

RED MOUNTAIN FREEWAY (LOOP 202)  
CONTROLLED REMOVAL OF MAN-MADE FILLS  
& BANK PROTECTION  
ADOT PROJECT NO. 202L MA 8 H 2151 02C  
ARIZONA DEPARTMENT OF TRANSPORTATION  
MARICOPA COUNTY, ARIZONA





# Arizona Department of Transportation

## Intermodal Transportation Division

206 South Seventeenth Avenue • Phoenix, Arizona 85007-3213



Fife Symington  
Governor

Larry S. Bonine  
Director

August 20, 1997

Thomas G. Schmitt  
State Engineer

FLOOD CONTROL DISTRICT RECEIVED	
AUG 22 1997	
CH ENG	P & PM
DEP	HYDRO
ADMIN	LMGT
FINANCE	FILE
C & O	<i>Z. M. Hill</i>
ENGR	<i>T. Bourland</i>
REMARKS <i>Hic</i>	

U.S. Environmental Protection Agency  
Region IX  
75 Hawthorne Street  
San Francisco, CA 95105

Attn: Roberta Riccio (H-7-2)

Subject: Red Mountain Freeway  
Controlled Removal of Man-Made Fills

Dear Ms. Riccio:

Submitted herewith for your approval is the final report prepared by AGRA Earth & Environmental for the Arizona Department of Transportation (ADOT) which supplements and completes the draft Engineering Evaluation/Cost Analysis (EE/CA) completed in November 1991. This report details ADOT's man-made fill removal efforts associated with the Red Mountain Freeway between Scottsdale Road and the Price Freeway and concludes ADOT's activities related to this matter per the Agreement and Covenant Not to Sue executed between ADOT and the EPA in August, 1991.

If you have any questions or need additional information, please contact me at (602) 255-7645.

Sincerely,

Terry L. Bourland  
ADOT Valley Project Manager

Attachment (3 copies)

cc: CH<sub>2</sub>M Hill - T. Mooney  
Arizona Department of Environmental Quality - L. Leonard  
Maricopa County Flood Control District - D. Rerick  
City of Tempe - H. Hargis  
DMJM - T. Monchak  
AGRA Earth & Environmental - C. Reynolds

*For your files/info*

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ADOT PROJECT NO. 202L MA 8 H 2151 02C  
ARIZONA DEPARTMENT OF TRANSPORTATION  
MARICOPA COUNTY, ARIZONA

Property of  
Flood Control District of MC Library  
Please Return to  
2801 W. Durango  
Phoenix, AZ 85009

Submitted To:

DMJM  
300 West Clarendon Avenue  
Suite 400  
Phoenix, Arizona 85014-0217

Submitted By:

AGRA Earth & Environmental, Inc.  
3232 West Virginia Avenue  
Phoenix, Arizona 85009-1502



13 August 1997

AEE Job No. E87-56  
Letter No. 1310

 **AGRA**  
*Earth & Environmental*

AGRA Earth &  
Environmental, Inc.  
3232 West Virginia Avenue  
Phoenix, Arizona 85009-1502  
Tel (602) 272-6848  
Fax (602) 272-7239

13 August 1997  
AEE Job No. E87-56  
Letter No. 1310

DMJM  
300 West Clarendon Avenue  
Suite 400  
Phoenix, Arizona 85013-0217

**Attention: Thomas M. Monchak, P.E.**

Gentlemen:

**RE: RED MOUNTAIN FREEWAY (LOOP 202)  
CONTROLLED REMOVAL OF MAN-MADE FILLS  
& BANK PROTECTION  
ADOT PROJECT NO. 202L MA 8 H 2151 02C  
ARIZONA DEPARTMENT OF TRANSPORTATION  
MARICOPA COUNTY, ARIZONA**

At the request of Mr. Terry Bourland of the Arizona Department of Transportation (ADOT), we have prepared the attached summary that details ADOT's efforts to remove man-made fills from the Loop 202 right-of-way between Scottsdale Road and the Price Freeway (Loop 101).

Should you have any questions about the presented information, please call the undersigned.

Respectfully submitted,

**AGRA Earth & Environmental, Inc.**

*Charles E. Reynolds*

Charles E. Reynolds, G.I.T.  
Project Manager

c: Addressee (10)  
Arizona Department of Transportation  
Attn: Mr. Terry Bourland (1)

mcb/J97-10/8-6-97

Reviewed by:

*L.A. Hansen*

Lawrence A. Hansen, Ph.D., P.E.  
Senior Vice President



## 1.0 INTRODUCTION

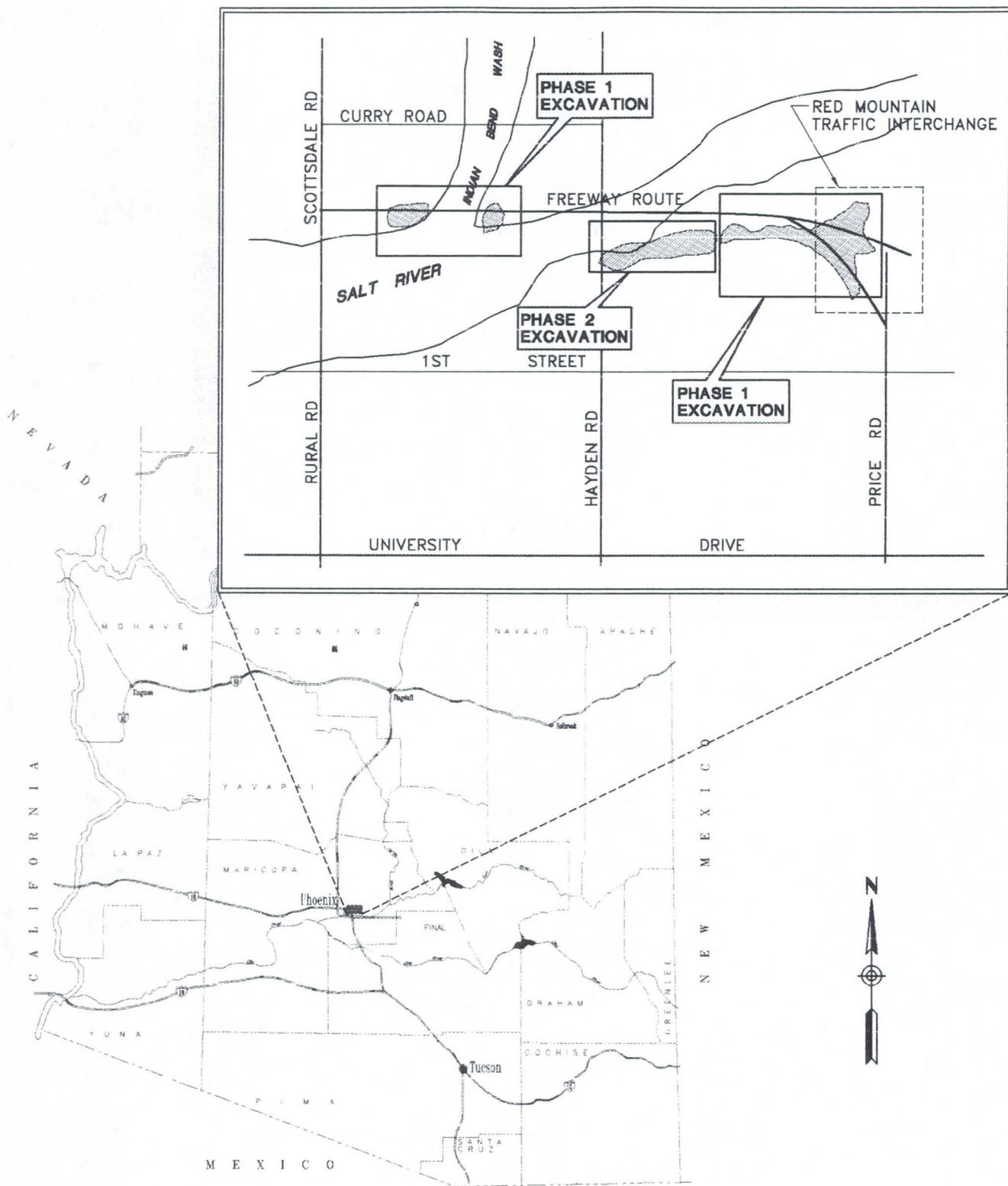
This report documents the removal of man-made fills (MMF) from Arizona Department of Transportation (ADOT) right-of-way along the Salt River between Scottsdale Road and Price Road as shown in Figure 1. The report was prepared for ADOT to supplement and complete the draft Engineering Evaluation/Cost Analysis (EE/CA). In addition, this report completes ADOT's obligations per the Agreement and Covenant Not to Sue between ADOT and the United States Environmental Protection Agency (EPA). All data, information, representations, and conclusions presented herein are based solely upon reviewed field notes, delivery records and other information present in ADOT files as of the date of this report.

## 1.1 BACKGROUND

Construction of the Red Mountain Freeway (formerly known as the East Papago Freeway) was approved and funded by the voters of Maricopa County in 1985. Design Section 6 of the Red Mountain Freeway (from Scottsdale Road to Price Road) crosses the South Indian Bend Wash (SIBW) Superfund site, so designated under the Comprehensive Environmental Response, Compensation and Liability Act of 1980, as amended (CERCLA). The EPA placed the SIBW site on the National Priorities List in 1983 in response to the discovery of widespread contamination of the groundwater beneath the site by volatile organic compounds (VOCs).

Although the EPA had not associated any of the prospective right-of-entry properties to the groundwater contamination by VOCs, ADOT recognized the potential of liability for performing response actions or paying response costs incurred by the EPA in the SIBW site, if it purchased property within the site to build a freeway and associated flood control features. Preliminary environmental studies conducted by ADOT within the SIBW site indicated that proposed freeway alignments would encounter active and inactive landfills that contained construction debris, rubbish, municipal solid wastes, rock/soil fill and potentially hazardous materials.

ADOT negotiated with the EPA to establish the limits of the cleanup that ADOT would perform relative to acquisition of freeway properties within the SIBW site. Subsequent negotiations led to the development of an Agreement and Covenant Not to Sue (Agreement), which required that ADOT prepare an EE/CA as a supplement to the Agreement. The EE/CA presented alternatives for disposition of the wastes that would be encountered in the excavations of man-made fill (MMF). In addition, the EE/CA presented alternatives and cost estimates for the excavation and treatment and/or disposal of petroleum-contaminated soils (PCS), asbestos-containing materials (ACM), municipal solid waste (MSW), rubbish, and construction debris. MMF removal was undertaken in two phases.



**FIGURE 1 - LOCATION MAP**

Concurrent with the preparation of the EE/CA, development of plans, specifications, and a Plan for Controlled Removal for the first phase of MMF removal within ADOT right-of-way was initiated. The initial phase of MMF removal was advertised for bid in May 1992. Following award of a contract to Sundt Corporation, the contractor prepared a Contractor Work Plan and a Site Specific Health and Safety Plan (SSHSP). All documents, including the draft EE/CA, Plan for Controlled Removal, project plans and specifications, Contractor Work Plan and SSHSP were presented for public comment. During a one-month comment period, no significant public comments were received. Construction on the initial phase of MMF removal was begun in November of 1992 and completed in November of 1993.

The second phase of MMF removal was advertised for bid in July 1995. By incorporating the Contractor Work Plan and SSHSP from the first phase of MMF removal into the contract documents for the second phase, a second public-comment period was eliminated in favor of a public notice of continued excavation. The second phase of MMF removal was awarded to Ames Construction in September 1995. Construction began in October 1995 and was completed in April 1996.

## 1.2 PROJECT OBJECTIVE

In accordance with the Agreement between ADOT and the EPA, ADOT committed to removing MSW and other MMF materials present on properties required for freeway construction. The deleterious MMF materials encountered were to be disposed in appropriately licensed and permitted off-site facilities, as required.

## 2.0 SCOPE OF WORK

### 2.1 PHASE I MAN-MADE FILL REMOVAL

The scope of work for the Phase I MMF removal project consisted of the excavation, segregation and loading of MSW, rubbish, tires, and other wastes from Salt River Project landfills (SRP-75 and SRP-78) and an area adjacent to the Old Tempe Landfill (OTL), and hauling to appropriate disposal sites. Additionally, rock/soil fill and inert construction debris materials were excavated, segregated, placed, and compacted in engineered fills for levees and roadway embankments. The work also included the construction of isolation and decontamination areas, fencing, shoring and the abandonment of several monitor wells.

The environmental aspects of the Phase I excavation process were monitored by RESNA, who acted as ADOT's environmental representative (AER). The AER observed, monitored and recorded activities involving identification and disposition of suspicious material.

## 2.2 PHASE II MAN-MADE FILL REMOVAL

The Phase II scope of work for MMF removal required the excavation, segregation and loading of MSW, ACM, rubbish, tires, and other materials primarily from the OTL and the Perry Lane Landfill and hauling to appropriate disposal sites. The scope also included excavation and placement in engineered fills of rock/soil and inert construction debris in the area of the Perry Lane Landfill near the OTL. Additional work included construction of decontamination areas, isolation areas, fencing, and a soil-nailed wall.

For the Phase II excavation process, Dames & Moore acted as the AER. Their responsibilities were as described for Phase I in Section 2.1.

## 3.0 MAN-MADE FILL REMOVAL METHODS & PROCESS

The following subsections describe the duration of the excavation of each site and the methods employed for the removal of MMF in the ADOT right-of-way.

### 3.1 PHASE I

Excavation, during Phase I, was undertaken at three different sites: the SRP-75 landfill, the SRP-78 landfill, and the OTL. These sites are shown in Figure 2. The duration of excavation operations was as follows:

SRP-75:	December 1992 - February 1993
SRP-78:	November 1992 - March 1993
OTL site:	February 1993 - November 1993

Excavation of MMF deposits from the SRP-75 and -78 landfill sites was accomplished with a Caterpillar 245 Excavator equipped with an 8 cubic yard bucket. The excavator was positioned on the existing ground surface and moved away from the excavated area, typically from west to east.

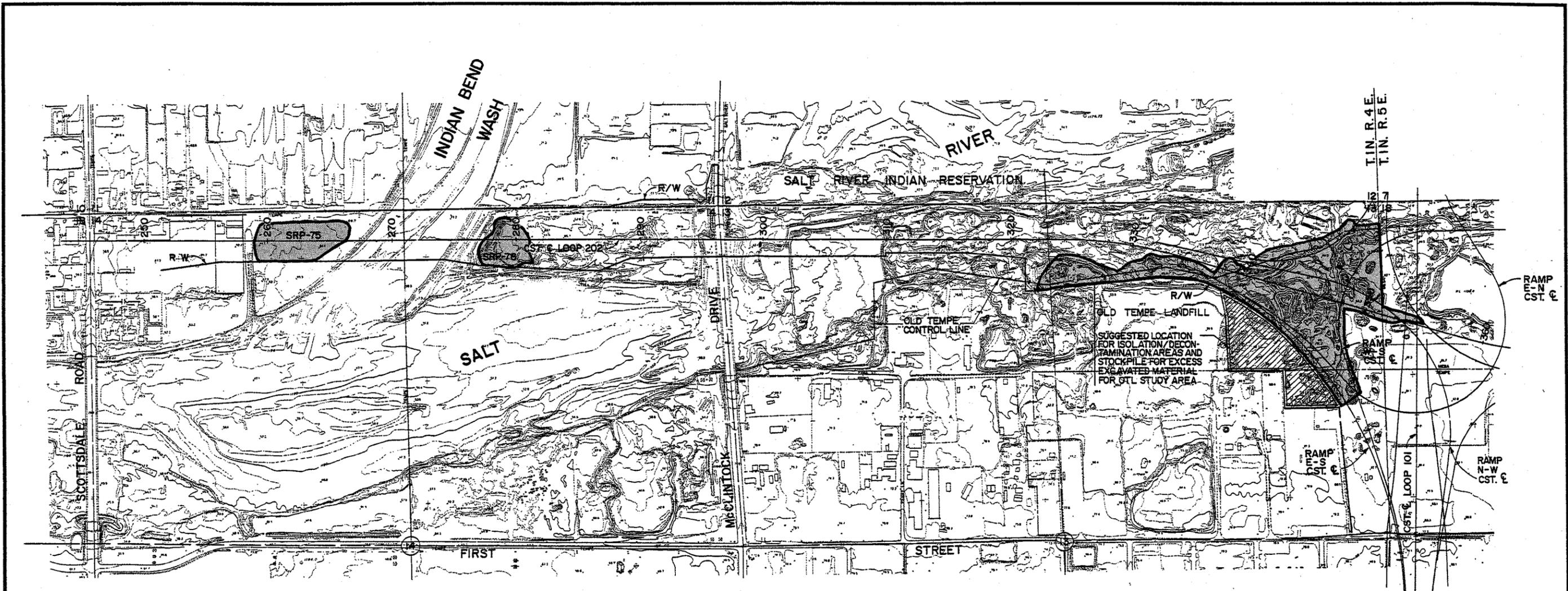
The excavation process was monitored at all times by the contractor's environmental representative (CER) and ADOT's environmental representative (AER). Environmental monitoring equipment was attached to the boom of the excavator to minimize the need for the CER and AER to enter the excavation area for monitoring purposes.

Each bucket of excavated material was inspected and loaded into 18-wheel, end-dump trucks and hauled from the site and disposed of as described in Section 5.1. Fill materials

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ADOT Project No. 202L MA 8 H 2151 02C  
Arizona Department of Transportation  
Maricopa County, Arizona

AEE Job No. E87-56  
Letter No. 1310  
13 August 1997  
Page 5

Figure 2



EXPLANATION

■ — ESTIMATED LIMIT PHASE I MAN-MADE FILL REMOVAL



**AGRA**  
 Earth & Environmental  
 3232 WEST VIRGINIA AVENUE  
 PHOENIX, ARIZONA, U.S.A.  
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JOB No.	E87-56
DESIGN	CER
DRAWN	SPG
DATE	7-97
SCALE	GRAPHIC

**FIGURE 2**  
 PHASE 1 EXCAVATION AREA

were completely removed from beneath the proposed roadway section in the SRP-75 and SRP-78 locations. MMF within the OTL area was completely removed from beneath the areas proposed for construction of cement-stabilized alluvium (CSA) riverbank protection on the south bank of the Salt River. MMF beneath proposed roadway alignments was removed to approximately 15 feet below the existing ground surface. Excavated areas within the proposed roadway alignment were backfilled and compacted with clean fill materials. Clean soils used for backfill came from the excavations on-site as detailed in Section 5.1.1; no imported soils were placed as backfill.

### **3.2 PHASE II**

The second phase of MMF removal was undertaken between October 1995 and April 1996. Phase II excavation methods were similar to those used in Phase I. Fills were removed along the alignment and placed and compacted for the south-bank protection system shown in Figure 3. MMF was completely removed from within the ADOT right-of-way in the limits of the project.

## **4.0 ENVIRONMENTAL INCIDENTS**

The term "Environmental Incident", as defined in the Phase II report on the removal of MMF from the Perry Lane Landfill and OTL (Dames & Moore, presented in Appendix B), is similarly used herein to describe instances where the hazardous materials contractor was requested to remove material that was identified as suspicious. Based on reviews of ADOT records, brief summaries of environmental incidents for the man-made fill excavated from the SRP-75, SRP-78 and OTL sites in Phase I are presented below. Additionally, descriptions of the types and known volumes of materials excavated as part of Phase II of the MMF removal are provided. Detailed descriptions of Environmental Incidents encountered in Phase I and Phase II are provided in Appendices A and B, respectively. Details on the handling and disposal of excavated MMF for both Phase I and Phase II are discussed in Section 5.0 of this report.

### **4.1 PHASE I**

Details of the Phase I removal process and materials encountered are provided in the RESNA documentation presented in Appendix A.

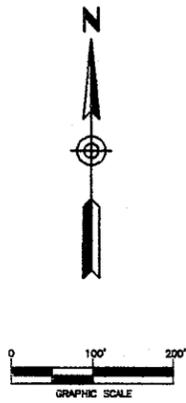
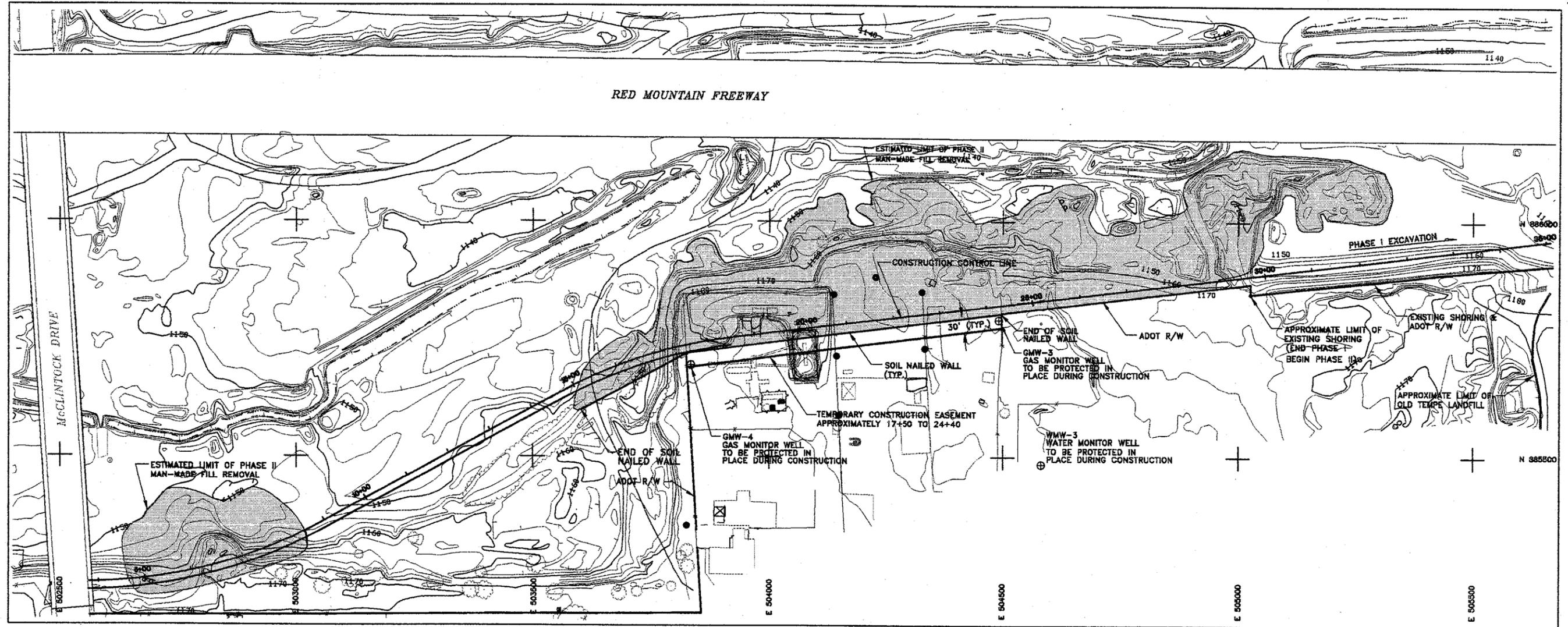
#### **4.1.1 Petroleum-Contaminated Soils**

Petroleum-contaminated soils (PCS) were excavated primarily from the OTL site at various times between February and June 1993. Once identified, the limits of the discolored soils

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AEE Job No. E87-56  
Letter No. 1310  
13 August 1997  
Page 7

**FIGURE 3**



**AGRA**  
**Earth & Environmental**  
 3232 WEST VIRGINIA AVENUE  
 PHOENIX, ARIZONA, U.S.A.  
 85009-1502

JOB No.	E87-56
DESIGN	CER
DRAWN	TMP
DATE	7-97
SCALE	GRAPHIC

**FIGURE 3**  
**PHASE 2 EXCAVATION AREA**

were determined. The PCS were then excavated and temporarily stockpiled. Approximately 5,000 cubic yards (cy) of PCS were excavated from the Phase I project area.

Prior to disposal, samples were collected from the PCS stockpile and analyzed for TCLP metals, total petroleum hydrocarbons, flash point and paint filter. ADOT sampling analyses for these soils confirmed the presence of hydrocarbon contamination above the Arizona Department of Environmental Quality's Suggested Soil Cleanup Level of 100 milligrams per kilogram. Analytical results also showed that the samples analyzed did not exhibit characteristics of a regulated hazardous waste according to 40 CFR 261.24; did not contain any free liquid; and did not exhibit the characteristic of a hazardous waste for ignitability according to 40 CFR 261.21. The analytical results of the PCS samples are provided in Appendix A. After characterization, the PCS were containerized and disposed off-site as discussed in Section 5.1.

#### **4.1.2 Asbestos-Containing Material**

Asbestos-containing materials (ACM), including transite pipe, were excavated from all three Phase I project sites between November 1992 and April 1993. After uncovering these materials, this portion of the excavation was temporarily cordoned-off. The materials were subsequently packaged or containerized, isolated from the site of the active excavation, sampled, analyzed and disposed off-site as discussed in Section 5.1.

#### **4.1.3 Municipal Solid Waste**

Municipal solid waste (MSW), including items described as trash, garbage and tires, was primarily excavated from the OTL area between February and November 1993. The total mass excavated was approximately 4,000 tons.

#### **4.1.4 Rubbish**

During the month of December 1992, materials excavated from the SRP-75 site and classified as rubbish included the non-putrescible organic fraction of construction debris. The excavation mass of these materials totaled approximately 32,250 tons.

#### **4.1.5 Drums & Paint Cans**

Drums, some empty and some containing varying amounts of unidentified materials or liquids, were excavated from all three Phase I sites during the months of January 1993 through October 1993. In addition, several paint-type cans with unknown contents were excavated

from the SRP-78 site during February 1993. Upon excavation of these materials, the active work area was cordoned-off and the excavation equipment moved to another location until the contents of these containers could be identified and the containers removed.

Empty drums were crushed and disposed off-site. Samples were collected and analyzed from all drums and paint cans containing unidentified materials. After characterization, the drums and paint cans were placed in overpack drums and disposed off-site.

#### **4.1.6 Batteries**

Lead-acid batteries were uncovered at the SRP-78 site during November and December 1992. After excavation, the batteries were stockpiled and containerized in overpack drums for off-site recycling.

#### **4.1.7 Other Unidentified & Suspicious Materials**

Several suspicious or unidentified materials were excavated from all three Phase I sites during the period between December 1992 and May 1993. Once excavated, these suspicious materials were segregated until they could be sampled, identified, containerized, and properly disposed off-site. In the meantime, excavation was continued at another part of the site.

A material described as "suspicious material, blue/white, and corrosive" was excavated from two different sites: SRP-75 in December 1992 and SRP-78 in March 1993. Samples of this material were collected and analyzed. Reviewed records did not clearly identify the material. This material was then containerized for off-site disposal. On February 1, 1993, a 5-gallon container of a material described as "Aquasand" was excavated from the SRP-78 landfill. It was determined that the material was probably silica sand used for filtration of water; however, the material was treated as a suspicious material. The container was segregated and its contents characterized for later disposal. Other suspicious materials were encountered and treated similarly.

#### **4.2 PHASE II**

Details of the Phase II removal process and materials encountered are provided in the Dames & Moore report presented in Appendix B.

#### **4.2.1 Petroleum Contaminated Soils**

Approximately 5,000 cy of PCS were excavated from the Phase II project area. Details of the handling and disposal of these materials are presented in Section 5.2.

#### **4.2.2 ACM & Silica Sand**

A total of 60 cy of asbestos-containing construction debris and 585 cy of silica sand were excavated and removed from the Phase II project area and disposed off-site.

#### **4.2.3 Municipal Solid Waste**

Excavations of MSW from the Phase II project area totaled approximately 110 tons. After excavation, these materials were containerized and disposed off-site.

#### **4.2.4 Rubbish**

Materials excavated from the Phase II work area and classified as rubbish totaled approximately 19,700 tons. Handling of rubbish is detailed in Section 5.2.

### **5.0 DISPOSITION OF EXCAVATED MATERIALS**

The disposition of all MMF removed during Phase I and Phase II excavations is discussed below.

#### **5.1 PHASE I**

##### **5.1.1 Inert Construction Debris & Clean Soil**

Inert construction debris and clean soils, including concrete, sand, gravel and rock, were excavated from the Phase I project area throughout MMF removal operations. The total volume of these materials excavated was approximately 450,000 cy. Once excavated and evaluated these materials were placed as backfill in other excavated areas in the proximity of the OTL.

##### **5.1.2 Non-Inert & Suspicious Materials**

According to available ADOT records, all excavated materials other than inert construction debris and clean soil, but including PCS, ACM, MSW, rubbish, drums, paint cans, and other suspicious materials, were identified, classified, characterized, containerized, and disposed off-

site at the Butterfield Landfill in Mobile, Arizona. Excavated tires also were disposed at the Butterfield Landfill.

## **5.2 PHASE II**

### **5.2.1 Inert Construction Debris & Clean Soil**

A total of 285,000 cy of inert construction debris and clean soil excavated from the Phase II portion of the project was used for construction of engineered-fill, CSA embankments, and grading near the OTL.

### **5.2.2 Non-Inert & Suspicious Materials**

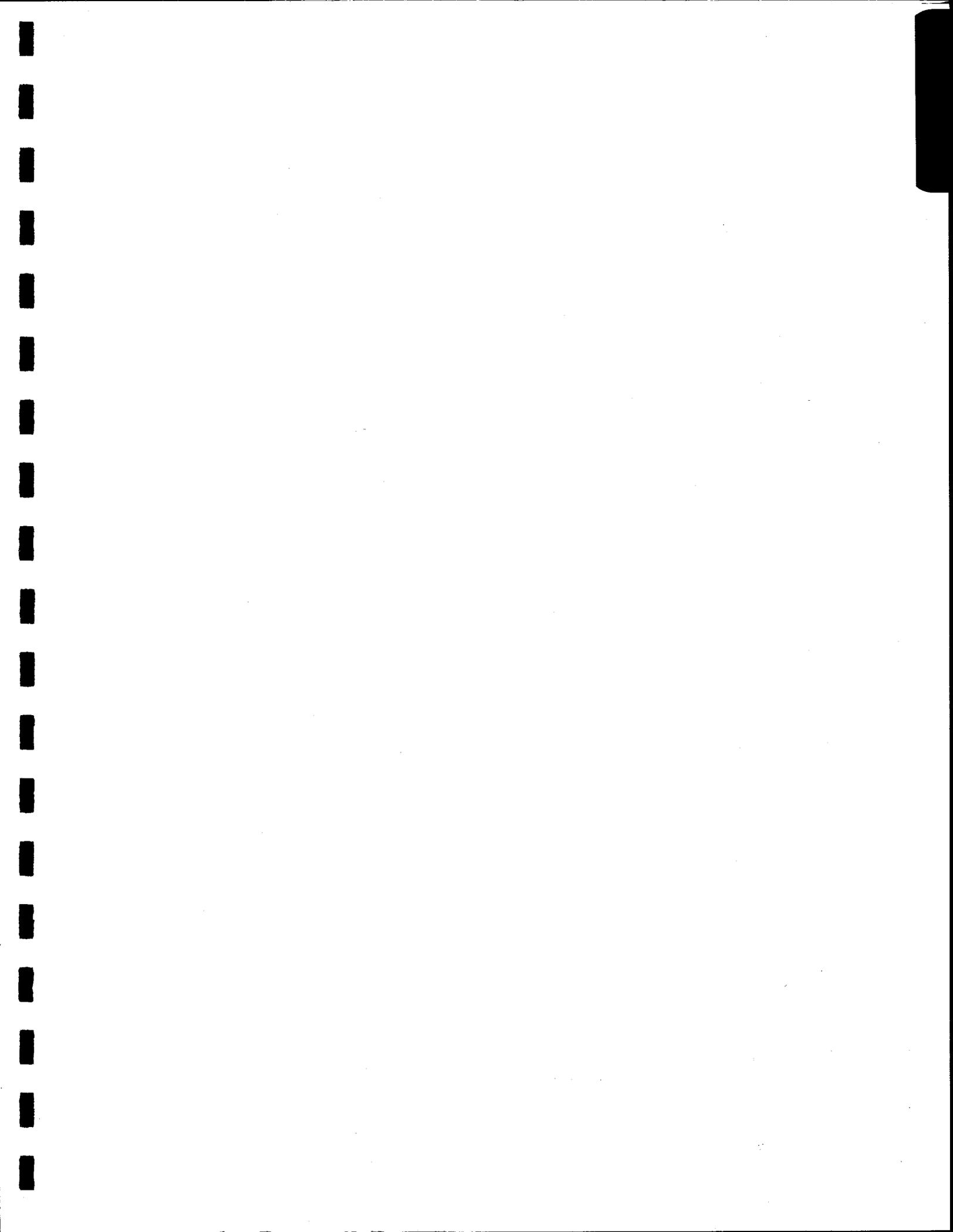
Details of the handling and disposal of non-inert and other suspicious materials, including ACM, PCS, MSW, oil filters, paint drums and soil, and silica sand are provided in Section 4 of the Dames & Moore report (Appendix B).

## **6.0 SUMMARY**

MMF removal, from within ADOT right-of-way for the above referenced project, was completed in two phases in compliance with the guidelines outlined in the EE/CA and requisite supporting documents. As constructed and to the extent possible, ADOT's right-of-way within the project limits is free from non-inert MMF deposits.

During the MMF removal process, no hazardous materials were encountered. All suspicious materials were identified, classified, and treated in accordance with the EE/CA. Classified materials included rubbish, MSW, ACM, drums, paint cans, silica sand, batteries, and tires. These materials, except for batteries, were containerized and transported to the Butterfield Landfill in Mobile, Arizona for disposal. Batteries also were packaged and delivered to a battery recycler. Inert construction debris and clean soils were placed as engineered-fill, CSA embankments, and grading near the OTL.

Records, required by the EE/CA, of the removal process will be maintained for a period of 10 years at ADOT offices located in Phoenix, Arizona.



**APPENDIX A**

**RESNA Reports  
& Laboratory Results**

1st Sampling Event at SRP 75

# ARIZONA DEPARTMENT OF HEALTH SERVICES

## State Laboratory

March 1, 1993

BARBARA J. ERICKSON, Ph.D., ASSISTANT DIRECTOR  
1520 West Adams, Phoenix, Arizona 85007  
(602) 542-6108

TOM SULLIVAN	TYPE OF SAMPLE: SURFACE WATER	PCA:	Sample Name: 1098-ME3578
AZ DEPT OF TRANSPORTATION	Custody: Y	PROJECT/PH:	Station:
206 S. 17TH AVENUE 619A	Priority: 3	GRANT/PH:	Date Sampled: 01/20/93
PHOENIX, AZ 85007		SITE ID:	Time Sampled: 11:15:00
			Date Lab Rec: 01/21/93

Note: All samples, including chain-of-custody, will be disposed of within 60 days unless a "Save Sample" form is received by the Chemistry Laboratory. All lab QA is within the limits defined in the SLS QA Manual unless otherwise noted in the report. "ND" means none detected at the MRL specified. "TR" means present at less than MRL, but not quantifiable.

Comments: None

### -- ANALYTICAL RESULTS --

LAB #	DATE ANALYZED	COMPOUND	RESULT	STORET NUMBER	WATER METHOD REFERENCE	WATER MIN. REPORTING LMT	SOLIDS METHOD REFERENCE	SOLIDS MIN. REPORTING LMT
2819		Total Recoverable Metals	Yes		EPA600/4-79-020			
	02/05/93	Antimony	ND	1097/1095	EPA 204.2	0.005 mg/l	EPA 3050/6010	100 mg/kg
	02/05/93	Arsenic	ND	1002/1000	EPA 206.2	0.010 mg/l	EPA 3050/6010	100 mg/kg
	01/27/93	Beryllium	ND	1012/1010	EPA 210.2	0.0005mg/l	EPA 3050/6010	50 mg/kg
	02/09/93	Cadmium	ND	1027/1025	EPA 213.2	0.0010mg/l	EPA 3050/6010	10 mg/kg
	02/02/93	Chromium, Total	ND	1034/1032	EPA 218.2	0.010 mg/l	EPA 3050/6010	10 mg/kg
	01/22/93	Copper	0.028 mg/l	1042/1040	EPA 220.1/220.2	0.010 mg/l	EPA 3050/6010	10 mg/kg
	01/27/93	Lead	ND	1051/1049	EPA 239.2	0.010 mg/l	EPA 3050/6010	50 mg/kg
	02/03/93	Mercury	ND	71900/71890	EPA 245.1	0.0005mg/l	EPA 7471	0.25 mg/kg
	01/28/93	Selenium	ND	1147/1145	EPA 270.2	0.005 mg/l	EPA 3050/6010	200 mg/kg
	02/01/93	Silver	ND	1077/1075	EPA 272.2	0.001 mg/l	EPA 3050/6010	10 mg/kg
	02/11/93	Thallium	ND	1059/1057	EPA 279.2	0.005 mg/l	EPA 3050/6010	1000 mg/kg
	02/18/93	Zinc	ND	1092/1090	EPA 289.1	0.05 mg/l	EPA 3050/6010	10 mg/kg
	02/19/93	Nickel	ND	1067/1065	EPA 249.1	0.10 mg/l	EPA 3050/6010	10 mg/kg

Reviewed and Approved:

Patricia A. Adler, Manager  
Office of Environmental and Analytical Chemistry

# ARIZONA DEPARTMENT OF HEALTH SERVICES

## State Laboratory

BARBARA J. ERICKSON, Ph.D., ASSISTANT DIRECTOR

March 1, 1993

1520 West Adams, Phoenix, Arizona 85007

(602) 542-6108

TOM SULLIVAN  
AZ DEPT OF TRANSPORTATION  
206 S. 17TH AVENUE 619A  
PHOENIX, AZ 85007

TYPE OF SAMPLE: SURFACE WATER  
Custody:  
Priority:3

PCA:  
PROJECT/PH:  
GRANT/PH:  
SITE ID:

Sample Name: 1098-ME6E78  
Station:  
Date Sampled: 01/20/93  
Time Sampled: 11:25:00  
Date Lab Rec: 01/21/93

Note: All samples, including chain-of-custody, will be disposed of within 60 days unless a "Save Sample" form is received by the Chemistry Laboratory. All lab QA is within the limits defined in the SLS QA Manual unless otherwise noted in the report. "ND" means none detected at the MRL specified. "TR" means present at less than MRL, but not quantifiable.

Comments: None

-- ANALYTICAL RESULTS --

LAB #	DATE ANALYZED	COMPOUND	RESULT	STORET NUMBER	WATER METHOD REFERENCE	WATER MIN. REPORTING LMT	SOLIDS METHOD REFERENCE	SOLIDS MIN. REPORTING LMT
82820	02/05/93	Antimony	ND	1097/1095	EPA 204.2	0.005 mg/l	EPA 3050/6010	100 ng/kg
	02/05/93	Arsenic	ND	1002/1000	EPA 206.2	0.010 mg/l	EPA 3050/6010	100 ng/kg
	01/27/93	Beryllium	ND	1012/1010	EPA 210.2	0.0005mg/l	EPA 3050/6010	50 ng/kg
	02/09/93	Cadmium	0.0022 mg/l	1027/1025	EPA 213.2	0.0010mg/l	EPA 3050/6010	10 ng/kg
	02/02/93	Chromium, Total	ND	1034/1032	EPA 218.2	0.010 mg/l	EPA 3050/6010	10 ng/kg
	01/22/93	Copper	ND	1042/1040	EPA 220.1/220.2	0.010 mg/l	EPA 3050/6010	10 ng/kg
	01/27/93	Lead	ND	1051/1049	EPA 239.2	0.010 mg/l	EPA 3050/6010	50 ng/kg
	02/03/93	Mercury	ND	71900/71890	EPA 245.1	0.0005mg/l	EPA 7471	0.25 ng/kg
	01/28/93	Selenium	ND	1147/1145	EPA 270.2	0.005 mg/l	EPA 3050/6010	200 ng/kg
	02/01/93	Silver	ND	1077/1075	EPA 272.2	0.001 mg/l	EPA 3050/6010	10 ng/kg
	02/11/93	Thallium	ND	1059/1057	EPA 279.2	0.005 mg/l	EPA 3050/6010	1000 ng/kg
	02/11/93	Zinc	ND	1092/1090	EPA 289.1	0.05 mg/l	EPA 3050/6010	10 ng/kg
	02/19/93	Nickel	ND	1067/1065	EPA 249.1	0.10 mg/l	EPA 3050/6010	10 ng/kg

*Patricia A. Adler*

Reviewed and Approved:  
Patricia A. Adler, Manager  
Office of Environmental and Analytical Chemistry

# ARIZONA DEPARTMENT OF HEALTH SERVICES

## State Laboratory

March 1, 1993

BARBARA J. ERICKSON, Ph.D., ASSISTANT DIRECTOR  
1520 West Adams, Phoenix, Arizona 85007  
(602) 542-6108

TOM SULLIVAN  
AZ DEPT OF TRANSPORTATION  
206 S. 17TH AVENUE 619A  
PHOENIX, AZ 85007

TYPE OF SAMPLE: SURFACE WATER  
Custody: Y  
Priority: 3  
PCA:  
PROJECT/PH:  
GRANT/PH:  
SITE ID:

Sample Name: 1098-ME9N78  
Station:  
Date Sampled: 01/20/93  
Time Sampled: 11:33:00  
Date Lab Rec: 01/21/93

Note: All samples, including chain-of-custody, will be disposed of within 60 days unless a "Save Sample" form is received by the Chemistry Laboratory. All lab QA is within the limits defined in the SLS QA Manual unless otherwise noted in the report. "ND" means none detected at the MRL specified. "TR" means present at less than MRL, but not quantifiable.

Comments: None

-- ANALYTICAL RESULTS --

LAB #	DATE ANALYZED	COMPOUND	RESULT	STORET NUMBER	WATER METHOD REFERENCE	WATER MIN. REPORTING LMT	SOLIDS METHOD REFERENCE	SOLIDS MIN. REPORTING LMT
32821	02/05/93	Antimony	ND	1097/1095	EPA 204.2	0.005 mg/l	EPA 3050/6010	100 mg/kg
	02/05/93	Arsenic	ND	1002/1000	EPA 206.2	0.010 mg/l	EPA 3050/6010	100 mg/kg
	01/27/93	Beryllium	ND	1012/1010	EPA 210.2	0.0005mg/l	EPA 3050/6010	50 mg/kg
	02/09/93	Cadmium	ND	1027/1025	EPA 213.2	0.0010mg/l	EPA 3050/6010	10 mg/kg
	02/02/93	Chromium, Total	ND	1034/1032	EPA 218.2	0.010 mg/l	EPA 3050/6010	10 mg/kg
	01/22/93	Copper	0.013 mg/l	1042/1040	EPA 220.1/220.2	0.010 mg/l	EPA 3050/6010	10 mg/kg
	01/27/93	Lead	ND	1051/1049	EPA 239.2	0.010 mg/l	EPA 3050/6010	50 mg/kg
	02/03/93	Mercury	ND	71300/71890	EPA 245.1	0.0005mg/l	EPA 7471	0.25 mg/kg
	01/28/93	Selenium	ND	1147/1145	EPA 270.2	0.005 mg/l	EPA 3050/6010	200 mg/kg
	02/01/93	Silver	ND	1077/1075	EPA 272.2	0.001 mg/l	EPA 3050/6010	10 mg/kg
	02/11/93	Thallium	ND	1059/1057	EPA 279.2	0.005 mg/l	EPA 3050/6010	1000 mg/kg
	02/19/93	Zinc	ND	1092/1090	EPA 289.1	0.05 mg/l	EPA 3050/6010	10 mg/kg
	02/19/93	Nickel	ND	1067/1065	EPA 249.1	0.10 mg/l	EPA 3050/6010	10 mg/kg

Reviewed and Approved:



Patricia A. Adler, Manager

Office of Environmental and Analytical Chemistry

# ARIZONA DEPARTMENT OF HEALTH SERVICES

## State Laboratory

March 1, 1993

BARBARA J. ERICKSON, Ph.D., ASSISTANT DIRECTOR

1520 West Adams, Phoenix, Arizona 85007

(602) 542-6108

TOM SULLIVAN	TYPE OF SAMPLE: SURFACE WATER	PCA:	Sample Name: 1098-ME12W78
AZ DEPT OF TRANSPORTATION	Custody: Y	PROJECT/PH:	Station:
206 S. 17TH AVENUE 619A	Priority: 3	GRANT/PH:	Date Sampled: 01/20/93
PHOENIX, AZ 85007		SITE ID:	Time Sampled: 11:44:00
			Date Lab Rec: 01/21/93

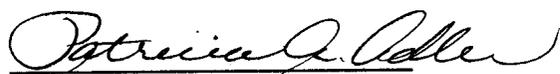
Note: All samples, including chain-of-custody, will be disposed of within 60 days unless a "Save Sample" form is received by the Chemistry Laboratory. All lab QA is within the limits defined in the SLS QA Manual unless otherwise noted in the report. "ND" means none detected at the MRL specified. "TR" means present at less than MRL, but not quantifiable.

Comments: SELENIUM SPIKE RECOVERY AT 87%.

-- ANALYTICAL RESULTS --

LAB #	DATE ANALYZED	COMPOUND	RESULT	STORET NUMBER	WATER METHOD REFERENCE	WATER MIN. REPORTING LMT	SOLIDS METHOD REFERENCE	SOLIDS MIN. REPORTING LMT
32822	02/05/93	Antimony	ND	1097/1095	EPA 204.2	0.005 ng/l	EPA 3050/6010	100 mg/kg
	02/04/93	Arsenic	ND	1002/1000	EPA 206.2	0.010 ng/l	EPA 3050/6010	100 mg/kg
	01/27/93	Beryllium	ND	1012/1010	EPA 210.2	0.0005ng/l	EPA 3050/6010	50 mg/kg
	02/09/93	Cadmium	ND	1027/1025	EPA 213.2	0.0010ng/l	EPA 3050/6010	10 mg/kg
	02/02/93	Chromium, Total	ND	1034/1032	EPA 218.2	0.010 ng/l	EPA 3050/6010	10 mg/kg
	01/22/93	Copper	ND	1042/1040	EPA 220.1/220.2	0.010 ng/l	EPA 3050/6010	10 mg/kg
	01/27/93	Lead	ND	1051/1049	EPA 239.2	0.010 ng/l	EPA 3050/6010	50 mg/kg
	02/03/93	Mercury	ND	71900/71890	EPA 245.1	0.0005ng/l	EPA 7471	0.25 mg/kg
	01/28/93	Selenium	ND	1147/1145	EPA 270.2	0.005 ng/l	EPA 3050/6010	200 mg/kg
	02/01/93	Silver	ND	1077/1075	EPA 272.2	0.001 ng/l	EPA 3050/6010	10 mg/kg
	02/11/93	Thallium	ND	1059/1057	EPA 279.2	0.005 ng/l	EPA 3050/6010	1000 mg/kg
	02/19/93	Zinc	ND	1092/1090	EPA 289.1	0.05 ng/l	EPA 3050/6010	10 mg/kg
	02/19/93	Nickel	ND	1067/1065	EPA 249.1	0.10 ng/l	EPA 3050/6010	10 mg/kg

Reviewed and Approved:



Patricia A. Adler, Manager

Office of Environmental and Analytical Chemistry

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Phone: (602) 961-0777  
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March 8, 1993

Mr. Tom Sullivan  
Arizona Department of Transportation  
Environmental Planning  
205 South 17th Avenue, Rm. 240E  
Phoenix, Arizona 85007

Subject: Weekly Project Summary  
Week Ending February 12, 1993  
SIBW-East Papago Freeway Landfill Removal Project  
RESNA Project No. A1098.11

Dear Mr. Sullivan:

The following is a summary of the field activities conducted on the South Indian Bend Wash (SIBW)-East Papago Freeway Landfill Removal Project for the week ending February 12, 1993. The activities for the week were confined to the SRP 75 and SRP 78 landfill sites, located on the north bank of the Salt River, west of McClintock Road, and to the Old Tempe Landfill (OTL) site, located near Price Road and the south bank of the Salt River in Tempe, Arizona. This project summary documents the activities as recorded by RESNA Industries, Inc. (RESNA), for the week of February 8, through February 12, 1993. The RESNA personnel present at the sites during the week included Mr. Scott Dickson and Mr. Brett McDaniel. Brett McDaniel was the Arizona Department Of Transportation's (ADOT) Environmental Representative (AER) who monitored the activities at the two SRP sites, while Scott Dickson was the AER who monitored the activities at the OTL site.

### February 8, 1993

#### OTL Landfill Site

The OTL AER calibrated the monitoring equipment at 6:30 a.m. and then arrived at the OTL site at 7:15 a.m. The tailgate safety meeting for the project personnel was held at 7:40 a.m. The OTL AER noted that the weather conditions for the day were cloudy skies, with rain showers the previous night that lasted into the morning. The forecast predicted that rain showers were possible throughout the day. It was decided by Sundt Corp. to begin operations until the rain increased to the point that operations would have to cease.

At 8:05 a.m. the 245 excavator began to excavate material at Station 22+00. The 988 and 950 loaders moved the excavated materials into stockpiles. No backfilling or compaction activities

were conducted throughout the day. Intermittant rain began at 9:30 a.m. but did not affect the operations or monitoring. Then at 9:50 a.m. Mr. Jack Van Marter of Sundt Corp. arrived on site and shut the work down for the day due to the rain. The rain had not affected the monitoring of the excavation activities. The OTL AER left the site at 10:15 a.m.

#### SRP 75 and 78 Landfill Site

The SRP AER arrived at the SRP 78 site at 7:06 a.m. and attended the tailgate safety meeting at 7:15 a.m. After the meeting ADOT granted Sundt Corp. a rain day for the day. The Contractor's Environmental Representative (CER) for the SRP sites was Don Bezek of Chemical Waste Management (CWM). Excavation operations began at the SRP 78 site at 7:35 a.m. Readings on the SRP AER's equipment were normal at the beginning of the excavation activities. The excavator removed the material from the south end of the site near Station 279. Mr. Scott Weinland of ADOT was visiting the site to observe the operations.

At 7:54 a.m. Mr. Brad Moring of CWM replaced Mr. Bezek as the SRP CER. At 8:35 a.m. the SRP AER learned that one more truck would be arriving at the site shortly to be loaded and then the work activities would be completed for the day. At 8:47 a.m. the last truck was loaded and left the site.

At 8:52 a.m. Mr. Joy Foster of ADOT arrived at the SRP 78 site to conduct moisture tests on the soil in the excavation. The SRP AER entered the excavation with Mr. Foster to monitor the atmosphere during the collection of the test samples. No unusual readings were recorded by the SRP AER. Mr. Foster collected samples from the bottom, middle and top of the excavation and calculated the moisture percent. The samples were collected near Station 280 and the excavation in this area was approximately 10 to 12 feet in depth. Results of the moisture tests were: 7.1 percent (%) at the bottom (10 foot depth), 8.7 % at the middle (6 foot depth), and 9.9 % at the top (2 foot depth).

At 9:20 a.m. Mr. Scott Weinland requested that the SRP AER accompany Mr. Foster to the SRP 75 site so that additional soil moisture tests could be conducted. The SRP AER met Mr. Foster at the SRP 75 site at approximately 9:27 a.m. No unusual readings were recorded by the SRP AER during the soil moisture tests in the excavation. Work for the day was ended at both SRP sites at 9:40 a.m. once all of the soil moisture tests were completed.

#### February 9, 1993

##### OTL Landfill Site

RESNA's Scott Dickson, the OTL AER, calibrated the monitoring equipment at 6:30 a.m. The OTL AER arrived on site at OTL site at 7:15 a.m. and attended the tailgate safety meeting for the project personnel at 7:30 a.m. Weather conditions for the day called for cloudy skies with possible chance of showers throughout the day. The 245 excavator began excavation at Station 22+00 EN and the OTL CER was monitoring the activities. The loaders were moving the excavated material over to the backfilling area between Station 22+00ES to 19+00 ES. The material was being spread by a 950 loader and then compacted with a steel drum vibratory roller.

At 9:45 a.m. Mr. Kurt Tucker, the OTL CER, notified the OTL AER that all asphalt material that was excavated was to be separated and not used as backfill material. The asphalt material would be hauled with the construction debris.

At 11:42 a.m. Mr. Brad Moring of CWM contacted the OTL AER and requested if Sundt could enter the excavation at the SRP 78 site in order to clean up debris from the bottom. Additionally, Mr. Moring would be the CER for this activity and wanted to know if an AER was required to be present. Mr. Dickson, the OTL AER, informed Mr. Moring that the work could be done as outlined as long as the CER immediately notify the OTL AER if any suspicious materials were encountered and also that no new excavation of material was conducted. The OTL AER notified Mr. Scott Weinland of ADOT concerning the work at the SRP 78 site and Mr. Weinland agreed with the decisions that were made. Mr. Weinland requested that the OTL AER notify Mr. Joy Foster of ADOT to have him check on the work progress periodically at the SRP 78 site.

At 1:00 p.m. the OTL AER went to the SRP 78 site to check on the activities. He noted that the 245 excavator had become stuck in the wet soil at the bottom of the excavation. Mr. Moring informed the OTL AER that a hydraulic line had been broken while the excavator had attempted to free itself from the mud. The mechanic was unable to repair the line since the part was buried in the mud. The OTL AER left the SRP 78 site at 2:45 p.m. to return to the OTL site.

At the OTL site the excavation was continuing at Station 19+00 by removing the clay like material from the ramp right of way. A 980 loader was hauling the clay like material to a segregated stock pile. A 988 loader was using material stockpiled at the end of Station 22+00 EN to backfill the excavation at Station 22+00 ES.

At 3:10 p.m. Brad Moring, the CER at SRP 78, contacted the OTL AER. Mr. Moring informed the OTL AER that Pulice Construction had offered to allow Sundt the use of their excavator to aid in extracting Sundt's 245 excavator from the mud at the SRP 78 site. However, Sundt could only use Pulice's excavator if they used one of Pulice's operators. Mr. Moring would not allow this unless Pulice's operator was OSHA 40 hour trained. The OTL AER agreed with Mr. Moring stating that unless the operator was 40 hour trained, then Sundt would be out of compliance with the work plan and would incur liability for ADOT. At 3:15 p.m. the OTL AER notified Mr. Scott Weinland of ADOT concerning the potential problem at the SRP 78 site. The OTL AER then proceeded to the SRP 78 site and arrived there at 3:16 p.m.

Mr. Jack Van Marter of Sundt requested if the OTL AER would allow Pulice's excavator to aid in the removal of Sundt's excavator. The OTL AER informed Mr. Van Marter that Pulice's operator could not work in the excavation since he would not be 40 hour trained. At 3:25 p.m. the OTL AER notified both Mr. Weinland and Mr. Al Kattan of ADOT concerning Sundt's request and the OTL AER's answer. They requested that the OTL AER keep them informed of the situation. At 4:00 p.m. the OTL AER notified Ms. Janice Petticrew of RESNA concerning the problem at the SRP 78 site. At this point the OTL AER remained at the SRP 78 site since operations had most likely ended for the day at the OTL site.

At 4:05 p.m. Sundt proposed an alternative plan. They would use Pulice's excavator and operator but not allow them inside the excavation. Sundt had to instruct Pulice's operator in the use of a 5-minute escape pack and the emergency evacuation procedures. Then a cable was attached to both excavators and Pulice's excavator pulled Sundt's excavator free of the mud. The excavator was pulled free of the mud at 4:37 p.m. and the operations on the site were then shut down for the day.

SRP 75 and 78 Landfill Site

The SRP AER arrived at the SRP 75 site at 7:15 a.m. The SRP AER noted that the Indian Bend Wash had water running in it and the haul road between SRP 75 and SRP 78 sites had been washed out and was inaccessible. The SRP AER was then notified by Mr. Scott Weinland of ADOT that the SRP 78 site was shut down for the day due to the rain, but that work at the OTL site was on-going. The SRP AER then left the SRP 75 site to return to the office at 8:06 a.m.

February 10, 1993

OTL Landfill Site

The OTL AER calibrated the monitoring equipment at 6:30 a.m. and arrived at the SRP 75 site at 7:15 a.m. The weather conditions were partly cloudy, with clearing skies, however, there had been heavy rains through the night and early morning. The tailgate safety meeting for the project personnel was held at 7:30 a.m. At 7:40 a.m. the operations at the OTL site commenced.

The loaders began excavating at Station 69+18 WS and the OTL CER was monitoring the work. The 245 excavator was not present on the site. At 10:00 a.m. Ms. Janice Petticrew of RESNA and Mr. Tom Sullivan of ADOT arrived on the OTL site. They inspected the site and left at 10:30 a.m. Ms. Petticrew returned to the OTL site at 10:50 a.m. to inform the OTL AER that Mr. Sullivan had verbally authorized RESNA to collect the used oil filters and paint can waste from the OTL area designated as MSW #1 on the far west side of the site. The filters and paint cans were to be collected into storage drums and stored near the decontamination pad to await special handling for disposal. Ms. Petticrew informed the OTL AER that RESNA would conduct this work on Friday morning, February 12, 1993. She then left the site.

Operations shut down at the OTL site for lunch at 12:00 p.m. and resumed at 12:30 p.m. At 1:15 p.m. Mr. Kurt Tucker of CWM, the OTL CER, talked to the OTL AER about his concerns with the lack of compliance on the part of Sundt Corp. with the site safety plan. The OTL AER agreed that in some areas Sundt had become lax concerning safety on the site.

At 2:00 p.m. the 245 excavator had arrived on site and entered the excavation at Station 69+00. The excavator began excavating material and placing the material into stockpiles which were then moved by the two loaders. At 2:51 p.m. Mr. David Allard of CH2M Hill, the EPA's representative for the SIBW Superfund site, visited the OTL site to observe the operations. He left at 3:08 p.m. The OTL AER noted that the OTL CER had not monitored dust on this day because of the extremely damp conditions of the soil due to the previous rains. The OTL AER had agreed that dust monitoring was not necessary due to the weather.

No unusual readings were recorded by either the OTL CER or AER throughout the day on the monitoring equipment. The operations were shut down for the day at 4:00 p.m.

SRP 75 Landfill Site

The SRP AER calibrated the monitoring equipment prior to arrival at the SRP 75 site. The SRP AER arrived at the SRP 75 site at 7:06 a.m. and the daily tailgate safety meeting was conducted at 7:15 a.m. Excavation at the SRP 75 site began at 7:30 a.m. at Station 262+80 moving south

toward Station 262+50. The haul road over to the SRP 78 site was washed out by Indian Bend Wash causing it to be inaccessible.

At 9:10 a.m. Mr. Joy Foster of ADOT requested assistance from the SRP AER as he entered the excavation to conduct soil moisture tests. Mr. Foster and the SRP AER obtained a confined space permit then proceeded to enter the SRP 78 excavation at 9:20 a.m. No unusual readings were recorded on the monitoring equipment by the SRP AER during the soil moisture testing. Mr. Foster then left the site at 9:45 a.m. to observe activities at the OTL site.

At 1:45 p.m. Mr. Foster of ADOT and the SRP AER entered the excavation again to collect more soil samples for moisture tests. These samples were collected near Station 262+50. No unusual readings were recorded by the SRP AER during the sampling.

Mr. Allard of CH2M Hill, the EPA's representative for the SIBW project, visited the SRP 75 site at 2:15 p.m. He observed the operations for approximately 10 minutes and then left the site.

The excavator moved to continue excavation from Station 262+50 to 262+25 at 3:05 p.m. No unusual readings were recorded by the SRP AER at 4:00 p.m. Operations ended for the day at 4:30 p.m. after the last truck was loaded.

## February 11, 1993

### OTL Landfill Site

RESNA's Scott Dickson, the AER for the OTL site, calibrated the monitoring equipment at 6:30 a.m. and then arrived at the SRP 75 site at 7:15 a.m. The tailgate safety meeting for the project personnel was held at 7:30 a.m. At 7:45 a.m. operations began at the OTL site with a 245 excavator working at Station 68+18 and a 235 excavator working at Station 16+00. The OTL AER notified the OTL CER, Mr. Kurt Tucker, that one of the excavation operations had to be shut down since the excavation operations were spaced too far apart for one person to adequately monitor. Additionally, the Sundt personnel who were spreading the geotextile fabric in the bottom of the excavation were working within 100 feet of the active excavation and did not have their 5-minute escape packs available. The Sundt personnel were notified that they could not enter the excavation unless they had a "C" kit or an escape pack with them. At 8:05 a.m. the OTL CER shut down the excavation operation at Station 16+00 and then sent a message to the Sundt Corp. field office to notify them of the shut down and that a second CER was needed for the OTL site.

At 8:47 a.m. Mr. Don Bezek, the site safety officer for the project, arrived on site. Mr. Bezek was notified of the need for a second CER and also that he needed to acquire proof that Sundt personnel who were new to the project had their OSHA 40-hour training. Additionally, the OTL CER and AER requested that the site safety officer review the site safety plan with the new Sundt personnel and supply them with "C" kits and/or 5-minute escape packs.

At 9:38 a.m., Mr. Jack Van Marter of Sundt arrived on the OTL site. Ms. Petticrew of RESNA and Mr. Bob McDonald of CWM also arrived on the site at this time. Mr. Van Marter talked with his personnel and then had a heated discussion with Mr. Tucker concerning the shut down of the excavation operation. Mr. Van Marter was upset that he had not been notified immediately of the shut down. The discussion ended when Mr. Van Marter left the site. Ms. Petticrew informed the OTL AER that RESNA would deliver some overpack drums to the OTL site later in the day to be

used for the accumulated small quantity of plastic gallon bottles of used oil, several 5-gallon paint containers and two 24 volt automotive batteries.

At 10:05 a.m. Mr. Van Marter returned and informed the OTL AER and Ms. Petticrew that the new Sundt personnel on site were OSHA 40 hour trained and that the site safety officer was going to review the safety plan with them. He apologized for his earlier loss of temper that had been due to a lack of communication between Sundt and CWM. Mr. Van Marter informed Ms. Petticrew and the OTL CER that he did not have any problems when dealing with RESNA personnel.

At 12:15 p.m. Mr. Jack McLaws of RESNA arrived at the OTL site with the overpack drums. Mr. McLaws and the OTL AER placed the bottles of oil and the paint containers into a plastic lined overpack. The two automotive batteries were then placed into a separate plastic lined overpack. Both overpacks were left on site for storage to await disposal. Mr. McLaws left the site at 12:30 p.m. to return to the RESNA office.

At 1:00 p.m. Mr. Van Marter notified the OTL AER that all of Sundt's personnel have "C" kits available to them on site at this time. Excavation operations were occurring at Station 16+00 only and the remainder of Sundt personnel were placing the geotextile fabric in the excavation at Station 22+00 EN. At 3:00 p.m. the OTL AER left the site due to sickness. The OTL AER informed the OTL CER to notify the SRP CER if problems were encountered at the OTL site. No unusual readings on the monitoring equipment were noted by the OTL AER throughout the day.

#### SRP 75 Landfill Site

The SRP AER calibrated the monitoring equipment prior to arriving at the site at 7:12 a.m. The daily tailgate meeting was conducted at 7:15 a.m. Excavation began at 7:30 a.m. at Station 262+50 and progressed toward Station 262+20. At 9:20 a.m. Mr. Joy Foster of ADOT and the SRP AER entered the excavation to collect samples for soil moisture tests. Prior to entry both Mr. Foster and the SRP AER signed a confined space entry permit. The SRP AER conducted the air monitoring for the entry and no unusual readings were recorded during the sample collection.

At 10:20 a.m. Ms. Janice Petticrew, RESNA's project manager, visited the site. Mr. Scott Weinland of ADOT visited at SRP 75 at 10:40 a.m. to observe the operations and talk with Mr. Foster.

At 1:00 p.m. the excavation work moved to Stations 262+20 and 262+00, at the northern boundary. At 1:55 p.m. Mr. Foster and Mr. Brett McDaniel, the SRP AER, once again entered the excavation under a confined space permit to collect additional samples for soil moisture testing. The results of the air monitoring during the sampling were normal.

At 3:05 p.m. Mr. Scott Dickson, the OTL AER, arrived at the SRP 75 site to inform the SRP AER that he was ill and was going home for the day. The OTL AER requested that the SRP AER be on call for the OTL site if the OTL CER requires assistance for the remainder of the day. The OTL CER was going to contact the SRP AER if any problems arose at the OTL site. No incidents were reported to the SRP AER from the OTL CER for the remainder of the day. No unusual readings were recorded by the monitoring equipment at the SRP 75 site throughout the day. Operations ceased at the SRP 75 site at 4:20 p.m.

**February 12, 1993**

**OTL Landfill Site**

The OTL AER calibrated the monitoring equipment at 6:30 a.m. and then arrived at the OTL site at 7:15 a.m. The tailgate safety meeting for the project personnel was held at 7:30 a.m. At 7:40 a.m. the operations began.

At 8:00 a.m. a crew of three RESNA personnel arrived on site. The RESNA crew began to collect and containerize waste containers previously identified by CWM as requiring special handling. The materials collected by the RESNA crew were containerized in plastic drums and stored by the decontamination pad to await disposal. At 8:15 a.m. Mr. Al Katan and Mr. Scott Weinland of ADOT arrived on site to observe the operations at the OTL site.

The excavation operations at Station 16+00 had to be shut down by the OTL CER at 9:30 a.m. when the organic vapor monitor used by the CER malfunctioned. Mr. Don Bezek, the OTL CER, had the equipment replaced and the operations resumed at 11:00 a.m.

No unusual readings were recorded on the monitoring equipment at the OTL site by the OTL CER or AER throughout the day. Operations ceased for the weekend at 4:00 p.m.

**SRP 75 Landfill Site**

The SRP AER calibrated the monitoring equipment prior to arriving at the site at 7:00 a.m. The daily tailgate safety meeting was conducted at 7:15 a.m. At 7:30 a.m. the excavation work began at the SRP 75 site. Mr. Scott Weinland of ADOT arrived on site at 7:45 a.m. to observe the operations. At 7:55 a.m. Mr. Ed Farr of Sundt Corp. also arrived on site to observe the operations and have a discussion with Mr. Weinland. Both Mr. Weinland and Mr. Farr left the SRP 75 site at 8:06 a.m. The excavation work had progressed to Station 261+80.

Mr. Joy Foster of ADOT and Mr. Brett McDaniel, the SRP AER, entered the excavation at the SRP 75 site to collect soil samples for moisture testing. The results of the air monitoring conducted by the SRP AER during the sampling was normal. By 10:00 a.m. the excavation work had progressed southwestward to Station 261+50. At 11:00 a.m. the excavator moved from Station 260+90, to Station 261+00. The excavation work progressed southward toward Station 260+80. At 1:30 p.m. the SRP AER and Mr. Foster collected additional soil samples for the soil moisture tests.

At 2:30 p.m. the depth of excavation was decreased to approximately 7 feet in depth because native soil was encountered below this depth. The excavation work was approximately near Station 261+20.

Earlier in the day Mr. Brad Moring, the SRP CER, informed the SRP AER that he had documented that Sundt personnel had been negligent in controlling dust and adequately controlling access to the site. Mr. Moring had noted that unauthorized personnel driving cement trucks and pump trucks had passed through the site with no warning or direction given by site personnel. Work was ended for the day at the SRP 75 site at 4:20 p.m. by Mr. Jack Van Marter of Sundt.

**Conclusions**

Review of the daily reports and air monitoring results provided by both project CER's did not identify inconsistencies between the project AER's and the CER's reports. No suspicious materials and no unusual air contaminants were identified at the SRP 75 site by the SRP CER or AER during the week. Additionally, no suspicious materials and no unusual air contaminants were identified at the OTL site by the OTL CER or AER during the week. Dust control measures were successfully keeping the airborne concentrations of respirable dust at the OTL and SRP 75 sites well below the maximum allowable concentration of 1.60 parts per million. Only one documented failure of adequate dust control was documented by CWM as a result of negligence on the part of Sundt personnel at the SRP 75 site. However, the incident did not exceed the maximum allowable level of dust on the site.

Sincerely,  
RESNA Industries, Inc.

*Janice Petticrew*  
Janice Petticrew  
Environmental Specialist

*Michael Wood for*

Jim Kirschner  
Professional Services Manager

jp

cc. Scott Weinland, ADOT

135 South Weber Drive, Suite 1  
Chandler, AZ 85226  
Phone: (602) 961-0777  
Fax: (602) 961-0554

March 9, 1993

Mr. Tom Sullivan  
Arizona Department of Transportation  
Environmental Planning  
255 South 17th Avenue, Rm. 240E  
Phoenix, Arizona 85007

Subject: Clean Up of Paint Cans, Oil Filters, and Drums at OTL Landfill  
SIBW-East Papago Freeway Landfill Removal Project  
RESNA Project No. A1098.11

Dear Mr. Sullivan:

RESNA Industries, Inc. (RESNA), mobilized a field crew to the Old Tempe Landfill (OTL) site in Tempe, Arizona, on February 12, 1993. RESNA was directed by the Arizona Department of Transportation (ADOT) to gather and containerize numerous paint cans and used oil filters in the area designated as MSW #1 on the far west end of the OTL site. In addition, RESNA was to sample three 55-gallon drums of liquid that had been left on the OTL site by the previous owners, and move the drums to a designated storage area. RESNA obtained verbal authorization to perform these services from Mr. Tom Sullivan during a visit to the OTL site on February 10, 1993. Mr. Sullivan requested that RESNA send a crew to the site to place the identified waste materials into drums and store the drums in a designated storage area on the OTL site to await profiling for disposal.

RESNA arrived at the OTL site at 8:15 a.m. on February 12, 1993, with a crew of three workers. The crew utilized Level D personal protective equipment plus protective gloves. The paint containers were of various sizes ranging from 1 pint up to 5 gallons. The oil filters also varied in size from small automobile filters up to large truck filters. The paint containers and the oil filters were separated from each other and placed into 85 gallon overpack drums. Additionally, RESNA placed two large automotive batteries into a separate overpack drum for storage on site prior to disposal.

135 South Weber Drive, Suite 1  
Chandler, AZ 85226  
Phone: (602) 961-0777  
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ARIZONA DEPT. OF TRANSPORTATION  
HIGHWAYS DIVISION  
ENVIRONMENTAL PLANNING SERVICES

March 12, 1993

MAR 16 1993

Mr. Tom Sullivan  
Arizona Department of Transportation  
Environmental Planning  
205 South 17th Avenue, Rm. 240E  
Phoenix, Arizona 85007

RECEIVED

Subject: Weekly Project Summary  
Week Ending February 19, 1993  
SIBW-East Papago Freeway Landfill Removal Project  
RESNA Project No. A1098.11

Dear Mr. Sullivan:

The following is a summary of the field activities conducted on the South Indian Bend Wash (SIBW)-East Papago Freeway Landfill Removal Project for the week ending February 19, 1993. The activities for the week were conducted at the SRP 75 and SRP 78 landfill sites, located on the north bank of the Salt River, west of McClintock Road, and to the Old Tempe Landfill (OTL) site, located along the south bank of the Salt River, west of Price Road in Tempe, Arizona. This project summary documents the activities as recorded by RESNA Industries, Inc. (RESNA), for the week of February 16, through February 19, 1993. The RESNA personnel present at the sites during the week included Mr. Brett McDaniel, Ms. Janice Petticrew, and Mr. Joel Nave. Brett McDaniel was the Arizona Department Of Transportation's (ADOT) Environmental Representative (AER) who monitored the activities at the two SRP sites. Ms. Janice Petticrew and Mr. Joel Nave were the AER's who monitored the activities at the OTL site.

### February 15, 1993

No work was conducted at either the OTL site, the SRP 75 site, or the SRP 78 site, on this day because of the observance of the President's Day holiday.

### February 16, 1993

#### OTL Landfill Site

The OTL AER, Ms. Janice Petticrew, arrived at the OTL site at 7:20 a.m. The tailgate safety meeting for the project personnel was held at 7:25 a.m. Work at the site commenced at 7:35 a.m. The work entailed cutting the right of way down to grade and placing the geotextile fabric in the excavations. The excavation containing the fabric was backfilled to the specified grade. Mr. Kurt Tucker of Chemical Waste Management (CWM) is the Contractor's Environmental Representative (CER) at the OTL site.

At 8:20 a.m. Mr. Scott Weinland of ADOT asked Ms. Petticrew, the OTL AER, if the drums of liquid petroleum materials, the oil filters and the paint waste containers had been collected from the OTL site and stored properly near the decontamination pad. Ms. Petticrew informed Mr. Weinland that all of the materials specified by ADOT had indeed been collected and containerized, and placed for storage near the decontamination pad until disposal arrangements could be made. Mr. Weinland was also concerned about a deep test pit that had been excavated along the west side of the excavation area, near the former concrete washout pond. Mr. Weinland instructed Mr. Joy Foster of ADOT to place caution tape around the pit to prevent individuals from accidentally falling into the pit.

At 8:30 a.m. Mr. Don Bezek of CWM arrived on site as the second CER for the OTL site. At 9:00 a.m. Mr. Joel Nave arrived on site. Mr. Nave brought all necessary monitoring equipment to the OTL AER. Mr. Nave and Ms. Petticrew proceeded to an area along the Salt River bank at the OTL site to collect some additional paint waste cans that had not previously been collected along with the other wastes. These paint waste containers were placed into overpack drums along with the other paint wastes at the decontamination pad storage area. Mr. Nave left the OTL site at 9:20 a.m.

At 10:00 a.m. the OTL CER, Mr. Tucker of CWM, entered the excavation to monitor the operations while a dozer leveled the bottom of the excavation to prepare the area for the fabric to be placed. The CER exited the excavation at 10:20 a.m. to continue normal monitoring of the excavation operations.

Mr. Don Bezek of CWM, the second OTL CER, was monitoring the excavation operations near the former cement washout area throughout the day. The excavator was breaking apart the concrete in the soil and stockpiling the material for later use.

Ms. Petticrew left the site at 12:00 p.m. to return to the RESNA office during the lunch break. Ms. Petticrew returned to the OTL site at 1:00 p.m. to continue monitoring the operations. Materials being excavated in the WS ramp area included concrete and asphalt pieces as well as a clay/silt material.

At 1:43 p.m. the OTL AER left the OTL site to go to the SRP 75 site to check on the operations. The OTL AER also delivered some calibration equipment to the SRP AER. The OTL AER returned to the OTL site at 2:15 p.m. At 2:30 p.m., Sundt Corp. personnel checked the grade on the WS right of way. Work ended for the day at 4:00 p.m. No unusual readings were recorded on the monitoring equipment throughout the day. No suspicious materials were encountered on this day.

#### SRP 75 Landfill Site

The SRP AER arrived at the SRP 75 site at 7:06 a.m. and attended the tailgate safety meeting at 7:16 a.m. The excavation work commenced at Station 261+10 at 7:30 a.m. By 8:24 a.m. the first load of trucks had been loaded and there was a break until the first trucks began to return. The SRP AER left the site to go to the RESNA office. The SRP AER returned to the SRP 75 site at 9:46 a.m. The trucks had begun to return and the SRP CER, Mr. Brad Moring of CWM, was monitoring the excavation operations.

The SRP AER noted the weather as partly cloudy with a 20% chance of rain during the day. The temperature was to reach 65 degrees Fahrenheit and the winds were gusting from 10 to 15 miles per hour from the east.

By 12:00 p.m. the excavator had progressed to Station 260+50. At 1:15 p.m. Mr. Bob McDonnell of CWM arrived on site to talk with the SRP CER. Mr. Jim Bushnel, the Certified Industrial Hygienist with CWM, also arrived on site to talk with Mr. McDonnell and Mr. Moring. Mr. McDonnell and Mr. Bushnel left the SRP 75 site at 1:35 p.m.

At 2:00 p.m. Mr. Joy Foster of ADOT and Mr. Brett McDaniel, the SRP AER, entered the excavation to obtain soil samples for testing the soil moisture content. The SRP AER monitored during the sample collection and no unusual readings were recorded.

At 2:36 p.m. the excavator moved to the northern portion of the SRP 75 site to begin excavation at Station 261+55. The depth of the excavation was approximately 5 feet below the ground surface in this area. Work for the day ended at 4:30 p.m. No unusual reading were recorded on the monitoring equipment and no suspicious materials were encountered throughout the day.

### **February 17, 1993**

#### **OTL Landfill Site**

RESNA's Janice Petticrew, the OTL AER, arrived at 7:20 a.m. and attended the tailgate safety meeting for the project personnel at 7:25 a.m. Mr. Bob McDonnell informed the OTL AER that Mr. Jim Bushnel of CWM would be visiting the OTL site later in the day to evaluate the need for air monitoring during excavation activities that are not within a landfill area on the OTL site.

At 8:00 a.m. Mr. Jim Bushnel of CWM, Mr. Ed Farr and Mr. Jack Van Marter of Sundt Corp. visited the OTL site and talked with the OTL AER. They asked Ms. Petticrew what was her opinion of personnel working down in the bottom of an excavation without escape packs when the removal involves only rock, soil, concrete and asphalt materials. Ms. Petticrew informed them that she believed it unnecessary to treat the excavations as confined spaces since previous investigations by Sergeant, Hauskins, and Beckwith in the areas, formerly owned by Century Materials and City Ready Mix, did not identify hazardous materials. Therefore, she believed that entry into the excavation when no active excavation activities were occurring did not require monitoring by a CER. Mr. Bushnel was drafting a letter to amend the site safety plan for submittal to the EPA for approval of the safety level down grade for certain areas of the OTL site. This safety level down grade would not apply to the SRP sites and would not apply to the removal of municipal solid waste from the OTL site.

Excavation had started in the W/S ramp area originally, but moved over to the cement washout area at 8:30 a.m. to continue excavation. The D-9 dozer remained at the W/S ramp to build a ramp out of the W/S excavation. At 10:25 a.m. the excavator moved back over to an area south of the S/W ramp to continue excavation. Mr. Tucker of CWM monitored the excavation in this area. A smaller excavator continued work at the washout area and Mr. Don Bezek of CWM monitored the work in that area.

At 10:45 a.m. the excavator at the W/S ramp area exposed a partial drum that had been cut in half and crushed. The OTL CER investigated the contents and obtained no readings on the monitoring equipment. The OTL CER upon visual inspection evaluated the material to be soil inside an empty drum. The excavation operations then continued.

At 10:55 a.m. Ms. Petticrew telephoned Mr. Tom Sullivan of ADOT to obtain permission to train another person to be the OTL AER since Mr. Scott Dickson would be out sick for the remainder of the week. Mr. Sullivan gave Ms. Petticrew a verbal authorization to train Mr. Joel Nave as a backup AER. Mr. Sullivan also informed Ms. Petticrew that he would be unavailable on Thursday and Friday of this week and that the contact if any emergency occurs would be Mr. William Belt of ADOT.

At 11:40 a.m. the small excavator moved from the washout area over to the W/S ramp to excavate a shallow trench along the top of the excavation slope to anchor the geotextile fabric in place. At 12:35 p.m. the excavation activities resumed after the lunch break at Station 63+70 W/S. Mr. Joel Nave arrived on site to be trained for the AER position. At 1:30 p.m. the excavator moved south of Station 63+70 to push fill material into the excavation to be used as backfill over the fabric. At 2:04 p.m. the smaller excavator joined the larger excavator in pushing the fill material into the excavation of the W/S ramp. Both of the excavators moved to approximately 100 feet south of Station 63+70 to resume excavation. The excavated material was used to backfill the W/S excavation. Work ended for the day at 4:00 p.m. at the OTL site.

#### SRP 75 Landfill Site

The SRP AER arrived on site at 7:06 a.m. and the tailgate safety meeting was held for project personnel at 7:12 a.m. Operations commenced at the SRP 75 site at 7:30 a.m. Mr. Scott Weinland of ADOT arrived on site to inspect the work progress at the site. Mr. Weinland left the site at 8:20 a.m. Mr. Jim Bushnel of CWM also briefly visited the SRP 75 site and talk with Mr. Brad Moring of CWM, the SRP CER.

At 8:55 a.m. Mr. Joy Foster of ADOT and the SRP AER entered the excavation at the SRP 75 site to collect soil samples for testing the soil moisture of the fill material. The SRP AER conducted the air monitoring in the excavation during this activity. No unusual readings were recorded. At 9:05 a.m., during a break in the truck traffic, CWM personnel moved the scaffolding used to tarp the trucks since the area of the site available for the trucks to move in had been reduced in size from the excavation operations and had to be rerouted to accommodate the trucks.

The weather conditions for the day as noted by the SRP AER were sunny and clear with a temperature of approximately 50 degrees Fahrenheit and a slight breeze out of the east. At 10:05 a.m. the excavation location had progressed to between Stations 260+00 and 259+50 and was moving toward the north. The operations ended for the day at 4:20 p.m. No suspicious materials were encountered and no unusual readings were recorded on the monitoring equipment.

### February 18, 1993

#### OTL Landfill Site

The OTL AER, Mr. Joel Nave of RESNA, arrived at the OTL site at 7:15 a.m. The tailgate safety meeting for the project personnel was held at 7:30 a.m. At 7:40 a.m. the operations at the OTL site commenced. The OTL AER calibrated the monitoring equipment at 8:15 a.m. The excavation work began near Station 63+70. The 245 excavator was working approximately 100 feet south of the station and the 235 excavator was working approximately 50 feet west of the station. Mr. Kurt

Tucker of CWM was the OTL CER for the site. The material that was excavated was placed back in the excavation at the E/S ramp. A compactor was compacting the backfill material in the W/S ramp.

At 9:00 a.m. one of the excavators exposed a green colored material at the north end of the W/S ramp, that upon investigation was identified by the CER and AER as pieces of colored concrete. At 9:15 a.m. Sundt Corp. personnel had a meeting to discuss how to attain the proper slope on the north end of the W/S ramp. Work resumed at 9:30 a.m.

At 10:30 a.m. Sundt excavated a test pit near the former concrete washout area. From the surface down to approximately 10 feet in depth the material was comprised of mud and gravel. Below the 10 foot depth the material was native soil. The OTL AER monitored the air during the excavation of the test pit. No unusual readings were recorded.

At 11:30 a.m. a 55-gallon drum was exposed during the excavation. The drum contained a soil like material that had become solidified but could be crumbled with hand pressure. A sample of the material was collected by the OTL AER. The OTL AER then called the RESNA office to have an 85-gallon overpack drum and several drum liners brought to the site to contain the drum of suspicious material.

At 12:00 p.m. work ceased for the lunch break. Work resumed at 12:30 p.m. A RESNA employee, Mr. Dean Pinkham, arrived on the OTL site to deliver the overpack and the drum liners. The previously identified 55-gallon drum was placed into two drum liners until further investigation could be completed. Mr. Pinkham left the site at 1:30 p.m. Work ended for the day at 4:00 p.m. No unusual readings were recorded on the monitoring equipment throughout the day.

#### SRP 75 Landfill Site

The SRP AER arrived at the SRP 75 site at 7:10 a.m. and the daily tailgate safety meeting was conducted at 7:15 a.m. by the site safety officer, Mr. Don Bezek of CWM. Excavation at the SRP 75 site began at 7:25 a.m. between Stations 260+20 and 260+35. The depth of excavation at this location was 10 to 12 feet. Mr. Richard Roth of CWM was the acting CER for the SRP 75 site.

The excavation had progressed to the point where the access road into the site was accessible from the west entrance only. The trucks turned around inside the SRP 75 site and exited through the entrance gate. A CWM employee directed the truck traffic to keep the traffic moving and avoiding confusion.

At 9:00 a.m. a suspicious material was exposed during the excavation operations near Station 260+20. The material was a solid, fluorescent, fibrous material that was similar to insulation. The fibers of the material were not straight and brittle, therefore, it was identified by the SRP CER to be non-asbestos material. No readings were recorded on the monitoring equipment for the material. Therefore, it was decided by the SRP CER that the material was non-hazardous and it was then loaded into one of the trucks for disposal.

At 11:00 a.m. the SRP AER noted that the excavation was continuing to move northward between Stations 259+75 and 260+50.

Mr. Brad Moring, the SRP CER, informed the SRP AER at 1:40 p.m. that a 5-gallon container of a petroleum like liquid material had been exposed by the excavator near Station 259+75,

approximately 80 feet north of the south side of the SRP 75 site. Mr. Moring informed the SRP AER that he would have the container of liquid material placed onto plastic along with some of the surrounding soil to insure that none of the material was left in the excavation. The material would be stored on the plastic until the SRP CER obtained authorization from Butterfield Station on whether they would accept the waste.

Mr. Joy Foster of ADOT and Mr. McDaniel, the SRP AER, entered the excavation at 1:45 p.m. to collect the soil samples for the soil moisture tests. The samples were collected near Station 260+25.

At 1:50 p.m. the SRP CER and AER had the container of the suspicious petroleum-like liquid material placed on plastic sheeting and covered with plastic. Approximately 1 cubic yard of soil was removed with the container since the container had been punctured upon removal by the excavator. No visible signs of contamination from the suspicious material was left in the remaining soil.

At 2:50 p.m. a second 5-gallon container of a petroleum product was exposed in the excavation. This container was crushed and the liquid had spilled into the soil. Approximately 6 cubic yards of soil surrounding the crushed container was removed along with the container and added to the plastic where the first container had been placed. No readings were recorded on the monitoring equipment from the liquid material.

Work ended for the day at the SRP 75 site at 4:30 p.m. No unusual readings were recorded on the monitoring equipment throughout the day. Dust was kept well below the maximum allowable level of 1.60 parts per million. The two 5-gallon containers of petroleum-like liquid material were the only suspicious materials encountered during the day.

## February 19, 1993

### OTL Landfill Site

Mr. Joel Nave of RESNA, the AER for the OTL site, arrived at the OTL site at 7:30 a.m. The tailgate safety meeting for the project personnel was held at 7:40 a.m. At 7:45 a.m. operations began at the OTL site. The OTL AER calibrated the monitoring equipment at 7:45 a.m. Mr. Kurt Tucker is the CER for the OTL site. The excavation operations began at the south side of Station 15+00 and 16+00. The 245 excavator was working at Station 15+00 and the 235 excavator was working at Station 16+00 which is the East/South (E/S) ramp near the main line. Other Sundt personnel were compacting the W/S ramp and collecting compaction test samples. Loaders carried the excavated material into the W/S ramp to be used as backfill.

At 11:15 a.m. the 245 excavator moved to the northwest side of Station 63+00 to excavate the concrete and soil material. The 235 excavator joined in the excavation at Station 63+00 at 12:00 p.m. Sundt personnel continued placing the geotextile fabric in the bottom of the W/S ramp excavation.

At 1:40 p.m. Ms. Janice Petticrew of RESNA relieved Mr. Nave as the OTL AER. Ms. Petticrew investigated the partial drum of soil-like material that had been exposed on February 18, 1993. Ms. Petticrew identified the material as a dried quantity of the silty clay material that had been previously identified on the OTL site as the "fines" produced at a concrete batch plant. The "fines"

are the silt and clay portion of the soil that is washed out of the rock and gravel used in the concrete batch plant process. This silty clay will dry and solidify into a hard material similar to silt from the bottom of a pond. This material had been previously encountered in several excavations on the OTL site. Therefore, the material was identified as non-hazardous.

At 2:00 p.m. an unauthorized truck from the Salt River Project drove around the work area and then left the site. The AER was unable to determine the purpose of the visit. Neither of the occupants of the truck signed in at the visitor check in point.

At 2:10 p.m. the excavation was continuing at Station 61+60 as it began to rain lightly. The rain did not affect the air monitoring of the excavation at this time. At 2:20 p.m. the rain became heavy and the excavation work was ended by the OTL CER. The rain continued to 2:45 p.m. at which time it was decided that Sundt would finish placing the geotextile fabric in the prepared area of the W/S ramp and then cease operations for the remainder of the day due to the rain. Laying the fabric was completed at 3:00 p.m. and the operations ended for the day. Mr. Scott Weinland of ADOT visited the site at 3:00 p.m. and Ms. Petticrew informed him that water samples had been collected that day at the SRP 78 site.

#### SRP 75 Landfill Site

The SRP AER arrived at the SRP 75 site at 7:06 a.m. The daily tailgate meeting was conducted by Mr. Don Bezek of CWM at 7:15 a.m. Excavation began at 7:20 a.m. at Station 260+00 approximately 80 feet north of the south side of the site.

At 9:00 a.m. Mr. Joy Foster of ADOT and Mr. Brett McDaniel, the SRP AER, entered the excavation to collect the soil samples for the soil moisture testing. The air monitoring indicated normal readings during the collection of the samples. The SRP AER noted that the weather was partly cloudy, cool, and breezy with the wind blowing out of the southwest at approximately 5 miles per hour. The amount of clouds increased substantially by 12:00 p.m.

At 2:00 p.m. a light rain began at the SRP 75 site. At 2:45 p.m. the SRP AER telephoned Mr. Scott Weinland of ADOT to inform him that due to the rain, no air monitoring could be conducted. Operations were shut down for the remainder of the day at 2:50 p.m. due to the rain.

#### Conclusions

Review of the daily reports and air monitoring results provided by the project CER's did not identify inconsistencies between the AER's and the CER's reports. No unusual air contaminants were identified at the SRP 75 site by the SRP CER or AER during the week. Additionally, no unusual air contaminants were identified at the OTL site by the OTL CER's or AER during the week.

The suspicious materials that were investigated at the OTL site during the week included an empty, partial 55-gallon drum, some pieces of green colored concrete, and a 55-gallon drum of dried, solidified silty clay soil from the former concrete batch plant operations. The suspicious materials investigated at the OTL site were identified as not special wastes and as non-hazardous waste. The suspicious materials investigated at the SRP 75 site during the week included a solid, fibrous fluorescent insulation material and two 5-gallon containers of a petroleum type of liquid material. After investigation the fibrous material was identified as non-asbestos containing material and non-

hazardous. The two containers of the petroleum type of liquid were excavated and placed onto plastic as temporary storage until further investigations could be conducted. At this time the material is being treated as a special waste requiring special handling.

Dust control measures were successfully keeping the airborne concentrations of respirable dust at the OTL and SRP 75 sites well below the maximum allowable concentration of 1.60 parts per million.

Sincerely,  
RESNA Industries, Inc.

  
Janice Petticrew  
Environmental Specialist

  
Jim Kirschner  
Professional Services Manager

cc. Scott Weinland, ADOT

135 South Weber Drive, Suite 1  
Chandler, AZ 85226  
Phone: (602) 961-0777  
Fax: (602) 961-0554

March 15, 1993

Mr. Tom Sullivan  
Arizona Department of Transportation  
Environmental Planning  
205 South 17th Avenue, Rm. 240E  
Phoenix, Arizona 85007

ARIZONA DEPT. OF TRANSPORTATION

MAR 16 1993

RECEIVED

Subject: Sampling and Disposal Report  
Two 5-Gallon Containers of Petroleum Waste and Soil at the SRP 75 Site  
SIBW-East Papago Freeway Landfill Removal Project  
RESNA Project No. A1098.12

Dear Mr. Sullivan:

On February 18, 1993, at approximately 1:30 p.m., Sundt Corporation's (Sundt) excavator exposed a 5-gallon container of a liquid petroleum material in the excavation at the SRP 75 site. The container contained approximately 1-gallon of liquid. The container and approximately 1 cubic yard of the surrounding soil was excavated by Sundt and placed onto a sheet of plastic to facilitate further investigations. A second 5-gallon container containing the same liquid petroleum material was excavated in the same area at approximately 1:50 p.m. The second container had been crushed and some of the material had leaked into the surrounding soil. The second container, and approximately 6 cubic yards of the surrounding soil, was removed from the excavation and placed with the first container on the plastic. The containers and the soil were covered with an additional sheet of plastic to protect the material from the weather.

On February 23, 1993, the Arizona Department of Transportation's (ADOT) Environmental Representative (AER) for the SRP 75 site, Mr. Brett McDaniel of RESNA, collected two samples of the liquid petroleum material and the contaminated soil. The samples were placed into separate 8 ounce glass jars with teflon lined plastic lids. Each sample was labeled with the sample identification, sampler's name, the sample time and date, the sample location, and the sample description. The same information was recorded in the sampler's field logbook and on a chain-of-custody document. The samples were placed in a cooler with ice and then transported to Analytical Technologies, Inc. of Phoenix, Arizona. The samples were identified as Sample Nos. 0223-01 and 0223-02, composite samples of the material from both containers along with the soil.

The analyses conducted on the samples included EPA Method 8020, Aromatic Volatile Organics, and EPA Modified Method 8015, Non-halogenated Volatile Organics (a fuel fingerprint for identification). The Toxicity Characteristic Leaching Procedure (TCLP) for Lead was originally requested for sample no. 0223-02, however, due to the time constraints to have the material disposed, the test was canceled since the disposal facility accepted the waste without this test. The analytical results for the two samples have been summarized below. Copies of the laboratory report and the chain-of-custody document have been attached to this letter.

Table 1

<u>Analyte</u>	<u>Result (mg/Kg*)</u>	<u>Regulatory Level</u>
Method 8020 - Sample No. 0223-01:		
Benzene	<1.2	0.5 mg/L**
Toluene	310	200 ppm
Ethylbenzene	1.7	68 ppm
Total Xylenes	22	44 ppm
Method 8015 - Sample No. 0223-01:		
C6 - C10	4,900	
C10 - C22	38,000	
C22 - C36	<u>360,000</u>	
Total Hydrocarbons	402,900	100 ppm

\* mg/Kg = milligrams per kilogram or parts per million (ppm)

\*\* mg/L = milligrams per liter of extract or ppm (TCLP analysis)

Based on the results of the laboratory analyses and due to the unknown origins of the petroleum waste, RESNA considered the material to be a hazardous waste as a result of the identified high concentration of toluene. RESNA was unable to identify the origins of the petroleum waste, therefore, the liability to RESNA and ADOT was minimized by disposing of the waste as a hazardous waste under the Resource Conservation and Recovery Act (RCRA). Mr. Tom Sullivan of ADOT was notified of these results and RESNA was given a verbal authorization to arrange for the proper disposal of the material.

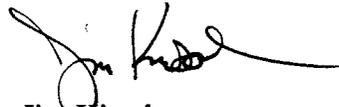
RESNA provided two 85-gallon overpack drums to containerize the two containers and the associated contaminated soil. RESNA completed the manifesting and profiling of the contaminated soil for disposal and obtained the EPA identification number for the waste. On March 5, 1993, the two overpack drums were transported by RESNA to ROMIC in Chandler, Arizona, for disposal under an emergency profile. The hazardous waste will be shipped to Marine Shale Processors in St. Rose, Louisiana for thermal treatment disposal. Copies of the hazardous waste manifest have been attached to this letter.

RESNA appreciates the opportunity to provide these services to ADOT. If you have any questions or require further information concerning this work please contact our office at (602) 961-0777.

Sincerely,  
RESNA Industries, Inc.



Janice Petticrew  
Project Manager



Jim Kirschner  
Professional Services Manager

jp/attachment

cc: Scott Weinland

<b>UNIFORM HAZARDOUS WASTE MANIFEST</b>		1. Generator's US EPA ID No. <b>AZP00000687</b>	Manifest Document No. <b>200014</b>	2. Page 1 of 1	Information in the shaded areas is not required by Federal law.	
3. Generator's Name and Mailing Address <b>SRP 75 Landfill Site / Arizona Department of Transportation 205 S. 17th Ave, Room 240E Phoenix, AZ, 85007 Attn: Tom Sullivan</b>				A. State Manifest Document Number		
4. Generator's Phone (602) 255-7767				B. State Generator's ID		
5. Transporter 1 Company Name <b>RESNA INDUSTRIES</b>		6. US EPA ID Number <b>AZD982516122</b>		C. State Transporter's ID		
7. Transporter 2 Company Name		8. US EPA ID Number		D. Transporter's Phone <b>602-961-0777</b>		
9. Designated Facility Name and Site Address <b>Romic Chemical Corporation - Southwest 6760 W. Allison Chandler, AZ, 85226</b>				E. State Transporter's ID		
10. US EPA ID Number <b>AZD009015389</b>				F. Transporter's Phone		
11. US DOT Description (Including Proper Shipping Name, Hazard Class and ID Number)				G. State Facility's ID		
12. Containers				13. Total Quantity		
14. Unit Wt/Vol				15. Waste No.		
a. <b>Hazardous waste solid n.o.s. (Toluene) ORM-E NA9189</b>				<b>0.020 F 0.2200 P F003</b>		
b.						
c.						
d.						
L. Additional Descriptions for Materials Listed Above <b>Profile # 209133 Job # A1098.12 Disposal PO# 2850</b>				K. Handling Codes for Wastes Listed Above		
15. Special Handling Instructions and Additional Information <b>Avoid contact with waste. Avoid Breathing Vapors DOT ERG # 11a)31 24 Hr Emergency Phone #s: RESNA 602-961-0777, Chemtrac 1-800-424-9300</b>						
16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations. If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.						
Printed/Typed Name <b>Janice Petticrew</b>		Signature <i>Janice Petticrew</i>		Month Day Year <b>10/31/93</b>		
17. Transporter 1 Acknowledgement of Receipt of Materials						
Printed/Typed Name		Signature		Month Day Year		
18. Transporter 2 Acknowledgement of Receipt of Materials						
Printed/Typed Name		Signature		Month Day Year		
19. Discrepancy Indication Space						
20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.						
Printed/Typed Name		Signature		Month Day Year		





Analytical **Technologies**, Inc.

9830 S. 51st Street Suite B-113 Phoenix, AZ 85044 (602) 496-4400

ATI I.D. 302876

March 12, 1993

RESNA Industries  
135 S. Weber  
Suite 1  
Chandler, AZ 85226

RECEIVED

MAR 15 1993

RESNA INDUSTRIES, INC.  
CHANDLER, ARIZONA

Project Name/Number: Papago FWY ROW, SRP75/A1098.11

Attention: Janice Petticrew

On 02/25/93, Analytical Technologies, Inc. received a request to analyze **non-aqueous and soil** sample(s). The sample(s) were analyzed with EPA methodology or equivalent methods. The results of these analyses and the quality control data, which follow each set of analyses, are enclosed.

D indicates the compound was analyzed at a greater dilution.

If you have any questions or comments, please do not hesitate to contact us at (602) 496-4400.

Michael G. Barry  
Project Manager

RVW/ktd

Enclosure

Robert V. Woods  
Laboratory Manager



Analytical Technologies, Inc.

CLIENT : RESNA - CHANDLER  
PROJECT # : A1098.11  
PROJECT NAME : PAPAGO FWY

DATE RECEIVED : 02/25/93  
REPORT DATE : 03/09/93

ATI I.D. : 302876

ATI #	CLIENT DESCRIPTION	MATRIX	DATE COLLECTED
01	0223-01	NON-AQUEOUS	02/23/93
02	0223-02	SOIL	02/23/93

RECEIVED  
MAR 15 1993  
RESNA - CHANDLER, ARIZONA

----- TOTALS -----

MATRIX	# SAMPLES
SOIL	1
NON-AQUEOUS	1

ATI STANDARD DISPOSAL PRACTICE

The samples from this project will be disposed of in thirty (30) days from the date of this report. If an extended storage period is required, please contact our sample control department before the scheduled disposal date.



Analytical Technologies, Inc.

GAS CHROMATOGRAPHY - RESULTS

ATI I.D. : 30287601

TEST : FUEL HYDROCARBONS (MOD. EPA 8015, BLS-191)

CLIENT : RESNA - CHANDLER  
PROJECT # : A1098.11  
PROJECT NAME : PAPAGO FWY  
CLIENT I.D. : 0223-01  
SAMPLE MATRIX : NON-AQUEOUS

DATE SAMPLED : 02/23/93  
DATE RECEIVED : 02/25/93  
DATE EXTRACTED : 02/25/93  
DATE ANALYZED : 02/25/93  
UNITS : MG/KG  
DILUTION FACTOR : 910

-----  
COMPOUNDS

RESULTS  
-----

FUEL HYDROCARBONS, C6-C10	4900
FUEL HYDROCARBONS, C10-C22(BLS-191)	38000
FUEL HYDROCARBONS, C22-C36	360000
FUEL HYDROCARBONS (CALCULATED SUM)	402900

SURROGATE PERCENT RECOVERIES

O-TERPHENYL (%)	107
-----------------	-----

RECEIVED  
MAR 15 1993  
RESNA - CHANDLER, ARIZONA



Analytical Technologies, Inc.

GAS CHROMATOGRAPHY - RESULTS

REAGENT BLANK

TEST : FUEL HYDROCARBONS (MOD. EPA 8015, BLS-191)

CLIENT : RESNA - CHANDLER  
PROJECT # : A1098.11  
PROJECT NAME : PAPAGO FWY  
CLIENT I.D. : REAGENT BLANK

ATI I.D. : 302876  
DATE EXTRACTED : 02/25/93  
DATE ANALYZED : 02/26/93  
UNITS : MG/KG  
DILUTION FACTOR : N/A

COMPOUNDS	RESULTS
FUEL HYDROCARBONS, C6-C10	<5
FUEL HYDROCARBONS, C10-C22(BLS-191)	<5
FUEL HYDROCARBONS, C22-C36	<5
FUEL HYDROCARBONS (CALCULATED SUM)	<5
SURROGATE PERCENT RECOVERIES	
O-TERPHENYL (%)	92

RECEIVED  
MAR 15 1993  
RESNA - CHANDLER, ARIZONA



Analytical Technologies, Inc.

QUALITY CONTROL DATA

TEST : FUEL HYDROCARBONS (MOD. EPA 8015, BLS-191)      ATI I.D. : 302876

CLIENT : RESNA - CHANDLER

PROJECT # : A1098.11      DATE ANALYZED : 02/26/93

PROJECT NAME : PAPAGO FWY      SAMPLE MATRIX : SOIL

REF I.D. : 30287701      UNITS : MG/KG

COMPOUNDS	SAMPLE CONC. RESULT	SAMPLE SPIKED	SAMPLE SPIKED	% SPIKED REC.	DUP. SAMPLE	DUP. SPIKED REC.	RPD
FUEL HYDROCARBONS (C10-C22)	<5	51	60	118	50	98	18

$$\% \text{ Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative \% Difference)} = \frac{(\text{Spiked Sample Result} - \text{Duplicate Spike Sample Result})}{\text{Average of Spiked Sample}} \times 100$$



Analytical Technologies, Inc.

GAS CHROMATOGRAPHY - RESULTS

ATI I.D. : 30287601

TEST : BTEX (8020) AND MTBE

CLIENT : RESNA - CHANDLER
PROJECT # : A1098.11
PROJECT NAME : PAPAGO FWY -
CLIENT I.D. : 0223-01
SAMPLE MATRIX : NON-AQUEOUS

DATE SAMPLED : 02/23/93
DATE RECEIVED : 02/25/93
DATE EXTRACTED : 03/01/93
DATE ANALYZED : 03/01/93
UNITS : MG/KG
DILUTION FACTOR : 1

COMPOUNDS

RESULTS

BENZENE <1.2
TOLUENE 310 D
ETHYLBENZENE 1.7
TOTAL XYLENES 22
METHYL-t-BUTYL ETHER <5.8

SURROGATE PERCENT RECOVERIES

BROMOFLUOROBENZENE (%) 106

RECEIVED
MAR 15 1993
ANALYTICAL TECHNOLOGIES, INC.
CHANDLER, ARIZONA



Analytical Technologies, Inc.

GAS CHROMATOGRAPHY - RESULTS

REAGENT BLANK

TEST : BTEX (8020) AND MTBE

CLIENT : RESNA - CHANDLER  
PROJECT # : A1098.11  
PROJECT NAME : PAPAGO FWY  
CLIENT I.D. : REAGENT BLANK

ATI I.D. : 302876  
DATE EXTRACTED : 03/01/93  
DATE ANALYZED : 03/02/93  
UNITS : MG/KG  
DILUTION FACTOR : N/A

COMPOUNDS	RESULTS
BENZENE	<0.025
TOLUENE	<0.025
ETHYLBENZENE	<0.025
TOTAL XYLENES	<0.025
METHYL-t-BUTYL ETHER	<0.12

SURROGATE PERCENT RECOVERIES

BROMOFLUOROBENZENE (%) 105

RECEIVED  
MAR 15 1993  
RESNA - CHANDLER, ARIZONA



Analytical Technologies, Inc.

QUALITY CONTROL DATA

ATI I.D. : 302876

TEST : BTEX (8020) AND MTBE

CLIENT : RESNA - CHANDLER  
 PROJECT # : A1098.11  
 PROJECT NAME : PAPAGO FWY  
 REF I.D. : 30351801

DATE ANALYZED : 03/02/93  
 SAMPLE MATRIX : SOIL  
 UNITS : MG/KG

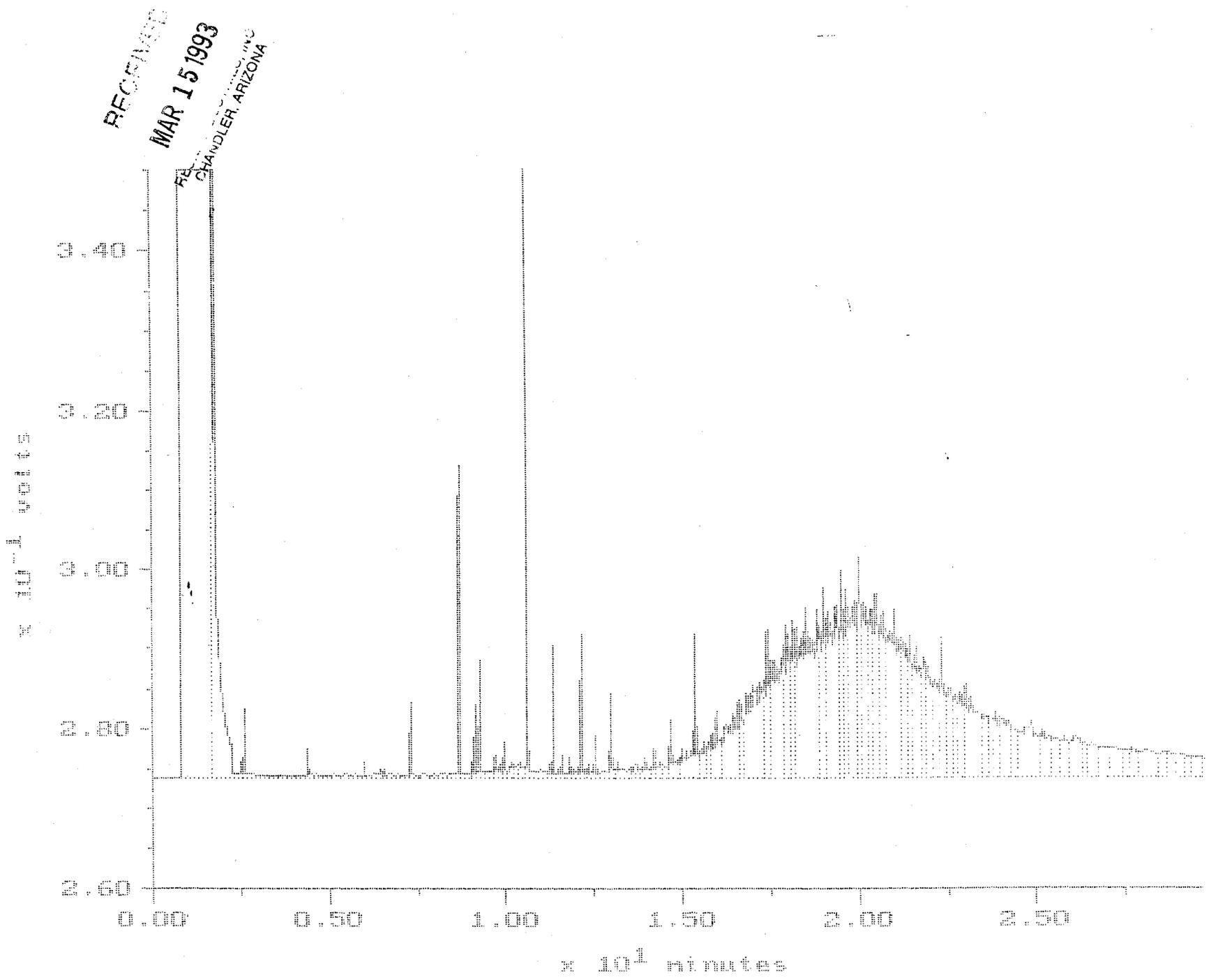
COMPOUNDS	SAMPLE CONC.		SPIKED SAMPLE	% REC.	DUP.	DUP.	RPD
	RESULT	SPIKED			SAMPLE	%	
BENZENE	<0.025	1.0	1.0	100	0.97	97	3
TOLUENE	<0.025	1.0	0.99	99	0.96	96	3
ETHYLBENZENE	<0.025	1.0	1.0	100	1.0	100	0
TOTAL XYLENES	<0.025	3.0	3.1	103	3.1	103	0
METHYL-T-BUTYL ETHER	<0.12	2.0	2.1	105	2.1	105	0

RECEIVED  
 MAR 15 1993  
 RESNA - CHANDLER, ARIZONA

$$\% \text{ Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

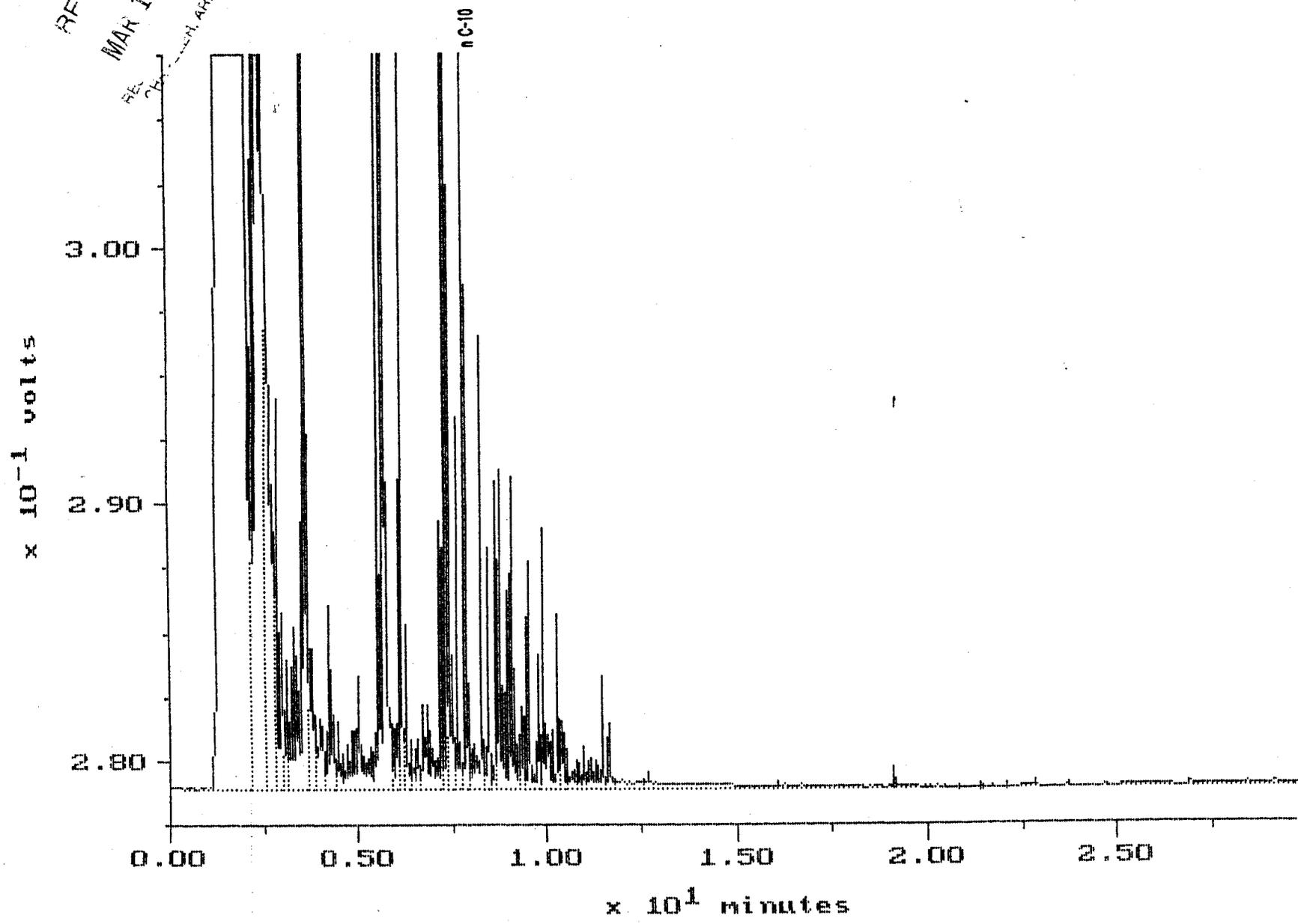
$$\text{RPD (Relative \% Difference)} = \frac{(\text{Spiked Sample Result} - \text{Duplicate Spike Sample Result})}{\text{Average of Spiked Sample}} \times 100$$

Sample: PARR 302876-1 Channel: PID-GCSA File name: 022513  
Acquired: 25-FEB-93 21:28 Method: H:\MAX\PURELS\DATA1\FEB-25 Operator:  
Dilution: 1 : 10.000



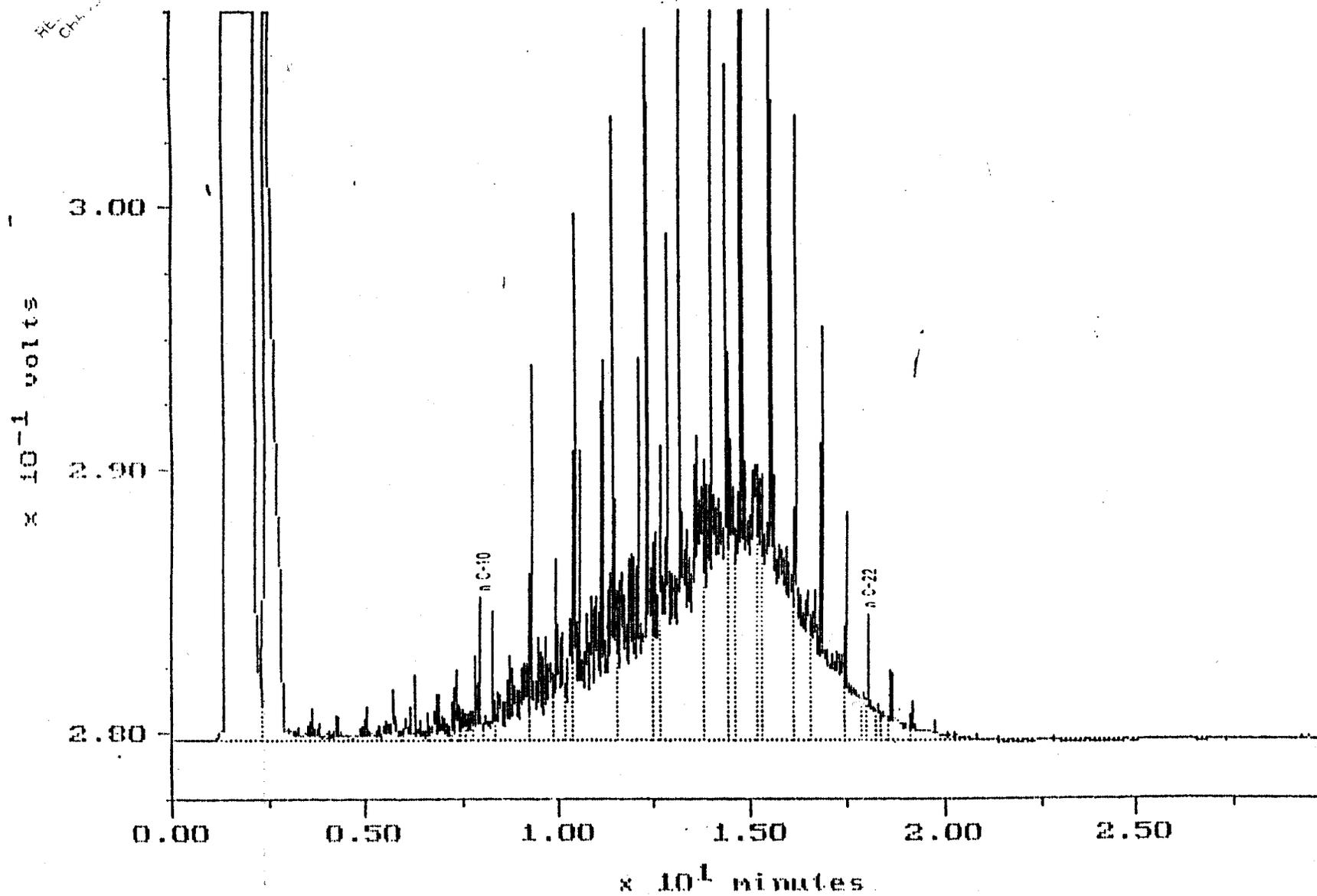
UNLEADED GASOLINE

RECEIVED  
MAR 15 1993  
REL. CHEM. DIV. ARIZONA



RECEIVED  
MAR 15 1993  
ANALYTICAL TECHNOLOGIES, INC.  
CHANDLER, ARIZONA

# DIESEL FUEL





CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

ATI # 302876

PROJECT NO. A1098.11		PROJECT NAME/SITE Papago Fwy ROW, SRP 75						ANALYSIS REQUESTED										P.O. #: A2832						
SAMPLERS <i>Brett McDaniel</i> (SIGN)		/ <i>Brett McDaniel</i> (PRINT)						NO. CONTAINERS	SAMPLE TYPE	<i>BTX (602/8020)</i> <i>TPHg (8015) Med. Field</i> <i>TPHd (8015)</i> <i>TOG 418.1/5520</i> <i>601/8010</i> <i>624/8240</i> <i>625/8270</i> <i>TCLP Lead</i>										REMARKS				
SAMPLE IDENTIFICATION	DATE	TIME	COMP	GRAB	PRES. USED	ICED																		
0223-01	2/23/93	805		X	none		1	liq	X	X														Product
0223-02	2/23/93	810		X	none		1	solid																Product w/soil
RECEIVED MAR 15 1993 RES. CHANDLER, ARIZONA																								
RELINQUISHED BY: <i>Brett McDaniel</i>		DATE 2/23/93	TIME 1107am	RECEIVED BY: <i>Janice Petticrew</i>		LABORATORY: ATI										PLEASE SEND RESULTS TO: Above c/w/d address <i>Janice Petticrew</i>								
RELINQUISHED BY: <i>Janice Petticrew</i>		DATE 2/25/93	TIME 11:00	RECEIVED BY: <i>D. Hill</i>																				
RELINQUISHED BY: <i>D. Hill</i>		DATE 2/25/93	TIME 11:30	RECEIVED BY:		REQUESTED TURNAROUND TIME: <i>Must have results in 2 weeks!</i>																		
RELINQUISHED BY:		DATE 2/25/93	TIME 1130	RECEIVED BY LABORATORY: <i>Marcia Math</i>		RECEIPT CONDITION:										PROJECT MANAGER: <i>Janice Petticrew</i>								

135 South Weber Drive, Suite 1  
Chandler, AZ 85226  
Phone: (602) 961-0777  
Fax: (602) 961-0554

March 15, 1993

Mr. Tom Sullivan  
Arizona Department of Transportation  
Environmental Planning  
205 South 17th Avenue, Rm. 240E  
Phoenix, Arizona 85007

ARIZONA DEPT. OF TRANSPORTATION

MAR 15 1993

RECEIVED

Subject: Sampling Report For Two 55-Gallon Drums of Soil Exposed at the OTL Site  
SIBW-East Papago Freeway Landfill Removal Project  
RESNA Project No. A1098.11

Dear Mr. Sullivan:

On February 22, 1993, Sundt Corporation exposed two 55-gallon drums in a large stockpile of material left on the OTL site by the previous owner of the property. The stockpile of material was comprised of concrete and asphalt materials as well as rock and soil from the former asphalt batch plant operations. The two 55-gallon drums appeared to contain soil. The drums were unlabeled and had several rusted holes in the containers. The drums were isolated in a storage area on the OTL site for further investigation.

At approximately 2:20 p.m., Mr. Scott Dickson of RESNA, the Arizona Department of Transportation's (ADOT) Environmental Representative (AER) for the OTL site, collected two samples of the soil from each of the two drums for a total of four soil samples. Each sample was placed into an 8 ounce glass jar and sealed with a teflon lined plastic lid. Each of the four samples were labeled with the sample identification number, the sampler's name, the sample time and date, the sample location, and the sample description. This information was also recorded in the sampler's field logbook and on a chain-of-custody document. The samples were delivered to Analytical Technologies, Inc. of Phoenix, Arizona, for analysis.

One sample from each drum was analyzed for EPA Method 8020, non-halogenated volatile organics and EPA Modified Method 8015, aromatic volatile organics (a fuel fingerprint for identification). The extra two samples were held for additional analyses if necessary. The results

of the analyses are summarized in Table 1 below. Copies of the laboratory results and the chain-of-custody document have been attached to this letter.

**TABLE 1  
ANALYTICAL RESULTS**

<b>Sample No.</b>	<b>D-1A</b>	<b>D2A</b>
<b>EPA Method 8020:</b>		
Benzene	<0.025	<0.025
Ethylbenzene	<0.025	<0.025
Toluene	<0.025	<0.025
Total Xylenes	<0.025	<0.025
<b>EPA Method 8015 Modified:</b>		
Fuel Hydrocarbons	60.0	<5.0

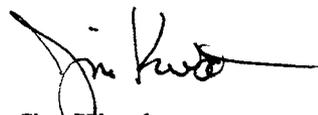
The results of the analysis identified the soil in the drums as non-regulated waste. One drum contained concentrations of petroleum hydrocarbons at 60 milligrams per kilogram (mg/kg) in soil which is below the action level established by the Arizona Department of Environmental Quality of 100 mg/kg in soil. The analyses of the soil sample from the second drum did not identify hazardous constituents nor petroleum hydrocarbons above the detection limit for the methods utilized.

RESNA recommended to Mr. Tom Sullivan on March 12, 1993, that the two drums be combined with the present large stockpile of petroleum contaminated soil in the isolation area constructed for the OTL site. In this way, the soil in the drums would be properly disposed even though the soil waste is a non-regulated waste. Mr. Sullivan provided RESNA with a verbal authorization on March 12, 1993, to dispose of the soil in the drums as suggested.

RESNA appreciates the opportunity to provide these services to ADOT. If you have any questions or require further information concerning this work please contact our office at (602) 961-0777.

Sincerely,  
RESNA Industries, Inc.

  
Janice Petticrew  
Project Manager

  
Jim Kirschner  
Professional Services Manager

jp/attachment

cc: Scott Weinland



### CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

ATI # 302877

PROJECT NO.		PROJECT NAME/SITE						ANALYSIS REQUESTED										P.O. #							
A1098.11		A.O.O.T / O.T.L.						<div style="display: flex; justify-content: space-between;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">           BTEX (802/8020)            TPHg (8015)            TPHd (8015) <i>Med. field</i>            TOG 418.1/5520            601/8010            624/8240            625/8270         </div> <div style="border: 1px solid black; width: 100%; height: 100%;"></div> </div>										A 2833							
SAMPLERS (SIGN)		(PRINT)																NO. CONTAINERS	SAMPLE TYPE	REMARKS					
<i>[Signature]</i>		Scott Dickson																							
SAMPLE IDENTIFICATION	DATE	TIME	COMP	GRAB	PRES. USED	ICED																			
D-2A (O.T.L.)	2/22/93	2:22 PM		X		X	1	S	X	X															
D-2R (O.T.L.)	2/22/93	2:24 PM		X		X	1	S																	Hold
D-1A (O.T.L.)	2/22/93	2:35 AM		X		X	1	S	X	X															Hold
D-1R (O.T.L.)	2/22/93	2:45 PM		X		X	1	S																	Hold
<div style="border: 1px solid black; padding: 5px; transform: rotate(-45deg); display: inline-block;">             MAR 05 1993              CHANDLER, ARIZONA           </div>																									
RELINQUISHED BY:		DATE	TIME	RECEIVED BY:		LABORATORY:				PLEASE SEND RESULTS TO: Janice Petticrew Chandler office															
<i>[Signature]</i>		2/22/93	4:40 PM	<i>Janice Petticrew</i>		ATI																			
RELINQUISHED BY:		DATE	TIME	RECEIVED BY:		REQUESTED TURNAROUND TIME:																			
<i>Janice Petticrew</i>		2-25-93	11:00	<i>[Signature]</i>																					
RELINQUISHED BY:		DATE	TIME	RECEIVED BY:		RECEIPT CONDITION:																			
<i>[Signature]</i>		2-25-93	11:30	<i>[Signature]</i>																					
RELINQUISHED BY:		DATE	TIME	RECEIVED BY LABORATORY:		PROJECT MANAGER:																			
<i>[Signature]</i>		2/25/93	11:30	<i>Marcia Smith</i>		Janice Petticrew																			



Analytical Technologies, Inc.

9830 S. 51st Street Suite B-113 Phoenix, AZ 85044 (602) 496-4400

ATI I.D. 302877

March 4, 1993

RESNA Industries  
135 S. Weber  
Suite 1  
Chandler, AZ 85226

Project Name/Number: A.D.O.T./O.T.L./A1098.11

Attention: Janice Petticrew

On 02/25/93, Analytical Technologies, Inc. received a request to analyze soil sample(s). The sample(s) were analyzed with EPA methodology or equivalent methods. The results of these analyses and the quality control data, which follow each set of analyses, are enclosed.

If you have any questions or comments, please do not hesitate to contact us at (602) 496-4400.

Michael G. Barry  
Project Manager

RVW/ktd

Enclosure

Robert V. Woods  
Laboratory Manager

RECEIVED

MAR 05 1993

RESNA  
CHANDLER, ARIZONA



Analytical Technologies, Inc.

CLIENT : RESNA - CHANDLER  
PROJECT # : A1098.11  
PROJECT NAME : A.D.O.T.

DATE RECEIVED : 02/25/93

REPORT DATE : 03/04/93

ATI I.D. : 302877

ATI #	CLIENT DESCRIPTION	MATRIX	DATE COLLECTED
01	D-2A (O.T.L.)	SOIL	02/22/93
02	D-2B (O.T.L.)	SOIL	02/22/93
03	D-1A (O.T.L.)	SOIL	02/22/93
04	D-1B (O.T.L.)	SOIL	02/22/93

RECEIVED  
MAR 05 1993  
RESNA - CHANDLER, ARIZONA

----- TOTALS -----

MATRIX	# SAMPLES
-----	-----
SOIL	4

ATI STANDARD DISPOSAL PRACTICE

The samples from this project will be disposed of in thirty (30) days from the date of this report. If an extended storage period is required, please contact our sample control department before the scheduled disposal date.



Analytical Technologies, Inc.

GAS CHROMATOGRAPHY - RESULTS

ATI I.D. : 30287703

TEST : FUEL HYDROCARBONS (MOD. EPA 8015, BLS-191)

CLIENT : RESNA - CHANDLER
PROJECT # : A1098.11
PROJECT NAME : A.D.O.T.
CLIENT I.D. : D-1A (O.T.L.)
SAMPLE MATRIX : SOIL

DATE SAMPLED : 02/22/93
DATE RECEIVED : 02/25/93
DATE EXTRACTED : 02/25/93
DATE ANALYZED : 02/26/93
UNITS : MG/KG
DILUTION FACTOR : 1

COMPOUNDS

RESULTS

FUEL HYDROCARBONS, C6-C10 <5
FUEL HYDROCARBONS, C10-C22(BLS-191) 27
FUEL HYDROCARBONS, C22-C36 33
FUEL HYDROCARBONS (CALCULATED SUM) 60

SURROGATE PERCENT RECOVERIES

O-TERPHENYL (%) 102

RECEIVED
MAR 05 1993
INDUSTRIES, INC
CHANDLER, ARIZONA



Analytical Technologies, Inc.

GAS CHROMATOGRAPHY - RESULTS

ATI I.D. : 30287701

TEST : FUEL HYDROCARBONS (MOD. EPA 8015, BLS-191)

CLIENT : RESNA - CHANDLER
PROJECT # : A1098.11
PROJECT NAME : A.D.O.T. =
CLIENT I.D. : D-2A (O.T.L.)
SAMPLE MATRIX : SOIL

DATE SAMPLED : 02/22/93
DATE RECEIVED : 02/25/93
DATE EXTRACTED : 02/25/93
DATE ANALYZED : 02/25/93
UNITS : MG/KG
DILUTION FACTOR : 1

COMPOUNDS

RESULTS

FUEL HYDROCARBONS, C6-C10 <5
FUEL HYDROCARBONS, C10-C22(BLS-191) <5
FUEL HYDROCARBONS, C22-C36 <5
FUEL HYDROCARBONS (CALCULATED SUM) <5

SURROGATE PERCENT RECOVERIES

O-TERPHENYL (%) 114

RECEIVED
MAR 05 1993
RESNA - CHANDLER, ARIZONA



Analytical Technologies, Inc.

GAS CHROMATOGRAPHY - RESULTS

ATI I.D. : 30287703

TEST : BTEX (8020) AND MTBE

CLIENT : RESNA - CHANDLER  
PROJECT # : A1098.11  
PROJECT NAME : A.D.O.T.  
CLIENT I.D. : D-1A (O.T.L.)  
SAMPLE MATRIX : SOIL

DATE SAMPLED : 02/22/9  
DATE RECEIVED : 02/25/9  
DATE EXTRACTED : 02/25/9  
DATE ANALYZED : 02/27/9  
UNITS : MG/KG  
DILUTION FACTOR : 1

-----  
COMPOUNDS

RESULTS  
-----

BENZENE <0.025  
TOLUENE <0.025  
ETHYLBENZENE <0.025  
TOTAL XYLENES <0.025  
METHYL-t-BUTYL ETHER <0.12

SURROGATE PERCENT RECOVERIES

BROMOFLUOROBENZENE (%)

103

RECEIVED

MAR 05 1993

ANALYTICAL TECHNOLOGIES, INC  
CHANDLER, ARIZONA



Analytical Technologies, Inc.

GAS CHROMATOGRAPHY - RESULTS

ATI I.D. : 30287701

TEST : BTEX (8020) AND MTBE

CLIENT : RESNA - CHANDLER
PROJECT # : A1098.11
PROJECT NAME : A.D.O.T. =
CLIENT I.D. : D-2A (O.T.L.)
SAMPLE MATRIX : SOIL

DATE SAMPLED : 02/22/93
DATE RECEIVED : 02/25/93
DATE EXTRACTED : 02/25/93
DATE ANALYZED : 02/26/93
UNITS : MG/KG
DILUTION FACTOR : 1

Table with 2 columns: COMPOUNDS and RESULTS. Rows include BENZENE, TOLUENE, ETHYLBENZENE, TOTAL XYLENES, and METHYL-t-BUTYL ETHER with their respective results.

SURROGATE PERCENT RECOVERIES

BROMOFLUOROBENZENE (%) 108

RECEIVED
MAR 05 1993
ANALYTICAL TECHNOLOGIES, INC
CHANDLER, ARIZONA



Analytical Technologies, Inc.

# GAS CHROMATOGRAPHY - RESULTS

## REAGENT BLANK

TEST : FUEL HYDROCARBONS (MOD. EPA 8015, BLS-191)

CLIENT : RESNA - CHANDLER  
PROJECT # : A1098.11  
PROJECT NAME : A.D.O.T.  
CLIENT I.D. : REAGENT BLANK

ATI I.D. : 302877  
DATE EXTRACTED : 02/25/93  
DATE ANALYZED : 02/26/93  
UNITS : MG/KG  
DILUTION FACTOR : N/A

-----  
COMPOUNDS

RESULTS

-----  
FUEL HYDROCARBONS, C6-C10 <5  
FUEL HYDROCARBONS, C10-C22 (BLS-191) <5  
FUEL HYDROCARBONS, C22-C36 <5  
FUEL HYDROCARBONS (CALCULATED SUM) <5

SURROGATE PERCENT RECOVERIES

O-TERPHENYL (%)

92

RECEIVED  
MAR 05 1993  
RESNA - CHANDLER, ARIZONA



Analytical Technologies, Inc.

QUALITY CONTROL DATA

TEST : FUEL HYDROCARBONS (MOD. EPA 8015, BLS-191)

ATI I.D. : 302877

CLIENT : RESNA - CHANDLER  
PROJECT # : A1098.11  
PROJECT NAME : A.D.O.T.  
REF I.D. : 30287701

DATE ANALYZED : 02/26/93  
SAMPLE MATRIX : SOIL  
UNITS : MG/KG

COMPOUNDS	SAMPLE CONC. RESULT	Spike	Spike	DUP.		RPD
				% SPIKED REC.	% SPIKED REC.	
FUEL HYDROCARBONS (C10-C22)	<5	51	60	118	50 98	18

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CHANDLER, ARIZONA

$$\% \text{ Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative \% Difference)} = \frac{(\text{Spiked Sample Result} - \text{Duplicate Spike Sample Result})}{\text{Average of Spiked Sample}} \times 100$$



REAGENT BLANK

TEST : BTEX (8020) AND MTBE

CLIENT : RESNA - CHANDLER  
PROJECT # : A1098.11  
PROJECT NAME : A.D.O.T.  
CLIENT I.D. : REAGENT BLANK

ATI I.D. : 302877  
DATE EXTRACTED : 02/25/93  
DATE ANALYZED : 02/26/93  
UNITS : MG/KG  
DILUTION FACTOR : N/A

COMPOUNDS	RESULTS
BENZENE	<0.025
TOLUENE	<0.025
ETHYLBENZENE	<0.025
TOTAL XYLENES	<0.025
METHYL-t-BUTYL ETHER	<0.12

SURROGATE PERCENT RECOVERIES

BROMOFLUOROBENZENE (%) 104

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CHANDLER, ARIZONA



Analytical Technologies, Inc.

QUALITY CONTROL DATA

ATI I.D. : 302877

TEST : BTEX (8020) AND MTBE

CLIENT : RESNA - CHANDLER
PROJECT # : A1098.11
PROJECT NAME : A.D.O.T.
REF I.D. : 30287701

DATE ANALYZED : 02/26/93
SAMPLE MATRIX : SOIL
UNITS : MG/KG

Table with 8 columns: COMPOUNDS, SAMPLE RESULT, CONC. SPIKED, SPIKED SAMPLE, % REC., DUP. SAMPLE REC., DUP. % REC., RPD. Rows include BENZENE, TOLUENE, ETHYLBENZENE, TOTAL XYLENES, METHYL-T-BUTYL ETHER.

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RES. ANALYTICAL TECHNOLOGIES, INC
CHANDLER, ARIZONA

% Recovery = (Spike Sample Result - Sample Result) / Spike Concentration x 100

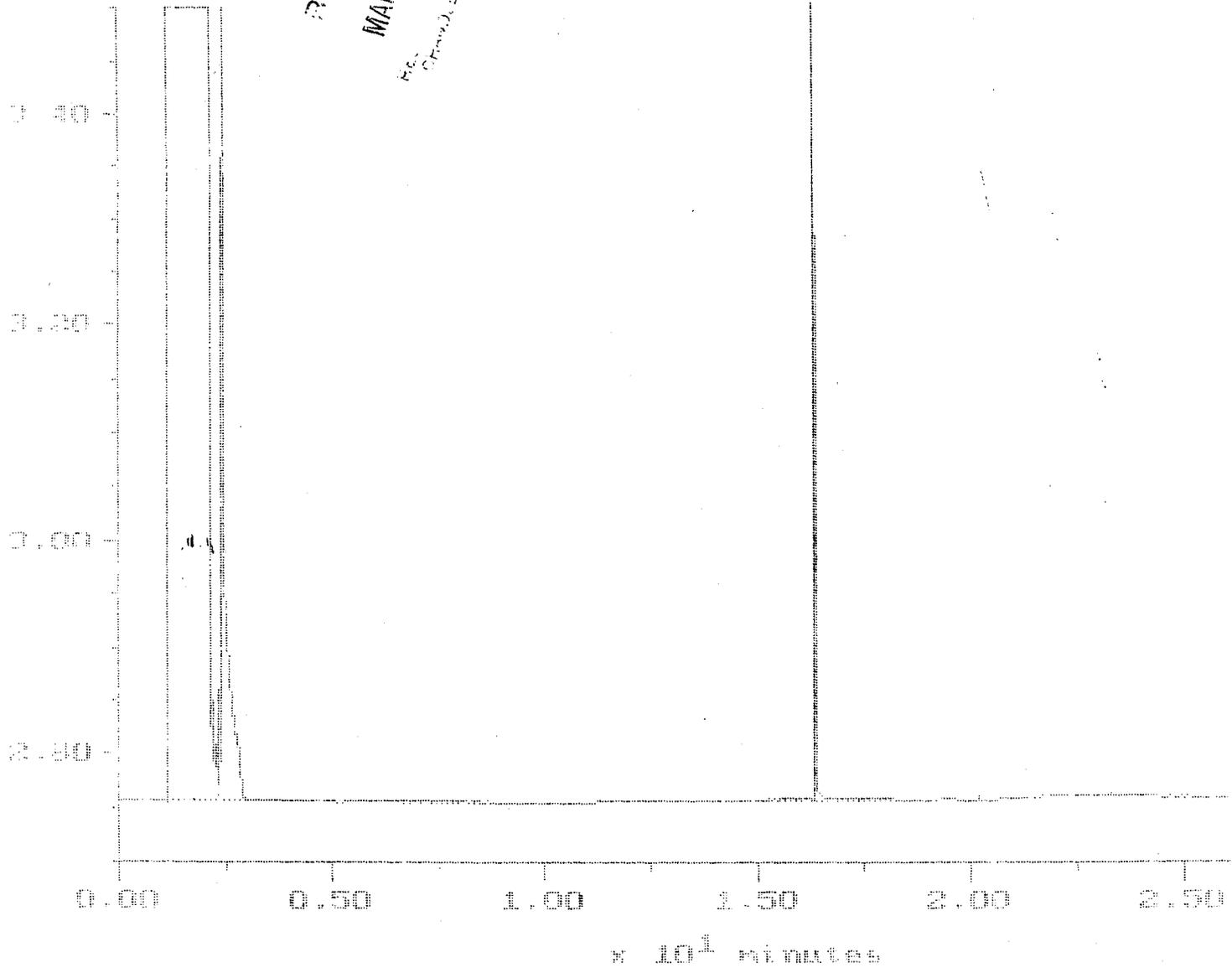
RPD (Relative % Difference) = (Spiked Sample Result - Duplicate Spike Sample Result) / Average of Spiked Sample x 100

Sample: FPM 102877-1  
Acquired: 25-PBB-91 20:41

Channel: PID-GC58  
Method: H:\MAX\PIBIS\DATA\1PBB-25

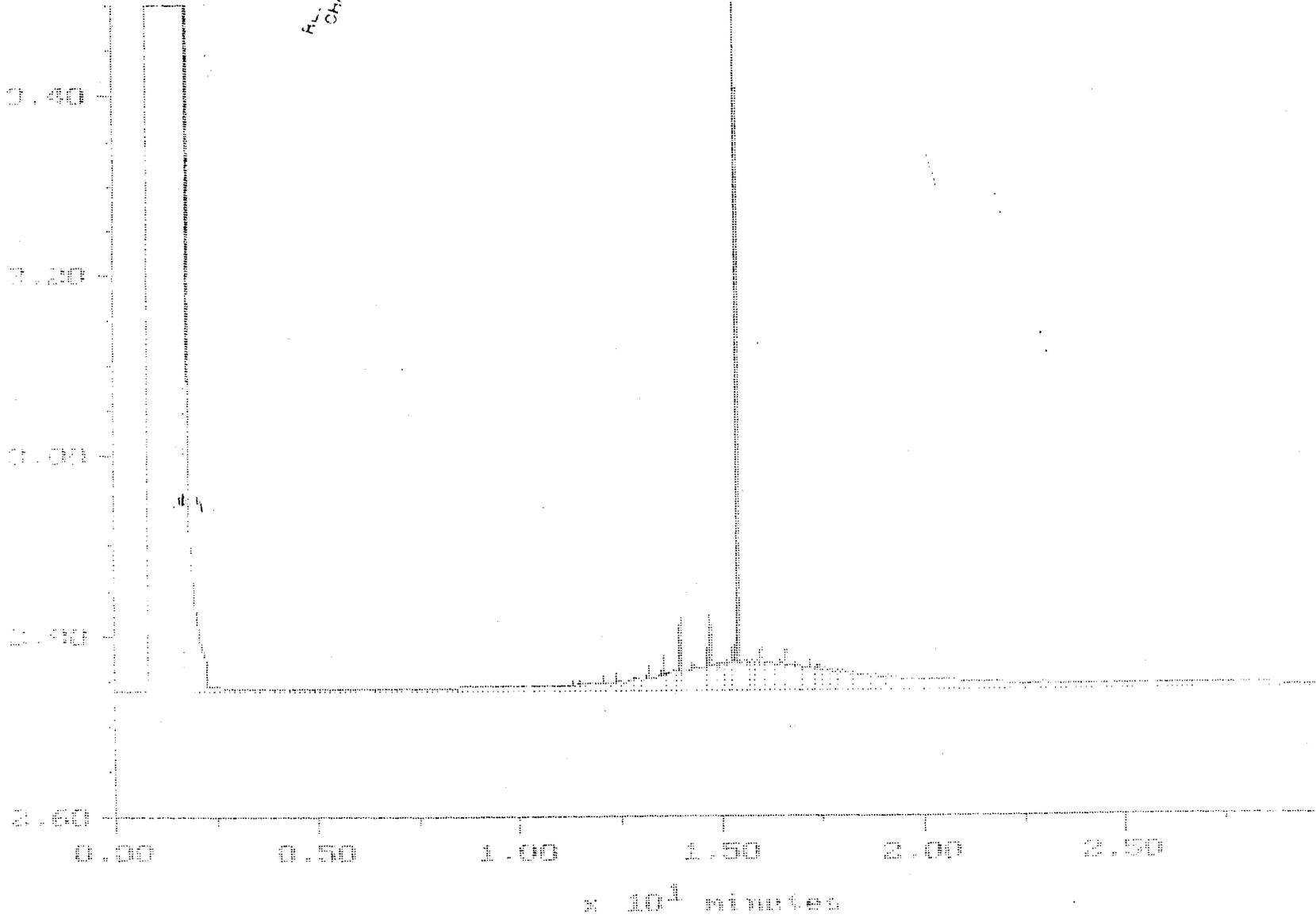
Filename: 023510  
Operator:

1.00E+05



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FBI  
LABORATORY  
PHOENIX, ARIZONA

Sample: P1P1 302877-1 Channel: FID-GC5A File name: 023605  
Acquired: 26-PPB-93 11:18 Method: H:\MAX\FURUS\DATA\PPB-26 Operator:

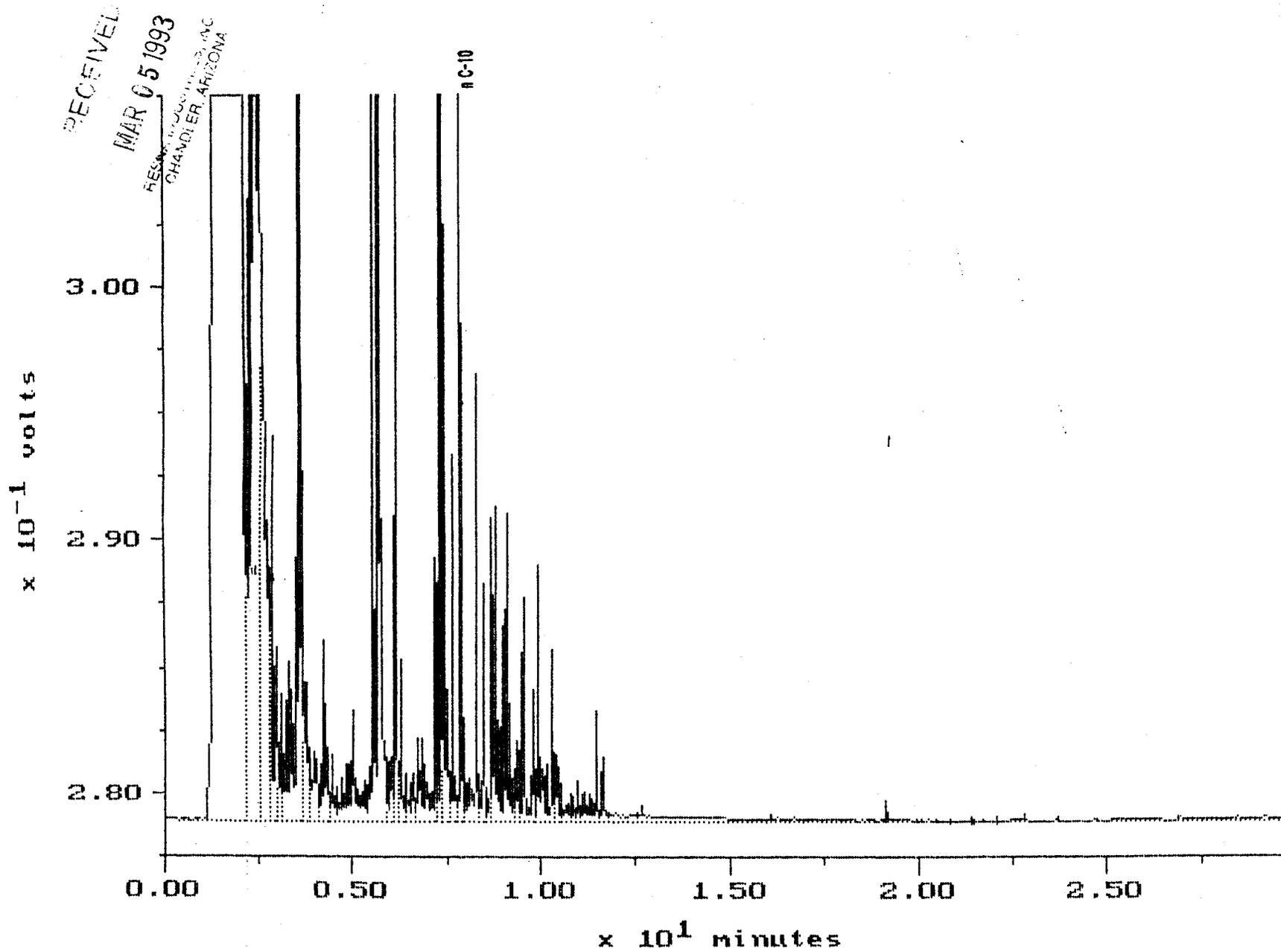


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MAR 05 1993

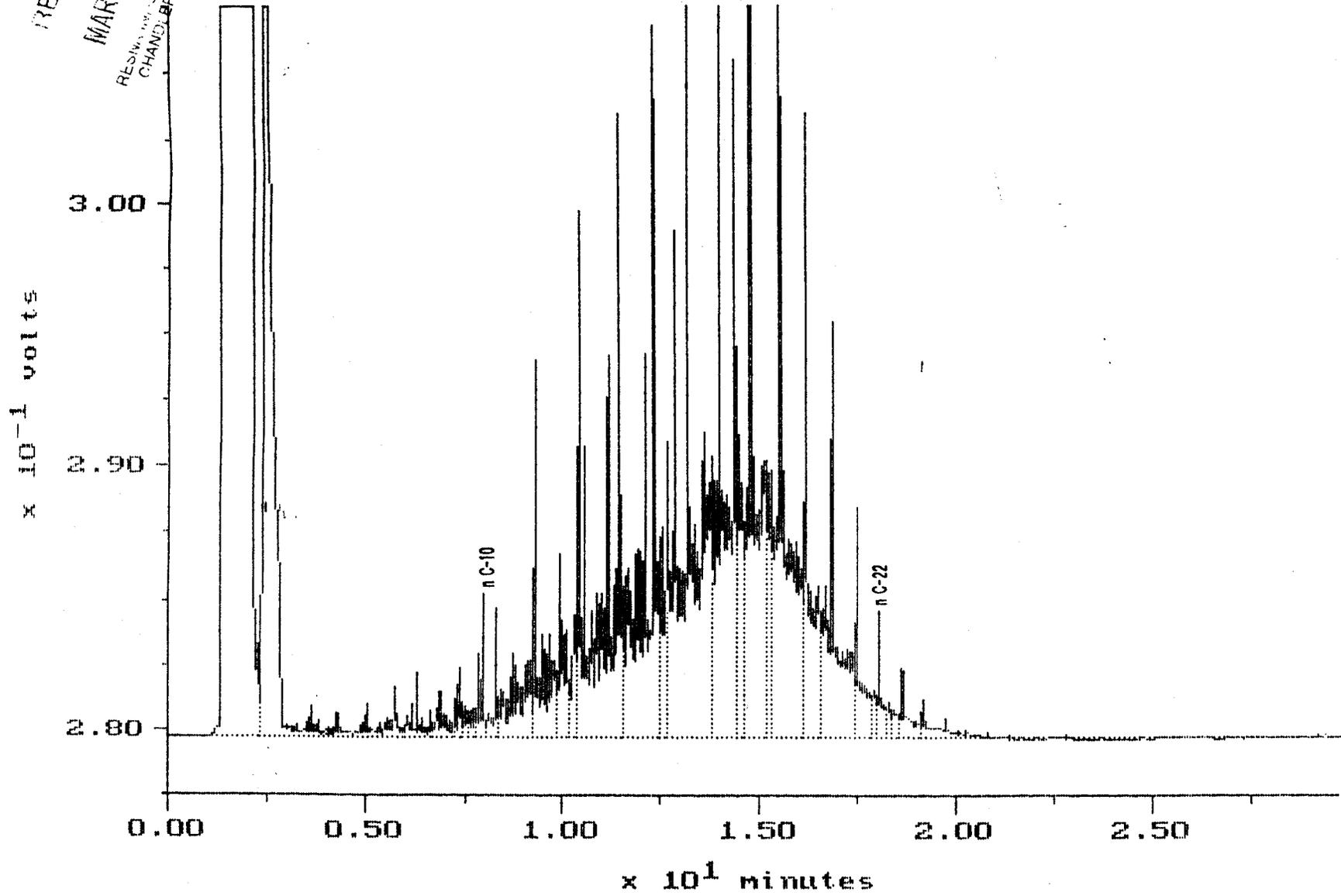
ALLIANT INDUSTRIES, INC.  
CHANDLER, ARIZONA

# UNLEADED GASOLINE



# DIESEL FUEL

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MAR 05 1993  
RESIN TECHNOLOGIES, INC.  
CHANDLER ARIZONA



135 South Weber Drive, Suite 1  
Chandler, AZ 85226  
Phone: (602) 961-0777  
Fax: (602) 961-0554

March 18, 1993

Mr. Tom Sullivan  
Arizona Department of Transportation  
Environmental Planning  
205 South 17th Avenue, Room 240E  
Phoenix, Arizona 85007

Subject: Weekly Project Summary  
Week Ending February 26, 1993  
SIBW-East Papago Freeway Landfill Removal Project  
RESNA Project No. 1098.11

Dear Mr. Sullivan:

The following is a summary of the field activities conducted on the South Indian Bend Wash (SIBW)-East Papago Freeway Landfill Removal Project for the week ending February 26, 1993. The activities for the week were confined to the SRP 75 landfill site, located on the north bank of the Salt River, west of McClintock Road, and to the Old Tempe Landfill (OTL) site, located near Price Road and the south bank of the Salt River in Tempe, Arizona. This project summary documents the activities as recorded by RESNA Industries, Inc. (RESNA), for the week of February 22, through February 26, 1993. The RESNA personnel present at the sites during the week included Mr. Scott Dickson and Mr. Brett McDaniel. Brett McDaniel was the Arizona Department of Transportation's (ADOT) Environmental Representative (AER) who monitored the activities at SRP 75, while Scott Dickson was the AER who monitored the activities at the OTL site.

### February 22, 1993

#### SRP 75 Landfill Site

The SRP AER arrived at the site at 7:10 a.m. and the daily tailgate safety meeting was conducted at 7:20 a.m. Excavation at SRP 75 began at 7:30 a.m. The initial Contractor's Environmental Representative (CER) for the SRP 75 site was Mr. Brad Moring of Chemical Waste Management (CWM). Excavation work continued from station 259+50 to station 260+70, progressing northward to depths of 10 to 15 feet.

At 10:20 a.m., Mr. Dave Allard, from CH<sub>2</sub>M Hill, representing the Environmental Protection Agency (EPA), visited the site to observe operations.

The excavation work was progressing near to where the two 5-gallon containers of suspicious petroleum liquid and associated soil, exposed on February 18, 1993, had been temporarily stored on plastic. RESNA decided that the containers of suspicious material and the associated contaminated soil, needed to be sampled to assess the potential hazardous properties of the material. Additionally, the waste and soil had to be placed into 85-gallon overpack drums for storage on the site to await the results of the laboratory analyses. The SRP AER and CER, along with Sundt Corporation (Sundt) personnel and heavy equipment, placed the soil and suspicious material into two overpack drums. These two drums were then placed at the far west end of the SRP 75 site for temporary storage.

During the day, no unusual readings were observed by the SRP CER and AER. Operations ended for the day at 4:35 p.m.

### OTL Site

At 7:00 a.m. Mr. Scott Dickson of RESNA, the OTL AER, arrived on site. A tailgate safety meeting was held at the site at 7:30 a.m.. Mr. Scott Wienland advised the OTL AER that two employees with Sergeant, Hauskins, and Beckwith (SH&B) would be arriving at the OTL site to install several soil gas wells at the area on the west end of the site designated as MSW #1. A drill rig and the two SH&B employees arrived at 9:35 a.m. and were escorted to the MSW #1 area by the OTL AER. Mr. David Allard of CH2M Hill, the EPA's representative for the site, arrive at the OTL site at 10:50 a.m. and expressed his satisfaction with the operations at the OTL site.

Operations continued on a normal schedule through lunch. At 1:15 p.m. Mr. Jack Van Marter with Sundt requested that the OTL AER monitor while test holes were excavated on the mound of soil and debris located directly north of Station 60+00, the northeast corner of the OTL site. ADOT wanted to investigate the composition of the mound of soil and rock to identify if the mound was comprised mostly of soil and rock or mostly of construction debris.

At 1:20 p.m. the first test hole was excavated, directly on top of the mound of soil and rock, to a depth of approximately 30 feet. No abnormal readings were detected on the monitoring equipment used by the OTL AER. The material excavated consisted of asphalt material, concrete rubble, piping, plastic, etc. The second test hole was excavated at 1:45 p.m. near the south central area at the base of the mound of soil and rock. The excavated materials were consistent with the first test hole. At 1:55 p.m., while excavating the second test hole, two 55-gallon metal drums containing soil were exposed by the excavator. The drums were damaged and had no labeling or identifiable markings. The drums were isolated in a temporary storage area near the mound of soil and rock until the OTL AER could collect and have analyzed samples of the drum contents to assess the disposal requirements.

At 1:56 p.m., Mr. Kurt Tucker of CWM, the OTL CER, notified the OTL AER that the excavator, working in another area of the OTL site, had exposed a small 2-gallon container. Further investigation by the OTL AER and CER, identified the container as a used oil filter from some type of heavy equipment.

Mr. Scott Weinland arrive at the OTL site at 2:00 p.m. and was notified by the OTL AER of the two identified drums of soil exposed in the mound of soil and rock. The OTL AER informed Mr. Weinland of the proposed course of action for handling the drums of soil. Ms. Janice Pettcrew of RESNA was contacted and agreed that samples should be collected and requested that two samples per drum be retrieved. The samples were collected by the OTL AER at 2:20 p.m. The area where

the drums were stored was barricaded with caution tape and the OTL AER noted that the material placed in the temporary storage area did not affect operations on the site. Operations ended for the day at 4:00 p.m.

### February 23, 1993

#### SRP 75 Landfill Site

The SRP AER calibrated the monitoring equipment prior to arrival at the site at 7:10 a.m. The daily tailgate meeting was conducted at 7:15 a.m. Excavation at the SRP 75 site commenced at 7:20 a.m.

The initial SRP CER present on the site was Mr. Robert Roth of CWM. Excavation work was conducted throughout the day from Station 259+50 to Station 260+75.

At 7:45 a.m., Don Bezek, the site safety officer for Chemical Waste Management (CWM) visited with the SRP CER and AER.

At 8:05 a.m., the SRP AER collected two samples for identification of the contents of the two 5-gallon containers of suspicious petroleum material and the associated soil. Samples identified as Nos. 0223-01 and 0223-02, were collected at 8:05 a.m. and 8:10 a.m., respectively. Sample No. 0223-01 consisted of the liquid portion of the suspicious material. Sample No. 0223-02 consisted of soil contaminated by the liquid material.

When the sampling was complete, the SRP AER and CER placed the containers of the suspicious material, along with the contaminated soil, into two 85-gallon overpack drums. By 10:30 a.m. the suspicious material was completely contained in the two overpack drums. The drums were stored on the far west side of the SRP 75 site. At 11:07 a.m., the SRP AER relinquished the two samples of the suspicious material to Ms. Janice Petticrew of RESNA for transportation to the laboratory for analysis.

At 2:05 p.m., the SRP AER accompanied Mr. Joy Foster of ADOT while he entered the excavation to collect soil samples for moisture content. The SRP AER provided air monitoring during the entry into the excavation and did not record unusual readings throughout the entry.

No unusual readings were recorded during the day by the SRP CER and AER. Operations ended for the day at 4:30 p.m.

#### OTL Site

The OTL AER calibrated the equipment prior to arriving on the site at 7:15 a.m. A tailgate safety meeting was held at 7:30 a.m. and operations began at 7:45 a.m. The OTL AER informed Mr. Kurt Tucker of CWM, the OTL CER, that the OTL AER would be leaving the OTL site at 8:00 a.m. to go and investigate the containers of suspicious material that had been exposed on February 22, 1993, at the SRP 75 site.

The OTL AER, Mr. Scott Dickson of RESNA, arrived at the SRP 75 site at 8:10 a.m. to observe the SRP AER, Mr. Brett McDaniel of RESNA, preparing to collect samples of the suspicious material. Both AER's investigated the suspicious material and based on the odor and physical

appearance, the material was similar to gear oil. The material had been placed on plastic sheets and consisted of soil and a liquid material from the two 5-gallon containers. The SRP AER and CER were preparing to have the material placed into two 85-gallon overpack drums using CWM's excavator to move the material.

At 8:55 a.m. the OTL AER left the SRP 75 site and returned to the OTL site. No unusual readings or suspicious materials had been reported by the OTL AER during his absence.

At 11:35 a.m. an unmarked and unfamiliar vehicle entered the OTL site. The OTL AER approached the vehicle and notified the occupants that unless they had business in the area, they would have to vacate the site. They acknowledged this warning and exited in the direction of the area designated as MSW #1. The unauthorized visitors had apparently entered the OTL site from that direction.

At 1:47 p.m., the OTL CER and AER identified some dark colored soil in the face of the present excavation. The OTL CER and AER had the excavator operator retrieve a bucket full of the dark colored soil for a closer examination. Investigation with the monitoring equipment did not detect unusual readings from the dark colored soil. Through visual inspection and olfactory evidence identified the material as consisting of some type of decomposing vegetation. The excavation was allowed to continue following this investigation.

Operations ended for the day at 4:00 p.m. No unusual readings or suspicious material was identified during the day.

## February 24, 1993

### SRP 75 Landfill Site

The SRP AER, arrived at the SRP 75 site at 7:10 a.m. and attended the tailgate safety meeting conducted by the site safety officer, Mr. Don Bezek of CWM, at 7:15 a.m. The excavation work began at 7:20 a.m. near Station 259+50.

At 8:30 a.m. a 30-gallon drum was exposed by the excavator near Station 260+00. A closer investigation of the drum identified the drum as an open-top empty drum that had become full of soil. At approximately 8:30 a.m. a light rain had also begun.

At 8:50 a.m. the SRP AER entered the excavation with Mr. Joy Foster of ADOT to collect the soil samples for testing the moisture content. The SRP AER conducted the air monitoring during the entry into the excavation area. No unusual readings were recorded by the SRP AER during the entry. The rain had begun to increase but by 9:00 a.m. the rain had ceased.

The rain continued intermittently between 10:00 a.m. and 11:30 a.m. In spite of the rain the excavation operations progressed eastward to Station 261+00 and then relocated to Station 259+75.

The operations at the SRP 75 site were ended for the day at 4:20 p.m. No unusual readings were recorded on the monitoring equipment and no suspicious materials were identified during the day.

OTL Site

The OTL AER arrived at the OTL site at 7:15 a.m. The daily tailgate safety meeting was held at 7:30 a.m. Excavation operations resumed at 7:45 a.m. near Station 60+00. The 245 excavator, and the loaders continued transferring excavated material for use as backfill after placing the geotextile fabric in the bottom of the excavation between Station 62+30 and 60+00. Sundt personnel were also in the excavation to spread the fabric and conduct surveying of the cross sections.

At 7:50 a.m. Mr. Scott Weinland of ADOT informed the OTL AER that SH&B personnel would be at the OTL site during the day to drill wells for surveying the soil types and geological formations in the area of the former concrete wash-out pond. Mr. Wienland requested that the OTL AER conduct the air monitor for SH&B's drilling activities.

The SH&B personnel arrived at the OTL site at 8:45 a.m. Discussion between the OTL AER and the SH&B personnel was conducted concerning the safety procedures that SH&B personnel would be following during the drilling activities. The SH&B personnel informed the OTL AER that they would be following their own established safety plan that had been developed for the site during the former site assessment work conducted on the OTL site.

At 10:16 a.m. the drill rig encountered groundwater at 28.5 feet below the bottom of the excavation they were drilling. SH&B continued drilling to a final depth of 32 feet. Air monitoring readings conducted during the drilling were normal.

At 10:45 a.m. the OTL AER was notified by the OTL CER that the Sundt excavator operator was complaining of odors from the present excavation. The air monitoring equipment did not identify abnormal readings from the soil in the excavation. Further investigation by the OTL AER and CER did not identify odors or abnormal readings. No suspicious material was observed.

At 10:55 a.m. SH&B moved to begin a second boring near Station 21+15. The drilling began at 11:00 a.m. At 12:05 p.m. the drill rig encountered a rock layer in the soil at a depth of 33 feet. SH&B were only able to complete the drilling to a final depth of 35.5 feet. Water had been encountered at 25.2 feet. The air monitoring readings were normal during the drilling of the second boring.

SH&B personnel began drilling the third boring at 12:49 p.m. At 1:30 p.m. the drill auger could not go beyond the depth of 7 feet due to hard material encountered in the soil. The drill rig had to be moved 5 feet southwest to attempt to drill again. However, the drill auger would still not advance beyond the 7 foot depth. The drill rig was unable to move to another location since no ramp access for the drill rig was available. SH&B decided that the drilling would be considered complete and no more borings would be required. SH&B personnel added a cement slurry as backfill in the two completed borings and at 1:48 p.m. SH&B left the OTL site.

At 2:05 p.m. the OTL AER resumed monitoring of the excavation area. The OTL CER informed the OTL AER that air monitoring readings had been normal throughout the day and no suspicious material had been identified. Operations for the day ended at 3:55 p.m.

February 25, 1993

SRP 75 Site

The SRP AER, arrived on the SRP 75 site at 7:06 a.m. and attended the safety meeting at 7:15 a.m. The excavation work resumed at 7:20 a.m. at Station 260+00, with the work progressing toward the east. Mr. Scott Weinland of ADOT was observing the excavation area and commented to the SRP AER that the northwestern limit of the landfill material was located at Station 259+50 at the northern end of the SRP 75 site.

Mr. Joy Foster of ADOT and the SRP AER entered the excavation at 9:00 a.m. to collect soil samples for testing the soil moisture content. Air monitoring conducted during the entry recorded normal conditions in the excavation. By 11:00 a.m. the excavation work had progressed to Station 261+00.

At 11:30 a.m., Mr. Dave Allard of CH<sub>2</sub>M Hill, the EPA representative, arrived at the SRP 75 site for an inspection of the site which was conducted until 12:00 p.m., at which time the excavation work had progressed to Station 261+25.

Several sections of asbestos cement pipe were exposed in the excavation at 12:50 p.m., near Station 260+00. A total of three sections of the asbestos cement pipe were removed from the excavation by CWM personnel, were wrapped in plastic sheeting and temporarily stored on the west side of the SRP 75 site. Ms. Janice Petticrew of RESNA was notified at 1:20 p.m. by the SRP AER that the asbestos cement pipe had been identified. Ms. Petticrew informed the SRP AER that sampling of the material was not required and all that was required was to contain the material in plastic. At a later date, when the proper bill of lading could be completed by CWM personnel, the wrapped asbestos cement pipe would be hauled to Butterfield Station along with the other waste material for disposal. Operations at the SRP 75 site were not affected by the discovery of the pipe. The asbestos cement pipe had been contained in the plastic shortly after it was discovered and isolated in a temporary storage area where the site work was not affected.

The OTL AER arrived at the SRP 75 site at approximately 3:30 p.m. to relieve the SRP AER for the remainder of the day. The SRP AER left the SRP 75 site at 3:33 p.m. to return to the RESNA office.

OTL Site

The OTL AER arrived at the OTL site at 7:15 a.m. The tailgate safety meeting was held at 7:30 a.m. Operations resumed at 7:45 a.m. near Station 60+00.

Mr. Kurt Tucker of CWM, the OTL CER, notified the OTL AER that the excavator had exposed a piece of cement pipe which could potentially contain asbestos. Investigation by the OTL AER identified that the pipe did contain asbestos. At 12:45 p.m. the asbestos cement pipe was doubled wrapped in plastic and placed near the isolation area with other stored materials to await disposal. The OTL AER noted that the asbestos cement pipe was approximately 4 feet in length and 14 inches in diameter. At 1:15 p.m. the OTL CER and AER resumed monitoring of the operations. No unusual readings and no suspicious materials were identified at the OTL site throughout the day.

The OTL AER left the OTL site and arrived at the SRP 75 site to relieve Mr. Brett McDaniel, the SRP AER, at 3:30 p.m. The OTL CER had been notified that the OTL AER would be leaving the site. The last truck was loaded at 4:25 p.m., and at 4:30 p.m. the operations at the SRP 75 site were ended for the day. No unusual readings were noted and no suspicious materials were encountered at the SRP 75 site.

## February 26, 1993

### SRP 75

The SRP AER arrived on site at 7:06 a.m. and attended the tailgate safety meeting at 7:15 a.m. The excavation operations began at 7:25 a.m. Mr. Joy Foster and the SRP AER entered the excavation area at 8:40 a.m. to collect soil samples to test for moisture content.

Throughout the day no unusual readings were noted on the air monitoring equipment by the SRP AER or CER. Excavation operations occurred between Stations 260+00 and 261+00. No suspicious materials were identified throughout the day. Operations ended for the day at 4:30 p.m.

### OTL Site

The monitoring equipment was calibrated by the OTL AER at 6:30 a.m. The tailgate meeting was held shortly after the OTL AER arrived on site and during the tailgate safety meeting all site personnel inspected their 5 minute escape packs. At 7:45 a.m. the OTL AER noted that Sundt had two additional 30-yard dump trucks on the site. At 8:00 a.m. the OTL AER confirmed with Mr. Jack Van Marter of Sundt that two CERs would be present whenever two excavations were being conducted simultaneously on the OTL site. As of 8:00 a.m., there was only one CER present on the site, Mr. Kurt Tucker.

At 9:00 a.m. Mr. Scott Wienland of ADOT asked the OTL AER if it was possible to obtain the results of the most recent water samples from the SRP 78 site as soon as possible since Sundt was wanting to begin to the pump water out of the excavation and into the Salt River on Monday, February 1, 1993.

Mr. Don Bezeck of CWM, the site safety officer, arrived at the OTL site 9:45 a.m. to perform the duties of a CER so that Sundt could have two excavation operations on the site. Ms. Janice Petticrew of RESNA notified the OTL AER, Mr. Scott Dickson, that the laboratory results for the analyses of the water from the SRP 78 site had been received in the RESNA office and the results identified the water as having no hazardous constituents present. Ms. Petticrew advised the OTL AER to inform ADOT personnel and Sundt personnel that the water in the excavation at the SRP 78 site could be pumped into the Salt River. Mr. Jack Van Mater of Sundt was notified by the OTL AER of these results.

At 10:05 a.m. the excavation operations began at Station 60+00 with Mr. Don Bezek as the acting OTL CER for the excavation. At 10:25 a.m. Mr. Scott Wienland of ADOT was also notified of water sample results by the OTL AER. Mr. Weinland requested that RESNA send copies to ADOT's Jefferson Field Office as soon as possible so that the results could then be sent directly over to the Arizona Department of Environmental Quality (ADEQ) for approval to pump the water into the Salt River.

At 1:55 p.m. Mr. Samir Badri of ADEQ arrived on the site to observe operations, and seemed satisfied with the current operations.

At 3:30 p.m. readings were noted by the OTL AER as having been normal at both excavation operations throughout the day. Nothing unusual had been observed. Operations were ended for the day at 4:00 p.m.

### Conclusions

Review of the daily reports and air monitoring results provided by the project CER's did not identify inconsistencies between the AER's and the CER's reports. No unusual air contaminants were identified at the SRP 75 site by the SRP CER or AER during the week. Additionally, no unusual air contaminants were identified at the OTL site by the OTL CER's or AER during the week.

The suspicious materials that were investigated at the OTL site during the week included two 55-gallon drums containing soil and a section of 14 inch diameter asbestos cement pipe. The drums and the pipe were segregated in a temporary storage area until further investigations could be completed. The drums of soil were sampled and the samples sent to Analytical Technology, Inc. for analysis to identify the potential hazardous constituents. The asbestos cement pipe was wrapped in plastic and stored near the isolation area to await disposal. The suspicious materials investigated at the SRP 75 site during the week included several sections of asbestos cement pipe. The pipe was wrapped in plastic and stored in a temporary storage area to await disposal to Butterfield Station landfill. No other suspicious materials were identified on either of the sites during the week.

Dust control measures were successfully keeping the airborne concentrations of airborne dust at the OTL and SRP 75 sites well below the maximum allowable concentration of 1.60 parts per million.

Sincerely,  
RESNA Industries, Inc.



Janice Petticrew  
Environmental Specialist



Jim Kirschner  
Professional Services Manager

cc. Scott Weinland, ADOT

135 South Weber Drive, Suite 1  
Chandler, AZ 85226  
Phone: (602) 961-0777  
Fax: (602) 961-0554

April 16, 1993

Mr. Tom Sullivan  
Arizona Department of Transportation  
Environmental Planning  
205 South 17th Avenue, Room 240E  
Phoenix, Arizona 85007

Subject: Weekly Project Summary  
Week Ending March 5, 1993  
SIBW-East Papago Freeway Landfill Removal Project  
RESNA Project No. 1098.11

Dear Mr. Sullivan:

The following is a summary of the field activities conducted on the South Indian Bend Wash (SIBW)-East Papago Freeway Landfill Removal Project for the Week ending March 5, 1993. The activities for the week were confined to the SRP 75 and SRP 78 landfill sites, located on the north bank of the Salt River, west of McClintock Road, and to the Old Tempe Landfill (OTL) site, located near Price Road and the south bank of the Salt River in Tempe, Arizona. This project summary documents the activities as recorded by RESNA Industries, Inc. (RESNA), for the week of March 1, through March 5, 1993. The RESNA personnel present at the sites during the week included Mr. Scott Dickson and Mr. Brett McDaniel. Brett McDaniel was the Arizona Department of Transportation's (ADOT) Environmental Representative (AER) who monitored the activities at SRP 75, while Scott Dickson was the AER who monitored the activities at the OTL site.

### March 1, 1993

#### SRP 75 Landfill Site

The SRP AER, Mr. Brett McDaniel, arrived on the site at 7:06 a.m. and attended the daily tailgate safety meeting conducted by Mr. Brad Moring of Chemical Waste Management (CWM) at 7:15 a.m. Loading operations began at 7:22 a.m. at Station 260+75. Mr. Scott Weinland of ADOT was on site to discuss the limits of the excavation. The SRP AER left the site briefly at 8:40 a.m. Upon returning at 9:30 a.m. the SRP AER was informed that Mr. Jack Van Marter of Sundt Corporation (Sundt), Mr. Scott Weinland of ADOT and Mr. Brad Moring of CWM had discussed the current limits of the excavation and decided that the limits were acceptable.

At 10:50 a.m. the SRP AER discussed the disposal of the asbestos cement pipe at the SRP sites with Ms. Janice Petticrew of RESNA. Mr. Brad Moring of CWM agreed to arrange the waste manifesting for the asbestos cement pipe if the asbestos was accepted at Butterfield landfill.

Operations continued normally throughout the remainder of the day. Operations ended at the SRP 75 site for the day at 4:25 p.m.

### OTL Site

At 6:30 a.m. Mr. Scott Dickson of RESNA, the OTL AER, calibrated the monitoring equipment and arrived at the OTL site at 7:15 a.m. The daily tailgate safety meeting was held at 7:30 a.m. Operations at the OTL site began at 7:45 a.m. Only one excavation operation was begun until CWM was able to get a second CER on site to monitor the additional excavation site. Mr. Don Bezek of CWM was the OTL CER. At 8:40 a.m. Mr. Bob McDonald of CWM arrived on site as the second OTL CER.

The OTL AER, Mr. Dickson, was notified at 10:47 a.m. by Mr. Bezek, the OTL CER, that strong odors of diesel fuel were evolving from the soil near station 16+00. After further investigation the OTL AER did not obtain readings from the organic vapor meter however, there was a noticeable diesel fuel like odor emanating from the soil in the area of the excavation.

At 11:20 a.m. the OTL AER retrieved two samples from the excavator's bucket of the potentially contaminated soil. The potentially contaminated area was cordoned off to prevent unauthorized access until the analytical results were obtained.

Ms. Janice Petticrew of RESNA was notified of the investigations at 11:45 a.m. by the OTL AER. Ms. Petticrew notified Mr. Tom Sullivan and Mr. Scott Weinland, both of ADOT, regarding the potentially contaminated soil identified at the OTL site. Mr. Weinland requested that the contaminated soil not be removed until analytical results were obtained. Ms. Janice Petticrew was notified of Mr. Weinland's request at 12:15 p.m.

At 12:45 p.m. Mr. Jim Moots of Zenitech arrived at the OTL site. Zenitech was retained by ADOT to be the hazardous materials contractor to handle the potentially contaminated soil. The OTL AER, Mr. Dickson, showed Mr. Moots the area of potential contamination. Zenitech decided to use Level D Personal protective equipment (PPE) for the excavation work. Mr. Moots collected one soil sample from the potentially contaminated area to be analyzed prior to initiating work.

At 1:00 p.m. Ms. Janice Petticrew of RESNA arrived on the site and was directed to the area of potential soil contamination. The OTL AER had collected two samples of the potentially contaminated material to be analyzed to identify potential hazardous constituents. Zenitech decided that the plan of action would be to wait for the results of the analyses for petroleum hydrocarbons. Once the analytical results were obtained, and if the levels were above the Arizona Department of Environmental Quality (ADEQ) suggested clean up level of 100 parts per million (ppm), the contaminated soil would be removed. The limits of contamination would be determined by use of the organic vapor meter. The contaminated material would be loaded into roll-off containers, and the roll-offs stored on site near the decontamination area to await profiling for disposal.

At 3:20 p.m. Zenitech personnel began to excavate the contaminated soil and Zenitech ordered a larger excavator since the small backhoe was not able to remove the large cobble stones in the soil. Zenitech personnel covered the contaminated area with plastic sheeting to slow down the volatilization of the petroleum vapors.

At 4:45 p.m. all of the operations at the OTL site ended for the day. The OTL AER noted that the initial scan of the sample collected by Zenitech for total petroleum hydrocarbons identified

concentrations of petroleum hydrocarbons over 130 ppm. The scan was not quantitative and did not identify the exact concentration of petroleum hydrocarbons, but quantitative analysis did identify that the concentration was definitely greater than the clean up level of 100 ppm. Additionally, after further investigation by Zenitech, the estimated quantity of potentially contaminated soil was approximately 1,000 cubic yards.

### March 2, 1993

#### SRP 78 Site

The SRP AER, Mr. Brett McDaniel, arrived at the SRP 78 site and attended the tailgate safety meeting at 7:18 a.m. Excavation and loading operations resumed at 7:30 a.m. Mr. Scott Weinland of ADOT visited the site briefly to discuss site conditions and excavation plans.

At 8:00 a.m. the SRP AER was informed that suspicious material had been exposed. Upon investigation the greenish colored material was believed to be some type of oxidized metal compound. The suspicious material did not emit organic vapors or explosive gases identifiable on the monitoring equipment. The suspicious material was placed onto plastic sheeting and tightly wrapped in the plastic. The quantity of material was approximately 5 gallons. The material contained in the plastic was placed on the east side of the SRP 78 site to await further investigation by the OTL AER, Mr. Scott Dickson of RESNA.

An ADOT site inspector arrived at the SRP 78 site at 9:45 a.m. to collect soil samples from the excavation for soil moisture content. Prior to entering the excavation the ADOT inspector signed a confined space permit. Scott Weinland of ADOT arrived on site and requested that the AER and CER investigate the eastern extent of the excavation limits at the SRP 75 site. Both the ADOT inspector and Mr. Weinland left the site at 10:10 a.m.

At 12:30 p.m. the SRP AER and CER investigated the eastern limits of the SRP 75 site near Station 281+00. Upon investigation they identified that the top 2 to 3 feet of the eastern side of the excavation did contain man-made fill material. The material was outside of the original limits of excavation but still within the right-of-way of the freeway.

Operations at the SRP sites ended for the day at 4:30 p.m. No unusual readings were recorded on the monitoring equipment throughout the day. The excavation of man-made material at SRP 78 was almost complete, with approximately a 10,000 square foot area remaining to be excavated.

#### OTL Site

The OTL AER, Mr. Dickson, calibrated the monitoring equipment at 6:30 a.m. and arrived on site at 7:15 a.m. The tailgate safety meeting was held at 7:30 a.m. and operations resumed from the previous day at 7:45 a.m. Mr. Jack Van Marter of Sundt was notified of the estimated quantity of petroleum contaminated soil identified by Zenitech and that Zenitech personnel should arrive on site at approximately 9:00 a.m. to continue the removal.

At 8:30 a.m. Mr. Scott Weinland and Mr. Al Katan, both of ADOT, arrived at the site location of the petroleum contaminated soil to discuss the possible storage of the contaminated soil. Mr. Katan and Mr. Weinland wanted to dispose of the contaminated soil as it was removed to avoid storage on the site. The OTL AER informed ADOT that the soil could be removed directly to a

disposal facility but not until the analytical sample results were obtained for profiling the waste. An excavator was delivered at 9:38 a.m., by a rental company, to the OTL site for Zenitech to use, however, Zenitech had not as yet arrived on the site. Zenitech arrived on site at 10:15 a.m.

At 10:00 a.m. Mr. Joel Nave of RESNA arrived at the OTL site to oversee and monitor the removal of the petroleum contaminated soil by Zenitech. Ms. Janice Petticrew of RESNA notified the OTL AER of the laboratory results for the samples of the suspicious soil material. The results of the analyses identified total petroleum hydrocarbons in excess of 6,000 milligrams per kilogram (mg/kg) in the soil. Trace levels of toluene, ethylbenzene and total xylenes were identified but did not exceed the ADEQ recommended clean up levels for these compounds. Mr. Jim Moots of Zenitech and Mr. Joel Nave of RESNA were notified of the laboratory results. Copies of the chain-of-custody and analytical results are attached to this letter. Two samples were collected but only one sample was analyzed.

Zenitech began their operations by constructing a ramp into the excavation for the equipment. At 1:19 p.m. Zenitech collected two samples from the bottom of the excavation for analysis. Due to the high level of organic vapors in the area, Zenitech upgraded to Level C personal protective equipment. Zenitech began removal of the contaminated soil and loaded the soil into roll-off containers on site.

Mr. Tom Sullivan of ADOT arrived at the OTL site at 2:10 p.m. and requested that Zenitech remove the obvious grossly contaminated soil and load the removed contaminated soil into roll-off containers for storage on the site until the contaminated soil could be disposed. Mr. Sullivan also requested that Zenitech only remove contaminated materials that were within the original limits of excavation for the freeway project. This resulted in a depth of excavation no greater than 20 feet deep from the surface.

At 4:00 p.m. all operations ended for the day at the OTL site. No unusual readings were recorded during Sundt's operations. Zenitech obtained readings only on the organic vapor meter of approximately 25 parts per million in the air above the contaminated soil. No additional suspicious materials were identified on the site during the day.

### March 3, 1993

#### SRP 78 Site

The SRP AER arrived at the SRP 78 site at 7:15 a.m. and attended the tailgate safety meeting at 7:00 a.m. Excavation operations began at 7:20 a.m. It was noted by the SRP AER that a different operator for Sundt, Mr. Bob Miller, was present for half the day, since the regular operator was out ill.

Mr. Dave Allard of CH<sub>2</sub>M Hill, the EPA's environmental representative for the project, arrived on site at 11:00 a.m. to inspect the site operations. Mr. Allard left after a brief conversation with the SRP CER.

At approximately 12:00 p.m., Mr. Scott Dickson of RESNA, the OTL AER, arrived at the SRP 78 site to inspect the suspect material identified the previous day. Mr. Dickson noted that the material identified was very similar in appearance to previously identified material at the SRP 75 site. The previously identified material had been analytically identified as non-hazardous paint waste. Ms.

Janice Petticrew of RESNA was contacted at 12:30 p.m. regarding the suspicious material. Ms. Petticrew stated that it was CWM's responsibility to determine if the material could be transported to Butterfield Station along with the other fill material. The OTL AER left the site at 3:00 p.m. Mr. Scott Weinland and Mr. Al Katan had arrived at the SRP 78 site at approximately 2:45 p.m. to inspect the operations and they left the site at 3:00 p.m.

Mr. Joy Foster of ADOT and the SRP AER entered the excavation at the SRP 78 site at 3:20 p.m. to collect soil samples for moisture content. The monitoring equipment indicated normal readings during the time of sampling.

Operations at the SRP sites ended for the day at 4:30 p.m. No additional suspicious material was identified, and the previously identified suspicious material was determined by CWM to be non-hazardous and had been loaded onto one of the trucks for disposal at approximately 3:00 p.m.

### OTL Site

The monitoring equipment was calibrated by the OTL AER at 6:30 a.m. The daily tailgate safety meeting was held at 7:30 a.m. and work resumed at 7:45 a.m. Zenitech personnel arrived on the site to resume their removal operations. Mr. Joel Nave of RESNA arrived on the OTL site at 7:30 a.m. and attended the tailgate safety meeting. Zenitech arrived on site at 8:00 a.m. to begin their operations. Mr. Joel Nave of RESNA was the AER overseeing the removal operations by Zenitech.

At 8:15 a.m. the OTL AER assisted Mr. Nave in conducting a PCB field test on the petroleum contaminated soil. The results of the field test were negative and therefore the petroleum contaminated soil was identified as non-PCB containing waste.

At 9:50 a.m. Mr. Scott Weinland of ADOT notified the OTL AER that he had been contacted by Mr. David Allard of CH<sub>2</sub>M Hill. Mr. Allard informed Mr. Weinland that any removal of suspicious material from the OTL site should be accomplished in compliance with the existing work plan for the site. Any deviations from the work plan must be pre-approved by the EPA. Zenitech was asked to cease operations until a final ruling from the EPA could be obtained by ADOT concerning removal and storage of the petroleum contaminated soil.

Mr. Tom Sullivan of ADOT was notified at 10:30 a.m. concerning Mr. Allard's directive. Zenitech was placed on stand-by until further notice. Mr. Jim Moots of Zenitech notified his personnel to cease operations until further notice by Mr. Sullivan. At 12:00 p.m., after securing the work area, Zenitech left the OTL site. Mr. Nave of RESNA also left the OTL site at this time.

Ms. Janice Petticrew of RESNA arrived on the OTL site at 3:00 p.m. She notified the OTL AER that the isolation area would have to be constructed by Sundt once the location of the isolation area was determined by ADOT and Sundt. Removal of the petroleum contaminated soil would not resume until Monday, March 8, 1993.

Mr. Dickson and Mr. Nave, the AER's, noted that readings on the monitoring equipment had been normal throughout the day and no additional suspicious material had been exposed. Zenitech and Mr. Nave did however obtain various readings on the organic vapor meters when monitoring the petroleum contaminated soil. Zenitech had increased their level of protection to Level C personal protective equipment due to the increase in organic vapors emitting from the contaminated soil. The operations ended for the day at 4:00 p.m.

**March 4, 1993**

**SRP 78 Site**

The SRP AER arrived on site at 7:05 a.m. and attended the tailgate safety meeting. Excavation operations began at the SRP 78 site at 7:10 a.m.

One of Sundt's operators entered the excavation at 7:30 a.m. and constructed a ramp into the center of the excavation using a small trackhoe.

At 9:00 a.m. two 55-gallon drums were exposed during the excavation operation at Station 280+00. One drum was empty and the other contained a foam-like material and water. Upon investigation of the drums the SRP CER and AER identified the contents of the one drum to be non-hazardous. The organic vapor meter detected concentrations of organic vapor of 70 parts per million from the foam material. However, this same foam material had been previously identified on the SRP 78 site and was determined to be non-hazardous. Both drums were loaded into the waiting trucks for disposal.

At 9:25 a.m., near Station 280+20, a 30-gallon drum was exposed. The 30-gallon drum contained the same foam-like material. The drum was extensively rusted, exposing the foam material. Organic vapor meter readings from the drum were 70 ppm. The SRP CER and AER identified the drum as the same non-hazardous foam material.

At 10:00 a.m. Ms. Petticrew inquired of the SRP AER as to whether or not CWM was going to dispose of the asbestos cement pipes removed at the two SRP sites. The SRP AER asked the SRP CER, Mr. Brad Moring, if CWM would remove the asbestos material. Mr. Moring informed the SRP AER that the asbestos material would be shipped to Butterfield Station by CWM.

At 10:50 a.m. Ms. Petticrew of RESNA additionally requested that the SRP AER collect a profile sample from the two 85-gallon overpack drums, containing petroleum contaminated soil previously exposed on the SRP 75 site. At 11:20 a.m. the SRP AER went to the SRP 75 site and collected a sample from one of the two overpack drums containing the petroleum contaminated soil.

At 1:00 p.m. the SRP AER and Mr. Jack Johnson of Sundt, loaded the asbestos cement pipe stored at the SRP 75 site and transported the contained material using a loader, to the SRP 78 site. The asbestos pipe was stockpiled near the excavation at the SRP 78 site to wait for the completion of waste manifests to transport the asbestos waste to Butterfield Station for disposal.

Mr. Dave Allard of CH<sub>2</sub>M Hill visited the site at 1:35 p.m. for approximately 15 minutes to inspect the progress of operations.

At 3:30 p.m. Ms. Petticrew of RESNA arrived at the SRP 78 site to receive the profile sample collected earlier in the day from the overpack drums of contaminated soil stored at SRP 75 site. Ms. Petticrew transported the sample to the RESNA office to be used to profile the waste for disposal.

At 4:30 p.m. Sundt inquired of Mr. Joy Foster of ADOT and the SRP AER what monitoring personnel were required for the excavation operations to continue until sundown. Mr. Joy Foster and the SRP AER informed Sundt that both a CER and AER would be required on the site to

continue operations. At 4:35 p.m. it was decided by Mr. Van Marter of Sundt to end operations for the day.

#### OTL Site

The OTL AER calibrated the monitoring equipment at 6:30 a.m. and attended the daily tailgate safety meeting at 7:30 a.m. Operations resumed at 7:45 a.m. at Station 15+00. Mr. Scott Weinland notified the OTL AER that ADOT surveyors and contractor surveyors would be on site to survey the area to be used to construct the isolation area for the storage of suspicious materials. Additionally, later in the day Sundt would begin construction of the isolation area.

At 10:15 a.m. Ms. Janice Petticrew of RESNA notified the OTL AER that CTI, one of Sundt's subcontractors, would arrive on the OTL site to remove several empty roll-off containers not utilized by Zenitech, and to relocate the roll-offs containing the previously excavated petroleum contaminated soil. The roll-offs containing the waste soil were to be relocated to an area that would be adjacent to the isolation area once it was constructed. The CTI truck arrived on the OTL site at 10:35 a.m. and the OTL AER directed the truck to the area where the roll-offs were located. There was a total of five roll-offs that contained petroleum contaminated soil.

Sundt personnel began construction of the isolation area at 1:35 p.m.

David Allard of CH<sub>2</sub>M Hill arrived at 1:55 p.m. on the site to check on operations and inspect the location of the isolation area. Mr. Allard left the OTL site at 2:40 p.m. Operations ended for the day at 4:00 p.m. No unusual readings were recorded throughout the day on the monitoring equipment by the OTL AER or CERs. No additional suspicious material was identified on the site during the day.

#### March 5, 1993

##### SRP 78 Site

The morning tailgate safety meeting was held at 7:03 a.m. and conducted by Mr. Brad Moring, the SRP CER. Excavation and loading operations began at 7:10 a.m.

At 7:50 a.m. the asbestos cement pipe stored at the SRP 78 site was transported to Butterfield Station for disposal. The SRP AER monitored the operations while the Sundt operator removed fill material from the bottom of the excavation that had been submerged underwater in the excavation. The wet fill material was stockpiled on the SRP 78 site to drain and dry out. Once the material was dried, Sundt would have trucks return to the site to transport the material to Butterfield Station Landfill for disposal.

The SRP AER was informed at 10:40 a.m. by Sundt personnel that there were a couple of asbestos containing pipes wrapped in plastic near the east fence of the SRP 78 site. The asbestos pipes had been overlooked during the loading of the previous asbestos pipe. The SRP AER had not been aware of the existence of the additional asbestos pipes. The SRP AER and CER decided that the asbestos pipe would be loaded along with the remaining fill material being removed from the bottom of the excavation at a later date.

Mr. Joel Nave and Ms. Janice Petticrew, both of RESNA, arrived at the SRP 78 site at 11:15 a.m. to remove and transport the 85-gallon overpack drum that contained automobile batteries removed from the SRP landfills. The SRP AER informed Ms. Petticrew of the asbestos pipes still on-site and told her that CWM would stockpile the asbestos pipe with the other fill material for transportation off-site at a later date.

Removal of the wet fill material from the bottom of the SRP 78 excavation continued until 4:30 p.m., at which time operations were ended for the day.

### OTL Site

The monitoring equipment was calibrated by the OTL AER at 6:30 a.m. The tailgate safety meeting was held at 7:30 a.m. and operations began at 7:45 a.m. Sundt's subcontractor for constructing the isolation area, Surrot, arrived on-site to place the liner for the isolation area. Mr. Jack Van Marter of Sundt notified all personnel at the OTL site that beginning March 8, 1993, site operations would begin at 7:00 a.m. instead of 7:30 a.m.

At 11:30 a.m. Surrot completed the construction of the isolation area and left the OTL site. Sundt's operations on the site continued through the remainder of the day. Readings on the monitoring equipment were recorded as normal throughout the day by the OTL AER and CER. At 1:00 p.m. the OTL AER noted that the isolation area was not complete since a fence was required around the area for security and sand bags still needed to be placed around the edge of the liner.

At 1:30 p.m. the OTL AER left the site and informed all site personnel that Mr. Brett McDaniel of RESNA, the SRP AER, would be the AER for the OTL site for the remainder of the day if suspicious materials or unusual readings were encountered on the OTL site.

### Conclusions

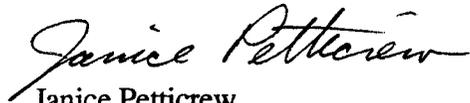
Review of the daily reports and air monitoring results provided by the project CER's did not identify inconsistencies between the AER's and the CER's reports. No unusual air contaminants were identified at the SRP sites by the SRP CER or AER during the week. Additionally, no unusual air contaminants were identified at the OTL site for Sundt's operations by the OTL AER or CER during the week. Zenitech, the hazardous materials contractor on the OTL site, did obtain organic vapor readings from the petroleum contaminated soil during removal operations. Zenitech performed the removal operations in Level C personal protective equipment.

The suspicious material investigated at the OTL site during the week included the petroleum contaminated soil near Station 16+00. Excavation of the contaminated soil began on March 1, 1993, and was conducted by Zenitech. The suspicious material investigated at the SRP sites during the week included non-hazardous paint waste and non-hazardous foam-like material in drums. Approximately 5-gallons of the paint waste was exposed and shipped to Butterfield Station. Two 55-gallon and one 30-gallon drums of the foam-like material was exposed and also shipped to Butterfield Station. Two 85-gallon overpack drums of petroleum contaminated waste soil was removed by RESNA from the SRP 75 site for disposal as hazardous waste due to the high concentration of toluene in the soil. Additionally, RESNA removed one 85-gallon overpack drum containing used automotive batteries which would be delivered by RESNA to a battery recycler for disposal. The stockpile of asbestos cement pipe at SRP 78 and 75, was shipped to Butterfield

Station by CWM, except for two sections of asbestos pipe that remained at SRP 78. No additional suspicious material was identified on either of the sites during the week.

Dust control measures were successfully keeping the airborne concentrations of dust at the OTL and SRP sites well below the maximum allowable concentration of 1.60 parts per million.

Sincerely,  
RESNA Industries, Inc.



Janice Petticrew  
Project Manager

cc. Scott Weinland, ADOT



CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

PROJECT NO. A1098.11		PROJECT NAME/SITE A.D.O.T / O.T.L.						ANALYSIS REQUESTED										P.O. #: 2841	
SAMPLERS <i>[Signature]</i>		(SIGN) <i>[Signature]</i>						(PRINT) Scott Dickson										ATI #303513	
SAMPLE IDENTIFICATION		DATE	TIME	COMP	GRAB	PRES. USED	ICED	NO. CONTAINERS	SAMPLE TYPE	BTEX (602/8020)	TPHq (8015)	PAHs (8015)	TOG 418 1/5520	601/8010	624/8240	625/8270	REMARKS		
1) * 1A 16+50 ES		3/1/93	11:15		X			1	S	X	X								
2) 1B 16+50 ES		3/1/93	11:18		X			1	S								Hold		
RELINQUISHED BY:		DATE	TIME	RECEIVED BY:		LABORATORY:		PLEASE SEND RESULTS TO:											
<i>[Signature]</i>		3/1/93	1:05pm	<i>Janice Petticrew</i>		ATI		Janice Petticrew											
RELINQUISHED BY:		DATE	TIME	RECEIVED BY:		REQUESTED TURNAROUND TIME:		VERBALS ASAP TO JANICE PETTICREW											
<i>Janice Petticrew</i>		3/1/93	1:30pm			< 24 hrs.													
RELINQUISHED BY:		DATE	TIME	RECEIVED BY:		RECEIPT CONDITION:		PROJECT MANAGER:											
		3/1/93	1:30pm	<i>Janice Smith</i>		Good		<i>Janice Petticrew</i>											

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 MAR 08 1993  
 CHANDLER, ARIZONA



Analytical **Technologies, Inc.**

9830 S. 51st Street Suite B-113 Phoenix, AZ 85044 (602) 496-4400

ATI I.D. 303513

March 5, 1993

RESNA Industries  
135 S. Weber  
Suite 1  
Chandler, AZ 85226

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P.O.  
CHANDLER, ARIZONA

Project Name/Number: A.D.O.T./O.T.L./A1098.11

Attention: Janice Petticrew

On 03/01/93, Analytical Technologies, Inc. received a request to analyze soil sample(s). The sample(s) were analyzed with EPA methodology or equivalent methods. The results of these analyses and the quality control data, which follow each set of analyses, are enclosed.

If you have any questions or comments, please do not hesitate to contact us at (602) 496-4400.

Michael G. Barry  
Project Manager

RVW/mag

Enclosure

Robert V. Woods  
Laboratory Manager



Analytical Technologies, Inc.

CLIENT : RESNA - CHANDLER  
PROJECT # : A1098.11  
PROJECT NAME : ADOT/OTL

DATE RECEIVED : 03/01/93  
REPORT DATE : 03/04/93

ATI I.D. : 303513

ATI #	CLIENT DESCRIPTION	MATRIX	DATE COLLECTED
01	1A 16+50 ES	SOIL	03/01/93
02	1B 16+50 ES	SOIL	03/01/93

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----- TOTALS -----

MATRIX	# SAMPLES
SOIL	2

ATI STANDARD DISPOSAL PRACTICE

The samples from this project will be disposed of in thirty (30) days from the date of this report. If an extended storage period is required, please contact our sample control department before the scheduled disposal date.



GAS CHROMATOGRAPHY - RESULTS

ATI I.D. : 30351301

TEST : FUEL HYDROCARBONS (MOD. EPA 8015, BLS-191)

CLIENT : RESNA - CHANDLER
PROJECT # : A1098.11
PROJECT NAME : ADOT/OTL
CLIENT I.D. : 1A 16+50 ES
SAMPLE MATRIX : SOIL

DATE SAMPLED : 03/01/93
DATE RECEIVED : 03/01/93
DATE EXTRACTED : 03/01/93
DATE ANALYZED : 03/02/93
UNITS : MG/KG
DILUTION FACTOR : 20

Table with 2 columns: COMPOUNDS and RESULTS. Rows include FUEL HYDROCARBONS, C6-C10 (290), FUEL HYDROCARBONS, C10-C22(BLS-191) (5500), FUEL HYDROCARBONS, C22-C36 (530), and FUEL HYDROCARBONS (CALCULATED SUM) (6320).

SURROGATE PERCENT RECOVERIES

O-TERPHENYL (%)

\*\*

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\*\* Due to the necessary dilution of the sample, result was not attainable



Analytical Technologies, Inc.

GAS CHROMATOGRAPHY - RESULTS

REAGENT BLANK

TEST : FUEL HYDROCARBONS (MOD. EPA 8015, BLS-191)

CLIENT : RESNA - CHANDLER  
PROJECT # : A1098.11  
PROJECT NAME : ADOT/OTL  
CLIENT I.D. : REAGENT BLANK

ATI I.D. : 303513  
DATE EXTRACTED : 03/01/93  
DATE ANALYZED : 03/01/93  
UNITS : MG/KG  
DILUTION FACTOR : N/A

-----  
COMPOUNDS RESULTS  
-----

FUEL HYDROCARBONS, C6-C10 <5  
FUEL HYDROCARBONS, C10-C22(BLS-191) <5  
FUEL HYDROCARBONS, C22-C36 <5  
FUEL HYDROCARBONS (CALCULATED SUM) <5

SURROGATE PERCENT RECOVERIES

O-TERPHENYL (%) 87

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QUALITY CONTROL DATA

TEST : FUEL HYDROCARBONS (MOD. EPA 8015, BLS-191)

ATI I.D. : 303513

CLIENT : RESNA - CHANDLER  
PROJECT # : A1098.11  
PROJECT NAME : ADOT/OTL  
REF I.D. : 30349915

DATE ANALYZED : 03/01/93  
SAMPLE MATRIX : NON-AQUEOUS  
UNITS : MG/KG

COMPOUNDS	SAMPLE CONC.		SPIKED %	DUP. DUP.		RPD	
	RESULT	SPIKED		SAMPLE REC.	SAMPLE REC.		
FUEL HYDROCARBONS (C10-C22)	<5	51	46	90	48	94	4

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CHANDLER, ARIZONA

$$\% \text{ Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative \% Difference)} = \frac{(\text{Spiked Sample Result} - \text{Duplicate Spike Sample Result})}{\text{Average of Spiked Sample}} \times 100$$



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GAS CHROMATOGRAPHY - RESULTS

ATI I.D. : 30351301

TEST : BTEX (8020) AND MTBE

CLIENT : RESNA - CHANDLER  
PROJECT # : A1098.11  
PROJECT NAME : ADOT/OTL =  
CLIENT I.D. : 1A 16+50 ES  
SAMPLE MATRIX : SOIL

DATE SAMPLED : 03/01/93  
DATE RECEIVED : 03/01/93  
DATE EXTRACTED : 03/01/93  
DATE ANALYZED : 03/01/93  
UNITS : MG/KG  
DILUTION FACTOR : 1

COMPOUNDS	RESULTS
BENZENE	<0.025
TOLUENE	0.14
ETHYLBENZENE	0.36
TOTAL XYLENES	2.2
METHYL-t-BUTYL ETHER	<0.12

SURROGATE PERCENT RECOVERIES

BROMOFLUOROBENZENE (%) 119

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MAR 08 1993

RESNA INDUSTRIES, INC.  
CHANDLER, ARIZONA



Analytical Technologies, Inc.

GAS CHROMATOGRAPHY - RESULTS

REAGENT BLANK

TEST : BTEX (8020) AND MTBE

CLIENT	: RESNA - CHANDLER	ATI I.D.	: 303513
PROJECT #	: A1098.11	DATE EXTRACTED	: 03/01/93
PROJECT NAME	: ADOT/OTL	DATE ANALYZED	: 03/02/93
CLIENT I.D.	: REAGENT BLANK	UNITS	: MG/KG
		DILUTION FACTOR	: N/A

COMPOUNDS	RESULTS
BENZENE	<0.025
TOLUENE	<0.025
ETHYLBENZENE	<0.025
TOTAL XYLENES	<0.025
METHYL-t-BUTYL ETHER	<0.12

SURROGATE PERCENT RECOVERIES

BROMOFLUOROBENZENE (%)	105
------------------------	-----

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MAR 08 1993  
RESNA  
CHANDLER, ARIZONA



Analytical Technologies, Inc.

QUALITY CONTROL DATA

ATI I.D. : 303513

TEST : BTEX (8020) AND MTBE

CLIENT : RESNA - CHANDLER
PROJECT # : A1098.11
PROJECT NAME : ADOT/OTL
REF I.D. : 30351801

DATE ANALYZED : 03/02/93
SAMPLE MATRIX : SOIL
UNITS : MG/KG

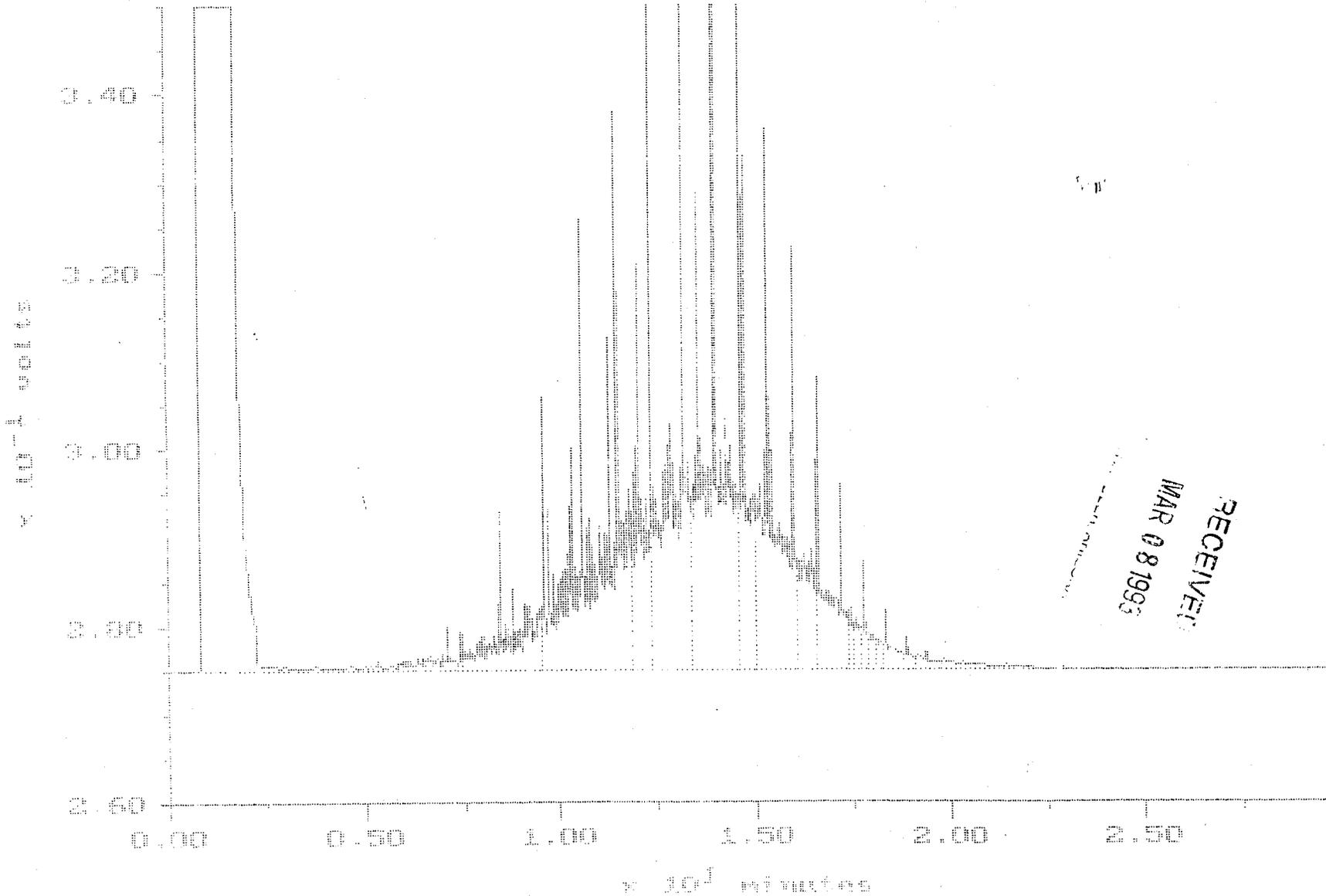
Table with 8 columns: COMPOUNDS, SAMPLE CONC. RESULT, SPIKED SPIKED, % SPIKED, DUP. SAMPLE REC., DUP. SAMPLE REC., RPD. Rows include BENZENE, TOLUENE, ETHYLBENZENE, TOTAL XYLENES, METHYL-T-BUTYL ETHER.

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MAR 08 1993
CHANDLER, ARIZONA

% Recovery = (Spike Sample Result - Sample Result) / Spike Concentration x 100

RPD (Relative % Difference) = (Spiked Sample Result - Duplicate Spike Sample Result) / Average of Spiked Sample x 100

Sample: PPN 303513-1 Channel: FID-6C5A File name: 030123  
Acquired: 02-MAR-93 2:30 Method: H:\MAX\FUELS\DATA1\MAR-01PH Operator:  
Dilution: 1 : 20.000

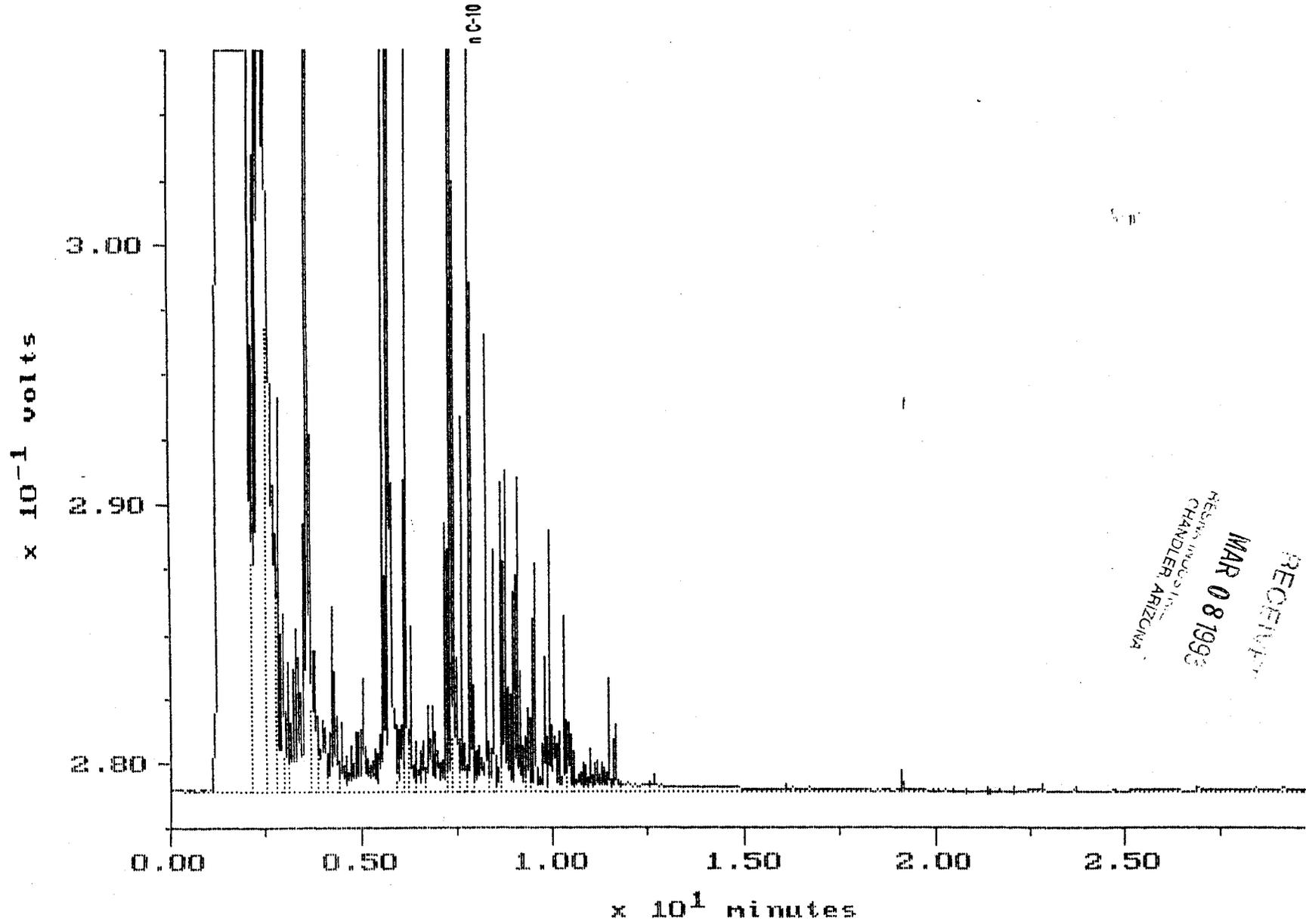


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Analytical Technologies, Inc.

### UNLEADED GASOLINE

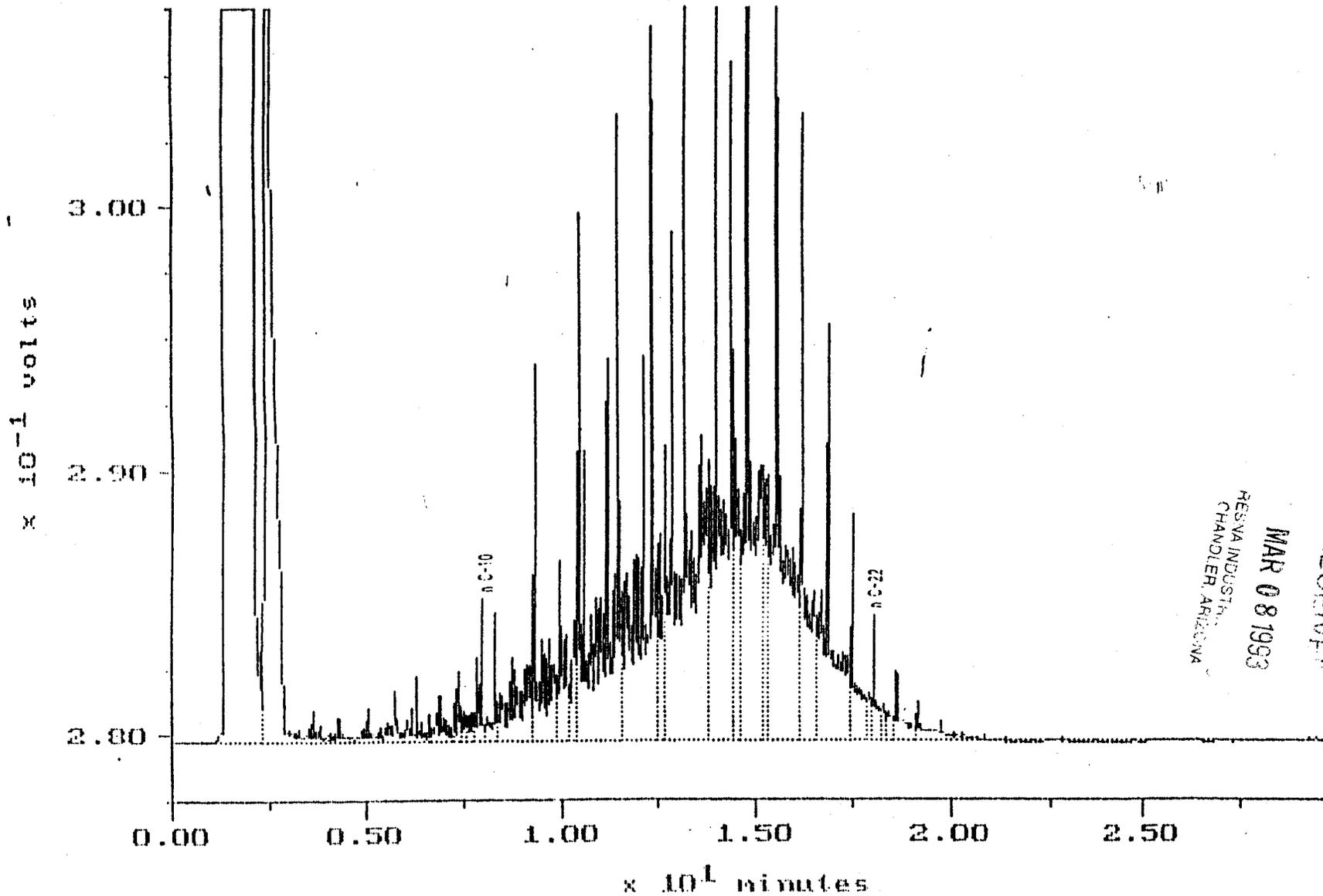


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MAR 08 1993  
RESINA INDUSTRIES  
CHANDLER ARIZONA



Analytical Technologies, Inc.

# DIESEL FUEL



RECEIVED  
MAR 08 1993  
RESVA INDUSTRIES  
CHANDLER, ARIZONA

135 South Weber Drive, Suite 1  
Chandler, AZ 85226  
Phone: (602) 961-0777  
Fax: (602) 961-0554

April 20, 1993

Mr. Tom Sullivan  
Arizona Department of Transportation  
Environmental Planning  
205 South 17th Avenue, Room 240E  
Phoenix, Arizona 85007

ARIZONA DEPARTMENT OF TRANSPORTATION  
PHOENIX, ARIZONA 85007

RECEIVED

Subject: Weekly Project Summary  
Week Ending March 12, 1993  
SIBW-East Papago Freeway Landfill Removal Project  
RESNA Project No. 1098.11

Dear Mr. Sullivan:

The following is a summary of the field activities conducted on the South Indian Bend Wash (SIBW)-East Papago Freeway Landfill Removal Project for the week ending March 12, 1993. The activities for the week were confined to the Old Tempe Landfill (OTL) site, located near Price Road and the south bank of the Salt River in Tempe, Arizona. This project summary documents the activities as recorded by RESNA Industries, Inc. (RESNA), for the week of March 8, through March 12, 1993. The RESNA personnel present at the OTL site during the week included Mr. Scott Dickson and Mr. Brett McDaniel. Brett McDaniel was the Arizona Department of Transportation's (ADOT) Environmental Representative (AER) who monitored the activities on the site conducted by Zenitech, the hazardous materials contractor conducting the removal of the previously identified petroleum contaminated soil. Scott Dickson was the OTL AER who monitored the general excavation activities at the OTL site conducted by Sundt Corporation (Sundt).

### March 8, 1993

#### OTL Site

The OTL AER calibrated the monitoring equipment at 6:15 a.m. and arrived at the OTL site at 6:45 a.m. The tailgate safety meeting was held at 7:00 a.m. Operations for the day included excavation at Station 15+50 W/S, backfilling the excavation between Stations 16+00 and 15+00, and placing the geotextile fabric once the surveying was completed. At 7:20 a.m. Mr. Scott Weinland of ADOT informed the OTL AER that the isolation area had been constructed for use as a storage area for the previously identified petroleum contaminated soil. Mr. Weinland indicated that he would be meeting with Mr. Tom Sullivan of ADOT later in the day to discuss removal of the contaminated material.

At 7:35 a.m. Mr. Brett McDaniel of RESNA arrived at the OTL site to act as the second OTL AER to oversee the removal of the petroleum contaminated soil by Zenitech, the hazardous materials

contractor. Mr. McDaniel talked with Mr. Weinland concerning the procedures for placing the petroleum contaminated soil (PCS) on the isolation pad. The isolation pad is 50 feet wide and 50 feet long, with approximately a 2 foot high berm around the perimeter of the pad. The OTL AER informed Mr. McDaniel that Zenitech was to remove the petroleum contaminated soil down to the specified construction grade until further directions from ADOT were received.

One of Zenitech's personnel arrived at the OTL site at 7:55 a.m. The OTL AER informed Zenitech of the procedures to be followed when placing the contaminated material into the isolation area. Zenitech was also informed of the air monitoring requirements for the OTL site during excavation operations. This included monitoring for combustible gases and organic vapors. Additionally, 5-minute escape packs were required when personnel entered the excavations. Mr. Hackett of Zenitech began to construct a ramp down into the excavation at 8:00 a.m. but stopped the work at 8:55 a.m. to wait for the remainder of the Zenitech crew.

At 9:35 a.m. Mr. Jim Moots of Zenitech arrived on the site. Mr. Moots discussed the operations with Mr. Hackett. At 9:55 a.m. Mr. Moots left the site. At 10:10 a.m. two more Zenitech employees arrived on the site. Zenitech did not have the air monitoring equipment necessary, so the OTL AER, Scott Dickson, informed them that they could use RESNA's equipment until they could requisition some of their own. Zenitech also did not have 5-minute escape packs and one of the employees was sent to bring some to the site.

Once Zenitech obtained all of the necessary equipment to conduct excavation operations on the OTL site, the removal operations began at 11:11 a.m. Mr. McDaniel entered the excavation to investigate the PCS and to conduct air monitoring in the excavation. The organic vapor meter detected readings of organic vapors between 5 and 10 parts per million (ppm) in the soil. The PCS appeared to extend from the ground surface down to at least 15 to 20 feet in depth.

The CTL AER left the area where Zenitech was working and left Mr. McDaniel in charge of overseeing the operation. The OTL AER continued to monitor the Sundt operations at Station 58+00 where Sundt was excavating around the storm drain. No unusual readings were detected with the monitoring equipment.

At 12:30 p.m. Mr. McDaniel informed the OTL AER that Zenitech's operations had ceased due to a hydraulic leak on the excavator. The removal of the PCS would continue the next day, March 9, 1993, following repair of the equipment. Zenitech began to secure the site for the remainder of the day. The PCS that had been placed in the isolation area was covered with plastic and the excavation was cordoned off using caution tape. Zenitech left the site at 1:36 p.m.

Mr. McDaniel left the OTL site to inspect the SRP 78 site. Mr. McDaniel wanted to insure that the asbestos cement pipe had been placed with the remaining excavated material to be transported to Butterfield Station for disposal. Mr. McDaniel arrived at the SRP 78 site at 1:40 p.m. and found that the asbestos pipe had not been properly moved by Sundt as had been directed by Mr. McDaniel. At 2:00 p.m. Mr. McDaniel returned to the OTL site to inform Mr. Jack Van Marter of Sundt that the asbestos pipe had to be moved as soon as possible. Mr. Van Marter of Sundt informed Mr. McDaniel that he would have one of his personnel do it right away. Mr. McDaniel left the OTL site for the day at 3:20 p.m.

Sundt's operations continued at the W/S ramp where they began the removal of the 72 inch diameter storm drain. The OTL AER continued to monitor the operations. No unusual readings

were recorded throughout the day by the OTL AER and the OTL CER. No additional suspicious material was identified. Operations ended for the day at 4:00 p.m.

### March 9, 1993

#### OTL Site

The OTL AER calibrated the monitoring equipment at 6:15 a.m. and arrived at the OTL site at 6:45 a.m. The tailgate safety meeting was held at 7:00 a.m. Operations resumed at the W/S Ramp where Sundt was removing a 72 inch diameter storm drain. The OTL AER noted that Zenitech personnel had not arrived on site at this time. The OTL AER was notified that three Zenitech personnel arrived on site at 7:35 a.m. and were waiting on the arrival of the mechanic to repair the damaged hydraulic line on the excavator used by Zenitech.

The mechanic arrived on the site at 10:30 a.m. and the excavator was removed from the site for the repairs. The repairs were completed at 10:50 a.m. and the removal of the PCS was resumed by Zenitech. The PCS was located approximately between Stations 16+00 and 16+40. Mr. Brett McDaniel of RESNA arrived on the site at 11:35 a.m. to oversee the PCS removal operations by Zenitech and to conduct periodic monitoring for compliance with the work plan for the SIBW/East Papago project.

Mr. David Allard with CH<sub>2</sub>M Hill, the EPA's environmental representative for the project, arrived on site at 12:55 p.m. to observe the operations. Mr. Allard was to meet with Mr. Al Katan of ADOT at 1:00 p.m. Mr. Katan and Mr. Scott Weinland, both of ADOT, arrived at the OTL site at 1:23 p.m. to meet with Mr. Allard. Mr. Allard, Mr. Katan, and Mr. Weinland inspected the isolation area for the PCS at 1:30 p.m.

Mr. Scott Weinland of ADOT informed Mr. Don Bezek and Mr. Bob McDonnell, both of Chemical Waste Management (CWM), that Mr. Allard had commented that the health and safety reports from CWM had become less informative, and that he would like to see more information reported in the weekly reports. The OTL AER noted this request in his logbook.

At 1:40 p.m. Zenitech requested that the access ramp on the west side of the area being excavated be closed to Sundt's equipment traffic. Mr. McDaniel of RESNA informed Mr. Jack Van Marter of Sundt about the need for the closure of the access. At 1:50 p.m. Mr. McDaniel of RESNA stopped an equipment operator from using the ramp west of the Zenitech operations. The Sundt operator was informed that the ramp was closed. The operator informed Mr. McDaniel that Mr. Van Marter had not informed him about the closure, but that he would agree not to use the ramp.

Operations at the OTL site ended for the day at 3:30 p.m. No unusual readings or additional suspicious material was identified during the day. Zenitech's operations also ceased at 3:30 p.m. No unusual readings were noted by Zenitech or Mr. Brett McDaniel. Prior to leaving the site, Zenitech covered the PCS stockpile, in the isolation area, with plastic sheeting.

March 10, 1993

OTL Site

The OTL AER calibrated the monitoring equipment at 6:15 a.m. and arrived at the OTL site at 6:45 a.m. The tailgate safety meeting was held at 7:00 a.m. Work resumed on the diversion of the storm drain at 7:15 a.m. Mr. McDaniel of RESNA arrived on site to monitor the work conducted by Zenitech at 7:30 a.m. Zenitech personnel arrived at the OTL site at 7:30 a.m.

Zenitech began transferring the PCS to the isolation area at 8:45 a.m. Mr. McDaniel noted that he had not witnessed Zenitech personnel conducting a pre-job tailgate safety meeting prior to beginning work. At 9:30 a.m. Zenitech informed Mr. McDaniel that Zenitech was near completion of the removal of the PCS from the excavation area. At 10:45 a.m. Mr. Dan Hackett of Zenitech and Mr. McDaniel entered the excavation to identify if the removal of the PCS was complete. Mr. McDaniel suggested that Zenitech clean up and level the bottom of the excavation to assist with future entry by equipment into the excavation. Zenitech agreed that clean up of the excavation bottom should be done.

The OTL AER monitored Sundt's operations at the E/S ramp. Sundt removed water from the excavation resulting from the storm drain diversion activities. Both Sundt's and Zenitech's operations ceased for lunch at 12:00 p.m. All operations resumed on the site at 12:30 p.m.

At 2:30 p.m. Zenitech informed Mr. McDaniel that they would collect samples from the bottom of the excavation tomorrow morning. Zenitech removed the remaining PCS from the excavation and covered the PCS stockpile in the isolation area with plastic to secure the site for the night. Mr. McDaniel was to observe the sampling process in the morning.

At 2:30 p.m. the OTL AER noted that Sundt was conducting an excavation operation at the storm drain diversion area and no CER was present to conduct monitoring during this operation. The OTL AER stopped the excavation operation and notified Mr. Jack Van Marter of the violation.

All operations for the day ended at 3:30 p.m. No unusual readings were recorded on the monitoring instruments during the day.

March 11, 1993

OTL Site

The OTL AER calibrated the monitoring equipment at 6:15 a.m. and arrived at the OTL site at 6:45 a.m. The tailgate safety meeting was held at 7:00 a.m. Sundt's operations resumed at the E/S ramp at 7:15 a.m. Mr. McDaniel of RESNA and Zenitech personnel arrived on site at 7:30 a.m.

At approximately 8:00 a.m. Mr. McDaniel observed Zenitech collect samples from the side walls and bottom of the excavation. At 9:30 a.m. Mr. Al Katan and Mr. Scott Weinland of ADOT arrived on site to talk with Zenitech concerning the operation. Mr. McDaniel requested of Mr. Weinland that ADOT check the grade that Zenitech had reached to insure that the specified grade had been achieved. Mr. Weinland said he would have the ADOT surveyors check the grade.

At 9:15 a.m. Mr. Van Marter of Sundt notified the OTL AER and CER that the E/S ramp excavation would have to stop while excavation was conducted at the diversion area of the storm drain. The OTL AER offered to conduct the monitoring of the diversion excavation since the operation would not take very long. The OTL AER monitored the excavation operation at the diversion area from 9:30 a.m. to 9:45 a.m. The OTL AER then resumed monitoring along with the OTL CER at the E/S ramp.

At 10:00 a.m. Mr. Don Bezek of CWM, Sundt's health and safety officer, visited the site. At 11:30 a.m. the excavation operations moved from the E/S ramp to the storm drain diversion area to continue excavation. Some of Sundt's personnel began replacing the storm drain near Station 58+00 W/S.

At 10:30 a.m. Zenitech conducted some additional excavation of the PCS. At 11:30 a.m. Zenitech informed Mr. McDaniel that they had completed the work which consisted of removing the PCS to the specified construction grade level. However, Zenitech informed Mr. McDaniel that some PCS still remained below the grade in the bottom of the excavation.

At 12:45 p.m. Mr. Hackett of Zenitech informed the OTL CER that he had received preliminary results for the samples collected earlier in the day from the excavation of the petroleum contaminated soil. The analyses identified concentrations of petroleum hydrocarbons of less than 20 parts per million (ppm) in the side wall of the excavation and 130 ppm in the bottom of the excavation. The OTL AER requested copies of the analyses once they were received by Zenitech. The OTL AER notified Ms. Petticrew of RESNA of the sample results at 1:00 p.m. Zenitech began to demobilize from the site at 1:00 p.m.

All operations at the OTL site ended for the day at 3:30 p.m. No unusual readings or additional suspicious material was identified on the site by the OTL AER and CER.

### March 12, 1993

#### OTL Site

The OTL AER calibrated the monitoring equipment at 6:15 a.m. and arrived at the OTL site at 6:45 a.m. The tailgate safety meeting was held at 7:00 a.m. Sundt's operations resumed at 7:15 a.m. Sundt's operations included excavation of material at Station 351+00, removal of excavated material using rock trucks to transport the material to stockpiles, and installing the new storm drain at Station 57+00 W/S.

At 9:30 a.m. Zenitech arrived at the OTL site. Mr. Tom Sullivan of ADOT had directed Zenitech to remove an additional 2 to 3 feet of soil from the bottom of the excavation area to insure complete removal of the PCS. Once the material was removed, Zenitech was to backfill the excavation back to the specified grade using clean fill material. Zenitech began their operations at 9:45 a.m. It was noted at 10:00 a.m. by the OTL AER that Zenitech did not have the proper monitoring equipment nor escape packs as was required by the site work plan during their operations.

Sundt's operations continued as usual. Zenitech demobilized from the site by 12:30 p.m. All operations ceased on the OTL site at 3:00 p.m. No unusual readings were recorded by the OTL AER or CER during the day and no additional suspicious material was identified.

## Conclusions

Review of the daily reports and air monitoring results provided by the project CER's did not identify inconsistencies between the AER's and the CER's reports. No unusual air contaminants were identified at the OTL site by the OTL CER or AER during the week. No additional suspicious material was identified on the OTL site during the week. Zenitech completed the removal and transfer of the PCS from the excavation area to the isolation area on March 12, 1993.

Dust control measures were successfully keeping the airborne concentrations of airborne dust at the OTL site well below the maximum allowable concentration of 1.60 parts per million.

Sincerely,  
RESNA Industries, Inc.



Janice Petticrew  
Project Manager

cc. Scott Weinland, ADOT

135 South Weber Drive, Suite 1  
Chandler, AZ 85226  
Phone: (602) 961-0777  
Fax: (602) 961-0554

April 21, 1993

Mr. Tom Sullivan  
Arizona Department of Transportation  
Environmental Planning  
205 South 17th Avenue, Room 240E  
Phoenix, Arizona 85007

Subject: Weekly Project Summary  
Week Ending March 26, 1993  
SIBW-East Papago Freeway Landfill Removal Project  
RESNA Project No. 1098.11

Dear Mr. Sullivan:

The following is a summary of the field activities conducted on the Arizona Department of Transportation (ADOT) South Indian Bend Wash (SIBW)-East Papago Freeway Landfill Removal Project for the week ending March 26, 1993. The activities for the week were confined to the Old Tempe Landfill (OTL) site, located near Price Road and the south bank of the Salt River in Tempe, Arizona. This project summary documents the activities as recorded by RESNA Industries, Inc. (RESNA), for the week of March 22, through March 26, 1993. The RESNA personnel present at the OTL site during the week included Mr. Scott Dickson. Scott Dickson was ADOT's Environmental Representative (AER) who monitored the general excavation activities at the OTL site conducted by Sundt Corporation (Sundt). Chemical Waste Management (CWM) is a subcontractor for Sundt who provided the Contractor's Environmental Representative (CER) and Site Safety Officer (SSO) for the operations.

### March 22, 1993

The AER, Mr. Scott Dickson, calibrated the air monitoring equipment at 6:15 a.m. and arrived at the OTL site at 6:45 a.m. The tailgate safety meeting was held for all project personnel at 7:00 a.m. by the SSO, Mr. Don Bezek of CWM. At 7:15 a.m. the project operations resumed at Station 350+00 on the main line. Material was excavated by a 245 excavator and loaded into rock trucks to haul to the stockpile area. Another excavator was preparing the W/S ramp storm drain to be backfilled with concrete slurry. The slurry trucks were to arrive at the job site at 9:00 a.m.

The slurry trucks began to arrive on site at 9:09 a.m. Operations ceased for the lunch break at 12:00 p.m. When operations resumed at 12:30 p.m., Sundt began to place the geotextile fabric in the E/S ramp.

Operations ended for the day at 3:30 p.m. No unusual readings were recorded on the monitoring equipment by the AER or CER. No suspicious material was identified throughout the day.

### March 23, 1993

The AER calibrated the monitoring equipment at 5:45 a.m. and arrived at the OTL site at 6:20 a.m. The tailgate safety meeting was held at 6:30 a.m. Operations resumed at 6:45 a.m. with excavation of material at the access ramp to the main line and the remaining Sundt personnel placing the geotextile fabric on the E/S ramp. By 7:15 a.m. the access ramp of the main line was completed and the excavator moved to the E/S ramp to excavate material.

At 7:20 a.m. Mr. Scott Weinland of ADOT arrived at the OTL site. Mr. Weinland gave copies of some analytical results, provided by Sergeant, Hauskins and Beckworth (SH&B), for the drums of materials that SH&B left stored on the OTL site from their previous studies of the site. The drums were stored in a fenced area at the east end of the W/S ramp. Two of the drums contained soil contaminated with petroleum hydrocarbons. Mr. Weinland, after having a discussion with Mr. Tom Sullivan of ADOT, requested that RESNA dispose of the two drums of petroleum contaminated soil. Mr. Dickson identified the two drums of petroleum soil waste and had these set aside. The remaining drums containing soil and water were not considered to be contaminated based on the analytical results. Therefore, the remaining drums were to be emptied on the site and the metal drums properly disposed.

At 11:45 a.m. the operations ceased for a lunch break. The operations resumed at 12:15 p.m. on the E/S ramp. At 1:30 p.m. sections of the 72-inch diameter storm drain were placed at the main line area.

Operations for the day ended at 3:00 p.m. No unusual readings were recorded on the monitoring instruments during the day and no suspicious material was identified.

### March 24, 1993

The AER calibrated the monitoring equipment at 5:45 a.m. and arrived at the OTL site at 6:20 a.m. The tailgate safety meeting was held at 6:30 a.m. Since rain had been predicted in the weather forecast, all Sundt personnel concentrated on installing the storm drain, pouring the field collars, and filling with slurry, to complete these operations prior to the rain. The only excavation work conducted involved the D-9 dozer ripping out concrete on the E/S ramp. The ripping operations ended at 8:30 a.m.

At 1:20 p.m. a CTI truck arrived on the OTL site to remove the roll-off containers stored in the isolation area that contained petroleum contaminated soil. The AER accompanied the driver to the isolation area. At 1:28 p.m. the AER notified Mr. Scott Weinland of ADOT that the roll-off containers were being removed from the site. Mr. Weinland informed the AER that Mr. Fred Schaufler of the EPA had authorized the disposal of the soil to Butterfield Station Landfill, however, Mr. Weinland had not been notified that the transfer would occur on this day. The AER contacted Zenitech to confirm that CTI was suppose to move the roll-offs on this day. Zenitech did confirm that the roll-offs were to be shipped on March 24, 1993, by CTI and that Mr. Tom Sullivan had provided them with the authorization to conduct the transfer. The CTI truck driver

provided the AER with a copy of the Bill of Lading for the roll-offs and the truck left the site at 1:50 p.m. The CTI driver informed the AER that another CTI truck would arrive on site the next day and that Zenitech personnel would be present.

Operations were ended for the day at 3:30 p.m. No unusual readings on the monitoring equipment or suspicious material was identified on the site throughout the day.

### **March 25, 1993**

The AER calibrated the monitoring equipment at 5:45 a.m. and arrived at the OTL site at 6:20 a.m. The tailgate safety meeting was held at 6:30 a.m. The site operations resumed at 6:45 a.m. with the excavator removing material from the east end of the main line near Station 353+00. The excavated material was loaded into rock trucks and transferred to the stockpile area.

At 7:00 a.m. a subcontractor for Sundt arrived on site to cut a man-way in the 72 inch diameter storm drain. Since the subcontractor was not 40 hour trained, Mr. Don Bezek of CWM, the SSO, accompanied the subcontractor for the duration of the work.

Two CTI trucks arrived at the OTL site at 7:20 a.m. to remove the remaining roll-off containers and transport them to Butterfield Station Landfill. One CTI truck left the site at 7:48 a.m. and Zenitech arrived on site at 8:20 a.m. At 8:40 a.m. several 35 foot belly-dump trucks arrived on the site to transport the petroleum contaminated soil that was stockpiled in the isolation area to Butterfield Station. Zenitech loaded the contaminated soil into the belly-dump trucks. The first full truck left the site at 8:58 a.m.

At 8:35 a.m. Mr. Brett McDaniel of RESNA arrived at the OTL site to act as the AER for Mr. Dickson. Mr. McDaniel observed Sundt's operations on the storm drain of the main line. At 9:30 a.m. Mr. McDaniel and the AER decided that there was a need for two AER's on the site since Zenitech was also conducting operations on the OTL site on this day. Mr. McDaniel would oversee Zenitech's operations and Mr. Dickson would oversee Sundt's operations. At 9:30 a.m. Mr. Dickson, the AER, returned to observe Sundt's operations leaving Mr. McDaniel at the isolation area.

At 10:30 a.m. Mr. McDaniel noted that one of the truck drivers for Zenitech did not have a hard hat on. Mr. McDaniel informed Zenitech that it was their responsibility to insure that the truck drivers abided by the site's Health and Safety Plan. The rules governing the oversight of the AER over the hazardous materials contractor in enforcing the safety plan is outlined in the Appendix L. Zenitech disagreed with this and had been informed by ADOT that they did not have to follow the site safety plan and work plan that had been developed for Sundt. Mr. Scott Weinland of ADOT informed the AER, Mr. Dickson, and Mr. McDaniel that there did have to be an AER overseeing the hazardous materials contractor and that they should continue to oversee Zenitech's operations on the OTL site.

The AER noted that at 9:30 a.m. the Zenitech operator loading the soil from the isolation area had ripped the liner of the isolation area. The AER informed Zenitech that the isolation area was intended to be a permanent structure for the duration of the OTL project. At 9:45 a.m. Mr. Brett McDaniel relieved the AER at the isolation area activities. Mr. McDaniel was to oversee the Zenitech operations for the remainder of the day. The AER returned to monitor Sundt's operations.

The AER notified Mr. Scott Weinland of ADOT at 10:45 a.m. that Zenitech had destroyed a portion of the isolation area liner. Mr. Weinland informed the AER that he was very concerned about the condition of the isolation pad and that he would try to contact Mr. Tom Sullivan about the matter.

Zenitech's operations ceased at 12:36 p.m. because of a mechanical problem with the loader. A mechanic was expected to arrive to repair the equipment.

At 2:00 p.m. Mr. Dave Allard of CH<sub>2</sub>M Hill, EPA's representative for the SIBW project, arrived on site. Mr. Allard observed Sundt's and Zenitech's operations. Mr. Allard expressed concern about the condition of the isolation area liner. At 2:20 p.m. Mr. Allard informed Mr. McDaniel that since the isolation area had holes in the liner it was no longer considered an isolation pad. Mr. Allard informed the AER that the isolation area and the contaminated soil would have to be covered and contained before Zenitech left the site at the end of the day.

Sundt's operations at the OTL site ended for the day at 3:00 p.m. except for the concrete work conducted on the storm drain. No unusual readings or additional suspicious material was identified on the site by the AER and CER. At 3:05 p.m. the AER informed Mr. McDaniel that Zenitech was to cover the isolation area with plastic before they leave the site for the day. The AER left the site at 3:45 p.m. Zenitech continued working on the site until 6:00 p.m. Zenitech covered the isolation area with plastic prior to leaving the site.

### March 26, 1993

The AER, Mr. Scott Dickson, calibrated the monitoring equipment at 6:15 a.m. and arrived at the OTL site at 6:25 a.m. The tailgate safety meeting was held at 6:30 a.m. The site operations resumed at 6:45 a.m. at the east end of the main line. Zenitech resumed their operations at 7:00 a.m. Mr. McDaniel arrived on the site at 7:05 a.m. to oversee Zenitech.

Mr. Tom Sullivan of ADOT arrived on the site at 11:00 a.m. to observe the site operations. Mr. Sullivan informed Zenitech that they were to remove all of the isolation pad except for the sand bags. Sundt's operations continued throughout the day until 1:15 p.m. when it began to rain. Sundt ended the operations for the day at 1:30 p.m. Zenitech continued their operations until the petroleum contaminated soil had been completely removed from the site.

All operations at the OTL site were ended for the day by 4:00 p.m. No unusual readings or additional suspicious material was identified on the site by the AER and CER.

### **Conclusions**

Review of the daily reports and air monitoring results provided by the project CER's did not identify inconsistencies between the AER and the CER reports. No unusual air contaminants were identified at the OTL during the week. No additional suspicious material was identified on the OTL site during the week. Zenitech completed the removal of the petroleum contaminated soil from the isolation area on March 26, 1993. The isolation area no longer exists on the OTL site.

Dust control measures were successfully keeping the airborne concentrations of airborne dust at the OTL site well below the maximum allowable concentration of 1.60 parts per million.

Sincerely,  
RESNA Industries, Inc.

*Janice Petticrew*

Janice Petticrew  
Project Manager

cc. Scott Weinland, ADOT

135 South Weber Drive, Suite 1  
Chandler, AZ 85226  
Phone: (602) 961-0777  
Fax: (602) 961-0554

April 21, 1993

Mr. Tom Sullivan  
Arizona Department of Transportation  
Environmental Planning  
205 South 17th Avenue, Room 240E  
Phoenix, Arizona 85007

Subject: Weekly Project Summary  
Week Ending April 2, 1993  
SIBW-East Papago Freeway Landfill Removal Project  
RESNA Project No. A1098.11

Dear Mr. Sullivan:

The following is a summary of the field activities conducted on the South Indian Bend Wash (SIBW)-East Papago Freeway Landfill Removal Project for the Arizona Department of Transportation (ADOT) for the week ending April 2, 1993. The activities for the week were confined to the Old Tempe Landfill (OTL) site, located near Price Road and the south bank of the Salt River in Tempe, Arizona. This project summary documents the activities as recorded by RESNA Industries, Inc. (RESNA), for the week of March 29, through April 2, 1993. Mr. Scott Dickson of RESNA was the ADOT Environmental Representative (AER) who monitored the general excavation activities at the OTL site conducted by Sundt Corporation (Sundt). Chemical Waste Management (CWM) is a subcontractor for Sundt who provided the Contractor's Environmental Representative (CER) and Site Safety Officer (SSO) for the operations.

### March 29, 1993

The AER, Mr. Scott Dickson, calibrated the air monitoring equipment at 6:15 a.m. and arrived at the OTL site at 6:20 a.m. A light rain was falling on the site at 6:20 a.m. The tailgate safety meeting was held for all project personnel at 6:30 a.m. by the SSO, Mr. Don Bezek of CWM. At 7:15 a.m. the project operations resumed on the site.

At 8:00 a.m. the excavation operations had ceased so no air monitoring was conducted. Activities included placing of the geotextile fabric and the disassembly of the forms used for pouring the concrete field collar for the storm drain. No lunch was taken by the project personnel and no excavation operations occurred throughout the remainder of the day.

Operations ended for the day at 2:30 p.m. No unusual readings were recorded on the monitoring equipment by the AER or CER and no suspicious material was identified throughout the day.

**March 30, 1993**

The AER calibrated the monitoring equipment at 5:45 a.m. and arrived at the OTL site at 6:25 a.m. The tailgate safety meeting was held at 6:30 a.m. Operations resumed at 6:45 a.m. with excavation at the east end of the main line, transferring excavated material to backfill the W/S ramp and also backfilling the storm drain at the main line with aggregate base (AB) gravel.

At 9:00 a.m. Ms. Janice Petticrew of RESNA arrived on-site to instruct the AER to collect profile samples from the 55-gallon drums of petroleum contaminated soil left on the OTL site by Sergeant, Hauskins and Beckwith (SHB). Ms. Petticrew informed the AER that she would call back later to provide the drum identification numbers to the AER. Ms. Petticrew left the site at 9:10 a.m.

At 9:44 a.m. Ms. Petticrew contacted the AER and informed him that the drums to be sampled were labeled as SHB Drum Numbers 8 and 12. The AER collected one sample from each of the two drums to be used for profiling the waste at a disposal facility. The samples were labeled as Nos. D8-1A and D12-1A. The information concerning the sample identification number, time, date, location and description, plus the sampler's name, was placed on the sample label, in the AER's field notebook, and on the chain-of-custody form. During the lunch break from 11:30 a.m. to 12:00 p.m. the AER transported the samples to the RESNA office for storage.

Operations continued after lunch at the E/S ramp. At 2:20 p.m. the excavation operations moved back to the main line.

Operations at the OTL site ended for the day at 3:00 p.m. The AER and CER reported no unusual readings from the monitoring instruments during the day and no suspicious material.

**March 31, 1993**

The AER calibrated the monitoring equipment at 5:45 a.m. and arrived at the OTL site at 6:20 a.m. The tailgate safety meeting was held at 6:30 a.m. The operations on the OTL site resumed at 6:45 a.m. at the west end of the main line. Excavated material was transferred as backfill to the W/S ramp.

Operations continued throughout the day with no unusual readings recorded by the AER and CER. Just before 12:00 p.m. the excavator encountered considerable quantities of rubble and debris in the excavation of the main line. However, no suspicious material was identified by the CER and AER. Operations were ended for the day at 3:00 p.m.

**April 1, 1993**

The AER calibrated the monitoring equipment at 5:45 a.m. and arrived at the OTL site at 6:20 a.m. The tailgate safety meeting was held at 6:30 a.m. The site operations resumed at 6:45 a.m. in the same areas as the day before; the west end of the main line. Backfilling operations occurred at the W/S ramp and between Stations 353+00 and 351+00 on the main line.

At 9:55 a.m. Mr. Al Katan and Mr. Scott Weinland, both of ADOT, arrived at the OTL site to observe the operations. They left the site at 10:20 a.m.

At 12:00 p.m. the operations moved to the east end of the main line. Operations included excavation and placement of the geotextile fabric in the main line. By 1:05 p.m. the backfilling operations on the W/S ramp were completed.

Sundt's operations at the OTL site ended for the day at 3:00 p.m. No unusual readings or suspicious material was identified on the site by the AER and CER.

### April 2, 1993

The AER calibrated the monitoring equipment at 5:45 a.m. and arrived at the OTL site at 6:20 a.m. The tailgate safety meeting was held at 6:30 a.m. The site operations resumed at 6:45 a.m. at the east end of the main line near Station 355+00. The excavated material was used as backfill on the main line between Stations 353+00 and 345+00.

At 8:00 a.m. one 55-gallon metal drum was identified in the excavated material. Investigation by the CER and AER identified the drum as a former trash container since the drum had no lid and contained trash. No readings were recorded on the monitoring equipment and no visible signs of suspicious material was identified in the trash.

At 9:25 a.m. the excavator moved to the west end of the main line. At 10:25 a.m. the excavator exposed a section of asbestos cement pipe. The AER wrapped the asbestos pipe in two layers of plastic and had the pipe placed with the previously removed asbestos pipe near the decontamination pad on the OTL site.

Mr. David Allard with CH<sub>2</sub>M Hill, EPA's representative for the SIBW project, arrived on the site at 1:00 p.m. Mr. Allard informed the AER that he was satisfied with the operations and asked the AER about the status of the isolation area. The AER informed Mr. Allard that the isolation area no longer existed and that the liner had been completely removed.

At 1:20 p.m. Mr. Brad Moring of CWM, the CER, informed the AER that the excavator had exposed some type of metal container. Upon investigation by the CER and AER, the container was identified as a hot water heater tank. Operations continued as normal.

The operations at the OTL site were ended for the day at 2:30 p.m. No unusual readings were recorded on the monitoring equipment throughout the day. An empty 55-gallon drum and a hot water heater tank were exposed during the excavation operations and both were identified as non-hazardous by the CER. One section of asbestos cement pipe was identified during the excavation on the main line. The asbestos pipe was wrapped in plastic and stored near the decontamination pad to wait for disposal. No other suspicious material was identified on the OTL site throughout the day.

### **Conclusions**

Review of the daily reports and air monitoring results provided by the project CER did not identify inconsistencies between the AER and the CER reports. No unusual air contaminants were identified at the OTL site during the week. The suspicious material identified on the OTL site during the week included one section of asbestos cement pipe identified on April 2, 1993. The

asbestos pipe was wrapped in plastic and stored near the decontamination pad on the OTL site. One empty 55-gallon drum and one hot water heater tank were identified on April 2, 1993, and both were identified as non-hazardous by the CER.

Dust control measures were successfully keeping the airborne concentrations of airborne dust at the OTL site well below the maximum allowable concentration of 1.60 parts per million.

Sincerely,  
RESNA Industries, Inc.



Janice Petticrew  
Project Manager

cc. Scott Weinland, ADOT

135 South Weber Drive, Suite 1  
Chandler, AZ 85226  
Phone: (602) 961-0777  
Fax: (602) 961-0554

April 21, 1993

Mr. Tom Sullivan  
Arizona Department of Transportation  
Environmental Planning  
205 South 17th Avenue, Room 240E  
Phoenix, Arizona 85007

Subject: Weekly Project Summary  
Week Ending March 19, 1993  
SIBW-East Papago Freeway Landfill Removal Project  
RESNA Project No. 1098.11

Dear Mr. Sullivan:

The following is a summary of the field activities conducted on the Arizona Department of Transportation (ADOT) South Indian Bend Wash (SIBW)-East Papago Freeway Landfill Removal Project for the week ending March 19, 1993. The activities for the week were confined to the Old Tempe Landfill (OTL) site, located near Price Road and the south bank of the Salt River in Tempe, Arizona. This project summary documents the activities as recorded by RESNA Industries, Inc. (RESNA), for the week of March 15, through March 19, 1993. The RESNA personnel present at the OTL site during the week included Mr. Scott Dickson. Scott Dickson was ADOT's Environmental Representative (AER) who monitored the general excavation activities at the OTL site conducted by Sundt Corporation (Sundt).

### March 15, 1993

The AER calibrated the monitoring equipment at 6:15 a.m. and arrived at the OTL site at 6:45 a.m. The tailgate safety meeting was held at 7:00 a.m. Operations for the day began at 7:15 a.m. at Station 351+00 on the main line. Additionally, work on the storm drain continued at Station 57+00 W/S. Mr. Brad Moring of Chemical Waste Management (CWM) was the Contractor's Environmental Representative (CER) for the OTL site operations. Mr. Moring was monitoring the excavation operations at Station 351+00 on the main line and Mr. Don Bezek of CWM, the site safety officer, was monitoring the operations at the storm drain area.

At 10:23 a.m. Sundt exposed one section of asbestos cement pipe that was approximately 4 feet in length and 12 inches in diameter. The AER, Mr. Scott Dickson, while wearing level C personal protective equipment, had the excavator operator place the pipe section onto plastic and the AER

wrapped the pipe in two layers of 12 millimeter thick plastic sheeting for storage on the site. One of Sundt's loaders transported the wrapped asbestos pipe to the decontamination area for storage.

At 2:00 p.m. the AER observed the operations at the storm drain on the main line. At 2:25 p.m. a concrete truck arrived on the OTL site to pour the concrete for the north side of the field collar on the storm drain. While the pouring was being conducted, the form for the field collar fell apart at the bottom of the east end. The concrete pouring operations moved to the south side to continue pouring while repairs were made to the north side of the form.

Sundt's operations ended for the day at 3:30 p.m. No unusual readings were recorded on the monitoring equipment by the CER or AER throughout the day. The only suspicious material identified during the day was the one 4-foot section of asbestos cement pipe.

### March 16, 1993

The AER calibrated the monitoring equipment at 6:15 a.m. and arrived at the OTL site at 6:45 a.m. The tailgate safety meeting was held at 7:00 a.m. Operations resumed at 7:15 a.m. in the same areas as yesterday on the main line and the storm drain on the W/S ramp. At 8:47 a.m. the excavator was moved to an area on the main line and began to excavate the 72 inch diameter storm drain in this area.

Mr. Dave Allard with CH<sub>2</sub>M Hill, the EPA's environmental representative for the SIBW superfund site, arrived at the OTL site at 10:00 a.m. Mr. Allard observed the operations and then left the site at 10:35 a.m.

At 1:40 p.m. Ms. Janice Petticrew of RESNA, arrived on site to deliver project summary reports to Scott Weinland of ADOT. During Ms. Petticrew's visit, Mr. Jack Van Marter of Sundt informed Ms. Petticrew and the AER that the demolition and removal of the conveyor's and crushers located at the former Tri-City Ready Mix facility may be scheduled during Sundt's operations on the site. Mr. Van Marter expressed concern whether the contractor conducting the demolition operations would conduct the operations according to the work plan and safety plan for the SIBW/East Papago Landfill removal project since the work would be conducted along with Sundt's operations. Ms. Petticrew did not know how the demolition project was specified by ADOT and informed Mr. Van Marter that she would express his concerns to ADOT.

Operations at the OTL site ended for the day at 3:30 p.m. No unusual readings or suspicious materials were identified on the site throughout the day by the CER and AER.

### March 17, 1993

The AER calibrated the monitoring equipment at 6:15 a.m. and arrived at the OTL site at 6:45 a.m. The tailgate safety meeting was held at 7:00 a.m. During the safety meeting, Mr. Brad Moring of CWM informed the AER that Mr. Bezek, the site safety officer, would be out sick for the day. Mr. Moring requested that the site operations continue until a replacement for the site safety officer could be acquired. The AER informed Mr. Moring that the operations could resume but a replacement must be acquired within several hours or the operations would have to cease. The AER notified Mr. Scott Weinland of ADOT concerning the lack of a site safety officer and that the problem would be rectified within several hours. Mr. Weinland agreed to allow the operations to

continue as directed by the AER. The operations resumed at Station 351+00 on the main line, which included excavation of fill material and removal of the storm drain.

At 7:25 a.m. Mr. Don Bezek arrived at the OTL site to act as the site safety officer until a replacement could be found.

At 12:40 p.m. the CER, Mr. Moring of CWM, notified the AER of a possible suspicious material that was exposed at Station 351+80. Investigation by the AER and CER identified a strong diesel fuel-like odor and readings of 30 parts per million (ppm) recorded on the organic vapor meter. The area of contamination was composed of pea gravel. Beneath the pea gravel was a layer of sand and silt that appeared to be uncontaminated. The depth of the contaminated pea gravel was approximately 4 feet. The contamination was also mixed with standing water present in the excavation that had come from the storm drain.

The AER notified Ms. Janice Petticrew of RESNA concerning the petroleum contaminated soil at 1:00 p.m. Ms. Petticrew requested that the AER collect a sample of the contaminated soil and deliver the sample to Analytical Technology laboratory for immediate analysis to identify the material. The analytical test methods to be conducted on the samples, as directed by Ms. Petticrew, were EPA methods 8020 and 418.1.

The AER, wearing level C personal protective equipment, entered the excavation where the contaminated soil was located. At 1:40 p.m. the AER collected one sample of the contaminated material from a small stockpile where the material had been placed. The sample was placed into an 8 ounce glass jar with a teflon lined plastic cap. The sample was transported under a chain-of-custody to the laboratory. Information concerning the sample collection was recorded in the AER's field notebook and sample label. The information recorded included the sampler's name, sample date and time, sample location, sample description, and the sample identification number. The sample was identified as Sample No. 1A351+00E.

At 2:10 p.m. the AER left the OTL site to deliver the soil sample to the laboratory for rush analysis. The AER returned to the site after delivering the sample to the laboratory. At 2:50 p.m. the AER notified Mr. Scott Weinland of ADOT concerning the identified suspicious material and the actions that had been taken.

Sundt's operations for the day ended at 3:30 p.m. The only suspicious material identified on the site throughout the day was the petroleum contaminated soil. Readings recorded for the day by the CER and AER were normal except for the readings from the contaminated soil.

### **March 18, 1993**

The AER calibrated the monitoring equipment at 6:15 a.m. and arrived at the OTL site at 6:45 a.m. The tailgate safety meeting was held at 7:00 a.m. Operations resumed at the OTL site at 7:15 a.m. at the main line area. Once the main line was completed at 7:55 a.m. the operations moved to the E/S ramp and continued excavation and backfilling.

At 8:20 a.m. a representative for Tempe City Water notified the AER and Mr. Joy Foster of ADOT, that a 12 inch diameter water line was suppose to cross the main line of the freeway project. However, the reported water line was not owned by the City of Tempe. The City of

Tempe representative suggested to the AER and Mr. Foster that the line may be owned by the City of Phoenix.

Mr. Brad Moring of CWM, the CER, notified the AER at 9:00 a.m. that Sundt had two excavation operations occurring and that there was only one CER. The AER decided to monitor the second operation since that operation was to be of short duration.

At 1:30 p.m. the removal of the storm drain at the main line was completed. Ms. Janice Petticrew of RESNA contacted the AER at 1:30 p.m. and provided the analytical results for the suspicious material identified the day before as potentially petroleum contaminated soil near the storm drain of the main line. The results identified no hazardous components, but the soil was contaminated with petroleum hydrocarbons at concentrations above 300 milligrams per kilogram. Ms. Petticrew informed the AER that she would notify both Mr. Weinland and Mr. Tom Sullivan of ADOT about the contaminated soil and the analytical results.

The operations at the OTL site ended for the day at 3:30 p.m. No unusual readings or additional suspicious material was identified on the site by the OTL AER and CER.

### March 19, 1993

The AER calibrated the monitoring equipment at 6:15 a.m. and arrived at the OTL site at 6:45 a.m. The tailgate safety meeting was held at 7:00 a.m. The operations resumed at 7:15 a.m. The AER notified Mr. Jack Van Marter of Sundt that the petroleum contaminated soil near the storm drain was not hazardous, and Sundt could remove the contaminated soil and transfer the soil to the isolation area along with the previously excavated petroleum contaminated soil. Mr. Van Marter agreed to move the material as directed by the AER.

At 9:30 a.m. the AER conducted the air monitoring while Sundt's loader transferred the petroleum contaminated soil to the isolation area. At 9:50 a.m. Mr. Scott Dickson, the AER, collected a clearance sample from the bottom of the excavation where the contaminated soil had been removed. The sample was placed into an 8 ounce glass jar with a teflon lined plastic cap. The sample was labeled with the sampler's name, sample date and time, sample location, sample description, and the sample identification number, No. 1b351+00. At 10:50 a.m. the transfer of the petroleum contaminated material had been completed.

The AER delivered the clearance sample to Advanced Analytical laboratories at 11:30 a.m. The sample was delivered under a completed chain-of-custody form. Analyses requested was EPA method 418.1 for total petroleum hydrocarbons. The AER returned to the OTL site at 12:00 p.m.

The operations ended for the week on the OTL site at 3:00 p.m. No unusual readings were recorded by the AER or CER during the day and no additional suspicious material was identified.

### **Conclusions**

Review of the daily reports and air monitoring results provided by the project CER's did not identify inconsistencies between the AER's and the CER's reports. No unusual air contaminants were identified at the OTL site by the CER or AER during the week. Several cubic yards of petroleum contaminated soil was identified on March 17, 1993. The petroleum contaminated soil

was transferred by Sundt and the AER to the isolation area. The petroleum contaminated soil identified on March 17, 1993, would be disposed with the other waste stored in the isolation area. No additional suspicious material was identified on the OTL site during the week.

Dust control measures were successfully keeping the airborne concentrations of airborne dust at the OTL site well below the maximum allowable concentration of 1.60 parts per million.

Sincerely,  
RESNA Industries, Inc.

Janice Petticrew  
Project Manager

cc. Scott Weinland, ADOT

135 South Weber Drive, Suite 1  
Chandler, AZ 85226  
Phone: (602) 961-0777  
Fax: (602) 961-0554

ARIZONA DEPT. OF TRANSPORTATION  
HIGHWAYS DIVISION  
ENVIRONMENTAL PLANNING SERVICES

April 27, 1993

APR 27 1993

Mr. Tom Sullivan  
Arizona Department of Transportation  
Environmental Planning  
205 South 17th Avenue, Room 240E  
Phoenix, Arizona 85007

RECEIVED

Subject: Weekly Project Summary  
Week Ending April 9, 1993  
SIBW-East Papago Freeway Landfill Removal Project  
RESNA Project No. A1098.11

Dear Mr. Sullivan:

The following is a summary of the field activities conducted on the South Indian Bend Wash (SIBW)-East Papago Freeway Landfill Removal Project for the Arizona Department of Transportation (ADOT) for the week ending April 9, 1993. The activities for the week were confined to the Old Tempe Landfill (OTL) site, located near Price Road and the south bank of the Salt River in Tempe, Arizona. This project summary documents the activities as recorded by RESNA Industries, Inc. (RESNA), for the week of April 5, through April 9, 1993. Mr. Scott Dickson of RESNA was the ADOT Environmental Representative (AER) who monitored the general excavation activities at the OTL site conducted by Sundt Corporation (Sundt). Chemical Waste Management (CWM) is the subcontractor for Sundt who provided the Contractor's Environmental Representative (CER) and Site Safety Officer (SSO) for the operations.

#### April 5, 1993

The AER, Mr. Scott Dickson, calibrated the air monitoring equipment at 5:45 a.m. and arrived at the OTL site at 6:20 a.m. The tailgate safety meeting was held for all project personnel at 6:30 a.m. by the SSO, Mr. Don Bezek of CWM. At 6:45 a.m. the project operations resumed on the site at the west end of the main line.

At 9:00 a.m. Mr. Brad Moring of CWM, the CER, notified the AER that the excavator had exposed a 55-gallon drum. Investigation of the drum by the CER and AER identified the drum as containing concrete and was considered non-hazardous. At 10:40 a.m. the AER noted that the readings on the air monitoring equipment were normal.

Operations ended for the day at 3:00 p.m. No unusual readings were recorded on the monitoring equipment by the AER or CER and no suspicious material was identified throughout the day. Only

one 55-gallon drum was identified, but upon further investigation was considered non-hazardous concrete.

**April 6, 1993**

The AER calibrated the monitoring equipment at 5:45 a.m. and arrived at the OTL site at 6:20 a.m. The tailgate safety meeting was held at 6:30 a.m. Operations resumed at 6:45 a.m. with excavation at the west end of the main line near Station 349+00. Readings were noted as normal on the air monitoring equipment by the AER at 8:40 a.m.

Operations shut down for lunch at 11:30 a.m. and resumed at 12:00 p.m. at the west end of the main line. The excavator began to continuously encounter various construction debris in the excavation of the main line in the center of the area. The AER noted that the area had probably been a former small rubbish landfill. No suspicious material was identified during the excavation of the debris.

Operations at the OTL site ended for the day at 3:00 p.m. The AER and CER reported no unusual readings from the monitoring instruments during the day.

**April 7, 1993**

The AER calibrated the monitoring equipment at 5:45 a.m. and arrived at the OTL site at 6:20 a.m. The tailgate safety meeting was held at 6:30 a.m. Operations resumed at 6:45 a.m. with excavation at the west end of the main line near Station 348+00. Backfilling operations were occurring at the east end of the main line.

Operations shut down for lunch at 11:30 a.m. and resumed at 12:00 p.m. at the west end of the main line. No suspicious material was identified during the excavation throughout the day.

Operations at the OTL site ended for the day at 3:00 p.m. The AER and CER reported no unusual readings from the monitoring instruments during the day.

**April 8, 1993**

The AER calibrated the monitoring equipment at 5:45 a.m. and arrived at the OTL site at 6:20 a.m. The tailgate safety meeting was held at 6:30 a.m. Operations resumed at 6:45 a.m. with excavation at the west end of the main line near Station 349+00. Mr. Jack Van Marter of Sundt informed the AER that he wanted to use a loader to remove material between Stations 17+00 and 22+00 EN. The AER informed Mr. Van Marter that the CER would remain to monitor the excavation on the main line and that the AER would monitor the short duration work conducted by the loader.

At 8:15 a.m. Ms. Janice Petticrew arrived on site to observe the operations. Ms. Petticrew left the site at 8:30 a.m. after talking with the AER. The work conducted by the loader ended at 9:35 a.m. and the AER returned to the west end of the main line. The AER noted that the readings were normal from the air monitoring equipment at 10:20 a.m.

Operations shut down for lunch at 11:30 a.m. and resumed at 12:00 p.m. at the west end of the main line. No suspicious material was identified during the excavation. Operations at the OTL site ended for the day at 3:00 p.m. The AER and CER reported no unusual readings from the monitoring instruments during the day.

April 9, 1993

The AER calibrated the monitoring equipment at 5:15 a.m. and arrived at the OTL site at 5:50 a.m. The tailgate safety meeting was held at 6:00 a.m. Operations resumed at 6:15 a.m. with excavation at the west end of the main line near Station 347+00. Mr. Jack Van Marter requested that the AER monitor during the excavation of several test holes between Stations 345 and 346. The test holes were to be excavated to identify if obstructions such as concrete may impede the progress of the main line excavation. The AER agreed to conduct the air monitoring

The test hole excavation was completed at 7:00 a.m. and the AER returned to observe the operations on the west end of the main line. Operations shut down for lunch at 11:30 a.m. and resumed at 12:00 p.m.

Operations at the OTL site ended for the day at 3:00 p.m. The AER and CER reported no unusual readings from the monitoring instruments during the day and no suspicious material was identified.

### Conclusions

Review of the daily reports and air monitoring results provided by the project CER did not identify inconsistencies between the AER and the CER reports. No unusual air contaminants were identified at the OTL site during the week. The suspicious material identified on the OTL site during the week included one 55-gallon drum identified on April 5, 1993. The drum was investigated and identified by the CER and AER as containing non-hazardous concrete. No other suspicious material was identified during the week.

Dust control measures were successfully keeping the airborne concentrations of airborne dust at the OTL site well below the maximum allowable concentration of 1.60 parts per million.

Sincerely,  
RESNA Industries, Inc.

  
Janice Petticrew  
Project Manager

cc. Scott Weinland, ADOT

135 South Weber Drive, Suite 1  
Chandler, AZ 85226  
Phone: (602) 961-0777  
Fax: (602) 961-0554

ARIZONA DEPT. OF TRANSPORTATION  
HIGHWAY DIVISION  
ENVIRONMENTAL PLANNING SERVICE

April 28, 1993

MAY 11 1993

RECEIVED

Mr. Tom Sullivan  
Arizona Department of Transportation  
Environmental Planning  
205 South 17th Avenue, Rm. 240E  
Phoenix, Arizona 85007

Subject: Disposal of Drums Containing Diesel Fuel at OTL Site  
SIBW-East Papago Freeway Landfill Removal Project  
RESNA Project No. A1098.11

Dear Mr. Sullivan:

On April 12, 1993, RESNA Industries, Inc. (RESNA), retained All Western Oil, Inc. (AWO) to dispose of diesel fuel contained in three drums identified at the Old Tempe Landfill (OTL) Site on the South Indian Bend Wash (SIBW)-East Papago Freeway Landfill Removal Project. RESNA was directed by the Arizona Department of Transportation (ADOT) to properly dispose of the contents of the three drums identified on the OTL site.

RESNA met AWO at the OTL site at 10:27 a.m. on April 12, 1993. RESNA accompanied the AWO truck to the isolation area where the three drums of diesel fuel had been temporarily stored. An AWO employee conducted the tests for used oil; all three drums passed the requirements. AWO proceeded to pump a total of 165 gallons of diesel fuel from the three drums into the vacuum truck tank. The AWO truck left the OTL site at 11:00 a.m. after completing the collection. A copy of the Bill of Lading for the diesel fuel has been included with this letter as Attachment A.

RESNA appreciates the opportunity to provide these services to ADOT. If you have any questions concerning these services or require additional information, please call our office at 961-0777.

Sincerely,  
RESNA Industries, Inc.



Janice Petticrew  
Project Manager

cc. Scott Weinland, ADOT

JP

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**ATTACHMENT A**

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ALL WESTERN OIL, INC.  
1535 N. McQueen  
Gilbert, AZ 85234  
(602) 892-8135  
(602) 892-0173 - FAX

CUSTOMER PICK UP TICKET

No 36791

MANIFEST # 34153

P.O. #/CONTACT Janice TELE. # 961-0277

CUSTOMER NAME Rescan

DEPARTMENT \_\_\_\_\_

BILLING \_\_\_\_\_

ADDRESS 2128 E 181 St

CITY Tempe STATE AZ ZIP \_\_\_\_\_

MATERIAL	QUANTITY	DRUMS	@	TOTAL
ON SPECIFICATION USED OIL FUEL WASTE OIL NOS COM LIQ NA 1270				
OFF SPECIFICATION USED OIL FUEL WASTE OIL NOS COM LIQ NA 1270				
GAS				
DIESEL	<u>165</u>	<u>3</u>	<u>10.00</u>	<u>30.00</u>
WATER / COOLANT				
TEST KIT		<u>3</u>	<u>15.00</u>	<u>45.00</u>
OTHER				
TOTALS				<u>75.00</u>

THESE PRODUCTS ARE NON-HAZARDOUS

COMMENTS paid check 02/28

CHLORINE TESTED: YES NO PPM 50-400

CUSTOMER'S SIGNATURE Janice Pettis

CUSTOMER'S NAME PRINTED Janice Pettis

DRIVER'S SIGNATURE Don Dough DATE 4/12/93

DESTINATION (Check One)

- ALL WESTERN ENVIRONMENTAL 2655 S. 11th AVENUE PHOENIX, AZ 85007 AZD983479007
- ALL WESTERN OIL 1535 N. Mc QUEEN RD GILBERT, AZ 85234 AZD980895676
- OTHER \_\_\_\_\_

135 South Weber Drive, Suite 1  
Chandler, AZ 85226  
Phone: (602) 961-0777  
Fax: (602) 961-0554

April 28, 1993

Mr. Tom Sullivan  
Arizona Department of Transportation  
Environmental Planning  
205 South 17th Avenue, Room 240E  
Phoenix, Arizona 85007

Subject: Weekly Project Summary  
Week Ending April 16, 1993  
SIBW-East Papago Freeway Landfill Removal Project  
RESNA Project No. A1098.11

Dear Mr. Sullivan:

The following is a summary of the field activities conducted on the South Indian Bend Wash (SIBW)-East Papago Freeway Landfill Removal Project for the Arizona Department of Transportation (ADOT) for the week ending April 16, 1993. The activities for the week were confined to the Old Tempe Landfill (OTL) site, located near Price Road and the south bank of the Salt River in Tempe, Arizona. This project summary documents the activities as recorded by RESNA Industries, Inc. (RESNA), for the week of April 12, through April 16, 1993. Mr. Scott Dickson of RESNA was the ADOT Environmental Representative (AER) who monitored the general excavation activities at the OTL site conducted by Sundt Corporation (Sundt). Chemical Waste Management (CWM) is the subcontractor for Sundt who provided the Contractor's Environmental Representative (CER) and Site Safety Officer (SSO) for the operations.

**April 12, 1993**

The AER, Mr. Scott Dickson, calibrated the air monitoring equipment at 5:15 a.m. and arrived at the OTL site at 5:50 a.m. The tailgate safety meeting was held for all project personnel at 6:00 a.m. by the SSO, Mr. Don Bezek of CWM. At 6:15 a.m. the project operations resumed on the site at the west end of the main line, west of Station 347+00.

At 7:59 a.m. Ms. Janice Petticrew of RESNA contacted the AER to inform him that All Western Oil (AWO) would be arriving on the OTL site and that the AER was to meet them at the front gate. AWO was to remove the liquid from the three 55-gallon drums that were temporarily stored at the isolation area on the OTL site. The AER was to accompany AWO during the removal of the liquid waste.

The AWO truck arrived at the OTL site at 10:15 a.m. and was met by Mr. Dickson of RESNA. The AER accompanied AWO to the isolation area where the drums were stored. AWO pumped the liquid from the three drums and left the site at 11:20 a.m. Ms. Janice Petticrew of RESNA arrived on the site at 11:00 a.m. to meet with the AWO employee. Ms. Petticrew left the site at 11:20 a.m.

Operations ended for the day at 2:30 p.m. No unusual readings were recorded on the monitoring equipment by the AER or CER and no suspicious material was identified throughout the day.

**April 13, 1993**

The AER calibrated the monitoring equipment at 5:15 a.m. and arrived at the OTL site at 5:50 a.m. The tailgate safety meeting was held at 6:00 a.m. Operations resumed at 6:15 a.m. with excavation at the west end of the main line near Station 346+00. Readings were noted as normal on the air monitoring equipment by the AER at 9:20 a.m. Weather conditions were noted as partly cloudy skies with cool temperatures, but no rain was in the forecast.

Operations shut down for lunch at 11:30 a.m. and resumed at 12:00 p.m. Excavation continued on the west end of the main line. No suspicious material was identified on the OTL site throughout the day.

Operations at the OTL site ended for the day at 2:30 p.m. The AER and CER reported no unusual readings from the monitoring instruments throughout the day.

**April 14, 1993**

The AER calibrated the monitoring equipment at 5:15 a.m. and arrived at the OTL site at 5:50 a.m. The tailgate safety meeting was held at 6:00 a.m. Mr. Brad Moring of CWM, the CER, introduced Mr. Mark Cook of CWM during the safety meeting as the individual who would be the CER for the remainder of the week since Mr. Moring was out. Mr. Don Bezek of CWM, the SSO, was to assist Mr. Cook with the CER duties.

Operations resumed at 6:15 a.m. with excavation at the east end of the main line near Station 346+50. The AER requested that the SSO review the site safety plan and the work plan with Mr. Cook so that he could become familiar with the plans. Readings were noted as normal on the air monitoring equipment by the AER at 7:45 a.m.

Operations shut down for lunch at 11:30 a.m. and resumed at 12:00 p.m. Excavation continued on the east end of the main line. No suspicious material was identified on the OTL site throughout the day.

Operations at the OTL site ended for the day at 2:30 p.m. The AER and CER reported no unusual readings from the monitoring instruments throughout the day.

**April 15, 1993**

The AER calibrated the monitoring equipment at 5:15 a.m. and arrived at the OTL site at 5:50 a.m. The tailgate safety meeting was held at 6:00 a.m. Operations resumed at 6:15 a.m. with excavation at the west end of the main line near Station 345+00.

The AER noted that Sundt's excavator had not been able to excavate down to the specified grade of 15 feet between Stations 245+50 to 347+00 due to the presence of solid concrete. Additional concrete was also identified on the north side near Station 345+00.

At 7:30 a.m. Mr. Joy Foster and Mr. Scott Weinland of ADOT informed the AER that Mr. David Allard of CH<sub>2</sub>M Hill had visited the OTL site the day before at 3:30 p.m. and that Mr. Allard was expected to visit again sometime later this day.

Operations shut down for lunch at 11:30 a.m. and resumed at 12:00 p.m. at the west end of the main line. At 1:00 p.m. the D-9 dozer began ripping the concrete on the south side of the main line from Station 345+00 to 347+00.

Operations at the OTL site ended for the day at 2:30 p.m. The AER and CER reported no unusual readings from the monitoring instruments throughout the day. No suspicious material was identified throughout the day.

**April 16, 1993**

The AER calibrated the monitoring equipment at 5:15 a.m. and arrived at the OTL site at 5:50 a.m. The tailgate safety meeting was held at 6:00 a.m. Operations resumed at 6:15 a.m. with excavation at the west end of the main line near Station 344+75. The D-9 dozer continued to rip the concrete between Stations 347+00 to 345+00.

Mr. David Allard with CH<sub>2</sub>M Hill, the EPA's representative for the SIBW site, visited the OTL site at 12:45 p.m. Mr. Allard observed the operations and left the site at 1:30 p.m. The AER noted that readings from the monitoring equipment were normal at 1:30 p.m.

Operations at the OTL site ended for the day at 2:00 p.m. The AER and CER reported no unusual readings from the monitoring instruments throughout the day. No suspicious material was identified on the site throughout the day.

**Conclusions**

Review of the daily reports and air monitoring results provided by the project CER did not identify inconsistencies between the AER and the CER reports. No unusual air contaminants were identified at the OTL site during the week. No suspicious material was identified on the OTL site during the week.

Dust control measures were successfully keeping the airborne concentrations of airborne dust at the OTL site well below the maximum allowable concentration of 1.60 parts per million.

Sincerely,  
RESNA Industries, Inc.



Janice Petticrew  
Project Manager

cc. Scott Weinland, ADOT

135 South Weber Drive, Suite 1  
Chandler, AZ 85226  
Phone: (602) 961-0777  
Fax: (602) 961-0554

May 3, 1993

Mr. Tom Sullivan  
Arizona Department of Transportation  
Environmental Planning  
205 South 17th Avenue, Room 240E  
Phoenix, Arizona 85007

ARIZONA DEPT. OF TRANSPORTATION  
HIGHWAYS DIVISION  
ENVIRONMENTAL PLANNING SERVICE

MAY 3 1993

RECEIVED

Subject: Weekly Project Summary  
Week Ending April 23, 1993  
SIBW-East Papago Freeway Landfill Removal Project  
RESNA Project No. A1098.11

Dear Mr. Sullivan:

The following is a summary of the field activities conducted on the Arizona Department of Transportation's (ADOT) South Indian Bend Wash (SIBW)-East Papago Freeway Landfill Removal Project for the week ending April 23, 1993. The activities for the week were confined to the Old Tempe Landfill (OTL) site, located near Price Road and the south bank of the Salt River in Tempe, Arizona. This project summary documents the activities as recorded by RESNA Industries, Inc. (RESNA), for the week of April 19, through April 23, 1993. Mr. Brett McDaniel of RESNA was the ADOT Environmental Representative (AER) who monitored the general excavation activities at the OTL site conducted by Sundt Corporation (Sundt). Chemical Waste Management (CWM) is the subcontractor for Sundt who provided the Contractor's Environmental Representative (CER), Mr. Brad Moring, and Site Safety Officer (SSO), Mr. Don Bezek, for the operations.

**April 19, 1993**

The AER, Mr. Brett McDaniel, attended the tailgate safety meeting for all project personnel at 6:00 a.m. which was conducted by the SSO, Mr. Don Bezek of CWM. At 6:15 a.m. excavation operations resumed on the south side of Station 344+50 on the main line.

At 7:05 a.m. Mr. Scott Weinland of ADOT arrived on the site to observe the operations and left the site at 7:30 a.m. Miscellaneous rubbish and construction debris was being excavated by Sundt near Station 344+50. Some of the material noted by the AER was sheet metal, plastic pipe, and paper.

The operations ceased for a lunch break from 11:30 a.m. to 12:00 p.m. Excavation operations resumed at Station 344+00 on the west end of the main line.

Operations ended for the day at 2:30 p.m. No unusual readings were recorded on the monitoring equipment by the AER or CER and no suspicious material was identified throughout the day.

**April 20, 1993**

The AER arrived at the OTL site and attended the tailgate safety meeting at 6:00 a.m. The AER calibrated the monitoring equipment at 6:10 a.m. Operations resumed at 6:15 a.m. A trackhoe with a hammer attachment was used to break up the large pieces of concrete exposed on the site. Excavation continued on the main line right-of-way.

Operations shut down for lunch at 11:30 a.m. and resumed at 12:00 p.m. Excavation continued at Station 243+90. A large slab of concrete, greater than 400 square feet, was exposed approximately 20 feet south of the north side of the excavation at Station 243+90.

At 2:00 p.m. Mr. Dave Allard with CH<sub>2</sub>M Hill, the EPA's environmental representative for the SIBW superfund site, visited the OTL site. Mr. Allard observed the operations and then left the site at 2:15 p.m.

Operations at the OTL site ended for the day at 2:30 p.m. The AER and CER reported no unusual readings from the monitoring instruments throughout the day. No suspicious material was identified throughout the day at the OTL site.

**April 21, 1993**

The AER arrived at the OTL site at 7:48 a.m. Mr. Brad Moring of CWM, the CER, briefed the AER, concerning the operations that had occurred on the OTL site from 6:15 a.m. to 8:00 a.m. No unusual readings on the monitoring equipment or suspicious material was encountered during that time. The excavation work was being conducted between Stations 244+00 to 243+50.

Operations ceased for lunch from 11:30 a.m. to 12:00 p.m. The excavation operations resumed at 12:00 p.m. between Stations 244+00 to 243+50. The operations proceeded without incident for the remainder of the day.

Operations at the OTL site ended for the day at 2:30 p.m. The AER and CER reported no unusual readings from the monitoring instruments throughout the day. No suspicious material was identified during the operations throughout the day.

**April 22, 1993**

The AER, Mr. Brett McDaniel, arrived at the OTL site and attended the tailgate safety meeting at 6:00 a.m. Operations resumed at 6:10 a.m. with excavation operations at Station 243+75 of the main line and placing the geotextile fabric in the bottom of the excavated areas of the main line.

Mr. Scott Weinland of ADOT visited the site in the morning and left at 8:15 a.m.

Operations shut down for lunch at 11:30 a.m. and resumed at 12:00 p.m. Excavation continued at Station 245+00 of the main line. Sundt was continuing to break the large pieces of concrete that had been stockpiled on the site.

Operations at the OTL site ended for the day at 2:30 p.m. The AER and CER reported no unusual readings from the monitoring instruments throughout the day. No suspicious material was identified during the operations throughout the day.

April 23, 1993

The AER arrived on the OTL site and attended the tailgate safety meeting for project personnel at 6:00 a.m. Operations resumed at 6:10 a.m. with excavation between Stations 246+00 and 247+00.

At 9:15 a.m. the excavation operations moved to Station 243+00. Soil material, that had been reported to the AER by CWM to have a moisture content too high to be used as backfill, was stockpiled on the OTL site, south of the work area. The operations did not shut down for lunch on this day.

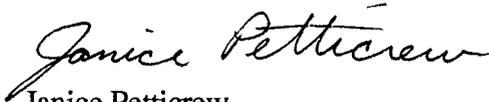
Operations at the OTL site ended for the day at 2:00 p.m. The AER and CER reported no unusual readings from the monitoring instruments throughout the day. No suspicious material was identified during the operations throughout the day.

### Conclusions

Review of the daily reports and air monitoring results provided by the project CER did not identify inconsistencies between the AER and the CER reports. No unusual air contaminants were identified at the OTL site during the week. No suspicious material was identified on the OTL site during the week.

Dust control measures were successfully keeping the airborne concentrations of airborne dust at the OTL site well below the maximum allowable concentration of 1.60 parts per million.

Sincerely,  
RESNA Industries, Inc.



Janice Petticrew  
Project Manager

cc. Scott Weinland, ADOT

135 South Weber Drive, Suite 1  
Chandler, AZ 85226  
Phone: (602) 961-0777  
Fax: (602) 961-0554

May 4, 1993

Mr. Tom Sullivan  
Arizona Department of Transportation  
Environmental Planning  
205 South 17th Avenue, Room 240E  
Phoenix, Arizona 85007

ARIZONA DEPT. OF TRANSPORTATION  
HIGHWAYS DIVISION  
ENVIRONMENTAL PLANNING SERVICES

MAY 4 1993

RECEIVED

Subject: Weekly Project Summary  
Week Ending April 30, 1993  
SIBW-East Papago Freeway Landfill Removal Project  
RESNA Project No. A1098.11

Dear Mr. Sullivan:

The following is a summary of the field activities conducted on the Arizona Department of Transportation's (ADOT) South Indian Bend Wash (SIBW)-East Papago Freeway Landfill Removal Project for the week ending April 30, 1993. The activities for the week were confined to the Old Tempe Landfill (OTL) site, located near Price Road and the south bank of the Salt River in Tempe, Arizona. This project summary documents the activities as recorded by RESNA Industries, Inc. (RESNA), for the week of April 26, through April 30, 1993. Mr. Scott Dickson, Mr. Brett McDaniel, and Mr. Joel Nave, all of RESNA, were the ADOT Environmental Representatives (AER) who monitored the general excavation activities throughout the week at the OTL site. Sundt Corporation (Sundt) is the general contractor for the project. Chemical Waste Management (CWM) is the subcontractor for Sundt who provided the Contractor's Environmental Representative (CER), Mr. Brad Moring, and the Site Safety Officer (SSO), Mr. Don Bezek, for the project.

**April 26, 1993**

The AER, Mr. Scott Dickson, calibrated the monitoring equipment at 5:15 a.m. The AER arrived on the OTL site at 5:50 a.m. and attended the tailgate safety meeting for all project personnel at 6:00 a.m. At 6:15 a.m. excavation operations resumed at Station 343+00 on the main line. Mr. Jack Van Marter informed the AER that the excavated material stockpiled at the SRP 78 site was to be transported to Butterfield Landfill on this day. Mr. Louis Garcia of CWM would be on the SRP 78 site to oversee the operation and safety. Additionally, Mr. Brad Moring of CWM, the CER, informed the AER that the project operations would not shut down in May as originally planned. Since the Salt River water level had been dropping drastically, the project operations would continue with no shut down foreseen in the near future until the project is completed.

At 8:30 a.m. the AER left the OTL site to observe the transfer of material from the SRP 78 site. CWM had provided eleven trucks to transport the material and approximately 2800 cubic yards of material was to be hauled to Butterfield Landfill for disposal.

The AER returned to the OTL site at 9:00 a.m. Mr. Joy Foster of ADOT informed the AER that a contractor would be present on the OTL site later in the day in order to conduct the demolition of the structures and buildings remaining on the area of the OTL site formerly owned by Tri-City Ready Mix. Mr. Al Katan of ADOT had requested that the AER periodically observe the demolition operations.

Operations were shut down for the lunch break from 11:30 a.m. to 12:00 p.m. At 12:00 p.m. the AER went to the SRP 78 site to observe the loading operations. Only some of the material at the SRP 78 site was to be moved on this day and the loading operations were scheduled for an early shut down.

The AER returned to the OTL site at 12:30 p.m. The AER noted that the demolition contractor was present on the OTL site and went to observe the operations. The AER noted that the demolition contractor's personnel were not wearing hard hats and were not using fall protection when working on elevated surfaces. The AER contacted Mr. Al Katan of ADOT at 12:45 p.m. to express his concerns about the failure of the demolition contractor to operate using safe procedures established and enforced by the Occupational Safety and Health Administration (OSHA). Mr. Katan informed the AER that the AER's responsibilities should only be concerned with environmental issues, such as air monitoring, and that the demolition work was a separate contract from the SIBW/Papago project. Mr. Katan also informed the AER that if the demolition contractor was not following OSHA standards then Mr. Joy Foster of ADOT should be the person to inform the demolition contractor concerning corrective actions. At 1:30 p.m. Mr. Foster informed the demolition contractor that the work must be conducted following OSHA standards.

Operations ended for the day at 2:30 p.m. No unusual readings were recorded on the monitoring equipment by the AER or CER and no suspicious material was identified throughout the day on the OTL site.

#### April 27, 1993

The AER, Mr. Scott Dickson of RESNA, arrived at the OTL site at 5:50 a.m. The tailgate safety meeting was held at 6:00 a.m. Operations resumed at 6:15 a.m. with excavation operations at Station 10+00 on the E/S ramp.

At 7:30 a.m. the demolition contractor arrived on the OTL site to continue demolition operations. Mr. Don Bezek of CWM, the SSO, expressed his concern to the AER about the liability for safety to CWM and Sundt with the demolition contractor on the OTL site and not following the same work plan or site safety plan. The AER informed the SSO that he would have to voice his concerns directly to Mr. Al Katan of ADOT.

At 9:00 a.m. Mr. Brad Moring of CWM, Mr. Don Bezek of CWM, Mr. Greg Cooper of Sundt, and Mr. Jack Van Marter of Sundt, notified the AER that Sundt was considering shutting down the OTL site operations if the demolition contractor continued to work on the same site. The AER informed CWM and Sundt that any grievances they had concerning the demolition contractor would have to be discussed directly with ADOT. Mr. Jack Van Marter of Sundt requested that the

AER notify Mr. Dave Allard with CH<sub>2</sub>M Hill, the EPA's environmental representative for the SIBW superfund site, concerning the demolition contractor. The AER informed Sundt that Sundt would have to directly notify the EPA.

Mr. Brad Moring of CWM notified the AER at 9:15 a.m. that the operations at the SRP 78 site involving the transportation of the stockpiled material had been shut down for the day due to a lack of trucks to transport the material in the most economical manner.

At 10:25 a.m. Mr. Al Katan of ADOT arrived on the OTL site. Mr. Greg Cooper of Sundt requested of ADOT that if the demolition contractor was to remain on the OTL site, that the demolition area be barricaded from the rest of the OTL site operations and that Sundt receive a written letter from ADOT relieving Sundt and CWM of any liability concerning the demolition contractor as a result of the OTL operations. Mr. Katan agreed to these requests by Sundt. Mr. Katan left the site at 10:47 a.m.

At 12:00 p.m., after the lunch break, Mr. Louis Garcia of CWM replaced Mr. Brad Moring of CWM as the CER for the OTL site for the remainder of the day.

Operations at the OTL site ended for the day at 2:30 p.m. The AER and CER reported no unusual readings from the monitoring instruments throughout the day. No suspicious material was identified throughout the day on the OTL site.

#### **April 28, 1993**

Mr. Brett McDaniel of RESNA, the AER, arrived at the OTL site at 5:55 a.m. The tailgate safety meeting was held at 6:00 a.m. Operations resumed at 6:15 a.m. with excavation operations at Stations 342+50 and 340+00 on the main line.

At 8:00 a.m. Mr. Al Katan and Mr. Scott Weinland, both of ADOT, observed the screening operation conducted by Sundt. Sundt was screening the debris from a large stockpile of material located in the northeast corner of the OTL site.

At 11:00 a.m. Mr. Dave Allard of CH<sub>2</sub>M Hill, the EPA's environmental representative for the SIBW superfund site, arrived on site to observe the operations. Mr. Allard left the OTL site at 11:25 a.m.

The AER noted at 2:30 p.m. that no suspicious material had been identified during the day. Two unidentified objects were exposed at Station 340+00 and were investigated; a hot water heater tank and a drum containing solidified concrete. Neither of these objects were identified as suspicious or hazardous.

Operations at the OTL site ended for the day at 2:30 p.m. The AER and CER reported no unusual readings from the monitoring instruments and no suspicious material was identified during the operations throughout the day at the OTL site.

#### **April 29, 1993**

The AER, Mr. Joel Nave of RESNA, arrived on the OTL site and attended the tailgate safety meeting at 6:00 a.m. for all project personnel. Operations resumed at 6:15 a.m. with excavation

operations at Station 339+90 on the E/S ramp. At 11:00 a.m. the excavation operations moved to the west side of the E/S ramp. Sundt also continued breaking the concrete pieces that were stockpiled on the OTL site and using the smaller concrete pieces as backfill on the E/S ramp.

Operations at the OTL site ended for the day at 2:30 p.m. The AER and CER reported no unusual readings from the monitoring instruments and no suspicious material was identified during the operations throughout the day at the OTL site.

### April 30, 1993

The AER, Mr. Brett McDaniel of RESNA, arrived at the OTL site at 5:10 a.m. Operations resumed at the OTL site at 6:17 a.m. with excavation operations at Station 339+50 on the E/S ramp.

At 6:50 a.m. suspicious material was exposed in the excavation area on the north side of the right-of-way of the Price Road off-ramp (E/S ramp), at Station 339+80. Investigation of the suspicious material identified the material as a drum approximately 30-gallons in size that contained a liquid substance similar to used motor oil and water. The investigation, conducted by the CER and AER, identified approximately 10 to 15 gallons of the liquid in the drum. Liquid from the drum had spilled onto the soil in the excavation. The spill area was approximately 7 feet by 4 feet in size. CWM barricaded the area where the drum was located and work was shut down in this area. No hazardous air borne contaminants from the suspicious material were identified with the CER's and AER's monitoring equipment.

At 7:00 a.m. Mr. Brett McDaniel, the AER, notified Ms. Janice Petticrew of RESNA concerning the course of action to be taken concerning the suspicious material. Ms. Petticrew informed the AER that he was to collect a sample of the material to be analyzed for composition and proceed to shovel the contaminated soil and drum into 55-gallon drums for storage at the OTL sites decontamination area. Once the visibly contaminated soil was properly contained in drums, the AER was directed by Ms. Petticrew to collect one clearance soil sample from the excavated area. Both samples were to be delivered to Analytical Technologies for analysis.

The AER left the OTL site at 7:23 a.m. to return to the RESNA office to obtain sampling equipment and drums for containing the suspicious material. The AER, along with Mr. Dean Pinkham of RESNA, returned to the OTL site at 9:25 a.m. to conduct the containerization of the suspicious material and collect the soil samples. The suspicious material was loaded into five 55-gallon drums and one 85-gallon overpack drum. The six drums of waste were stored near the decontamination pad at 11:00 a.m. The two soil samples were collected and delivered to the laboratory for analysis by the AER.

Operations at the OTL site ended for the day at 2:30 p.m. The AER and CER reported no unusual readings from the monitoring instruments. A suspicious material was identified during the operations at the OTL site. The material was tentatively identified by RESNA as some type of petroleum hydrocarbon and water. The suspicious material had spilled onto the soil in the excavation. The contaminated soil, concrete and drum was containerized by RESNA and stored in the decontamination area. The suspicious material was sampled and delivered to the laboratory by RESNA for analysis to identify the material.

## Conclusions

Review of the daily reports and air monitoring results provided by the project CER did not identify inconsistencies between the AER and the CER reports. No unusual air contaminants were identified at the OTL site during the week. The suspicious material identified on the OTL site during the week appeared to be some type of petroleum hydrocarbon mixed with water. No other suspicious material was identified on the OTL site during the week. The suspicious material was containerized for storage in the decontamination area of the OTL site and was sampled and analyzed for identity.

Dust control measures were successfully keeping the airborne concentrations of airborne dust at the OTL site well below the maximum allowable concentration of 1.60 parts per million.

Sincerely,  
RESNA Industries, Inc.



Janice Petticrew  
Project Manager

cc. Scott Weinland, ADOT

135 South Weber Drive, Suite 1  
Chandler, AZ 85226  
Phone: (602) 961-0777  
Fax: (602) 961-0554

ARIZONA DEPT. OF TRANSPORTATION  
HIGHWAYS DIVISION  
ENVIRONMENTAL PLANNING SERVICES

May 17, 1993

Mr. Tom Sullivan  
Arizona Department of Transportation  
Environmental Planning  
205 South 17th Avenue, Room 240E  
Phoenix, Arizona 85007

MAY 17 1993  
**RECEIVED**

Subject: Weekly Project Summary  
Week Ending May 7, 1993  
SIBW-East Papago Freeway Landfill Removal Project  
RESNA Project No. A1098.11

Dear Mr. Sullivan:

The following is a summary of the field activities conducted on the Arizona Department of Transportation's (ADOT) South Indian Bend Wash (SIBW)-East Papago Freeway Landfill Removal Project for the week ending May 7, 1993. The activities for the week were confined to the Old Tempe Landfill (OTL) site, located near Price Road and the south bank of the Salt River in Tempe, Arizona. This project summary documents the activities as recorded by RESNA Industries, Inc. (RESNA), for the week of May 3, through May 7, 1993. Mr. Scott Dickson of RESNA was the ADOT Environmental Representative (AER) who monitored the general excavation activities throughout the week at the OTL site. Sundt Corporation (Sundt) is the general contractor for the project. Chemical Waste Management (CWM) is the subcontractor for Sundt who provided the Contractor's Environmental Representative (CER), Mr. Brad Moring, and the Site Safety Officer (SSO), Mr. Don Bezek, for the project.

May 3, 1993

The AER, Mr. Scott Dickson of RESNA, calibrated the monitoring equipment at 5:15 a.m. The AER arrived on the OTL site at 5:50 a.m. and attended the tailgate safety meeting for all project personnel at 6:00 a.m. At 6:15 a.m. operations resumed on the E/S ramp. Operations included excavation of material, breaking concrete, backfilling, and screening of soil and debris.

At 8:00 a.m. the AER recorded that readings on the monitoring equipment were normal. The CER, Mr. Moring of CWM, informed the AER that a small drum was exposed by Sundt on Friday, April 20, 1993. The drum was investigated by the CER, Mr. Moring, and the AER, Mr. Brett McDaniel of RESNA. The drum appeared to contain some type of petroleum hydrocarbon such as oil. The drum of liquid had spilled onto the soil in the area immediately surrounding the drum. The drum, liquid and soil were containerized by RESNA into six 85-gallon plastic overpack drums and stored by the decontamination pad on the OTL site. The material containerized was sampled and the samples were submitted to ATI Analytical Laboratory for characterization analysis.

Operations were shut down for the lunch break from 11:30 a.m. to 12:00 p.m. The CER notified the AER at 2:00 p.m. that the operations at the SRP 78 site were complete. Sundt had completed the removal of the man-made fill material and the material had been transported to Butterfield Station Landfill for disposal. This included the removal of the last remaining section of asbestos cement pipe at the SRP 78 site. No unusual readings had been recorded during the final removal operations and no additional suspicious materials were identified.

Operations ended for the day at 2:30 p.m. No unusual readings were recorded on the monitoring equipment by the AER or CER and no suspicious material was identified throughout the day on the OTL site.

### May 4, 1993

The AER, Mr. Scott Dickson of RESNA, arrived at the OTL site at 5:50 a.m. The tailgate safety meeting was held at 6:00 a.m. Operations resumed at 6:15 a.m. with excavation operations at Station 9+75 on the E/S ramp and the breaking of the concrete at Station 339+50 on the main line. Sundt was additionally screening the soil and debris in the pile of material located in the northeast corner of the OTL site. Mr. Brad Moring, the CER, informed the AER that the screened debris would be transported to Butterfield Station Landfill for disposal on this day.

At 6:45 a.m. two trucks from CTI Trucking Company arrived on the OTL site to begin the transportation of the screened debris from the material pile. The two trucks would be transporting the debris throughout the day.

At 10:30 a.m. the AER was notified by Mr. Joy Foster of ADOT that Sundt's track-hoe with an attached hammer was to be moved tomorrow from the OTL site to the SRP 78 site to break apart a large log of wood.

Operations ceased for the lunch break from 11:30 a.m. to 12:00 p.m. At 12:15 p.m. the AER went to the SRP 78 site to observe the breaking operations. The CER noted that the man-made material specified to be removed from SRP 78 had been removed except for the large log that Sundt was to break apart. The CER arrived back on the OTL site at 12:45 p.m.

Operations at the OTL site ended for the day at 2:30 p.m. The AER and CER reported no unusual readings from the monitoring instruments throughout the day. No suspicious material was identified throughout the day on the OTL site.

### May 5, 1993

The AER, arrived at the OTL site at 5:50 a.m. The tailgate safety meeting was held at 6:00 a.m. Operations resumed at 6:15 a.m. with excavation operations at Station 339+50 on the main line. The screening operations had been completed but the two CTI trucks were still transporting the debris to Butterfield Station Landfill.

At 6:45 a.m. the breaker was transported to the SRP 78 site to begin breaking the log of wood.

Mr. Dave Allard with CH2M Hill, the EPA's representative for the SIBW superfund site, arrived at the OTL site at 9:45 a.m. The AER informed Mr. Allard of the drum of petroleum type liquid exposed by Sundt on April 30, 1993, and the steps taken by RESNA to contain the contaminated

soil. Mr. Allard also expressed concern to the AER about the lack of barricades, caution tape and signs restricting access to the OTL site from the demolition operations being conducted on the former Tri-City Ready Mix property. Mr. Allard informed the AER that he would discuss his concerns with Mr. Al Katan of ADOT. Mr. Allard left the OTL site at 10:05 a.m.

At 11:00 a.m. Mr. Roger Veil, one of ADOT's field inspectors, observed a suspicious object in the soil material being used by Sundt as backfill in the excavations. Mr. Veil notified the CER and AER of the observation and requested that they investigate the suspicious object. The CER and AER investigated the suspicious object and identified the object as a used hot water heater tank. No further action was required.

At 12:00 p.m. operations resumed after the half hour lunch break. Sundt began screening soil and debris from another stockpile of material located on the OTL site. Mr. Jack Van Marter notified the AER that the breaking of the log of wood at the SRP 78 site was complete and that one truck would be required to transport the wood to Butterfield Station Landfill.

At 2:00 p.m. the AER observed a large amount of black smoke rising from the area where the demolition contractor was conducting operations on the former Tri-City Ready Mix (Tri-City) property. The AER investigated the source of the smoke and observed a fire consuming the shorings at a former grizzly where the demolition contractor had been using a cutting torch. The torch had started the fire and the demolition contractor had no fire extinguishing equipment available. The AER observed that the fire was out of control. At 2:10 p.m. the AER notified Mr. Jack Van Marter of Sundt about the fire and requested if Sundt's water truck could be used to extinguish the fire. Mr. Van Marter agreed and sent the water truck over to the former Tri-City property. The water truck began applying water to the fire at 2:20 p.m. At 2:35 p.m. the AER notified the ADOT Jefferson Field office concerning the fire. Mr. Scott Weinland and Mr. Al Katan of ADOT were not available but the office personnel informed the AER that they would deliver the message to them. The AER had notified the ADOT office in order to determine if the Tempe Fire Department should be notified of the fire. At 2:45 p.m. the AER investigated the site of the fire and noted that the fire appeared to be extinguished and no smoke was left. The AER decided that the Fire Department did not need to be called at this time since the fire was extinguished. The AER noted in his field notes that the fire could have been avoided if the demolition contractor had available the necessary fire extinguishing equipment during operations involving the cutting torch. No fire extinguishing equipment had been available on the demolition contractors site.

Operations at the OTL site ended for the day at 2:30 p.m. The AER and CER reported no unusual readings from the monitoring instruments and no suspicious material was identified during the operations throughout the day at the OTL site.

### May 6, 1993

The AER arrived on the OTL site and attended the tailgate safety meeting at 6:00 a.m. for all project personnel. Operations resumed at 6:15 a.m. with excavation operations at Station 339+00. Screening of debris from pile of material continued and Mr. Louie Garcia of CWM informed the AER that a total of five or six trucks would be present on the OTL site to transport the debris to Butterfield Station Landfill.

At 8:15 a.m. a fencing contractor began to remove the fence that had enclosed the former isolation area and use the fence sections to divide the demolition operation on the former Tri-City property from the OTL site as had been requested by Mr. Dave Allard with CH2M Hill.

At 10:30 a.m. the AER noted that readings from the monitoring equipment were normal. Site personnel took a lunch break from 11:30 a.m. to 12:00 p.m. At 12:45 p.m. the fencing contractor completed the fencing operation and left the OTL site. The last of the trucks were loaded for the day at 1:30 p.m.

Operations at the OTL site ended for the day at 2:30 p.m. The AER and CER reported no unusual readings from the monitoring instruments and no suspicious material was identified during the operations throughout the day at the OTL site.

### May 7, 1993

The AER calibrated the monitoring equipment at 5:15 a.m. and arrived at the OTL site at 5:50 a.m. The tailgate safety meeting was held for all project personnel at 6:00 a.m. Operations resumed at the OTL site at 6:15 a.m. with excavation operations at Station 340+00 on the main line. The geotextile fabric was being placed in the excavation on the E/S ramp and the screening operations were also continuing.

Mr. Paiz with CH2M Hill arrived at the OTL site at 10:45 a.m. Mr. Paiz will be replacing Mr. Dave Allard as the EPA's representative for the SIBW superfund site. The AER informed Mr. Paiz of the status of the OTL site operations up to the present time. Mr. Paiz left the OTL site at 11:20 a.m.

Operations at the OTL site ended for the day at 2:00 p.m. The AER and CER reported no unusual readings from the monitoring instruments and no suspicious material was identified during the operations throughout the day at the OTL site.

### Conclusions

Review of the daily reports and air monitoring results provided by the project CER did not identify inconsistencies between the AER and the CER reports. No unusual air contaminants were identified at the OTL site during the week. No suspicious material was identified on the OTL site during the week.

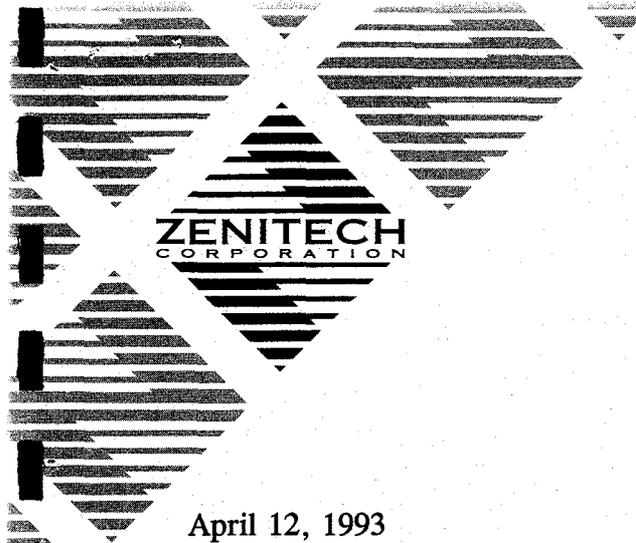
Dust control measures were successfully keeping the airborne concentrations of airborne dust at the OTL site well below the maximum allowable concentration of 1.60 parts per million.

Sincerely,  
RESNA Industries, Inc.



Janice Petticrew  
Project Manager

cc. Scott Weinland, ADOT



**ZENITECH**  
CORPORATION

ARIZONA DEPT. OF TRANSPORTATION  
HIGHWAYS DIVISION  
ENVIRONMENTAL PLANNING SERVICES

APR 14 1993

**RECEIVED**

April 12, 1993

Arizona Department of Transportation  
205 South 17th Avenue  
Phoenix, Arizona 85007

Attn: Mr. Tom Sullivan, Environmental Planner

Re: Arizona Department of Transportation  
Papago Project (Old Tempe Landfill)  
Soil Remediation  
Zenitech Project Number 92013-20

Dear Mr. Sullivan:

On March 1, 1993, Zenitech Corporation was retained by the Arizona Department of Transportation (ADOT) to excavate suspected petroleum contaminated soil at the old Tempe landfill site. The impacted area was in the path of the current work being performed at that site by Sundt and Chemical Waste Management for ADOT. The volume and when the release occurred is unknown, however, the release is suspected to have occurred while the site was being operated by a sand and gravel contractor.

Zenitech personnel responded to the site on March 1, 1993, and upon arrival met with Scott Dixon of RESNA. Mr. Dixon briefed Zenitech as to the approximate size of the suspected area, and what types of samples had been collected. ADOT decided that prior to any excavation Zenitech would perform further sampling, and send the samples to Advanced Analytical for expedited analysis by the following methods to evaluate the suspected contaminant. The analysis performed on March 1, 1993 Advanced Analytical was:

TCLP Metals	EPA Method 1311
Total Petroleum Hydrocarbons	EPA Modified Method 418.1
Flash Point	EPA Method 1010
Paint Filter	EPA Method 9095

The results of the above listed analysis were received by Zenitech on March 1, 1993 and confirmed the presence of petroleum hydrocarbon contamination above the Arizona Department of Environmental Quality (ADEQ) Suggested Soil Cleanup Levels (SSCL) of 100 mg/kg.

Results of the TCLP indicate the sample does not exhibit the characteristics of a regulated hazardous waste according to 40 CFR 261.24. Results of the paint filter test indicated the material contained no free liquid. Results of the flash point test indicated the material to have a flash point of > 200 degrees fahrenheit and therefore does not exhibit the characteristic of a hazardous waste for ignitability according to 40 CFR 261.21.

On March 2, 1993, Zenitech commenced the excavation of the contaminated material. The estimated quantity of soil to be excavated was 600 to 800 cubic yards. The original plan for excavation was to place the material into roll off containers pending waste profiling, and disposal. Five roll off containers were filled at that time.

On March 3, 1993 the project was shut down by ADOT pending the construction of a containment area for the storage of contaminated soil. ADOT decided at that time the balance of the contaminated soil would be stockpiled in the lined containment area after construction, pending disposal.

Profiling of the waste to Waste Management of North America's Butterfield Station Regional Landfill, Mobile, Arizona began on March 4, 1993, after receipt of analytical data. Profiling was completed on March 5, 1993, and verbal approval was received at that time. Formal approval was received March 11, 1993 from Waste Management under profile number WMNA 001826.

On March 8, 1993, excavation at the site was resumed after the completion of the containment area. On March 11, 1993, visual observations indicated excavation parameters had been met. These parameters had been established by ADOT as the maximum extent of the excavation. Confirmatory soil samples were taken at that time to assess the remaining levels of contamination. The analytical data indicated the concentrations of Total Petroleum Hydrocarbon (TPH) levels in the bank and side wall area to be below the method reporting limits of 20 mg/kg. A review of the analytical data for the sample collected from the bottom of the excavation at the existing grade revealed levels of 130 mg/kg TPH. No additional excavation below the designated grade area was planned unless requested by ADOT.

On March 12, 1993, ADOT requested additional material be removed from the bottom grade area to reduce remaining residual contamination. Zenitech was directed to remove up to an additional two vertical feet but not to proceed through the clay lens area. At the completion of the additional excavation two more clearance samples were collected from the bottom of the

Mr. Tom Sullivan  
April 12, 1993  
Page 3

excavation. The clearance samples were sent to Advanced Analytical for analysis by EPA modified method 418.1, and was completed March 12, 1993. A review of the analytical data for the sample indicated TPH levels of 29 mg/kg and < 20 mg/kg.

On March 25 and 26 1993, Zenitech re-mobilized to the site and loaded the stockpiled soil for transportation to the Butterfield Landfill under the existing waste profile. Zenitech removed a total of 1,024 tons of soil in forty-three 30 cubic yard end dumps and five 20 cubic yard roll off boxes. Please refer to the attached bills of lading and weigh slips.

Thank you for the opportunity to perform services to ADOT. If I can be of further assistance, please feel free to contact me.

Sincerely,

ZENITECH CORPORATION



Frank LeForce  
President

attachments

**ATTACHMENT A**

**LAB ANALYSIS**

**ADVANCED ANALYTICAL LABORATORY**  
2414 West 12th Street, Tempe, Arizona 85281

**LABORATORY REPORT**

Client: Zenitech  
500 North 56th Street  
Chandler, Arizona 85226  
Project: ADOT ER

Sampling Date: 3/12/93  
Date Received: 3/12/93  
Date Extracted: 3/27/93  
Date of Analysis: 3/27/93

EPA METHOD 8020-BTEX

Sample Name	Sample #	Concentration mg/Kg				surrogate % Rec
		benzene	toluene	ethyl benzene	xylene(s)	
92013-20-11	93-03-0105	<50	<50	<50	<50	97

\*Duplicates Below Detection Limits

Duplicate, % diff.:	0*	0*	0*	0*
Spike, % recovery:	92	107	105	104
Limit of Detection (mg/Kg):	50	50	50	50

Checked By:

Kathy McCleskey  
Analyst:  
Waters

# ADVANCED ANALYTICAL LABORATORY

2414 West 12th Street, Tempe, Arizona 85281

## LABORATORY REPORT

Client: Zenitech Corp.  
500 North 56th Street  
Chandler, Arizona 85226  
Project: ADOT ER

Sampling Date: 3/12/93  
Date Received: 3/12/93  
Date Extracted: 3/12/93  
Date of Analysis: 3/12/93

### EPA METHOD 418.1-Total Petroleum Hydrocarbons

Sample Name	Sample #	Concentration mg/Kg
92013-20-10	93-03-0104	29
92013-20-11	93-03-0105	<20

Duplicate, % diff.: 0%  
Spike, % recovery: 107 %  
Limit of Detection: 20 mg/Kg

Checked By:

*Kathy McCloskey*

Analyst:

*John Jay Dubesky*



**ADVANCED ANALYTICAL LABORATORY**  
2414 West 12th Street, Tempe, Arizona 85281

**LABORATORY REPORT**

**Client:** Zenitech Corp.  
300 North 56th Street  
Chandler, Arizona 85226  
**Project:** ADOT ER

**Sampling Date:** 3/11/93  
**Date Received:** 3/11/93  
**Date Extracted:** N/A  
**Date of Analysis:** 3/11/93

**EPA METHOD 9095 - Paint Filter Test**

<b>Sample Name</b>	<b>Sample #</b>	<b>Reported Value ml</b>
92013-20-04	93-03-0070	0
92013-20-03	93-03-0074	0

**Checked By:**

*John J. Debesky*  

---

**Analyst:**  
*Kathy Matlosky*  

---

**ADVANCED ANALYTICAL LABORATORY**  
2414 West 12th Street, Tempe, Arizona 85281

**LABORATORY REPORT**

**Client:** Zenitech Corp.  
300 North 56th Street  
Chandler, Arizona 85226  
**Project:** ADOT ER

**Sampling Date:** 3/11/93  
**Date Received:** 3/11/93  
**Date Extracted:** 3/11/93  
**Date of Analysis:** 3/15/93

**EPA METHOD 1311-Toxicity Characteristic Leaching Procedure (TCLP)**

**Sample Name** 92013-20-03

**Sample #** 93-03-0074

<b>CAS Number</b>	<b>Analyte</b>	<b>Concentration (mg/L)</b>	<b>MCL (mg/L)</b>
7440-38-2	Arsenic	<0.1	5.0
7440-39-3	Barium	<1.0	100.
7440-43-9	Cadmium	<0.1	1.0
7440-47-3	Chromium	<0.5	5.0
7439-92-1	Lead	<0.5	5.0
7439-97-6	Mercury	<0.05	0.2
7782-49-2	Selenium	<0.1	1.0
7440-22-4	Silver	<0.1	5.0

**Checked By:**

*John J. Dubesky*  
\_\_\_\_\_  
**Analyst:**  
*Kathy McCloskey*  
\_\_\_\_\_

**ADVANCED ANALYTICAL LABORATORY**  
2414 West 12th Street, Tempe, Arizona 85281

**LABORATORY REPORT**

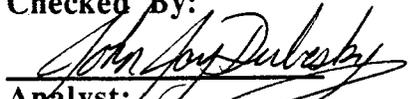
**Client:** Zenitech Corp.  
300 North 56th Street  
Chandler, Arizona 85226  
**Project:** ADOTER

**Sampling Date:** 3/11/93  
**Date Received:** 3/11/93  
**Date Extracted:** N/A  
**Date of Analysis:** 3/11/93

**EPA METHOD 1010 - Flash Point, F**

Sample Name	Sample #	Flash Point, F
92013-20-04	93-03-0070	>200
92013-20-03	93-03-0074	>200

**Checked By:**

  
**Analyst:**  


# ADVANCED ANALYTICAL LABORATORY

2414 West 12th Street, Tempe, Arizona 85281

## LABORATORY REPORT

Client: Zenitech Corp.  
300 North 56th Street  
Chandler, Arizona 85226  
Project: ADOT ER

Sampling Date: 3/11/93  
Date Received: 3/11/93  
Date Extracted: 3/11/93  
Date of Analysis: 3/11/93

### EPA METHOD 418.1-Total Petroleum Hydrocarbons

Sample Name	Sample #	Concentration mg/Kg
92013-20-04	93-03-0070	67
92013-20-05	93-03-0071	59
92013-20-01	93-03-0072	<20
92013-20-02	93-03-0073	<20
92013-20-03	93-03-0074	130

Duplicate, % diff.: 5%  
Spike, % recovery: 104 %  
Limit of Detection: 20 mg/Kg

Checked By:

*Kathy McCloskey*

Analyst:

*John J. Dubesky*



**ADVANCED ANALYTICAL LABORATORY**  
2414 West 12th Street, Tempe, Arizona 85281

**LABORATORY REPORT**

**Client:** Zenitech Corp.  
300 North 56th Street  
Chandler, Arizona 85226  
**Project:** ADOT ER

**Sampling Date:** 3/11/93  
**Date Received:** 3/12/93  
**Date Extracted:** 3/12/93  
**Date of Analysis:** 3/12/93

**EPA METHOD 418.1-Total Petroleum Hydrocarbons**

<b>Sample Name</b>	<b>Sample #</b>	<b>Concentration mg/Kg</b>
92013-20-06	93-03-0083	<20
92013-20-07	93-03-0084	48
92013-20-08	93-03-0085	63
92013-20-09	93-03-0086	24

**Duplicate, %diff.:** 0%  
**Spike, %recovery:** 104 %  
**Limit of Detection:** 20 mg/Kg

**Checked By:**

*Kathy McCloskey*  
\_\_\_\_\_  
**Analyst:**  
*[Signature]*  
\_\_\_\_\_



1844 W. GRANT ROAD SUITE #104  
TUCSON, ARIZONA 85745  
(602) 882-5880 ■ FAX # (602) 882-9788

# CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

DATE 3-11 PAGE 1 OF 1

PROJECT NAME ADOT ER # 92013-20  
 PROJECT MNGR Jim Meats  
 COMPANY/ADDRESS Zenith 570 N  
56th St Chandler AZ  
85226 PHONE 480-8855  
 SAMPLERS SIGNATURE [Signature]

NUMBERS OF CONTAINERS	ANALYSIS REQUESTED															
	Base/Neu/Acid Organics GC/MS 625/8270	Volatile Organics GC/MS 824/8240/524.2	Halogenated or Aromatic Volatiles 601/8010	Pesticides or PCBs 608/8080	Total Petroleum Hydrocarbons (EPA 418.1/BLS-18)	TPH/BTEX BLS-191 418.1	PHENOLS 604	TCLP Metals	Metals (total or dissolved) List Below	Semi VOA	Pest Herb	Cyanide	SDWA-INORGANICS PRIMARY/SECONDARY	TOTAL COLIFORM FECAL COLIFORM	HAZARDOUS WASTE PROFILE	Oil & Grease
					<input checked="" type="checkbox"/>											
					<input checked="" type="checkbox"/>											
					<input checked="" type="checkbox"/>											
					<input checked="" type="checkbox"/>											

SAMPLE I.D.	TIME	DATE	LAB I.D.	SAMPLE MATRIX
92013-20-06	10:00	3/11	10013	Soil
92013-20-07		3/11	10014	
92013-20-08		3/11	10015	
92013-20-09		3/11	10016	

<b>RELINQUISHED BY:</b> Signature: <u>[Signature]</u> Printed Name: <u>Sean D. Arvola</u> Firm: <u>Zenith</u> Date/Time: <u>3/11 10:00 AM</u>	<b>RECEIVED BY:</b> Signature: <u>[Signature]</u> Printed Name: <u>Kathy McCloskey</u> Firm: <u>Advanced Analytical LAB.</u> Date/Time: <u>3/11 10:00 AM</u>	<b>TURNAROUND REQUIREMENTS:</b> <input checked="" type="checkbox"/> 24 hr ___ 48 hr ___ 5 day ___ ___ Standard ___ Provide Verbal Preliminary Results ___ Provide FAX Preliminary Results Requested Report Date: _____	<b>REPORT REQUIREMENTS</b> <input checked="" type="checkbox"/> I. Routine Report ___ II. Report (Includes DUP,MS, MSD, as required, may be charged as samples) ___ III. Data Validation Report (Includes All Raw Data)	<b>INVOICE INFORMATION:</b> P.O. # _____ Bill to: _____	<b>SAMPLE RECEIPT:</b> Shipping VIA: _____ Shipping #: _____ Condition: _____ Total Containers: _____ Lab No.: _____
---	--	---	---	---	---

<b>RELINQUISHED BY:</b> Signature _____ Printed Name _____ Firm _____ Date/Time _____	<b>RECEIVED BY:</b> Signature _____ Printed Name _____ Firm _____ Date/Time _____	Samples Preserved According to EPA Specifications Yes <input type="checkbox"/> No <input type="checkbox"/> <b>SPECIAL INSTRUCTIONS/COMMENTS:</b>  
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**APPENDIX B**

**Dames & Moore  
Phase II Report  
& Laboratory Results**



ARIZONA DEPARTMENT OF TRANSPORTATION  
PHOTOGRAPHIC SECTION  
PHOTOGRAPHY SECTION

RECEIVED

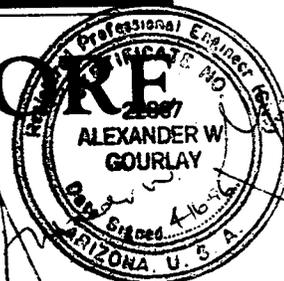
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**ENVIRONMENTAL REPORT  
CONTROLLED REMOVAL OF MAN-MADE FILLS  
ARIZONA PROJECT 202 L MA 8 H 2151 02C  
RED MOUNTAIN FREEWAY (LOOP 202)  
McCLINTOCK DRIVE - JCT 101L**

**D&M Job No. 11344-101-022  
April 16, 1996**



**DAMES & MOORE**



# DAMES & MOORE

POINTE CORPORATE CENTRE, 7500 NORTH DREAMY DRAW DRIVE, SUITE 145, PHOENIX, ARIZONA 85020  
(602) 371-1110 FAX: (602) 861-7431

April 16, 1996

Mr. Thomas J. Sullivan  
Arizona Department of Transportation  
Highways Division - Environmental Planning Services  
205 South 17th Avenue  
Room 240E, MD 619E  
Phoenix, Arizona 85007-3212

Report  
Monitoring of the Controlled Removal  
of Man-Made Fills  
Red Mountain Freeway (Loop 202)  
McClintock Drive - Jct 101L  
D&M Job No. 11344-101-022

Dear Mr. Sullivan:

Please find attached one copy of Dames & Moore's report describing the monitoring of excavations in the "Controlled Removal of Man-Made Fills" project, Red Mountain Freeway (Loop 202), McClintock Drive - Jct 101L. In addition, a photographic log covering the time Dames & Moore was on-site, between October 1995 and March 1996, has also been included.

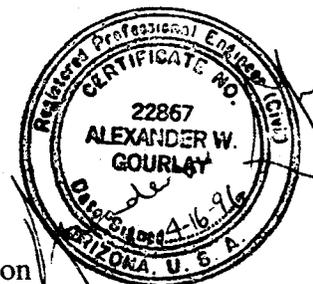
Please do not hesitate to contact us if you have any questions.

Sincerely,

DAMES & MOORE

  
Alexander W. Gourlay, P.E.  
Manager, Engineering & Construction

  
Kamallesh Piniseti  
Staff Engineer



AWG/KP/tc

**ENVIRONMENTAL REPORT  
CONTROLLED REMOVAL OF MAN-MADE FILLS  
D&M Job No. 11344-101-022**

**TABLE OF CONTENTS**

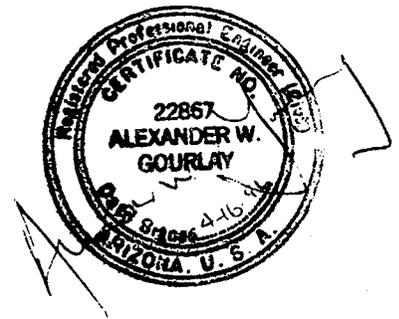
	<u>Page</u>
1.0 INTRODUCTION .....	1
2.0 BACKGROUND .....	2
3.0 SCOPE OF WORK .....	4
4.0 ENVIRONMENTAL INCIDENTS .....	7
4.1 ASBESTOS REMOVAL .....	7
4.2 OIL FILTERS .....	7
4.3 SILICA SAND REMOVAL .....	8
4.4 ASBESTOS AND PCS REMOVAL .....	9
4.5 PCS REMOVAL .....	9
4.6 PARTIALLY CRUSHED PAINT DRUM REMOVAL .....	9
4.7 REMOVAL OF PARTIALLY CRUSHED PAINT DRUMS AND SOIL .....	10
5.0 CONCLUSIONS .....	11

**APPENDICES**

- A Asbestos - Analytical Test Results
- B Oil Filters - Analytical Test Results

**LIST OF FIGURES**

- 1 Vicinity Map
- 2 Site Map
- 3 Organizational Chart
- 4 Environmental Incidents



## 1.0 INTRODUCTION

Dames & Moore was commissioned by the Arizona Department of Transportation (ADOT) to act as the AER (ADOT's Environmental Representative) for the Phase II excavations within the Perry Lane Landfill and immediately west of the Old Tempe Landfill. The site is located at the southeastern corner of the intersection between McClintock Drive and the Red Mountain Freeway and is on the boundary of the City of Tempe and the City of Mesa (see Figure 1). The role of Dames & Moore was to monitor the excavation of all man-made fill excavations and identify any suspected hazardous waste. The approximate boundaries of the man-made fill excavation areas is shown on Figure 2.

Dames & Moore was on-site full-time between October 1995 and March 1996. This report summarizes the role of Dames Moore on-site and describes the occasions when suspicious materials were encountered.

## 2.0 BACKGROUND

In 1985, the Maricopa Association of Governments (MAG) completed studies that concluded that there was a need for additional transportation facilities in the Phoenix Metropolitan area. Construction of the Red Mountain Freeway (Loop 202) from 44th Street to the proposed Red Mountain Traffic Interchange (RMTI) at Price Road was approved and funded by the voters of Maricopa County in late 1985. The Red Mountain Freeway was opened for general traffic in 1995.

A section of the freeway east of Rural Road, and part of the RMTI, lies within the boundaries of the South Operable Unit of the Indian Bend Wash Superfund Site (SIBW), as established under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) of 1980, as amended. The boundaries of the SIBW site were established by the U.S. Environmental Protection Agency (EPA) in 1983 in response to the discovery of widespread contamination of groundwater by volatile organic compounds (VOCs). Although EPA has not directly associated any of the prospective right-of-entry properties with regard to groundwater contamination by VOCs, ADOT recognized the potential to acquire liability for paying response costs received by EPA in the SIBW site by developing property within the site to build a freeway. ADOT responsibilities for response action at SIBW has been defined and limited by an Agreement and Covenant not to Sue (Agreement) between ADOT and EPA. An appurtenant scope of work and Engineering Evaluation/Cost Analysis (EE/CA) were prepared for ADOT in support of the agreement.

This project is the second of two phases of man-made fill removal from along the south bank of the Salt River between McClintock Drive and Price road. Phase I excavation began in November 1992 and was completed in November 1993. During this time approximately 450,000 cubic yards of sand, gravel and cobbles were removed from the area. Approximately 32,250 tons of rubbish and 4,000 tons of municipal solid waste (MSW) were also removed. Rubbish is defined as material that is the non-putrescible organic fraction of ordinary construction debris. MSW is defined as household waste, including clothing, plastic, paper, glass, and wastes resulting from the processing, handling, preparation, cooking, and serving of food. A total of 5,000 cubic yards of petroleum contaminated soils (PCS) were removed from the project site during the Phase I removal project. No materials classified as hazardous were encountered during the Phase I removal.

The Phase II project involved excavations into the Old Tempe Landfill study area and the Perry Lane Landfill. The Old Tempe Landfill study area was defined by the EE/CA, and is generally bounded by McClintock Drive to the west, Price Road to the east, the north bank of the Salt River, and partially by Pima Street and First Street to the south.

### 3.0 SCOPE OF WORK

The Phase II work included the following activities:

- excavation, segregation, loading, and hauling to appropriate sites any MSW, rubbish or tires encountered;
- excavation and placement in engineered fills of suitable rock/soil fill and inert construction debris;
- construction of a temporary soil nailed wall approximately between Stations 17+60 and 24+50 (see Figure 2) as a measure to temporarily stabilize the exposed face north of the Phoenix Redi-Mix property during excavations into man-made fills;
- construction of a cement stabilized alluvium (CSA) embankment along the south bank of the Salt River, extending the entire length of the project site; and
- construction of a HDPE lined isolation and decontamination area (approximately 20 ft by 20 ft).

An organizational chart (Figure 3), shows the relationship of parties involved with the project.

If potentially hazardous materials were encountered during the project, Dames and Moore had the authority to cease excavations in a particular area to evaluate site conditions and implement control measures. Dames & Moore initiated the following steps if potentially hazardous material was encountered:

- Dames & Moore liaised with the CER (Contractor's Environmental Representative) to confirm that a potentially hazardous material had been encountered. If this was the case, operations were temporarily ceased in that area.
- The ADOT Resident Engineer was notified that an unknown condition or potentially hazardous material had been encountered during excavations.
- Dames & Moore inspected the material with air monitoring equipment (wearing level C personal protective equipment if necessary).

- If a hazardous material or special waste was confirmed, excavation works were relocated away from that area and the area cordoned off. Further steps to identify the material, including sampling and quick-turnaround laboratory analysis were also undertaken, as required.
- Dames & Moore consulted with ADOT's Environmental Planning Services Coordinator (Tom Sullivan) and discussed the need for the Hazardous Materials Contractor (HMC), Remedial Solutions, Inc. (RSI), to remove the material. This decision was based on a qualitative assessment, laboratory results, or both.
- If the material had to be removed, Dames & Moore communicated the location and estimated the quantity of the potentially hazardous material to the HMC. Any sampling required to profile the material for subsequent disposal was performed by the HMC.
- If the material was suspected to be asbestos-containing-material (ACM), an AHERA-certified representative from Dames & Moore performed any required sampling.
- Dames & Moore did not supervise or otherwise direct the HMC in its performance of hazardous material or ACM removal.
- Following removal of the potentially hazardous material or special waste, Dames & Moore discussed with ADOT's Environmental Planning Services Coordinator the need for confirmation sampling. The ADOT resident engineer was notified when excavations could resume at that location.
- Dames & Moore submitted a report, describing the incident, to the appropriate ADOT project personnel.

Dames & Moore also maintained records of all applicable daily field activities, sampling locations, laboratory results, equipment calibration records, and air monitoring results.

A site specific Health and Safety Plan was prepared by Dames and Moore as part of this contract. The purpose of this plan, which was developed specifically for Dames and Moore's operations at the ADOT Red Mountain Freeway project site, was to assign responsibilities, establish personal protection standards and mandatory safety procedures, and provide for contingencies that may arise while operations were being conducted at the site. This plan was prepared as a supplement to the Health and Safety Plan prepared by ADOT (June 1995).

## 4.0 ENVIRONMENTAL INCIDENTS

This section describes the environmental incidents that occurred at the project site during the Phase II excavations of man-made fill. The term "environmental incident" is used in this report to describe an occasion where the HMC was required to remove material that had been inspected and confirmed as suspicious material. In the first two incidents, Dames & Moore collected samples of the suspicious material and was responsible for forwarding laboratory results to the HMC for profiling of the material prior to disposal. For simplicity, all subsequent sampling was performed by the HMC.

### 4.1 ASBESTOS REMOVAL

Prior to commencement of the man-made fill excavation, Remedial Solutions Inc. (RSI), took samples from five different areas on October 24, 1995, to analyze for suspected asbestos contaminated material (ACM). Three samples were taken from each area, for a total of 15 samples. The approximate sample locations are shown in Figure 4. The samples were submitted to Fiberquant Analytical Services to determine the asbestos content using polarized light microscopy (PLM). The laboratory report is attached in Appendix A. The results showed that samples 1A and 1B contained greater than 1 percent asbestos by volume.

Based on the results obtained from the Laboratory, ADOT advised RSI to remove the asbestos material from Areas 1A and 1B. Figure 4 references these areas as S1. RSI mobilized to the site on October 30, 1995 and excavated approximately 60 cubic yards of asbestos contaminated construction debris. The asbestos contaminated debris was transported in roll-off bins to the Butterfield Landfill for disposal.

### 4.2 OIL FILTERS

On November 6, 1995, used oil filters were encountered at Station 18+65, 20 feet north of the soil nailed wall and approximately 7 feet below the grade line of the fence. The soil surrounding the oil filters was black and exhibited a strong hydrocarbon odor. A "stop work in place" signal was given by the CER to the equipment operator. The approximate limits of the extent of contamination were determined using a photo-ionization detector (PID) and the area was cordoned off using stakes and caution tape. A composite soil sample was taken by Dames & Moore to characterize the contaminated soil.

The soil sample was preserved on ice until delivery to Analytical Technologies, Inc., in Phoenix, Arizona. The soil sample was analyzed for Total Petroleum Hydrocarbons (TPH) in accordance with EPA Method 418.1, and Volatile Organic Compounds (VOCs) in accordance with EPA Method 8010 (Halogenated Volatile Organics), and EPA Method 8020 (Aromatic Volatile Organics). The sample was also analyzed for flash point and RCRA metals by TCLP in accordance with ATI Method P10.618 and EPA Method 6010. EPA method 6010 analyses were performed by McKenzie Laboratories of Phoenix, Arizona. These analytical methods were selected based on the acceptance criteria for petroleum contaminated soils (PCS) at the Butterfield Landfill.

The laboratory report is attached in Appendix B. The report records the sample, submittal, extraction and analysis dates, as well as the analytical results and detection limits. Quality assurance and quality control data, including surrogate and spike recovery data, are also included in the report. The analytical results showed that petroleum hydrocarbons (3,200 mg/kg) were present in the composite sample. The analytical results were forwarded to RSI as documentation for disposal.

RSI excavated approximately 60 cubic yards of petroleum contaminated soil on November 6, 1995. The petroleum contaminated soil was transported in roll-off bins to the Butterfield Landfill for disposal. A confirmatory composite soil sample was taken at the base of the excavation. The confirmatory soil was analyzed for TPHC in accordance with EPA method 418.1. The results showed that petroleum hydrocarbons were still present in the soil. The laboratory report is attached in Appendix B.

ADOT advised RSI to remove soil to a depth of 1 foot below the existing soil surface. RSI again mobilized to the site on November 10, 1995 and excavated an additional 30 cubic yards of soil. All petroleum contaminated soil was transported in roll-off bins to the Butterfield Landfill for disposal.

#### **4.3 SILICA SAND REMOVAL**

On November 2, 1995, ADOT observed silica sand covering a large area between Stations 25+50 and 26+00. Although silica sand is not a hazardous material, when disturbed under windy conditions it can pose a health risk to workers through inhalation. RSI mobilized to the site on November 10, 1995 and excavated approximately 240 cubic yards of silica sand. The sand was transported in 16 end dump trailers to Butterfield Landfill for disposal. RSI again mobilized to

the site on November 13, 1995 to remove an additional 345 cubic yards of silica sand, which was transported in 23 end dump trailers to the Butterfield Landfill for disposal.

#### **4.4 ASBESTOS AND PCS REMOVAL**

On November 14, 1995, paint cans (TPH contaminated) and four-6-inch-diameter transite pipes (suspected ACM) were encountered at Station 17+60, 30 feet north of the soil nailed wall. A "stop work in place" signal was given by the CER to the equipment operator. The approximate limits of the extent of contamination were determined using a PID and the area was cordoned off using stakes and caution tape.

RSI mobilized to the site on November 15, 1995 and excavated approximately 15 cubic yards of contaminated soil. The soil and paint cans were transported in roll-off bins to the Butterfield Landfill for disposal. The suspected ACM was placed in a dedicated roll-off bin, located next to the isolation and decontamination area. RSI transported this bin to the Butterfield Landfill for disposal at the end of the project.

#### **4.5 PCS REMOVAL**

On January 8, 1996, five 55 gallon drums were encountered at Station 23+25, 15 feet north of the soil nailed wall. A "stop work in place" signal was given by the CER to the equipment operator. The approximate limits of the extent of contamination was determined using a PID and the area was cordoned off using stakes and caution tape. One of the drums contained a greenish liquid (suspected to be anti-freeze), the other drums were empty.

RSI mobilized to the site on January 8, 1996. They removed the five drums and excavated approximately 15 cubic yards of contaminated soil which was transported in roll-off bins to the Butterfield Landfill for disposal.

#### **4.6 PARTIALLY CRUSHED PAINT DRUM REMOVAL**

On January 12, 1996, four 5 gallon drums were encountered at Station 23+00, 80 feet north of the soil nailed wall. A "stop work in place" signal was given by the CER to the equipment operator. All of the drums were empty except for one which contained paint. Visual inspection and a PID air monitoring survey indicated there was no contamination of the surrounding soil. PID readings within the drum containing paint were as high as 260 ppm.

RSI mobilized to the site on January 16, 1996. The empty drums were placed into a 55-gallon drum which was transported to the Butterfield Landfill for disposal. The crushed drum with paint was placed into an 85 gallon overpack drum and was staged in the decontamination area. The drum was later placed into a roll-off bin on March 6, 1996 and transported to the Butterfield Landfill for disposal.

#### **4.7 REMOVAL OF PARTIALLY CRUSHED PAINT DRUMS AND SOIL**

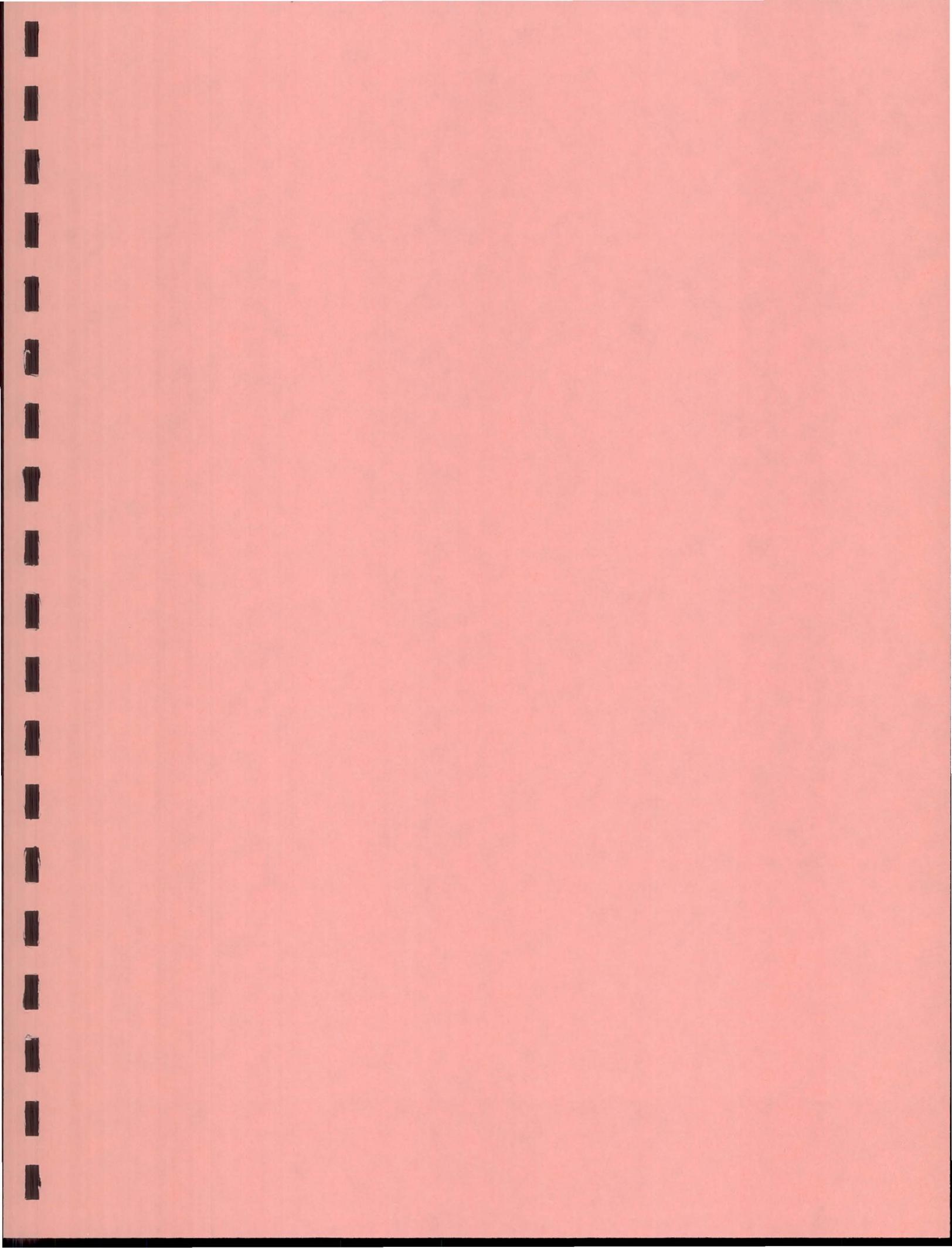
On February 29, 1996, three partially crushed 55 gallon paint drums were encountered at Station 22+50, 100 feet north of the soil nailed wall. A "stop work in place" signal was given by the CER to the equipment operator. The approximate limits of the extent of contamination were determined using a PID and the area was cordoned off using stakes and caution tape.

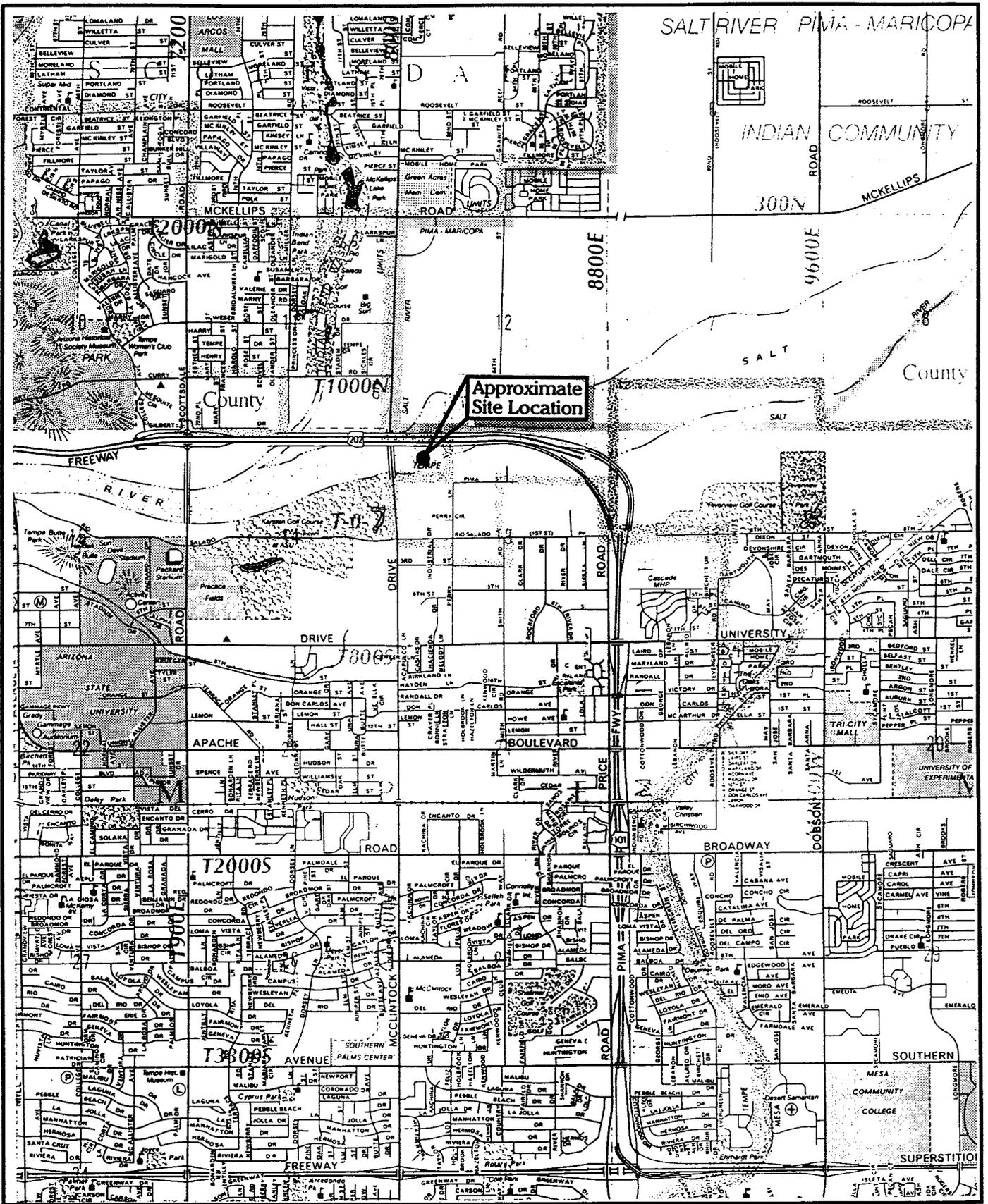
RSI mobilized to the site on March 1, 1996. They removed the three drums and also excavated approximately 15 cubic yards of paint contaminated soil which was transported in a roll-off bin to the Butterfield Landfill for disposal.

## 5.0 CONCLUSIONS

Dames & Moore, acting as ADOT's environmental representative, monitored the excavation of man-made fills from the project site between October 1995 and March 1996. The primary role of Dames & Moore was to identify suspected hazardous waste or special waste during excavation works and notify ADOT's Environmental Planning Services Coordinator if suspicious material was required to be removed from the project site.

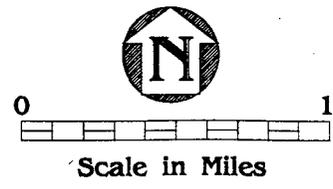
By the end of the Phase II project, which continued until April 1996, approximately 285,000 cubic yards of sand, gravel and cobbles had been excavated from the area. A large portion of this material was used, where suitable, for engineered fill embankments, grading, and the CSA embankment. Approximately 19,700 tons of rubbish and 110 tons of MSW were also removed. The Hazardous Waste Contractor removed approximately 135 cubic yards of petroleum contaminated soil, 60 cubic yards of asbestos contaminated construction debris, and 585 cubic yards of silica sand from the site. No hazardous materials were encountered during the project.





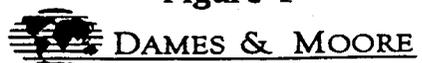
A05278-04-01-96

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 Reproduction with permission No. 950504-A

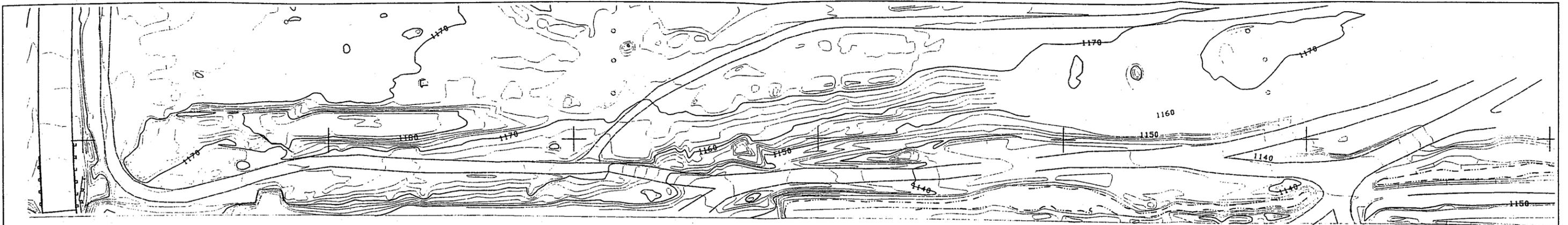


# Vicinity Map

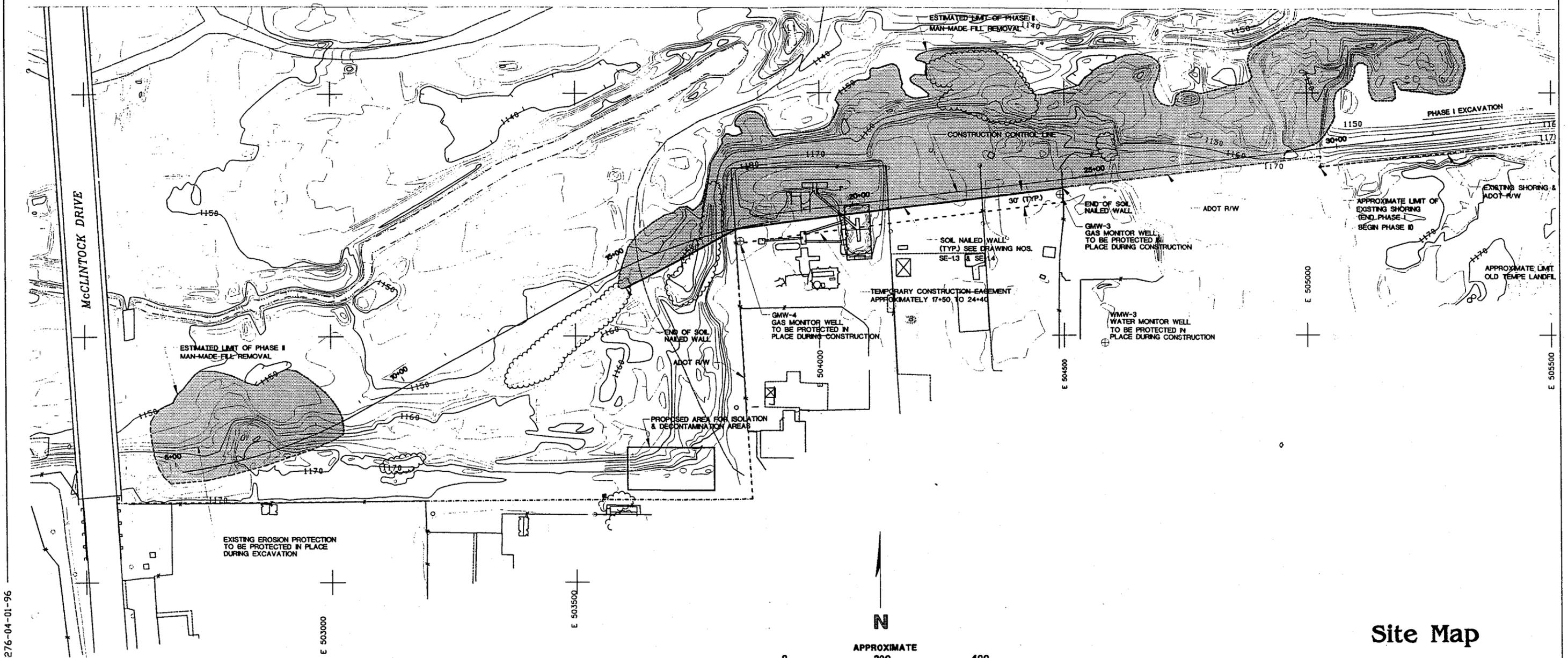
Figure 1



11544-101-022



RED MOUNTAIN FREEWAY



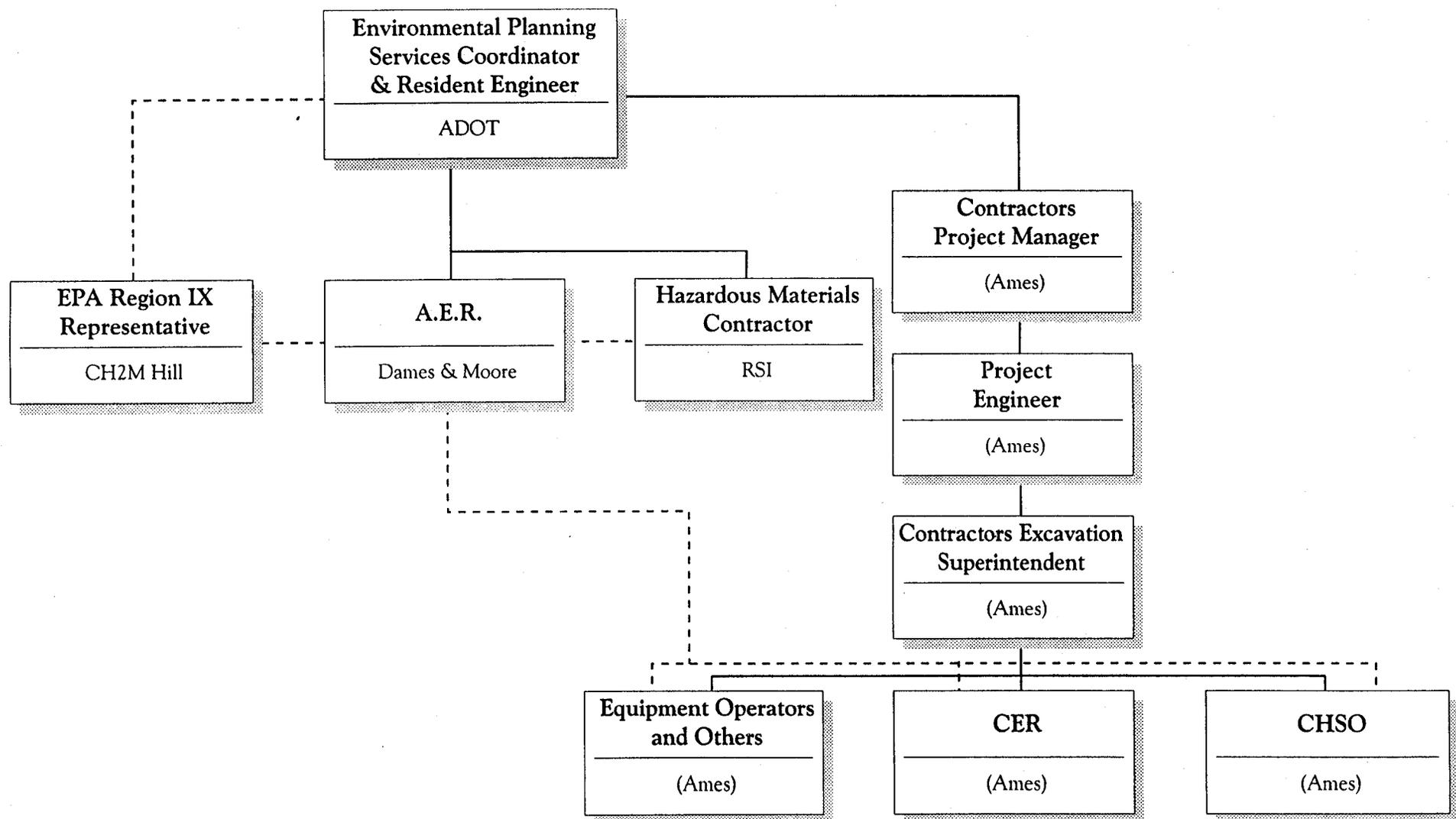
A05276-04-01-96

Reference: Original Drawing by AGRA Earth & Environmental 6/95.

Site Map

Figure 2

DAMES & MOORE  
11344-101-022

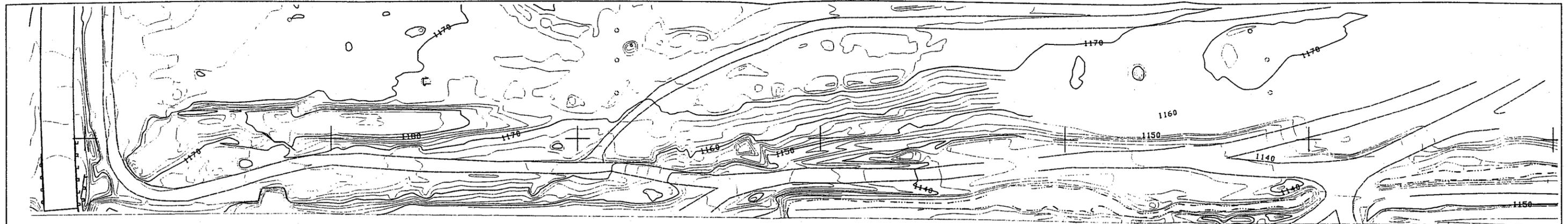


DD0207-04-02-96

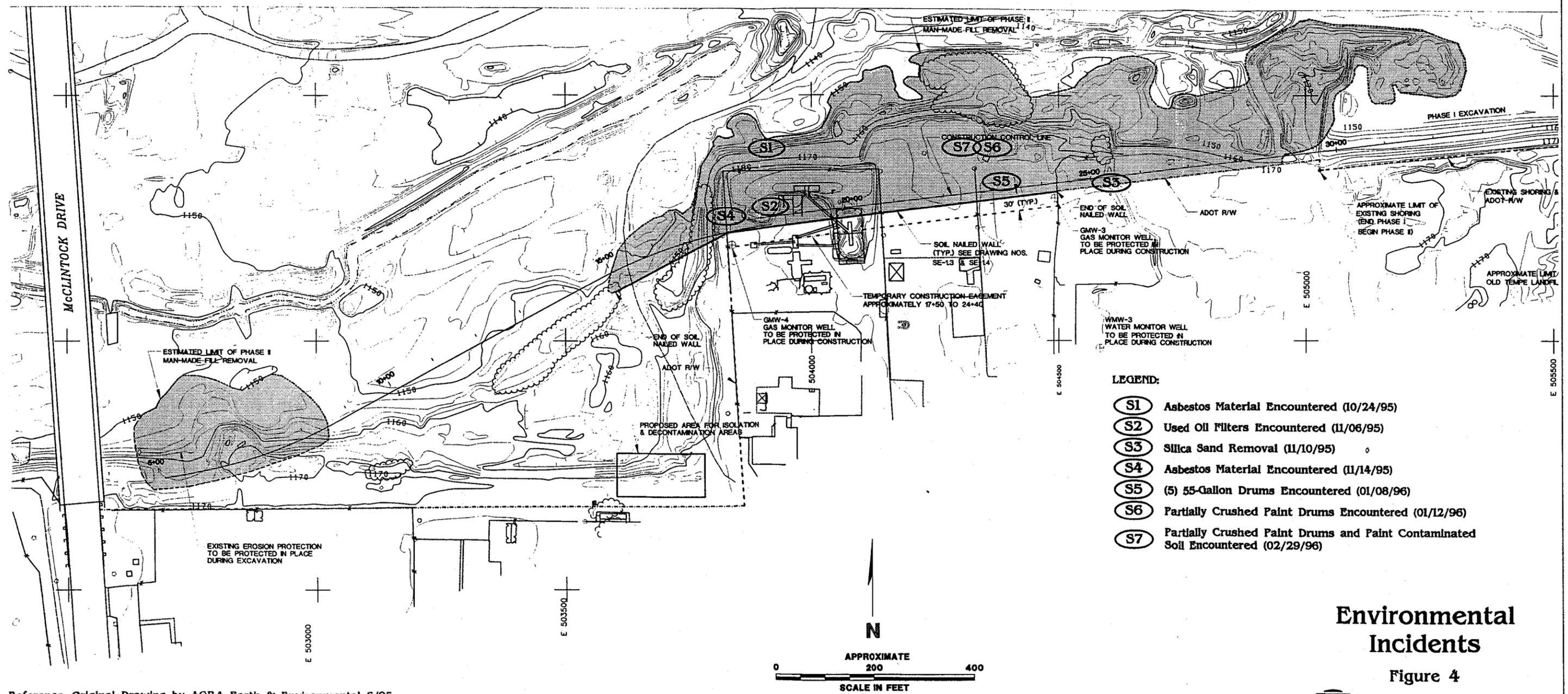
———— Contractual Chain of Authority  
 - - - - - Line of Communication

**Organizational Chart**  
 Figure 3





RED MOUNTAIN FREEWAY



LEGEND:

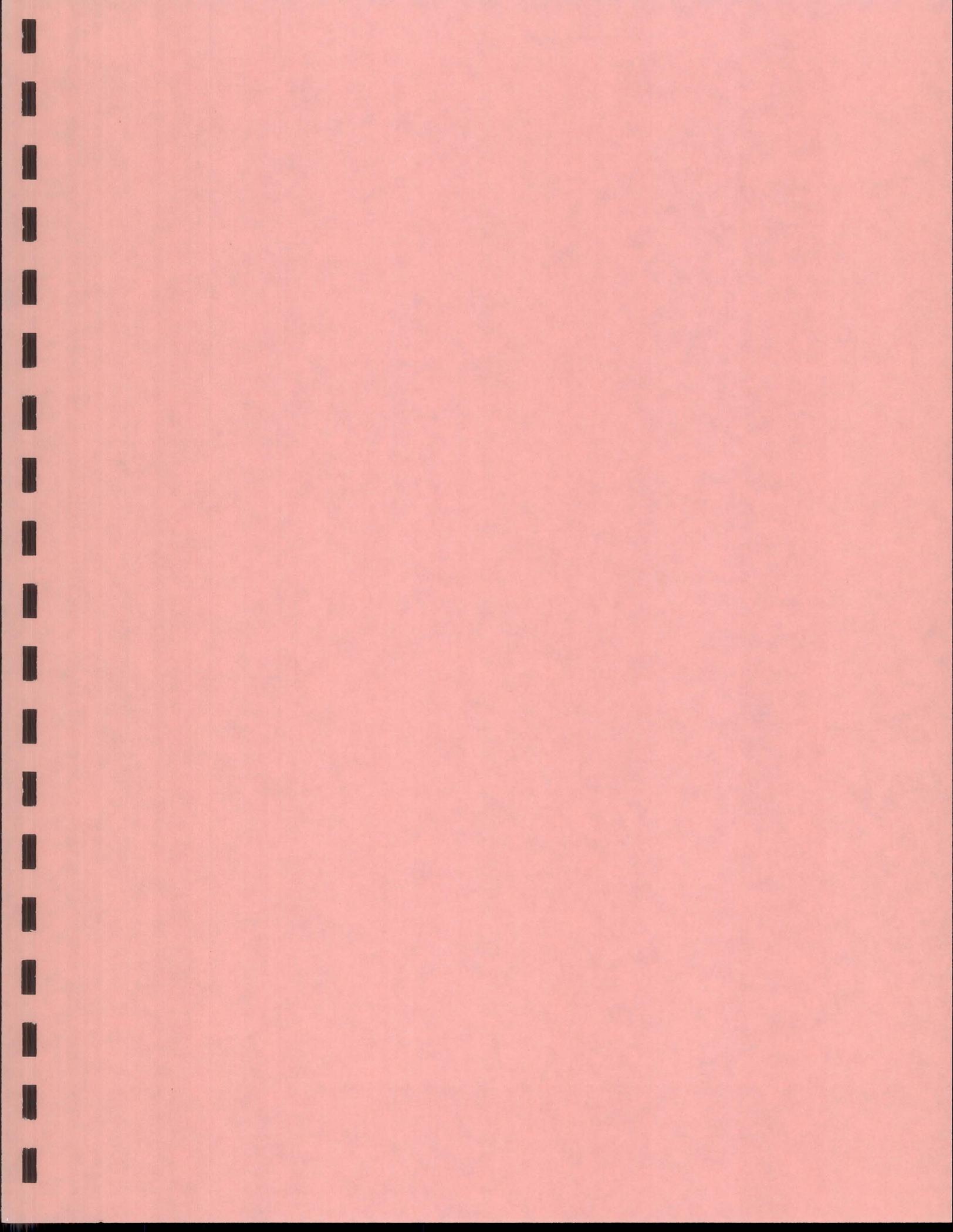
- (S1) Asbestos Material Encountered (10/24/95)
- (S2) Used Oil Filters Encountered (11/08/95)
- (S3) Silica Sand Removal (11/10/95)
- (S4) Asbestos Material Encountered (11/14/95)
- (S5) (5) 55-Gallon Drums Encountered (01/08/96)
- (S6) Partially Crushed Paint Drums Encountered (01/12/96)
- (S7) Partially Crushed Paint Drums and Paint Contaminated Soil Encountered (02/29/96)

A05277-04-01-96

Reference: Original Drawing by AGRA Earth & Environmental 6/95.

Environmental Incidents

Figure 4



**APPENDIX A**

**ASBESTOS - ANALYTICAL TEST RESULTS**

**Fiberquant Analytical Services**

Fiberquant, Inc. 4624 S. 35th St. Phoenix, Arizona 85040; (602)276-6139; FAX:(602)276-4558

**Analysis of Bulk Samples for Asbestos Fibers by Polarized Light Microscopy (PLM)  
Summary Report**

Job No. 95-4794

Client: ENV REMEDIATION & SVCS  
 Address: 500 N 56TH ST STE 16  
 CHANDLER, AZ 85226

Client Job: 5135 Ames Sampling Client P.O. verbal Received: 10/24/95  
 Contact: Bob Kercher Phone: (602)940-1034 ( )

15 samples were received for determination of asbestos content by polarized light microscopy (PLM). Please refer to the attached information form for analytical method and interpretation of results. The results of the analyses are summarized below:

**Analytical Notes:**

Sample Number	Lab Number	Description	Overall Results
1A	95-10-2782		Positive: 30-40% Chrysotile
1B	95-10-2783		Positive: 10-20% Chrysotile
1C	95-10-2784		Negative: No asbestos detected
2A	95-10-2785		Negative: No asbestos detected
2B	95-10-2786		Negative: No asbestos detected
2C	95-10-2787		Negative: No asbestos detected
3A	95-10-2788		Negative: No asbestos detected
3B	95-10-2789		Borderline Negative: <=1% (Tr), type: Chrysotile
3C	95-10-2790		Borderline Negative: <=1% (Tr), type: Chrysotile
4A	95-10-2791		Negative: No asbestos detected
4B	95-10-2792		Negative: No asbestos detected
4C	95-10-2793		Negative: No asbestos detected
5A	95-10-2794		Negative: No asbestos detected
5B	95-10-2795		Negative: No asbestos detected
5C	95-10-2796		Negative: No asbestos detected

A detailed report for each sample is attached. The overall results above are averaged for the entire sample. Individual layers within each sample may be positive while the overall results remain negative. Check the detailed reports for any samples reported as borderline negative overall.

  
 Larry S. Fricke  
 Approved As: Remediation Signatory

Date 10/25/95

CHAIN OF CUSTODY RECORD

COMPANY: ENVIRONMENTAL REMEDIATION & SERVICES

ADDRESS: 500 N. 56<sup>th</sup> STE. 16

CITY/STATE/ZIP: CHANDLER AZ. 85226

PHONE: 940-1034 FAX: 602-940-8857



P.03  
8617431

TO

FROM ENVIRONMENTAL  
OCT-26-1995 10:30

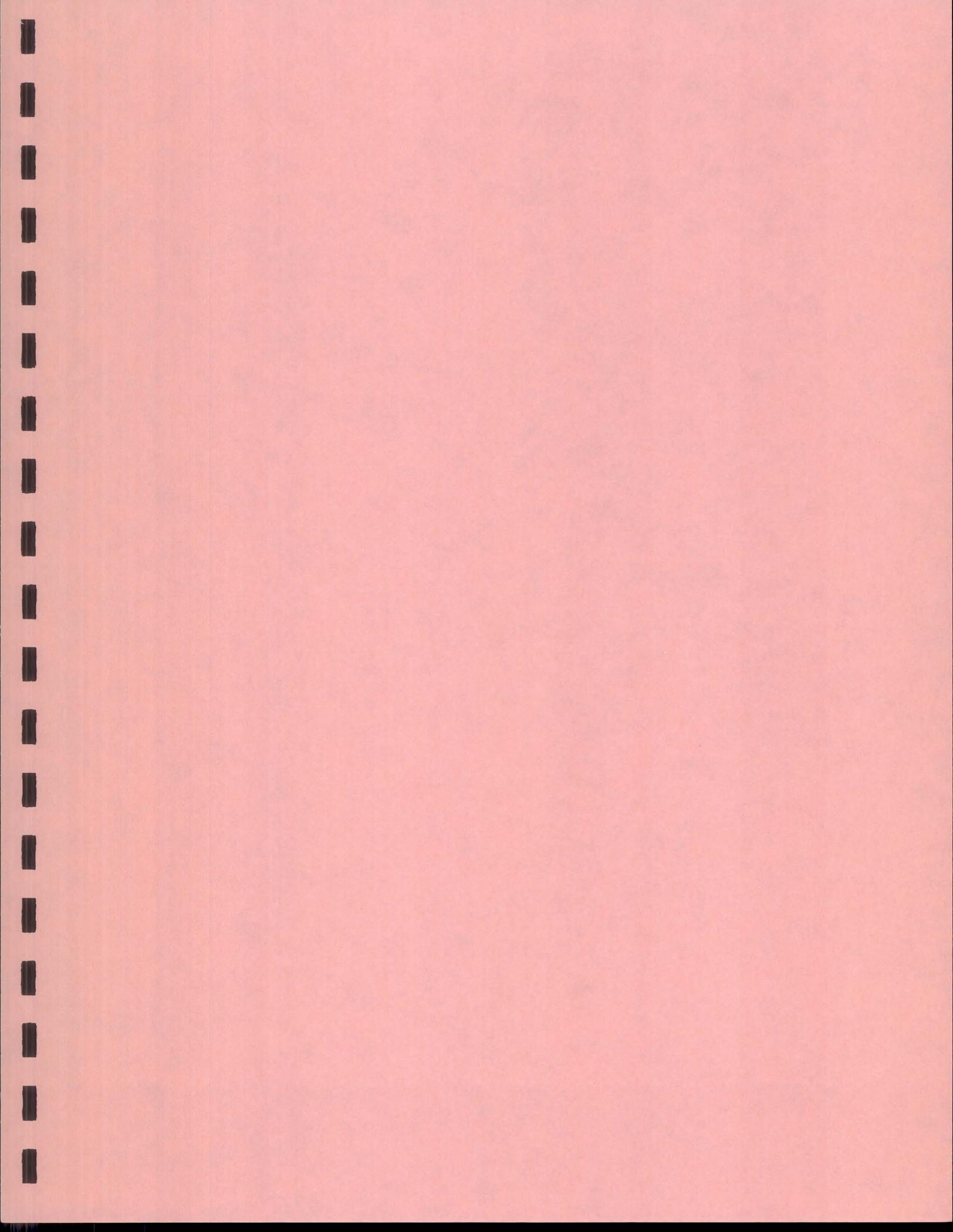
TOTAL P.03

CONTACT (PRINT) BOB KERCHER		SAMPLER SIGNATURE James K. Sullivan		PROJECT NAME JOB NUMBER 95135 AMES SAMPLING		PO NUMBER
SAMPLE NUMBER	LAB CODE	DATE TAKEN	TIME ON/OFF	VOLUME or AREA	COMMENTS (Type of Material, Priority, Activity, Etc.)	
1A	FLM	10/24/95	8:00	AREA	ASPHALT FIBEROUS MATERIAL	
1B	FLM	10/24/95		AREA	ASPHALT FIBEROUS MATERIAL	
1C	FLM	10/24/95		AREA	HARD CLAYEY MATERIAL	
2A	FLM	10/24/95		AREA	ASPHALT SHINGLE	
2B	FLM	10/24/95		AREA	ASPHALT SHINGLE	
2C	FLM	10/24/95		AREA	ASPHALT SHINGLE	
3A	FLM	10/24/95		AREA	MULTI-LAYERED FIBEROUS MATERIAL	
3B	FLM	10/24/95		AREA	GYPSUM FIBEROUS MATERIAL	
3C	FLM	10/24/95		AREA	GYPSUM WALLBOARD	
4A	FLM	10/24/95		AREA	CEMENT w/ FIBEROUS MATERIAL	
4B	FLM	10/24/95		AREA	CEMENT w/ FIBEROUS MATERIAL	
4C	FLM	10/24/95		AREA	CEMENT w/ FIBEROUS MATERIAL	
5A	FLM	10/24/95		AREA	PLASTIC SHEET w/ FIBEROUS MATERIAL	
5B	FLM	10/24/95		AREA	PLASTIC SHEET w/ FIBEROUS MATERIAL	
5C	FLM	10/24/95	12:00	AREA	ASPHALT FIBEROUS MATERIAL	

TURNAROUND TIME					SAMPLE TYPE CODES				
CIRCLE SAMPLE TYPE & TURNAROUND TIME REQUESTED					PLEASE CALL TO CONFIRM HIGH				
FCM	FLM	TCM	TEW WATER	LEAD	FLM = SLUR	TCM = TCM/AM	RAW = RA/IR/UK	TEW = TEW/WATER	RAW = RA/TYPE
1-DAY	2-DAY	3-DAY	4-DAY	5-DAY	FCM = AIR/AREA	TEW = TEW/BLANCK	RAM = RA/INCE/FLTR	RAW = RA/TYPE	RAM = RA/INCE/FLTR
14-DAY	18-DAY	21-DAY	28-DAY	35-DAY	PCP = AIR/PERSONAL		AAF = AA/TYPE/FLTR	AAF = AA/TYPE/FLTR	AAF = AA/TYPE/FLTR
EXTENDED	14-DAY	18-DAY	21-DAY	28-DAY	PCP = AIR/PERSONAL		AAA = AA/TYPE/AREA	AAA = AA/TYPE/AREA	AAA = AA/TYPE/AREA

RELEASED BY SIGNATURE	DATE	TIME	RECEIVED BY SIGNATURE	DATE	TIME	RECEIVED BY SIGNATURE	DATE	TIME
<i>James K. Sullivan</i>	10/24/95	13:23						
RECEIVED BY SIGNATURE	DATE	TIME	RECEIVED BY SIGNATURE	DATE	TIME	RECEIVED BY SIGNATURE	DATE	TIME

10/24/95 2:23  
01/95



**APPENDIX B**

**OIL FILTERS - ANALYTICAL TEST RESULTS**



Analytical Technologies, Inc.

GENERAL CHEMISTRY - QUALITY CONTROL

CLIENT : DAMES & MOORE, PHOENIX  
PROJECT # : 11344-101-022  
PROJECT NAME : ADOT-LANDFIL

ATI I.D. : 511597

PARAMETER	UNITS	ATI I.D.	SAMPLE RESULT	DUP. RESULT	RPD	SPIKED SAMPLE	SPIKE CONC	% REC
IGNITABILITY		51159701	NEG	NEG	NA	NA	NA	NA
PETROLEUM HYDROCARBONS	MG/KG	51158701	<20	<20	NA	230	230	100

$$\% \text{ Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative Percent Difference)} = \frac{(\text{Sample Result} - \text{Duplicate Result})}{\text{Average Result}} \times 100$$



Analytical Technologies, Inc.

METALS RESULTS

ATI I.D. : 511597

CLIENT : DAMES & MOORE, PHOENIX  
PROJECT # : 11344-101-022  
PROJECT NAME : ADOT-LANDFIL

DATE RECEIVED : 11/06/95

REPORT DATE : 11/16/95

PARAMETER	UNITS	01
SILVER (TCLP 1311/6010)	MG/L	<0.05
ARSENIC (TCLP 1311/6010)	MG/L	<0.10
BARIUM (TCLP 1311/6010)	MG/L	0.93
CADMIUM (TCLP 1311/6010)	MG/L	<0.02
CHROMIUM (TCLP 1311/6010)	MG/L	<0.05
MERCURY (TCLP 1311/7470)	MG/L	<0.002
LEAD (TCLP 1311/6010)	MG/L	<0.10
SELENIUM (TCLP 1311/6010)	MG/L	<0.10



Analytical Technologies, Inc.

METALS RESULTS

ATI I.D. : 511597

CLIENT : DAMES & MOORE, PHOENIX  
PROJECT # : 11344-101-022  
PROJECT NAME : ADOT-LANDFIL

DATE RECEIVED : 11/06/95

REPORT DATE : 11/16/95

---

PARAMETER	UNITS	01
SILVER (TCLP 1311/6010)	MG/L	<0.05
ARSENIC (TCLP 1311/6010)	MG/L	<0.10
BARIUM (TCLP 1311/6010)	MG/L	0.93
CADMIUM (TCLP 1311/6010)	MG/L	<0.02
CHROMIUM (TCLP 1311/6010)	MG/L	<0.05
MERCURY (TCLP 1311/7470)	MG/L	<0.002
LEAD (TCLP 1311/6010)	MG/L	<0.10
SELENIUM (TCLP 1311/6010)	MG/L	<0.10



Analytical Technologies, Inc.

METALS - QUALITY CONTROL

CLIENT : DAMES & MOORE, PHOENIX  
 PROJECT # : 11344-101-022  
 PROJECT NAME : ADOT-LANDFILL

ATI I.D.: 511597

PARAMETER	UNITS	ATI I.D.	SAMPLE RESULT	DUP. RESULT	RPD	SPIKED SAMPLE	SPIKE CONC.	% REC
SILVER	MG/L	51159701	<0.05	<0.05	NA	0.45	0.50	90
ARSENIC	MG/L	51159701	<0.10	<0.10	NA	1.0	1.0	100
BARIUM	MG/L	51159701	0.93	0.89	4	1.9	1.0	97
CADMIUM	MG/L	51159701	<0.02	<0.02	NA	0.48	0.50	96
CHROMIUM	MG/L	51159701	<0.05	<0.05	NA	0.95	1.0	95
LEAD	MG/L	51159701	<0.10	<0.10	NA	0.90	1.0	90
MERCURY	MG/L	51159701	<0.002	<0.002	NA	0.025	0.024	96
SELENIUM	MG/L	51159701	<0.10	<0.10	NA	0.97	1.0	97

$$\% \text{ Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative \% Difference)} = \frac{(\text{Sample Result} - \text{Duplicate Sample Result})}{\text{Average of Sample Result}} \times 100$$



## GAS CHROMATOGRAPHY - RESULTS

ATI I.D. : 51159701

TEST : VOLATILE HALOCARBON/AROMATIC (EPA 8010/8020)

CLIENT	: DAMES & MOORE, PHOENIX	DATE SAMPLED	: 11/06/95
PROJECT #	: 11344-101-022	DATE RECEIVED	: 11/06/95
PROJECT NAME	: ADOT-LANDFIL	DATE EXTRACTED	: 11/08/95
CLIENT I.D.	: ADOT-1-11-6-95	DATE ANALYZED	: 11/09/95
SAMPLE MATRIX	: SOIL	UNITS	: MG/KG
		DILUTION FACTOR	: 1

-----	-----
COMPOUNDS	RESULTS
-----	-----

BENZENE	<0.025
BROMODICHLOROMETHANE	<0.025
BROMOFORM	<0.025
BROMOMETHANE	<0.1
ARBON TETRACHLORIDE	<0.025
CHLOROBENZENE	<0.025
CHLOROETHANE	<0.025
CHLOROFORM	<0.025
CHLOROMETHANE	<0.025
DIBROMOCHLOROMETHANE	<0.025
2-CHLOROETHYL VINYL ETHER	ND
1,3-DICHLOROBENZENE	<0.025
1,4-DICHLOROBENZENE	<0.025
1,2-DICHLOROBENZENE	<0.025
DICHLORODIFLUOROMETHANE	<0.025
1,1-DICHLOROETHANE	<0.025
1,2-DICHLOROETHANE	<0.025
1,1-DICHLOROETHENE	<0.025
CIS-1,2-DICHLOROETHENE	<0.025
1,2-DICHLOROPROPANE	<0.025
CIS-1,3-DICHLOROPROPENE	<0.025
TRANS-1,3-DICHLOROPROPENE	<0.025
THYLBENZENE	<0.025
METHYLENE CHLORIDE	<0.10
1,1,2,2-TETRACHLOROETHANE	<0.05
TETRACHLOROETHENE	<0.025
TOLUENE	<0.025
1,1,1-TRICHLOROETHANE	<0.025
1,1,2-TRICHLOROETHANE	<0.025
TRICHLOROETHENE	<0.025
TRICHLOROTRIFLUOROETHANE	<0.10
VINYL CHLORIDE	<0.025
TOTAL XYLENES	<0.025
TRICHLOROFLUOROMETHANE	<0.025
TRANS-1,2-DICHLOROETHENE	<0.025

## SURROGATE PERCENT RECOVERIES

BROMOCHLOROMETHANE (%)	90
BROMOFLUOROBENZENE (%)	108



## REAGENT BLANK

TEST : VOLATILE HALOCARBON/AROMATIC (EPA 8010/8020)

CLIENT	: DAMES & MOORE, PHOENIX	ATI I.D.	: 511597
PROJECT #	: 11344-101-022	DATE EXTRACTED	: 11/08/95
PROJECT NAME	: ADOT-LANDFIL	DATE ANALYZED	: 11/10/95
CLIENT I.D.	: REAGENT BLANK	UNITS	: MG/KG
		DILUTION FACTOR	: N/A

COMPOUNDS	RESULTS
BENZENE	<0.025
BROMODICHLOROMETHANE	<0.025
BROMOFORM	<0.025
BROMOMETHANE	<0.1
CARBON TETRACHLORIDE	<0.025
CHLOROENZENE	<0.025
CHLOROETHANE	<0.025
CHLOROFORM	<0.025
CHLOROMETHANE	<0.025
DIBROMOCHLOROMETHANE	<0.025
2-CHLOROETHYL VINYL ETHER	ND
1,3-DICHLOROBENZENE	<0.025
1,4-DICHLOROBENZENE	<0.025
1,2-DICHLOROBENZENE	<0.025
DICHLORODIFLUOROMETHANE	<0.025
1,1-DICHLOROETHANE	<0.025
1,2-DICHLOROETHANE	<0.025
1,1-DICHLOROETHENE	<0.025
CIS-1,2-DICHLOROETHENE	<0.025
1,2-DICHLOROPROPANE	<0.025
CIS-1,3-DICHLOROPROPENE	<0.025
TRANS-1,3-DICHLOROPROPENE	<0.025
ETHYLBENZENE	<0.025
METHYLENE CHLORIDE	<0.10
1,1,2,2-TETRACHLOROETHANE	<0.05
TETRACHLOROETHENE	<0.025
TOLUENE	<0.025
1,1,1-TRICHLOROETHANE	<0.025
1,1,2-TRICHLOROETHANE	<0.025
TRICHLOROETHENE	<0.025
TRICHLOROTRIFLUOROETHANE	<0.10
VINYL CHLORIDE	<0.025
TOTAL XYLENES	<0.025
TRICHLOROFLUOROMETHANE	<0.025
TRANS-1,2-DICHLOROETHENE	<0.025

## SURROGATE PERCENT RECOVERIES

BROMOCHLOROMETHANE (%)	104
BROMOFLUOROBENZENE (%)	113



Analytical Technologies, Inc.

QUALITY CONTROL DATA

ATI I.D. : 511597

TEST : VOLATILE HALOCARBON/AROMATIC (EPA 8010/8020)

CLIENT : DAMES & MOORE, PHOENIX  
 PROJECT # : 11344-101-022  
 PROJECT NAME : ADOT-LANDFIL  
 REF I.D. : 51159701

DATE ANALYZED : 11/09/95  
 SAMPLE MATRIX : SOIL  
 UNITS : MG/KG

COMPOUNDS	SAMPLE CONC.		SPIKED %	DUP. %		RPD
	RESULT	SPIKED		SPIKED	REC.	
1,1-DICHLOROETHENE	<0.025	1.0	1.1	110	1.0	10
TRICHLOROETHENE	<0.025	1.0	1.1	110	1.1	0
TETRACHLOROETHENE	<0.025	1.0	1.1	110	1.1	0
BENZENE	<0.025	1.0	1.0	100	1.0	0
BROMODICHLOROMETHANE	<0.025	1.0	1.1	110	1.1	0
CHLOROFORM	<0.025	1.0	1.0	100	1.0	0
1,1,1-TRICHLOROETHANE	<0.025	1.0	1.1	110	0.99	11
TOLUENE	<0.025	1.0	1.0	100	1.0	0
CHLOROBENZENE	<0.025	1.0	1.0	100	1.0	0
O-XYLENE	<0.025	1.0	1.1	110	1.1	0

$$\% \text{ Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative \% Difference)} = \frac{(\text{Spiked Sample Result} - \text{Duplicate Spike Sample Result})}{\text{Average of Spiked Sample}} \times 100$$



**ATTACHMENT 1**





Analytical **Technologies**, Inc.

9830 S. 51st Street Suite B-113 Phoenix, AZ 85044 (602) 496-4400

ATI I.D. 511632

November 16, 1995

Dames & Moore  
7500 N. Dreamy Draw Drive  
Suite 145  
Phoenix, AZ 85020

Project Name/Number: ADOT-LANDFILL/11344-101-022

Attention: Alex Manning

On 11/08/95, Analytical Technologies, Inc., received a request to analyze soil sample(s). The sample(s) were analyzed with EPA methodology or equivalent methods. The results of these analyses and the quality control data, which follow each set of analyses, are enclosed.

If you have any questions or comments, please do not hesitate to contact us at (602) 496-4400.

Claudia S. Blanton  
Project Manager

CSB/jmf

Enclosure

**ADHS License No. AZ0061**  
**Sherman McCutcheon, Laboratory Manager**



Analytical Technologies, Inc.

CLIENT : DAMES & MOORE, PHOENIX

DATE RECEIVED : 11/08/95

PROJECT # : 11344-101-022

PROJECT NAME : ADOT-LANDFIL

REPORT DATE : 11/13/95

ATI I.D. : 511632

ATI #	CLIENT DESCRIPTION	MATRIX	DATE COLLECTED
01	ADOT-2-11-8-95	SOIL	11/08/95

----- TOTALS -----

MATRIX	# SAMPLES
SOIL	1

ATI STANDARD DISPOSAL PRACTICE

The samples from this project will be disposed of in thirty (30) days from the date of this report. If an extended storage period is required, please contact our sample control department before the scheduled disposal date.



Analytical **Technologies**, Inc.

### DATES OF ANALYSIS

ACCESSION #: 511632

SAMPLE ID	TEST AND METHOD NUMBER	DATE OF ANALYSIS	ANALYST
51163201	418.1 AZ PERCENT MOISTURE	11/8/95	PW
51163201	PETROLEUM HYDROCARBONS, IR	11/8/95	PW

REFERENCES: Arizona Department of Health Services (ADHS), Division of Laboratory Services Method



Analytical Technologies, Inc.

GENERAL CHEMISTRY RESULTS

ATI I.D. : 511632

CLIENT : DAMES & MOORE, PHOENIX  
PROJECT # : 11344-101-022  
PROJECT NAME : ADOT-LANDFIL

DATE RECEIVED : 11/08/95

REPORT DATE : 11/13/95

PARAMETER	UNITS	01
PETROLEUM HYDROCARBONS, 418.1	MG/KG	250
418.1 AZ PERCENT MOISTURE		11



Analytical Technologies, Inc.

GENERAL CHEMISTRY - QUALITY CONTROL

CLIENT : DAMES & MOORE, PHOENIX  
PROJECT # : 11344-101-022  
PROJECT NAME : ADOT-LANDFIL

ATI I.D. : 511632

PARAMETER	UNITS	ATI I.D.	SAMPLE RESULT	DUP. RESULT	RPD	SPIKED SAMPLE	SPIKE CONC	% REC
PETROLEUM HYDROCARBONS	MG/KG	51158701	<20	<20	NA	230	230	100

$$\% \text{ Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative Percent Difference)} = \frac{(\text{Sample Result} - \text{Duplicate Result})}{\text{Average Result}} \times 100$$

