMBER: 0030 **RESPONSIBLE:** S - STATE
DETERMINED: 6/15/1993 **DETERMINED BY:** S - STATE
CITATION: **RESOLVED:** 4/15/1994
TYPE: GENERATOR-MANIFEST REQUIREMENTS

VIOLATION NUMBER: 0031 **RESPONSIBLE:** S - STATE
DETERMINED: 6/15/1993 **DETERMINED BY:** S - STATE
CITATION: **RESOLVED:** 4/15/1994
TYPE: TSD-LAND BAN REQUIREMENTS

VIOLATION NUMBER: 0032 **RESPONSIBLE:** S - STATE
DETERMINED: 6/15/1993 **DETERMINED BY:** S - STATE
CITATION: **RESOLVED:** 4/15/1994
TYPE: TSD-LAND BAN REQUIREMENTS

CORRECTIVE ACTION INFORMATION

CA EVENT: CAGPR

- Continued on next page -

Target Property: ~2200 N REDWOOD ROAD
SALT LAKE CITY UT 84116 REDO

JOB: 09E-7120

RCRACOR

SEARCH ID: 3 **DIST/DIR:** 1.16 NE **ELEVATION:** 4230 **MAP ID:** 12

NAME: CHEVRON SALT LAKE REFINERY
ADDRESS: 2351 NORTH 100 WEST
SALT LAKE UT 84116
CONTACT: DENTON L SCHANTZ

REV: 5/13/09
ID1: UTD092029768
ID2:
STATUS: CA
PHONE: 8015397378

CA EVENT:	19810101	CA400 - DATE FOR REMEDY SELECTION (CM IMPOSED)
CA EVENT:	19810101	CA450 - CORRECTIVE MEASURES DESIGN APPROVED
CA EVENT:	19810101	CA500 - CMI WORKPLAN APPROVED
CA EVENT:	19850101	CA600EC - STABILIZATION MEASURES IMPLEMENTED-PRIMARY MEAS IS EXPOSURE CONTROL
CA EVENT:	19860101	CA650 - STABILIZATION CONSTRUCTION COMPLETED
CA EVENT:	19930123	CA150 - RFI WORKPLAN APPROVED
CA EVENT:	19920128	CA225YE - STABILIZATION MEASURES EVALUATION-FACILITY IS AMENABLE TO STABILIZATION
CA EVENT:	19930205	CA600EC - STABILIZATION MEASURES IMPLEMENTED-PRIMARY MEAS IS EXPOSURE CONTROL
CA EVENT:	19930205	CA450 - CORRECTIVE MEASURES DESIGN APPROVED
CA EVENT:	19930205	CA500 - CMI WORKPLAN APPROVED
CA EVENT:	19920301	CA400 - DATE FOR REMEDY SELECTION (CM IMPOSED)
CA EVENT:	19890317	CA050RF - RFA Completed - Assessment was an RFA
CA EVENT:	19890331	CA050 - RFA COMPLETED
CA EVENT:	19910405	CA100 - RFI IMPOSITION
CA EVENT:	19960405	CA400 - DATE FOR REMEDY SELECTION (CM IMPOSED)
CA EVENT:	19970408	CA450 - CORRECTIVE MEASURES DESIGN APPROVED
CA EVENT:	19970408	CA500 - CMI WORKPLAN APPROVED
CA EVENT:	19970408	CA600EC - STABILIZATION MEASURES IMPLEMENTED-PRIMARY MEAS IS EXPOSURE CONTROL
CA EVENT:	19920501	CA450 - CORRECTIVE MEASURES DESIGN APPROVED
CA EVENT:	19920501	CA500 - CMI WORKPLAN APPROVED
CA EVENT:	19960606	CA550 - CERTIFICATION OF REMEDY COMPLETION (CMI)
CA EVENT:	19950630	CA400 - DATE FOR REMEDY SELECTION (CM IMPOSED)
CA EVENT:	19990709	CA750YE - RELEASE TO GW CONTROLLED DETERMINATION-YES, APPLICABLE AS OF THIS DATE
CA EVENT:	19990709	CA725YE - HUMAN EXPOSURES CONTROLLED DETERMINATION-YES, APPLICABLE AS OF THIS DATE

- Continued on next page -

Target Property: ~2200 N REDWOOD ROAD
SALT LAKE CITY UT 84116 REDO

JOB: 09E-7120

RCRACOR

SEARCH ID: 3 **DIST/DIR:** 1.16 NE **ELEVATION:** 4230 **MAP ID:** 12

NAME: CHEVRON SALT LAKE REFINERY
ADDRESS: 2351 NORTH 100 WEST
SALT LAKE UT 84116
CONTACT: DENTON L SCHANTZ

REV: 5/13/09
ID1: UTD092029768
ID2:
STATUS: CA
PHONE: 8015397378

CA EVENT:	19970804	CA550 - CERTIFICATION OF REMEDY COMPLETION (CMI)
CA EVENT:	19970804	CA650 - STABILIZATION CONSTRUCTION COMPLETED
CA EVENT:	19970804	CA770GW - ENGINEERING CONTROLS ESTABLISHED-GROUNDWATER CONTROL
CA EVENT:	19960816	CA650 - STABILIZATION CONSTRUCTION COMPLETED
CA EVENT:	19960816	CA770GW - ENGINEERING CONTROLS ESTABLISHED-GROUNDWATER CONTROL
CA EVENT:	19960816	CA999RM - CA PROCESS IS TERMINATED-REMEDIAL ACTIVITIES COMPLETE
CA EVENT:	19990824	CA006OU - Operable Unit
CA EVENT:	19990824	CA006RU - Regulated Unit
CA EVENT:	19990824	CA006SM - Solid Waste Mgmt Unit
CA EVENT:	19970902	CA999RM - CA PROCESS IS TERMINATED-REMEDIAL ACTIVITIES COMPLETE
CA EVENT: PERMIT TOOLS	19970902	CA772EP - INSTITUTIONAL CONTROLS ESTABLISHED-ENFORCEMENT AND
CA EVENT: CONTROL	19970902	CA770NG - ENGINEERING CONTROLS ESTABLISHED-NON-GROUNDWATER
CA EVENT: GROUNDWATER	19970902	CA750NR - RELEASE TO GW CONTROLLED DETERMINATION-NO RELEASE TO
CA EVENT:	19970902	CA650 - STABILIZATION CONSTRUCTION COMPLETED
CA EVENT: REMOVL and/OR TRT	19970902	CA600SR - STABILIZATION MEASURES IMPLEMENTED-PRIMARY MEAS IS SOURCE
CA EVENT:	19970902	CA550 - CERTIFICATION OF REMEDY COMPLETION (CMI)
CA EVENT:	19970902	CA400 - DATE FOR REMEDY SELECTION (CM IMPOSED)
CA EVENT: MEASURES NEEDED	19970902	CA725NC - HUMAN EXPOSURES CONTROLLED DETERMINATION-NO CONTROL
CA EVENT:	19970904	CA075HI - CA PRIORITIZATION-HIGH CA PRIORITY
CA EVENT:	20030916	CA999RM - CA PROCESS IS TERMINATED-REMEDIAL ACTIVITIES COMPLETE
CA EVENT:	19960916	CA076H
CA EVENT:	19960916	CA077H
CA EVENT: APPLICABLE AS OF THIS DATE	19960916	CA725YE - HUMAN EXPOSURES CONTROLLED DETERMINATION-YES,

- Continued on next page -

Target Property: ~2200 N REDWOOD ROAD
SALT LAKE CITY UT 84116 REDO

JOB: 09E-7120

RCRACOR

SEARCH ID: 3 **DIST/DIR:** 1.16 NE **ELEVATION:** 4230 **MAP ID:** 12

NAME: CHEVRON SALT LAKE REFINERY
ADDRESS: 2351 NORTH 100 WEST
SALT LAKE UT 84116
CONTACT: DENTON L SCHANTZ

REV: 5/13/09
ID1: UTD092029768
ID2:
STATUS: CA
PHONE: 8015397378

CA EVENT:	20030916	CA650 - STABILIZATION CONSTRUCTION COMPLETED
CA EVENT:	19960916	CA070YE - DETERMINATION OF NEED FOR A RFI-RFI IS NECESSARY
CA EVENT:	19960916	CA750YE - RELEASE TO GW CONTROLLED DETERMINATION-YES, APPLICABLE AS OF THIS DATE
CA EVENT:	19931001	CA550 - CERTIFICATION OF REMEDY COMPLETION (CMI)
CA EVENT:	19931001	CA600EC - STABILIZATION MEASURES IMPLEMENTED-PRIMARY MEAS IS EXPOSURE CONTROL
CA EVENT:	19911002	CA400 - DATE FOR REMEDY SELECTION (CM IMPOSED)
CA EVENT:	19951006	CA200 - RFI APPROVED
CA EVENT:	19951030	CA225NR - STABILIZATION MEASURES EVALUATION-FACILITY NOT AMENABLE TO STABILIZATION
CA EVENT:	19951030	CA999NF - CA PROCESS IS TERMINATED-NO FURTHER ACTION
CA EVENT:	19951030	CA600EC - STABILIZATION MEASURES IMPLEMENTED-PRIMARY MEAS IS EXPOSURE CONTROL
CA EVENT:	19951030	CA450 - CORRECTIVE MEASURES DESIGN APPROVED
CA EVENT:	19951030	CA500 - CMI WORKPLAN APPROVED
CA EVENT:	19861101	CA550 - CERTIFICATION OF REMEDY COMPLETION (CMI)
CA EVENT:	19861101	CA999NF - CA PROCESS IS TERMINATED-NO FURTHER ACTION
CA EVENT:	19981203	CA770GW - ENGINEERING CONTROLS ESTABLISHED-GROUNDWATER CONTROL
CA EVENT:	19911218	CA075HI - CA PRIORITIZATION-HIGH CA PRIORITY
CA EVENT:	19981231	CA650 - STABILIZATION CONSTRUCTION COMPLETED
CA EVENT:	19981231	CA550 - CERTIFICATION OF REMEDY COMPLETION (CMI)

HAZARDOUS WASTE INFORMATION:

D035 - Methyl ethyl ketone
F001 - The following spent halogenated solvents used in degreasing: Tetrachloroethylene, trichlorethylene, methylene chloride, 1,1,1-trichloroethane, carbon tetrachloride and chlorinated fluorocarbons; all spent solvent mixt
F037 - Petroleum refinery primary oil/water/solids separation sludge - Any sludge generated from the gravitational separation of oil/water/solids during the storage or treatment of process wastewaters and oily cooling wastew
K048 - Dissolved air flotation (DAF) float from the petroleum refining industry.
K049 - Slop oil emulsion solids from the petroleum refining industry.
K050 - Heat exchanger bundle cleaning sludge from the petroleum refining industry.
D026 - Cresol
K051 - API separator sludge from the petroleum refining industry.
K169

- Continued on next page -

Target Property: ~2200 N REDWOOD ROAD
SALT LAKE CITY UT 84116 REDO

JOB: 09E-7120

RCRACOR

SEARCH ID: 3 **DIST/DIR:** 1.16 NE **ELEVATION:** 4230 **MAP ID:** 12

NAME: CHEVRON SALT LAKE REFINERY
ADDRESS: 2351 NORTH 100 WEST
SALT LAKE UT 84116
CONTACT: DENTON L SCHANTZ

REV: 5/13/09
ID1: UTD092029768
ID2:
STATUS: CA
PHONE: 8015397378

K170
K171
K172
U104
K032 - Wastewater treatment sludge from the production of chlordane.
K052 - Tank bottoms (leaded) from the petroleum refining industry.
D003 - Reactive waste
D025 - p-Cresol
D000
F038 - Petroleum refinery secondary (emulsified) oil/water/solids separation sludge - Any sludge and/or float generated from the physical and/or chemical separation of oil/water/solids in process wastewaters and oily cooling
D002 - Corrosive waste
D004 - Arsenic
D005 - Barium
D007 - Chromium
D024 - m-Cresol
D001 - Ignitable waste
D009 - Mercury
D010 - Selenium
D011 - Silver
D018 - Benzene
D023 - o-Cresol
D008 - Lead

Environmental FirstSearch Descriptions

NPL: ***EPA*** NATIONAL PRIORITY LIST - The National Priorities List is a list of the worst hazardous waste sites that have been identified by Superfund. Sites are only put on the list after they have been scored using the Hazard Ranking System (HRS), and have been subjected to public comment. Any site on the NPL is eligible for cleanup using Superfund Trust money.
A Superfund site is any land in the United States that has been contaminated by hazardous waste and identified by the Environmental Protection Agency (EPA) as a candidate for cleanup because it poses a risk to human health and/or the environment.
FINAL - Currently on the Final NPL
PROPOSED - Proposed for NPL

NPL DELISTED: ***EPA*** NATIONAL PRIORITY LIST Subset - Database of delisted NPL sites. The National Oil and Hazardous Substances Pollution Contingency Plan (NCP) establishes the criteria that the EPA uses to delete sites from the NPL. In accordance with 40 CFR 300.425.(e), sites may be deleted from the NPL where no further response is appropriate.
DELISTED - Deleted from the Final NPL

CERCLIS: ***EPA*** COMPREHENSIVE ENVIRONMENTAL RESPONSE COMPENSATION AND LIABILITY INFORMATION SYSTEM (CERCLIS)- CERCLIS is a database of potential and confirmed hazardous waste sites at which the EPA Superfund program has some involvement. It contains sites that are either proposed to be or are on the National Priorities List (NPL) as well as sites that are in the screening and assessment phase for possible inclusion on the NPL.
PART OF NPL- Site is part of NPL site
DELETED - Deleted from the Final NPL
FINAL - Currently on the Final NPL
NOT PROPOSED - Not on the NPL
NOT VALID - Not Valid Site or Incident
PROPOSED - Proposed for NPL
REMOVED - Removed from Proposed NPL
SCAN PLAN - Pre-proposal Site
WITHDRAWN - Withdrawn

NFRAP: ***EPA*** COMPREHENSIVE ENVIRONMENTAL RESPONSE COMPENSATION AND LIABILITY INFORMATION SYSTEM ARCHIVED SITES - database of Archive designated CERCLA sites that, to the best of EPA's knowledge, assessment has been completed and has determined no further steps will be taken to list this site on the National Priorities List (NPL). This decision does not necessarily mean that there is no hazard associated with a given site; it only means that, based upon available information, the location is not judged to be a potential NPL site.
NFRAP – No Further Remedial Action Plan
P - Site is part of NPL site
D - Deleted from the Final NPL
F - Currently on the Final NPL
N - Not on the NPL
O - Not Valid Site or Incident
P - Proposed for NPL
R - Removed from Proposed NPL
S - Pre-proposal Site
W – Withdrawn

RCRA COR ACT: ***EPA*** RESOURCE CONSERVATION AND RECOVERY INFORMATION SYSTEM SITES - Database of hazardous waste information contained in the Resource Conservation and Recovery Act Information (RCRAInfo), a national program management and inventory system about hazardous waste handlers. In general, all generators, transporters, treaters, storers, and disposers of hazardous waste are required to provide information about their activities to state environmental agencies. These agencies, in turn pass on the information to regional and national EPA offices. This regulation is governed by the Resource Conservation and Recovery Act (RCRA), as amended by the Hazardous and Solid Waste Amendments of 1984.
RCRAInfo facilities that have reported violations and subject to corrective actions.

RCRA TSD: ***EPA*** RESOURCE CONSERVATION AND RECOVERY INFORMATION SYSTEM

TREATMENT, STORAGE, and DISPOSAL FACILITIES. - Database of hazardous waste information contained in the Resource Conservation and Recovery Act Information (RCRAInfo), a national program management and inventory system about hazardous waste handlers. In general, all generators, transporters, treaters, storers, and disposers of hazardous waste are required to provide information about their activities to state environmental agencies. These agencies, in turn pass on the information to regional and national EPA offices. This regulation is governed by the Resource Conservation and Recovery Act (RCRA), as amended by the Hazardous and Solid Waste Amendments of 1984.
Facilities that treat, store, dispose, or incinerate hazardous waste.

RCRA GEN: ***EPA/MA DEP/CT DEP*** RESOURCE CONSERVATION AND RECOVERY INFORMATION SYSTEM GENERATORS - Database of hazardous waste information contained in the Resource Conservation and Recovery Act Information (RCRAInfo), a national program management and inventory system about hazardous waste handlers. In general, all generators, transporters, treaters, storers, and disposers of hazardous waste are required to provide information about their activities to state environmental agencies. These agencies, in turn pass on the information to regional and national EPA offices. This regulation is governed by the Resource Conservation and Recovery Act (RCRA), as amended by the Hazardous and Solid Waste Amendments of 1984.
Facilities that generate or transport hazardous waste or meet other RCRA requirements.
LGN - Large Quantity Generators
SGN - Small Quantity Generators
VGN – Conditionally Exempt Generator.
Included are RAATS (RCRA Administrative Action Tracking System) and CMEL (Compliance Monitoring & Enforcement List) facilities.
CONNECTICUT HAZARDOUS WASTE MANIFEST – Database of all shipments of hazardous waste within, into or from Connecticut. The data includes date of shipment, transporter and TSD info, and material shipped and quantity. This data is appended to the details of existing generator records.
MASSACHUSETTES HAZARDOUS WASTE GENERATOR – database of generators that are regulated under the MA DEP.
VQN-MA = generates less than 220 pounds or 27 gallons per month of hazardous waste or waste oil.
SQN-MA = generates 220 to 2,200 pounds or 27 to 270 gallons per month of waste oil.
LQG-MA = generates greater than 2,200 lbs of hazardous waste or waste oil per month.

RCRA NLR: ***EPA*** RESOURCE CONSERVATION AND RECOVERY INFORMATION SYSTEM SITES - Database of hazardous waste information contained in the Resource Conservation and Recovery Act Information (RCRAInfo), a national program management and inventory system about hazardous waste handlers. In general, all generators, transporters, treaters, storers, and disposers of hazardous waste are required to provide information about their activities to state environmental agencies. These agencies, in turn pass on the information to regional and national EPA offices. This regulation is governed by the Resource Conservation and Recovery Act (RCRA), as amended by the Hazardous and Solid Waste Amendments of 1984.
Facilities not currently classified by the EPA but are still included in the RCRAInfo database. Reasons for non classification:
Failure to report in a timely matter.
No longer in business.
No longer in business at the listed address.
No longer generating hazardous waste materials in quantities which require reporting.

Federal IC / EC: ***EPA*** BROWNFIELD MANAGEMENT SYSTEM (BMS) - database designed to assist EPA in collecting, tracking, and updating information, as well as reporting on the major activities and accomplishments of the various Brownfield grant Programs.
FEDERAL ENGINEERING AND INSTITUTIONAL CONTROLS- Superfund sites that have either an engineering or an institutional control. The data includes the control and the media contaminated.

ERNS: ***EPA/NRC*** EMERGENCY RESPONSE NOTIFICATION SYSTEM (ERNS) - Database of incidents reported to the National Response Center. These incidents include chemical spills, accidents involving chemicals (such as fires or explosions), oil spills, transportation accidents that involve oil or chemicals, releases of radioactive materials, sightings of oil sheens on bodies of water, terrorist incidents involving chemicals, incidents where illegally dumped chemicals have been found, and drills intended to prepare responders to handle these kinds of incidents. Data since January 2001 has been received from the National Response System database as the EPA no longer maintains this data.

Tribal Lands: ***DOI/BIA*** INDIAN LANDS OF THE UNITED STATES - Database of areas with boundaries established by treaty, statute, and (or) executive or court order, recognized by the Federal Government as

territory in which American Indian tribes have primary governmental authority. The Indian Lands of the United States map layer shows areas of 640 acres or more, administered by the Bureau of Indian Affairs. Included are Federally-administered lands within a reservation which may or may not be considered part of the reservation. BUREAU OF INDIAN AFFIARS CONTACT - Regional contact information for the Bureau of Indian Affairs offices.

State Spills 90: ***DERR*** UT SPILLS DATABASE - Database of environmental spills and other incidents

State/Tribal SWL: ***DSHW*** UTAH SOLID WASTE FACILITY INVENTORY - The Division of Solid and Hazardous Waste maintains the landfill list.

State/Tribal LUST: ***DERR*** UST LIST - Sites with underground storage tanks in Utah

State/Tribal UST/AST: ***DERR*** LUST LIST - Sites with leaking underground storage tanks in Utah

State/Tribal VCP: ***DERR*** VOLUNTARY CLEANUP PROGRAM - The Utah Voluntary Cleanup Program (VCP) was created to promote the voluntary cleanup of contaminated sites.

State/Tribal Brownfields: ***UTDEQ*** BROWNFIELD LISTING - Sites listed as Brownfield Projects on the DERR's interactive map.

NPDES: ***EPA*** THE NATIONAL POLLUTION DISCHARGE ELIMINATION SYSTEM - Database of permitted facilities receiving and discharging effluents to and from a natural source where treatment of the effluent is monitored.

FINDS: ***EPA*** FACILITY INDEX SYSTEM(FINDS)/FACILITY REGISTRY SYSTEM(FRS) - The index of identification numbers associated with a property or facility which the EPA has investigated or has been made aware of in conjunction with various regulatory programs. Each record indicates the EPA office that may have files on the site or facility. A Facility Registry System site has an FRS in the status field.

TRIS: ***EPA*** TOXIC RELEASE INVENTORY SYSTEM (TRIS)– Database that contains information on toxic chemical releases and other waste management activities reported annually by certain covered industry groups as well as federal facilities. This inventory was established under the Emergency Planning and Community Right-to-Know Act of 1986 (EPCRA) and expanded by the Pollution Prevention Act of 1990.

RADON: ***NTIS*** NATIONAL RADON DATABASE - EPA radon data from 1990-1991 national radon project collected for a variety of zip codes across the United States.

Environmental FirstSearch
Street Name Report for Streets within .25 Mile(s) of Target Property

Target Property: ~2200 N REDWOOD ROAD
SALT LAKE CITY UT 84116 REDO

JOB: 09E-7120

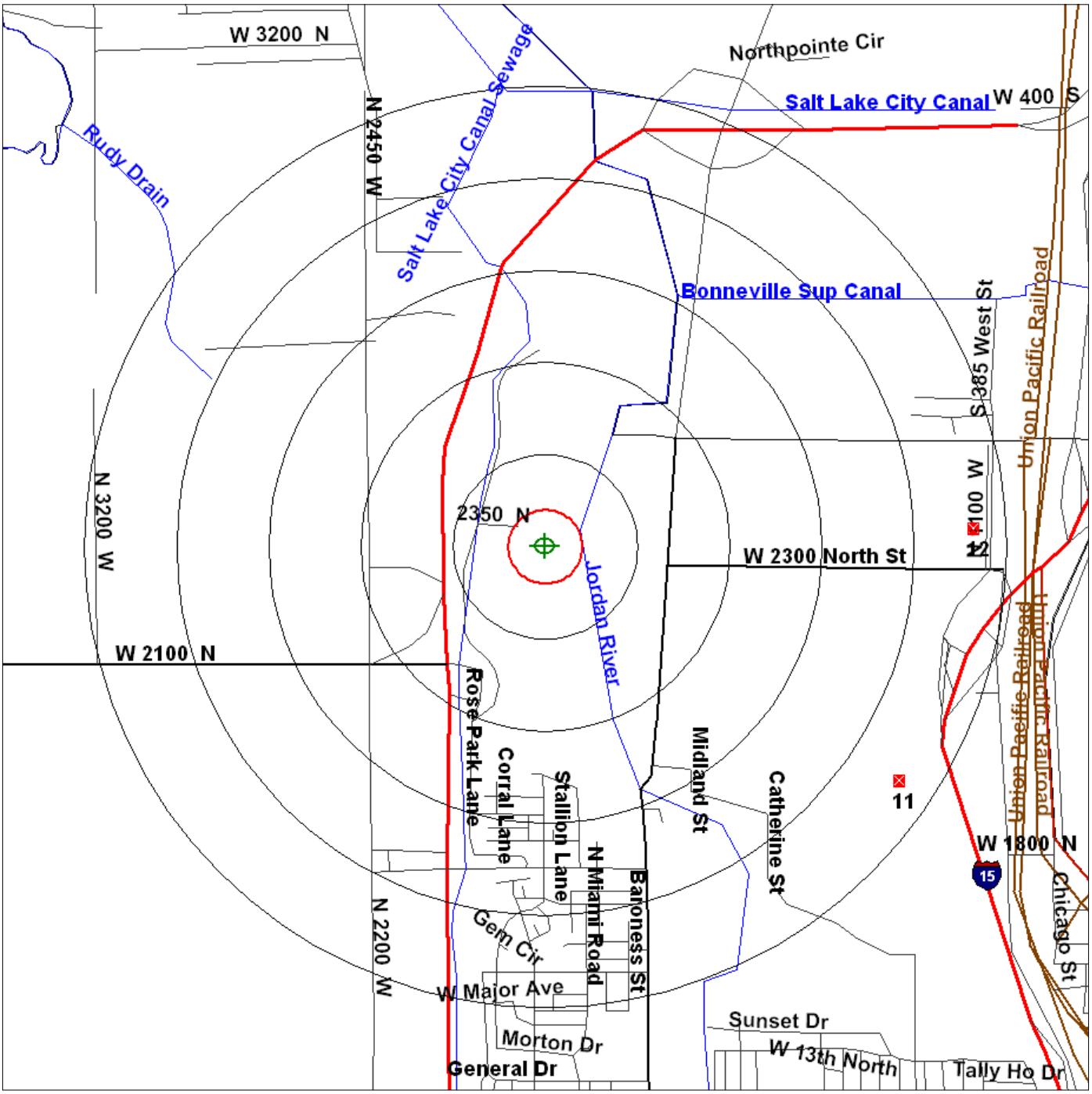
Street Name	Dist/Dir	Street Name	Dist/Dir
2350 N	0.12 NW		
Rose Park Ln	0.22 NW		

Environmental FirstSearch

1.25 Mile Radius

NPL RCRACOR State Sites

~2200 N REDWOOD ROAD, SALT LAKE CITY UT 84116



Source: 2005 U.S. Census TIGER Files

Target Site (Latitude: 40.817876 Longitude: -111.944539) .....

Identified Site, Multiple Sites, Receptor .....

NPL, DELNPL, Brownfield, Solid Waste Landfill (SWL), Hazardous Waste

Triballand.....

Railroads .....

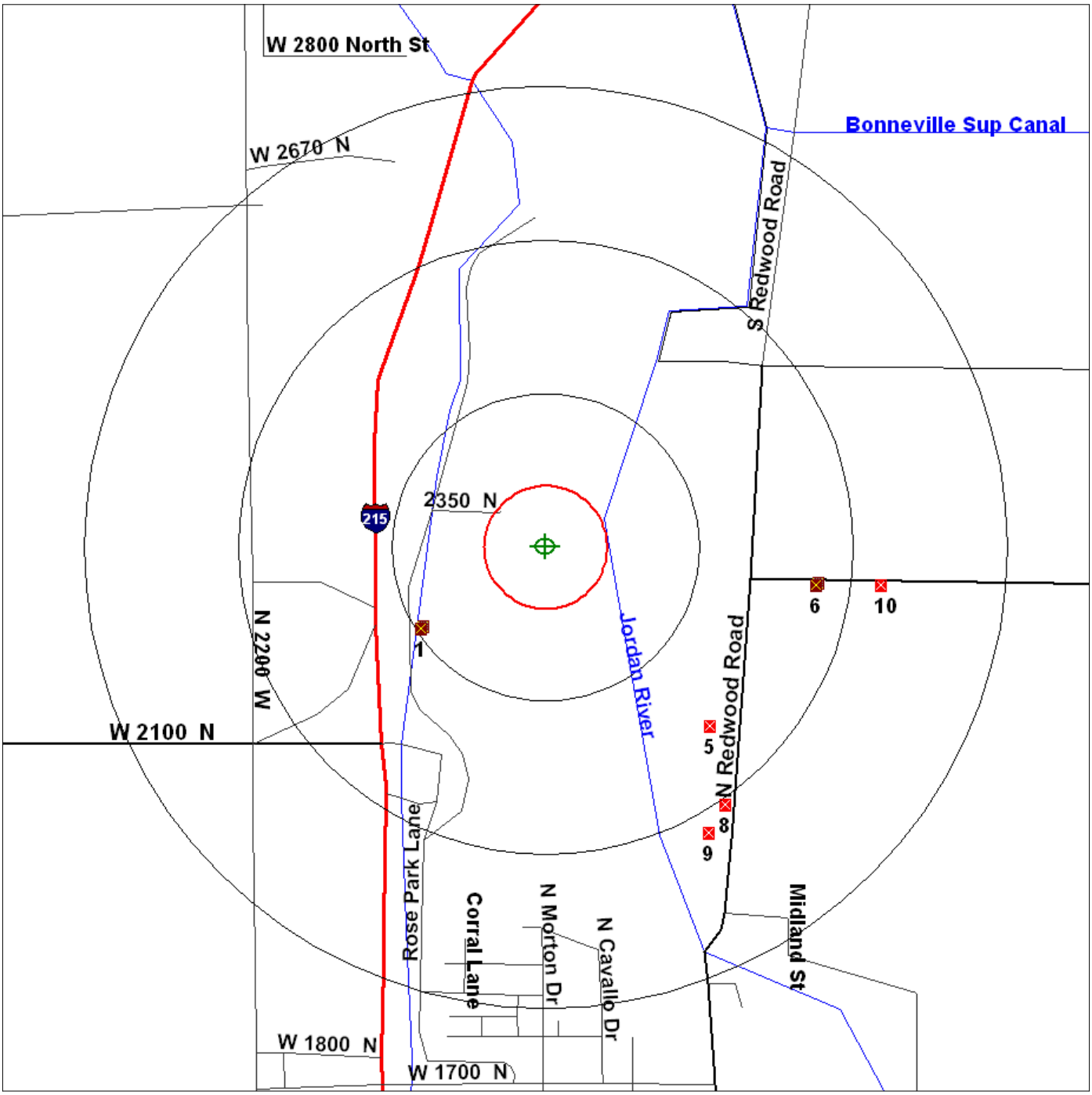
Black Rings Represent 1/4 Mile Radius; Red Ring Represents 500 ft. Radius

Environmental FirstSearch

.75 Mile Radius

Selected FEDERAL SWL LUST Sites

~2200 N REDWOOD ROAD, SALT LAKE CITY UT 84116



Source: 2005 U.S. Census TIGER Files

Target Site (Latitude: 40.817876 Longitude: -111.944539) .....

Identified Site, Multiple Sites, Receptor .....

NPL, DELNPL, Brownfield, Solid Waste Landfill (SWL), Hazardous Waste

Triballand.....

Railroads .....

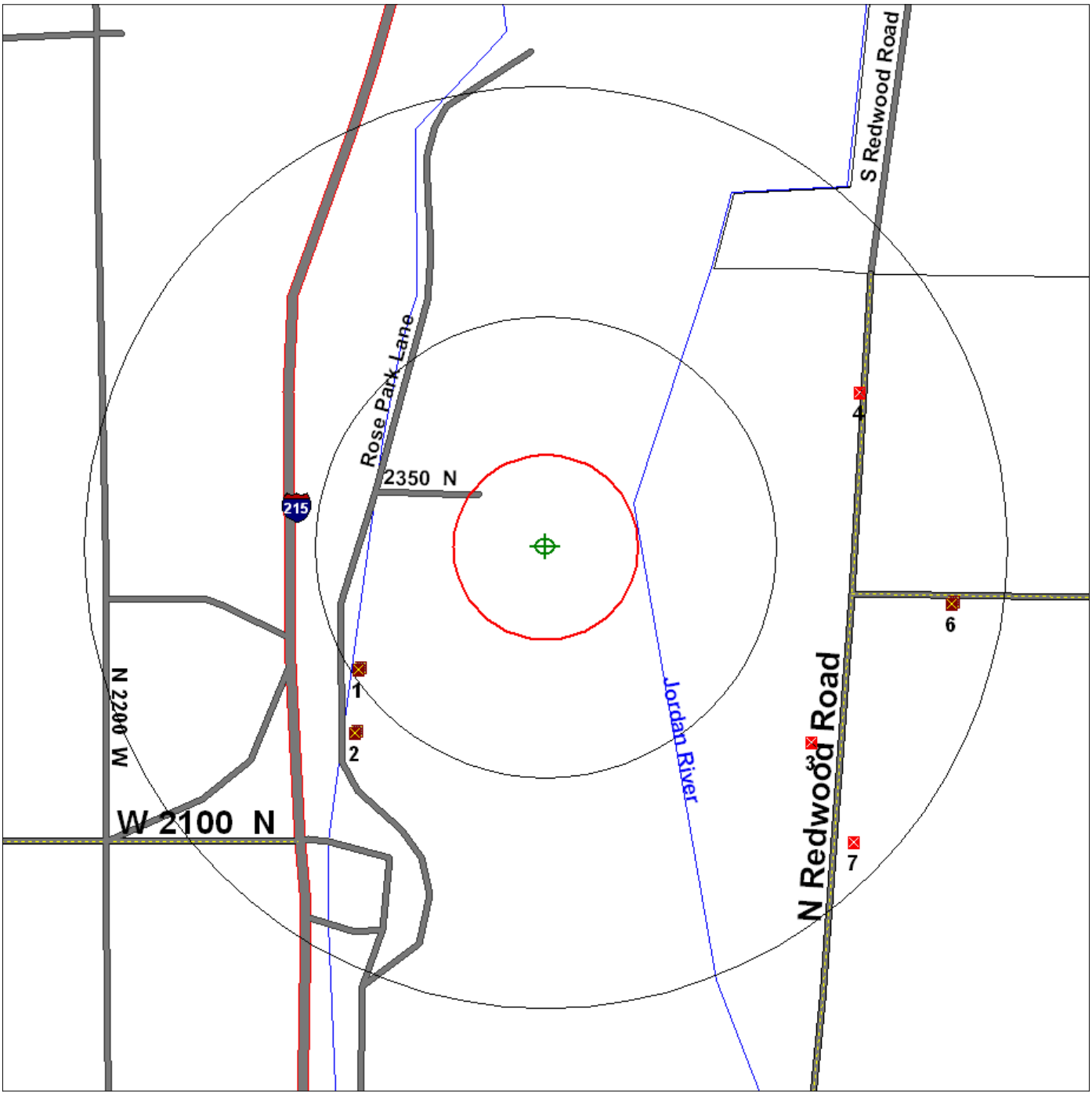
Black Rings Represent 1/4 Mile Radius; Red Ring Represents 500 ft. Radius

Environmental FirstSearch

.5 Mile Radius

Selected FEDERAL UST Sites

~2200 N REDWOOD ROAD, SALT LAKE CITY UT 84116



Source: 2005 U.S. Census TIGER Files

Target Site (Latitude: 40.817876 Longitude: -111.944539) .....

Identified Site, Multiple Sites, Receptor .....

NPL, DELNPL, Brownfield, Solid Waste Landfill (SWL), Hazardous Waste

Triballand.....

Railroads .....

Black Rings Represent 1/4 Mile Radius; Red Ring Represents 500 ft. Radius

APPENDIX 4

Glossary of Terms and List of Acronyms

ACM - Asbestos-containing material, defined as any material or product which contains greater than 1% asbestos fibers by volume or 0.1 in California.

Adjoining property - any property or properties the border of which is contiguous or partially contiguous with that of the subject property, or that would be contiguous or partially contiguous with that of the property but for a street, road, or other public thoroughfare separating them.

AULs – Activity or Use Limitations, usually associated with legal or physical restriction of use, access to a site, or a facility.

bgs - Below the ground surface.

Business Environmental Risk – A risk which can have a material environmental or environmentally –driven impact on the business.

CERCLA - The Comprehensive Emergency Response, Compensation and Liability Act of 1980, as amended by the Superfund Amendment and Reauthorization Act of 1986, collectively known as Superfund. CERCLA is the federal regulation concerned with the identification, investigation and cleanup of abandoned or uncontrolled hazardous waste sites.

CERCLIS - The Comprehensive Emergency Response, Compensation and Liability Information System. CERCLIS is the list of sites compiled by the EPA which have been investigated or are currently under investigation for potential hazardous substance contamination.

Construction debris - Any materials which have been stored or dumped on the subject property in the course of property development including, but not limited to, concrete, brick, asphalt, wood, metal and other materials which are commonly considered "non-hazardous."

CORRACTS List - List of RCRA Facilities subject to corrective action.

de minimis - Conditions that generally do not present a threat to human health or the environment, and that generally would not be the subject of an enforcement action if brought to the attention of the appropriate governmental agency.

ERNS List - The Emergency Response Notification System List of reported CERCLA hazardous substance releases or spills in quantities greater than the Reportable Quantity for each particular substance.

Hazardous substance - A substance defined as a hazardous substance (Section 101(14) of CERCLA) includes all RCRA hazardous wastes, hazardous air pollutants under the Clean Air Act, and toxic pollutants under the Clean Water Act. For the purposes of this Phase I ESA and in accordance with ASTM Standard E 1527, this definition includes petroleum products.

Historical Recognized Environmental Condition (HREC) – an Environmental Condition which in the past would have been considered a Recognized Environmental Condition (see definition below), but which may or may not be considered a REC currently.

LUST – Leaking Underground Storage Tank

NFRAP - No further remedial action planned.

NPL - National Priorities List. The federal list of designated "Superfund" sites that can receive federal monies for investigation and cleanup. .

Oil/Water separator - a vault like structure which intercepts wastewater and removed free phase petroleum (fuels, oils, greases) from the surface of the water. Dissolved products are not treated in an oil/water separator.

RBCA – Risk-Based Corrective Action.

RCRA - The Resource Conservation and Recovery Act of 1976. The federal regulation which governs the identification, management, transportation, and disposal of hazardous wastes from "cradle to grave."

RCRA Generator - Facilities that generate regulated amounts of hazardous waste, as defined by RCRA.

RCRA TSD Facility - A permitted Treatment, Storage or Disposal facility for hazardous wastes. Generally these facilities handle large volumes of hazardous wastes.

Recognized Environmental Condition (REC) - the presence or likely presence of hazardous substances or petroleum products on a property under conditions that indicate an existing release, a past release, or a material threat of a release into structures, ground, groundwater or surface water on the subject property. The term includes hazardous substances or petroleum products even under conditions in compliance with laws.

Septic system - A wastewater system normally used to collect sanitary sewerage. Generally there are two types: 1) a self contained system which is routinely pumped to removed sewerage, and 2) a leachfield type which discharges the sewerage to the subsurface.

Sump - A man-made structure designed to collect and contain liquid runoff from a facility. Sumps are commonly one of three types: 1) self-contained, 2) an open sump which discharges to the subsurface, 3) or a plumbed system, which is connected to a sewer system.

Underground storage tank - any tank, including underground piping connected to the tank, that is or has been used to contain petroleum products or hazardous substances and the volume of which is 10% or more beneath the ground surface.

Wastewater - Wastewater generated by a facility's activities (e.g., electroplating, laundry, etc.) which may be treated prior to discharge into the municipal sewer system. Industrial facilities often have wastewater discharge permits with discharge limits for specific hazardous substances and petroleum products.

APPENDIX 5

Previous Reports and Other Relevant Information

Michael O. Leavitt
Governor
Dianne R. Nielson, Ph.D.
Executive Director
Kent P. Gray
Director

State of Utah

FILE COPY

DEPARTMENT OF ENVIRONMENTAL QUALITY
DIVISION OF ENVIRONMENTAL RESPONSE AND REMEDIATION

168 North 1950 West
P.O. Box 144840
Salt Lake City, Utah 84114-4840
(801) 536-4100 Voice
(801) 359-8853 Fax
(801) 536-4414 T.D.D.

ERRL-0081-98

January 23, 1998

William Evans
Semi Service, Inc.
1082 South 300 West
Salt Lake City, Utah 84101

RE: Release Site EIXM, Energy Express, Inc., 2125 North Redwood Road, Salt Lake City, Utah
Facility Identification No. 4000276

Dear Mr. Evans:

The case file for this facility has been reviewed by your state project manager, Bruce Hagans, who has recommended that no further corrective action be taken at this time. This recommendation is based upon the information contained in the file supplied by you or your consultant.

The information you have submitted indicates that petroleum contamination remaining at the site complies with state underground storage tank rules. Based upon current land use, there appears to be no pathway for exposure to the contamination. In the future, if there is a change in land usage, or if other evidence indicates a spread of contamination from the facility which may cause a threat to human health or the environment, further corrective action may be required.

Sincerely,

Kent P. Gray, Executive Secretary (UST)
Utah Solid and Hazardous Waste Control Board

KPG/BHH/dd

cc: Thomas L. Schlenker, M.D., M.P.H., Director, Salt Lake City/County Health Department

Utah's RBCA Tier 1 Worksheet

FACILITY INFORMATION

Energy Express, Inc.
Facility Name
2125 N. Redwood Road, SLC, UT
Facility Location and Address (no Box Numbers)
Mr. William Evans, Semi Service, Inc. 1082 South 300 West, SLC, UT. 84101
Facility Owner Name and Address (City/State/Zip Code)
Facility Owner Phone # (801) 521-0360
Area Code *Phone Number*

(for DERR use only)
Facility ID. # 4000276
Release ID EIXM
Notification Date April 27, 1995
Release Reported By Melvin Muir
DERR Project Manager: B. Hagans
Person Completing Worksheet: B. Hagans

SITE ASSESSMENT INFORMATION

(for DERR use only)
a. Site Classification
(use Table A.1 for most precise classification)
Classification:
Impacts: Soil, Groundwater, Surface Water
Required Response Actions: Over excavation, monitoring, natural attenuation

b. Contaminant Source Information

Product Released	Amount Released (gal)	Size (gal) & # of USTs	Cause of Release (if known)
Gasoline			___tank ___piping ___dispenser ___overfill/spill ___Other:
Diesel	unkn	_x_tank	_x_piping ___dispenser _x_overfill/spill ___Other:
Waste Oil			___tank ___piping ___dispenser ___overfill/spill ___Other:
Unknown			___tank ___piping ___dispenser ___overfill/spill ___Other:
Other			___tank ___piping ___dispenser ___overfill/spill ___Other:

Sources Removed: _x_tank __piping _x_dispenser __free product _x_contaminated soil
Other Information: AST's removed September 1988., release never reported at time of tank removal.

c. Land Use Information

Current Land Use at the Site: _____ residential _____ commercial __X__ industrial
Surrounding Neighborhood: _____ residential _____ commercial __x__ industrial
(***Note:*** *Surrounding land use is* ***Residential*** *if one or more residences share a common property line with the Facility)*

d. Soil Information

Depth to Top and Base of Contaminated Soil (feet below land surface): __5__Top __7__Base
Soil Type(s): ML Depth (feet below land surface): 2-9
Method of Soil Type Identification (*check applicable*): ____Unified Soil Classification _x___Geologist's description

e. Groundwater Information

Was groundwater present in excavations? _x__Yes ___No Thickness of Free Product: N/A
Depth to groundwater (feet below land surface): 3-6 fbg
Is groundwater impacted at any concentration: __X__Yes ___No
Groundwater flow direction *(circle applicable)*: E, W, N, S, SE, SW, NE, NW _x___Inferred? ___Measured?
Slope direction of surface topography *(circle applicable)*: E, W, N, S, SE, SW, NE, NW

f. Distance from Source to Nearest Potential Receptor
(If any receptors are within 30 feet you must go to Tier 2)

Receptors *(enter distance to each in feet)*
Subsurface Utilities: >30 Water line >30 Sewer line >30 Natural Gas __>30_Storm Drain >30 Telephone
_OH__Electrical ____ Other (specify)
____Property Line ____Buildings (specify type: ____Residence ____Commercial ___ other, specify)

Distance to Other Receptors
(for DERR use only)
(If any receptors are within 500 feet you must go to Tier 2)

Receptors Within 500 feet *(enter distance to each in feet and attach water well data sheets and maps; show facility location on each map)*
_____Municipal Well _on-site_Domestic Well _____Irrigation Well
__500__Surface water (*specify type: lake, stream, creek, river, wetland*): Jordan River

FACILITY SITE MAP

The owner/operator must submit a facility site map, as close as possible to scale, indicating the north direction, and shows locations of the following properly labeled features:

- Current and/or former UST systems (indicate product type for each)
- Utility lines (underground)
- Buildings or other structures
- Excavations
- Soil stockpiles
- Location of the release and known contamination
- Property lines
- Monitoring wells
- Sample locations

SUPPLEMENTAL INFORMATION

The site has been rented by two different operators prior and during UDEQ's involvement with the site. Contained on the site was ASTs containing diesel fuel. In September 1988 the operators of the site removed their ASTs, and over excavated soil under the AST. Soil was stockpiled on site, and the excavation was left open. In April 1995 a release was reported to UDEQ based on a site inspection by Salt Lake City/County Health Department. The owner and the 2 operators could not agree on responsibility for the site investigation; however, the open excavation was closed. Because of the conflict by the responsible parties, the site investigation lagged, and was conducted in piece meal. In November 1995 monitoring wells were installed and environmental samples were taken. Ground water at the site does not appear to have been impacted, or if it was impacted by petroleum, it has naturally attenuated. Analytical results from soil samples show some contamination from MW-9; at 9 feet below grade (fbg) however, no groundwater contamination was found in any of the wells during any of the sampling events. On or about October 31, 1997, the excavated soil was finally removed by the operator and disposed at E.T. Technologies. In regards to the on site domestic well, it was established in 1958; however, at that time a residence is reported to have occupied the property. The well is drilled to a deep aquifer, and is not in use and abandoned. Currently the site is industrial and is used as truck hauler storage yard. The surrounding area is also industrial, and current construction in the immediate area is for industrial. The future land use is speculated to remain industrial. Based on the available data that was supplied by the operator, I recommend that we close the site.

Owner/Operator Must Submit Copies of Laboratory Analytical Data for all samples collected

RBCA TIER 1 SCREENING LEVEL EVALUATION
(for DERR use only)
(The Screening Levels are applicable only when distance-to-receptor criteria are met)

	Groundwater (mg/L)		*Soil (mg/kg)*	
CONSTITUENTS	**Screening Level**	**Highest Concentration at Source**	**Screening Level**	**Highest Concentration at Source**
Benzene	0.3	0.016	0.9	<0.10
Toluene	7	<0.002	61	<0.10
Ethylbenzene	4	<0.002	23	0.28
Xylenes	73	<0.002	235	1.2
Naphthalene	0.1	<0.004	10	.15
MTBE	0.2	N/A	0.3	N/A
TPH-gasoline	10	N/A	1500	N/A
TPH-diesel	10	0.37	5000	1500
Oil and Grease/TRPH	10	N/A	10000	N/A

RECOMMENDED TIER 1 ACTIONS (For DERR Use Only)

	All contaminant concentration levels are below Tier 1 screening levels and no receptors are within the critical distances. *Recommendation* - No further action.
X	All contaminant concentrations are below Tier 1 screening levels but receptors are within the critical distances. *Recommendation* - Site closeout.
	Contaminant concentration(s) exceed Tier 1 screening levels or receptors are within critical distances. *Recommendation* - Perform a Tier 2 risk assessment or cleanup to applicable levels.

Evaluation completed by: _____ January 20, 1998

DERR Project Manager's Signature — Date

_____ _____

Signature of Person Completing Tier 1 Worksheet if different than DERR Project Manager — Date

Reviewed 7/25/97

June 6, 1997

Mr. Bruce Hagans
Utah Department of Environmental Quality
Division of Environmental Response and Remediation (DERR)
168 North 1950 West
Salt Lake City, Utah 84114-4840

DEQ / DERR
RECEIVED
JUN - 6 1997
HAND DELIVERED

RE: Petro Source/Semi Service Transportation Facility
2125 North Redwood Road, Salt Lake City, Utah
Facility Identification Number 4000276, Release EIXM

Dear Mr. Hagans,

The purpose of this letter is to report on recent sampling actions taken by Petro Source at the Redwood Road Facility referenced above and to outline Petro Source's proposed actions to prepare the site for final closure.

History of Investigation and Remedial Actions at the Facility

Past release investigation and remediation efforts at the facility have included the installation (in August 1995) of five permanent monitor wells (labeled monitor wells MW-1, MW-4, MW-6, MW-7 and MW-9), the over-excavation of approximately 400 cubic yards of soil near the location of the above ground storage tank (tank has been removed) and on-site stockpiling of the excavated soil in the northwest corner of the facility.

Groundwater samples from the five monitor wells were analyzed in September 1995 and June 1996 for Benzene, Toluene, Ethylbenzene, Xylene and Naphthalene (BTEXN) and Total Petroleum Hydrocarbon (TPH) via EPA Method 8260. Soil samples from the facility were analyzed for TPH and BTEXN via Method 8015. See Appendix 2 for analytical results.

The September 1995 groundwater analytical results ranged from less than the reporting limit of 2 parts per billion (ppb) BTEXN in Monitor Wells MW-1, MW-4, MW-6 and MW-8 to 16 ppb Benzene in Monitor Well MW-9. TPH concentrations ranged from less than the reporting limit of 0.02 milligrams per liter (mg/l) or ppm in Monitor Wells MW-1, MW-4, MW-6 and MW-8 to 3.6 ppm in MW-7.

September 1995 soil samples were taken from Monitor Wells MW-7, MW-8 and MW-9 during well installation. The analytical results ranged from levels of TPH and BTEXN less than reporting limits for Monitor Well MW-8 to 2,900 ppm TPH and 15 ppm of Naphthalene in Monitor Well MW-9.

The June 1996 groundwater analytical results ranged from less than the reporting limit of 2 ppb BTEXN in Monitor Wells MW-1, MW-4, MW-6 and MW-7 to 6 ppb Benzene in Monitor Well MW-9. TPH concentrations ranged from less than the reporting limit of 0.02 mg/l (ppm) in Monitor Wells MW-1, MW-4, MW-6 and MW-7 to 0.08 mg/l in Monitor Well MW-9.

June 1996 soil samples were taken from Monitor Well MW-9 and the soil stockpile. The analytical results indicated levels of TPH and BTEXN less than reporting limits for Monitor Well MW-9 and a level of TPH of 3,900 ppm and BTEXN less than the reporting limits for the soil stockpile.

Based on the results of the June 1996 groundwater and soil sampling, the Redwood Road Facility was presented to DERR for closure in a letter dated July 16, 1996 from TPH-Rocky Mountains. Further communication with DERR resulted in the request (from DERR) to complete additional work on the soil stockpile prior to closure of the site.

Recent Investigation at the Facility

Based on the above-listed history, Petro Source determined (after receiving input from the DERR) that further sampling and analysis on the soil stockpile should be completed to determine the average concentration of TPH in the stockpile.

In April 1997 Petro Source sampled and had analyzed seven total composite soil samples taken from the soil stockpile located in the northwest corner of the facility (See Drawing 1 for soil pile location).

Soil samples were taken on April 14, 1997 by Mr. Matt Miller of J.P. REDD, INC., a Utah Certified Soil and Groundwater Sampler (ID# GS1082). The soil stockpile was divided into seven quadrants, with one sample taken from each quadrant (See Drawing 1 for stockpile quadrants). Composite samples were taken from each quadrant by removing equal portions of approximately 10 to 15 grab samples from the quadrant and mixing the soil together for analysis. This method was used to provide a "representative" sample that would give an average concentration of each stockpile quadrant. See Appendix 1 for photographs of the composite sampling areas.

Soil samples were placed in screwed-lid glass sample jars and transported under Chain-of-Custody to Mountain States Analytical, Inc. (MSAI, a Utah Certified Environmental Laboratory) for analysis. The soil samples were analyzed for TPH by MSAI according to Method 8015 Modified. Results of the analysis are as follows (See Appendix 3 for the laboratory report):

Sample #	TPH Concentration (mg/kg or ppm)
1	82
2	142
3	132
4	316
5	373
6	264
7	98

The April 1997 testing of the soil stockpile shows that the levels of TPH still exceed State of Utah Level I Soil Cleanup Levels (100 ppm) in most quadrants. The sum average TPH concentration in the stockpile is 200 ppm.

Proposed Corrective Action for the Facility Soil Stockpile

Petro Source proposes to dispose of the stockpiled soil on-site at the Redwood Road Facility on the back part of the property that is not paved. Petro Source proposes placing the approximately 400 cubic yards of stockpiled soil in a 2 or 3 inch layer over the back section of the property, as shown in Drawing 1. The soil would be roller compacted and then have 3 inches of roller compacted gravel cover placed over it.

We feel that disposing of the stockpiled soil in this manner will provide a safe, cost efficient way to remediate the site and therefore allow for site closure.

We look forward to hearing from you regarding this facility. Please let us know if you have any questions or require any additional information regarding this facility.

Respectfully yours,

J.P. REDD, INC.

By _____
Matthew Miller
Utah Certified UST Consultant

cc: Larry Bardwell
Mike Redd
Cliff Wardell

C:\work\petro_so\ps_misc\bh_let.wpd\MM

The following tables compare analytical results from groundwater sampling conducted at the Redwood Road Facility in September 1995 and June 1996 at the five monitor wells (MW-1, MW-4, MW-6, MW-7 and MW-9). Monitor Wells MW-2, MW-3 and MW-5 were never completed or sampled. Monitor Well MW-8 was abandoned after initial sampling. All results are given in ppm.

WELL MW-1

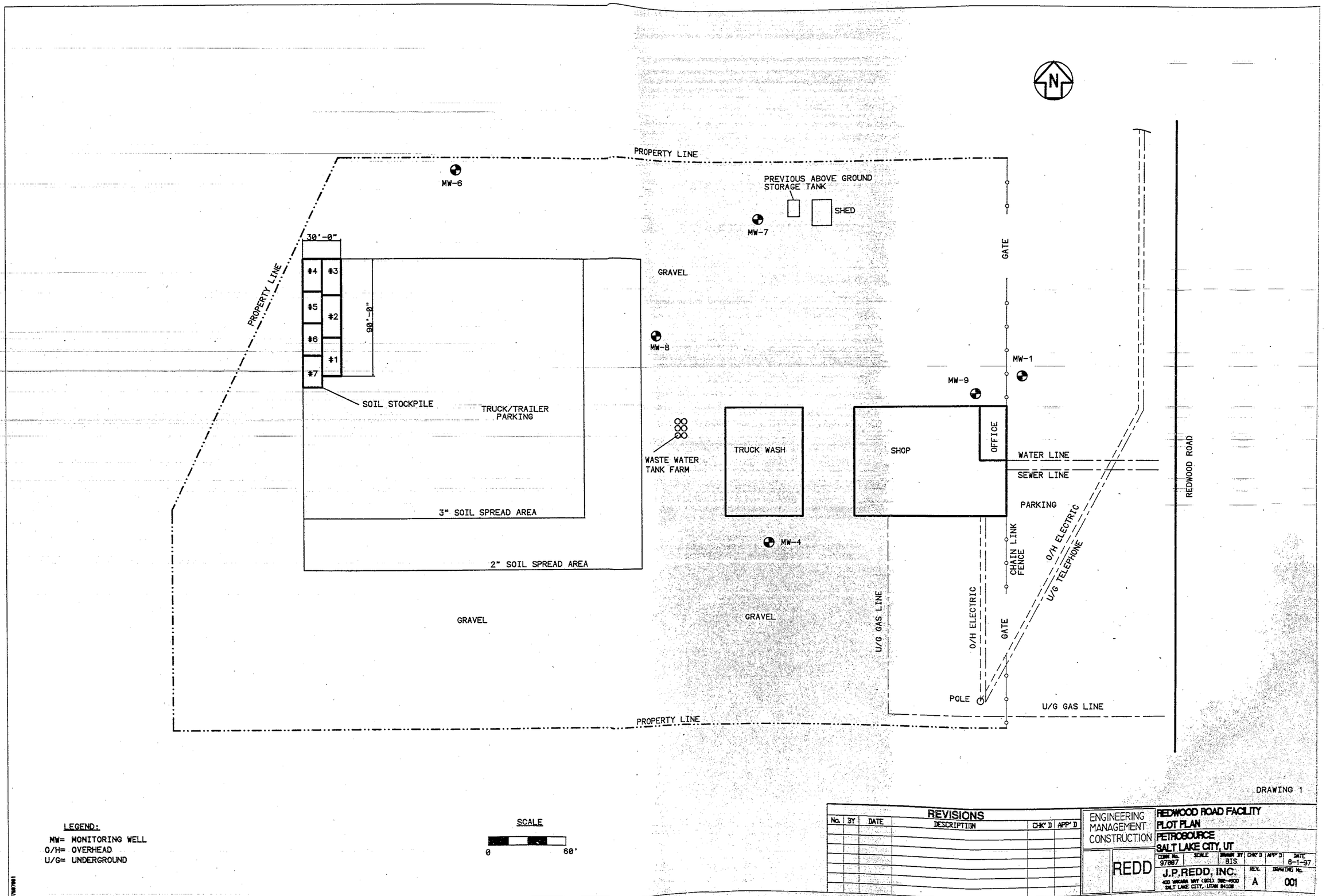
Constituent	September 1995	June 1996
TPH	<0.02	<0.02
Benzene	<0.002	<0.002
Toluene	<0.002	<0.002
Ethylbenzene	<0.002	<0.002
Total Xylene	<0.002	<0.002
Naphthalene	<0.004	<0.004

WELL MW-4

Constituent	September 1995	June 1996
TPH	<0.02	<0.02
Benzene	<0.002	<0.002
Toluene	<0.002	<0.002
Ethylbenzene	<0.002	<0.002
Total Xylene	<0.002	<0.002
Naphthalene	<0.004	<0.004

WELL MW-6

Constituent	September 1995	June 1996
TPH	<0.02	<0.02
Benzene	<0.002	<0.002
Toluene	<0.002	<0.002
Ethylbenzene	<0.002	<0.002
Total Xylene	<0.002	<0.002
Naphthalene	<0.004	<0.004



C:\WORK\PTASRCE\97007001.dwg Fri Jun 06 07:41:44 1997

LEGEND:
MW= MONITORING WELL
O/H= OVERHEAD
U/G= UNDERGROUND

SCALE
0 60'

DRAWING 1

REVISIONS					
No.	BY	DATE	DESCRIPTION	CHK'D	APP'D

ENGINEERING MANAGEMENT CONSTRUCTION

REDD

REDWOOD ROAD FACILITY
PLOT PLAN
PETROSOURCE
SALT LAKE CITY, UT

CONT No.	SCALE	DRAWN BY	CHK'D	APP'D	DATE
97007		BIS			6-1-97

J.P.REDD, INC.
400 WAKARA WAY (801) 582-4500
SALT LAKE CITY, UTAH 84108

REV. A

DRAWING No. 001

Michael O. Leavitt
Governor
Dianne R. Nielson, Ph.D.
Executive Director
Kent P. Gray
Director

State of Utah

FILE COPY

DEPARTMENT OF ENVIRONMENTAL QUALITY
DIVISION OF ENVIRONMENTAL RESPONSE AND REMEDIATION

168 North 1950 West
P.O. Box 144840
Salt Lake City, Utah 84114-4840
(801) 536-4100 Voice
(801) 359-8853 Fax
(801) 536-4414 T.D.D.

ERRU-410-96

August 22, 1996

Jon Muehlberger
BR & F, LC
2351 Cave Hollow Way
Bountiful, Utah 84010

RE: Underground Storage Tanks (USTs) at Sunstate Equipment
Located at 2051 N. Redwood Rd., Salt Lake City, Utah
Facility ID. #4001471, Tank #1

Dear Mr. Muehlberger:

A review of the information you have submitted in the closure notice received on August 16, 1996, for the above referenced UST, indicates that no corrective action is required at the site at this time. The information you have submitted indicates that any detectable petroleum contamination at the site complies with state UST rules. Based upon these rules there appears to be no threat to human health or the environment.

Corrective action may be needed in the future if contamination is found that threatens human health or the environment. Please contact **David Wilson** at (801) 536-4138, if you have any questions regarding this matter.

Sincerely,

Kent P. Gray, Executive Secretary (UST)
Utah Solid and Hazardous Waste Control Board

KPG/DW/jd

cc: Lenora Bishop, LUST Section
Theodore R. Thatcher, TR Tech, Inc.

09-95

TRTech, Inc.

P.O. Box 7 Farmington, Utah

August 16, 1996

Underground Storage Tank Section
Utah Department of Environmental Response
168 North 1950 West
Salt Lake City, Utah 84116

Subject: Closure of the Former Petrolane (now Sunstate) Facility
Facility No. 4001471

Job No. 183

Dear UST Section:

The Appended is the Closure Notice for the above reference facility. The tanks were removed on July 17, 1996. The test data for the closure indicates that residual contamination at the site is negligible and far below either RBCA or older MCL levels. It should be noted that this sample was split and used for quality control purposes (required by a real estate transaction). The duplicate VOC samples were a close check but the 418.1 data was too far off to be valid so the water was sampled again on August 6, 1996. The soil samples showed a trace (< 70 ppm) of TRH and no BTEXN.

TABLE I
GROUND WATER ANALYTICAL DATA mg/liter (ppm)

Sample	Date	TRH 418.1	Benzene	Toluene	Ethylbenzene	Xylenes	Naphthalene
W-1 UT	07/17/96	31.7	n/d	n/d	n/d	n/d	0.0032
W-1 AZ	07/17/96	7.7	n/d	n/d	0.0006	0.0015	n/r
Repeat	08/06/96	n/d	n/r	n/r	n/r	n/r	n/r
Utah RBCA Tier I		10.0	0.3	7.0	4.0	73.0	0.1

n/d= non-detect n/r= not run

TABLE II
SOIL SAMPLE ANALYTICAL DATA mg/kilogram (ppm)

Sample	Date	TRH 418.1	Benzene	Toluene	Ethylbenzene	Xylenes	Naphthalene
SS-1 W	07/17/96	58.5	n/d	n/d	n/d	n/d	n/d
SS-2 E	07/17/96	68.6	n/d	n/d	n/d	n/d	n/d
Utah RBCA Tier I		10,000.	0.9	61	23	235	10

n/d= non-detect n/r= not run

The tank that was removed was in "new" condition and any contamination was a result of surface spillage at the filler port.

The soils were light gray native lacustrian deposits of silty clay with fine

sand lenses (brown). The soils were former swamp with a high degree of organic debris fitting the USC category of OH.

No contaminated waste was generated in this operation and no contaminated materials left the Ricci property. At the recommendation of the Fire Marshall the tank (in new condition) was salvaged for use as a surface tank at the adjacent (contiguous) site.

In my opinion this site meets the all closure criteria without remedial action and should be closed without further action.

Yours Very Truly,
TRTech, Inc.

Theodore R. Thatcher
Geochemist

TRT/trt

UNDERGROUND STORAGE TANK CLOSURE NOTICE (Revised 03/01/93)

Facility ID # 4001471

State Use Only	
Date Processed	8/20/96 by DJL
Date Mailed to LHD	
Samples in LUST File #	
Samples to LUST Review	

Closure Notice prepared at the request of the owner/operator (identified below) by Theodore R. Thatcher
of (company name) TRTech, Inc. Phone # (801) 4519714
Address PO Box 7 City Farmington State Ut Zip 84025

FACILITY INFORMATION

Tank Owner B.R.&F., L.C. Phone # (801) 364 0700
[ ] dba (individual doing business as) [ ] sole proprietorship [X] partnership [ ] corporation
Address c/o Martineau & Co. #8 Broadway #500 City SLC State Ut Zip 84111
Facility Name Former Petrolane
Address 2051 North Redwood Rd. City SLC State Ut Zip
Contact person Jon Muehlberger Phone # (801) 364 0700
Number of regulated tanks at the facility before closure: 1
Number of regulated tanks at the facility after closure: 1

TYPE OF CLOSURE [X] Permanent [ ] Temporary [ ] Change-In-Service

Permanent or Change-In-Service [X] Fuel was emptied [X] Sludge was removed [X] Tank was cleaned.
Tank was: [ ] Purged [X] Inerted. Method Used: CO_2
Location of Closure Records 507 W 4500 S. Murray
For in-place closure: tanks filled with n/a
Substance to be stored for Change-In-Service n/a

Temporary [ ] Fuel was emptied. [ ] Corrosion protection is operating. [ ] Release detection equipment is operating.
Residue depth remaining in tank _____ inches, or _____% by weight of total capacity of UST.
3 months: [ ] Vent lines open Cap/Secure: [ ] lines [ ] pumps [ ] manways n/a
12 months: [ ] Permanently closed [ ] New/Upgraded [ ] Extension request

TANKS CLOSED

Tank #	1								
Age of tank	8 yrs								
Capacity	550								
Subs. stored*	w/o								
Date last used	Jun 1996								
Date closed	7-17-96								
Rmvd/In place									

* Indicate the specific substance stored in each tank closed (regular, unleaded, diesel, waste oil, etc.)

TANK REMOVER Name Jon Muehlberger Cert. # TR 0124 Exp. date ____

Company B.B.&F., L.C. Phone # (801)364 0700

Address #8 Broadway # 500 City SLC State Ut Zip 84111

SOIL/GROUNDWATER SAMPLER Name Huntley Thatcher Cert. # GS0995 Exp. date ____

Company TRTech, Inc. Phone # (801)451 9714

Address PO Box 7 City Farmington State Ut Zip 84025

DISPOSAL SITES USED:

Tank: was in new condition-will recycle Date 7-17-96 Number n/a

Product from Tank: V.J. Sump & Trap Date 7-17-96 Amount 400

Contaminated water from tank cleaning: V.J Sump & Trap Date 7-17-96 Amount 30

Sludge: no sludge detected Date ____ Amount ____

Contaminated Water: none Date ____ Amount ____

Contaminated Soil: none Date ____ Amount ____

Is any contaminated soil which was overexcavated still on site? ____ Yes X No ____ Not applicable

SITE ASSESSMENT

Complete the Facility Site Plat (Closure Notice) and Sample Information Table (Closure Notice) on pages 3 and 4 to show the locations, depths, and other information on all soil/groundwater samples taken for closure. The samples must be consistently identified by sample ID # on the site plat, table, and lab analysis report.

[√] Completed Facility Site Plat (Closure Notice) is attached.

[√] Completed Sample Information Table (Closure Notice) is attached.

[√] Certified lab analytical environmental sample results are attached.

[√] Unified Soil Classification (USC) sample results are attached.

[√] Chain of Custody form is attached.

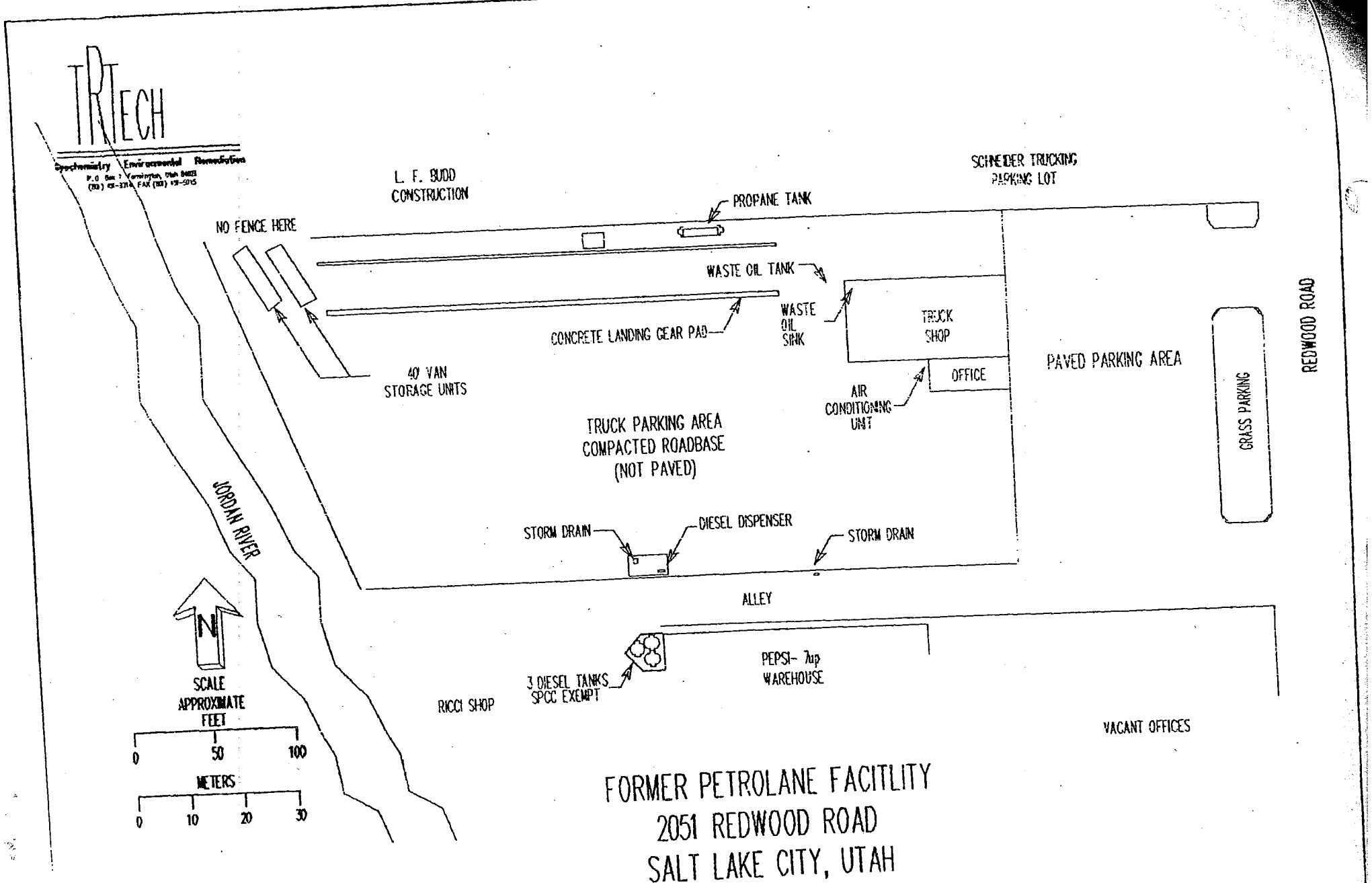
Samples were properly: [√] Collected [√] Labeled [√] Packaged [√] Transported

[√] Samples were in sight of the person in custody at all times or in a secured locked place.

I certify under penalty of law that the closure site assessment at this facility was conducted in accordance with R311-202 (parts 280.52 and 280.72) and R311-205 U.A.C., and that any additional samples required by R311-202 parts 280.52 and 280.72 and R311-205-2(a)(1) were properly collected.

Signature of Certified Groundwater/Soil Sampler Huntley Thatcher

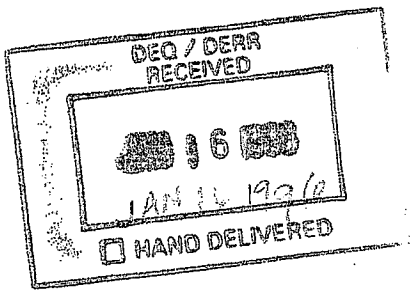
Full name of Certified Sampler Huntley Thatcher **Date** 8-16-96



FORMER PETROLANE FACITLITY
2051 REDWOOD ROAD
SALT LAKE CITY, UTAH

Figure A-2

RISK ASSESSMENT
RICCI INVESTMENT CO., FACILITY 4000796
2021 NORTH REDWOOD ROAD
SALT LAKE CITY, UTAH



Prepared For
LaMont Robison, Trustee
Ricci Investment Co.
557 West 4500 South
Murray, Utah

by

TRTech, Inc.
P.O. Box 7
Farmington, Utah 84025
(801) 451-9714 FAX (801) 451-9715 e-mail angfanger@aol.com

Job 082

January 19, 1996

ABSTRACT

Based on the Risk Based Corrective Action (RBCA) Tier II Risk Assessment set forth below and addressing various circumstances associated with the real property located at 2021 North Redwood Road in Salt Lake City, Utah, facility no. 40000796 ("Site"), no further remedial action should be required by the Utah Division of Environmental Response and Remediation (DERR) and the Site should be listed as "closed". Special circumstances evident at the Site include:

Extremely low levels of benzene, toluene, ethylbenzene, xylenes and naphthalene (BTEXN) that constitute the major threat to human health risk from a hydrocarbon release in the soil and ground water.

The inability to dig and chase the plume because of its proximity to the Jordan River levee. If the river were to find a path (sand lenses) into such an excavation the resulting levee breach and flood could be catastrophic and cost millions in damages.

The water quality in the Jordan River at this point is so poor that the residual levels of contamination cannot have any negative environmental effect. In fact the low levels of hydrocarbons, if any, that may reach the river should actually have a beneficial effect by reacting with the excess nitrogen (NH_3-N) in the river. Micro-releases would also provide nutrients for microscopic life at the base of the shore bird food chain.

There are no sensitive receptors at or near the Site.

The bulk of the plume is in a wetland, as defined by the U.S. Army Corps of Engineers. Wetlands are proven to be a viable remediation method for hydrocarbon releases. TRTech, Inc., has constructed two very successful temporary wetlands to remediate hydrocarbon releases in Centerville and Tremonton, Utah.

The Site is not now a threat to human health or the environment. However, as a condition to issuing a no further action letter, the Site should be checked and all remnants of the free product removal and remediation equipment should be removed. The tank excavation should be backfilled placing any stockpiled soils contaminated with oil and grease on the surface lift so that natural weathering will complete the remediation. Site restoration may probably be necessary as a condition of sale.

2.0 INTRODUCTION

DERR regulations require the submission and approval of a Risk Assessment before a Site with unusual circumstances may be closed. This report has been written to satisfy these regulatory demands.

2.1 DESCRIPTION

The Site consists of corporate offices, a large warehouse and truck shop and a pre-engineered steel utility building. There are three surface storage tanks on the Site that are exempt from EPA Spill Prevention Countermeasure and Control (SPCC) regulations. The Site is nestled between Redwood Road and the Jordan River Parkway. The ground surface at the Site slopes toward the west, and storm drainage collects in a wetland that is in the Jordan River Parkway between the Ricci property line and the Jordan River. Storm water that does not evaporate or percolate is pumped up over the levee into the Jordan River. The Site is bounded on the east by Redwood Road, on the south by The Lewis Rock Shop, to the west by the Jordan River Parkway and the Jordan River and to the north by Sunstate Equipment Co.

The facility has a Level II Site Sensitivity. Shallow ground water and proximity to the Jordan River are offset by the near complete lack of population and the industrial nature of the neighborhood.

2.2 SITE HISTORY

The Ricci facility on the Site was built on a wet-meadow ecosystem before wetland regulations circa 1975. The facility was built on man-made fill, and the wetland segment where the contaminant plume is located has flooded, during the rainy season, every year since 1975. The Site was permitted by the Salt Lake City Fire Department to have two underground storage tanks, a 12,000 gallon diesel tank, a 500 gallon waste oil tank and three surface storage tanks bounded by a concrete containment. In the fall, some time prior to November 1993, the waste

oil tank was removed, without a Closure Plan and sampling. No contamination was noted.

The 12,000 gallon diesel tank was removed in November 1993, and there were copious amounts, 7-14 cm (4-8"), of free product in the excavation. TRTech reported the release, on 11/18/95, via a FAX memo to Scott Manzano of DERR. The FAX report included:

Free Product Removal Report
Public Notification Flyer (delivered ½ mile radius)
Site Map
Hydrologic Profile
Remediation (free product removal) Equipment Plan
Abatement and Initial Site Characterization
Closure recommendations

A vacuum truck was called out weekly from Advance Petroleum Recycling (APR) to pump free product. Ricci employees reported that APR removed between 1,300 and 2,000 gallons of free product.

With permission from the Jordan River Parkway, Ricci dug test pits and installed the north and south wells. The up gradient sump was installed at the same time. A skimmer and oil/water separator were installed in the excavation, and an air sparger was placed in the pond. Ricci personnel reported that the skimmer removed about 300-400 gallons of oil. The skimmer has been in continuous operation since the operation started except for periods of low water and when the pond was frozen. There was a continuous exudation of oil into the pond, maintaining continuous and contiguous free product coverage of the pond from 1993 to the summer of 1995. By the fall of 1995 only a non-contiguous sheen of oil remained on the pond. The Site was characterized in conjunction with a sub-surface investigation as soon as the free product problem was abated. Five combination monitoring/sparging wells were installed on the Site -- one upgradient and four downgradient. The depth to ground water ranges from 0 (flooded) to about 50 cm (1.5') depending on the season, and the water load carried by the Jordan River.

TABLE I
ANALYTICAL TEST RESULTS, SOILS

Date of Sample	Sample Location	Sample Medium	Sample Depth meters	TPH mg/kg	TRH mg/kg O&G	Benzene mg/kg ppm	Toluene mg/kg ppm	Ethyl Benzene mg/kg	Total Xylene mg/kg	Naphthalene mg/kg
12/12/93	SS-1	Soil	2g	<2	n/r	3	<1	<1	4.0	<2
11/20/95	SS-1	Soil	1.8-2g		OK 7020[a]	<5	<5	<5	3.7	11.3
11/20/95	SS-2	Soil	1.8-2g		60100[a]	0.475	1.03	5.87	51.9	24.2[a]
11/20/95	SS-3	Soil	1.8-2g		OK 9420[a]	<5	<5	<5	16.5	22.0[a]
11/20/95	SS-4	Soil	1.8-2g		26000[a]	Must be re-sampled				
11/20/95	SS-5	Soil	1.8-2g		OK 3230[a]	<0.005	<0.005	<0.005	<0.015	<0.005
11/20/95	SS-6	Soil	1.8-2g		214	<0.46	<0.46	<0.46	1.95	12.4
11/20/95	SS-7	Soil	1.8-2g		4030[a]	<0.45	0.45	<0.45	47.4	13.2
11/20/95	SS-8	Soil	1.8-2g		2300[a]	<0.06	0.12	<0.06	2.06	2.59
11/20/95	SS-9	Soil	1.8-2g		60300[a]	<0.075	0.106	<0.075	6.32	10.3

|nnnnn| physically or chemically impossible results, like trying to pour a quart into a cup. API Publication 1628[1] reports that, in coarse sands, values of over 15,000 mg/kg are not possible.
n/r = not recorded
g = grab sample
[a] = samples that would still be above RBCA Tier II standards at the time this report was written

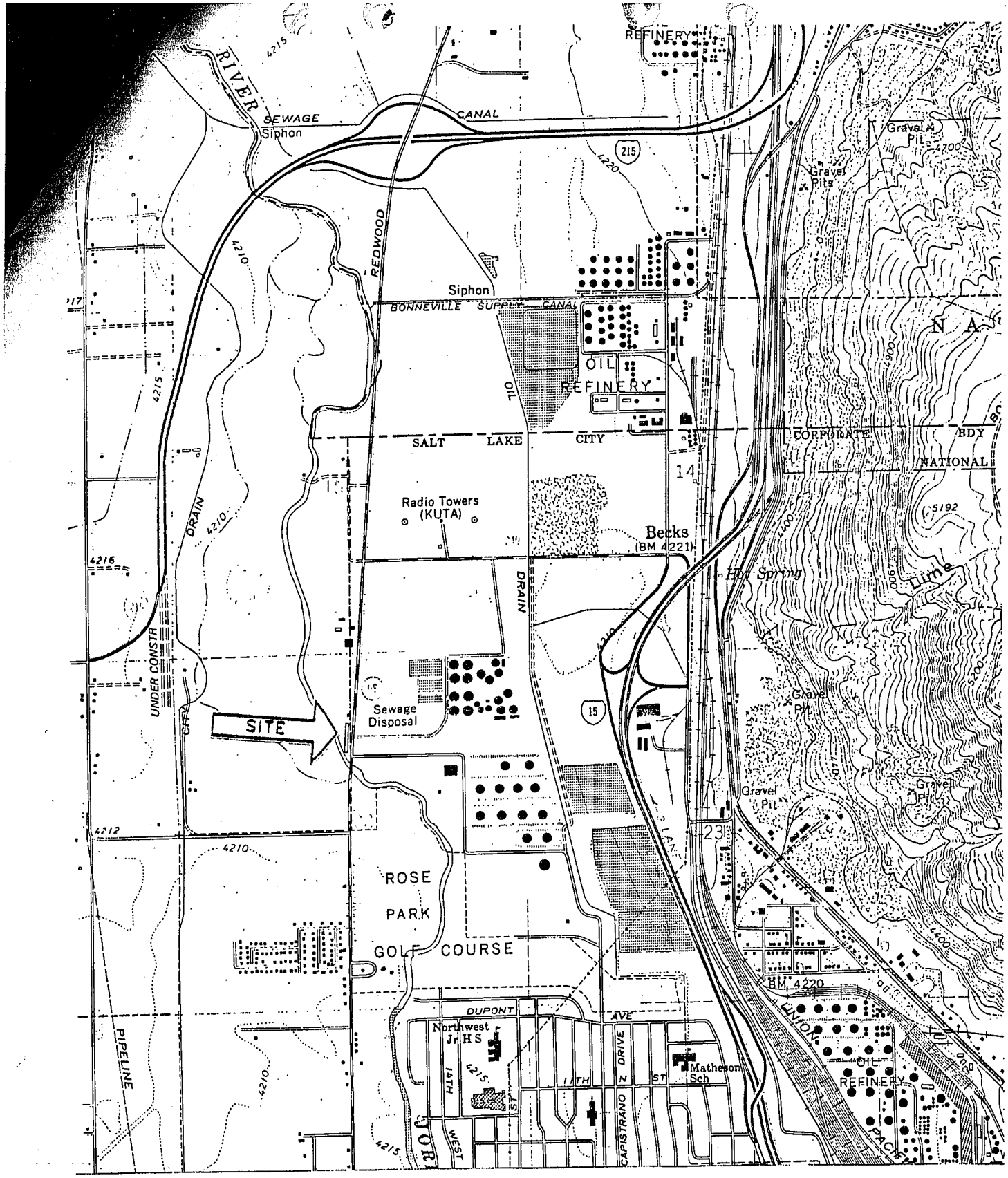
TABLE II
ANALYTICAL TEST RESULTS, WATER

Date of Sample	Sample ID	Sample Medium	Sample Source	TPH mg/l	TRH mg/l O&G	Benzene mg/l ppm	Toluene mg/l ppm	Ethyl Benzene mg/l	Total Xylene mg/l	Naphthalene mg/l
12/12/93	HOH-1	Water	pit	5.6	n/r	0.18	1.90	<1.0	1.4	0.33[a]
7/19/95	Pit	Water	pit	n/r	n/r	<0.002	0.009	0.003	0.17	0.021
8/18/95	Upgrad	Water	U-Sump	11.0	n/r	0.007	<0.002	0.007	0.073	0.11
8/18/95	Pit	Water	pit	7.1	n/r	<0.002	<0.002	<0.002	<0.006	<0.002
8/18/95	N-well	Water	No Well	<0.5	n/r	<0.002	<0.002	<0.002	<0.006	<0.002
8/18/95	S-well	Water	So Well	137.0[a]	n/r	<0.002	<0.002	<0.002	0.023	0.277[a]
11/20/95	WS-2	Water	So Well	n/r	<5	<0.20	0.223	<0.2	3.41	11.7[a]
11/20/95	WS-3	Water	No Well	n/r	1490[a]	0.012	<0.002	0.005	0.016	0.018
11/20/95	WS-4	Water	New Well	n/r	79[a]	<0.002	0.004	<0.002	<0.005	0.007
11/20/95	WS-5	Water	W/O Tk	n/r	5.26	Re-sample				

| nnnn | Doubtful results, data inconsistent with components and solubility factors.
n/r = not requested
[a] = samples that would still be above RBCA Tier II standards at the time this report was written

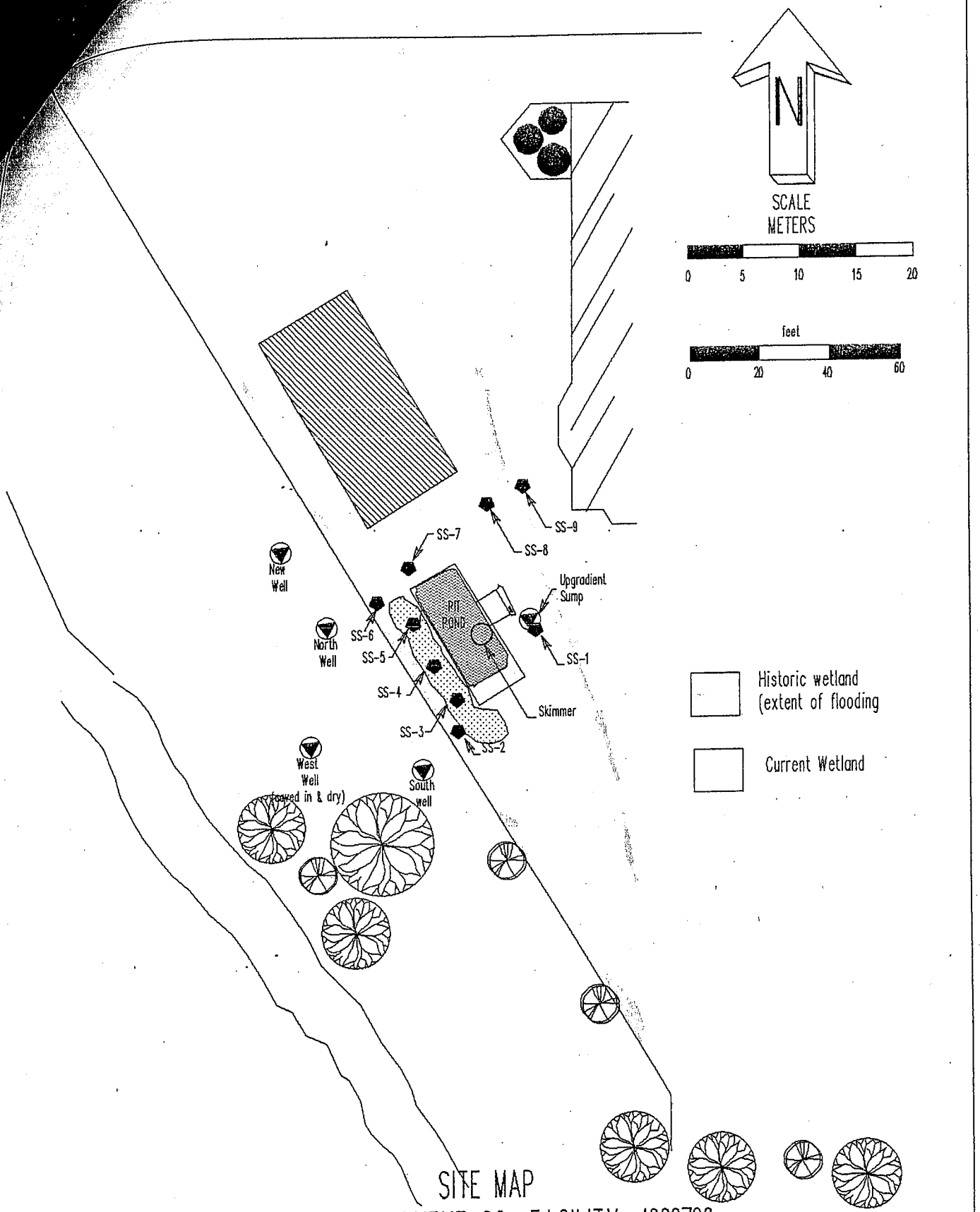
There was an unconfirmed report that spent transformer oils may have been mixed with diesel at this Site. This prompted a screening of the Site for PCB. The test results were non-detect at all sampling points, except the up gradient sump that showed 0.008 μg/l of PCB. The upgradinent well was re-

[1] "A Giide to the Assessment and Remediation of Underground Petroleum Releases" p-13.



VICINITY MAP
RICCI INVESTMENT CO. FACILITY 4000796
2021 NORTH REDWOOD ROAD
SALT LAKE CITY, UTAH

SCALE 1:24000



SITE MAP
RICCI INVESTMENT CO. FACILITY, 4000796
2021 NORTH REDWOOD ROAD
SALT LAKE CITY, UTAH

SUBSURFACE INVESTIGATION

UDEQ-DERR

Ricci Investment Company
Facility ID 4000796, Release Site EIIW
2021 North Redwood Road
Salt Lake City, Utah

November 4, 2003

B. Thomas Clark
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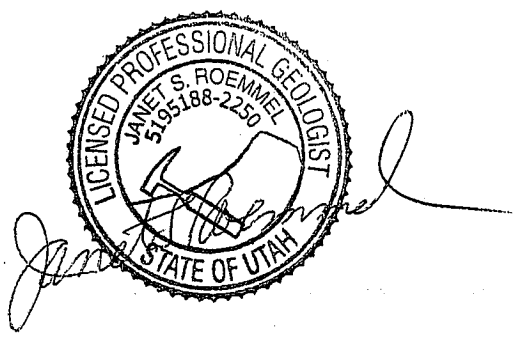

EXECUTIVE SUMMARY

This report presents the results of a Subsurface Investigation conducted by SECOR International Incorporated (SECOR) at the Ricci Investment Company property (the site), located at 2021 North Redwood Road, Salt Lake City, Utah. The Utah Department of Environmental Quality, Division of Environmental Response and Remediation refers to the site as Facility ID 4000796, Release Site EIIW.

The following results are concluded in this investigation:

- Soil and groundwater above Level 1 Recommended Cleanup Levels and Water Quality Standards exists both upgradient and downgradient (off site) from the former underground storage tank system and former release area.

- Diesel-range total petroleum hydrocarbon is the predominant constituent of concern for soil and groundwater, although naphthalene, benzene, and gasoline-range total petroleum hydrocarbon also occur above cleanup levels.

- Soil contamination occurs in the silts and sands of the vadose zone and the smear zone. The lateral extent of the soil contamination is not delineated in the downgradient direction and the extent of the groundwater contamination, at depths between 5.5 to 9 feet below ground surface, is not delineated in the upgradient to cross-gradient direction.

- The site does not meet the criteria for a Risk-Based Corrective Action Tier 1 closure because petroleum contaminants are off site and lie near a surface water body.

- No evidence exists that the nearby Jordan River is adversely affected by the diesel release. However, the lateral and vertical hydraulic connection between the site groundwater and the river is unclear.

Based on these results, SECOR recommends initiating quarterly groundwater monitoring and sampling of site-related wells to assess overall contaminant movement and concentration trends, groundwater elevation trends, and the stability of the limited contaminant plume that remains in the subsurface. Further subsurface investigation may be warranted off site to the southwest and on site to the northeast to further delineate remaining soil and groundwater contamination. Further investigation is warranted to establish the flow pathways from the site contamination to the Jordan River.

1.0 INTRODUCTION

This report presents the results of a Subsurface Investigation conducted by SECOR International Incorporated (SECOR) at the Ricci Investment Company property (the site), located at 2021 North Redwood Road, Salt Lake City, Utah. The Utah Department of Environmental Quality, Division of Environmental Response and Remediation (DERR) refers to the site as Facility ID 4000796, Release Site EIIW.

1.1 Objectives and Scope of Work

The objectives of this investigation were to provide information on both on- and off-site characteristics, and to assess the extent of petroleum hydrocarbon contamination in soils and shallow groundwater. The scope of work for this investigation included preparing a site-specific health and safety plan, advancing nine soil probeholes, installing nine groundwater monitoring wells in the probeholes, collecting and analyzing soil and groundwater samples for petroleum hydrocarbons, evaluating the data collected during the field investigation, and preparing this report.

1.2 Background

The site was investigated in 1994 through 1996 following discovery of a diesel fuel release on November 12, 1993. According to TRTech, Inc. (TRTech) the release may have also resulted from waste oil or transformer oil; however, neither polychlorinated biphenyls (PCBs) nor chlorinated hydrocarbons were confirmed at the site. Soil and groundwater contamination was discovered during the removal of a single, 17-year-old 12,000-gallon underground storage tank (UST). A Closure Notice was submitted to the DERR on September 30, 1994. The release was attributed to the leaking diesel fuel UST, and possibly the waste oil UST. A sheen of light non-aqueous phase liquid (LNAPL) and petroleum odors were noted. The release volume was estimated at as much as several thousand gallons of diesel fuel.

LNAPL was removed from the excavation using a vacuum truck. An upgradient sump and monitoring pits were installed at the facility and on the adjacent Jordan River Parkway to facilitate additional LNAPL removal. Reportedly, over 3,500 gallons of LNAPL were removed via skimming. In addition, TRTech conducted air sparging of the contaminated groundwater. Emergency remedial actions were conducted until mid-1996.

Early pumping tests showed that the soils exhibit low permeability. Contaminant migration may be affected by a septic holding tank present north of the release area by altering the natural hydraulic gradient. No petroleum contamination has been noted in the nearby Jordan River, located approximately 60 feet to the southwest of the release.

Typical monitoring wells were not installed; rather a track hoe was used to dig test pits in the wetlands area. The test pit "wells" were flooded at least once since installation. More commonly, groundwater has been observed at 4 to 5 feet below ground surface (bgs) in the test pit "wells." The direction of groundwater flow likely fluctuates seasonally toward and away from the Jordan River, or southeast and northwest relative to the site.

A risk assessment dated January 19, 1996 prepared by TRTech indicated that "the source of contamination was eliminated" and that the remaining contamination (soil averaging 12,000 milligrams per kilogram) "posed no demonstrated risk to human health or the environment." Site-Specific Tier 2 Screening Levels were proposed with a recommendation for no further action at the site. In response, the DERR requested additional investigative work on August 25, 1999, January 13, 2000, and April 28, 2000. Subsequent work included monitoring water levels and sampling the groundwater from the test pit "wells."

The perforated pipe and sparging equipment installed at test pits in the wetlands were observed in disrepair during a recent SECOR site visit. The test pit wells were not gauged as part of this investigation.

4.0 NATURE OF RELEASE AND ABATEMENT MEASURES

The release at the site is attributed to a leaking diesel fuel UST system, comprised of a 12,000-gallon UST, underground piping, and a dispenser island. Some early evidence suggested that either a leaking transformer or a leaking waste oil UST were possible sources. However, based on laboratory analyses, those were ruled out due to the lack of PCBs and chlorinated hydrocarbons detected in analytical results. Thus, the release is now attributed to diesel fuel only.

The release of diesel fuel was estimated at as much as several thousand gallons near the southwest property line, adjacent to wetlands associated with the Jordan River Parkway. The UST system was removed in 1993. In addition, over 3,500 gallons of LNAPL were removed via skimming. TRTech conducted air sparging of the contaminated groundwater. Emergency remedial actions were conducted until mid-1996. No further corrective action has been conducted.

Historical sampling and analysis of the Jordan River surface water showed no petroleum contaminants in the river near the site.

Based on the results of recent sampling, over 2,000 cubic yards of petroleum-contaminated soil above cleanup levels remain in place. The groundwater plume covers an area of approximately 6,500 square feet. Using an assumed mixing zone of 6.6 feet (from DERR's Tier 2 Risk Assessment Guidance), approximately 325,000 gallons of petroleum-contaminated groundwater above cleanup levels remain in place.

On August 12, 2003, LNAPL was observed as a sheen on the groundwater in newly installed monitoring wells MW-1 and MW-4 during well development. Measurable LNAPL of 0.08 feet in thickness was observed only on the groundwater in well MW-5 on September 30, 2003.

6.0 INVESTIGATION RESULTS

This section describes the results obtained from drilling and sampling. The results were used to evaluate the extent and degree of diesel fuel contamination in soil and groundwater. Copies of the laboratory analytical report and chain-of-custody document are included in Appendix E.

6.1 Soil

Soil probehole logs are presented in Appendix B. The soil probehole logs contain geologic descriptions, Unified Soil Classification System soil classification, drilling methods, and field screening results. Geologic cross-sections of the subsurface are shown on Figures 6 and 7. Sampling locations for soil samples collected for laboratory analyses are shown on Figure 8. Native soils encountered during this investigation range from a clayey silt (ML) to clayey to silty sand (SM) to medium- to coarse-grained sand. In general, the surface clayey silt extends to a depth of about 5 feet bgs and overlies a coarser-grained silty sand, which extends to about 8 feet bgs. The silty sand is underlain by an organic-rich silt to clay layer to a depth of about 13 feet bgs. A silty sand to sandy silt was encountered to the total depth explored at 15 feet bgs.

Soil analytical results for this investigation are summarized in Table 2, and are posted near each respective probing location on Figures 6 through 8. A petroleum odor was observed during drilling of most of the probeholes. Soil samples confirmed the presence of TPH-DRO as high as 15,000 milligrams per kilogram (mg/Kg), naphthalene as high as 43 mg/Kg, and benzene as high as 0.25 mg/Kg in MW-5 at 7.5 feet bgs off site and downgradient. Naphthalene and TPH-DRO in soil exist above their respective Level I Recommended Cleanup Levels (RCLs) at least 120 feet laterally downgradient of the former source area. The stratigraphic level of soil contamination is illustrated on Figures 6 and 7, and is consistent with groundwater transport primarily to the southwest from the former tank basin to create adsorbed soil contamination now below the water table. Soil contamination occurs both above and below the water table in a lateral area of approximately 6,500 square feet.

6.2 Groundwater

Relative groundwater elevations were calculated for wells MW-1 through MW-9. Each depth to groundwater measurement was converted to a relative groundwater elevation using the relative top-of-casing elevation of the monitoring well. Groundwater was measured at depths ranging from 5.51 to 8.96 feet bgs and flows west-southwest with an average hydraulic gradient of 0.004 ft/ft. The lateral and vertical hydraulic connections between the groundwater at the site and the flow of nearby surface water is unclear, as the river water elevation is higher than the adjacent wetlands. Groundwater elevations, contours, and arrows showing the direction of groundwater flow are shown on Figure 9.

Groundwater analytical results for this investigation are summarized in Table 3, and are posted near each respective well on Figure 10. Benzene, naphthalene, TPH-GRO, and/or TPH-DRO were reported above their respective Water Quality Standards over 30 feet to the southwest (downgradient) of the former release area. The highest TPH-DRO concentrations are 21,000 micrograms per liter in MW-1 and MW-4, located as far as 25 feet northeast (upgradient) of the former release area. The plume encompasses an area of approximately 6,900 square feet elongated perpendicular to the Jordan River.

Natural attenuation parameters suggest that natural biodegradation is occurring in the area of the groundwater plume. DO concentrations ranged from 0.5 milligrams per liter (mg/L) to 2.0 mg/L (Figure 11 and Table 4). Depleted DO concentrations generally occur near the source area, whereas the higher concentrations occur nearer the periphery of the plume. The Eh shows lower values suggesting more reducing conditions within the plume, and higher values suggesting less reducing conditions outside the plume.

The initial Eh values were verified on September 30, 2003. On that day measurable LNAPL was observed on the groundwater in one well. SECOR measured 0.08 feet of LNAPL at MW-5.

7.0 CONCLUSIONS AND RECOMMENDATIONS

Based on field observations and the existing analytical data, we conclude the following:

- Soils at the site are clayey silt, clayey to silty sands, medium- to coarse-grained sand, and an organic-rich silt to clay layer.

- Groundwater was observed between 5.51 to 8.96 feet bgs. The hydraulic gradient is 0.004 ft/ft to the south-southwest. The relationship of the site groundwater flow to the Jordan River surface water flow is unclear, as the water elevation is higher in the River.

- Soil contamination extends upgradient and downgradient from the former release area, and the lateral and vertical extents were adequately defined, except in the most downgradient position. The shallowest soil contamination occurs near the source area, although most of the remaining mass of contamination occurs below the water table in the smear zone. Vadose and smear zone soils exhibit TPH-DRO, and to a lesser extent, naphthalene concentrations above the respective Level 1 RCLs.

- Groundwater contamination extends upgradient and downgradient from the former release area, and the lateral and vertical extents were adequately defined downgradient of the former tank basin. However, the cross-gradient extent and upgradient extents on both sides of the former tank basin are not defined. Samples showed benzene, naphthalene, and TPH-DRO concentrations above the respective Water Quality Standards extending from the former UST source area off site and downgradient towards the Jordan River. The highest groundwater concentrations lie upgradient of the former source area.

- Dissolved oxygen concentrations are depleted and Eh values are more reducing within the groundwater plume compared to peripheral values, suggesting natural aerobic bioremediation is occurring.

- Because the groundwater plume is not confined to the site and lies near a river, RBCA Tier 1 closure guidelines do not apply.

Based on these results, SECOR recommends:

- Initiating groundwater monitoring and sampling of site-related wells. This will give a better understanding of overall contaminant movement and concentration trends, natural attenuation of contamination, and groundwater elevation trends. Groundwater monitoring and sampling should include natural attenuation parameters to evaluate the viability of natural biodegradation as a component of corrective action.

- Further investigation of the northeastern (upgradient to cross-gradient) extent of the groundwater plume and southwestern (downgradient) off-site extent of the soil contamination.

- Further investigation of the groundwater-to-surface water flow paths to assess the hydraulic connection between the site and the Jordan River.

LNAPL REMOVAL REPORT FOR

UDEQ-DERR

Ricci Investment Company
Facility ID 4000796, Release Site EIIW
2021 North Redwood Road
Salt Lake City, Utah

August 26, 2004
260T.5016202

Prepared by:

for

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Reviewed by:

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Senior Geologist
Utah Certified UST Consultant #CC0022

EXECUTIVE SUMMARY

This report presents the results of the completion of a Work Assignment for Removal of Liquid Petroleum from Installed Wells conducted by SECOR International Incorporated (SECOR) at the Ricci Investment Company property (the site), located at 2021 North Redwood Road, Salt Lake City, Utah. The Utah Department of Environmental Quality, Division of Environmental Response and Remediation refers to the site as Facility ID 4000796, Release Site EIIW, Work Assignment EIIW-4.

This Work Assignment was conducted over a period of 8 weeks from June 23 to August 18, 2004. The scope of work consisted of monitoring the site wells for groundwater elevation and light non-aqueous phase liquid (LNAPL) thickness, bailing LNAPL from wells containing LNAPL, and monitoring the recovery levels of LNAPL and groundwater in LNAPL-containing wells. Each monitoring period was planned to cover the period of time that the LNAPL would recover to 80% of the original measured thickness, but due to the slow recovery rates, 80% recovery was not observed and LNAPL recovery thicknesses diminished with each bailing.

The following results are concluded in this investigation:

- Groundwater elevations ranged from a relative elevation of 89.32 feet to 92.89 feet during the five monitoring events.
- The shallowest that groundwater was recorded was in MW-7 at 3.09 feet below ground surface (bgs) and the deepest groundwater was recorded from MW-4 at 7.64 feet bgs with a maximum fluctuation observed at 3 feet.
- LNAPL has been previously measured in wells on and off site. LNAPL thicknesses of up to 4 feet have been recorded in site wells.
- Recent monitoring of LNAPL indicated the lateral extent of the LNAPL plume is located on site near the former dispenser island.
- The thickness of LNAPL shows a strong inverse relationship in MW-4 and a weaker direct relationship to groundwater elevation in MW-2.
- LNAPL thickness in wells is greatest during low groundwater conditions. Groundwater elevations during this investigation have consistently been above the recorded groundwater elevation when 4.0 feet of LNAPL was measured in MW-4.
- Recovery of LNAPL after removal is very slow. During a 2-week interval between removal events, LNAPL levels failed to reach the previous thickness. During a 4-week interval between removal events, LNAPL exceeded the previous thickness.

Based on these results, SECOR recommends:

- Continued monthly to quarterly monitoring and removal of LNAPL by hand bailing. The recovery rate is too slow to warrant use of a mechanical skimmer.

- Construction of a sump or larger extraction well near the former underground storage tank basin to facilitate removal of more LNAPL than can be efficiently recovered from the smaller 2-inch diameter wells that were not designed for LNAPL extraction.

1.0 INTRODUCTION

This report presents the results of a Work Assignment for Removal of Liquid Petroleum from Installed Wells conducted by SECOR International Incorporated (SECOR) at the Ricci Investment Company property (the site), located at 2021 North Redwood Road, Salt Lake City, Utah (Figures 1 & 2). The Utah Department of Environmental Quality (UDEQ), Division of Environmental Response and Remediation (DERR) refers to the site as Facility ID 4000796, Release Site EIIW.

1.1 Objectives and Scope of Work

The objectives of this work assignment were to monitor and baildown light non-aqueous phase liquid (LNAPL) from selected monitoring wells containing LNAPL. Results would be used to evaluate the rate of recovery of LNAPL and to determine if mechanical LNAPL skimming is warranted. Tasks included LNAPL monitoring, removal and disposal, and preparing this report.

1.2 Background

The site was investigated in 1994 through 1996 following discovery of a diesel fuel release on November 12, 1993. Soil and groundwater contamination was discovered during the removal of a single, 17-year-old 12,000-gallon underground storage tank (UST). A Closure Notice was submitted to the UDEQ-DERR on September 30, 1994. The release was attributed to the leaking diesel fuel UST, and possibly a waste oil UST. The release volume was estimated to be as much as several thousand gallons of diesel fuel.

LNAPL was removed from the excavation using a vacuum truck. An upgradient sump and monitoring pits were installed at the facility and on the adjacent Jordan River Parkway to facilitate additional LNAPL removal. Reportedly, over 3,500 gallons of LNAPL were removed via skimming.

No petroleum contamination has been noted in the nearby Jordan River, located approximately 60 feet to the southwest of the release.

A risk assessment dated January 19, 1996 prepared by TRTech, Inc. indicated that "the source of contamination was eliminated" and that the remaining contamination (soil averaging 12,000 milligrams per kilogram) "posed no demonstrated risk to human health or the environment." Site-Specific Tier 2 Screening Levels were proposed with a recommendation for no further action at the site. In response, the UDEQ-DERR requested additional investigative work on August 25, 1999, January 13, 2000, and April 28, 2000. Subsequent work included monitoring water levels and sampling the groundwater from test pit "wells."

SECOR conducted a subsurface investigation in August and September 2003 that included installation and sampling of wells on the site and on the adjacent wetlands to the southwest. Results suggested that the soil contamination extends from the source area downgradient into the wetlands area. Dissolved groundwater contamination extends to an area similar to the soil contamination in a downgradient direction toward the Jordan River. However, the hydrogeologic connection between the site and the Jordan River is unclear. LNAPL was observed as a sheen on the water in MW-1 and MW-4 and was measured in MW-5 at 0.08 feet thick.

UDEQ-DERR conducted groundwater monitoring and sampling at the site in May 2004. LNAPL was measured in MW-2 (0.10 feet) and MW-4 (4.00 feet). In response, UDEQ-DERR directed SECOR to conduct five events of monitoring of the site wells and conduct five baildown tests on wells containing LNAPL over several weeks.

2.0 METHODOLOGY

This section briefly describes the field investigation scope and methods for the baildown tests that were conducted on June 23, 2004 through August 18, 2004. The field investigation scope was as follows:

- Monitoring nine wells (MW-1 through MW-9). All nine wells were gauged for static water levels and LNAPL thickness prior to each test. Static water levels were recorded to the nearest 0.01 feet using a battery-powered, oil/water interface probe. Groundwater depth measurements were recorded after verifying the measurements by moving the interface probe above and below the air/water or LNAPL/water interface level a minimum of three times. The measured groundwater depths were converted to relative groundwater elevations by subtracting the depth to groundwater from the relative top-of-casing elevation.

- Wells containing LNAPL were bailed with a disposable bailer to remove as much LNAPL as possible. Removal of contaminated groundwater was not the primary focus, although the groundwater level was lowered by several feet during the LNAPL removal procedures. Site photographs showing the some of the baildown procedures and are included in Appendix A.

- Immediately after the LNAPL was removed the groundwater and LNAPL levels were measured with an interface probe. The time and measurements of LNAPL extraction were recorded and additional groundwater measurements were taken at increasingly longer time intervals. The recorded field data is attached as Appendix B.

- Waste groundwater and LNAPL was containerized for removal and recycling by V.J. Environmental of Bountiful, Utah. A copy of waste manifest is included in Appendix C. The empty labeled drum is located west of the west building to facilitate future LNAPL removal.

3.0 INVESTIGATION RESULTS

This section describes the results obtained from the five baildown tests. The results were used to evaluate the feasibility of using an LNAPL skimmer to remove LNAPL at the site.

3.1 Groundwater Information

Groundwater was encountered between 7.64 feet below ground surface (bgs) and 3.09 feet bgs. The maximum groundwater fluctuation of 3 feet occurred in MW-4. Table 1 shows data for all groundwater monitoring events. Wells were constructed with screened intervals to accommodate the likely fluctuations of groundwater levels and to intersect the shallow groundwater table and LNAPL interface (Table 2). The direction of groundwater flow is towards the west-southwest at an average hydraulic gradient of approximately 0.01 feet per foot. It is likely that the direction of groundwater flow changes seasonally if the nearby Jordan River water level rises appreciably. Old riverbeds that have been filled in may also have seasonal influences on the direction of groundwater flow.

3.2 LNAPL Baildown Tests

LNAPL has been reported in on-site source area wells MW-1, MW-2, MW-4, and off-site downgradient well MW-5. During the five baildown tests LNAPL was measured in source area wells MW-2 and MW-4. Graphs 1 and 2 plot relative groundwater and LNAPL thickness versus time. Table 3 shows the data for the five baildown tests. The results of the first baildown test for MW-2 and the first and second baildown tests for MW-4 are shown on Graphs 3 through 5 as the best representation of the aquifer response. None of the rest of the baildown tests were plotted on graphs due to the small thickness of LNAPL encountered, which resulted in limited data.

A full LNAPL recovery of 80% of the originally measured thickness was not observed during these tests due to the slow return of LNAPL to the wells.

3.3 Thickness of LNAPL

The correlation between LNAPL thickness measured in the well and the free product thickness in the formation can not be easily determined. Thus, a relative measure of LNAPL thickness is suggested by thickness of product in a well whose screen crosses the water table. Fluctuation in the groundwater elevation directly affects the thickness of LNAPL in monitoring wells as the groundwater fluctuates above or below the bottom of the smear zone in the formation. LNAPL thickness in wells increases when low groundwater levels allow drainage of product from the unsaturated zone.

For these monitoring and baildown events, the lowest observed groundwater elevation was the first event, which corresponded to the thickest LNAPL. Groundwater elevations rose until dropping in the final event, which showed a corresponding increase in LNAPL thickness. The increase in LNAPL thickness observed in the final event may also reflect the longer duration for recharge between baildown events.

It is likely that a thicker accumulation of LNAPL will occur in the future when groundwater levels are even lower.

3.4 Estimate of LNAPL Recovery Rate

The greatest measured thickness of LNAPL occurred in MW-4 on May 19, 2004 and was recorded at 4 feet, but was not bailed at that time. This thickness of LNAPL was reported at 3.94 feet during the first LNAPL removal event. This thickness continued to decrease during each subsequent LNAPL removal event until the second to last event when LNAPL was measured at 0.07 feet. During the last event LNAPL was reported at 0.09 feet thick after a 4-week recovery period.

Groundwater elevations in MW-4 have consistently been above the lowest recorded groundwater elevation when the thickest LNAPL measurement was taken in May.

Groundwater elevation in MW-2 was at an all time recorded high in May and the measured LNAPL thickness doubled the next month when the groundwater elevation dropped 0.23 feet.

A recovery rate could not be determined due to the slow recharge rate in LNAPL. The thickness of LNAPL never recovered to 80% of the original thickness, thus, precluding the calculation of an estimated recovery rate if a skimmer were used.

The total amount of LNAPL recovered from the site was estimated at 0.78 gallons. Total water and LNAPL mixture recovered was approximately 6 gallons (Table 4).

4.0 CONCLUSIONS AND RECOMMENDATIONS

Based on field observations and the existing analytical data, we conclude the following:

- Groundwater is shallow between 3 feet and 8 feet bgs and with a maximum fluctuation observed at 3 feet.
- LNAPL has been observed as thick as 4 feet in MW-4 in the source area.
- The LNAPL plume area is limited to an area north of the former UST basin near the former dispenser.
- The thickness of LNAPL in relation to groundwater elevation is a direct relationship in MW-2 and is an inverse relationship in MW-4.
- LNAPL thickness in wells is greatest during low groundwater conditions. Groundwater elevations during this investigation have consistently been above the recorded groundwater elevation when 4.0 feet of LNAPL was measured in MW-4.
- Recovery of LNAPL after removal is very slow. During a 2-week interval between removal events, LNAPL levels failed to reach the previous thickness. During a 4-week interval between removal events, LNAPL exceeded the previous thickness.
- A mechanical LNAPL skimmer would not be cost effective for this site.

Based on these results, SECOR recommends:

- Continued monthly to quarterly groundwater monitoring and removal of LNAPL by handbailing.
- Construction of a sump or larger extraction well near the former UST basin to facilitate removal of more LNAPL than is recovered from the smaller 2-inch diameter wells that were not designed for LNAPL extraction.

5.0 STANDARD LIMITATIONS

The findings and conclusions documented in this report have been prepared for the specific application to this project and have been developed in a manner consistent with that level of care and skill normally exercised by members of the environmental science profession currently practicing under similar conditions in the area. No warranty, expressed or implied, is made.

A potential always remains for the presence of unknown, unidentified, or unforeseen subsurface contamination. Further evidence against such potential site contamination would require additional subsurface exploration and testing.

If new information is developed in future site activities (which may include excavations, boreholes, or other studies), SECOR should be requested to reevaluate the conclusions of this report, and to provide amendments as required.

6.0 REFERENCES

SECOR International Incorporated, 2003. *Subsurface Investigation,* Ricci Investment Co., 2021 North Redwood Road, Salt Lake City, Utah, November 4, 2003.

TRTech, Inc., 1996. *Risk Assessment*, Ricci Investment Co., Facility 4000796, 2021 North Redwood, Road, Salt Lake City, Utah, January 19, 1996.

United States Geological Survey, 1975. *7.5-Minute Quadrangle, Salt Lake City North, Utah,* 1:24,000-scale topographic map, 1963, photorevised 1969 and 1975.

Utah Department of Environmental Quality, 2003. *Interactive Map Database Search,* July 14, 2003.

TABLE 1
Groundwater Monitoring Results
Ricci Investment Company
2021 North Redwood Road, Salt Lake City, Utah

Location ID	Date	Depth of Groundwater Below Top of Casing (feet)	Depth to Groundwater (feet bgs)	Relative Groundwater Elevation (feet)	LNAPL Thickness (feet)
MW-1	08/13/03	5.53	5.53	91.42	sheen
	09/30/03	6.02	6.02	90.93	0.00
	05/19/04	3.60	3.60	93.35	0.00
	06/23/04	4.18	4.18	92.77	0.00
	06/30/04	4.44	4.44	92.51	0.00
	07/07/04	4.65	4.65	92.30	0.00
	07/21/04	4.66	4.66	92.29	0.00
	08/18/04	5.38	5.38	91.57	0.00
MW-2	08/13/03	6.18	6.18	91.09	0.00
	09/30/03	6.37	6.37	90.90	0.00
	05/19/04	4.55	4.55	92.72	0.10
	06/23/04	4.78	4.78	92.49	0.20
	06/30/04	4.92	4.92	92.35	0.06
	07/07/04	5.10	5.10	92.17	0.03
	07/21/04	5.10	5.10	92.17	0.02
	08/18/04	5.80	5.80	91.47	0.04
MW-3	08/13/03	5.51	5.51	91.27	0.00
	09/30/03	5.77	5.77	91.01	0.00
	05/19/04	3.52	3.52	93.26	0.00
	06/23/04	3.89	3.89	92.89	0.00
	06/30/04	4.15	4.15	92.63	0.00
	07/07/04	4.30	4.30	92.48	0.00
	07/21/04	4.28	4.28	92.50	0.00
	08/18/04	5.05	5.05	91.73	0.00
MW-4	08/13/03	5.84	5.84	91.12	sheen
	09/30/03	5.98	5.98	90.98	0.00
	05/19/04	7.82	7.82	89.14	4.00
	06/23/04	7.64	7.64	89.32	3.94
	06/30/04	4.75	4.75	92.21	0.33
	07/07/04	4.86	4.86	92.10	0.15
	07/21/04	4.82	4.82	92.14	0.07
	08/18/04	5.49	5.49	91.47	0.09
MW-5 (off-site)	08/13/03	8.96	5.37	91.04	0.00
	09/30/03	9.19	5.60	90.81	0.08
	05/19/04	7.25	3.66	92.75	0.00
	06/23/04	7.62	4.03	92.38	0.00
	06/30/04	7.83	4.24	92.17	0.00
	07/07/04	8.02	4.43	91.98	0.00
	07/21/04	8.00	4.41	92.00	0.00
	08/18/04	8.57	4.98	91.43	0.00
MW-6 (off-site)	08/13/03	8.60	4.98	91.01	0.00
	09/30/03	8.76	5.14	90.85	0.00
	05/19/04	6.85	3.23	92.76	0.00
	06/23/04	7.26	3.64	92.35	0.00
	06/30/04	7.53	3.91	92.08	0.00
	07/07/04	7.70	4.08	91.91	0.00
	07/21/04	7.65	4.03	91.96	0.00
	08/18/04	8.24	4.62	91.37	0.00

TABLE 1
Groundwater Monitoring Results
Ricci Investment Company
2021 North Redwood Road, Salt Lake City, Utah

Location ID	Date	Depth of Groundwater Below Top of Casing (feet)	Depth to Groundwater (feet bgs)	Relative Groundwater Elevation (feet)	LNAPL Thickness (feet)
MW-7 (off-site)	08/13/03	8.04	4.42	91.01	0.00
	09/30/03	8.18	4.56	90.87	0.00
	05/19/04	6.30	2.68	92.75	0.00
	06/23/04	6.71	3.09	92.34	0.00
	06/30/04	6.96	3.34	92.09	0.00
	07/07/04	7.20	3.58	91.85	0.00
	07/21/04	7.16	3.54	91.89	0.00
	08/18/04	7.80	4.18	91.25	0.00
MW-8 (off-site)	08/13/03	8.61	5.07	90.96	0.00
	09/30/03	8.67	5.13	87.36	0.00
	05/19/04	6.83	3.29	92.74	0.00
	06/23/04	7.07	3.53	92.50	0.00
	06/30/04	7.27	3.73	92.30	0.00
	07/07/04	7.33	3.79	92.24	0.00
	07/21/04	7.15	3.61	92.42	0.00
	08/18/04	8.13	4.59	91.44	0.00
MW-9 (off-site)	08/13/03	8.00	4.48	91.01	0.00
	09/30/03	8.15	4.63	90.86	0.00
	05/19/04	6.37	2.85	92.64	0.00
	06/23/04	6.76	3.24	92.25	0.00
	06/30/04	7.01	3.49	92.00	0.00
	07/07/04	7.21	3.69	91.80	0.00
	07/21/04	7.13	3.61	91.88	0.00
	08/18/04	7.74	4.22	91.27	0.00
North Well	06/30/04	5.03	NS	NS	0.00
	07/07/04	5.26	NS	NS	0.00
South Well	07/07/04	4.10	NS	NS	0.00

Explanation of Abbreviations

bgs = below ground surface
LNAPL = light non-aqueous phase liquid
NS = not surveyed

TABLE 2
Well Completion Information
Ricci Investment Company
2021 North Redwood Road, Salt Lake City, Utah

Well No.	Diameter (inches)	Total Well Depth (feet)	Screened Interval (feet)	Top of Casing Elevation (feet)	Top of Casing Height Above Grade (feet)
MW-1	2	12.70	2.70 - 12.70	96.95	0.00
MW-2	2	12.75	2.75 - 12.75	97.27	0.00
MW-3	2	12.70	2.70 - 12.70	96.78	0.00
MW-4	2	12.75	2.75 - 12.75	96.96	0.00
MW-5	2	16.32	2.73 - 12.73	100.00	3.59
MW-6	2	15.85	2.23 - 12.23	99.61	3.62
MW-7	2	16.17	2.55 - 12.55	99.05	3.62
MW-8	2	16.38	2.84 - 12.84	99.57	3.54
MW-9	2	16.40	2.88 - 12.88	99.01	3.52

TABLE 3
LNAPL Baildown Tests
Ricci Investment Company
2021 North Redwood Road, Salt Lake City, Utah

Well ID	Test Number	Date	Time	Total Elapsed Time (min)	Depth to Groundwater (feet bgs)	Depth to LNAPL (feet bgs)	LNAPL Thickness (feet)
MW-2	Test 1	06/23/04	12:18	0	7.43	NM	0.00
			12:20	2	7.01	NM	0.00
			12:24	6	6.23	NM	0.00
			12:32	14	5.38	NM	0.00
			12:48	30	4.78	NM	0.00
			13:20	62	4.57	4.55	0.02
			13:52	94	4.58	4.55	0.03
			14:24	126	4.58	4.55	0.03
			14:56	158	4.58	4.55	0.03
			15:28	190	4.60	4.54	0.06
			16:00	222	4.57	4.54	0.03
			16:32	254	4.58	4.55	0.03
			17:04	286	4.58	4.55	0.03
			17:36	318	4.58	4.55	0.03
			18:08	350	4.64	4.60	0.04
		06/24/04	8:01	1,183	4.64	4.60	0.04
			17:40	1,762	4.62	4.58	0.04
		06/25/04	11:47	2,849	4.72	4.67	0.05
MW-2	Test 2	06/30/04	10:10	0	7.27	NM	0.00
			10:11	1	6.89	NM	0.00
			10:13	3	6.63	NM	0.00
			10:17	7	6.03	NM	0.00
			10:25	15	5.43	NM	0.00
			10:41	31	5.00	NM	0.00
			11:13	63	4.81	4.80	0.01
			11:45	95	4.80	4.79	0.01
			12:17	127	4.80	4.79	0.01
			12:49	159	4.80	4.79	0.01
MW-2	Test 3	07/07/04	9:50	0	7.40	NM	0.00
			9:51	1	7.15	NM	0.00
			9:53	3	6.78	NM	0.00
			9:57	7	6.17	NM	0.00
			10:05	15	5.63	NM	0.00
			10:21	31	5.20	NM	0.00
			10:53	63	5.04	NM	0.00
			11:25	95	5.02	NM	0.00
Test 4 not conducted on 7/21/04 for MW-2 due to only 0.02 of LNAPL measured.							
MW-2	Test 5	08/18/04	9:43	0	7.63	NM	0.00
			9:44	1	7.49	NM	0.00
			9:46	3	7.22	NM	0.00
			9:50	7	6.85	NM	0.00
			9:58	15	6.31	NM	0.00
			10:14	31	5.90	NM	0.00
			10:46	63	5.69	NM	0.00

TABLE 3
LNAPL Bailown Tests
Ricci Investment Company
2021 North Redwood Road, Salt Lake City, Utah

Well ID	Test Number	Date	Time	Total Elapsed Time (min)	Depth to Groundwater (feet bgs)	Depth to LNAPL (feet bgs)	LNAPL Thickness (feet)
MW-4	Test 1	06/23/04	11:57	0	10.25	10.20	0.05
			11:59	2	9.62	9.54	0.08
			12:03	6	8.39	8.27	0.12
			12:11	14	7.09	6.90	0.19
			12:27	30	5.69	5.50	0.19
			12:59	62	4.81	4.61	0.20
			13:31	94	4.53	4.35	0.18
			14:03	126	4.42	4.23	0.19
			14:35	158	4.37	4.17	0.20
			15:07	190	4.35	4.15	0.20
			15:39	222	4.33	4.16	0.17
			16:11	254	4.36	4.15	0.21
			16:43	286	4.37	4.15	0.22
			17:15	318	4.37	4.15	0.22
			17:47	350	4.38	4.15	0.23
			17:57	360	4.38	4.15	0.23
		06/24/04	7:59	1,201	4.52	4.23	0.29
			17:39	1,782	4.49	4.20	0.29
		06/25/04	11:49	2,872	4.55	4.25	0.30
MW-4	Test 2	06/30/04	9:48	0	8.41	8.40	0.01
			9:49	1	8.12	8.11	0.01
			9:50	2	7.82	7.81	0.01
			9:52	4	7.30	7.28	0.02
			9:56	8	6.80	6.77	0.03
			10:04	16	5.94	5.89	0.05
			10:20	32	5.23	5.17	0.06
			10:52	64	4.76	4.70	0.06
			11:24	96	4.63	4.55	0.08
			11:56	128	4.61	4.52	0.09
			12:28	160	4.61	4.51	0.10
			13:00	192	4.60	4.50	0.10
MW-4	Test 3	07/07/04	9:40	0	7.51	7.50	0.01
			9:41	1	7.26	7.25	0.01
			9:43	3	6.97	6.96	0.01
			9:47	7	6.45	6.43	0.02
			9:55	15	5.78	5.76	0.02
			10:11	31	5.26	5.23	0.03
			10:43	63	4.89	4.86	0.03
			11:15	95	4.81	4.78	0.03
			11:47	127	4.78	4.75	0.03

TABLE 3
LNAPL Bailown Tests
Ricci Investment Company
2021 North Redwood Road, Salt Lake City, Utah

Well ID	Test Number	Date	Time	Total Elapsed Time (min)	Depth to Groundwater (feet bgs)	Depth to LNAPL (feet bgs)	LNAPL Thickness (feet)
MW-4	Test 4	07/21/04	9:15	0	7.13	NM	0.00
			9:16	1	7.00	NM	0.00
			9:18	3	6.72	NM	0.00
			9:22	7	6.17	NM	0.00
			9:30	15	5.67	NM	0.00
			9:46	31	5.22	5.20	0.02
			10:18	63	4.90	4.87	0.03
MW-4	Test 5	08/18/04	9:34	0	8.10	NM	0.00
			9:35	1	7.93	NM	0.00
			9:37	3	7.83	NM	0.00
			9:41	7	4.70	NM	0.00
			9:49	15	6.88	NM	0.00
			10:05	31	6.22	6.21	0.01
			10:37	63	5.68	5.67	0.01
			11:09	95	5.50	5.49	0.01

Explanation of Abbreviations

min	= minute
bgs	= below ground surface
LNAPL	= light non-aqueous phase liquid
NM	= no LNAPL measured

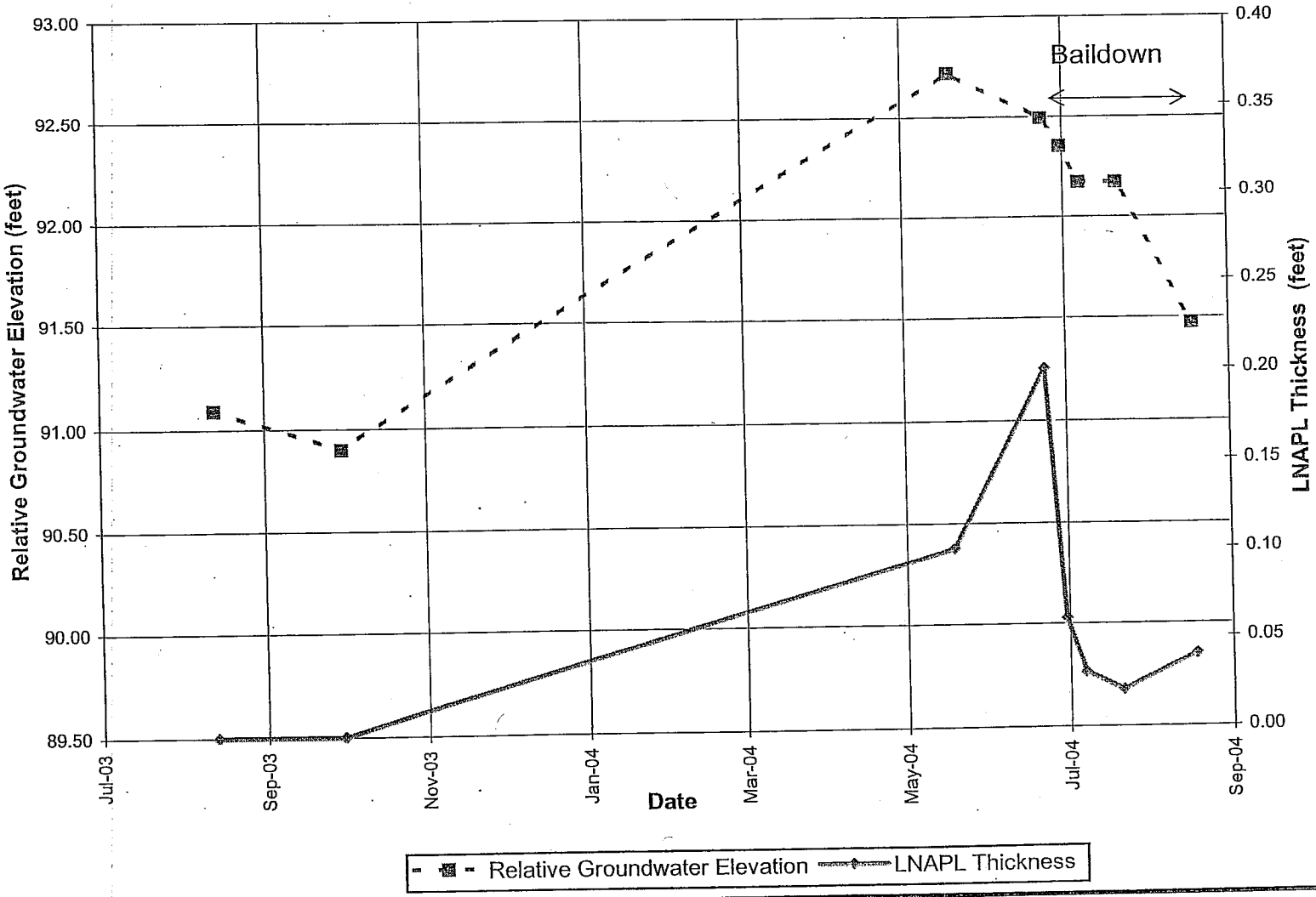
TABLE 4
LNAPL Recovery Volume
Ricci Investment Company
2021 North Redwood Road, Salt Lake City, Utah

Well	Date	LNAPL Recovered (gallons)	Cumlative LNAPL Recovered (gallons)
MW-2	06/23/04	0.032	0.032
	06/30/04	0.010	0.042
	07/07/04	0.005	0.047
	07/21/04	0.003	0.050
	08/18/04	0.006	0.056
MW-4	06/23/04	0.630	0.630
	06/30/04	0.048	0.678
	07/07/04	0.024	0.702
	07/21/04	0.011	0.713
	08/18/04	0.014	0.727

Explanation of Abbreviations
LNAPL = light non-aqueous phase liquid

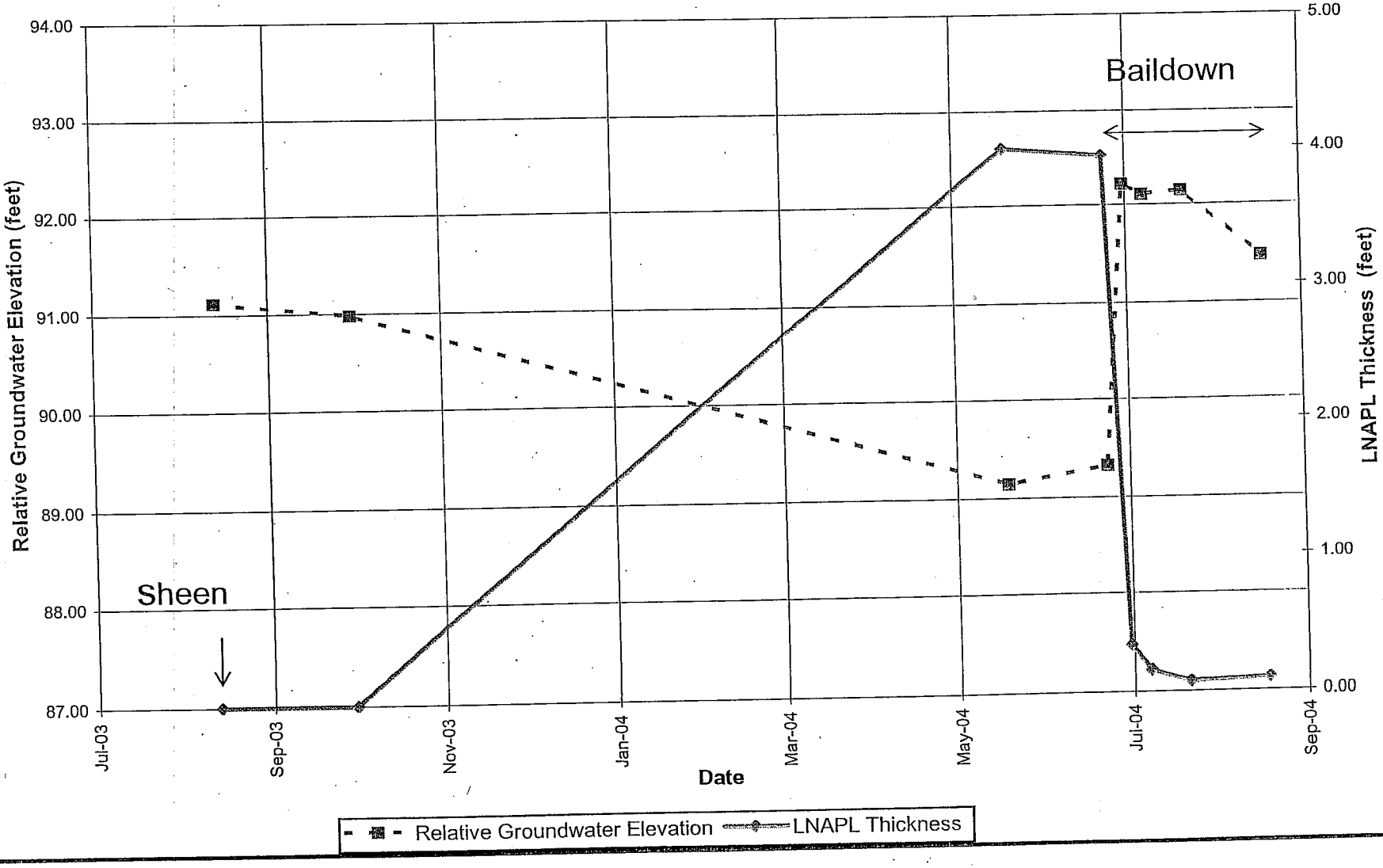
GRAPH 1

MW-2 Relative Groundwater Elevation and LNAPL Thickness vs. Time



GRAPH 2

MW-4 Relative Groundwater Elevation and LNAPL Thickness vs. Time



GENERAL SYMBOLS

- MW-1 — GROUNDWATER MONITORING WELL LOCATION & NUMBER
- MW-1(P) — PROPOSED GROUNDWATER MONITORING WELL LOCATION & NUMBER
- VE-1 / EW-1 — VAPOR OR WATER EXTRACTION WELL LOCATION & NUMBER
- VE-1 (P)/ EW-1(P) — PROPOSED VAPOR OR WATER EXTRACTION WELL LOCATION & NUMBER
- PZ-1 — 1" MONITORING PIEZOMETER
- MW-1 — HAND-AUGER SOIL SAMPLE LOCATION
- WS-1 — IRRIGATION WELL or PRIVATE WELL
- GP-1/ B-1 — SOIL BOREHOLE GEOPROBE LOCATION
- SS-1 — SOIL SAMPLE LOCATION
- BM — BENCH MARK
- MW-1 — ABANDONED OR DESTROYED GROUNDWATER MONITORING WELL
- 1 — PHOTOGRAPH NUMBER & DIRECTION
- IW-1 — INJECTION WELL
- IW-1(P) — PROPOSED INJECTION WELL

APPROXIMATE LOCATIONS OF UTILITIES AND SITE FEATURES

- E — UNDERGROUND ELECTRIC LINE
- E — ABOVEGROUND ELECTRIC LINE
- T — UNDERGROUND TELEPHONE LINE
- T — ABOVEGROUND TELEPHONE LINE
- E&T — UNDERGROUND ELECTRIC & TELEPHONE
- E&T — ABOVEGROUND ELECTRIC & TELEPHONE
- FO — FIBER OPTIC CABLE LINE
- CTV — CABLE TELEVISION LINES
- W — WATER LINE
- IR — IRRIGATION LINE
- G — GAS LINE
- PP — PETROLEUM PIPELINE
- S — SEWER
- SS — SANITARY SEWER
- SW — STORM SEWER
- SD — STORM DRAIN WITH CATCH BASIN
- SP — SPRINKLER LINE
- TRAIN TRACKS
- FENCE
- PROPERTY LINE

- AS-1 — AIR SPARGE WELL
- AS-1(P) — PROPOSED AIR SPARGE WELL
- VM-1 — VAPOR MONITORING WELL
- VM-1(P) — PROPOSED VAPOR MONITORING WELL

- CONCRETE
- ROAD
- EARTH MATERIAL (TOP SOIL)
- ASPHALT /SECTION
- APPROXIMATE EXTENT OF HYDROCARBON-IMPACTED SOIL
- SAND / FILL MATERIAL

GROUNDWATER/SOIL ANALYTICAL RESULTS, CROSS SECTIONS AND NATURAL ATTENUATION

ANALYTE	ANALYTICAL METHOD
NAME OF WELL	DEPTH bgs
MTBE	8260B
BENZENE	8260B
TOLUENE	8260B
ETHYLBENZENE	8260B
TOTAL XYLENES	8260B
NAPHTHALENE	8260B
TPH	8260B
SAMPLE DATE	

ALL SOIL RESULTS ARE IN MILLIGRAMS PER KILOGRAM
ALL GROUNDWATER RESULTS IN MICROGRAMS PER LITER

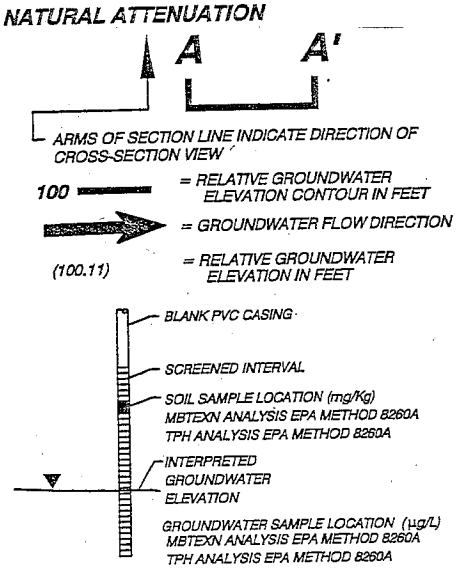
< = ANALYTE NOT DETECTED ABOVE STATED CONCENTRATION

BOLD = ANALYTE DETECTED ABOVE MCL, UTAH RCL, OR RBCA TIER 1 SCREENING LEVEL

NA = NOT ANALYZED
NM = NOT MEASURED
NS = NOT SAMPLED

E = ESTIMATED CONCENTRATION (VALUE EXEEDS THE LINEAR WORKING RANGE OF THE INSTRUMENTATION)

bgs = BELOW GROUND SURFACE
MTBE = METHYL TERTIARY BUTYL ETHER
TPH = TOTAL PETROLEUM HYDROCARBONS

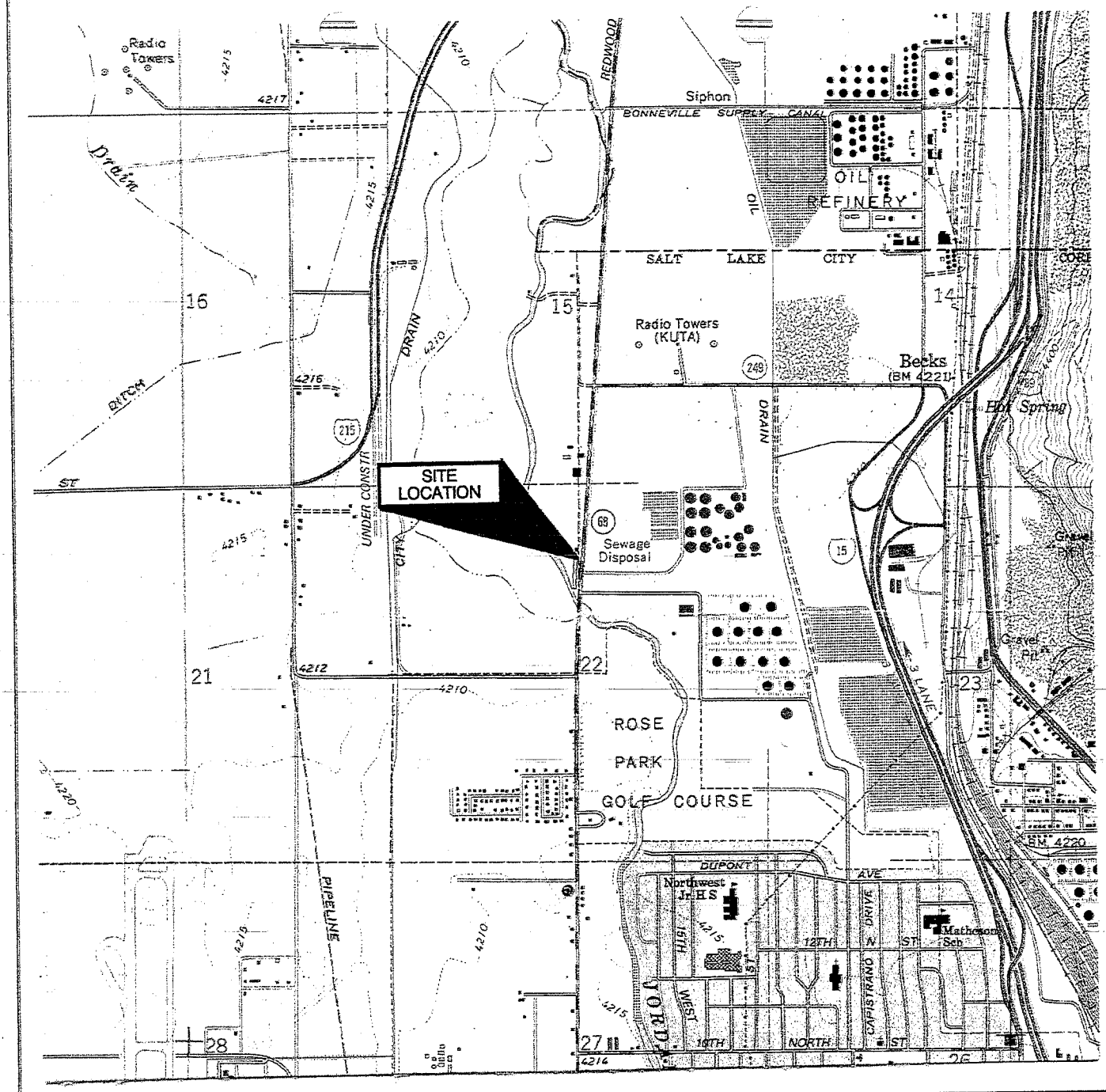


SECOR

LEGEND

DWN: CFS REVISED: 06/10/04

DWG: LEGEND_D



UTAH

QUADRANGLE LOCATION

North

0 1/2 1

SCALE (MILES)

REFERENCE: USGS 7.5 MINUTE QUADRANGLE: SALT LAKE CITY NORTH, UTAH; 1963 PHOTOREVISED 1969 & 1975

SECOR International Incorporated

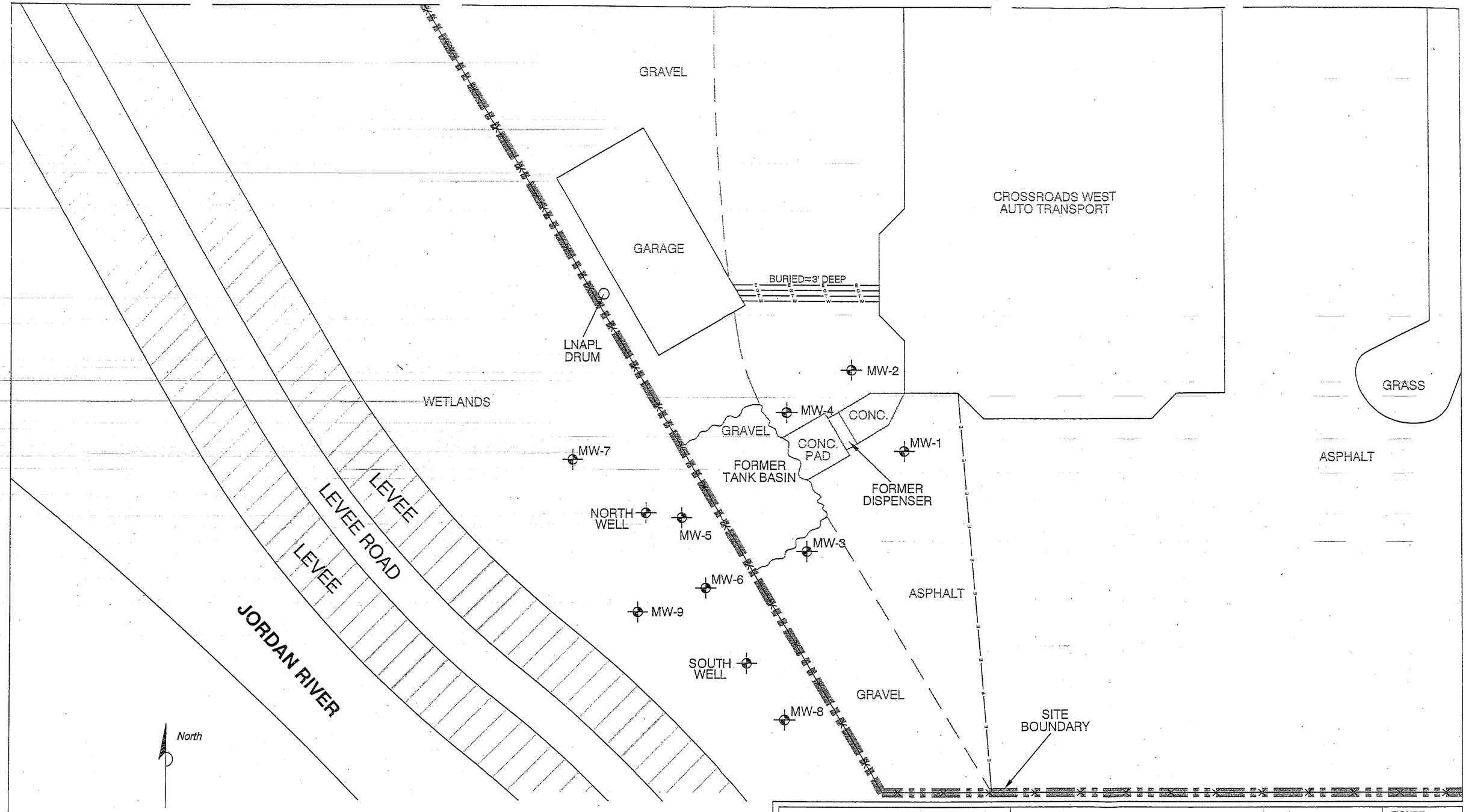
SITE LOCATION MAP

RICCI INVESTMENT COMPANY
2021 N. REDWOOD ROAD
SALT LAKE CITY, UTAH

FIGURE: **1**

JOB#: 26OT.5016100. APPR: DWN: CFS DATE: 09/30/03

DWG: S0501007



SECOR
International Incorporated

SITE PLAN

RICCI INVESTMENT COMPANY
2021 N. REDWOOD ROAD
SALT LAKE CITY, UTAH

FIGURE: **2**

JOB#: 26OT.5016300. APPR: DWN: CFS DATE: 07/21/04

DWG: S0501014.DWG

GRAVEL

GARAGE

CROSSROADS WEST
AUTO TRANSPORT

ARMY CORPS OF ENGINEERS/ LEVEE ROAD

LEVEE

LEVEE

JORDAN RIVER

WETLANDS

BURIED≈3' DEEP

DEPTH	4	14
N	1.3	<0.0026
GRO	25	<0.026
DRO	69	<20

DEPTH	4	6.5
N	**14**	1.6
GRO	**310**	22
DRO	**4,800**	**170**

DEPTH	5	10
N	**15**	0.57
GRO	**130**	6.5
DRO	**6,300**	31

DEPTH	5	8.5
N	**8.0**	**18**
GRO	**69**	**290**
DRO	**4,500**	**160**

DEPTH	7.5	13
N	**43**	**4.1**
GRO	**460**	**130**
DRO	**15,000**	<39

DEPTH	5	12.5
N	0.39	<0.0042
GRO	11	<0.042
DRO	**300**	**210**

DEPTH	7.5	11
N	**7.8**	<0.0049
GRO	**100**	**100**
DRO	**720**	**260**

DEPTH	4.5	9
N	0.089	<0.0030
GRO	0.23	<0.030
DRO	<20	<20

DEPTH	7.5	14
N	<0.0024	<0.0049
GRO	<0.024	<0.049
DRO	<20	<49

DEPTH	FEET(bgs)	FEET(bgs)
N	NAPHTHALENE 8260B	
GRO	TPH 8015	
DRO	TPH 8015/UT MODIFIED	

SS-8 SS-9 MW-2 SS-7 MW-4 SS-6 SS-5 MW-7 SS-1 MW-1 SS-4 SS-3 MW-3 MW-5 MW-6 SS-2 MW-9 MW-8

GRAVEL CONC CONC PAD FORMER TANK BASIN FORMER DISPENSER NORTH WELL SOUTH WELL ASPHALT GRASS ASPHALT GRAVEL

AREA OF SOIL CONCENTRATIONS EXCEEDING LEVEL 1 RCLs

SITE BOUNDARY

North

0 30 60

APPROX. SCALE (FEET)

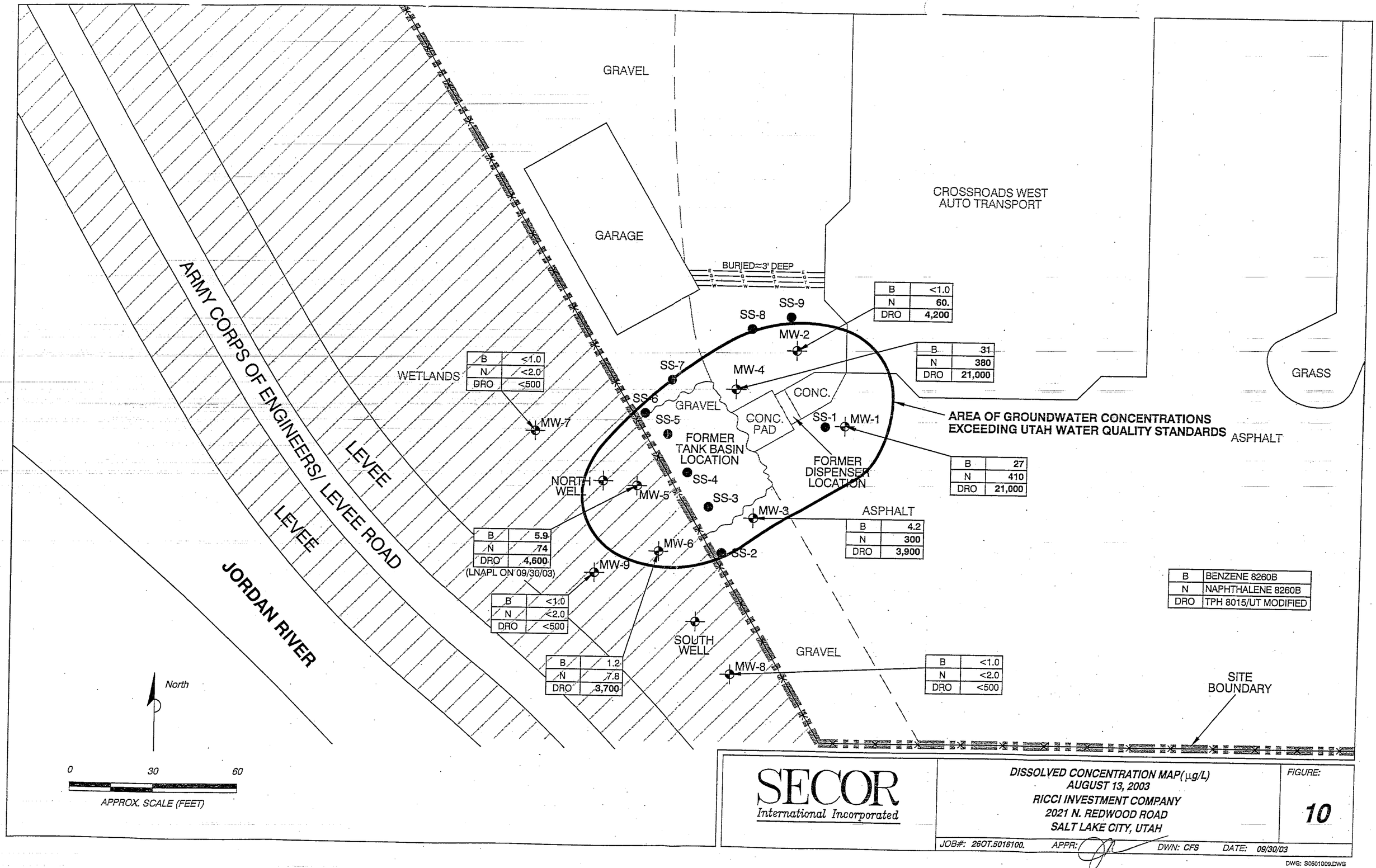
SECOR International Incorporated

SOIL ANALYTICAL RESULTS IN mg/kg
AUGUST 11 AND 12, 2003
RICCI INVESTMENT COMPANY
2021 N. REDWOOD ROAD
SALT LAKE CITY, UTAH

FIGURE: 8

JOB#: 26OT.5016100, APPR: DWN: CFS DATE: 09/30/03

DWG: S0501008.DWG



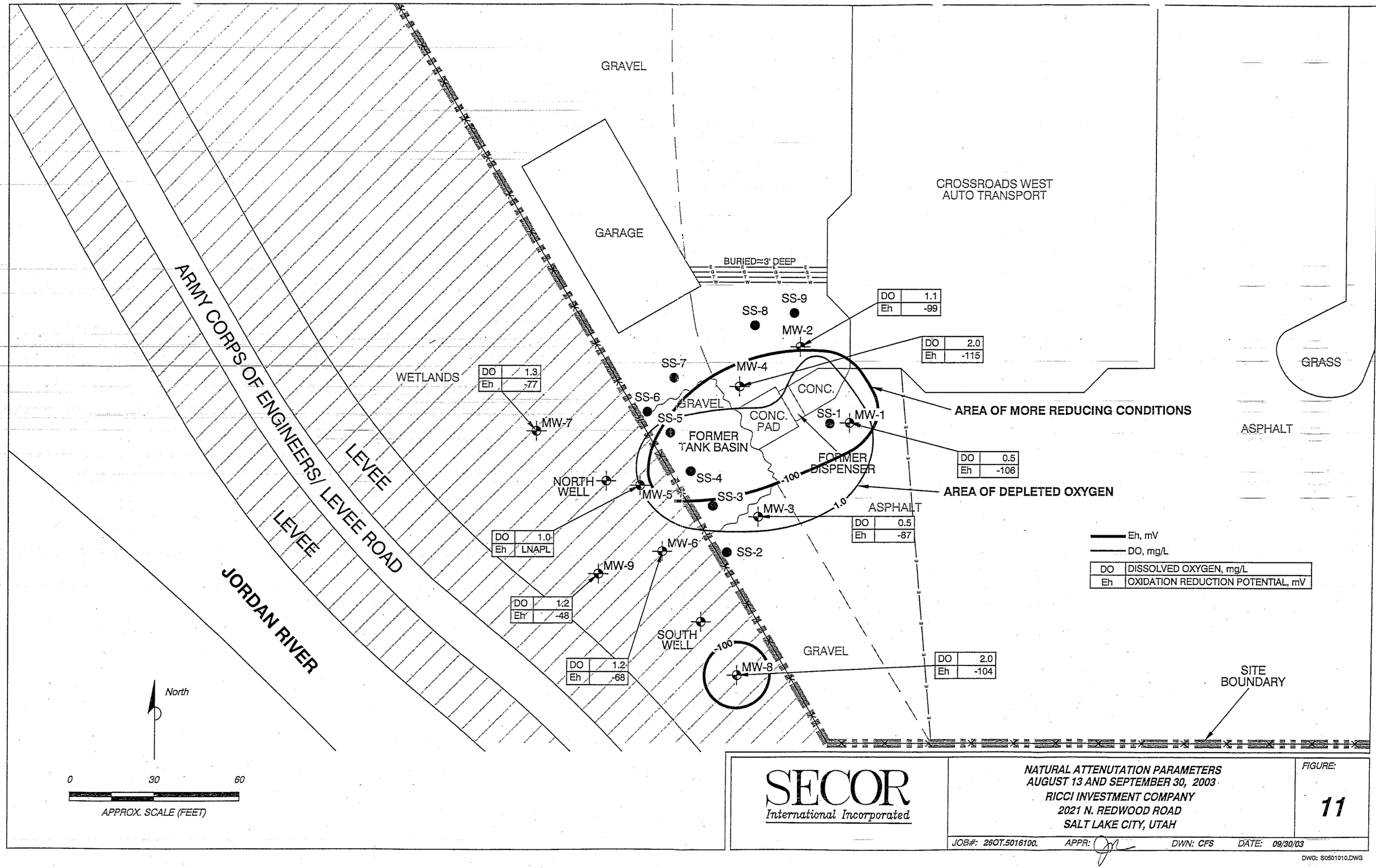
SECOR
International Incorporated

DISSOLVED CONCENTRATION MAP(µg/L)
AUGUST 13, 2003
RICCI INVESTMENT COMPANY
2021 N. REDWOOD ROAD
SALT LAKE CITY, UTAH

FIGURE: 10

JOB#: 26OT.5016100. APPR: DWN: CFS DATE: 09/30/03

DWG: S0501009.DWG



SECOR International Incorporated

NATURAL ATTENUTATION PARAMETERS
AUGUST 13 AND SEPTEMBER 30, 2003
RICCI INVESTMENT COMPANY
2021 N. REDWOOD ROAD
SALT LAKE CITY, UTAH

FIGURE: **11**

JOB#: 26OT.5016100. APPR: DWN: CFS DATE: 09/30/03

DWG: S0501010.DWG

July 21, 2009

State of Utah Department of Environmental Quality
Division of Environmental Response and Remediation
Underground Storage Tank Section
168 North 1950 West
Salt Lake City, Utah 84116

Re: **2008 Annual Groundwater Monitoring Report**
Ricci Investment Company, located at 2021 North Redwood Road, Salt Lake City, Utah
Facility Identification No. 4000796, Release Site EIIW

Attention: File

Melissa Turchi submits on behalf of UDEQ/DERR this letter as a summary of the 2008 semi-annual monitoring data collected on April 29, 2008 and October 23, 2008, from Ricci Investment Company, located at 2021 North Redwood Road, Salt Lake City, Utah. The groundwater samples were collected by Melissa Turchi, certified sampler #1343, and Hillary Mason, certified sampler #1016 on April 29, 2008. The groundwater samples were collected by Melissa Turchi, certified sampler #1343, and Morgan Atkinson, certified sampler #1228 on October 23, 2008.

FIELD PROCEDURES

All groundwater monitoring and sampling field procedures were conducted in accordance with the protocols established in the UST Rules, R311-205. DERR personnel on-site included the following; Melissa Turchi, Morgan Atkinson and Hillary Mason. Monitoring Wells MW-1, MW-3, MW-5, MW-6, MW-9, MW-10, MW-11 and MW-13 were sampled on April 29, 2008. Monitoring Wells MW-1, MW-3, MW-5, MW-6, MW-9, MW-10, MW-11 and MW-13 were sampled on October 23, 2008. The following tasks were completed at the site:

- Static water levels were measured from the top of the well casing (TOC) to groundwater using an electric water-level indicator.
- If necessary, wells were checked for the presence of LNAPL using an oil/water interface probe.
- Groundwater samples were collected using a bailer.
- Groundwater samples were directly transferred into vials and capped with Teflon-lined lids. Samples were immediately placed on ice and kept at 4 °C during transport to Utah-certified State Laboratory in Salt Lake City, Utah. All Chain of Custody protocols were followed during this sampling event.
- Samples were analyzed for diesel using appropriate analytical methods 8015B and 8260B.
- Chain-of-custody protocols were initiated in the field and continued to the laboratory and through the analysis of the samples.
- Purged groundwater generated during monitoring and sampling activities was disposed of on-site.

RESULTS

The attached Figure-1 is a site map for the facility. The attached Table 1 summarizes historical and current analytical results, groundwater elevation data, and LNAPL data. The groundwater elevations were calculated for the monitoring wells by the DERR project manager using survey data from previous investigation reports. Each depth to groundwater measurement was converted to a relative groundwater elevation using the relative top-of-casing elevation of the monitoring well provided previously in subsurface investigation reports prepared by SECOR International, Inc. The chain-of-custody forms, sample field logs and analytical laboratory reports are also attached.

- MW-2 and MW-4 contained LNAPL on April 29, 2008 and October 23, 2008.
- Petroleum contamination above ISLs was observed in MW-1, MW-10, and MW-11 on April 29, 2008. Petroleum contamination above ISLs was observed in MW-1, MW-10, MW-11, and MW-13 on October 23, 2008.
- MTBE was detected below ISLs in MW-11 on April 29, 2008.

CONCLUSIONS & RECOMMENDATIONS

It is recommended to perform free product abatement in MW-2 and MW-4. LNAPL was removed from MW-2, MW-4 and EW-1 using Enhanced Fluid Recovery on December 3, 2008. Total of 75 gallons of LNAPL and groundwater were removed and sent to VJ Environmental for disposal. More analytical and groundwater elevation data is needed to better document any type of analytical or groundwater flow direction trends at the site. Additional semi-annual groundwater monitoring and sampling is recommended. The next round of groundwater monitoring is scheduled for April 2009.

Sincerely,

Melissa Turchi
DERR Project Manager

Attachments

Groundwater Monitoring and Analytical Results
Ricci Investment Company
2021 North Redwood Road, Salt Lake City, Utah

Location No.	Date	Groundwater Concentrations (µg/L)								Depth to Groundwater (feet)	LNAPL Thickness (feet)	Relative Groundwater Elevation (feet)
		MTBE	Benzene	Toluene	Ethyl Benzene	Total Xylenes	Naphthalene	TPH-GRO	TPH-DRO			
MW-1	08/13/03	<2.0	27	<2.0	2.2	<2.0	410.0	730	21,000	5.53	0.00	91.42
	04/21/05	<2.0	8.9	<2.0	<2.0	<2.0	250.0	2,700	360,000	2.49	0.00	94.46
	04/29/05	<1.0	8.0	<1.0	1.3	<1.0	182.0	2,400	11,400	2.32	NM	94.63
	10/21/05	<1.0	7.0	<1.0	1.1	1.5	23.3	6,000	23,400	5.25	0.00	91.70
	04/20/06	<1	6.3	<1.0	1.3	<1.0	60.5	1,300	6,500	1.7	0.00	95.25
	12/01/06	<1	3.6	<1.0	0.7	0.8	8.3	1,900	15,900	4.45	0.00	92.50
	04/20/07	<1	1.0	<1.0	<1.0	<1.0	0.7	1,300	700	3.7	0.00	93.25
	11/02/07	<1	4.0	<1.0	<1.0	0.6	11.6	11,400	118,000	4.45	0.00	92.50
	04/29/08	<0.123	4.4	0.23	0.3	0.81	6.6	1,000	9,000	3.48	0.00	93.47
	10/23/08	<10	<10	<10	<10	<10	<10	2,000	21,000	5.47	0.00	91.48
MW-2	08/13/03	<2.0	<1.0	<2.0	<2.0	2.3	60	380	4,200	6.18	0.00	91.09
	04/21/05	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	2.87	0.07	94.40
	04/29/05	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	NM	NM	NM
	10/21/05	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	6.00	0.50	91.27
	04/20/06	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	2.35	0.35	94.92
	12/1/2006	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	5.6	0.69	91.67
	04/20/07	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	4.35	0.05	92.92
	11/02/07	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	5.52	0.1	91.75
	04/29/08	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	3.60	0.15	93.67
	10/23/08	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	5.45	0.20	91.82
MW-3	08/13/03	<2.0	4.2	<2.0	<2.0	<2.0	300	1,000	3,900	5.51	0.00	91.27
	04/21/05	<2.0	2.5	<2.0	<2.0	<2.0	68	250	670	1.72	0.00	95.06
	04/29/05	<1.0	2.3	<1.0	<1.0	<1.0	57.7	<1000	1,000	1.68	NM	95.10
	10/21/05	<1.0	<1.0	<1.0	<1.0	<1.0	33.4	<1000	<1000	4.83	0.00	91.95
	04/20/06	<1.0	<1.0	<1.0	<1.0	<1.0	2.7	<1000	<1000	1.38	0.00	95.40
	12/1/2006	<1.0	<1.0	<1.0	<1.0	<1.0	39.8	<1000	1,300	4.36	0.00	92.42
	04/20/07	<1.0	<1.0	<1.0	<1.0	<1.0	32.8	<1000	1,200	3.60	0.00	93.18
	04/29/08	<0.123	<0.0949	<0.0854	<0.196	<0.357	<0.129	<1000	<1000	3.08	0.00	93.7
	10/23/08	<10	<10	<10	<10	<10	9.2	800	700	5.15	0.00	91.63
MW-4	08/13/03	<2.0	31	<2.0	6.8	<2.0	380	1,400	21,000	5.84	sheen	91.12
	04/21/05	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	3.72	1.56	93.24
	04/29/05	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	NM	NM	NM
	10/21/05	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	8.75	4.01	88.21
	04/20/06	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	1.35	0.10	95.61
	12/01/06	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	5.5	1.00	91.46
	04/20/07	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	4.05	0.25	92.91
	11/02/07	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	5.35	0.30	91.61
	04/29/08	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	2.98	3.21	93.98
	10/23/08	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	8.31	3.33	88.65

Groundwater Monitoring and Analytical Results
Ricci Investment Company
2021 North Redwood Road, Salt Lake City, Utah

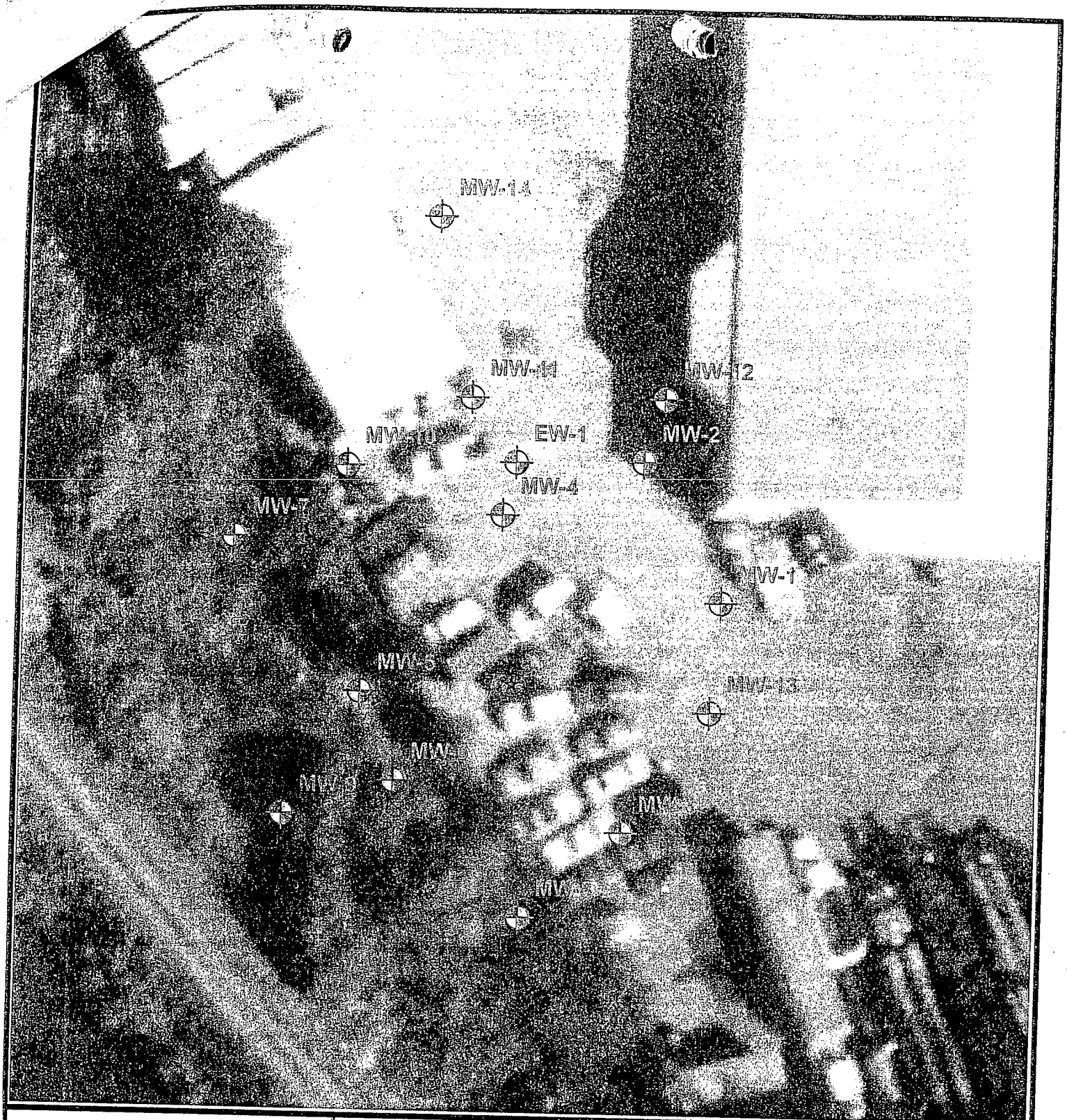
Location No.	Date	Groundwater Concentrations (µg/L)								Depth to Groundwater (feet)	LNAPL Thickness (feet)	Relative Groundwater Elevation (feet)
		MTBE	Benzene	Toluene	Ethyl Benzene	Total Xylenes	Naphthalene	TPH-GRO	TPH-DRO			
MW-5	08/13/03	<2.0	5.9	<2.0	<2.0	<2.0	74	440	4,600	8.96	0.00	91.04
	04/21/05	<2.0	1.3	<2.0	<2.0	<2.0	9.6	90	23,000	5.39	0.00	94.61
	04/29/05	<1.0	<1.0	<1.0	<1.0	<1.0	4.2	<1000	<1000	5.30	NM	94.70
	10/21/05	<1.0	<1.0	<1.0	<1.0	<1.0	1.5	<1000	<1000	8.46	0.00	91.54
	04/20/06	<1.0	<1.0	<1.0	<1.0	<1.0	1.3	<1000	1,800	4.58	0.00	95.42
	12/1/2006	<1.0	<1.0	<1.0	<1.0	<1.0	1.5	<1000	2,000	7.89	0.00	92.11
	04/20/07	<1.0	0.9	<1.0	<1.0	<1.0	1.0	<1000	<1000	7.1	0.00	92.9
	11/02/07	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1000	1,400	8.07	0.00	91.93
	04/29/08	0.35	<0.0949	<0.0854	<0.196	<0.227	<0.129	<1000	<1000	6.70	0.00	93.3
	10/23/08	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1000	<1000	8.87	0.00	91.13
MW-6	08/13/03	<2.0	1.2	<2.0	<2.0	<2.0	7.8	46	3,700	8.60	0.00	91.01
	04/21/05	<2.0	<1.0	<2.0	<2.0	<2.0	<2.0	<20	4,600	4.80	0.00	94.81
	04/29/05	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1000	<1000	4.79	NM	94.82
	10/21/05	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1000	<1000	8.05	0.00	91.56
	04/20/06	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1000	1,100	4.32	0.00	95.29
	12/1/2006	<1.0	<1.0	<1.0	<1.0	<1.0	0.6	<1000	1,000	7.49	0.00	92.12
	04/20/07	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1000	<1000	6.85	0.00	92.76
	11/02/07	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1000	<1000	8.53	0.00	91.08
	04/29/08	<0.123	<0.0949	<0.0854	<0.196	<0.227	<0.129	<1000	<1000	6.80	0.00	92.81
	10/23/08	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1000	<1000	8.40	0.00	91.21
MW-7	08/13/03	<2.0	<1.0	<2.0	<2.0	<2.0	<2.0	<20.	<500	8.04	0.00	91.01
	04/21/05	<2.0	<1.0	<2.0	<2.0	<2.0	<2.0	<20.	<500	4.51	0.00	94.54
	04/29/05	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1000	<1000	4.35	NM	94.70
	10/21/05	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1000	<1000	7.5	0.00	91.55
	04/20/06	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1000	<1000	3.42	0.00	95.63
MW-8	08/13/03	<2.0	<1.0	<2.0	<2.0	<2.0	<2.0	<20.	<500	8.61	0.00	90.96
	04/21/05	<2.0	<1.0	<2.0	<2.0	<2.0	<2.0	<20.	<500	4.55	0.00	95.02
	04/29/05	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1000	<1000	4.00	NM	95.57
	10/21/05	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1000	<1000	7.47	0.00	92.10
	04/20/06	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1000	<1000	4.35	0.00	95.22
MW-9	08/13/03	<2.0	<1.0	<2.0	<2.0	<2.0	<2.0	<20.	<500	8.00	0.00	91.01
	04/21/05	<2.0	<1.0	<2.0	<2.0	<2.0	<2.0	<20.	5,000	4.83	0.00	94.18
	4/29/2005	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1,000	<1000	4.69	NM	94.32
	10/21/05	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	2,000	<1000	7.38	0.00	91.63
	04/20/06	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1,000	1,400	4.1	0.00	94.91
	04/20/07	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1,000	<1000	6.4	0.00	92.61
	11/02/07	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1000	1,100	7.52	0.00	91.49
	04/29/08	<0.123	<0.0949	<0.0854	<0.196	<0.227	<0.129	<1000	<1000	5.98	0.00	93.03
	10/23/08	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1000	<1000	7.81	0.00	91.20

Groundwater Monitoring and Analytical Results
Ricci Investment Company
2021 North Redwood Road, Salt Lake City, Utah

Location No.	Date	Groundwater Concentrations (µg/L)								Depth to Groundwater (feet)	LNAPL Thickness (feet)	Relative Groundwater Elevation (feet)
		MTBE	Benzene	Toluene	Ethyl Benzene	Total Xylenes	Naphthalene	TPH-GRO	TPH-DRO			
MW-10	04/21/05	<2.0	33	50	25	19	350	1,400	2,800	1.81	0.00	95.00
	04/21/05	<2.0	52	78	42	25	420	2,400	2,500	1.81	0.00	95.00
	10/21/05	<1.0	31.7	57.4	28.9	20.6	385	3,100	10,100	4.65	0.00	92.16
	04/20/06	<1.0	32.3	41.5	35.8	12.5	367	3,400	13,100	1.10	0.00	95.71
	12/1/2006	<1.0	18.5	21.8	21.4	12	246 E	2,200	8,800	4.00	0.00	92.81
	04/20/07	<1.0	6.4	5	<1.0	4.6	<1.0	1,300	6,100	3.42	0.00	93.39
	11/02/07	<1.0	11	10.5	14	9.9	266	2,700	9,400	4.3	0.00	92.51
	04/29/08	<0.123	7.7	8.3	15	8.7	210	1,000	2,000	3.06	0.00	93.75
	10/23/08	<10	6.6	7.8	16	<10	298	2,700	17,000	4.8	0.00	91.99
MW-11	04/21/05	9.9	4.7	<2.0	2.9	<2.0	310	1,200	3,400	1.99	0.00	94.76
	10/21/05	<1.0	11.8	<1.0	4.5	<1.0	367	2,000	7,000	4.74	0.00	92.01
	04/20/06	<1.0	<1.0	<1.0	<1.0	<1.0	22.6	<1,000	2,300	0.6	0.00	96.15
	12/01/06	21.4	2.9	<1.0	1.6	0.6	234	2,200	19,100	3.9	0.00	92.85
	04/20/07	18.6	2.8	<1.0	<1.0	<1.0	150	<1,000	5,100	3.07	0.00	93.68
	11/02/07	0.7	4.7	<1.0	<1.0	<1.0	303	1,500	8,300	4.13	0.00	92.62
	04/29/08	4.1	1.6	0.4	0.9	1.6	140	1,000	5,000	2.75	0.00	94.00
	10/23/08	<10	<10	<10	<10	<10	259	2,600	20,000	4.56	0.00	92.19
MW-12	04/21/05	<2.0	5.1	<2.0	<2.0	<2.0	<2.0	<20.	<500	2.43	0.00	94.83
	10/21/05	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1000	<1000	5.25	0.00	92.01
	04/20/06	<1.0	1.3	<1.0	<1.0	<1.0	<1.0	<1000	<1000	1.50	0.00	95.76
	12/1/2006	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1000	<1000	4.56	0.00	92.70
	11/2/2007	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1000	<1000	4.75	0.00	92.51
MW-13	04/21/05	<2.0	4.6	<2.0	<2.0	<2.0	30	290	840	1.93	0.00	95.04
	10/21/05	<1.0	<1.0	<1.0	<1.0	<1.0	5.3	<1000	4,300	5.00	0.00	91.97
	04/20/06	<1.0	<1.0	<1.0	<1.0	<1.0	21.3	<1000	1,500	1.20	0.00	95.77
	12/1/2006	<1.0	<1.0	<1.0	<1.0	<1.0	8.2	<1000	2,200	3.5	0.00	93.47
	04/20/07	<1.0	<1.0	<1.0	<1.0	<1.0	5.9	<1000	<1000	3.4	0.00	93.57
	04/20/07	<1.0	<1.0	<1.0	<1.0	<1.0	9.6	<1000	<1000	3.4	0.00	93.57
	12/1/2007	<1.0	<1.0	<1.0	<1.0	<1.0	2.7	<1000	2,700	4.1	0.00	92.87
	04/29/08	<0.123	<0.0949	<0.0854	<0.196	<0.227	1.3	<1000	<1000	3.08	0.00	93.89
	10/23/08	<10	<10	<10	<10	<10	<10	1,100	14,000	4.93	0.00	92.04
MW-14	04/21/05	<2.0	4.1	<2.0	<2.0	<2.0	<2.0	<20	<500	1.50	0.00	95.13
	12/01/06	<1.0	1.5	<1.0	<1.0	<1.0	0.9	<1000	<1000	3.80	0.00	92.83
RBCA ISLs		200	5	1,000	700	10,000	700	1,000	1,000			
RBCA Tier 1 Screening Levels		200	300	3,000	4,000	10,000	700	10,000	10,000			

Explanation of Abbreviations

MTBE = methyl tertiary butyl ether by EPA Method 8260B
µg/L = micrograms per liter
TPH-GRO = gasoline-range total petroleum hydrocarbons by EPA Method 8260B
TPH-DRO = diesel-range total petroleum hydrocarbons by EPA Method 8015B/UT Modified
< = analyte not detected above the practical quantitation limit
NM = not measured
RBCA = Risk-Based Corrective Action Screening Level
NS = not sampled
E = estimated
LNAPL = light non-aqueous phase liquid



Legend

MWs

0 7.5 15 22.5 30
Feet
1 inch equals 30 feet

N
W E
S

Utah Department of
Environmental Quality
Division of Environmental
Response and Remediation

FIGURE #1
Ricci Investment Company
Map Description

Facility 4000796, Release IIW
2021 North Redwood Road
Salt Lake City, Utah

by: Melissa Turchi Date: 2/1/08

Stantec Consulting Inc.
3995 South 700 East Suite 300
Salt Lake City UT 84107
Tel: (801) 261-0090
Fax: (801) 266-1671

Stantec

August 17, 2009

Ms. Melissa Turchi
Utah Department of Environmental Quality
Division of Environmental Response and Remediation
168 North 1950 West, 1st Floor
Salt Lake City, Utah 84114

RE: Proposed Work Plan for Remediation Planning
Ricci Investment Company
2021 North Redwood Road, Salt Lake City, Utah
Facility ID #: 4000796
UST Release Site IIW

Dear Ms. Turchi:

Stantec Consulting Inc. (Stantec) presents the following proposed Work Plan for Ricci Investment Company (Ricci) located at 2021 North Redwood Road, Salt Lake City, Utah (Figure 1).

The purpose of this proposed Work Plan is to present an opinion of probable cost to the Utah Division of Environmental Response and Remediation (DERR) for Remediation Planning. The Remediation Planning includes execution of a Corrective Action Plan (CAP) meeting (Task 1), CAP Letter (Task 2), Public Notification (Task 3), and development of technical specifications, engineers cost estimate and bid schedule (Task 4).

BACKGROUND

The site was investigated in 1994 through 1996 following discovery of a diesel fuel release on November 12, 1993. According to TRTech, Inc. (TRTech) the release may have also resulted from waste oil or transformer oil; however, neither polychlorinated (PCBs) nor chlorinated hydrocarbons were confirmed at the site. Soil and groundwater contamination was discovered during the removal of a single, 17-year-old 12,000-gallon underground storage tank (UST). A Closure Notice was submitted to the UDEQ-DERR on September 30, 1994. The release was attributed to the leaking diesel fuel UST, and possibly the waste oil UST. A sheen of light non-aqueous phase liquid (LNAPL) and petroleum odors were noted. The release volume was estimated to be as much as several thousand gallons of diesel fuel.

LNAPL was removed from the excavation using a vacuum truck. An up gradient sump and monitoring pits were installed at the facility and on the adjacent Jordan River Parkway to facilitate additional LNAPL removal. Reportedly, over 3,500 gallons of LNAPL were removed via skimming. In addition, TRTech conducted air sparging of the contaminated groundwater. Emergency remedial actions were conducted until mid-1996.

Early pumping tests showed that the soils exhibit low permeability. Contaminant migration may be affected by the presence of a septic leach field present north of the release area, which may be altering the natural hydraulic gradient. Petroleum contamination was not observed in the nearby Jordan River, located approximately 60 feet to the southwest of the release.

No typical monitoring wells were initially installed; rather a track hoe was used to dig test pits in the wetlands area. The test pit "wells" were flooded at least once since installation. More commonly, groundwater has been observed at 4 to 5 feet below ground surface (bgs) in the test pit "wells."

A risk assessment dated January 19, 1996 prepared by TRTech indicated that "the source of contamination was eliminated" and that the remaining contamination (soil averaging 12,000 milligrams per kilogram) "posed no demonstrated risk to human health or the environment." Site-Specific Tier 2 Screening Levels were proposed with a recommendation for no further action at the site. In response, the UDEQ-DERR requested additional investigative work on August 25, 1999, January 13, 2000, and April 28, 2000. Subsequent work included monitoring water levels and sampling the groundwater from the test pit "wells."

SECOR now part of Stantec conducted a subsurface investigation in August and September 2003 which included installation and sampling of wells on the site, and the adjacent wetlands to the southwest. Results suggested that the soil contamination extends from the source area downgradient into the wetlands area. Groundwater contamination extends to an area similar to the soil contamination in a downgradient direction toward the Jordan River. However, the hydrogeologic connection between the site and the Jordan River is unclear.

LNAPL has been observed as thick as 4 feet in MW-4 in the source area during periods of low groundwater elevations. SECOR (Stantec) conducted a series of LNAPL bail down tests at MW-2 and MW-4 in 2004. The well recovery was slow. Additional wells were recommended for further delineation of the LNAPL plume and removal of the LNAPL.

In April 2005 SECOR (Stantec) installed four groundwater monitoring wells (MW-10 through MW-13) to further delineate the magnitude and extent of petroleum impact. Subsequently, one extraction well (EW-1) was installed north of the former UST basin in an effort to extract residual free product.

Stantec has followed up on the site with several well observations and enhanced fluids recovery efforts. These events have been conducted over the past three years. During a recent event, on December 3, 2008 approximately 75 gallons of fluid were recovered from MW-2 and MW-4.

SCOPE OF WORK

Task 1 – Corrective Action Plan Meeting

Stantec proposes a Corrective Action Plan (CAP) meeting between the site property owner, Stantec and DERR personnel. The meeting will be held to address the most viable option of site remediation including the reduction and management of potential future public exposure to the confirmed release.

Task 2 – Corrective Action Plan Letter

Stantec will prepare a CAP Letter describing the site remediation strategy. The CAP Letter will provide detail of the corrected action technology and the rational for the selection. The CAP Letter will be submitted for approval from the DERR.

A draft CAP Letter will be provided to the DERR for review, comment, and subsequent approval prior to execution of the Public Notification process presented below.

Task 3 – Public Notification

Following completion of Task 2 and the DERR approval of the CAP Letter, Stantec proposes to meet the Public Notification requirements using the following process:

- Hand-deliver a copy of the CAP Letter to businesses and surrounding the Ricci site. It is Stantec's desire to execute the Public Notification in this way as to create the opportunity for direct face-to-face communication with the public surrounding the site.

- Document the delivery of the CAP Letter by completing a Public Notification Log, which would include the name and address of individuals or businesses contacted, confirmation of delivery of a copy of the CAP Letter, and what concerns if any are brought up at that time. Stantec would attempt to initially address any concerns. The DERR contact information would be provided and questions that could not be addressed by Stantec would be forwarded/directed to the DERR.

- Stantec would attempt the CAP Letter hand delivery to businesses adjacent to the site and to the east, across Redwood Road. The area outlined above can be viewed on Figure 1.

In the event a person cannot be located at any of the proposed structures, a copy of the CAP Letter with a Stantec business card will be attached to the front entrance. Stantec proposes to visit the businesses during normal business hours.

Task 4 – Technical Specifications, Bid Schedule and Engineers Cost Estimate Development

Under Task 4, Stantec will prepare the technical specifications, bid schedule and an engineer's opinion of probable cost. The proposed technical specifications, bid schedule and an opinion of probable cost will outline the proposed timeline and technical specifications for project execution and costs for:

- Over excavate impacted soil.

- Coordinate and schedule work with underground utility companies and the site business.

- Manage impacted soil and wastes for proper disposal.

- Conduct confirmation soil and groundwater sampling.

- Backfilling, compact, and replace surface pavement and monitoring wells.

- Prepare a report documenting the remediation activities and present the results of confirmation soil and groundwater sampling.

Stantec will also include the necessary permitting requirements in the bid letter to be addressed by the winning contractor.

PROPOSED BUDGET

The proposed budget by Task is presented in Table 1. The 2008 Stantec PST Fund approved rates were used in the budget preparation. The costs are based on the scope of work described above. Anything outside the scope will not be completed without prior approval from the DERR.

The opinion of probable costs presented in Table 1 include all Stantec professional labor, indirect costs, travel, all coordination efforts, and direct expenses required to complete the base scope of work. Variations in the site description, scope of work, or schedule defined herein may require modification of the costs, project schedule and/or report contents. Should these conditions be modified during the implementation of this project, no changes in the scope of work defined herein or changes in excess of the authorized fee will be incurred without prior authorization from the DERR.

PROPOSED SCHEDULE

Stantec is prepared to proceed with implementation of the tasks outlined above after receiving written authorization from Ricci and the DERR.

Please contact David Friz or Scott Wheeler at (801) 801-261-0090 if you have questions or need additional information about this proposed Work Plan.

Sincerely,

STANTEC CONSULTING INC.

David R. Friz

for Scott Wheeler, PG
Project Geologist
Utah Certified Sampler

Reviewed by:

David R. Friz

David Friz, PG
Senior Project Geologist
Certified UST Consultant

cc: 1 – Addressee, regular mail

Attachments: 1 - Figure 1, Site Map
2 - Proposed Budget Spreadsheet

FIGURE

TABLE

TABLE 1

PROPOSAL PRICE $ 8,486.00

Proposed Work Planfor Remediation Planning

Ricci Investment Company

2021 North Redwood Road, Salt Lake City, Utah

Stantec 2008 PST FUND APPROVED RATES WERE USED TO DEVELOP THIS COST ESTIMATE

Revised 08/17/09

Task 1 - Corrective Action Plan Meeting

Labor

	Staff	Quantity	Hourly Rate	Subtotal	Subtotal	Totals
101	Senior Geologist (PG) - Preparation, Client/DERR Meeting	4	$ 132.00	$ 528.00		
103	Project Geologist - DERR Meeting	4	$ 95.00	$ 380.00		
		Labor Subtotal		$908.00		

Direct Costs

Equipment/Materials/Supplies	Quantity	Rate	Units	Subtotal
Mileage (round trip)	30	$ 0.55	mile	$ 16.50
	Direct Costs Subtotal			$ 16.50

Task 2 Subtotal: $924.50

Task 2 - Corrective Action Plan Letter

Labor

	Staff	Quantity	Hourly Rate	Subtotal	Subtotal	Totals
101	Senior Geologist (PG) - Letter review, Client/DERR Communication	2	$ 132.00	$ 264.00		
103	Project Geologist - Letter Preparation and Review	5	$ 95.00	$ 475.00		
111	Drafter - Letter Preparation	1	$ 57.00	$ 57.00		
123	Administrator - Office Support, Letter Preparation	2	$ 53.00	$ 106.00		
		Labor Subtotal		$902.00		

Task 3 Subtotal: $902.00

Task 3 - Public Notification

Labor

	Staff	Quantity	Hourly Rate	Subtotal	Subtotal	Totals
101	Senior Geologist (PG) - Field Support, Client/DERR Communication, Project Management	4	$ 132.00	$ 528.00		
103	Project Geologist - Public Notification, Preperation Field Visits to Area Businesses and Documentation	10	$ 95.00	$ 950.00		
		Labor Subtotal		$1,478.00		

Direct Costs

Equipment/Materials/Supplies	Quantity	Rate	Units	Subtotal
Mileage - one round trip	50	$ 0.55	estimate	$ 27.50
	Direct Cost Subtotal			$ 27.50

Task 4 Subtotal: $1,505.50

Task 4 - Technical Specifications, Engineers Cost Estimate and Bid Schedule

Labor

	Staff	Quantity	Hourly Rate	Subtotal	Subtotal	Totals
101	Senior Geologist (PG) - Document Preparation, Scoping, Review, Client/DERR Communication, Project Management	6	$ 132.00	$ 792.00		
103	Project Geologist - Scoping, Bid Request and Technical Specification Preperation	40	$ 95.00	$ 3,800.00		
111	Drafter - Bid Specifications, Work Plan Drawings	8	$ 57.00	$ 456.00		
123	Administrator - Work Plan Preparation	2	$ 53.00	$ 106.00		
		Labor Subtotal		$5,154.00		

Task 5 Subtotal: $5,154.00

PROPOSED WORK PLAN MJH-03 BUDGET: $8,486.00

Melissa Turchi - RE: Work Assignment IIW-12

From: "Friz, David" <david.friz@stantec.com>
To: "Melissa Turchi" <mturchi@utah.gov>
Date: 8/18/2009 3:28 PM
Subject: RE: Work Assignment IIW-12
CC: "Wheeler, Scott" <Scott.Wheeler@stantec.com>
Attachments: map_site_2009_12.pdf

Hi Melissa, Figure us attached. Please contact Scott Wheeler or me with questions or comments. Thanks, Dave Friz

David R. Friz, P.G.
Senior Project Manager
Stantec
3995 South 700 East Suite 300
Salt Lake City UT 84107
Ph: (801) 261-0090
Fx: (801) 266-1671
david.friz@stantec.com
stantec.com

From: Friz, David
Sent: Monday, August 17, 2009 5:09 PM
To: 'Melissa Turchi'
Cc: Wheeler, Scott
Subject: Work Assignment IIW-12

Hi Melissa, Stantec's work plan for the WA IIW-12 is attached. We still need to finish up the figure, which should be sent tomorrow. Please contact Scott Wheeler or me with questions or comments. Thanks, Dave Friz

David R. Friz, P.G.
Senior Project Manager
Stantec
3995 South 700 East Suite 300
Salt Lake City UT 84107
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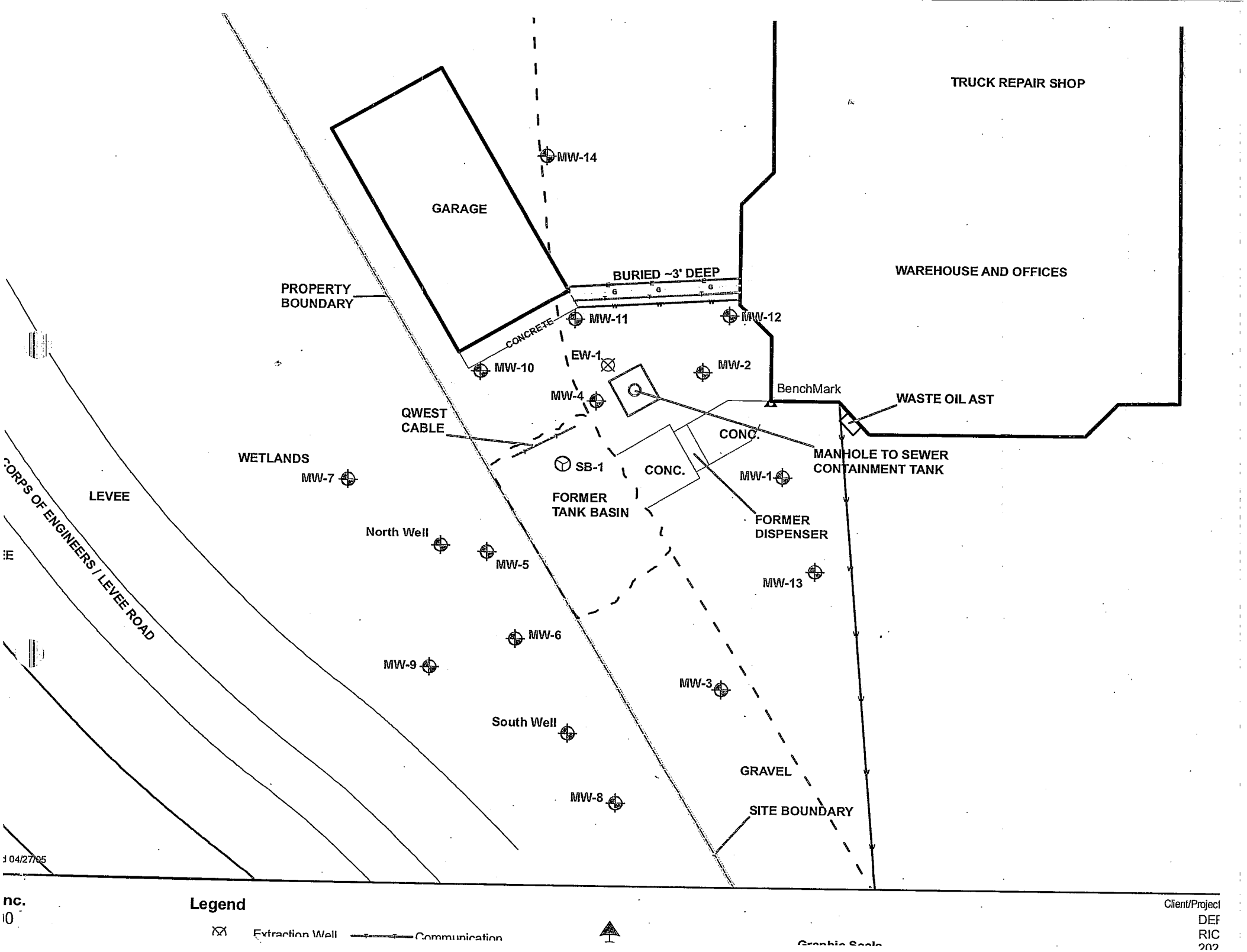
david.friz@stantec.com
stantec.com


TRUCK REPAIR SHOP
MW-14
GARAGE
BURIED ~3' DEEP
WAREHOUSE AND OFFICES
PROPERTY BOUNDARY
CONCRETE
MW-11
MW-12
MW-10
EW-1
MW-2
MW-4
BenchMark
WASTE OIL AST
QWEST CABLE
CONC.
MANHOLE TO SEWER CONTAINMENT TANK
WETLANDS
SB-1
CONC.
MW-7
MW-1
LEVEE
FORMER TANK BASIN
FORMER DISPENSER
North Well
MW-5
MW-13
CORPS OF ENGINEERS / LEVEE ROAD
MW-6
MW-9
MW-3
South Well
GRAVEL
MW-8
SITE BOUNDARY
04/27/05
Legend
Extraction Well
Communication

Utah Department of Environmental Quality
UST Release Detection Inspection

Facility ID 4001371

Page / of /

☐ DERR Use Only

Ownership of Tanks	Location of Tanks
Owner Name SALT LAKE COUNTY	Location Name CITY DRAIN PUMPING STATION
Address 7125 S 600 W	Address 2200 N ROSE PARK LN
City MIDVALE State UT Zip 84047	City SALT LAKE CITY State UT Zip 84116
Contact JOANA FOWLES Phone (801) 562-6446	Contact JACKIE STEPHENSEN Phone

Complete for each tank. If the facility has more than four tanks, complete the information for additional tanks on a separate form.

Number of tanks at the facility:	1										
Tank Installation Date	3/18/1987										
Capacity of Tank (in gallons)	10000										
Tank siphoned or compartmented											
Substance Stored	Diesel										
Tank is in use	Single (Yes) No		Yes No		Yes No		Yes No		Yes No		Yes No
Date last used / depth of product											
Current year tank tags are in place	(Yes) No		Yes No		Yes No		Yes No		Yes No		Yes No
Material of construction of tanks	Fiberglass Reinforced Plastic										
Material of construction of piping	Fiberglass Reinforced Plastic										
Piping type	Safe Suction										
Type of Spill Prevention device	bucket										
Spill bucket is clean, intact, etc.	Yes No		Yes No		Yes No		Yes No		Yes No		Yes No
Type of Overfill Prevention device	Shutoff										

Overfill alarm (audible or visible) is properly located so delivery driver can hear or see it, and is clearly identified.	Yes No (N/A)
Containment sumps are sealed, free from water, product, etc.	Yes No (N/A)
The results of the last two cathodic protection tests are available (within six months of installation and every three years thereafter).	Yes No (N/A)
Cathodic Protection Testing. Date of last test: / Tester / UT	
Impressed Current System is checked for proper operation at least every 60 days and the results of the last three checks are available. Yes No (N/A)	Dates of last three checks:

Indicate the corrosion protection method used for each UST. Number each dispenser. Give results for the most recent cathodic protection test.

		Corr. Protect. Method	Sacrificial Anode	Impressed Current: Instant Off	Impressed Current: Depolarized
Tanks	1	NM			
	2				
	3				
	4				
	5				
	6				
Lines	1	NM			
	2				
	3				
	4				
	5				
	6				
Tank Flex	1	Sump			
	2				
	3				
	4				
	5				
	6				
Disp. Flex					

Site Drawing North

SCANNED

DERR - 2008 - 002888

Comments

owner did not show

FR Method: PST Method OK? (Y) N by: RB

I Rich Saukkola inspected this facility on 6/19/08

Signature: [signature] TI 284

O/O Signature:

Distribution: White- DERR, Yellow- Inspector, Pink- Facility/Owner

Ldcheck0807.doc

REPORT OF SAMPLING ACTIVITIES
PORTLAND CEMENT SITES 1,4, AND 5
SALT LAKE CITY, UTAH
TDD #T08-9304-0012
PAN EUT0012SAA

PREPARED FOR:

U.S. Environmental Protection Agency
Region VIII
Waste Management Division
Karen Mooar, On-Scene Coordinator
Mike McCeney, Remedial Project Manager

PREPARED BY:

Charles Baker
Ecology and Environment, Inc.
Technical Assistance Team

DATE SUBMITTED: May 25, 1993

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3.0	SAMPLING PROCEDURES	2
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APPENDIX 1 Analytical Results
APPENDIX 2 Site Photographs
APPENDIX 3 Properties of CKD extract

REPORT OF SAMPLING ACTIVITIES
PORTLAND CEMENT SITES 1,4, AND 5
SALT LAKE CITY, UTAH
TDD #T08-9304-0012
PAN EUT0012SAA

1.0 INTRODUCTION

As directed under the U.S. Environmental Protection Agency's (EPA) Technical Directive Document T08-9304-0012, the Ecology and Environment Inc., Technical Assistance Team (TAT) conducted sampling of waste cement kiln dust (CKD), soil, and surface water at the Portland Cement Sites 1, 4, and 5 located near Salt Lake City, in North Davis and Salt Lake Counties, Utah. The sampling plan for the site was submitted to EPA on May 6, 1993. Sampling activities commenced on May 10, 1993 and were completed on May 11, 1993. The sampling team returned to Denver on May 12, 1993. The samples that were collected were field screened and split with the Utah Department of Environmental Quality (UDEQ) representative and the PRP representatives on-site. UDEQ will arrange for laboratory analysis of some of the samples for total metals content. The following TAT personnel were involved in the sampling effort:

Charles Baker	Project Manager
Kent Alexander	Site Safety/Spectrace Operator
Tony Amos	Geoprobe Operator

The sampling objectives were to characterize the lead contamination of the waste CKD, and determine the pH of the waste CKD piles based on the criteria set forth in Test Methods for Evaluating Solid Waste SW-846 Chapter 9 for simple random sample collection and statistical analysis. In addition, surface water samples of opportunity were collected an screened for pH. The sampling strategy involved extensive use of field screening equipment to conduct sample analysis. Time constraints of one week for the sample plan preparation and two weeks for the submission of this report were assigned by EPA.

2.0 SITE LOCATION AND DESCRIPTION

The sites are former dumping locations of waste cement kiln dust in three locations near Salt Lake City (Figure 1). The sites have been investigated for potential scoring as NPL sites, but did not meet scoring criteria for listing on the National Priorities List. Portland Cement Site 5 is located south of Cudahy Lane at about 2500 West in North Salt Lake. The waste CKD piles on this site are scattered in an area approximately 1/2 mile long by 100 yards wide on the east side

of the Jordan River. Portland Cement Site 4 is located at 1850 North Redwood Road, on the property of Utah LP Gas Company. The waste CKD underlies a parking lot that has been topped with clean backfill. Portland Cement Site 1 is located west of the Salt Lake International Center at approximately 9400 West south of 500 North in Salt Lake County. Approximately 102,000 cubic yards of waste CKD are on site 1, and 68,000 cubic yards of waste CKD are on site 5.

3.0 SAMPLING PROCEDURES

TAT's mobilization for the sampling effort began on May 9, 1993. The TAT Geoprobe, truck, and trailer were loaded with sampling and monitoring equipment and driven to Salt Lake City. A representative of Geowest Golden, Inc., Paul Weissenborn was present during sampling activities conducted on sites 1 and 5, and accepted split samples of the soils that were collected beneath the waste CKD piles. A representative of IHI, Nancy Sanders, representing the landowner accepted splits of waste CKD samples and soil samples collected at site 5. Other personnel on-site during the sampling event included: Steven Thiriot (UDEQ), Karen Mooar (USEPA,OSC), Mike McCeney (USEPA,RPM), and two members of the American Association of Retired Persons.

To prepare for this sampling effort, aerial site photographs of sites 1 and 5 were digitized, and overlaid with 50 foot grids. Locations where grid lines intersected waste CKD piles were numbered. Sampling locations were determined by randomly generating 10 numbers ranging from 1 to the total number of possible locations for each site. The sites were then gridded by using a laser ranging transit, and sample locations were marked with wooden stakes. Samples of the waste CKD were collected using a stainless steel coring device with an extractable acetate inner liner. When the acetate liner was extracted from the coring device, the sample core was capped to prevent loss during transport. Samples were then moved to a sample prep area. The top 6 inches of waste CKD was removed from the inner liner, composited, and split into sample and analysis containers. Compositing consisted of mixing the material in clean plastic buckets, using a clean stainless steel or teflon spoon. Sample and analytical containers were laboratory certified clean 4-ounce glass jars obtained from an EPA bottle depository or laboratory certified clean 8-ounce plastic mixing cups. These samples are identified as PCx-SO-nn, where x = site number (1,4, or 5) and nn = grid sample location.

The remaining CKD was removed from the acetate liner, and composited in a separate plastic container. Again, the composited material was split into clean 4-ounce sample jars and clean analysis containers. These samples are identified as PCx-CKD-nn. Where possible, any soil in the cores was

visually identified, removed from the inner liner, composited, and placed in clean 4-ounce glass jars. These samples are identified as PCx-SS-nn.

The top 6 inches of CKD composite, and the remaining CKD core composite was analyzed for pH using a Corning Checkmate pH meter with a combination glass and reference electrode, EPA tag number 724656. The meter was calibrated using three buffer solutions to establish the calibration curve. The samples were prepared in accordance with EPA method number 9045 (Soil pH) attached as part of Appendix 1. In addition, UDEQ conducted pH screening using their own pH monitoring equipment.

The top 6 inches of CKD composite, and the remaining CKD core composite was also analyzed for lead using a Spectrace 9000 X-ray Fluorescence Analyzer. Prior to analysis the CKD composite was allowed to air dry on a clean aluminum pie plate, crushed to a fine powder using a mortar and pestle, and then analyzed.

As sample results were obtained, the results were tabulated and compared with Box 1 of SW-846 chapter 9, page 13, to determine if the numbers of waste samples collected could be considered statistically valid against the characterization criteria agreed upon by EPA and UDEQ. The criteria agreed upon was pH of 12.5 and/or total lead in excess of 2,000 parts per million (PPM).

4.0 FIELD OBSERVATIONS

Salt Lake City received record rainfall (approximately 5 inches) the weekend prior to the sampling activities. Due to time constraints several deviations from the approved sampling plan occurred. Because the sites were very wet, the waste CKD was too soft for a vehicle to drive on. As a result, using the truck mounted hydraulics to drive and extract the coring device was not possible. Manually driving the coring device was possible using a sledge hammer, and extracting the core using pipe wrenches proved successful. Because hydraulics were not available, cores extracted were at a maximum 4 feet long, and in some cases no soil beneath the CKD could be collected. The wet CKD varied in consistency from wet clay to dry semi-hardened concrete. Therefore, in order to composite the samples, the spoon fabrication was changed from teflon to clean stainless steel. The spoons were decontaminated using an alconox/water solution, and rinsed with clean water. Wet samples can attenuate X-rays, so the CKD samples analyzed for lead were air dried on clean aluminum pie tins. The pie tins were also deconned using an alconox/water solution, and rinsed with clean water. Because of the large number of bottles required by splitting samples between the UDEQ and two PRP

contractors, in some cases the split samples were not sample tagged or custody sealed. The sample bottles were labeled, sealed with electrical tape, and chain of custody was maintained prior to transfer to UDEQ and the PRP contractors.

4.1 Portland Cement Site 5

Site 5 is located south of Cudahy lane at about 2500 West (1/2 to 3/4 of a mile west of Redwood Road) in Davis County. The site is estimated to contain approximately 68,000 cubic yards (60,000 tons) of waste CKD. The piles of waste are scattered in piles ranging between 3 to 9+ feet tall throughout the 50 acre site, but primarily in two locations.

The first location is immediately evident from the site access. It is approximately 1/2 mile long and 100 yards wide, roughly running along the same line as the Jordan River. The second location is near the south end of the site, roughly 100 yards by 100 yards square (Figure 3). The site is not fenced, easily accessed, and evidence of trespass, bicycle tracks, footprints, animal tracks, and evidence of vehicle traffic was noted on the site. Three signs are posted on the CKD piles, warning of caustic materials. There was also evidence of dumping of cement kiln bricks and refractory material on the site. The site is bordered by a waste water treatment plant to the North, the Jordan River and low density residential to the west, open fields to the south and east. Visual inspection of the site showed more CKD present than was observed in the aerial photos taken in 1982. There was also large volume of standing water west of the main pile, and an apparent wetland area south east of the main pile.

The recent rain had caused the waste CKD on the surface of the piles to be soft, similar in consistency to wet clay. Near the surface soils, however, the CKD was nearly set, and had a consistency similar to partially set concrete. As mentioned previously, the samples had to be collected using the soil coring device manually inserted and extracted. A total of seven core samples were collected from the site at locations shown on Figure 2. Results of the sampling effort are summarized on Table 1. The waste CKD below surface level was shown to be statistically of high enough pH to exceed the action level of 12.5, but well below the 2000 ppm action level for lead. Waste CKD samples collected from 0 to 6 inches depth showed pH ranging from 9.86 to 12.08 and lead values between 710 and 1300 ppm. Sample splits of subsurface soils were provided to the Geowest representative. In addition, 2 samples of ponded surface water were collected on the site and analyzed for pH. Water sample 1 had a pH of 8.91, and sample 2 had a pH of 10.6.

4.2 Portland Cement Site 4

Site 4 is located at 1850 Redwood Road in Salt Lake City, on the east side of the road (Figure 1). The site occupies 5.27 acres of land owned by the Utah LP gas company. The site is located in a light industrial area of Salt Lake City, and there are small businesses to the west and north of the site. The Jordan River is located approximately one half of a mile south from the site. The site had an estimated 2420 cubic yards of waste CKD deposited on the property. According to the owner of the site, the waste CKD was piled primarily on the west side of the site. In 1983 the site was graded, and the CKD was covered with clean fill. On May 11, 1993 the site was inspected by the EPA, UDEQ, and TAT representatives. Along the perimeter of the graded parking area, several locations of what appeared to be small exposed waste CKD piles were noted. A small exposed pile on the east side of the site was sampled. This sample was analyzed for pH (11.46) and lead (260 ppm). Along the north and west embankment, numerous ephemeral rivulets have exposed material that appears to be waste CKD. To determine if the waste CKD is impacting surface water, four water samples were collected and analyzed for pH (Figure 3). pH values for the ponded water ranged from 8.01 to 8.09 on the east and northeast corner of the site and 9.25 to 9.35 along the northwest and west corners.

4.3 Portland Cement Site 1

Site 1 is located at approximately 9300 West and just south of 700 North in Salt Lake County (Figure 1). The waste CKD occupies a recently fenced area of approximately 15.6 acres in the northeast corner of the property. The site is relatively isolated compared to the other two, with no neighboring businesses or populations. However, the area northwest of the site appears to be a popular recreation area for nude sunbathing. Approximately 20 vehicles were noted driving to this area during sampling activities. The site's low lying areas were flooded with approximately two inches of standing water, and the CKD on the site was of similar texture noted on site 5. As the CKD dried throughout the day, a hardening one quarter-inch thick surface crust and salt crystals were observed forming on the surface of the waste CKD. There are piles of refractory waste and kiln bricks present on this site as well. Immediately south of the fenced area are approximately seven piles of waste CKD that are not fenced. Access to these piles is not possible by road, and requires negotiating the flooded low lying areas. The piles on site ranged from approximately four feet to eight+ feet tall.

Eight sample cores of waste CKD were collected on the site, at locations determined randomly in the manner used for site 5 (Figure 4). The samples were collected, composited and

analyzed in the same manner as those collected on Site 5. Again, the waste CKD was shown to statistically exceed the action level for pH (12.7), but not exceed the action level for lead (740 ppm). Sample and statistical results are summarized as Table 2. Sample splits of the subsurface soils were made available and accepted by the UDEQ, the Geowest consultant, and the IHI consultant.

5.0 CONCLUSIONS

Sample results obtained from the sampling effort are summarized in Table 3. Each site's potential for a removal action was evaluated based on imminent threat criteria of the waste and potential for environmental damage caused by allowing the material to remain as is. It should be noted that the discussion below is based on preliminary review of the site record, observations onsite, anecdotal information, and as much review of technical journals as was possible given the time constraints of the project.

Waste CKD does not meet the criteria for a RCRA hazardous waste characteristic despite the pH results. The waste CKD is a solid and is not considered a corrosive waste, regardless of its corrosive properties (45 FR 33109, May 19, 1980). Nor does the waste meet the action level for lead. However, the CKD could represent a health threat in the form of direct contact, fugitive dust, and contamination of surface and ground water.

The direct contact threat with the CKD is of primary concern on site 5. There is currently no fence on the site and, as noted earlier, there is evidence of trespass onto the site. Site 1's fence appears to be an effective deterrent to trespass, and has reduced the direct contact threat on that site. A potential exposure problem with the uncontained waste CKD south of site 1 could be eliminated by adding that waste to the fenced site. Site 4's waste CKD is predominantly covered by clean fill, and in those few areas where CKD is exposed, the material can be easily added to the backfill area. Direct contact with the highly alkaline waste CKD could be expected to cause irritation of skin, mucous membranes, eyes, and the throat. Also, direct contact represents potential exposure to heavy metals that are contained in the CKD.

The potential threat posed by CKD to surface and ground water is two fold: leaching/migration of heavy metals, and spread of high pH contaminated water. Leaching and migration of lead from CKD has been extensively studied by the EPA because CKD is the major byproduct of cement kilns that burn hazardous

waste fuel. Based on tests conducted on Los Robles CKD[1], (Figure 8.5.2 in Appendix 3) soluble lead in water should be approximately .05 ppm, based on lead content mean of 500 ppm in CKD on Site 5 and .2 ppm based on a lead content mean of 740 ppm on Site 1. The text also notes that typically 90% of lead potentially present in solution is absorbed onto solid surfaces of clays, carbonates, and hydrated metal oxides in soils[2]. Lead that is dissolved in water in contact with CKD will be removed from solution as the water moves away from the CKD through surface adsorption and precipitation of insoluble lead oxide and carbonate salts. Because the site soils in Sites 5 and 1 are both clayey silts at least 7 feet thick[3], lead migration should be limited to immediate clay soils beneath the CKD and not into the shallow water aquifer or Jordan River. Other trace heavy metal contaminants are present in CKD, including arsenic, chromium, barium and molybdenum.

Chromium migration is of greater concern because of the alkaline environment and high temperatures of cement manufacture are likely to produce a greater percentage of hexavalent chrome, which is highly soluble in alkaline water. Trivalent chromium, cadmium, barium, copper, iron, nickel, and zinc are all efficiently removed from waste water through hydroxide or carbonate precipitation[4], both of which are present in a CKD/water mixture. Arsenic could potentially migrate as pentavalent arsenic which is soluble in high pH water, but is likely to be absorbed on clays as pH approaches neutral.[5]

Because the waste piles are currently in contact with standing

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1. Standard Handbook of Hazardous Waste Treatment and Disposal, Harry M. Freeman, USEPA HWERL, McGraw Hill Book Company, 1989. Section 8.5

2. J.D. Hem, "Geochemical controls on Lead Concentrations in Stream Water and Sediments," Journal of the Geochemical Society and the Meteoritical Society, 40:(6)599-609, Pergamon Press, New York, June 1976.

3. Utah DOH Memorandum Dated August 27, 1986 and September 4, 1986 From Jim Salmon to Loretta Pickerell regarding status of Portland Cement Sites 1 and 5 SI Evaluations.

4. Separation of Heavy Metals and Other Trace Contaminants, American Institute of Chemical Engineers Symposium Series Number 243, Volume 81, 1985 Pages 165-167.

5. Arsenic Species as an Indicator of Redox Conditions in Groundwater, Cherry, J.A. and others, 1979

water, and historical review of Sites 5 and 1 show that historically the site's CKD is in contact with water[5] even during the dry months, heavy metal migration into the water should be limited to hexavalent chrome and arsenic, as long as the solution is basic. Ground water well monitoring of the site conducted in 1984 showed no increase in constituent concentrations attributable to the sites[7]. The possibility remains of groundwater contamination by hexavalent chrome and arsenic as long as water and waste CKD remain in contact with one another. No recent sampling of ground water wells has occurred, and to date there is no definite evidence that metal contamination is migrating from any of the sites in ground or surface water.

The observed cement kiln brick on Sites 1 and 5, represent a potential threat because of their documented release of hexavalent chrome. Studies at Portland Cement Sites 2 and 3 have documented the presence of hexavalent chrome in the bricks, and the bricks probably represent the greatest concentration of chromium on the sites.

The high alkalinity of surface water sampled on the site 5 is of concern. Sample PC5-SW-02 was collected from ponded water in the middle of a CKD pile and had a pH of 10.16. Sample PC5-SW-01 was collected from ponded water on native soil between several CKD piles and had a pH of 8.90. The State of Utah's numerical standards for the protection of beneficial uses of water document pH ranges of 6.5 to 9.0 are acceptable. Clay soils will tend to absorb hydroxyl ions, lowering pH as the water migrates from the CKD source. Again, review of site documents show no attributable impact of the site on pH of ground water monitoring wells. To date, there is not evidence that pH contamination is migrating off site. However, no recent sampling of shallow water wells has occurred. The surface water samples that were collected on Site 4 show the waste CKD could be impacting the ponded water to the west of the site, and exceeding the pH 9.0 limit set forth by the State. Investigation to determine if the high pH ponded surface water is migrating to the south and toward the Jordan River may need to be conducted. Potential solutions to this problem include repair and maintenance of the clean fill areas and erosion control to prevent surface runoff from the fill area from eroding the sides of the fill and exposing the waste CKD.

The potential exposure route that could represent the greatest potential threat is fugitive dust. Waste CKD has a median

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[6] ibid, UDOH Memorandum, Re: SI Evaluations

[7] ibid, UDOH Memorandum, Re: SI Evaluations

diameter of 10 micro meters[8]. This is the size of material that the American Conference of Governmental Industrial Hygienists classifies as a thoracic respiratory threat[9]. According to the UDEQ's representative, Steven Thiriot, there is anecdotal evidence of fugitive dust blowing from Sites 1 and 5. However, review of background information shows the waste CKD on Sites 1 and 5 are described as permanently wet. As documented in Appendix 3, Freeman notes that when CKD has absorbed 10-15% water by weight it becomes sticky and the fugitive dust emission is virtually eliminated. During the sampling event, no readings were obtained for particulates on the mini ram. Also, as observed on site 1, a hardened crust of CKD and salt formed on the surface of the CKD as it dried in the sun. If the crust is not broken up, this may be an effective cap against dust emission in all but extremely windy conditions. Thiriot indicated no particulate sampling had been conducted on any of the sites, and thus there is no documented evidence or analysis of fugitive dust emission. However, the potential for emission of fugitive dust is still possible. Fugitive CKD dust emissions could impact the area of recreation activities west of site 1, and the workers at the waste water treatment system north of site 5, and potentially the population west of site 5.

6.0 RECOMMENDATIONS

Removal action considerations and options for these sites are difficult to evaluate. The amount of documentation for the sites show that there is little documented evidence of release associated with the waste CKD on Sites 1, 4, and 5. There is a potential for release, potentially harming human health and the environment. Also, due to time constraints, ARAR's for the site were not considered. The following preliminary evaluations of removal options are based on estimated costs, "rule of thumb" estimates, and discussions with EPA's Emergency Removal Contracting Services Contractor, and should not be considered final.

6.1 No Further Action

6.1.1 Advantages - There is no cost associated with this choice. Because the Waste CKD is currently wet, fugitive dust emissions are unlikely. As discussed previously, the majority of metals contamination associated with the CKD should be

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[8] ibid, Standard Handbook of Hazardous Waste Treatment and Disposal, Page 8.67

[9] "Threshold Limit Values and Biological Exposure Indices For 1989-1990", American Conference of Governmental Industrial Hygienists, Appendix D.

limited to the soils immediately beneath the waste CKD. Surface water contamination is primarily elevation in pH, but this assists in preventing migration of heavy metal contaminants. However, review of the sampling results of the top 6 inches of CKD sampled show it to be of lower pH (9.6-12.8), but still containing elevated levels of lead. However, the amount of lead in the CKD is below the "action level" agreed upon by the State and EPA.

6.1.2 Disadvantages - The possible migration of arsenic and hexavalent chrome into ground and surface water. Determination of the hydraulic connections between the shallow water aquifer and the hydraulic gradient between the aquifers in all potential use scenarios are impossible to determine. Because of this, potential contamination of the shallow water aquifer may need to be considered as potential contamination of the deep water aquifer. The direct contact threat with elevated lead and alkaline waste CKD on site 5 is probable. Fugitive dust emissions are possible if the waste CKD dries to such an extent it becomes vulnerable to air transport.

6.1.3 Cost - There is no cost associated with this choice.

6.2 Fence Site 5

6.2.1 Advantages - A fence constructed around Site 5 to prohibit site access reduces the direct contact threat.

6.2.2 Disadvantages - Fencing the site does nothing to address the possible migration of arsenic and hexavalent chrome in surface and ground water. Fugitive dust could still be a problem if the waste CKD dries.

6.2.3 Cost -
Assuming a fence of 4,800 lineal feet to cover site 1, and a cost of $12.50 per lineal foot[10] to meet standard EPA specifications for security fence, the cost would be $60,000.

6.3 Level CKD piles and cap with 18 inches of top cover

6.3.1 Advantages - This action eliminates the direct contact threat. This choice may allow for land use of the area such as open space, parking lots, etc., provided no excavation is done. Zoning changes for the land may be required. This action would also eliminate the fugitive dust threat.

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[10] Phone conversation with Greg Maxwell, Riedel Environmental Services, May 20, 1993

6.3.2 Disadvantages - This action would still allow for the potential of ground water contamination. Extraordinary events such as flooding of the Jordan River (Sites 4 and 5) or extraordinary surface water drainage could re-expose waste CKD.

6.3.3 Cost -
Assuming a total site area for site 1 if 447,630 square ft and 256,277 square feet for site 5[11], 18 inches of top soil would yield a total of 39,100 cubic yards of topsoil required. Based on a cost of $12/cubic yard[12], this yields a material cost of $469,000 for topsoil alone. With $10,000 for Mob/Demob and a 20% contingency, this yields a total of $573,000. Some maintenance cost may be required for the sites.

6.4 Remove the Waste CKD and dispose of it at a waste facility

6.4.1 Advantages - This action eliminates all potential health threats.

6.4.2 Disadvantages - This is the most costly action.

6.4.3 Cost -
Assuming a 102,000 cubic yards of waste CKD on site 1, and 68,000 cubic yards of waste CKD on site 5 and 1 cubic yard of material weighing approximately 1.5 tons, this yields a total of 255,000 tons of material. A landfill charge of $30-50/ton[13], yields a cost of $7,650,000 to $12,750,000 for disposal alone. Assuming a transportation cost of 4 to 5 cents per ton mile[14], and a 60 mile run to Grassy Mountain, transportation costs are $612,000 to $765,000. Transportation costs would be greater as distances traveled increases. The cost estimate for transportation is based on trucking. Railcar transportation may yield a lower overall cost. Clearly, the costs for this option exceed the 2 million dollar limit for an

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11 Memorandum from J. Steven Thiriot to Charles Baker Dated April 28, 1993, notes attached by Mark Day, P.E.

12 Tetra Tech's Focused Feasibility Study for Portland Cement Sites 2 and 3, OU2, Dated October, 1992, Table 4-3.

13 Memorandum from Elissa Roselyn URS Consultants, to Ralph Rice Dated May 14, 1993.

14 Phone Conversation with Greg Maxwell, Riedel Environmental Services, May 20, 1993.

emergency removal action.

6.5 Remove the Waste CKD and dispose of it at Summitville Mine in Colorado as part of the stabilization action there.

6.5.1 Advantages - This action eliminates all potential health threats, and eliminates the cost of landfill disposal.

6.5.2 Disadvantages - Transportation costs would be dramatically increased, and involves transport across state lines. The waste CKD is not considered a RCRA waste, and there is no technical reason for denial of transport. However, political considerations for transportation and deposition of the material may cause difficulty. There will need to be bench scale testing of the material to ensure proper buffering capabilities for the purpose of treatment of potentially acidic waste at the Summitville site. There is likely to be lead contaminated soils beneath the waste CKD in the form of lead oxide. Removal of the alkaline waste CKD material may allow for the mobilization of the lead, if the contaminated soil is exposed to slightly acidic storm water. Contaminated soils may need to be excavated and disposed of.

6.5.3 Costs -
Assuming 255,000 tons of material, and 4 to 5 cents per ton mile, and 500 miles to travel between Salt Lake City and Summitville, this yields a cost of $5,100,000 to $6,375,000. Again, this exceeds the 2 million dollar limit for an emergency removal. Again, this cost estimate is based strictly on trucking cost. Rail costs were not investigated.

6.6 Summary of Recommendations -
Based on the cost estimates described above, fencing or capping the site represent the most cost effective method of dealing with the health threats associated with sites 1 and 5. Maintenance of site 4's cover and monitoring of site 4's runoff and groundwater could yield information as to the effectiveness of capping of sites 1 and 5 with fill. Alternately, if funding is available, transportation of the material to Summitville Mine would be the most beneficial use of the waste material. Alternatives such as acid treatment of the waste CKD were not considered because of the potential for mobilization of the heavy metal species in the waste CKD.

TABLE 1

Portland Cement Site # 5
pH, XRF Results and Statistical Analysis

Sample Location	Number of samples	Lead Result (ppm)	pH Level
PC5–CKD–49	1	560	13.15
PC5–CKD–81	2	750	12.73
PC5–CKD–22	3	710	12.00
PC5–CKD–64	4	270	12.79
PC5–CKD–77	5	480	12.70
PC5–CKD–05	6	410	12.80
PC5–CKD–09	7	400	12.95

	Lead	pH
Number of samples	7	7
Mean	511.429	12.731
Variance	30114.286	0.128
STD	173.535	0.358
STD error	65.590	0.135
t.20	1.440	1.440
CI	94.450	0.195
Number to collect	1	5

TABLE 2

Portland Cement Site
pH, XRF Results and Statistical Analysis

Sample Location	Number of Samples	Lead Result (ppm)	pH Level
PC1-CKD-28	1	1200	12.20
PC1-CKD-18	2	920	13.07
PC1-CKD-140	3	280	12.62
PC1-CKD-73	4	680	
PC1-CKD-59	5	620	12.68
PC1-CKD-114	6	740	12.86
PC1-CKD-66	7		12.82
* PC1-CKD-73			11.44

	Lead	pH
Number of samples	6	6
Mean	740.000	12.708
Variance	94720.000	0.087
STD	307.766	0.294
STD error	125.645	0.120
t.20	1.476	1.533
CI	185.452	0.184
Number to collect	1	5

* Sample was not used in the statistical analysis.

TABLE 3

Portland Cement sites 1, - and 5
Lead Results (ppm) and pH Results

ID	Pb–Raw	Pb–Qual	pH
PC1–SO–18	998.37	1000	11.42
PC1–CKD–18	920.69	920	13.07
PC1–SO–28	1298.4	1300	9.86
PC1–CKD–28	1152.4	1200	12.20
PC1–SO–59	928.46	930	12.08
PC1–CKD–59	620	620	12.68
PC1–CKD–66	N/A	N/A	12.82
PC1–SO–73	762.43	760	11.76
PC1–CKD–73	682.58	680	11.44
PC1–SO–114	708.59	710	11.35
PC1–CKD–114	739.31	740	12.86
PC1–SO–140	747.79	750	11.56
PC1–CKD–140	284.17	280 J	12.62
PC4–SO–01	255.52	260 J	11.46
PC4–SW–01	N/A	N/A	8.09
PC4–SW–02	N/A	N/A	8.01
PC4–SW–03	N/A	N/A	9.25
PC4–SW–04	N/A	N/A	9.35
PC5–SO–05	442.06	440 J	12.79
PC5–CKD–05	412.76	410 J	12.80
PC5–SO–09	803.96	800	12.04
PC5–CKD–09	398.77	400 J	12.95
PC5–SO–22	657.5	660	11.43
PC5–CKD–22	713.95	710	12.00
PC5–SO–49	797.18	800	10.09
PC5–CKD–49	558.41	560	13.15
PC5–SO–64	483.06	480 J	11.63
PC5–CKD–64	269.43	270 J	12.79
PC5–SO–77	344.97	340 J	12.61
PC5–CKD–77	476.3	480 J	12.70
PC5–SO–81	552.25	550	12.12
PC5–CKD–81	747.59	750	12.73
PC5–SW–01	N/A	N/A	8.90
PC5–SW–02	N/A	N/A	10.16

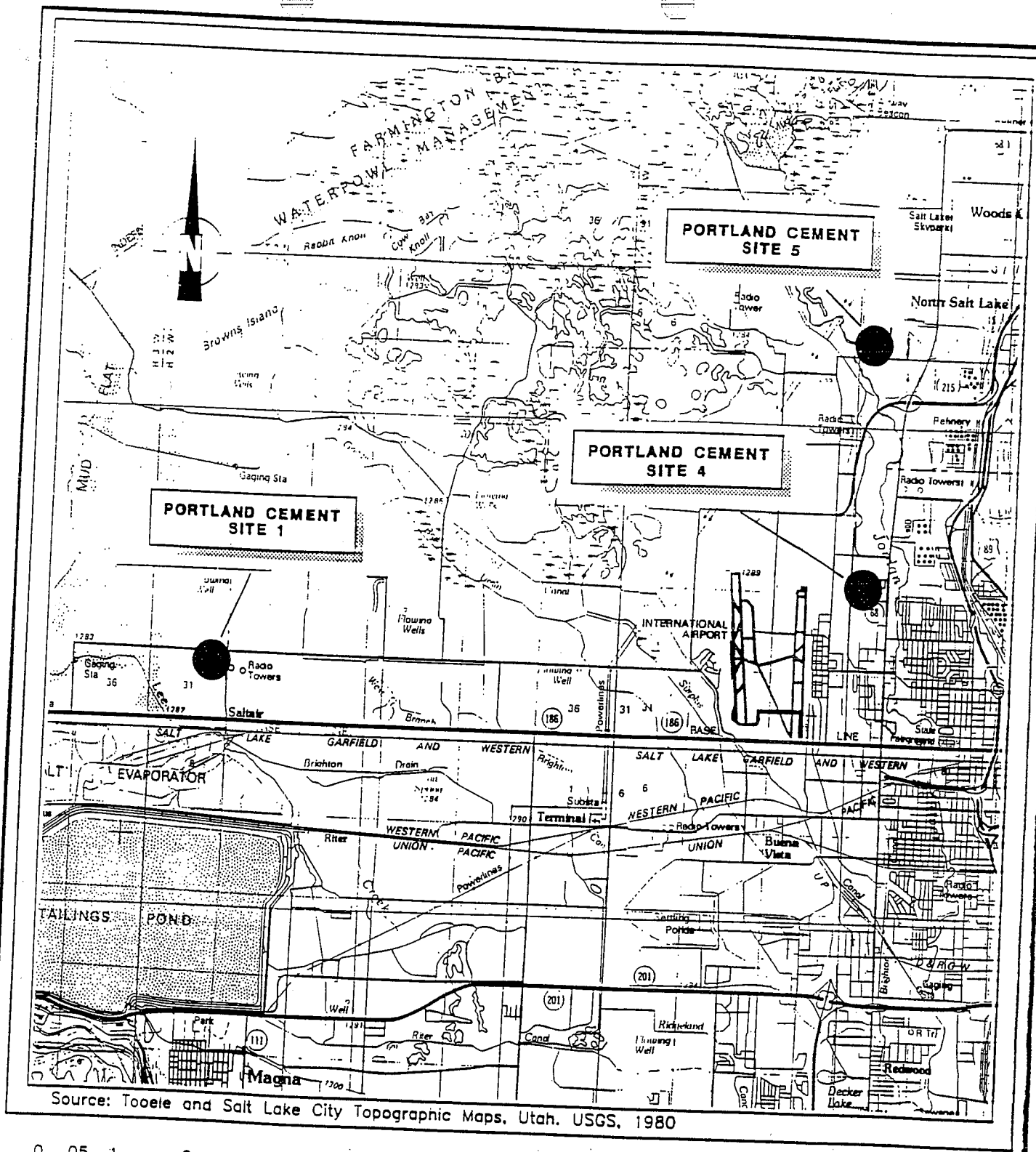
N/A – Not Analyzed

TABLE 4

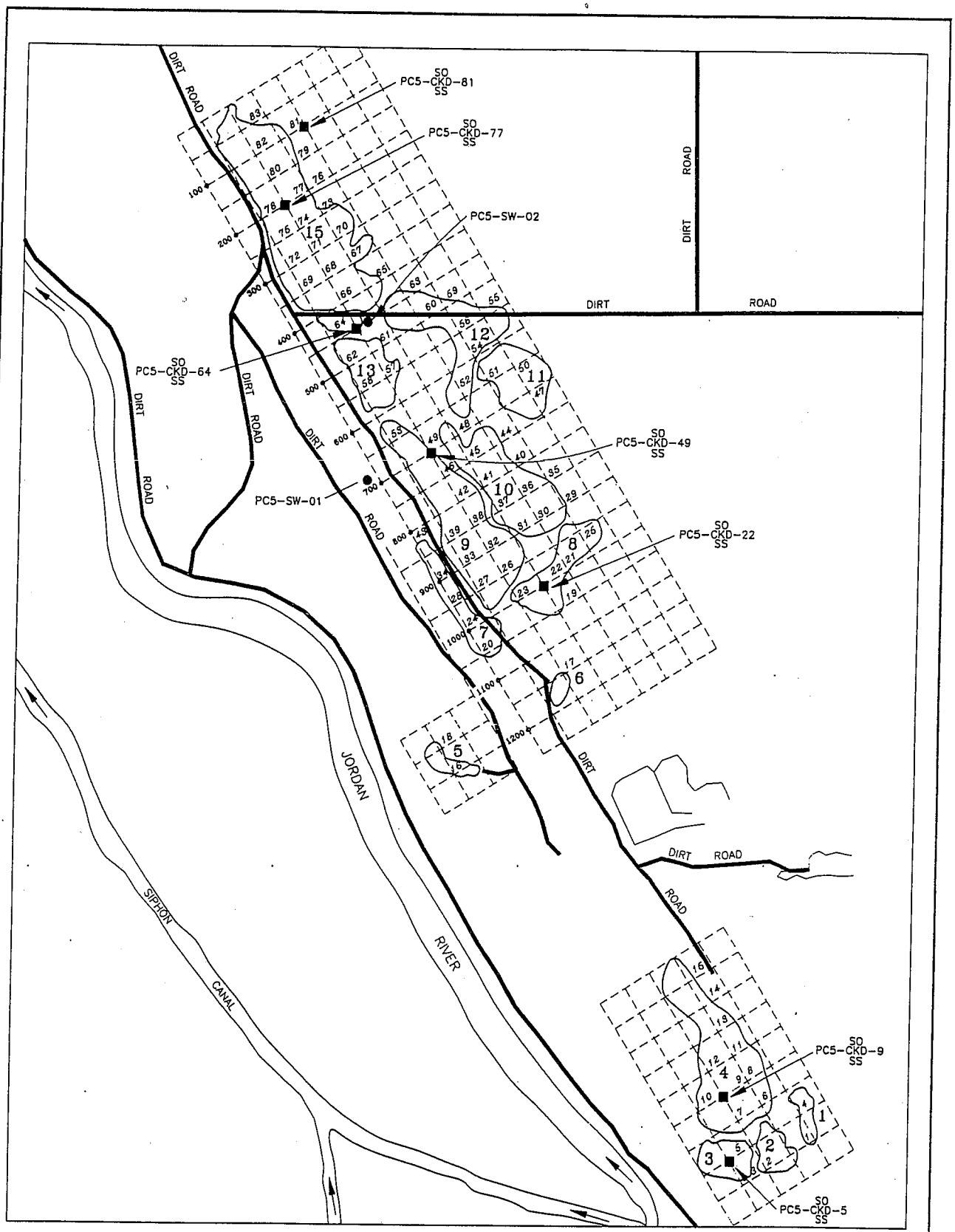
Portland Cement sites 1, 4 and 5
Splits with the State of Utah

	SAMPLE NUMBER
1	PC1-SS-140
2	PC5-CKD-09
3	PC1-SS-28
4	PC5-CKD-81
5	PC4-SO-01
6	PC1-CKD-18
7	PC5-SS-64
8	PC5-CKD-49
9	PC1-CKD-140
10	PC1-CKD-59
11	PC1-SS-59
12	PC5-SS-77
13	PC5-SS-81
14	PC1-CKD-28
15	PC5-CKD-22
16	PC1-SS-73
17	PC1-CKD-66
18	PC5-CKD-05
19	PC1-SS-66
20	PC5-CKD-77
21	PC5-SS-09
22	PC5-CKD-64
23	PC1-CKD-114
24	PC1-CKD-73
25	PC5-SS-22

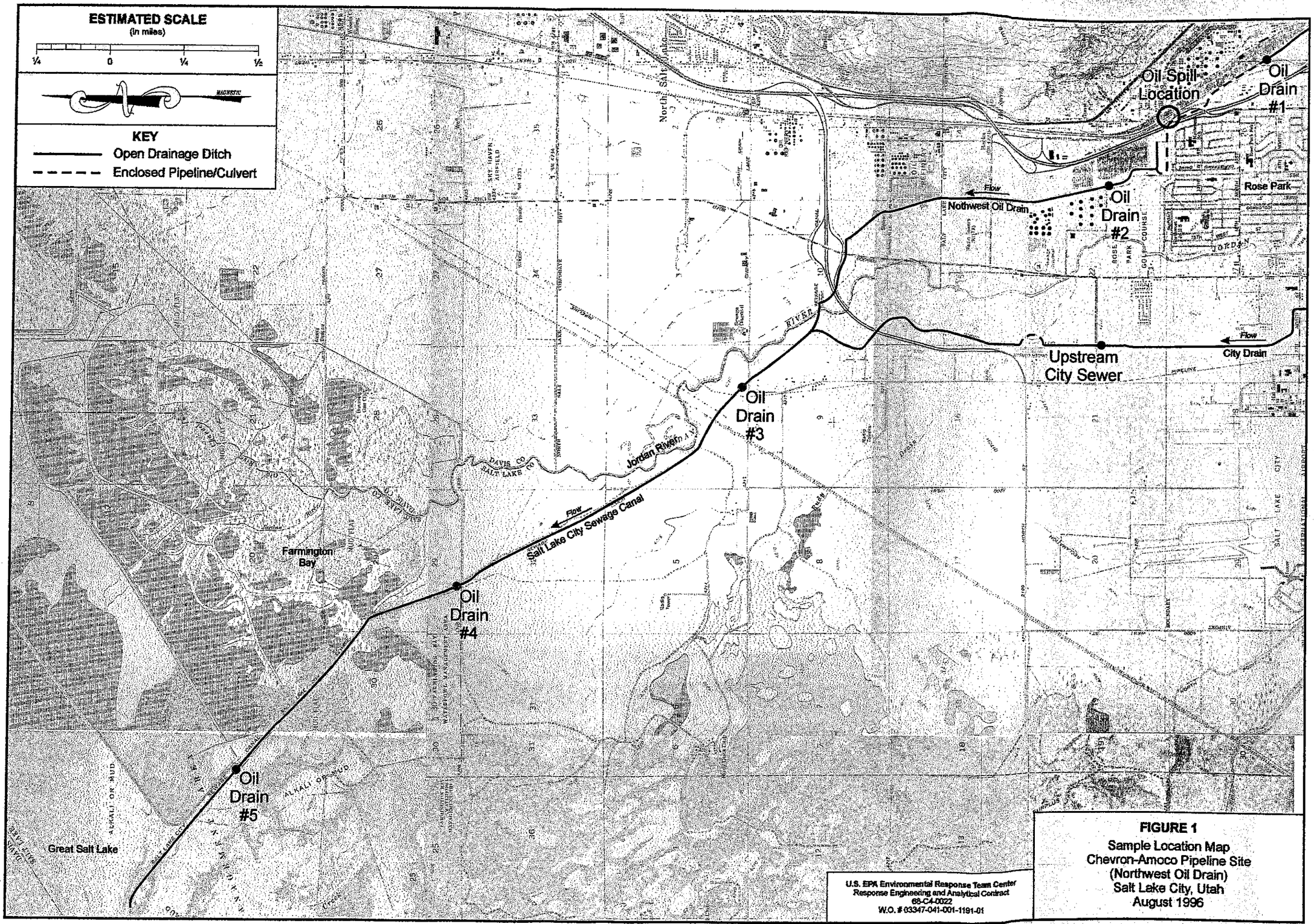
The State of Utah will analyze the first thirteen samples listed above and will archive the rest.



TECHNICAL ASSISTANCE TEAM FOR EMERGENCY RESPONSE, REMOVAL AND PREVENTION EPA CONTRACT 68-WO-0037	
TITLE: PORTLAND CEMENT Salt Lake City, Utah SITE LOCATION MAP T.D.D. T08-9304-012	
ecology & environment, inc. DENVER, COLORADO	FIG. 1
Date: 05/93	



TECHNICAL ASSISTANCE TEAM FOR EMERGENCY RESPONSE, REMOVAL AND PREVENTION EPA CONTRACT 68-W0-0037	
TITLE:	PORTLAND CEMENT Salt Lake City, Utah SITE 5 SAMPLE LOCATION MAP
T.D.D. T08-9304-012	
ecology & environment, inc. DENVER, COLORADO	FIG. 2
Date: 05/93 Drawn by: RSM Scale:	



U.S. EPA Environmental Response Team Center
Response Engineering and Analytical Contract
68-C4-0022
W.O. # 03347-041-001-1191-01

FIGURE 1
Sample Location Map
Chevron-Amoco Pipeline Site
(Northwest Oil Drain)
Salt Lake City, Utah
August 1996

ANALYTICAL RESULTS REPORT

NORTHWEST OIL DRAIN
Salt Lake County, Utah
UTD980667000

Utah Department of Environmental Quality
Division of Environmental Response and Remediation
Prepared By: Jason L. Knowlton

Draft 3/25/91
Revised 7/15/91

EXECUTIVE SUMMARY

Sampling was conducted at the Northwest Oil Drain CERCLA site (formerly known as Rose Park Canals), by the Utah Bureau of Environmental Response and Remediation, during July, 1990. The site consists of over 5 linear miles of operational and abandoned canals, historically used for the transport of industrial waste, raw sewage and storm waters in northern Salt Lake and southern Davis Counties, Utah. Residential development has occurred atop portions of the canals which have been buried in northern Salt Lake City.

Five soil samples were collected; 2 from crawl spaces of homes overlying the canal, 2 from locations adjacent to the canals, and 1 from a vacant field for use as background. Eleven sediment samples were collected; 5 from areas where the canals had been buried and 6 from portions of the existing canal. Four surface water samples were also collected from portions of the existing canals and 3 ground water samples were collected from existing shallow wells.

Significantly elevatated contaminant levels, compared to background, were discovered in only one of the soil samples. A sample collected from the crawl space of a residence on Tally Ho Drive, directly overlying the canal, yielded 1100 parts per million (ppm) lead, and 7 organic constituents with a total concentration of about 1500 parts per billion (ppb).

Significant levels of lead, chromium, and several potentially hazardous organic compounds were discovered in eight of the sediment samples. The sediment material varied in composition from a light gray clay to a black tarry sludge with a weak to very strong "tarry" odor. In the areas where the canals had been buried, odorous clayey material was generally encountered at a depth of about 3 feet below the ground surface. Where the canals were still in operation, a black, sludgey material was generally encountered at depths less than 1 foot. Potentially affected populations include 585 persons who live or attend school directly atop the old canals, and 122,353 residents within a 4 mile target distance limit.

Surface water samples exhibited elevated levels of selenium, thallium, and in one sample, lead, as compared to concentrations in the background ground water sample. No representative surface water background sample could be obtained. Organic constituents detected in surface water samples include acetone and methylene chloride. Acetone was used for the decontamination of sampling equipment which may account for these elevated levels. Methylene chloride is commonly utilized laboratory compound. Concentrations of these contaminants were all in the parts per billion range. Potential surface water environmental targets include breeding habitat of the endangered Peregrine Falcon, located in the wetlands of the Farmington Bay Waterfowl Management Area.

Elevated levels of arsenic, selenium and thallium, relative to background, were found in the ground water from a well located just west of, and downgradient to, a buried portion of canal. Barium, lead and selenium were at elevated levels in a well located in the Rose Park Golf Course, approximately 1000 feet downgradient to the canals. No significant amounts of organic compounds were present in the ground water samples. Twenty four municipal

wells, serving 66,140 persons, are located within 4 miles of the canals. However, all of these wells are upgradient or cross-gradient of the site.

From the results of the sampling efforts, several potentially hazardous substances have been identified in the canal sludges. The substance identified are, for the most part, relatively immobile. However, increased contaminant levels in the downstream and downgradient flow directions show that a limited migration of a few contaminants may be occuring through the ground water and surface water pathways.

1.0 ODUCTION

The Northwest Oil Drain site (UTD980667000 - formerly known as Rose Park Canals) is a network of canals, historically used for the transport of industrial wastes, raw sewage, and storm waters in northern Salt Lake and southern Davis Counties, Utah. Use of the canals in the southern part of the site was discontinued due to residents' complaints during the development of the Rose Park Subdivision around the early 1950s. With the northward expansion of the Rose Park Subdivision, these canals were filled in and structures were built directly atop the canal traces. In the southern industrial and northern portions of the site part of the canals are still in use as storm drains and for the transport of treated industrial and municipal waste waters[1].

Sampling was conducted at this site by the Utah Bureau of Environmental Response and Remediation (UBERR) during the period of July 9 through July 17, 1990. A Sampling Plan, dated November 2, 1989, was prepared for the site which outlined the procedures to be followed for sampling this site. A Field Activities Report, dated January 17, 1991 outlines the procedures which were actually followed. This report presents the analytical results from the sampling efforts and summarizes the data which has been gathered to date.

The sampling activities were undertaken as part of a Screening Site Investigation under authority of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA). UBERR conducts these activities under agreement with the U.S. Environmental Protection Agency (EPA). EPA Form 2070-13, "Site Inspection Report," is included as Attachment A. The information presented here will be used for purposes of scoring the site according to the Hazard Ranking System (HRS) of the National Oil and Hazardous Substance Pollution Contingency Plan (NCP).

The scope of sampling activities involved the collection of 11 sediment samples, 5 soil samples, 4 surface water samples, 3 ground water samples, and 4 quality control samples, for a total of 27 samples.

The objectives of sampling as stated in the Sampling Plan were as follows:

1) To characterize the sludges as deposited in the canal bottoms and assess the hazard to persons residing atop the canals.

2) To determine whether hazardous constituents from the sludges are releasing or migrating through surface water or ground water pathways.

3) To determine whether soils adjacent to the canals are contaminated and whether this contamination is directly attributable to the canals and not to other potential sources located nearby.

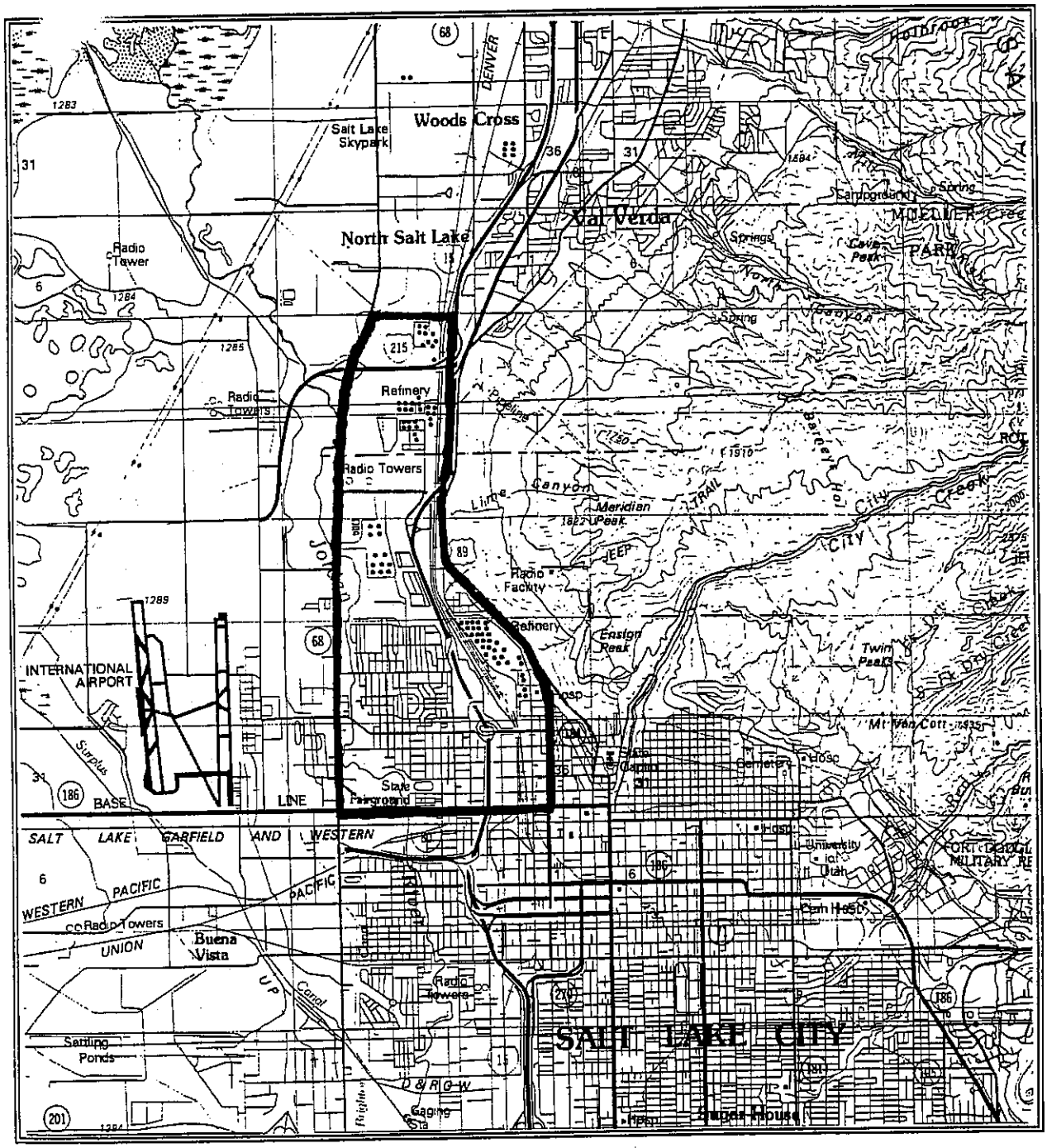
2.0 BACKGROUND

Information pertaining to the history and location of the canals has been obtained mostly from files at the Salt Lake City Public Works, Engineering Office and from a series of aerial photos dated from 1946 through 1977. Other sources of information on canal locations included a mosquito abatement map of 1936, U.S. Geological Survey, Salt Lake City, North, 7.5 minute quadrangle (topographic), last revised in 1975, and information from the Salt Lake City Public Utilities, Water and Sewer, Engineering Office. Previous assessments of the hazards associated with the canals have been performed by the Utah Bureau of Solid and Hazardous Waste (UBSHW), the U.S. Environmental Protection Agency, Region VIII, and the Fred C. Hart Associates (FCHA), Region VIII, Field Investigations Team (FIT).

2.1 LOCATION AND DESCRIPTION

The study area encompasses approximately 8 square miles in northern Salt Lake and southern Davis Counties, Utah, in the eastern half of Township 1 North, Range 1 West, Salt Lake Base and Meridian (see Figure 1). In the south part of the study area is the Rose Park Subdivision, a northward municipal extension of Salt Lake City. A large industrial area consisting of mostly oil refineries and railroad, lies adjacent to Rose Park on the east and extends north towards North Salt Lake, Woods Cross, and Bountiful Cities. The area is bounded, somewhat arbitrarily, to the north by Cudahy Lane, east by U.S. Highway 89 and the base of the Wasatch Mountain Range, south by North Temple Street, and to the west by the Jordan River.

Prior to the closing of the Oil Drain canal in the Rose Park area in the early 1950's, the canal received industrial waste, most notably from Utah Oil Refining Company and the Union Pacific Railroad yards, and storm waters from northwest Salt Lake City, through a system of tributary canals to the east of what is presently the Rose Park Subdivision[1]. The main trunk of the Oil Drain flowed north along 800 West then west just north of 1000 North, then north again at approximately 1000 West. At approximately 1400 North, the Oil Drain turns west and then north again along the edge of the Rose Park Sludge Pits (CERCLA Site UTD 980635452). Just to the north of the sludge pit, the Oil Drain turns to a north of northwest direction and joins with the smaller Sewage Canal coming from the south along 1200 West. The channels of both of these canals south of approximately 1500 North have been filled in. Just to the north of this confluence with the Sewage Canal, the Oil Drain is still in use and receives its first water from the pipelines which were used to replace the now defunct sections of canal. Two of the tributaries to the Oil Drain east of Rose Park are still in use. These two tributaries flow northward along the west side of the railroad tracks and enter the above mentioned pipeline near Interstate 15 after turning to the west, the first one near the vicinity of 900 North and the other near approximately 1350 North. Two canals flowing from the industrial portions of Davis County have also been included in this study. These join with the Oil Drain in the northwest corner of the site.



NORTH

UTAH DEPARTMENT OF HEALTH

BUREAU OF ENVIRONMENTAL RESPONSE AND REMEDIATION

Figure 1

SITE LOCATION

Rose Park Canals
Salt Lake and
Davis Counties, Utah

By	Date	Scale
JLK	9/10/90	1:100000

USGS Topo. Base, Salt Lake City.
1 x 2 30 x 60 minute series, metric.

2.2 SITE HISTORY

Prior to the early 1900's, sewage and liquid wastes were transported northward via canal through the southern part of the study area and deposited in the shallow Hot Springs Lake. At that time, the lake covered a large area in the northern and central portions of the site extending southward to the current north edge of the Rose Park Subdivision. Sometime prior to the early 1920's, a system of canals was built to drain the lake and reclaim the land. The large Oil Drain Canal was constructed around this time to transport wastes further northward and deposit them in Farmington Bay of the Great Salt Lake. This canal is still in use although it has apparently been rerouted over many stretches. Complaints and concerns from residents of the newly constructed Rose Park Subdivision in the early 1950's caused the use of the canal to be discontinued in the area of Rose Park and resulted in plans to build a pipeline to transport the wastes to a location farther north in the canal. The costs for construction of this pipeline were to be shared by Salt Lake City, Utah Oil Company and the Union Pacific Railroad, based on their use of the canal. By the late 1950's, the canals had been filled in and a northward extension of the Rose Park Subdivision was built[1]. Approximately 35 houses and 1 school were constructed directly atop the canal locations. Also about this time, the open Sewage Canal along 1200 West Street north of 1000 North was replaced by a pipeline and filled in. No dwelling structures lie directly atop this canal. In the early 1960's, the Salt Lake City sewage treatment plant was constructed. The date at which other industries using the canal began treatment of their wastes is unknown.

2.3 PREVIOUS WORK

Environmental assessment work to date has dealt only with the 1200 West Sewage Canal and the Oil Drain Canal and was limited to the Rose Park residential area. Discovery of the canals as a potential hazardous waste site resulted from a geophysical survey conducted as part of the remedial activities at the Rose Park Sludge Pit[2]. The following summarizes previous reports on the area.

U.S. EPA, Region VIII, Site Inspection Report, Rose Park Canals, November 1980. Personnel from the EPA, FCHA-FIT, and State and Local Health Departments inspected the site, interviewed residents and conducted an Organic Vapor Analyzer (OVA) survey in crawl spaces and basements of 2 homes and Matheson School (currently Salt Lake City Headstart). The appearance of sludge material in crawl spaces after rises in the water table was noted. Results of the OVA survey were negative. The low OVA readings were partially attributed to cool, wet, windy conditions. Substances of concern included pyrene, fluoranthrene, phenanthrene, lead, and other unknown hydrocarbons.

EPA FIT TEAM

~~FCHA~~, Region VIII, FIT, OVA Report - Rose Park and Canals, November 25, 1981. An Organic Vapor Analyzer survey was conducted in August 1981 under warm, sunny conditions. The OVA was calibrated to benzene, toluene, and xylene. Rose

ark Sludge Pit monitoring wells showed an assortment of benzene, methane and other organic volatiles at concentrations up to 41 parts per million (ppm) above background. Fresh sludge from the Rose Park Sludge Pit registered a benzene peak on the OVA with other unidentified volatiles and a total organic vapor concentration of 4.2 ppm above background. OVA readings for the crawl spaces and basements of all homes sampled, and for the basement of Matheson School, were negative for volatile emissions. Sludge material was recognized in the basement of one house on Talley Ho Drive and 1 to 2 inches below the soil in the front yard of a residence on Dupont Street. An OVA reading taken above the Dupont Street sludge registered a methane peak at 194 ppm above background. They concluded that the sludge may be creating a self-liner retarding the migration of organic material and that the concentration of volatiles in the sludge appears to be low. Their results showed no significant problem in the Rose Park area.

FCHA, Region VIII, FIT, North Salt Lake City Canals, Working Paper, March 1, 1982. The canals in the Rose Park Subdivision were accurately located by an electromagnetic conductivity survey conducted by Technos, Inc. The Oil Drain Canal was determined to be approximately 20 feet wide and 10 feet deep with a band of sludge extending beyond the canal width to a total width of about 40 feet. Upon drilling, the sludge material was found at an average depth of 4 feet. The Sewage Canal was determined to be approximately 5 1/2 feet deep and 4 feet wide. Eleven sludge/soil samples were taken from 5 boreholes drilled into the main canal. Ground water was encountered in all boreholes above the level of the sludge. Four additional sludge/soil samples were taken from crawl spaces of homes built over the canal. Analyses of these samples show maximums of lead greater than 5000 ppm, copper at 169 ppm, and arsenic at 105 ppm. Seven of the 12 metals analyzed were present in the ppm range. Nitrate, sulfate and chloride were all present at levels greater than 1%, with sulfate concentration generally exceeding 10%. Only 2 of the samples were run for organic Gas Chromatograph/Mass Spectometry (GC/MS) analyses and only the base neutral compounds were analyzed. Heavy oils interfered with compound identification and recovery such that no quantitative information was obtained for the acid compounds, volatile organics, pesticides or polychlorinated biphenyls (PCBs). Doing a GC/MS analysis utilizing a capillary column in the gas chromatograph was recommended to alleviate this problem for any subsequent analyses of the Rose Park sludges. Some polynuclear aromatic hydrocarbon (PAH) compounds were identified in the ppm range with a maximum PAH concentration of approximately 300 ppm. Due to the poor recovery, this concentration level becomes suspect. PAHs identified include pyrene, fluoranthrene and phenanthrene. A need for further sampling and more complete laboratory analyses was identified. After the extraction on the inorganic portion, 90% of the sludge still remained uncharacterized. This report is included as Attachment B.

UBSHW, Preliminary Assessment (PA), June 24, 1987. This report identifies substances of concern in oil refinery wastes, railroad maintenance shop wastes, and

...ner unknown liquid industrial wastes as potentially including benzene, phenanthrene, ethylpthalate, and pyrene, and cites concentration of pyrene up to 132 ppm and bis 2 ethylhexylphthalate up to 106 ppm. The potential for release to groundwater and air was noted although no migration to these pathways was apparent. Of greatest concern was the on-site exposure to persons residing directly over the canals or to persons attending Matheson School. The site was given a low priority for further study due to the apparently adequate containment of the sludges within the canals.

3.0 SITE CONDITIONS

3.1 GEOLOGY AND SOILS

The site is located on the east bank of the Jordan Valley in the eastern portion of the Basin and Range Physiographic Province, on a down block associated with the Wasatch Fault which trends roughly north-south along the eastern site boundary and the base of the Wasatch Mountains. Tertiary and Quaternary Lake Bonneville sediments consisting of interbedded clay, silt, sand, and gravel underlie the site to depths greater than 1000 feet. The surface sediments consist of: deltaic light-gray and light-brown clay with some sand and silt covering most of the site; alluvial sand to silty-sand, very dark gray to brown, along the flood plain of the Jordan River in the northwest portion of the site; and brown to dark-gray silt and clay dry lake deposits of the old Hot Springs Lake. Several artificial fill areas are present across the site[3].

Soils consist of gray silty-clay loams and silty-clays. The soils have moderately slow permeability and moderate intake of water. Runoff in the area is very slow. A lime accumulation layer commonly occurs at a depth of about 16 inches and some of the soils are affected by salts and alkali[4,5].

3.2 GROUND WATER

An extensive zone of interbedded silt, sand and clay, consisting predominantly of low permeability silt and clay "lenses" underlies most of the Jordan Valley. This zone has been characterized as a low permeability semi-confining layer which separates the ground water in the Rose Park area into 2 distinct portions of the aquifer[5]. The deep, semi-confined portion, which exhibits artesian characteristics, supplies most of the groundwater withdrawals for domestic and irrigation purposes in the site area. No withdrawals on the shallow, unconfined portion of the aquifer have been identified.

The deep, confined portion of the aquifer is the principal source in the Jordan Valley for nearly all ground water withdrawals for municipal, domestic, irrigation, or other uses. Regional flow direction is to the northwest towards the Jordan River and the Great Salt Lake. The potentiometric surface averages a few feet above the ground surface in the Rose Park area. An upward hydraulic gradient and slow discharge through the low permeability

zon... ...o the shallow portion of the aquifer is maintained, reducing and possibly eliminating the immediate potential for contamination of the lower portions[7]. It has been demonstrated, however, that this artesian head can be reversed with an increase in the demand and withdrawal made on the deep portion of the aquifer causing a reversal in the flow direction through the low permeability layer and allowing a potential for contaminants to enter the principal aquifer[8].

The shallow portion of the aquifer is for the most part unused in the area of the Northwest Oil Drain site, nor is it likely to be used even for irrigation purposes due to high natural concentrations of salts, dissolved solids, and other substances derived both from industrial practices in the area and from the inherent nature of the water sources in the area[7]. Depth to the water table varies throughout the area with marked seasonal fluctuations from about 1 to 10 feet below the ground surface[9,10]. Regional flow of the shallow aquifer is to the northwest but fluctuations in the near surface flow in the Rose Park area towards the north, southwest, and east directions have been documented[2]. Possible factors influencing these variations in the flow directions include changes in the recharge/discharge relationship and localized permeability differences due to cultural influences and structural improvements, seasonal effects, and possible natural permeability "anomalies" such as subsurface stream channels or local clay, sand or gravel lenses.

3.3 SURFACE WATER

Most of surface water on the site flows into the Oil Drain canal. The canal joins with the Cudahy Drain and Sewage Canal from the north, siphons under the Jordan River in the northwest corner of the site, joins with the City Drain from the west bank of the Jordan River, and then flows north of northwest as the Salt Lake City Sewage Canal toward Farmington Bay of the Great Salt Lake. These canals are for drain purposes and their waters are not used even for irrigation. The canal terminates in the Farmington Bay Waterfowl Management Area approximately 5 miles from the Jordan River Siphon and 8 miles from the current canal origin north of the Rose Park Subdivision. It should be noted that the names 'Oil Drain' and 'Salt Lake City Sewage Canal' are often used synonymously. The total change in elevation over the length of the canal is approximately 10 to 15 feet[11].

3.4 CLIMATE

The following climatic data were compiled from the Salt Lake City International Airport located approximately 2 miles west of Rose Park. Average annual precipitation at the airport is 15.31 inches, with a mean daily high temperature of 64.1° F and a mean daily low of 32.6° F. Total annual estimated pan evaporation is 83.91 inches with the highest monthly pan evaporation occurring in July, accounting for 15.84 inches of the annual total. The prevailing wind is from a south of southeast to southeast direction at an average velocity of 8.7 miles per hour[12,13].

4.0 SAMPLE COLLECTION

Sampling was conducted by BERR during July, 1990. Five soil samples were collected; 2 from crawl spaces of homes overlying the canal, 2 from locations adjacent to the canals, and 1 from a vacant field for use as background. Eleven sediment samples were collected; 5 from areas where the canals had been buried and 6 from portions of the existing canal. Four surface water samples were also collected from portions of the existing canals and 3 ground water samples were collected from existing shallow wells. Table 1 briefly describes and summarizes the samples which were collected. Figures 2 and 3 show the sample locations.

Three shallow ground water wells, trending from the southeast to the northwest across the southern part of the site were sampled. The exact methods of construction for these wells are unknown. The wells were installed by the U.S. Geological Survey and Salt Lake City Public Utilities as piezometers for measuring water levels and not for measuring water quality. As such, the data obtained may be questionable, but for the purpose of determining whether any increase in contamination to the ground water is occurring, by orders of magnitude, the wells should be suitable. Attachment C shows the detailed locations for the 2 USGS wells and provides the periodic water level measurements for the 3 wells. Water levels were not measured at the time of sampling due to equipment problems. The lack of water levels is not felt to be a problem since any extrapolation of these levels from one well to the next would only be approximate due to the large distance between wells.

Four surface water samples were collected from existing portions of the canal system. Two of these are from canals located in the southeast portion of the site which appear to be tributaries to the Oil Drain. The others were taken from the main trunk of the Oil Drain canal.

Twelve sediment samples were obtained throughout the site, either from existing portions of the canal system or by augering through fill material in defunct sections. Black tarry sludge with a moderate to strong petroleum odor was encountered in the open portions of the canals. In most cases, this material was underlain by gray and brown clayey material. However, in the main trunk of the Oil Drain, the bottom of the black sludge was not encountered within the 3 1/2 foot depth that the sampler penetrated. In portions of the canal that had been filled in, the material that was encountered was generally a gray to brown clay with black to brown streaks or nodules and a weak to strong petroleum odor. Contamination was readily apparent in all sediment samples collected, either visually or by the odor of the material.

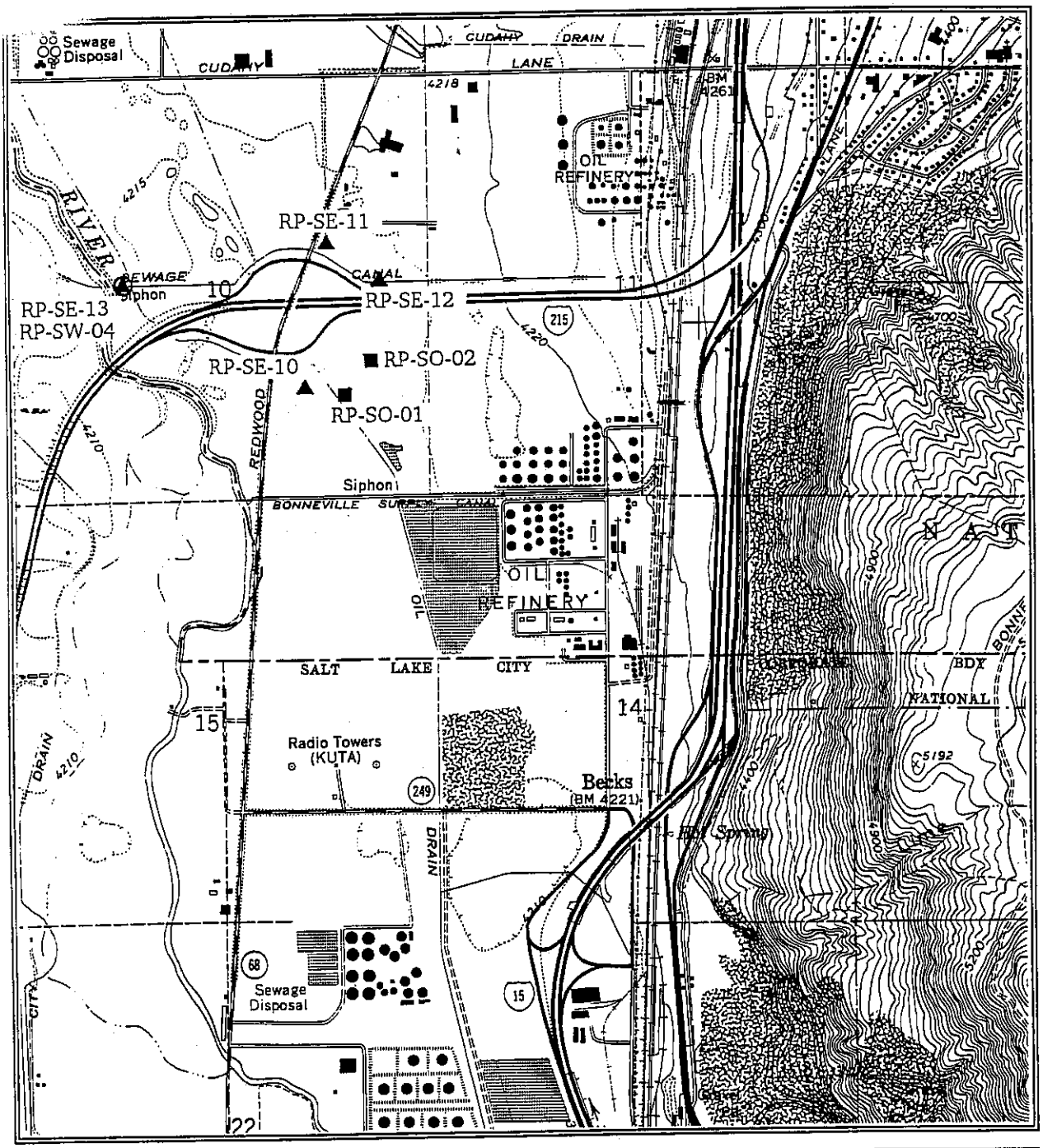
Five soil samples were collected from across the site to determine whether contaminants from the canals are present at the surface. Two of these samples were taken from the crawl spaces of homes directly overlying the canals. Two were collected from surface soils adjacent to the canals. One soil sample was collected from a vacant field for use as

Table 1
SAMPLE SUMMARY

Sample #	Location	Description	RAS or SAS	Splits?
RP-SO-01	Chevron property - Canal bank	Gray-brown to dark-brown soil	RAS	Y
RP-SO-02	Chevron property - Background	Alkali soil	RAS	Y
RP-SO-03	Chandler residence crawlspace	Med. to dark-brown sandy-clay with slight petroleum odor	RAS	N
RP-SO-04	Eastwood residence crawlspace	Description unavailable	RAS	N
RP-SO-05	West frontage road	Gray-brown sandy-loam	RAS	N
RP-SE-01	D&RG Railroad property	Black sludge with moderate petroleum odor	SAS	Y
RP-SE-02	Gibbons and Reed Construction Co. property	Black clayey sludge with moderate petroleum odor	SAS	Y
RP-SE-04	East frontage road	Black tarry sludge, brown oily clay, and gray clay, strong petroleum odor	SAS	N
RP-SE-05	West frontage road	Brown sandy-clay with black streaks, and light-gray clay, moderate to strong petroleum odor	RAS	N
RP-SE-06	Oil Drain Canal near Rosewood Park	Black tarry sludge with strong tarry odor	SAS	Y
RP-SE-07	Same as RP-SE-06	Duplicate	SAS	N
RP-SE-08	1200 West Sewage Canal	Gray silty-clay with brown streaks	RAS	Y
RP-SE-09	South portion of Oil Drain Canal	Black oily sludge	SAS	N
RP-SE-10	Chevron property - Abandoned canal	Description unavailable	RAS	Y
RP-SE-11	Cudahy Drain	Brown clayey sludge, and black oily sludge, moderate petroleum and sewer odor	SAS	N
RP-SE-12	I-215 Sewage Canal	Brown clay, black sludge, and gray clay	SAS	N
RP-SE-13	Oil Drain Canal near Jordan River Siphon	Very wet black sludge with moderate petroleum and sewer odor	SAS	N

Table 1 (continued)
SAMPLE SUMMARY

RP-SW-01	D&RG Railroad property	Clear with abundant algae and tadpoles	RAS	Y
RP-SW-02	East frontage road	Clear with slight oily sheen and abundant algae	RAS	N
RP-SW-03	South portion of Oil Drain Canal	Clear with spots of oily sheen and abundant algae and tadpoles	RAS	N
RP-SW-04	Oil Drain Canal near Jordan River Siphon	Very murky brown to green with abundant green algae	RAS	N
RP-SW-05	Decontamination blank	Carbon-filtered deionized water	RAS	N
RP-GW-01	664 North 400 West	Clear. Background sample	RAS	N
RP-GW-02	1045 Tally Ho Drive	Slighty turbid, "sticky" appearance	RAS	N
RP-GW-03	Rose Park Golf Course	Clear	RAS	N
RP-GW-04	Trip Blank	Carbon-filtered deionized water	RAS	N
RP-GW-05	Same as RP-GW-02	Duplicate sample	RAS	N



NORTH

■ = Soil Sample

▲ = Sediment Sample

○ = Surface Water Sample

⬢ = Ground Water Sample

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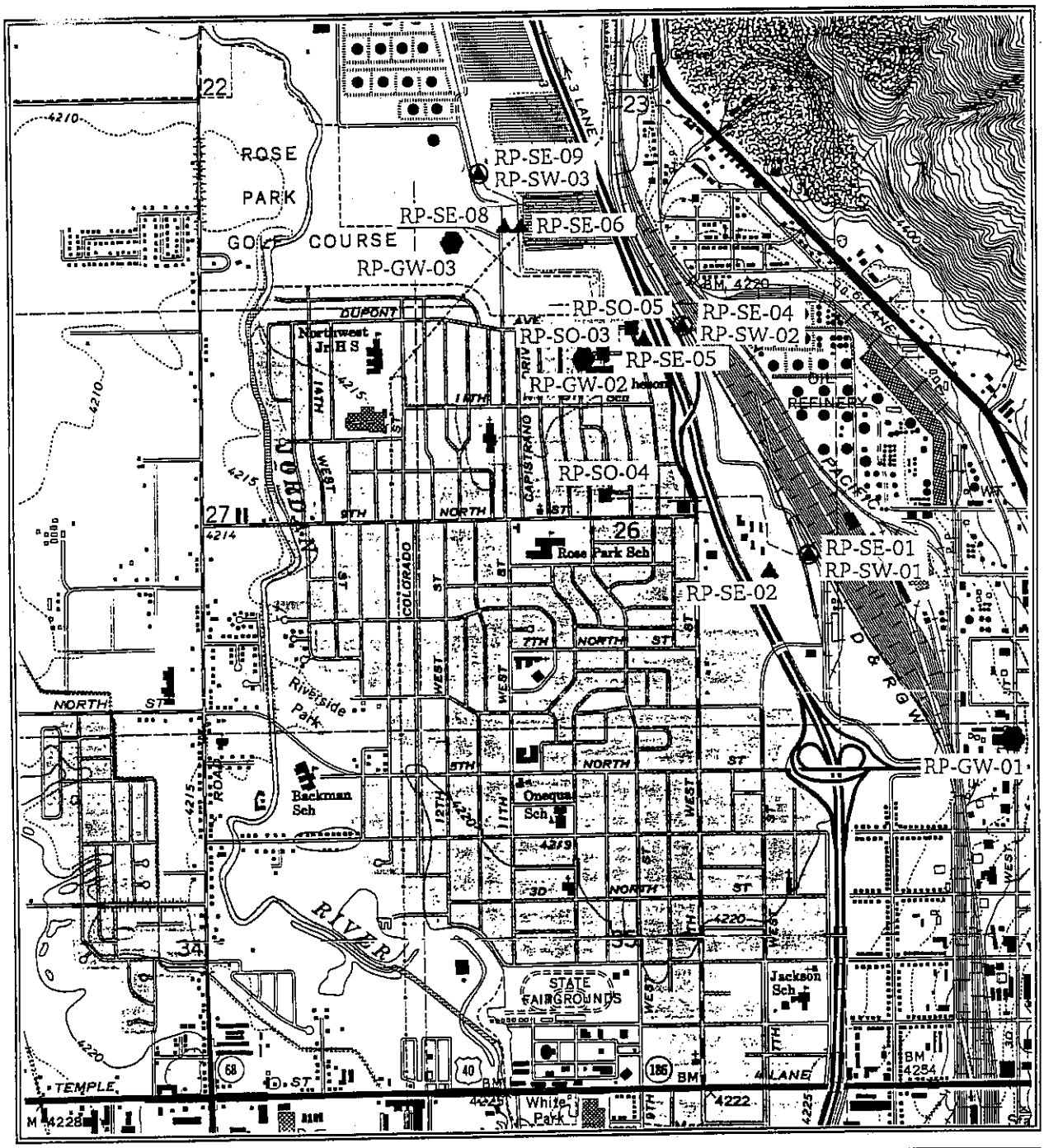
Figure 3

SAMPLE LOCATION - NORTH

Rose Park Canals
Salt Lake and Davis
Counties, Utah

By	Date	Scale
JLK	9/10/90	1:24000

USGS Topo. Base. Salt Lake City, North. 7.5 min. Series



NORTH

■ = Soil Sample

▲ = Sediment Sample

○ = Surface Water Sample

● = Ground Water Sample

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Figure 2

SAMPLE LOCATION - SOUTH

Rose Park Canals
Salt Lake and Davis
Counties, Utah

By	Date	Scale
JLK	9/10/90	1:24000

USGS Topo. Base. Salt Lake City, North. 7.5 min. Series

background. No contamination was visibly evident in any of the soil samples collected. The soils were gray to brown, clay to sandy loam, often with an alkali surface. A slight petroleum odor was noticed in the soil of a crawl space of a residence on Tally Ho Drive upon excavation of about 6 inches. The same location within this crawl space was sampled in 1982 by FIT. They had reported a black sludgy material to be present here, and their analyses reported approximately 90 percent organic material and greater than 5000 ppm lead[14].

5.0 ANALYTICAL RESULTS

From the results of the sampling efforts, several potentially hazardous substances have been identified in the canal sludges. The substance identified are, for the most part, relatively immobile. However, increased contaminant levels in the downstream and downgradient flow directions show that a limited migration of a few contaminants may be occuring through the ground water and surface water pathways.

Materials of concern are organic, oily wastes which had been deposited in the canals over a large number of years[1]. Table 2 summarizes the major substances of concern which were detected for each media. Table 3 lists the organic constituents present in one sample, RP-SE-09, from the Oil Drain Canal which yielded the highest concentration of identified organic material. The materials shown in these tables are typical of most of the samples in which canal sludge was encountered, with the exception of arsenic and selenium, which were detected only in the crawl space of the Tally Ho Drive residence. The significance of the elevated arsenic and selenium in this crawl space is not fully understood, however, both of these substances were detected in ground water, above drinking water Maximum Contaminant Levels (MCLs), or Maximum Contaminant Level Goals (MCLGs), from a monitoring well located 2 houses downgradient from this residence. Selenium was also detected above MCLGs in 3 out of the 4 surface water samples collected. Attachment D contains tabulated analytical results for all the samples collected. Attachment E contains QA summaries for the data and the analytical results for the data in CLP format.

Barium, beryllium, cadmium, chromium, cobalt, copper, lead, mercury, nickel, selenium, silver, vanadium, zinc, and approximately 45 organic compounds were identified in soil and sediment at levels significantly above background soils. Due to the large number of contaminants present in the sludge, they will not be individually listed here. Instead, reference to the appropriate table of Attachment D should be made in the evaluation of each sample and segment of canal.

A background sediment sample was not collected, nor was it deemed appropriate to collect, due to the likelihood that most of the materials that were deposited in the canals were probably deposited in water at the most upstream point, or headwaters, of the canal system. Thus, the canal sludge present may be better classified as a source of contamination, rather than evaluating the sediment as a component of the surface water migration pathway.

NORTHWEST OIL DRAIN
Environmental Investigation

EPA/UDEQ FALL, 1998

Air, sediment, water sampling planned in early October

Indoor air samples will be taken at several residences in the Rose Park community in late September-early October by the U.S. Environmental Protection Agency (EPA) and the Utah Department of Environmental Quality (UDEQ).

The samples are being taken as part of an investigation of the Northwest Oil Drain, a series of historic canals which begin in the vicinity of Rose Park. The agencies will also be taking soil, sediment, and water samples along the length of the canal system, which ends at the Farmington Bay Wildlife Management area.

The Northwest Oil Drain has been the focus of environmental investigations over the years, both because of historical disposal practices and petroleum product spills which have impacted in the canal system. The site is part of an EPA database listing sites which may or may not be contaminated. It is the goal of both EPA and UDEQ to determine if there is a problem which needs to be addressed. If there is, a plan will be developed and submitted for public comment. If there is not, the file will be earmarked "No Further Action."

Why there may be a concern

The canals which make up the Northwest Oil Drain were constructed in the 1920s for the transport and disposal of waste refinery oils, other industrial wastes, sewage, and storm water. Approximately 15 linear miles long, the canals were used extensively through the 1950s. Around that time, a large portion of the southern end of the canals were backfilled and the Rose

Questions? Give one of us a call:

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Renette Anderson, Community Relations -
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Park subdivision was constructed. Aerial photos and previous environmental investigations show the location of the canal in the neighborhood. Approximately 30 homes and the Matheson school were built directly above the main branch of the canal (see map).

Previous testing along the Northwest Oil Drain suggests that only main canal has been impacted by surface and below surface petroleum product spills from nearby industries. It is believed that, below the residential area, the main canal contains a layer of sludge approximately 20 feet wide and several feet thick. If you are one of these 35 homes, you may have encountered this sludge in either your open crawl space or if you have dug deep holes (4-10 feet) in your yard.

Scientists are concerned about the potential for public exposure because the sludge contains heavy metals, including lead, arsenic, chromium, and copper. The sludge also contains organic compounds, most notably polycyclic aromatic hydrocarbons or PAHs. Studies have shown that long term exposure to these contaminants may increase an individual's potential risk of developing cancers.

Why we are sampling now

EPA and UDEQ want to see if the Northwest Oil Drain is impacting indoor air quality in the Rose Park community. To answer that question, air samples will be taken in the crawl spaces of at least three homes directly atop the buried canal and from the Matheson school. Three homes way from the canal will be sampled for comparison.

Water and sediment samples will also be taken in the area of Rose Wood Park, in portions of the canal to the north, and in the Farmington Wildlife Management area. These results will be used to determine if contaminants have moved along the canal toward the Great Salt Lake.

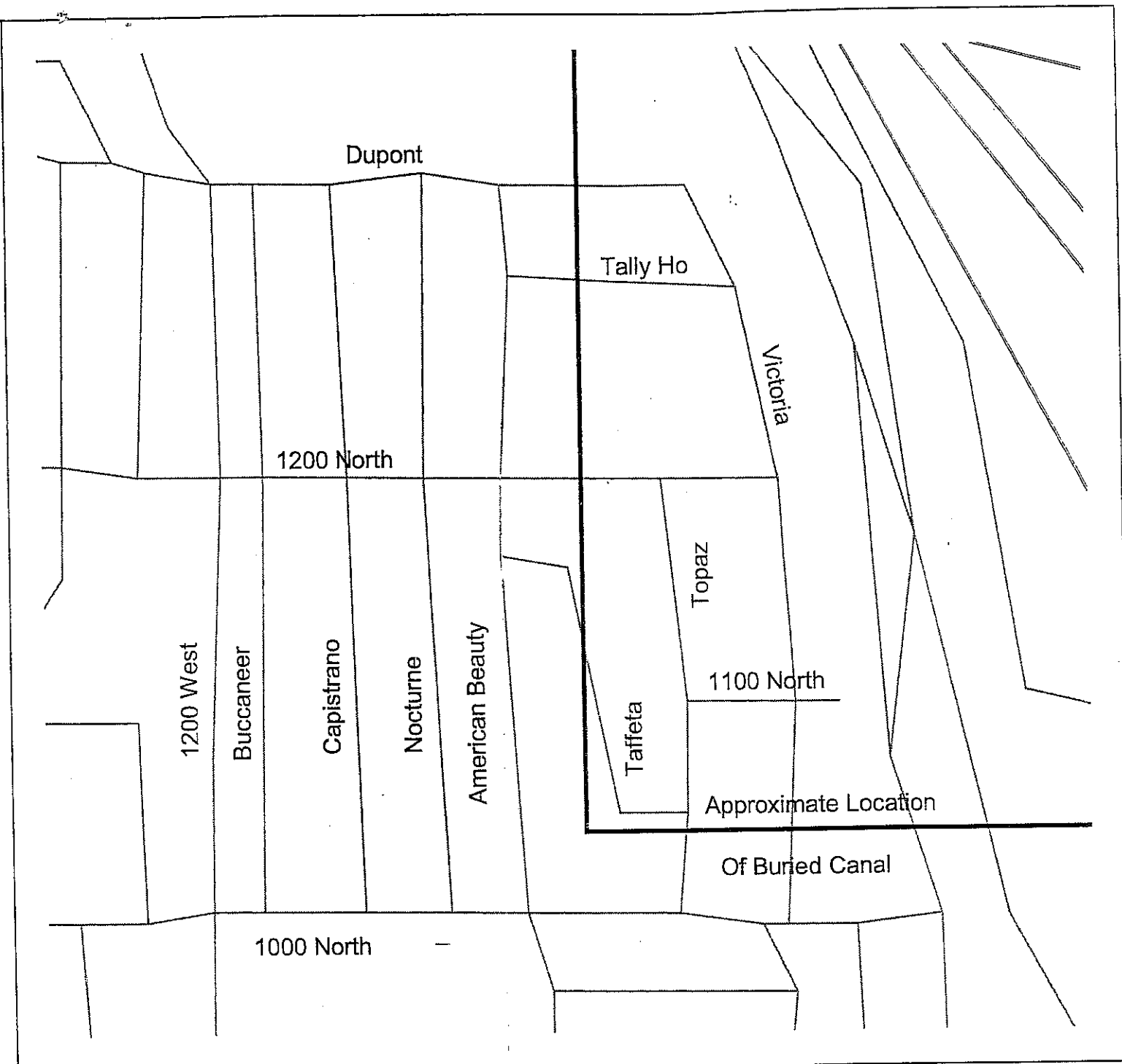
What to expect

State of the art technology will be used. These instruments will be able to measure very low levels of potential volatile and semivolatile organic compounds. These new instruments are able to detect contamination at a much lower level than the instruments which were available and used in the earlier investigation.

EPA and UDEQ are working with homeowners in the area to identify residents who are willing to participate. Homeowners were sought who:

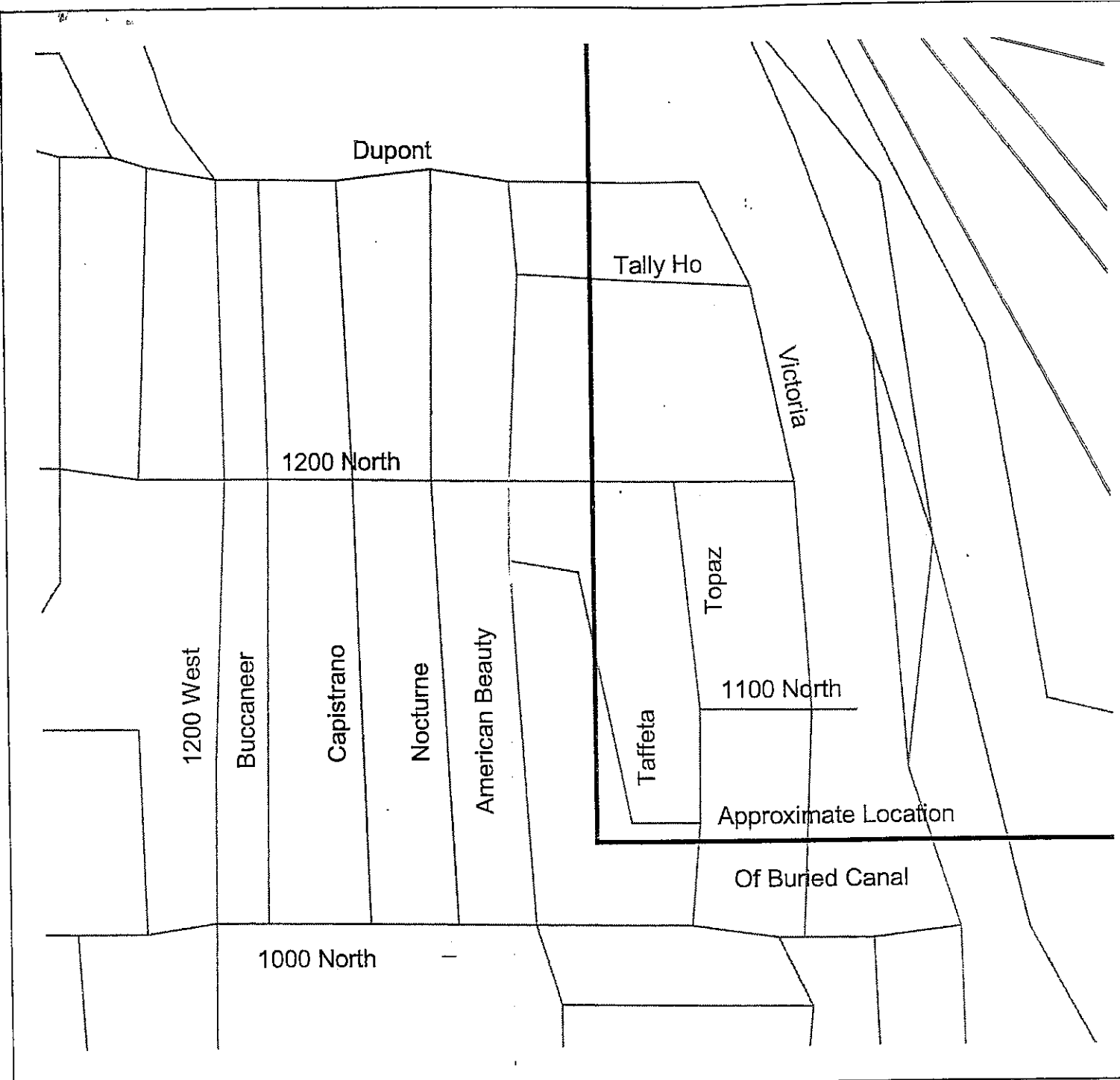
1. Live in close proximity to the buried portion of the canals
2. Have a crawlspace or a basement
3. Are willing to sign an access agreement allowing the agencies to conduct the sampling.

Prior to sampling, homeowners will be asked to fill out a questionnaire. It will help scientists identify other sources for these compounds which may be in the home. For example, the presence of gas stoves, gas water heaters, solvents, cleaning fluids, recently painted surfaces, and newly-installed carpet can all contribute to detectable concentrations of organic chemicals.



Rose Park Residential Neighborhood

Indoor Air Sampling Study Area



Rose Park Residential Neighborhood

Indoor Air Sampling Study Area

Homeowners will not need to do anything special to accommodate the sampling. They will be asked to maintain normal living conditions. A small monitor, about half the size of a gas barbecue's tank, will be placed in the crawl space to collect samples over a short period of time - ranging from a few hours to a few days. Samples will then be sent to a lab for analysis. The results, including an explanation of what they mean, will be provided to the individual homeowners and generally to the community as soon as possible once the analysis is completed.

Public Involvement - Keeping you informed

The sampling is being conducted as a Site Assessment under the Federal Superfund program. A Public Information Repository, which contains documents related to the site, has been established at the Day-Riverside Branch Library, 1575 W. 1000 North. Fact sheets, such as this one, will be distributed to interested residents as more information becomes available. The fact sheets will also explain opportunities for public involvement throughout the process. Public Involvement contributes to sound decisions and assures better identification of public health or environment concerns.

If you would like to be included on a mailing list, please contact Nancy Mueller, EPA Community Involvement Coordinator, at 1-800-227-8917.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
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http://www.epa.gov/region08

December 23, 2002

The Environmental Protection Agency (EPA), in conjunction with the Utah Department of Environmental Quality (UDEQ), the United States Fish and Wildlife Service (USFWS), and the Northwest Oil Drain Working Group (Salt Lake City Corporation (City), Salt Lake County, BP Amoco and Chevron Products Co.) has completed the Northwest Oil Drain canal investigation. A strategy has been developed to remove contamination found in the canal north of the Rose Park neighborhood in Salt Lake City, Utah. This letter briefly describes the history and location of the canal, the environmental investigations conducted at the site, and the proposed clean-up strategy for the canal.

The Northwest Oil Drain canal is a set of canals constructed in the 1920s for the transport of industrial and municipal wastes and storm water. Today the canal consists of four sections:

1) A three-quarter mile section of canal paralleling the western edge of the Union Pacific Rail Yard (this section of the canal is being investigated independently by Union Pacific Railroad.)

2) A filled in portion of the canal passing beneath I-15 and continuing beneath the Rose Park neighborhood. Indoor air samples and soil/sludge samples were collected in and around homes in 1998. EPA determined that the soil/sludge beneath the homes and the school do not pose a respiratory health risk. However, EPA does recommend covering crawlspace floors with plastic sheets and using plastic/rubber gloves if home owners encounter or handle the soil/sludge material.

As part of the 1998 sampling event, groundwater samples were collected and test results indicated that groundwater was not being adversely affected by the soil/sludge remaining in the filled in portion of the canal.

3) A predominantly dry, approximately one quarter-mile long, section of the canal is located just north of the Rosewood Park tennis courts, extending to the wastewater treatment plant outfall at Boy Scout Drive.

4) A 8.6 mile length of canal beginning at the wastewater treatment plant outfall at Boy Scout Drive extending through largely unpopulated, undeveloped land to the Farmington Bay Waterfowl Management Area. This segment of the canal is the primary focus of this letter.

In 1998 EPA collected soil/sludge samples in the 8.6 mile length of canal beginning at Boy Scout Drive extending to the Farmington Bay Waterfowl Management Area. In 2001 the Northwest Oil Drain Working Group collected additional samples to determine the best way to address the contamination. The results from the sampling events indicate that the canal contains high to moderate levels of Total Petroleum Hydrocarbons (both diesel and gasoline residuals), oil and grease and total lead. The study results also suggest that plants and animals living in or near the canal are potentially at risk from the harmful chemicals found in the soil/sludge.

Based upon the results of the 1998 and 2001 studies the Northwest Oil Drain Working Group evaluated seven clean-up options to address the 86,000 cubic yards of contaminated soil/sludge. After studying the seven options, EPA, UDEQ, USFWS and the Working Group recommend the following clean-up approach:

- Remove, Dewater, and Dispose of the Material at a Regulated Landfarm Facility

  This clean-up option applies to the heavily contaminated material found in the first two and three-quarter miles of the canal beginning at Boy Scout Drive to approximately I-215 and Redwood Road.

  This approach involves removing the soil/sludge from the canal, draining the material (dewatering), and then trucking/shipping the material off-site to a regulated landfarm facility where it will be treated to reduce contamination levels.

- Remove, Sidecast and Dispose Locally

  This clean-up option applies to the lesser contaminated material found just north of I-215 and Redwood Road and continuing to the Farmington Bay Waterfowl Management Area.

  This approach involves removing the soil/sludge from the canal and placing the material near the banks of the canal. The soil/sludge would be mixed, tilled or graded into the range and agricultural land adjacent to the canal.

- Backfill the Non-Flowing Section of the Canal

  This portion of the project consists of filling in the Non-Flowing Section of the canal located just north of the Rosewood Park tennis courts with clean fill material.

The cost for this work is conservatively estimated to be five point one million dollars. EPA believes that this proposed removal action is protective and cost effective. The clean-up is being funded by the Working Group.

A copy of the document used to make this recommendation is available in the Riverside Public Library. The document is titled, "Northwest Oil Drain Draft Engineering Evaluation/Cost Analysis (EE/CA), December 16, 2002." A public notice was published in the Salt Lake Tribune and Deseret News on December 17, 2002 announcing the availability of the document and the beginning of the 30 day public comment period. On January 8th, 2003 an open house will begin at 6 P.M. at the Utah Department of Environmental Quality, 168 North 1950 West, Room 101, Salt Lake City, Utah. Immediately following the open house (at approximately 7 P.M.) a public meeting will begin to address formal comments. If you are unable to attend the meeting on January 8th you are encouraged to send written comments to Russ Leclerc, RPM, 8EPR-SR, U.S. Environmental Protection Agency, 999 18th Street Suite 300, Denver, CO. 80202, with a copy mailed to Vicki Bennett, Salt Lake City Corporation, 451 S. State Street, Room 145, Salt Lake City, Utah 84111. Comments can also be e-mailed to leclerc.russell@epa.gov and nwodgroup@yahoo.com. Comments must be submitted by January 17th, 2003

If you have any questions or comments regarding the contents of this letter or the cleanup, please call Russ Leclerc, EPA Remedial Project Manager, at 1-800-227-8917 extension 6693 or Jason Murdock, UDEQ Project Manager at 801-536-4238. If no significant adverse comments are received, cleanup work is planned to begin in late spring of 2003 and should be completed by the winter of 2003. EPA will continue to keep you informed of our progress and plans.

Sincerely,

Russell C Leclerc

Russ Leclerc
Remedial Project Manager

DEPARTMENT OF ENVIRONMENTAL QUALITY
DIVISION OF SOLID AND HAZARDOUS WASTE

Michael O. Leavitt
Governor
Dianne R. Nielson, Ph.D.
Executive Director
Dennis R. Downs
Director

288 North 1460 West
P.O. Box 144880
Salt Lake City, Utah 84114-4880
(801) 538-6170
(801) 538-6715 Fax
(801) 536-4414 T.D.D.

6/26
FYI.
From: [illegible]

DERR
ENVIRONMENTAL RESPONSE & RE
ENTERED
JUN 16 1995
BY

June 9, 1995

Robert L. Spicer
Stonebrook Real Estate, Inc.
8757 South Highland Drive
Sandy, Utah 84093

Re: Brinkerhoff Property, 1510 West 2300 North, Salt Lake City, Utah

Dear Mr. Spicer:

My staff has reviewed your May 12, 1995 letter concerning the Brinkerhoff Property and reviewed the information in the Division's file. The sampling conducted by Ecology and Environmental (E & E) for the Environmental Protection Agency, Emergency Response Branch (EPA\ERB) reports field screening 16 random samples for lead using an XRF (X-Ray Fluorescence) instrument. E & E selected four samples, from the locations that had the highest XRF concentrations, for Toxicity Characteristic Leaching Procedure (TCLP) anaylsis. It appears that the sampling activity conducted by the EPA\ERB found that lead concentrations were elevated and that one of four TCLP samples exceeded the regulatory limit of 5 mg/l. Please be advised XRF is used to field screening samples for gross contmaination and that using the TCLP results as the basis for a no further action decision may be valid in determining whether a removal action is warranted, but is not valid if used to evaluate whether the lead contamination poses a threat to human health or the environment.

The purpose of a TCLP analysis is to determine whether a solid waste is hazardous as defined by R315-2 of the Utah Administrative Code. The regulatory levels established by the TCLP testing method were designed to protect groundwater resources, it is not appropriate to use these values to determine whether a potential risk to human health or the environment exists.

The EPA recently published a **draft** Soil Screening Guidance which proposed a screening level for lead at 400 mg/l. The soil screening level for lead is based on EPA's Revised Interim Soil Lead Guidance for CERCLA Sites and RCRA Corrective Action Facilities, OSWER Directive #93355.4-12. It is important to note that this screening level is based on total concentration not TCLP. If the XRF data are reviewed we find that the average lead concentration at the Brinkerhoff Property is 2262 mg/l. This level is clearly above

UTAH CENTENNIAL 1896-1996

the aforementioned screening level.

Your letter asked what the Division's position is on this residue contamination. The Division views the site as appearing to have high levels of lead contamination which may be a characteristic hazardous waste if excavated. If the contaminated material is left in place the Division does not have any regulatory authority to require its removal. The Division does have concerns about the validity of the decision made by EPA, because it appears that EPA's decision was based on the TCLP analysis.

In a separate letter to Mr. Ralph Bohn you indicated that Workman Construction has finalized a plan with Salt Lake City to "land fill" this property with inert materials such as concrete, bricks, rocks and dirt. Please be advised that using "inert material" as fill is not regulated under the Solid and Hazardous Waste Control Act. Asphalt and contaminated soil are not inert and cannot be used as fill. If the inert material being deposited on this property is not being used as fill it would not enjoy an exemption from the rules and the disposal operation may require a permit from the Division.

If you have additional questions or require further assistance, please contact Bill Wallner at 538-6170.

Sincerely,

Dennis R. Downs, Executive Secretary
Utah Solid and Hazardous Waste Control Board

DRD\WMW\bw
f:\...\spicer.let
June 6, 1995

Mary Pat Buckmaster
Salt Lake County

c: Kent Gray, DERR
Robert L. Duprey, U.S. EPA, Region VIII
Thomas L. Schlenker, M.D., M.P.H., Health Officer/Department Director
Salt Lake City/County Health Department

FILE COPY

State of Utah

DEPARTMENT OF ENVIRONMENTAL QUALITY
DIVISION OF ENVIRONMENTAL RESPONSE AND REMEDIATION

Michael O. Leavitt
Governor
Dianne R. Nielson, Ph.D.
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(801) 536-4414 T.D.D.

ERRC-363-94

August 17, 1994

Mr. Clyde Reaveley
2175 Evergreen Avenue
Salt Lake City, Utah 84109

Re: Radio Station Property

Dear Mr. Reaveley:

The Utah Department of Environmental Quality has received and reviewed the letter you received from the U.S. Environmental Protection Agency dated April 21, 1994. As the implementation of Superfund actions lies with the Federal government, the State Division of Environmental Response and Remediation (DERR) has no authority to compel a Superfund cleanup at the property. If the property owner chooses to conduct cleanup on their own, a voluntary agreement with DERR should be developed to ensure adequate cleanup activities.

If you have any further questions regarding this matter, please contact J.D. Keetley at (801) 536-4130.

Sincerely,

for Brad T Johnson, CERCLA Branch Manager
Division of Environmental Response and Remediation

BTJ/JDK/js

cc: Dennis Downs, Director, UDSHW
Desiree Campbell, U.S. EPA, Region VIII
Thomas Schlenker, M.D., M.P.H., Salt Lake City/County Health Department
Sun Mountain Broadcasting, Inc.
Mrs. Keith Brinkerhoff

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION VIII
999 18th STREET - SUITE 500
DENVER, COLORADO 80202-2466

APR 21 1994

Ref: 8HWM-SR

Allan W. Flandro and
Clyde W. Reaveley
2075 Parleys Canyon Boulevard
Salt Lake City, Utah 84109

Karen Silver
Salt Lake Community Action Program
764 South 200 West
Salt Lake City, UT 84101

Mrs. Keith Brinkerhoff
807 2nd Avenue
Salt Lake City, UT 84103

Stuart E. Hunt
Sonnenschein, Nath & Rosenthal, counsel for
Sun Mountain Broadcasting, Inc.
1301 K Street N.W.
Suite 600, East Tower
Washington, D.C. 20005

RE: Radio Station Properties
Salt Lake City, Utah

Dear Mssrs. Flandro, Reaveley, and Hunt, Ms. Silver and Mrs. Brinkerhoff:

With this letter I am transmitting a report on the January, 1994 U.S. Environmental Protection Agency (EPA) sampling at the properties known as "Radio Station Properties," parcels of which are owned by Sun Broadcasting, Mssrs. Flandro and Reaveley, and Mrs. Brinkerhoff. In response to letters from the property owners, EPA undertook the sampling investigation documented in the attached report. Previously, EPA had conducted a Preliminary Assessment and Site Inspection on the same properties, which also involved sampling. These results are presented in the "Field Activities and Analytical Results Report for Petrochem/Ekotek Plant" (June 14, 1990) and can be viewed at the Utah Department of Environmental Quality's offices by contacting J.D. Keetley at (801) 536-4130.

As indicated in the attached report, four soil samples were taken at the properties and analyzed for toxicity characteristic leaching procedure (TCLP) analysis for metals, volatiles, and semivolatiles according to EPA standard procedures. TCLP analysis indicates what amount of a constituent could leach out of the soil under certain conditions. No volatiles or semivolatiles were detected, and small amounts of barium, cadmium

and chromium were detected at concentrations less than 1/20 of the TCLP regulatory levels (see 40 CFR Section 261.24). Significant amounts of lead were detected in all four samples and one sample failed TCLP for lead with a detected concentration of 6.47 mg/L. The TCLP regulatory level for lead is 5 mg/L. This means that by the TCLP test, that sample tested positive for the RCRA-hazardous toxicity characteristic and may be considered RCRA hazardous waste.

EPA has concluded its investigation of the Radio Station properties. As a result, EPA does not plan on taking any further action with respect to these properties. There are three primary bases for this decision. First, EPA's site assessment staff have determined that the properties do not qualify for placement on the National Priorities List (NPL). The NPL determines priorities on a national level for cleaning up sites. Second, because there are currently no human receptors, EPA's emergency response staff have determined that there is an insufficient threat to human health for EPA to conduct a time-critical removal action. It is not EPA's policy to conduct non-time critical removal action at properties which are not NPL-caliber.

Third, letters from the property owners (9/14/93 from Flandro & Reaveley, 1/12/94 from counsel for Sun Broadcasting) request that this property be investigated and perhaps cleaned up in connection with the Petrochem/Ekotek Superfund site. These properties cannot be tied into the Petrochem Superfund site and its investigation and clean-up for several reasons.

For NPL listing purposes, EPA has decided that in most cases sites should be scored individually because the scores would more accurately reflect the relative priority given to the site if the site is scored alone. In some exceptional cases, however, the nature of the operation that created the release or the nature of the probable appropriate response may indicate that two or more noncontiguous releases should be treated as one site for NPL purposes (EPA regional guidance for NPL candidate sites, publication 9345.1-08 12/91).

EPA policy with respect to aggregation of site cleanups is published in the Federal Register at 49 FR 37076. This policy lists factors which may be used among others by EPA in determining if two or more facilities or sites should be aggregated, and addressed as one site. These factors are:

1) Whether the releases are part of the same operation or unit. This might indicate a single cleanup strategy. In addition, potentially responsible parties (PRPs) would generally be the same for the releases, indicating that enforcement or cost recovery efforts could be very similar and might be consolidated.

2) Whether contamination from the releases is threatening the same media (for example, the same part of the ground

water or surface water body).

3) The distance separating the noncontiguous releases and whether the target populations are essentially the same or substantially overlapping.

The Radio Station properties are contaminated because of an essentially different operation than that which created the Petrochem Superfund site. Because the alleged dumping occurred in the 1970s, an almost entirely different group of PRPs is involved (the majority of PRPs at Petrochem sent waste to Petrochem in the 1980s). Different media are affected and different populations are potentially targeted between Petrochem and the Radio Station properties. A different type of remedial action would be required since the wastes and contamination are different. In addition, the affected media are not the same. Finally, it is not Agency policy to combine non-NPL caliber facilities (Radio Station properties) with NPL-caliber facilities (Petrochem), because the one overall score would be misleading.

For the above reasons, EPA has determined it is not appropriate to combine response actions at Radio Station properties with ongoing PRP and EPA actions at Petrochem. As noted above, the Radio Station properties area was evaluated on its own merit, and EPA will not be taking any further individual action on it.

This decision does not preclude individual property owners from arranging for your property to be investigated and cleaned up in a private action. In addition, the law allows for so-called "third-party" lawsuits against other private parties you believe are responsible for contamination at your properties. EPA cannot bring such a lawsuit on your behalf. You should also be aware that landowners may be liable under CERCLA section 107(a) for costs incurred during investigation or remediating the properties under CERCLA authorities.

If you have any questions regarding the information in this letter, or the report, please call Desiree Campbell of my staff, at (303) 293-1533, or have your attorney call Jim Stearns at (303) 294-7197.

Sincerely,

Robert L. Duprey, Director
Hazardous Waste Management Division

SITE INSPECTION PRIORITIZATION
PRELIMINARY PATHWAY ANALYSIS REPORT

RADIO STATION PROPERTY
CERCLIS ID #UTD988066031

Prepared For:

U.S. ENVIRONMENTAL PROTECTION AGENCY
REGION VIII

CONTRACT NO. 68-W9-0025

WORK ASSIGNMENT NUMBER: 32-8JZZ

September 24, 1993

MORRISON KNUDSEN CORPORATION
Environmental Services Division
7100 East Belleview Avenue, Suite 300
Englewood, Colorado 80111

1.0 INTRODUCTION

This Site Inspection Prioritization (SIP) Preliminary Pathway Analysis Report is prepared in partial fulfillment of Work Assignment Number 32-8JZZ issued to Morrison Knudsen Corporation, Environmental Services Division (MK) by the Region VIII office of the U.S. Environmental Protection Agency (EPA) under ARCS Contract Number 68-W9-0025.

The Radio Station Property site in Salt Lake City, Utah, EPA ID# UTD988066031, is the subject of this SIP. A completed Preliminary Assessment Worksheet is included as Appendix A of this report.

2.0 SITE DESCRIPTION

2.1 Site Location

The Radio Station Property (RSP) is located at 1500 West 2300 North in the northwest corner of Salt Lake City, Utah. The site is bounded by Redwood Road on the west, 2300 North on the south, the Oil Drain Canal on the east and the Salt Lake City boundary on the north. Most of the site lies in the NE ¼ of the SE ¼ of Section 15, T. 1N., R. 1W., Salt Lake Principal Meridian, Salt Lake County (see Figure 1).

The RSP consists of 48 acres and three properties. The largest portion of the site is owned by Sun Mountain Broadcasting, Inc. (SMB), which owns and operates KISN radio. The eastern edge of the site, consisting of 4.96 acres, is owned by Ms. Afton Brinkerhoff. Mr. Clyde Reaveley owns a small triangular piece of property covering 0.38 acres between the SMB property and the Brinkerhoff property. The location of each property is indicated in Figure 2 (Utah Department of Health (UDH) Sampling Plan, 7/17/90).

2.2 Site History

Between 1976 and 1978, 30 piles of spent sludge were deposited at the site. The sludge was generated at the Flinco, Inc. oil refinery at 1628 North Chicago Street in Salt Lake City. Flinco changed its name to Bonus International. Bonus recycled waste oils using an acid-clay (diatomaceous earth) process. The spent clays were neutralized with lime. A subsidiary of Bonus International, Economy Enterprises, disposed of the filter clays. Both of these firms were sold to Alex Johnson, Inc. in 1978. Mr. Johnson formed Ekotek of Delaware which later became Ekotek of Utah (Sonnenschein Nath & Rosenthal; UDH Sampling Plan, 7/17/90).

The clay and sludge piles are confined to the eastern end of the site and cover most of the Reaveley and Brinkerhoff properties and less than 5 acres of the SMB property. The site also contains debris piles consisting of broken concrete, scrap lumber, brick and a few 55-gallon drums containing a light brown, sludge-like material (UDH Sampling Plan, 7/17/90).

SMB maintains an office and two radio towers at the site. In 1985, SMB purchased part of the RSP from Carman Corporation and Clyde Reaveley sold part of his property to the Brinkerhoffs. The site was flooded by the rising waters of Great Salt Lake from 1985 to 1987 UDH Sampling Plan, 7/17/90).

The Utah Bureau of Solid and Hazardous Waste (UBSHW) visited the site in September, 1980. The UBSHW and the Salt Lake City/County Health Department conducted a joint inspection of the site in October, 1988. Draft and revised Preliminary Assessments were completed for the site by the UBSHW on November 30, 1988 and April 25, 1989, respectively. The Utah Department of Environmental Quality, Division of Environmental Response and Remediation conducted a site investigation in April, 1991 and completed an Analytical Results Report (ARR) on September 12, 1991.

Since the site investigation in April, 1991 midnight dumping at the site has been reported and investigated by the Utah Attorney General's Office. In March, 1990 monitoring wells and piezometers were installed at the site by James M. Montgomery Consulting Engineers, Inc. on behalf of SMB (Utah Department of Environmental Quality (DEQ) Field Activities Report, 7/17/91 and ARR, 9/12/91).

2.3 Site Characteristics

2.3.1 Geology and Hydrogeology

The site is situated on a lowland plain of the Jordan River Valley, which is also known as the Salt Lake Valley. This valley lies within the Basin and Range physiographic province. The valley is bounded on the west by the Oquirrh Mountains, and by the Traverse and Wasatch Mountains on the south and east, respectively. The site is underlain by over 2,200 feet of valley fill deposits consisting of gravel, sand, silt and clay. The valley fill resulted from lacustrine, glacial, alluvial, floodplain, ash fall, lava flow and mud rock flow deposits (Water Circular #3; Summary of Water Resources for Salt Lake County; Ground Water Resources and Simulated Effects of Withdrawals in the Bountiful Area).

3.0 WASTE CHARACTERISTICS

3.1 Hazardous Waste Sources

The waste source areas include the sludge piles and the drums of sludge-like material that are part of debris piles. The boundaries of individual piles have not been determined, but the boundaries for the aggregation of all 30 piles in shown in Figure 2. All of the drums were reported as being in "poor" condition. The file did not have any further data about the condition of the drums (UDH Sampling Plan, 7/17/90).

3.2 Previous Sampling Inspections

The UBSHW sampled sludge piles at the site in September, 1980. In April, 1991 the Utah DEQ, DERR sampled soil, sediment, sludge, surface water and ground water at the site. Analytical results for the seven sludge samples collected are presented in Table 1 (Utah DEQ Field Activities Report, 7/17/91).

3.3 Known and Suspected Contaminants of Concern

Nine, four and eight organic compounds were detected in sludge samples SL-3, SL-5 and SL-7, respectively. The concentrations of semivolatile and pesticide compounds detected in SL-3, SL-5, SL-7 were less than the detection limits specified for these compounds in SL-1, SL-2, SL-4 and SL-6. All of the organic compounds detected in the sludge samples, except for toluene in SL-3, are flagged with "J" data qualifiers, which indicate that the numeric values are estimates. The detection limits for semivolatile and pesticide compounds in samples SL-1, SL-2, SL-4 and SL-6 were three magnitudes of order higher than contract required detection limits for environmental samples.

All of the sludge samples contained aluminum, barium, beryllium, chromium, copper, iron, lead, manganese, sodium and zinc. High concentrations of aluminum, iron and lead were detected. The concentrations of barium, zinc and manganese were less than 1,000, 300 and 75 ppm, respectively. Copper concentrations ranged from 9.6-42.4 ppm. Low levels of chromium, and a trace of beryllium were also detected (Utah DEQ Analytical Results Report, 9/12/91).

Analytical results from sludge samples collected in September, 1980 by the UBSHW are presented in Table 2. Trace levels of Lindane were present in samples UK-1, UK-2 and UK-3. Trace levels of methoxychlor and endrin were also detected in UK-2. Sample UK-2 contained the highest metals concentrations (UDH Activity Report, 9/10/80).

3.4 Waste Quantity

The Site Inspection Report form completed by the Utah DEQ on August 29, 1991 states that 3,500 cubic yards of sludge, 1,000 cubic yards of oily waste and 4,000 cubic yards of heavy metals are present at the site. The Draft Analytical Results Report by the Utah DEQ states that there is a combined quantity of 7,000 cubic yards of sludge and oily waste present at the site. Neither of these sources contain an explanation of how these volumes were derived or show waste quantity calculations.

The clay and sludge piles cover most of the Reaveley and Brinkerhoff properties and less than 5 acres of the SMB property. The total area covered by the piles is a maximum of 10.34 acres.

4.0 GROUND WATER MIGRATION PATHWAY

4.1 Waste Source Containment

The sludge piles were dumped directly on the ground surface. The drums of sludge-like material were said to be in poor condition by the UDERR. There is no mention in the file material of liners beneath the sludge piles and drums, or of any containment systems for these waste sources.

4.2 Likelihood of Release

Water levels in the six piezometers and five monitoring wells were measured on March 22, 1990, and on April 21 and May 20, 1991. Ground water elevations for these dates are presented in Table 3. Ground water elevation maps for these dates are shown in Figures 4, 5 and 6.

The March, 1990 water level data indicate that MW-1 is upgradient, MW-5 is downgradient and the general direction of ground water flow is to the west toward the Jordan River. The April and May, 1991 data indicate a different flow pattern, however. In April, MW-2 and MW-3 had the lowest ground water elevations in the monitoring wells. Piezometer BH-4 had the lowest elevation while BH-2 and BH-3 had the highest. A cone of depression was centered around BH-4 and MW-2 appears to be the most downgradient well. The May data also indicate a cone of depression centered at BH-3 with MW-4 as the upgradient well. Without more recent water level data, the differences in ground water flow direction in 1990 and 1991 preclude the determination of upgradient and downgradient wells for HRS purposes (Utah DEQ Field Activities Report, 7/17/91).

The confining bed and upward hydraulic pressure in the underlying artesian system may limit or prevent the vertical migration of contaminants from the shallow aquifer near the site.

4.3 Contaminants of Concern

The ground water pathway contaminants of concern are Aroclor-1248, aluminum, arsenic, barium, copper, lead and manganese.

4.4 Available Data Documenting a Release

Well MW-1 and MW-2 are located between the sludge piles and the Oil Drain Canal. MW-4 is located immediately west of the southern sludge pile. MW-3 is immediately west of the northern sludge pile. MW-5 is the farthest distance of any well from the sludge piles. Analytical results for samples collected from the five monitoring wells are presented in Table 4.

Well MW-4 contained elevated concentrations of aluminum, barium, copper and lead relative to the other wells. The concentrations of manganese in MW-4 and MW-5 were elevated relative to the levels in MW-1, MW-2 and MW-3. The concentration of arsenic in MW-3 is greater than three times the level detected in any other well. Three organic compounds were detected in MW-3. 4,4-DDE and gamma-Chlordane were detected at levels below contract required detection limits. MW-3 contained 1.7 ppb of Aroclor-1248. No organic compounds were detected in the other wells (Utah DEQ Analytical Results Report, 9/12/91).

The analytical data indicate that heavy metal concentrations are elevated at MW-4 and that arsenic and manganese at elevated at MW-3 and MW-5, respectively. Using these data for an observed release, however, is problematic because of the difference in ground water flow direction in 1990 and 1991. MW-3, MW-4 and MW-5 all appear to be downgradient in March, 1990. In April and May, 1991, however, ground water elevation data indicate that these wells are hydraulically upgradient.

4.5 Targets

The locations of municipal supply wells within a 4 mile radius of RSP are shown in Figure 1. Location, depth and service population data for each municipal well is shown in Table 5.

proportion by the population for each tract as given in the 1990 Census of Population and Housing for Utah. The census tract areas included within each distance category were estimated by examining topographic maps. The estimated population for each distance category is given below:

0 to ¼ Mile:	5
¼ to ½ Mile:	274
½ to 1 Mile:	842
1 to 2 Miles:	7,681
2 to 3 Miles:	17,553
3 to 4 Miles:	21,558

A National Wetland Inventory map of the Salt Lake City North quadrangle indicates that there are numerous palustrine, emergent wetlands within 4 miles of the site. The estimated acreage of this type of wetlands in each target distance category is given below (USF&WS):

0 to ¼ Mile:	6
¼ to ½ Mile:	20
½ to 1 Mile:	30
1 to 2 Miles:	224
2 to 3 Miles:	640
3 to 4 Miles:	1,100

8.6 Data Gaps

The current vegetative status of the sludge piles is not known.

9.0 SUMMARY

The Radio Station Property at 1500 West 2300 North in Salt Lake City, Utah consists of three properties covering 48 acres. Spent filter clay sludges from a waste oil recycling process were deposited on-site between 1976 and 1978. These waste piles cover most of the Reaveley and Brinkerhoff properties and less than 5 acres of the Sun Mountain Broadcasting, Inc. property. The Brinkerhoff and Reaveley properties cover 4.96 and 0.38 acres, respectively. Piles of broken concrete, scrap lumber, brick and a few 55-gallon drums containing a sludge-like material are also present at the site. Midnight dumping has also been reported at the site.

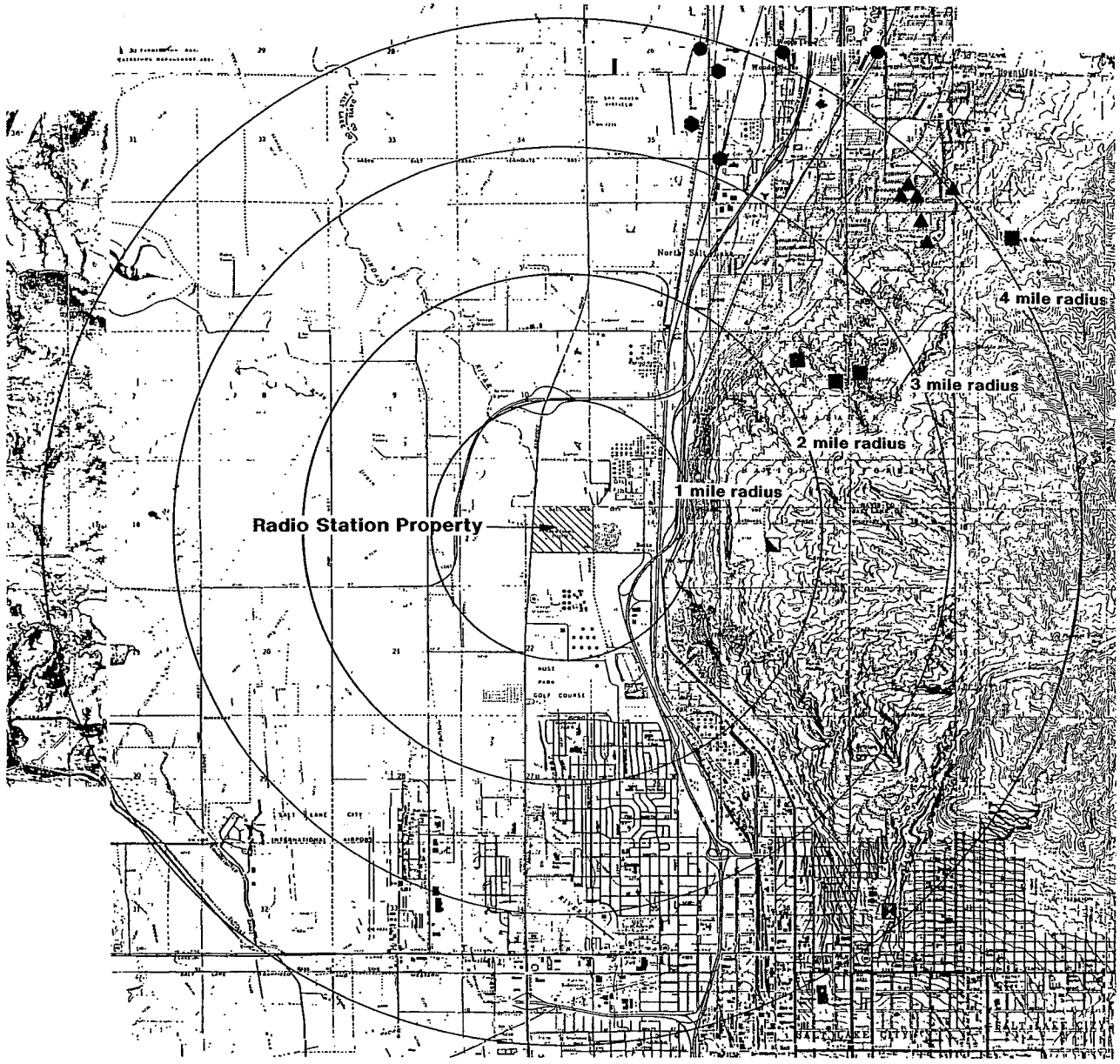
Analytical results from sludge samples indicate the sludge contains 10 organic, and 12 inorganic constituents.

Five monitoring wells were installed at the site in 1990. Depth to ground water ranged from 2.5-6.5 feet. Well MW-4 contained elevated metals relative to the other wells. Attribution of a release from the site based on this data is questionable because of ground water elevation data that indicates flow directions to the east and west in 1991 and 1990, respectively. The ground water flow direction will have to be established in order to satisfy attribution criteria. Thirteen supply wells for four public water supply systems are present within 4 miles of the site. All of these wells draw water from the confined aquifer. The combined service populations for the South Davis Water Improvement District, Wood Cross and North Salt Lake water systems is 21,284.

The sludge piles are less than 100 feet from the Oil Drain Canal. Surface water samples from the canal did not show significant differences in upstream and downstream contaminant concentrations. Sediment samples from the canal do show a release of carbon disulfide, aluminum and iron. Soil sample S-2 contained 14 organic compounds. Cadmium, copper , lead and zinc concentrations in S-2 were significantly greater than the levels detected in the background soil sample. S-2 also contained mercury and silver, which were not detected in the background sample.

The Oil Canal Canal empties into the Salt Lake City Sewage Canal approximately 1.6 miles downstream from the site. The Sewage Canal flows northwest for approximately 6.2 miles before emptying into Great Salt Lake (GSL). The last 7 miles of the 15-mile target distance limit are in GSL. There are no known drinking water intakes in the Oil Drain and Sewage Canals or in GSL. GSL has been designated a western hemisphere shorebird reserve, but not as a critical habitat. Federal and state-listed or proposed threatened or endangered species are not known to occur in or use GSL. GSL is used for sailing and swimming.

There is no file documentation that cover material has been placed over the sludge piles. Wind could transport material from the piles as particulates into nearby areas. There are an estimated 1,121 and 47,913 people residing within 1 and 4 miles of the site. There are an estimated 2,020 acres of palustrine, emergent wetlands within 4 miles of the site.



Legend :

- City of Woods Cross (WC) Well
- North Salt Lake (NSL) Well
- NSL Spring
- South Davis Spring
- South Davis Well
- Salt Lake City (SLC) Well

north

1 3/4 1/2 1/4 0 1/2 1 2miles

scale in miles

Figure 1

Map of Public Water Supply Wells & Springs Within 4 Miles of RSP

Radio Station Property

Salt Lake City, Utah

SOURCE : U.S.G.S. Salt Lake City North, Fort Douglas, Framington & Saltair 7.5' Quad Maps; SLC, NSL, WC & S. Davis Water Department

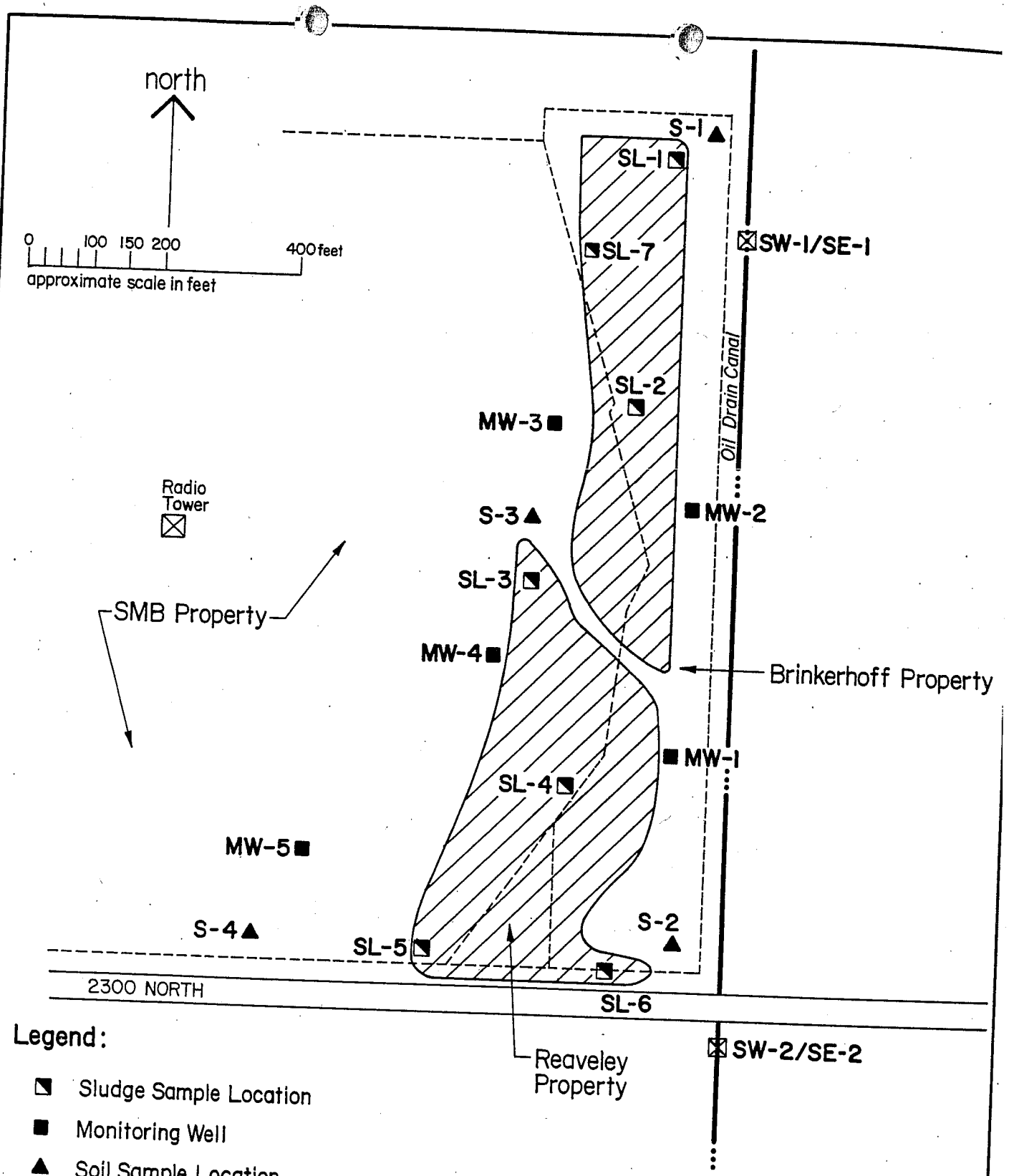


Figure 2

Map of Site Properties & Sampling Locations at RSP

Radio Station Property

Salt Lake City, Utah

Adapted from Utah DEQ, DERR Field Activities Report, 6/17/19 Report

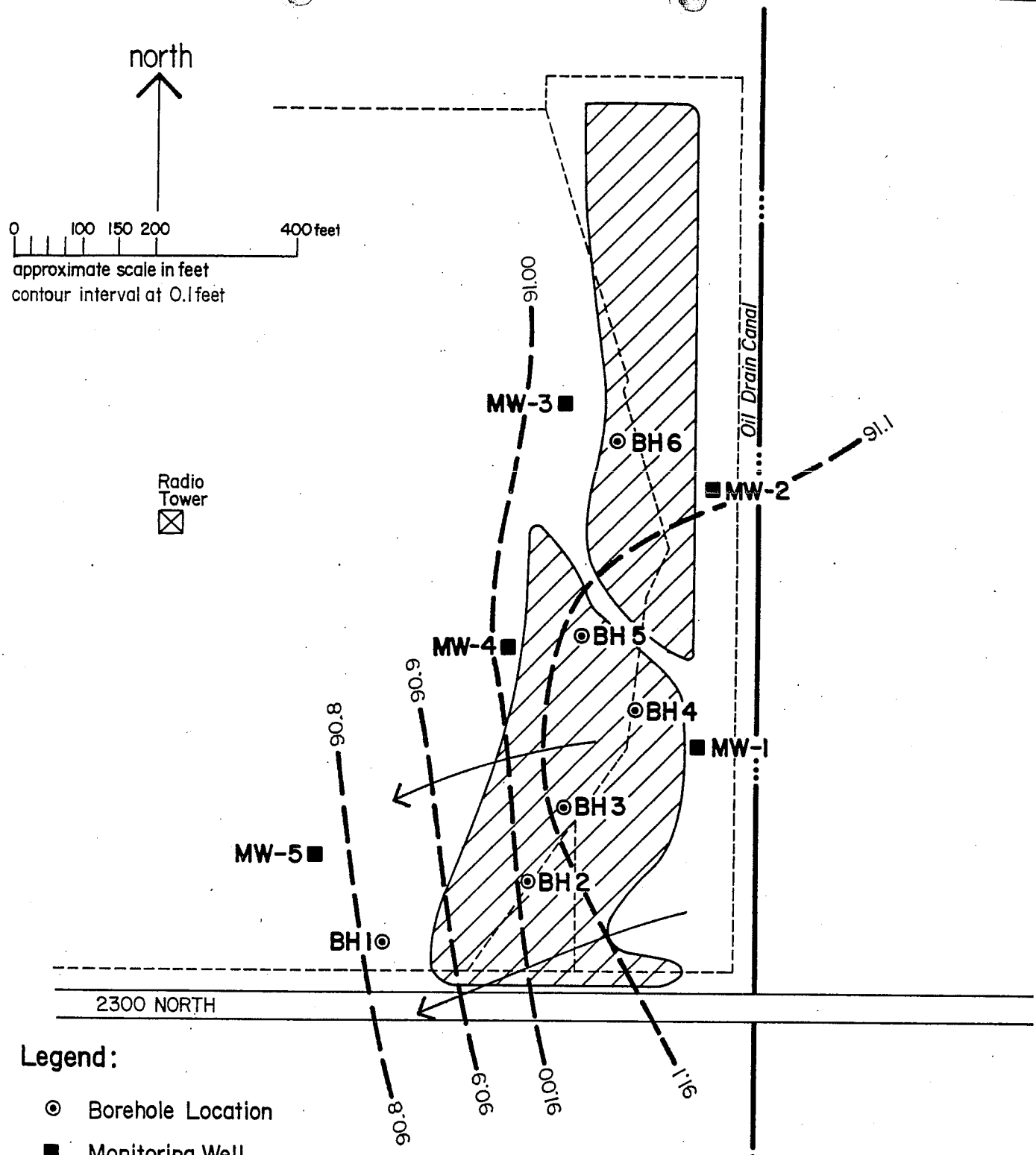
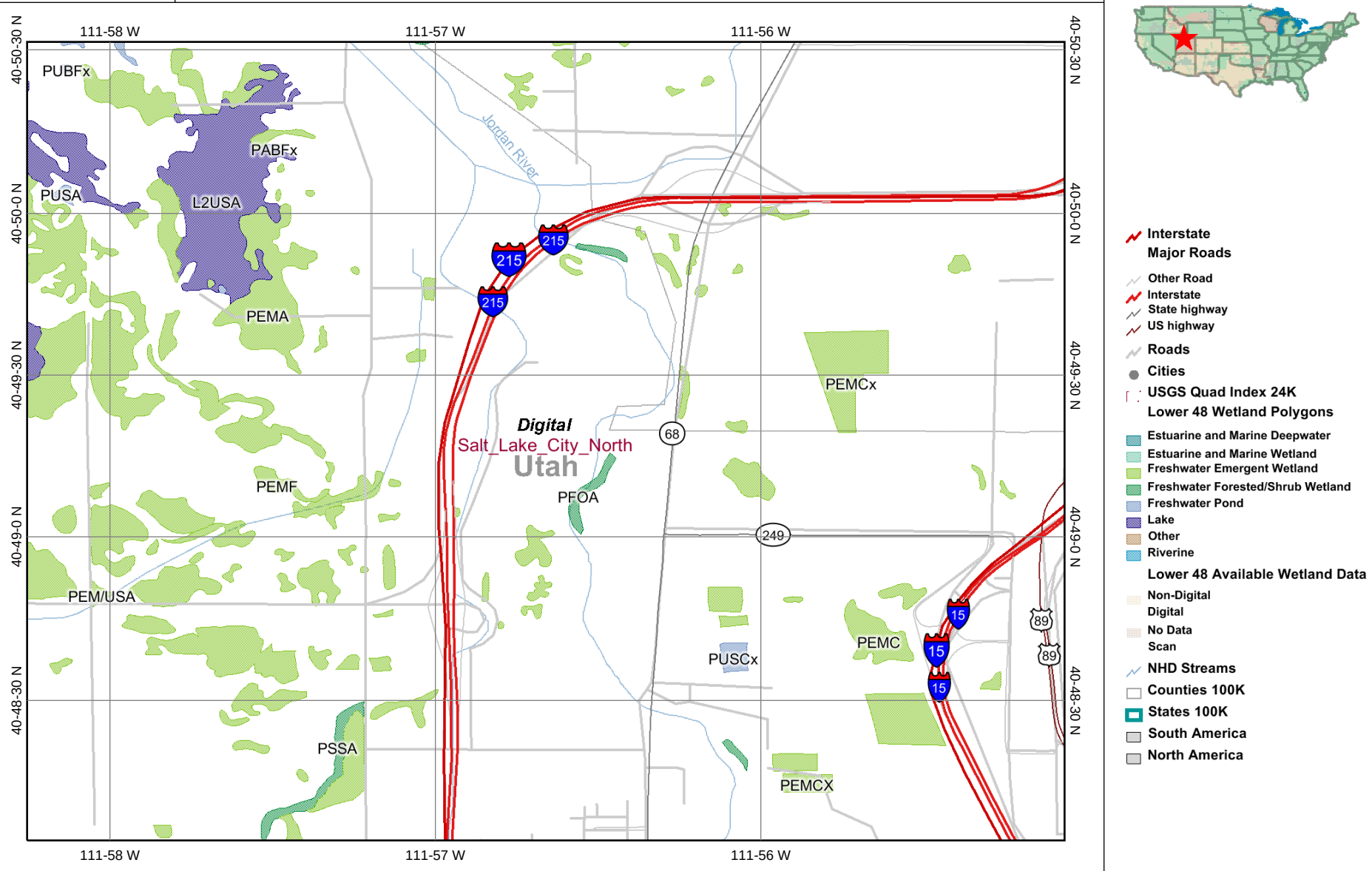


Figure 4

Ground Water Elevations at RSP on 3/22/90

Radio Station Property

Salt Lake City, Utah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PUSCx
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Jordan River
Digital
Salt_Lake_City_North
Utah
215
68
249
15
89
Interstate
Major Roads
Other Road
Interstate
State highway
US highway
Roads
Cities
USGS Quad Index 24K
Lower 48 Wetland Polygons
Estuarine and Marine Deepwater
Estuarine and Marine Wetland
Freshwater Emergent Wetland
Freshwater Forested/Shrub Wetland
Freshwater Pond
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North America